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WATER LEVELS AND ARTESIAN PRESSURE IN OBSERVATION WELLS IN THE UNITED STATES IN 1942

Part 1. NORTHEASTERN STATES

BY

O. E. MEINZER, L. K. WENZEL
and others

Prepared in cooperation with the States of
CONNECTICUT, INDIANA, MASSACHUSETTS, MICHIGAN
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WATER LEVELS AND ARTESIAN PRESSURE IN OBSERVATION WELLS IN THE UNITED STATES IN 1942

Part 1. NORTHEASTERN STATES

INTRODUCTION

By O. E. Meinzer and L. K. Wenzel

The rock formations of the earth are great natural underground 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 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.

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 the parts of the country that are covered.

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

Year	Northeastern States	Southeastern States	Northcentral States	Southcentral States	Northwestern States	Southwestern 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

The present volume covers the northeastern States and gives records of water level and artesian pressure in about 663 observation wells of the Geological Survey and cooperating agencies in Connecticut, Indiana, Massachusetts, Michigan, New Jersey, New York, Ohio, and Pennsylvania. Of these wells, 101 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 for the years before 1942. 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 27,400 individual determinations of water level and artesian pressure.

The water levels in this report are given with reference to datum planes of different kinds. Some are given in depths below the measuring point, which is a recognized reference mark at or near the top of the well from which the depth to water level is usually measured and others are given in height above an assumed datum plane.

Acknowledgments for effective services in the preparation of this report are due Misses Dorothy Ireland and Thelma Walls, who typed the offset copy, and to Mrs. Bertha Dale, who prepared the illustrations.

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. The wells were selected because the fluctuations of water level in them are believed to be typical, and

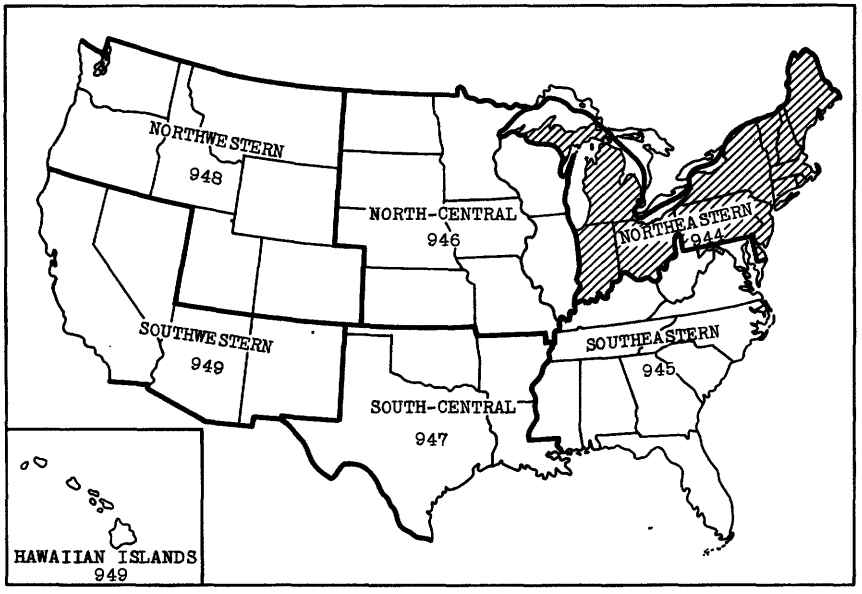

Figure 1.--Outline map of the United States, showing sections of the country covered by the six water-supply papers on water levels and artesian pressure in observation wells in 1942. The shaded section represents the part of the country covered by this volume.

they represent the general fluctuations that occur in the parts of the country in which the wells are situated. At the end of 1942 the network included about 130 wells in 40 States. About 40 of the wells were established expressly for the network in 1942; the other 90 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.

GENERAL SUMMARY OF CHANGES IN GROUND-WATER LEVEL IN 1942 IN THE NORTHEASTERN PART OF THE UNITED STATES

In 1942 the precipitation in all the States in the northeastern section was above normal and, as a result, the water levels in many wells of the section were maintained at comparatively high stages. The fluctuations of water level and artesian pressure in wells depend, however, on many factors besides the amount of precipitation. Consequently, it is usually not possible to find a simple relation between the changes in water level or artesian pressure and the departure from normal precipitation.

The following statements are taken chiefly from the interpretive texts that appear in this volume under the several States. They summarize the changes in ground-water level and artesian pressure that occurred in 1942 in the parts of the underground reservoirs that are tapped by the observation wells in the northeastern States.

Connecticut.--Of the 22 wells in New Haven County on which observations were made during the year, 21 showed net rises in water level and 1 showed a net decline. The rises in the 21 wells ranged from 0.29 foot to about 2.20 feet and averaged about 1.20 feet. The decline in the one well, which is at an industrial plant and is affected by the pumping of nearby wells, was 0.09 foot.

Indiana.--Essentially complete records of water levels were obtained in 1942 for 35 wells, 12 of which are in Indianapolis, Marion County, and the remainder distributed over the State. In the wells situated outside Indianapolis the water levels were a little more than 2 feet higher on January 1, 1943, than on January 1, 1942. The low stages in 1942 averaged a little more than a foot higher than those of 1941, and thus were about a foot higher than those of 1940 and only slightly higher than those of 1939.

Water levels in the observation wells in Marion County averaged about 0.6 foot higher in the spring of 1942 than in the spring of 1941, and on January 1, 1943, they averaged about 1.8 feet higher than on January 1, 1942. New record low stages due to increased pumpage from nearby wells were observed in 1942 in only two wells in Marion County.

Massachusetts.--All but 3 of the 32 observation wells in Massachusetts showed a net rise in water level during 1942, the 3 exceptions showing a net decline. Of the wells that showed a net decline two were affected by increased pumpage from nearby wells, particularly during December.

The relatively high stages of the ground-water levels near the end of 1942 are chiefly the result of heavy precipitation. The year 1942 is the first year since water-level measurements were begun, in 1939, in which above-normal precipitation has occurred; the precipitation in 1942 was about 3 inches greater than the average for the preceding 10 years and about 12 inches greater than in 1941.

Michigan.--At the end of 1942 the average of the water levels in 33 wells in the northern part of the Lower Peninsula was several tenths of a foot lower than the record high year-end stage of 1941 but a few tenths of a foot higher than the average for the entire period of record. The water level in the Roscommon well, a key well in Roscommon County, declined about 1 foot during the year. Ground-water conditions in the southern part of the Lower Peninsula, as shown by observation wells in Ann Arbor, Battle Creek, Kalamazoo, Jackson, Lansing, Pontiac, and Three Rivers, were on the whole somewhat better in 1942 than in 1941, owing to the excess in precipitation. The average daily pumpage decreased in 1942 at five of these cities and increased at two. The water levels in the observation wells averaged somewhat more than 1 foot higher in 1942 than in 1941.

New Jersey.--The Morrell well, a shallow well near Old Bridge, Middlesex County, is considered one of the best indices of shallow ground-water storage for the general region in which it is situated. The records obtained from the Morrell well in 1942 indicate that there was only a small gain in ground-water storage during the first 3 months of the year and that for the next 5 months storage decreased progressively, owing to a combination of below-normal precipitation and heavy vegetal demands. Increased precipitation in the last 5 months of the year produced appreciable recharge, however, and by the end of the year storage was back to normal.

New lows of water level were established in 1942 by 11 wells in Middlesex County. Two of these tap the Farrington sand member of the Raritan formation (the No. 1 sand of earlier reports), and the other nine tap the Old Bridge sand member of the Raritan formation (the No. 3 sand of earlier reports). These new lows are thought to be due to pumping, with the exception of that in the Fischer well (No. 28.4.4.2.1), which is too far from any center of pumping to be appreciably affected by it.

In the Penns Grove area, in Salem County, nine wells reached new lows in 1942. All are within the influence of heavy pumping.

The water levels in 1942 in the 500-foot sand in the Atlantic City area were slightly higher in the summer and slightly lower in the fall and winter than in the same seasons of the preceding year. This was due to a change in the rate of pumping by military establishments in this area. There were, however, the usual seasonal fluctuations, that is, higher levels in the winter, when pumping is light, than in the summer, when it is heavy.

New York.--During 1942 a general rise in ground-water levels occurred in Kings County, at the western end of Long Island, where excessive pumping has lowered the water table below sea level in an area of more than 45 square miles. Prior to 1942 water levels had been progressively declining for a considerable period of time. The rise in 1942 is believed to be chiefly the result of a general decrease in pumpage in the area. In the other three Long Island counties, particularly in Nassau and Suffolk Counties, the major fluctuations of ground-water level in most areas are chiefly the result of differences in the amount and distribution of precipitation. There was a considerable rise in the water levels of most of the observation wells in these counties during 1942.

Ohio.--Ground-water levels in the Mill Creek and Miami Valleys, Butler and Hamilton Counties, fluctuated differently in different parts of these valleys, the character of the fluctuations depending in general on the magnitude of the pumpage in each part. In the Middletown area, the water levels in shallow water-bearing beds rose during the period January to April--slightly in January, 2 to 6 feet in February, and 2 to 4 feet more in April. They declined rapidly in May, fluctuated within narrow limits during June and July, and then declined until late in November. The lowest levels reached in November were 2 to 4 feet higher than the lowest levels reached during 1941. In the Hamilton area the lowest levels reached during the fall of 1942 were in general slightly higher than those reached in December 1941. In the Miami Valley, south of Hamilton, and in the Divide area, between the Mill Creek and Miami Valleys, the lowest levels reached during 1942 were 1 to 3 feet higher than the lowest levels reached during 1941. In the Mill Creek Valley, south of the Hamilton County line, water

levels in the deeper water-bearing beds in general declined during the entire year. The decline was probably caused mainly by an increase in pumpage in the Lockland area. The lowest stages reached during 1942 were 2 to 18 feet lower than the lowest stages reached during 1941. In the lower Mill Creek Valley, in the stretch from Carthage to St. Bernard, water levels continued to decline during 1942 at approximately the same annual rate as previously--about 3 feet.

Pennsylvania.--The average of the water levels in about 25 observation wells distributed throughout the State and unaffected by pumping was somewhat below normal at the beginning of 1942. Below-normal stages continued until about the middle of March, when the water levels rose slightly above the 10-year average. They fluctuated seasonally until the middle of May, when heavy precipitation caused them, on the average, to rise to the highest stages recorded since 1931. They remained at or near record high stages for the remainder of the year.

CONNECTICUT

NEW HAVEN COUNTY

By John G. Ferris

The investigation of ground-water conditions in the New Haven area was continued in 1942 by the Geological Survey, United States Department of the Interior, in cooperation with the Connecticut State Water Commission. At the end of the year water-level measurements were being made in 22 observation wells. A continuous record of water level was obtained from one well equipped with an automatic water-stage recorder; the remaining wells were measured weekly up to October 2 and monthly thereafter. In all, about 1,000 individual measurements of water level were made during the year.

The monthly program of collecting samples of ground water for determination of chloride content, started on July 30, 1941, was continued in 1942 with the collection of about 240 samples of ground water from 20 pumping plants in the city of New Haven. The determinations of the chloride content of these samples were made by the Connecticut State Agricultural Experiment Station, at New Haven, under the direction of Dr. E. M. Bailey, chemist.

In addition to the work in New Haven, reconnaissance surveys of ground-water conditions have been made at Berlin, Bridgeport, Middletown, New London, Plainville, Stamford, Waterbury, and West Haven. These surveys indicate that relatively large quantities of ground water are pumped in Bridgeport and Waterbury and that ground-water problems may become critical in these areas. More general information indicates that ground-water problems may exist in other towns in the State that have not been surveyed. The results of these reconnaissance surveys serve as a guide in determining where more intensive investigations of ground-water conditions should be conducted.

As an aid in studying the results of the water-level measurement and chloride-sampling programs, the city of New Haven has been divided into four somewhat arbitrary areas based on the chief use of ground water in each area. The boundaries of these areas were shown on a map of New Haven published in a previous report.[1/] The "Residential area" comprises the north upland part of the town, where there are relatively few wells, most

[1/] Water levels and artesian pressure in observation wells in the United States in 1941: U. S. Geol. Survey Water-Supply Paper 936, p. 7, 1942.

of which are of small capacity. However, at widely separated locations in this area, there are a few industrial plants that pump considerable 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 storing meat and dairy products. The "Industrial area" is 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 follows:

Summary of data on ground-water levels in New Haven, Conn.

Well No.	First measured	Lowest observed water level with reference to mean sea level		Highest observed water level with reference to mean sea level		Reference to mean sea level Dec. 30, 1942
		Water level (feet)	Date	Water level (feet)	Date	
Residential area						
NHn 170	June 23, 1939	+15.64	Jan. 14, 1942	+18.41	June 23, 1939	+17.07
NHn 175	June 23, 1939	+2.27	Dec. 17, 1941	+4.51	June 23, 1939	+3.18
NHn 183	Dec. 13, 1939	+2.67	Dec. 3, 1941	+5.88	June 12, 1940	+4.13
NHn 270	May 21, 1941	+3.78	Dec. 17, 1941	+5.51	Sept. 17, 1942	+5.26
Air-conditioning area						
NHn 120	May 23, 1939	+2.60	Aug. 20, 1942	+9.24	May 23, 1939	+4.92
NHn 123	Feb. 22, 1941	-1.06	Aug. 13, 1942	+2.15	May 14, 1941	.....
NHn 126	Jan. 22, 1941	(a)	(a)	+2.63	Feb. 19, 1941	+1.98
NHn 128	May 31, 1939	+13.58	Aug. 27, 1941	+17.66	May 31, 1939	+15.17
Cold-storage area						
NHn 108	May 12, 1939	-2.36	Sept. 17, 1941	+1.26	May 8, 1940	-.43
NHn 110	May 12, 1939	-2.16	Nov. 12, 1941	+.51	May 12, 1939	-1.24
Industrial area						
NHn 131	June 1, 1939	-5.38	Dec. 10, 1941	-2.06	Feb. 19, 1941	-3.33
NHn 138	Feb. 28, 1940	-5.60	Dec. 10, 1941	-1.83	Jan. 2, 1941	-3.21
NHn 149	June 13, 1939	+1.08	Nov. 12, 1941	+3.25	June 30, 1939	+2.97
NHn 159	June 7, 1939	-16.40	Mar. 11, 1942	-4.11	June 12, 1939	-11.03
NHn 160	June 7, 1939	-13.72	Oct. 1, 1941	+4.15	Mar. 6, 1940	+2.51
NHn 178	July 21, 1939	-5.75	Mar. 11, 1942	+.04	June 12, 1939	-2.99
NHn 179	July 21, 1939	-5.19	Mar. 11, 1942	-.17	July 17, 1940	-3.07
NHn 235	Oct. 2, 1940	-1.65	Jan. 28, 1942	+.05	Sept. 3, 1942	-.36
NHn 245	Oct. 2, 1940	-1.07	Oct. 8, 1941	+.57	Nov. 20, 1940	.....
NHn 250	Oct. 9, 1940	+2.63	Feb. 25, 1942	+4.79	Oct. 9, 1940	+3.21

The preceding table shows that the ground-water level in all but two observation wells in New Haven reached its lowest observed stage in the latter part of 1941 or the early part of 1942. The water level in wells NHn 120 and NHn 123, which are located in the Air-conditioning area, reached its lowest observed stage in August 1942. All wells in this area generally reach their lowest stage in the latter part of August. About this time

a Well pumped during air-conditioning.

there is a relatively large decrease in pumping for air conditioning, owing to the advent of cooler weather. Wells NHn 120 and 123 are considerably nearer the center of the air-conditioning pumping area than well NHn 128 and have shown a persistent downtrend in water level since the beginning of record. A large part of the air-conditioning installations were made shortly before or after the start of water-level measurements in New Haven. The progressive decline of water levels in the Air-conditioning area will probably continue until a stage is reached that is commensurate with the higher rate of ground-water withdrawal in the area.

It will be noted that the lowest water levels in all the wells in the Residential area occurred within a relatively short period. This is true, also, of the wells in the Air-conditioning and Cold-storage areas. In the Industrial area, however, the times of occurrence of the lowest stages of the wells were spread over a 6-month period. Presumably, the wide range in the time of occurrence of the lowest stage in the Industrial area is the result of large variations in the rate of withdrawal at many of the manufacturing plants.

The following table shows the net change in ground-water levels in wells in New Haven during 1942:

Net change in ground-water levels in New Haven, Conn., during 1942

Area	Well No.	Net change in water level during 1942 (feet)
Residential	NHn 170	+1.42
	NHn 175	+.89
	NHn 183	+1.30
	NHn 270	+1.35
Air-conditioning	NHn 120	+.86
	NHn 126	+.83
	NHn 128	+1.54
Cold-storage	NHn 108	+.84
	NHn 110	+.75
Industrial	NHn 131	+1.73
	NHn 138	+1.60
	NHn 149	+1.42
	NHn 159	+.68
	NHn 160	-.09
	NHn 178	+2.20
	NHn 179	+1.64
	NHn 235	+1.10
	NHn 250	+.29

It will be noted from the table that the water level in all the wells in New Haven except well NHn 160 showed a net rise during the year. Well NHn 160 is located at an industrial plant in the Mill River area, and the water level in it is affected by changes in the rate of pumping in nearby wells.

The precipitation at New Haven in 1942 was 57.71 inches, or about 21 inches greater than in 1941 and about 12 inches above normal. The only months with appreciably below-normal precipitation were February, April, and September. Considerable recharge to the ground-water table occurred during the latter part of March and all of April as a result of the above-normal precipitation in March. With the start of the growing season in May, the water table declined at a relatively uniform rate through May, June, July, and the first part of August. In mid-August the water table rose rapidly as the result of recharge from the above-normal precipitation in July and August. Below-normal rainfall in September caused a decline of the water table during the latter part of September and all of October. The reduction in plant-moisture demands after October, in addition to the above-normal precipitation in November and December, resulted in a rise of ground-water levels toward the end of the year. The excess of precipitation and its somewhat favorable distribution were, in large part, the cause of the high water levels in New Haven at the end of 1942.

An inventory of industrial plants in New Haven in 1939 and 1940 indicated that more than 80 plants use ground water as a part of their industrial supply and that their combined daily withdrawal is somewhat less than 4 million gallons. Available information shows that the average daily withdrawal of ground water in 1942 was about 200,000 gallons in the Residential area, more than 400,000 gallons in the Air-conditioning area, more than 600,000 gallons in the Cold-storage area, and about 2,700,000 gallons in the Industrial area.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Observation wells in New Haven County are listed numerically. Complete descriptions are given for only newly added wells. The numbers in parentheses immediately following a well number indicate 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 on that page. The water level in each well is expressed in feet and referred to mean sea level.

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

Water level, in feet below mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	1.19	Mar. 25	0.72	June 11	1.06	Aug. 20	1.37
14	1.12	Apr. 1	.67	18	1.20	27	1.30
21	1.15	8	.81	25	1.31	Sept. 3	1.26
28	1.14	15	.69	July 2	1.47	10	1.31
Feb. 4	1.03	22	.75	9	1.51	17	1.37
11	.94	29	.82	16	1.58	25	1.29
18	.86	May 6	.95	23	1.69	Oct. 2	1.19
25	.83	13	.89	30	1.70	30	.86
Mar. 4	.96	20	.79	Aug. 6	1.67	Nov. 27	.74
11	.87	28	.93	13	1.57	Dec. 30	.43
18	.83	June 4	.98				

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

Water level, in feet below mean sea level, 1942

Jan. 7	1.96	Mar. 25	1.48	June 11	1.37	Aug. 20	1.66
14	1.89	Apr. 1	1.44	18	1.38	27	1.65
21	1.36	8	1.43	25	1.41	Sept. 3	1.65
28	1.81	15	1.40	July 2	1.46	10	1.65
Feb. 4	1.76	22	1.39	9	1.48	17	1.65
11	1.72	29	1.37	16	1.52	25	1.66
18	1.67	May 6	1.37	23	1.56	Oct. 2	1.66
25	1.61	13	1.37	30	1.60	30	1.56
Mar. 4	1.56	20	1.36	Aug. 6	1.63	Nov. 27	1.45
11	1.55	28	1.36	13	1.65	Dec. 30	1.24
18	1.51	June 4	1.36				

NHn 117 (*886, p. 59; 906, p. 8; 936, p. 12). The New York, New Haven, & Hartford Railroad Co. On east side of State Street, about 200 feet south of Chapel Street, New Haven. Measurements discontinued Mar. 4, 1942.

Water level, in feet below mean sea level, 1942

Jan. 7	0.31	Jan. 21	0.32	Feb. 11	0.24	Feb. 25	0.21
14	.30	28	.30	18	.25	Mar. 4	.12

NHn 120 (*886, p. 59; 906, p. 9; 936, p. 12). Roger Sherman Theater. On northwest side of College Street, about 160 feet northeast of Crown Street, New Haven.

Water level, in feet above mean sea level, 1942

Jan. 7	3.99	Mar. 25	4.29	June 11	4.29	Aug. 20	2.60
14	3.85	Apr. 1	4.44	18	4.16	27	3.18
21	3.78	8	4.53	25	3.85	Sept. 3	3.25
28	3.76	15	4.67	July 2	3.58	10	3.35
Feb. 4	3.72	22	4.82	9	3.40	17	3.22
11	3.69	29	4.99	16	3.27	25	3.69
18	3.77	May 6	5.09	23	3.07	Oct. 2	4.14
25	3.74	13	5.22	30	2.77	30	5.01
Mar. 4	3.85	20	5.23	Aug. 6	2.92	Nov. 27	5.18
11	3.96	28	4.95	13	2.61	Dec. 30	4.92
18	4.14	June 4	4.97				

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

Water level, in feet, with reference to mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	+0.56	Mar. 18	+.68	May 28-	+1.32	Aug. 6	-1.01
14	+.41	25	+.80	June 4	+1.26	13	-1.06
21	+.46	Apr. 1	+.93	11	+.69	20	-.75
28	+.40	8	+1.06	18	+.55	27	-.47
Feb. 4	+.26	15	+1.18	25	+.19	Sept. 3	-.76
11	+.29	22	+1.34	July 2	-.18	17	-.42
18	+.34	29	+1.57	9	- .25	Oct. 2	+.55
25	+.36	May 6	+1.65	16	-.44	Oct. 30	+1.55
Mar. 4	+.47	13	+1.77	23	-.69	Nov. 27	+1.50
11	+.57	20	+1.71				

NHn 126 (*936, p. 13). Liggett Drug Store. On east side of Church Street, about 100 feet north of Chapel Street, New Haven.

Water level, in feet above mean sea level, 1942

Jan. 7	1.15	Feb. 11	1.03	Mar. 18	1.23	Apr. 22	1.62
14	1.09	18	1.02	25	1.35	Oct. 2	1.09
21	1.01	25	1.04	Apr. 1	1.42	30	1.82
28	1.01	Mar. 4	1.08	8	1.48	Nov. 27	2.07
Feb. 4	.99	11	1.15	15	1.53	Dec. 30	1.98

NHn 128 (*886, p. 59; 906, p. 9; 936, p. 13). United Restaurant. On southwest side of Chapel Street, about 80 feet northwest of York Street, New Haven.

Water level, in feet above mean sea level, 1942

Jan. 7	13.61	Mar. 25	14.06	June 11	14.23	Aug. 20	14.00
14	13.66	Apr. 1	14.30	18	14.24	27	14.27
21	13.71	8	14.40	25	14.15	Sept. 3	14.28
28	13.72	15	14.48	July 2	14.03	10	14.40
Feb. 4	13.71	22	14.54	9	14.00	17	14.33
11	13.85	29	14.48	16	13.96	25	14.59
18	13.90	May 6	14.54	23	13.90	Oct. 2	14.68
25	13.91	13	14.44	30	13.80	30	14.68
Mar. 4	13.96	20	14.42	Aug. 6	13.85	Nov. 27	14.86
11	14.03	28	14.43	13	13.78	Dec. 30	15.17
18	14.09	June 4	14.37				

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

Water level, in feet below mean sea level, 1942

Jan. 7	4.90	Mar. 25	3.38	June 11	4.52	Aug. 20	3.63
14	5.00	Apr. 1	3.33	18	4.63	27	3.43
21	4.51	8	3.17	25	4.62	Sept. 3	3.30
28	4.30	15	3.11	July 2	4.05	10	3.19
Feb. 4	4.15	22	3.86	9	3.73	17	3.39
11	3.90	29	4.33	16	3.80	25	3.24
18	3.68	May 6	4.40	23	3.83	Oct. 2	3.26
25	3.56	13	4.46	30	3.86	30	3.63
Mar. 4	3.50	20	4.43	Aug. 6	3.95	Nov. 27	3.65
11	3.45	28	4.55	13	3.84	Dec. 30	3.33
18	3.40	June 4	4.47				

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

NHn 138 (*906, p. 9; 936, p. 14)--Continued.

Water level, in feet below mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	4.98	Mar. 25	4.50	June 11	4.38	Aug. 20	3.41
14	4.87	Apr. 1	4.49	18	4.54	27	3.25
21	5.22	8	4.30	25	4.57	Sept. 3	3.17
28	5.17	15	4.35	July 2	3.53	10	2.98
Feb. 4	5.03	22	4.41	9	3.40	17	3.34
11	4.78	29	4.57	16	3.48	25	2.90
18	4.66	May 6	4.39	23	3.66	Oct. 2	3.20
25	4.66	13	4.37	30	3.83	30	3.65
Mar. 4	4.62	20	4.32	Aug. 6	3.70	Nov. 27	3.65
11	4.54	28	4.33	13	3.64	Dec. 30	3.21
18	4.54	June 4	4.30				

NHn 149 (*886, p. 60; 906, p. 10; 936, p. 14). Seamless Rubber Co. On east side of Hallock Avenue, about 200 feet south of Second Street, New Haven.

Water level, in feet above mean sea level, 1942

Jan. 7	2.15	Mar. 25	2.05	June 11	2.10	Aug. 20	2.25
14	1.88	Apr. 1	2.10	18	2.20	27	2.42
21	1.82	8	2.17	25	2.45	Sept. 3	2.39
28	1.76	15	2.12	July 2	2.22	10	2.45
Feb. 4	1.61	22	2.09	9	2.32	17	2.41
11	1.69	29	2.10	16	2.08	25	2.44
18	1.71	May 6	2.06	23	2.03	Oct. 2	2.24
25	1.76	13	2.26	30	2.38	30	2.16
Mar. 4	1.97	20	2.08	Aug. 6	2.07	Nov. 27	2.36
11	1.95	28	2.14	13	2.13	Dec. 30	2.97
18	2.07	June 4	2.16				

NHn 152 (*886, p. 60; 906, p. 10; 936, p. 14). A. C. Gilbert Co. About 220 feet north of Peck Street and about 330 feet east of Blatchley Avenue, New Haven.

Water level, in feet above mean sea level, 1942

Jan. 7	10.88	Mar. 25	12.83	June 4	12.27	Aug. 20	12.43
14	10.53	Apr. 1	13.24	11	12.00	27	15.10
21	10.30	8	13.17	18	11.86	Sept. 3	15.22
28	10.17	15	13.08	25	11.71	10	15.21
Feb. 4	10.29	22	12.91	July 2	11.61	17	15.04
11	10.88	29	12.67	9	12.27	25	14.83
18	10.77	May 6	12.43	16	12.26	Oct. 2	14.74
25	10.75	13	12.18	23	12.34	30	14.15
Mar. 4	10.64	20	12.42	Aug. 6	12.91	Nov. 27	14.12
11	11.30	28	12.50	13	13.12	Dec. 30	14.26
18	12.11						

NHn 159 (*886, p. 61; 906, p. 11; 936, p. 15). National Folding Box Co. About 270 feet north of Alton Street and about 250 feet west of James Street, New Haven.

Water level, in feet below mean sea level, 1942

Jan. 7	12.33	Mar. 25	15.98	June 11	13.16	Aug. 20	12.33
14	15.17	Apr. 1	14.75	18	13.56	27	12.42
21	15.10	8	11.81	25	13.57	Sept. 3	11.85
28	15.17	15	13.66	July 2	11.18	10	11.29
Feb. 4	15.59	22	14.05	9	9.91	17	11.83
11	16.11	29	13.93	16	12.06	25	9.49
18	15.96	May 6	13.82	23	12.51	Oct. 2	9.81
25	15.27	13	13.37	30	12.44	30	11.75
Mar. 4	15.97	20	10.98	Aug. 6	12.56	Nov. 27	8.86
11	16.40	28	13.59	13	12.44	Dec. 30	11.03
18	15.94	June 4	13.49				

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NHn 160 (*886, p. 61; 906, p. 11; 936, 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 above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	2.36	Mar. 18	3.18	May 28	1.23	Aug. 20	3.35
14	2.13	25	3.12	June 11	1.04	27	2.64
21	2.25	Apr. 1	2.75	18	1.04	Sept. 3	2.19
28	1.70	8	2.33	July 2	1.22	10	1.73
Feb. 4	1.75	15	2.10	9	1.63	17	1.13
11	1.82	22	1.59	16	1.57	25	1.17
18	1.68	29	1.24	23	1.49	Oct. 2	1.06
25	1.38	May 6	1.06	30	2.13	30	1.50
Mar. 4	2.23	13	1.28	Aug. 6	1.79	Nov. 27	1.73
11	2.79	20	1.51	13	2.26	Dec. 30	2.51

NHn 168 (*886, p. 61; 906, p. 11; 936, p. 15). Story Dairy. About 120 feet south of Bailey Street and about 180 feet east of Ferry Street, New Haven.

Water level, in feet above mean sea level, 1942

Jan. 7	5.81	Mar. 25	6.72	June 11	6.93	Aug. 20	7.51
14	5.68	Apr. 1	6.88	18	6.95	27	7.63
21	5.69	8	7.04	25	6.84	Sept. 3	7.84
28	5.78	15	7.04	July 2	6.86	10	7.86
Feb. 4	5.34	22	7.07	9	6.87	17	7.86
11	6.14	29	7.10	16	6.78	25	7.82
18	5.94	May 6	6.97	23	6.92	Oct. 2	7.74
25	6.14	13	6.97	30	7.02	30	7.55
Mar. 4	6.31	20	7.02	Aug. 6	6.96	Nov. 27	7.67
11	6.35	28	7.01	13	7.04	Dec. 30	8.01
18	6.62	June 4	6.99				

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

Water level, in feet above mean sea level, 1942

Jan. 7	15.65	Mar. 25	16.23	June 11	16.89	Aug. 20	16.72
14	15.64	Apr. 1	16.41	18	16.83	27	17.03
21	15.66	8	16.61	25	16.77	Sept. 3	17.15
28	15.69	15	16.79	July 2	16.73	10	17.23
Feb. 4	15.75	22	16.90	9	16.69	17	17.26
11	15.83	29	16.97	16	16.64	25	17.32
18	15.91	May 6	17.00	23	16.60	Oct. 2	17.16
25	15.97	13	17.01	30	16.56	30	16.97
Mar. 4	16.01	20	17.00	Aug. 6	16.54	Nov. 27	16.87
11	16.04	28	16.97	13	16.52	Dec. 30	17.07
18	16.12	June 4	16.95				

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

Water level, in feet above mean sea level, 1942

Jan. 7	2.32	Mar. 25	2.85	June 11	3.32	Aug. 20	3.06
14	2.30	Apr. 1	3.00	18	3.31	27	3.09
21	2.28	8	3.09	25	3.31	Sept. 3	3.14
28	2.31	15	3.17	July 2	3.28	10	3.17
Feb. 4	2.34	22	3.20	9	3.26	17	3.21
11	2.40	29	3.23	16	3.21	25	3.23
18	2.45	May 6	3.26	23	3.15	Oct. 2	3.22
25	2.52	13	3.28	30	3.11	30	3.19
Mar. 4	2.57	20	3.29	Aug. 6	3.08	Nov. 27	3.14
11	2.66	28	3.31	13	3.05	Dec. 30	3.18
18	2.78	June 4	3.31				

NHn 178 (*886, p. 63; 906, p. 12; 936, 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 below mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	5.04	Mar. 25	5.44	June 4	4.40	Aug. 20	3.43
14	5.44	Apr. 1	4.95	11	4.35	27	3.20
21	5.56	8	4.77	18	4.45	Sept. 3	3.21
28	5.56	15	4.59	25	4.50	10	2.98
Feb. 4	5.58	22	4.75	July 2	3.81	17	3.12
11	5.67	29	4.70	9	4.01	25	3.09
18	5.65	May 6	4.66	16	3.44	Oct. 2	3.09
25	5.52	13	4.49	23	3.81	30	3.19
Mar. 4	5.61	20	4.42	Aug. 6	3.87	Nov. 27	3.23
11	5.75	28	4.50	13	3.64	Dec. 30	2.99
18	5.51						

NHn 179 (*886, p. 63; 906, p. 13; 936, 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 below mean sea level, 1942

Jan. 7	4.84	Mar. 25	4.91	June 4	4.00	Aug. 20	3.38
14	4.95	Apr. 1	4.58	11	3.95	27	3.18
21	5.06	8	4.33	18	4.02	Sept. 3	3.06
28	5.06	15	4.23	25	4.03	10	2.86
Feb. 4	5.09	22	4.30	July 2	3.62	17	3.04
11	5.10	29	4.27	9	3.58	25	2.98
18	5.13	May 6	4.23	16	3.49	Oct. 2	3.05
25	5.02	13	4.10	23	3.53	30	3.20
Mar. 4	5.08	20	4.05	Aug. 6	3.60	Nov. 27	3.33
11	5.19	28	4.05	13	3.51	Dec. 30	3.07
18	5.02						

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

Water level, in feet above mean sea level, 1942

Jan. 7	2.86	Mar. 25	3.71	June 11	3.81	Aug. 20	3.61
14	2.82	Apr. 1	3.97	18	3.73	27	3.96
21	2.84	8	4.08	25	3.68	Sept. 3	4.08
28	2.90	15	4.14	July 2	3.61	10	4.08
Feb. 4	2.97	22	4.14	9	3.58	17	4.02
11	3.08	29	4.09	16	3.52	25	3.89
18	3.15	May 6	3.97	23	3.46	Oct. 2	3.85
25	3.21	13	4.00	30	3.41	30	3.73
Mar. 4	3.21	20	4.01	Aug. 6	3.36	Nov. 27	3.76
11	3.31	28	3.93	13	3.33	Dec. 30	4.13
18	3.49	June 4	3.86				

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

Water level, in feet, with reference to mean sea level, 1942

Jan. 7	-1.52	Mar. 25	-1.09	June 4	-1.04	Aug. 20	-0.09
14	-1.62	Apr. 1	-1.04	11	-.82	27	+.02
21	-1.64	8	-1.00	18	-.79	Sept. 3	+.05
28	-1.65	15	-.98	25	-.99	10	.00
Feb. 4	-1.56	22	-.97	July 2	-1.02	17	-.22
11	-1.51	29	-.99	9	-.94	25	-.14
18	-1.47	May 6	-1.06	16	-.90	Oct. 2	-.43
25	-1.44	13	-1.05	23	-.73	30	-.62
Mar. 4	-1.37	20	-1.00	Aug. 6	-.54	Nov. 27	-.41
11	-1.30	28	-1.06	13	-.44	Dec. 30	-.36
18	-1.22						

NHn 245 (*906, p. 15; 936, p. 18). Atlantic Bottling Works. On south side of Fair Street, about 90 feet east of Prindle Street, New Haven.

Water level, in feet, with reference to mean sea level, 1942

	Water level		Water level		Water level		Water level
Jan. 7	-0.56	Mar. 25	+0.02	June 4	-0.13	Aug. 13	+0.06
14	-.56	Apr. 1	+.01	11	-.03	20	+.37
21	-.50	8	-.11	18	-.07	27	+.19
28	-.58	15	-.05	25	-.14	Sept. 3	+.12
Feb. 4	-.44	22	-.11	July 2	-.30	10	-.04
11	-.35	29	-.17	9	-.23	17	-.12
18	-.32	May 6	-.27	16	-.27	25	-.19
25	-.32	13	-.25	23	-.35	Oct. 2	-.21
Mar. 4	-.27	20	-.07	30	-.12	30	-.07
11	-.17	28	-.14	Aug. 6	-.16	Nov. 27	.00
18	-.06						

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

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	2.95	2.79	2.73	2.97	3.56	.....
2	2.91	2.76	2.66	2.99	3.59	.....
3	2.92	2.70	2.69	3.01	3.69	.....
4	3.01	2.71	2.75	3.08	3.65	a3.75
5	2.92	2.71	2.74	3.16	3.60	3.73
6	2.85	2.67	2.75	3.15	3.60	3.75
7	2.79	2.69	2.73	3.11	3.64	3.77
8	2.76	2.82	2.75	3.13	3.68	3.82
9	2.77	2.83	2.81	3.14	3.71	3.72
10	2.83	2.70	2.76	3.17	3.81	3.67
11	2.91	2.65	2.76	3.22	3.77	3.59
12	2.77	2.66	2.78	3.30	3.77	3.59
13	2.73	2.68	2.76	3.24	3.76	3.60
14	2.74	2.70	2.77	3.26	3.72	3.62
15	2.76	2.76	2.83	3.28	3.70	3.64
16	2.75	2.74	2.83	3.26	3.73	3.58
17	2.77	2.76	2.80	3.27	3.86	3.56
18	2.85	2.75	2.77	3.32	3.82	3.50
19	2.74	2.74	2.76	3.44	3.79	3.50
20	2.79	2.72	2.77	3.44	a3.82	3.50
21	2.79	2.73	2.79	3.44	....	3.50
22	2.79	2.75	2.90	3.42	....	3.42
23	2.80	2.69	3.02	3.46	....	3.35
24	2.82	2.65	2.98	3.46	....	3.34
25	2.90	2.63	2.93	3.49	....	3.32
26	2.81	2.64	2.95	3.55	....	3.32
27	2.79	2.66	2.98	3.58	....	3.35
28	2.73	2.68	3.01	3.59	a3.76	3.38
29	2.68	....	3.08	3.56	....	3.30
30	2.66	....	3.06	3.56	....	3.29
31	2.69	....	3.00	....	....	.....

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3.22	2.95	3.32	3.46	3.72	....
2	3.22	3.02	3.31	3.48	3.81	3.68
3	3.26	2.97	3.27	3.51	a3.78	3.59
4	3.29	2.89	3.29	3.60	3.72	3.57
5	3.47	2.87	3.30	3.58	3.70	3.58
6	3.37	2.86	3.33	3.57	3.69	3.62
7	3.28	2.84	3.44	3.56	3.72	3.58
8	3.25	2.82	3.37	3.54	3.79	3.57

a Estimated.

NHn 250 (*906, p. 15; 936, p. 18)--Continued

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
9	3.21	2.85	3.31	3.55	3.79	3.55
10	3.20	2.99	3.30	....	3.80	3.49
11	3.22	2.97	3.29	....	3.84	3.48
12	3.26	2.90	3.32	....	3.79	3.48
13	3.26	2.87	3.35	....	3.81	3.52
14	3.16	2.89	3.41	....	3.78	3.53
15	3.15	2.89	3.37	....	3.79	3.52
16	3.13	2.91	3.37	....	3.81	....
17	3.13	3.14	3.38	....	3.74	....
18	3.12	3.23	3.40	....	3.76	....
19	3.14	3.32	3.40	....	3.76	....
20	3.11	3.33	3.41	....	3.77	....
21	3.05	3.32	3.48	a3.58	3.81	....
22	3.04	3.31	3.41	3.61	3.84	....
23	3.02	3.34	3.38	3.65	3.82	....
24	3.01	3.43	3.38	3.66	3.78	....
25	3.00	3.35	3.40	3.70	3.79	....
26	3.01	3.31	3.42	3.73	3.79	....
27	2.99	3.28	3.51	3.67	3.80	....
28	3.04	3.27	3.52	3.67	3.79	....
29	2.99	3.30	3.47	3.68	3.78	....
30	2.95	3.36	3.46	3.72	3.75	a3.18
31	2.93	3.37	....	3.72	....	3.21

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

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	3.90	Mar. 25	4.60	June 11	5.20	Aug. 20	4.99
14	3.90	Apr. 1	4.80	18	5.16	27	5.28
21	3.92	8	4.96	25	5.11	Sept. 3	5.42
28	3.94	15	5.06	July 2	5.04	10	5.48
Feb. 4	3.99	22	5.15	9	5.01	17	5.51
11	4.12	29	5.19	16	4.98	25	5.48
18	4.20	May 6	5.20	23	4.93	Oct. 2	5.42
25	4.27	13	5.21	30	4.86	30	5.15
Mar. 4	4.33	20	5.22	Aug. 6	4.88	Nov. 27	5.02
11	4.38	28	5.23	13	4.84	Dec. 30	5.26
18	4.48	June 4	5.22				

a Estimated.

INDIANA

By C. L. McGuinness

PROGRAM OF WORK

The cooperative ground-water investigation in Indiana, involving (1) a detailed investigation in the Indianapolis area and (2) the State-wide observation-well program, was continued in 1942 by the Geological Survey, United States Department of the Interior, and the Division of Geology of the Indiana State Department of Conservation.

A report on the first of these two projects entitled "Ground-water resources of the Indianapolis area, Marion County, Ind.," was prepared by the writer during 1942. It was mimeographed and issued on January 1, 1943, as a publication of the above-mentioned Division of Geology.

During 1942 water-level measurements were begun in 6 wells, resumed in 4 wells formerly measured, and discontinued in 12 wells. Measurements were made at least once during the year in 73 wells. At the end of the year periodic measurements were being made in about 50 wells, including 11 in the Indianapolis area. The measurements were made by members of the State Department of Conservation and of municipal water departments and by private individuals. They were made twice a month in most of the wells, once a month or once a week in a few wells, and daily in one well in Indianapolis. In all, about 1,525 individual measurements were made in 1942. Two float-type automatic water-stage recorders were in operation in wells in Indianapolis during the year.

Essentially complete records of water levels were obtained for only 35 wells in 1942, including 12 wells in Marion County, in which Indianapolis is situated. For a number of wells in which essentially complete records had been obtained in previous years, only partial records were obtained in 1942. Previous records for well 1 in Madison County were found to be incorrect, owing to the method used in making the measurements.

PRECIPITATION

The average precipitation in Indiana during 1942 was 41.19 inches, 1.99 inches above the average for the years since 1887. The precipitation was fairly evenly distributed throughout the year. January and October were the driest months, with 1.73 and 1.79 inches, respectively; June and November were the wettest, with 5.55 and 4.83 inches, respectively. The average precipitation during 1942 in the different parts of the State was as follows: Northern part, 40.24 inches, or 4.48 inches above normal; central part, 40.90 inches, or 1.85 inches above normal; southern part, 42.42 inches, or 0.38 inch below normal.

FLUCTUATIONS OF WATER LEVEL

Factors affecting the water levels

The observation wells in Marion County are affected by heavy pumping from wells in the Indianapolis area for industrial, air-conditioning, and municipal uses. The following wells are also affected by pumping, either from nearby wells or from themselves: Well 1 in DeKalb County; well 1 in Elkhart County; well 1 in Franklin County; well 2 in Hamilton County; well 3 in Howard County; well 1 in LaPorte County; well 1 and possibly well 2, in Porter County; well 1 in Randolph County; well 1 in St. Joseph County; well 1 in Scott County; wells 1, 2, and 3 in Starke County; and well 1 in White County. Although so stated in an earlier report, it is not believed that well 1 in Madison County is affected by pumping. On the whole, the effects of pumping are not as apparent in the wells just enumerated as in those in Marion County, and the major trends in the fluctuations of water levels in them are largely related to variations in precipitation. The water level in well 3 in Fulton County is affected by the position of the water level in a raceway only a few feet distant. In the other wells mentioned, the fluctuations in water level are largely or wholly related to changes in natural conditions, principally to variations in the amount and distribution of precipitation.

Wells in counties other than Marion County

In the wells in counties other than Marion County for which essentially complete records were obtained in 1942 the water levels averaged a little more than 2 feet higher on January 1, 1943, than on January 1, 1942.

Because the number of wells observed was smaller than usual, no quantitative comparison is made with years previous to 1941. It is apparent, however, that the water levels at the beginning of 1943 in these wells were higher than at the beginning of any year since 1937.

Because the average precipitation in Indiana in 1942 was above normal and was more or less normally distributed in most parts of the State, ground-water recharge in the State was probably at least normal during the year. On the whole the hydrographs of the observation wells show well-defined spring peaks in 1942. The high stages of 1942 in the wells outside Marion County occurred as early as January and as late as June, but in most wells they occurred in April or May. The high stages averaged nearly 2 feet higher than those of 1941 and slightly higher than those of 1940 but were somewhat lower than those of 1938 and 1939. Thus, although recharge was probably normal or above normal in 1942, the necessity for replacing the losses in storage that occurred in 1941 prevented the water levels from reaching unusually high stages during the spring of 1942.

The seasonal low stages in individual wells outside Marion County occurred as early as July and as late as December. In many wells the low stages occurred rather early--from July to September. In most wells the water levels recovered substantially before the end of the year, as shown by the high year-end stages.

In the wells outside Marion County that are not affected by pumping, no record low stages were observed in 1942, although the record low stage of 1941 was equaled in one well, namely, well 2 in Clark County. In well 1, in DeKalb County, which was affected by pumping from nearby wells, a new record low stage was observed. In the wells outside Marion County the low stages in 1942 averaged a little more than a foot higher than those of 1941, and were thus about a foot higher than those of 1940 and slightly higher than those of 1939.

Wells in Marion County

Water levels in the observation wells in Marion County are affected both by variations in precipitation and by heavy pumping. The precipitation at Indianapolis in 1942 was about 2 inches above normal, and, largely as a result of this, the total pumpage in the Indianapolis area averaged only about 47 million gallons a day, about 5 million gallons a day less than in 1941. The water levels showed a corresponding recovery. The spring high

stages of 1942 averaged about 0.6 foot higher than those of 1941, the fall low stages averaged nearly 2 feet higher than those of 1941, and on January 1, 1943, the water levels averaged about 1.8 feet higher than on January 1, 1942. New record low stages were observed in 1942 in only 2 wells in Marion County--wells 8 and 9-- and in both wells this was due to increased pumpage from nearby wells.

SUMMARY OF GROUND-WATER CONDITIONS IN 1942

The ground-water conditions in Indiana in 1942 were, on the whole, much improved over those in 1941, both in Marion County and in the rest of the State. This was due almost entirely to the above-normal precipitation, which (1) produced above-normal ground-water recharge, (2) reduced the discharge of ground water by evaporation and transpiration, and (3) increased the discharge of ground water by seepage into the streams. The increased flow in the streams that resulted from the increased ground-water discharge in the summer and fall of 1942 permitted the use of considerable quantities o surface water to be used in industry and for public supply at Indianapolis an doubtless at many other places in the State, replacing water that would otherwi have been pumped from wells. It is safe to say that if the droughts of 1940 and 1941 had been repeated in 1942 the effects on both ground- and surface-water supplies in Indiana would have been disastrous; there is no doubt that the production of war materials would have been seriously curtailed at Indianapolis and also at many other places.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Observation wells in Indiana are listed alphabetically by counties and numerically within each county. Complete descriptions are given only for newly added wells. The numbers in parentheses immediately following a well number indicate the water-supply paper in which they appear. An asterisk indicates that a description of the well is given in that paper. Names of the observers are given except for wells in which all measurements were made by the writer. The water level in each well is expressed in feet below a fixed measuring point.

Boone County

Boone 1 (*817,p.43; 840,p.73; 845,p.70; 886,p.97; 906,p.21; 936,p.23). Leland H. Dale. NW¼NW¼ sec. 23, T. 18 N., R. 1 W., about 3 miles south of Lebanon along State Highway 39. Water level, in feet below measuring point, 1942: Apr. 30, 4.40.

Boone 2(*817, p. 43; 840,p.73; 845,p.70; 886,p.97; 906,p.21; 936,p.23). R. W. Gorrell. SE¼SE¼ sec. 4, T. 18 N., R. 1 E., at east end of abandoned schoolhouse on south side of State Highway 32, about 3 miles east of Lebanon. Water level, in feet below measuring point, 1942: Apr. 30, 5.88.

Brown County

Brown 2 (*840,p.73;845,p.70; 886,p.98; 906,p.21; 936,p.23). Brown County State Park. Near head of valley northwest of Blockhouse. Measurements made by Paul Voland and Millard Thickstun, Brown County State Park, A. E. Weddle, superintendent.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 30	3.36	June 1	4.77	Oct. 1	8.7
May 7	3.31	July 1	4.03		

Brown 3 (*840,p.74;845,p.70; 886,p.98; 906,p.21; 936,p.23). Brown County State Park. In front of Hoosier's Nest cabin, near tower at entrance to Brown County State Game Preserve. Measurements made by Paul Voland and Millard Thickstun, Brown County State Park, A. E. Weddle, superintendent.

Water level, in feet below measuring point, 1942

Jan. 30	7.33	June 1	8.10	Oct. 1	9.7
May 7	8.12	July 1	4.32		

Clark County

Clark 1 (*840,p.74;845,p.70; 886,p.98; 906,p.21; 936,p.24). 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. Measurements made by Dewey N. Hickman, project superintendent, and G. N. Heller, CCC camp S-51-A, and Elliot D. Brigham and Bruce Bell, successive superintendents, Clark State Forest.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	26.2	Apr. 30	15.95	July 14	16.60	Sept.30	23.66
Mar. 1	15.54	May 16	18.65	31	19.45	Oct. 15	24.09
16	5.70	30	14.97	Aug. 15	21.15	31	24.45
Apr. 2	9.60	June 15	18.10	31	22.39	Nov. 30	24.95
15	9.10	July 1	13.75	Sept.15	23.11	Dec. 31	10.45

Clark 2 (*840,p.74;845,p.70; 886,p.98; 906;p.21; 936,p.24). Clark State Forest. At Purdue camp site. Measurements made by Dewey N. Hickman, project superintendent, and G. N. Heller, CCC camp S-51-A, and Elliot D. Brigham and Bruce Bell, successive superintendents, Clark State Forest.

Water level, in feet below measuring point, 1942

Jan. 6	13.95	Apr. 30	3.26	July 14	6.55	Sept.30	11.90
Mar. 1	12.33	May 16	1.60	31	8.10	Oct. 15	12.20
16	10.10	30	a13.95	Aug. 15	9.40	31	12.38
Apr. 2	5.40	June 15	5.20	31	10.21	Nov. 30	12.25
15	2.29	July 1	5.60	Sept.15	11.30	Dec. 31	11.57

Clay County

Clay 1 (*840,p.74; 845,p.71; 886,p.98; *906,p.22; 936,p.24). Measurements discontinued.

a Equals lowest water level on record.

De Kalb County

De Kalb 1 (*817,p.44; 840,p.75; 845,p.71; 886,p.98; 906,p.22; 936,p.24). Auburn Water Department well 3. At Auburn waterworks. Measurements made by Auburn Water Department, Ted Haynes, superintendent.

Water level, in feet below measuring point, 1942

Date	Static level	Pumping level	Date	Static level	Pumping level
Jan. 9	10.5	18.5	June 29	10.5	19.5
26	11.5	18.5	July 10	11.5	18.5
Feb. 11	11.5	19.5	27	a13.5	20.5
25	11.5	18.5	Aug. 11	10.5	18.5
Mar. 10	10.5	18.5	25	10.5	18.5
25	9.5	18.5	Sept.15	11.5	18.5
Apr. 10	10.5	18.5	28	11.5	18.5
25	a13.5	19.5	Oct. 12	10.5	18.5
May 11	8.5	16.5	Nov. 12	11.5	18.5
25	7.5	16.5	Dec. 24	11.5	18.5
June 11	11.5	19.5			

Dubois County

Dubois 2 (*840,p.75; 936,p.24). Ferdinand State Forest. On north side of road near foot of hill at entrance to forest. Measurements made by Emmeran Tretter, superintendent, Ferdinand State Forest.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 8	9.93	July 19	12.59	Sept.15	15.13	Nov. 14	15.91
June 4	12.35	Aug. 1	13.11	Oct. 3	15.48	Dec. 3	12.03
16	11.62	16	13.62	15	15.64	15	12.24
July 1	10.14	Sept. 1	15.08	Nov. 2	15.69		

Elkhart County

Elkhart 1 (*936,p. 24). Elkhart City Waterworks. "Bucklen" well at city water plant on east side of North Main Street and north side of Christiana Creek. Measurements made by Charles Stone, Elkhart City Waterworks, Warren Swartz, general foreman.

Water level, in feet below measuring point, 1942

Jan. 1	8.73	Feb. 16	8.52	Mar. 16	8.65	Apr. 16	8.8
16	8.5	Mar. 1	8.5	Apr. 1	8.75	May 1	8.65
Feb. 1	8.65						

Franklin County

Franklin 1 (*840,p.75; 845,p.71; 886,p.99). Brookville Water Department. At south end of pumping plant, in Brookville. New measuring point, top of air line at base of turbine pump, approximately 3.5 feet above former measuring point. Air line is 100 feet long. Measurements made by W. L. Dare, engineer in charge, Brookville Water Department. The average daily pumpage from the two wells at the Brookville waterworks during the period April 6 to Nov. 24, 1942, was about 246,000 gallons, whereas during an equivalent period in 1939 it was only about 78,000 gallons. Notwithstanding the greater pumpage, the water level in well 1 trended slightly higher in 1942 than in 1939. This fact shows that the effects of precipitation have outweighed the effects of pumping on the water supplies of the gravels supplying the Brookville wells, and also that only a relatively small part of the available ground water in the valley of the Whitewater River is being utilized for the public water supply of Brookville.

Water level, in feet below measuring point, 1942

Apr. 4	35.0	June 16	33.5	Aug. 3	34.5	Oct. 2	35.0
22	33.0	23	33.0	17	34.0	17	35.5
May 7	34.0	July 1	34.0	Sept. 3	34.5	Nov. 5	36.0
26	34.0	15	34.5	17	34.0	24	34.0

a Lowest static water level on record.

Fulton County

Fulton 3 (*817,p.45; 840,p.76; 845,p.72; *886,p.99; 906,p.22; 936,p.25). City of Rochester. At Federal Fish Hatchery east of Rochester. Measurements made by K. W. Morrison, Federal Fish Hatchery, C. H. Walker, foreman.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 9	9.32	July 2	8.31	Sept. 4	8.70	Nov. 9	11.38
June 11	8.78	Aug. 6	8.32	Oct. 1	9.48	Dec. 10	11.41

Hamilton County

Hamilton 2 (*817,p.45; 840,p.77; 845,p.72; 886,p.99; 906,p.23; 936,p.25). Public Service Co. of Indiana. At water plant, in Noblesville. Measurements made by A. L. Wann, engineer, Noblesville water plant, Public Service Co. of Indiana.

Water level, in feet below measuring point, 1942

Jan. 15	26.41	Mar. 31	24.13	July 5	23.29	Oct. 5	24.35
Feb. 15	25.02	May 15	23.60	Aug. 1	24.08	Dec. 1	24.22
Mar. 4	24.93	June 2	22.58	Sept. 1	24.22		

Harrison County

Harrison 1 (*845,p.73; 886,p.99; 906,p.23; 936,p.26). SE¼NW¼ sec. 2, T. 4 S.,R. 2 E.,on south side of truck trail 1. Measurements made by Lafe Cline, superintendent, Harrison State Forest.

Water level, in feet below measuring point, 1942

Jan. 1	0.5	Feb. 28	1.8	May 31	2.9	Aug. 31	2.8
31	1.1	Mar. 31	1.5	June 30	2.7	Oct. 5	2.7
Feb. 16	.6	Apr. 30	2.6	July 31	3.6		

Harrison 2 (*840,p.77; 845,p.73; 936,p.26). No measurements made in 1942.

Harrison 3 (*840,p.77; 845,p.73; 886,p.99; 906,p.23; 936,p.26). Harrison State Forest. NE¼NE¼ sec. 23, T. 4 S., R. 2 E., on south side of road near Lowe Pond. Measurements made by Lafe Cline, superintendent, Harrison State Forest.

Water level, in feet below measuring point, 1942

Jan. 1	5.7	Feb. 28	3.2	May 31	7.35	Aug. 31	5.7
31	3.2	Mar. 31	6.30	June 30	3.8	Oct. 5	6.6
Feb. 16	2.8	Apr. 30	4.1	July 31	6.2		

Henry County

Henry 1 (*817,p.46; 840,p.77; 845,p.73; 886,p.100; 906,p.23; *936,p.26). No measurements made in 1942.

Howard County

Howard 3. Pittsburg Plate Glass Co. On north side of creek, 0.31 mile west of pumping station of Kokomo water works and 0.16 mile west of well Howard 1, which is now in use as a part of the Kokomo public supply. (See Water-Supply Paper 936,p.27.) Unused drilled well, diameter 12 or 15 inches, depth approximately 300 feet. Penetrates limestone. Measuring point, top of 1¼-inch to 1-inch reducer in 1¼-inch coupling at top of air pipe, 0.26 foot above flange at top of casing, 0.55 to 0.9 foot above land surface, and 1.35 feet below measuring point of well Howard 1. Water level affected by pumping from well Howard 1 and other wells of the Kokomo public-supply system. Measurements made by personnel of Kokomo Water Works Co., M. A. Stearns, manager.

Water level, in feet below measuring point, 1941-42

Date	Water level	Date	Water level	Date	Water level
Nov. 25, 1941	17.2	Apr. 2, 1942	15.8	Aug. 4, 1942	20.8
Dec. 18	17.4	May 6	16.6	Sept. 5	20.2
31	17.7	28	16.4	30	20.3
Jan. 1, 1942	18.2	June 18	16.8	Nov. 5	19.8
Feb. 18	15.3	July 7	19.8	28	16.6
Mar. 11	15.4	23	21.2	Dec. 26	19.0

Jackson County

Jackson 1 (*840,p.78; 845,p.74; 886,p.100; *906,p.24; 936,p.27). Jackson State Forest. Near northeast corner of office of CCC camp, Jackson State Forest. Measurements made by G. P. Coverdill and S. A. Solomon, CCC camp S-55, and Forrest Miller, district forester, Department of Conservation, Brownstown.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 17	4.98	May 30	5.6	Oct. 1	9.70	Nov. 16	9.57
May 2	6.7	Aug. 1	8.33	15	9.5	Dec. 1	8.2
9	6.12	15	8.0	Nov. 2	9.5	15	8.3
16	12.8	Sept.15	9.5				

Jefferson County

Jefferson 2 (*840,p.79; 845,p.74; 886,p.101; 906,p.24; 936,p.28). Clifty Falls State Park. At superintendent's house. Measurements made by personnel of Clifty Falls State Park, M. L. Carr, superintendent. Water levels, in feet below measuring point, 1942: July 20, 28.7; Aug. 17, 29.1.

Jennings County

Jennings 1 (*840,p.79; 845,p.74; 886,p.101; 906,p.24; 936,p.28). Muscatatuck State Park. SE¼NW¼ sec. 3, T. 6 N., R. 8 E., in northwest corner of park, near North Vernon. Measurements made by G. J. Bernhart, Muscatatuck State Park, Charles Vogel, superintendent.

Water level, in feet below measuring point, 1942

Apr. 1	4.97	June 1	5.95	Aug. 15	12.00	Oct. 15	15.00
15	3.94	15	5.95	Sept. 1	13.00	Nov. 1	15.94
May 1	6.20	July 1	4.99	15	13.96	15	15.00
9	3.47	15	6.99	Oct. 1	14.93	Dec. 1	15.92
15	1.99	Aug. 1	10.97				

Kosciusko County

Kosciusko 2 (*845,p.74; 886,p.101; 936,p.28). Wawasee State Fish Hatchery. Flowing well at sunken garden. Measurements made by Maurice Lung and Raymond Underwood, succesive superintendents, Wawasee State Fish Hatchery, Syracuse.

Water level, in feet below measuring point, 1942

May 20	3.36	July 15	3.23	Aug. 17	3.21	Oct. 1	3.19
June 15	3.65	Aug. 4	3.17	Sept. 2	3.17	Nov. 14	3.19
July 1	3.35						

La Porte County

La Porte 1.City of La Porte. Well 4 at pumping station of La Porte waterworks. Dug public-supply well, diameter about 50 feet, depth about 40 feet. Penetrates glacial outwash sand and gravel. Measuring point, edge of concrete curb at east edge of concrete platform, on west side of well, 1.25 feet above land surface. Water level affected by pumping for public supply from this and 3 other similar wells at the pumping station. Measurements made by L. Clemens, operator, La Porte Water Works, Arthur C. Baker, superintendent.

Water level, in feet below measuring point, 1942

July 4	13.2	Aug. 15	12.8	Oct. 3	12.75	Nov. 21	13.4
11	13.6	22	14.7	10	12.57	28	13.1
18	16.7	29	12.42	17	13.2	Dec. 5	13.6
23	14.55	Sept. 5	12.36	24	13.21	12	14.2
25	16.4	12	12.98	31	13.35	16	13.1
Aug. 1	13.5	19	13.32	Nov. 7	13.6	19	14.2
8	10.1	26	13.3	14	13.1		

La Porte 2. Kankakee State Game Preserve. SW¼SE¼ sec. 10, T. 33 N., R. 3 W., about 500 feet north of State Highway 8 and across Kankakee River ditch from well Starke 5. Unused drilled well, diameter 6 inches, depth 115 feet. Penetrates glacial outwash sands and gravels. Measuring point, top of casing, on north (lowest) edge, 0.31 foot above concrete platform and 1.1 feet above land surface. Altitude of land surface about same as at well Starke 5.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 2	6.99	Aug. 15	7.17	Oct. 16	7.30	Dec. 1	6.24
15	7.03	Sept. 1	7.48	31	7.16	16	6.72
23	7.30	15	7.64	Nov. 15	6.44	31	5.37
31	7.33	Oct. 1	7.40				

Madison County

Madison 1 (*817,p.47; 840,p.79; 845,p.75; 886,p.101; 906,p.25; 936,p.28). Note: Measurements have been made by personnel of Mounds State Park, using a steel tape wiped after each measurement with an oily rag. No chalk has been used on the tape. Presumably the wetted length of tape has been determined from the position of the uppermost droplet of water adhering to the tape. Because a droplet would seldom adhere to the tape at the uppermost point submerged, the length of wetted tape reported has probably been too low, giving depths to water too great, by amounts ranging from one or two hundredths of a foot to several feet. On May 1, 1942, a measurement made in the usual way by personnel of Mounds State Park gave depth to water of 9.80 feet. A measurement made later on the same day by the writer gave a depth to water of 6.15 feet. The water level in the well probably could not have changed by more than a few hundredths or a few tenths of a foot during the interval between measurements. Owing to the errors in the measurements, none are given for 1942, and previous measurements should be disregarded.

Madison 2 (*817,p.47; 840,p.79; 845,p.75; 886,p.101; 906,p.25; *936,p.28) Anderson Water Department well 2. Measurements made by B. E. Burrows, chief engineer, Anderson Water Department, W. J. Norton, superintendent.

Water level, in feet below measuring point, 1942

Jan. 5	18.19	Mar. 17	16.79	June 16	16.14	Sept. 16	17.32
19	18.31	Apr. 1	16.49	July 2	16.42	Oct. 5	17.60
Feb. 5	18.41	16	15.75	15	16.56	Nov. 6	17.79
16	17.79	May 1	16.13	Aug. 16	17.00	Dec. 1	17.70
Mar. 2	17.57	16	16.28	Sept. 1	17.10	16	17.68

Madison 3 (*817,p.47; 840,p.79; 845,p.75; 886,p.101; 906,p.25; *936, p.29). Albert Closser. About 2 blocks east of CCC camp in Frankton. Water level, in feet below measuring point, 1942: May 1, 22.63.

Madison 4 (*817,p.47; 840,p.79; 845,p.75; 886,p.102; 906,p.25; 936,p.29). At home formerly owned by Walter McCoy, about 3 blocks south of CCC Camp, in Frankton. Water level, in feet below measuring point, 1942: May 1, 5.71.

Marion County

Marion 1 (*817,p.48; 840,p.80; 845,p.75; *886,p.102; 906,p.25; *936,p.29) Indianapolis Water Co. "Motor well 15," at intersection of Eighteenth and Harding Streets, in Riverside well field, Indianapolis. Measurements made by personnel of Indianapolis Water Co., W. C. Mabee, chief engineer. Measurements generally made at 10 a.m. The factors affecting the water level in Marion well 1 are discussed in Water-Supply Paper 936, on pages 29-31.

In 1942 the pumpage from wells in limestone at the Riverside station of the Indianapolis Water Co. was less than during any year since observations in well 1 were begun, in August 1935. The total pumpage from limestone wells of the company in 1942 was about 110 million gallons, of which probably less than half was pumped at the Riverside station, the remainder being pumped at the Fall Creek station. The pumpage from limestone wells at the Riverside station in 1941 was 627 million gallons.

The pumpage from wells in gravel at the White River filtration plant was about 900 million gallons in 1942, as compared with about 440 million gallons in 1941. Thus the total pumpage from both gravel and limestone wells

of the Indianapolis Water Co. in the vicinity of the Riverside station was probably less than 950 million gallons in 1942, as compared with 1,068 million gallons in 1941. The water level in well 1 averaged about 3 feet higher in 1942 than in 1941. This was probably due only in small part to the relatively slight reduction in total pumpage; instead, it was probably due mostly to the reduction in pumpage from the wells in limestone and to the improved conditions of rainfall and recharge.

Water level, in feet below measuring point, 1942

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2.48	a4.36	1.42	a1.84	1.06	1.23	1.88	2.36	3.26	2.45	....	2.22
2	2.50	....	1.56	a1.88	1.10	1.43	....	2.18	3.12	2.46	2.44	2.28
3	2.32	a4.88	1.76	a1.58	1.16	1.48	1.78	2.22	2.98	2.38	2.50	a2.42
4	a2.14	a6.90	1.18	a1.32	....	....	1.64	2.44	2.90	2.26	2.56	a2.75
5	a2.72	a6.70	1.84	a1.52	1.10	1.50	1.48	2.42	2.80	2.32	2.60	a2.32
6	....	a6.18	1.84	a1.68	1.06	1.52	1.64	2.40	2.54	2.42	2.28	a2.62
7	....	a5.70	1.68	a1.88	....	1.20	1.72	2.50	2.38	2.46	3.28	a2.80
8	a2.90	5.40	1.50	a1.38	1.06	a4.68	1.78	2.40	2.50	2.54	2.08	a5.60
9	a2.90	a5.82	....	1.02	1.02	a5.18	1.86	2.12	2.46	2.54	2.06	a2.98
10	....	a6.08	1.18	a.82	1.04	a5.48	1.85	2.28	....	....	2.30	a2.90
11	a2.92	a6.22	a5.14	a1.20	1.02	a5.64	1.86	2.42	2.44	2.32	2.22	2.40
12	....	a6.26	....	a1.24	a1.18	a5.70	1.86	2.42	2.30	2.38	2.24	2.40
13	2.72	a6.36	a5.22	a1.24	a1.54	a5.76	1.78	2.36	2.20	2.46	a4.64	2.14
14	2.68	2.62	1.58	a1.26	1.22	a5.34	1.82	2.50	2.40	2.42	a2.24	a2.76
15	2.54	2.32	....	.96	1.18	a5.06	2.00	2.42	2.52	2.46	a1.94	a2.94
16	2.70	2.30	a1.14	.94	.94	a5.30	2.04	2.12	2.48	2.44	a2.60	a3.08
17	2.50	....	a4.40	.78	a3.80	a5.44	2.08	2.28	2.65	2.34	....	a2.70
18	....	....	a4.36	.76	a3.28	a5.58	2.14	2.40	2.58	a5.28	....	2.64
19	2.48	....	a4.58	.46	a1.16	a5.56	1.48	2.52	2.44	a5.50	a6.00	2.46
20	2.68	....	a4.80	.64	1.18	a5.36	2.08	2.50	2.30	a5.72	....	a2.20
21	2.56	....	a5.08	.60	....	a5.42	b7.88	2.48	2.34	a5.74	....	a2.92
22	2.56	....	1.62	....	1.08	2.24	3.68	2.36	2.50	a5.80	a4.98	a3.04
23	2.56	1.52	1.40	.88	.96	2.28	....	2.26	2.44	a6.53	2.28	2.64
24	2.44	1.72	a1.30	....	.90	2.12	5.16	....	2.44	2.86	2.30	2.38
25	2.36	1.76	a1.82	.84	1.06	....	3.12	....	2.42	2.54	2.36	2.20
26	2.34	1.70	a1.30	.68	1.16	....	2.24	....	2.34	2.48	2.24	1.72
27	2.56	1.68	a1.88	.74	1.02	1.90	3.30	a5.70	2.20	2.66	2.18	1.88
28	2.64	1.52	a1.30	1.06	1.34	1.70	2.50	....	2.38	2.54	2.36	a4.08
29	....	....	a1.40	1.00	1.28	1.70	2.40	a6.32	a4.06	a5.04	1.62	a5.40
30	....	....	a1.62	1.02	1.14	1.80	2.46	a6.32	a5.53	a5.76	2.02	a5.76
31	a2.90	....	a1.48	....	1.02	....	2.54	a6.58	....	8.52	....	....

Marion 2 (*817,p.48; 840,p.80; *886,p.102; 906,p.26; 936,p.32). Security Trust Bank Building, 130 East Washington Street, Indianapolis. Equipped with automatic water-stage recorder. Measurements made by W. L. Smith, Division of Geology,[1] H. L. Bretz and W. R. Watkins, Indianapolis, and the writer.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	32.58	Apr. 18	29.35	July 11	38.82	Sept. 27	40.55
12	31.89	25	29.66	18	39.94	Oct. 2	38.80
19	31.14	May 2	31.36	25	40.79	5	39.15
26	30.60	3	31.63	Aug. 1	41.60	10	38.21
Feb. 2	30.21	11	31.15	8	42.14	17	37.33
9	29.75	19	32.14	15	42.43	24	36.42
16	29.31	23	31.95	22	42.85	30	35.42
24	29.02	29	32.54	26	41.65	Nov. 14	33.77
Mar. 2	28.86	June 6	34.67	29	42.00	19	33.37
7	28.76	13	36.15	Sept. 5	42.52	21	33.59
14	28.64	14	36.43	9	42.02	28	32.78
16	28.52	17	35.68	12	42.35	Dec. 5	32.15
21	28.60	20	36.20	19	42.79	12	31.65
28	28.63	27	37.01	20	42.96	19	31.38
Apr. 4	28.69	July 4	38.04	26	40.31	26	31.00
11	28.97						

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

b Riverside air wells being pumped at time of measurement.

1/This refers to the Division of Geology of the Indiana State Department of Conservation.

Marion 3 (*817,p.48; 840,p.80; 845,p.75; 886,p.102; 906,p.27; 936,p.32). Emmerich Manual Training High School. In north room of school building, on South Meridian and Henry Streets, Indianapolis. Measurements made by W. L. Smith, Division of Geology, 1/ H. L. Bretz and W. R. Watkins, Indianapolis, and the writer.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	60.39	Apr. 18	56.12	July 11	57.89	Sept. 26	59.05
12	60.03	25	56.21	19	57.49	Oct. 3	59.00
23	59.55	May 2	55.98	25	58.24	10	58.89
Feb. 3	59.44	9	56.28	Aug. 1	58.37	28	58.30
9	58.56	16	56.02	8	58.22	31	57.65
10	59.09	23	55.98	15	58.44	Nov. 14	57.35
Mar. 4	58.77	30	56.29	22	58.80	28	57.08
14	57.32	June 6	56.49	29	59.17	Dec. 5	57.24
21	57.06	13	56.84	Sept. 5	58.90	14	56.57
28	56.62	20	57.16	12	59.02	21	57.02
Apr. 4	56.26	27	56.93	19	59.33	28	55.81
11	56.36	July 4	57.08				

Marion 4 (*840,p.80; *845,p.76; *886,p.103; 906,p.27; *936,p.32). Layne-Northern Co., Inc. In valley of Lick Creek, about 100 feet north of creek, about 700 feet west of South Meridian Street (4200 block), and about 350 feet south of Edwards Avenue, Indianapolis. Measurements made by W. L. Smith, Division of Geology, 1/ H. L. Bretz and W. R. Watkins, Indianapolis, and the writer.

Water level, in feet below measuring point, 1942

Jan. 2	10.70	Apr. 18	7.50	July 11	6.69	Oct. 3	8.25
12	10.78	25	7.12	19	7.60	10	8.39
23	10.78	May 2	9.59	25	7.94	17	8.08
Feb. 3	10.71	9	8.43	Aug. 1	7.54	24	7.88
10	10.52	16	8.06	8	7.03	31	7.89
Mar. 4	9.93	23	7.95	15	7.98	Nov. 14	7.84
7	9.94	30	7.93	22	7.64	21	7.62
14	9.73	June 6	9.51	29	7.70	28	7.54
21	9.39	13	8.21	Sept. 5	8.22	Dec. 5	7.41
28	9.11	20	7.22	12	7.63	12	7.36
Apr. 4	8.99	27	6.62	19	7.48	19	7.46
11	8.67	July 4	7.31	26	8.09	26	7.50

Marion 6 (*845,p.77; *886,p.103; 906,p.27; *936,p.32). No measurements made in 1942.

Marion 7 (*845,p.77; *886,p.103; 906,p.27; *936,p.32). Pennsylvania Railroad. In old railroad yards (Beville Street) east of Willard Park, 275 feet south of East Washington Street and just east of Willard Park fence. Well destroyed after Nov. 21, 1942. Measurements made by H. L. Bretz and the writer.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Mar. 4	66.58	Mar. 14	66.76	Aug. 29	67.69
7	66.57	June 20	65.39		

Marion 8 (*845,p.77; *886,p.103; *906,p.32). Pennsylvania Railroad. About 225 feet south of well Marion 7. Well destroyed after Nov. 21, 1942. Measurements made by W. L. Smith, Division of Geology, 1/ H. L. Bretz and W. R. Watkins, Indianapolis, and the writer.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	62.19	Mar. 4	66.42	Apr. 4	66.42	May 9	62.84
12	64.24	7	64.58	11	64.30	16	63.84
23	64.36	14	64.80	18	63.83	23	63.85
Feb. 3	64.44	21	64.20	25	63.87	30	62.68
10	64.68	28	64.06	May 2	63.82	June 6	63.97

1/ This refers to the Division of Geology of the Indiana State Department of Conservation.

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Marion 8 (*845,p.77; *886,p.103; *906,p.27; *936,p.32). Pennsylvania Railroad--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 13	62.92	July 25	65.19	Sept. 5	65.64	Oct. 17	65.36
20	63.44	Aug. 1	65.10	12	65.30	24	a65.99
27	65.40	8	65.03	19	65.08	31	65.64
July 4	64.64	15	65.22	26	65.30	Nov. 14	65.88
11	65.36	22	63.43	Oct. 3	65.14	21	62.77
19	63.10	29	65.74	10	65.44		

Marion 9 (*886,p.103; 906,p.27; *936,p.32). At former American Brewery. on West Ohio Street at Indianapolis Water Co. canal and about 250 feet south of well Marion 6, Indianapolis. Measurements made by W. L. Smith, Division of Geology, 1/ H. L. Bretz and W. R. Watkins, Indianapolis, and the writer.

Water level, in feet below measuring point, 1942

Jan. 2	47.55	Apr. 18	53.53	July 11	57.54	Oct. 3	a62.98
12	47.01	25	53.89	19	57.92	10	61.36
23	46.20	May 2	52.75	25	58.32	17	60.63
Feb. 3	45.95	9	53.86	Aug. 1	57.72	24	60.32
11	45.76	16	54.45	8	60.77	31	50.18
Mar. 4	53.92	23	54.88	15	59.04	Nov. 14	49.23
7	53.66	30	55.29	22	59.71	21	48.94
14	53.48	June 6	55.60	29	59.89	28	56.81
21	53.56	13	56.18	Sept. 5	60.02	Dec. 5	56.66
28	53.49	20	56.67	12	60.44	12	56.60
Apr. 4	53.41	27	57.69	19	60.64	19	59.20
11	53.49	July 4	57.78	26	60.68	26	56.12

Marion 10 (*886,p.104; 906,p.27; 936,p.32). Federal Building. In basement of building, Indianapolis. Measurements made by W. L. Smith, Division of Geology, 1/ H. L. Bretz and W. R. Watkins, Indianapolis, and the writer.

Water level, in feet below measuring point, 1942

Jan. 2	47.40	Apr. 18	46.64	July 11	56.46	Sept. 30	56.84
12	46.33	25	46.55	19	55.63	Oct. 3	53.74
23	46.07	May 2	46.60	25	57.63	10	53.88
Feb. 3	45.50	9	47.53	Aug. 1	59.42	17	52.01
11	44.88	16	47.09	8	56.26	24	51.54
Mar. 4	44.52	23	48.76	15	57.56	31	50.71
7	44.32	30	50.79	22	57.99	Nov. 14	49.70
14	44.39	June 6	53.10	31	56.84	28	48.27
21	44.37	13	54.58	Sept. 5	56.89	Dec. 5	48.74
28	45.97	20	54.66	12	57.25	14	48.31
Apr. 4	45.79	27	55.27	19.	57.55	21	48.09
11	44.99	July 4	54.68	26	54.06	28	47.64

Marion 11 (*886,p.105; 906,p.28; 936,p.33). Indianapolis sanitation plant. Owner's well 3. In dehydration building, about 500 feet west of power house. Equipped with automatic water-stage recorder, operated by personnel of Indianapolis sanitation plant, Don E. Bloodgood, superintendent.

Water level, in feet below measuring point, 1942

Jan. 2	25.88	Apr. 7	24.32	July 3	23.88	Oct. 2	25.20
9	25.83	10	23.73	10	24.34	9	25.23
16	26.22	20	23.56	17	24.62	16	25.38
23	26.17	24	24.08	24	25.05	23	25.79
30	26.19	May 1	24.65	31	25.15	30	25.48
Feb. 6	25.23	8	24.52	Aug. 7	25.08	Nov. 6	24.63
13	23.43	15	24.56	14	25.09	13	25.32
20	23.18	22	24.20	21	25.23	20	24.73
27	23.97	29	24.07	28	25.32	27	24.38
Mar. 6	24.51	June 5	24.70	Sept. 4	25.22	Dec. 4	24.46
13	23.11	12	24.29	11	25.12	11	24.50
20	22.18	19	23.26	18	25.10	18	25.05
27	23.44	26	23.62	25	25.36	26	24.78

a Lowest water level on record.

1/This refers to Division of Geology of the Indiana State Department of Conservation.

Marion 12 (*886,p.106; 906,p.29; 936,p.34). Indianapolis sanitation plant. Owner's well 11 (?). About 300 feet southeast of power house and about 50 feet north of resettler tank. Measurements made by personnel of Indianapolis sanitation plant, Don E. Bloodgood, superintendent.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	24.41	Apr. 10	22.70	July 10	23.78	Oct. 9	25.07
16	24.72	20	22.34	17	24.00	16	25.22
23	24.76	24	22.99	24	24.43	23	25.20
30	24.79	May 1	23.59	31	24.69	30	25.26
Feb. 6	24.11	8	23.51	Aug. 7	24.45	Nov. 6	25.02
13	21.80	15	23.68	14	24.52	13	25.03
20	21.69	22	23.30	21	24.62	20	24.61
27	22.77	29	23.74	28	24.78	27	23.70
Mar. 6	23.37	June 5	24.16	Sept. 11	24.49	Dec. 4	23.92
13	21.83	12	23.61	18	24.50	11	24.20
20	20.57	19	22.39	25	24.68	18	24.50
27	22.04	26	22.76	Oct. 2	24.84	26	24.60
Apr. 7	23.21	July 3	23.32				

Marion 13 (*886,p,106; 906 p.29; 936,p.34). Indianapolis sanitation plant. "East" observation well, about 500 feet east of power house. Measurements made by D. O. Bender, Indianapolis sanitation plant, Don E. Bloodgood, superintendent.

Water level, in feet below measuring point, 1942

Jan. 3	8.42	Apr. 4	6.88	July 10	7.80	Oct. 7	9.06
Feb. 2	8.88	May 12	7.30	Aug. 5	8.50	Nov. 12	9.06
Mar. 10	7.04	June 6	8.48	Sept. 1	8.64	Dec. 4	7.91

Marion 14 (*886,p,106; 906,p.29; 936,p.34). Indianapolis sanitation plant. "Resettler" observation well, about 400 feet southeast of power house, at southeast edge of resettler tank. Measurements made by D. O. Bender Indianapolis sanitation plant, Don E. Bloodgood, superintendent.

Water level, in feet below measuring point, 1942

Jan. 3	20.60	Apr. 4	17.18	July 10	20.24	Oct. 7	21.19
Feb. 2	21.06	May 12	19.47	Aug. 5	20.70	Nov. 12	20.06
Mar. 10	19.35	June 6	20.42	Sept. 1	20.80	Dec. 4	16.73

Marion 15 (*886,p.106; 906,p.29; *936,p.34). Indianapolis sanitation plant. "No. 2 driven well", about 550 feet north of power house and 64 feet northeast of supply well 6. Measurements made by D. O. Bender, Indianapolis sanitation plant, Don E. Bloodgood, superintendent. Well dry at 23.77 feet below new measuring point on Jan. 3, 1942, and at 23.79 feet on Feb. 2, 1942 (24.90 and 24.92 feet below old measuring point, respectively), and measurements discontinued.

Marion 16 (*906,p.30; *936,p.33). At former American Hominy Co.'s plant B, Madison Avenue and Palmer Street, Indianapolis. At south end of main building, near base of steel smokestack. Measurements made by W. L. Smith, Division of Geology,1/ H. L. Bretz and W. R. Watkins, Indianapolis, and the writer.

Water level, in feet below measuring point, 1942

Jan. 2	103.82	Apr. 18	109.09	July 11	107.74	Oct. 3	103.51
12	102.66	25	109.88	19	108.08	10	103.46
23	65.96	May 2	109.68	25	103.02	17	102.43
Feb. 3	66.60	9	108.89	Aug. 1	102.92	24	107.97
10	100.48	16	109.35	8	102.90	31	106.93
Mar. 4	101.29	23	109.13	15	103.40	Nov. 14	98.65
7	68.49	30	108.90	22	103.66	21	66.60
14	65.35	June 6	108.83	29	103.64	28	101.00
21	99.05	13	107.16	Sept. 5	103.80	Dec. 5	98.47
28	102.54	20	107.36	12	103.36	12	101.83
Apr. 4	97.53	27	107.56	19	103.44	19	98.25
11	93.76	July 4	107.24	26	101.83	26	86.73

1/ This refers to Division of Geology of the Indiana State Department of Conservation.

Monroe County

Monroe 1. (*840,p.82; 845,p.79; 886,p.107; 906,p.30; 936,p.35). Morgan-Monroe State Forest. At old camp site, north of Bean Blossom Road, near head of shallow draw. Northwesternmost of three dug wells. Measurements made by Charles E. Martin and John O. Holwager, successive superintendents, and Victor McGee, Morgan-Monroe State Forest.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	1.29	Mar. 31	0.85	June 30	0.7	Oct. 2	1.8
31	1.27	Apr. 15	.75	Aug. 1	1.6	Nov. 3	1.9
Feb. 14	1.24	30	1.05	Sept. 1	1.6	30	.8
28	1.1	June 1	1.4				

Montgomery County

Montgomery 1 (*817,p.49; 840,p.82; 845,p.79; 886,p.109; 906,p.30; 936, p.35). W. H. Moore. NW¼NW¼ sec. 36, T. 17 N., R. 6 W., at site of burned house, in Waveland. Measurements made by H. C. Loudermill, C. R. Overstreet, and Charles N. McBrayer, Waveland.

Water level, in feet below measuring point, 1942

Jan. 14	11.40	May 22	8.15	Aug. 15	13.05	Oct. 15	15.51
Feb. 13	8.37	June 24	9.09	Sept. 2	13.64	31	15.69
Mar. 6	12.09	July 22	10.74	15	14.48	Dec. 1	12.00
Apr. 20	9.12	31	11.41	30	15.05	15	13.8

Montgomery 2 (*817,p.49; 840,p.82; 845,p.79; 886,p.109; 906,p.30; 936, p.35). Former Vandalia Railroad (now part of Pennsylvania Railroad.) In former railroad stock pen, on north side of railroad track, in Waveland. Measurements made by H. C. Loudermill, C. R. Overstreet, and Charles N. McBrayer, Waveland.

Water level, in feet below measuring point, 1942

Jan. 14	4.25	June 24	3.94	Sept. 2	4.98	Oct. 31	4.94
Mar. 6	3.59	July 22	3.78	15	4.34	Dec. 1	3.93
Apr. 20	3.60	31	4.41	30	4.99	15	3.99
May 22	3.54	Aug. 15	4.74	Oct. 15	4.97		

Montgomery 3 (*817,p.49; 840,p.82; 845,p.79; 886,p.109; 906,p.30; 936, p.35). Charles Lamson. At residence, about 0.4 mile north of Waveland. Water level, in feet below measuring point, 1942: July 22, 9.97.

Montgomery 4 (*817,p.49; 840,p.82; 845,p.79; 886,p.109; 906,p.30; 936, p. 35). Mrs. W. L. Glenn. At residence, about 2 miles north of Waveland. Water level, in feet below measuring point, 1942: July 22, 8.94.

Morgan County

Morgan 1 (*840,p.82; 845,p.80; 886,p.109; 906,p.31; 936,p.35). Morgan-Monroe State Forest. SW¼SW¼ sec. 27, T. 11 N., R. 1 E., south of trail 3, in front of Shady Rest cabin. Measurements made by Charles E. Martin and John O. Holwager, successive superintendents, and Victor McGee, Morgan-Monroe State Forest.

Water level, in feet below measuring point, 1942

Jan. 15	7.24	Mar. 31	6.5	June 1	7.1	Oct. 2	9.0
31	7.24	Apr. 15	6.3	30	5.6	Nov. 3	9.5
Feb. 14	7.18	30	6.92	Aug. 1	8.8	30	6.5
28	7.2	May 15	6.0	Sept. 1	6.2		

Noble County

Noble 2 (*840,p.83; 845,p.80; 886,p.109; 906,p.31; 936,p.36). Lawrence Ott. SW¼SE¼ sec. 35, T. 33 N., R. 9 E., about 0.8 mile east of State Highway 9 and about 0.2 mile west of State Highway 102, about 300 feet north of county-line road. Measurements made by James Bodley, superintendent, Tri-Lakes fish hatchery, Columbia City.

Water level, in feet below measuring point, 1942

Jan. 16	22.95	Apr. 15	12.4	July 15	18.24	Oct. 16	16.95
Feb. 1	22.4	May 2	14.0	Aug. 1	18.8	31	17.5
15	22.4	15	15.0	16	19.0	Nov. 16	13.8
Mar. 1	23.3	June 1	16.4	Sept. 2	17.74	Dec. 1	15.0
16	19.81	15	17.3	16	16.3	16	14.1
Apr. 1	17.25	30	17.64	Oct. 1	16.3	31	19.7

Noble 3 (*840,p.83; 845,p.80; 886,p.109; 906,p.31; 936,p.36). Della May Kitt. NW¼SE¼ sec. 23, T. 33 N., R. 9 E., across road from residence of Della May Kitt, about 1.1 miles northwest of Merriam (erroneously published in Water-Supply Papers 845, 886, 906, and 936 as southwest of Merriam). Measurements made by James Bodley, superintendent, Tri-Lakes fish hatchery, Columbia City.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 16	25.5	Apr. 15	23.46	July 15	23.8	Oct. 16	23.13
Feb. 1	25.5	May 2	23.07	Aug. 1	24.1	31	23.4
15	22.73	15	23.3	16	23.2	Nov. 16	23.4
Mar. 1	24.77	June 1	23.4	Sept. 2	22.9	Dec. 1	23.26
16	23.58	15	23.6	16	23.1	16	23.2
Apr. 1	23.87	30	23.6	Oct. 1	23.22	31	24.3

Noble 5. Rolla Becker. N½NW¼NE¼ sec. 13, T. 34 N., R. 10 E., about 1 mile north of State Highway 8, and 4 miles southwest of Kendallville, about 6 feet south of owner's residence. Unused dug well, diameter 36 inches, depth 29.6 feet. Penetrates glacial drift. Measuring point, top of upper brick, marked with scratch, in south side of well curb, about 0.5 foot above land surface. Measurements made by Keith Becker, Rural Route 3, Kendallville.

Water level, in feet below measuring point, 1942

May 1	4.28	July 1	5.12	Sept. 4	5.57	Nov. 7	4.22
15	4.71	20	5.66	16	5.18	16	3.38
June 1	5.06	Aug. 3	5.10	Oct. 3	4.69	Dec. 3	3.99
15	4.14	24	5.09	22	4.80	18	4.36

Pike County

Pike 1 (*840,p.83; 845,p.80; 886,p.109; 906,p.32; 936,p.36). A. J. Heuring. In front of Heuring residence, at Lafayette and Main Streets, in Winslow. Measurements made by Heber Jones, superintendent, city waterworks, Winslow, and K. I. Shumaker, superintendent, Pike State Forest.

Water level, in feet below measuring point, 1942

May 7	8.41	Oct. 1	11.13	Nov. 2	11.95	Dec. 2	11.38
Sept. 4	10.33	14	11.52	18	12.05	18	11.25
15	10.60						

Porter County

Porter 1 (*817,p.50; 840,p.83; 845,p.80; 886,p.108; 906,p.32; 936,p.36). Valparaiso Water Department. Test well at well 1 pump house at Flint Lake, about 3 miles north of Valparaiso, west of State Highway 49. Measurements made by J. F. Bradley, engineer, Valparaiso Water Department.

No water was pumped in 1942 from wells at the Valparaiso waterworks, whereas an average of about 490,000 gallons a day was pumped during the period January 1 to October 16, 1941. During 1942 the water level in well 1 averaged about 2.7 feet higher than in 1941. This was probably due largely to the lack of pumping in 1942, but the recovery in water level in 1942 was probably also due in part to the abnormally high precipitation at Valparaiso in 1941 and to the fact that the precipitation there has not been below normal since 1936. The narrow range in fluctuation in water level in well 1 indicates that effects of both abnormal and deficient precipitation appear only with considerable lag in the sands penetrated by the well.

Water level, in feet below measuring point, 1942

Jan. 1	53.56	Apr. 15	52.30	July 15	52.12	Oct. 16	51.93
30	52.94	May 1	52.60	Aug. 3	52.18	Nov. 2	52.08
Feb. 15	52.70	16	52.30	15	52.20	15	52.02
Mar. 2	52.70	June 1	51.90	Sept. 1	52.00	Dec. 1	52.20
16	53.00	16	52.20	15	52.08	15	52.62
Apr. 1	52.40	July 2	52.12	Oct. 1	51.88		

Porter 2 (*817,p.50; 840,p.83; 845,p.80; 886,p.108; 906,p.32; 936,p.37). Indiana Dunes State Park. At Waverly Beach. Measurements made by Ben Wiseman, Indiana Dunes State Park. Water level, in feet below measuring point, 1942: Apr. 21, 13.6; June 20, 13.5; Aug. 5, 13.4; Nov. 3, 13.4.

Porter 3 (*817,p.50; 840,p.83; 845,p.80; 886,p.108; 906,p.32; *936,p.37). Indiana Dunes State Park. Near grocery store on picnic ground. Measurements made by Ben Wiseman, Indiana Dunes State Park. Water levels, in feet below measuring point, 1942: Apr. 21, 14.4; June 20, 14.9; Aug. 5, 16.2; Nov. 3, 16.5.

Porter 5 (*817,p.50; 840,p.83; 845,p.80; 886,p.108; 906,p.32; 936,p.37). A. A. Hanrahan. NW¼NW¼ sec. 36, T. 36 N., R. 6 W., at owner's residence. Measurements made by W. J. Taylor, engineer, CCC camp SCS-20 at Valparaiso J. R. Fabing, project superintendent. Camp abandoned and measurements discontinued after June 17.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 17	44.06	Mar. 17	43.67	May 4	43.67	June 3	43.59
Feb. 5	43.92	Apr. 1	43.70	15	43.53	17	43.48
Mar. 5	43.82	15	43.62				

Pulaski County

Pulaski 1 (*817,p.51; 840,p.84; 845,p.81; 886,pp. 108,110; 906,p.32; *936,p.38). Jasper-Pulaski State Game Preserve. In basement of superintendent's residence. Measurements made by H. H. Oetting, project superintendent, H. A. Stahl, engineer, and Hugh Lash, CCC camp S-67, Jasper-Pulaski State Game Preserve. Camp abandoned and regular measurements discontinued after Feb. 5. Water levels, in feet below measuring point, 1942: Jan. 2, 8.06; Jan. 21, 8.18; Feb. 5, 7.59; Apr. 30, 6.67.

Pulaski 3 (*817,p.51; 840,p.84; 845,p.81; 886,pp. 108,110; 906,p.32; 936,p.38). Jasper-Pulaski State Game Preserve. SW¼NE¼ sec. 6, T. 31 N., R. 4 W. , near north boundary line of preserve. Measurements made by H. H. Oetting, project superintendent, H. A. Stahl, engineer, and Hugh Lash, CCC camp S-67, Jasper-Pulaski State game preserve. Camp abandoned and regular measurements discontinued after Feb. 5. Water levels, in feet below measuring point, 1942: Jan. 2, 9.20; Jan. 21, 9.44; Feb. 5, 9.18.

Pulaski 4 (*817,p.51; *840,p.84; 845,p.81; 886,pp.108,110; 906,p.32; 936, p.38). On Charles Alberding farm, about 50 feet south of road and Starke County line. Measurements made by H. H. Oetting, project superintendent, H. A. Stahl, engineer, and Hugh Lash, CCC camp S-67, Jasper-Pulaski State Game Preserve. Camp abandoned and regular measurements discontinued after Feb. 5. Water levels, in feet below measuring point, 1942: Jan. 2, 5.76; Jan. 21, 5.90; Feb. 5, 5.89.

Randolph County

Randolph 1. Artie V. Keys. SE¼NE¼ sec. 26, T. 20 N., R. 14 E., in pump pit at rear of owner's residence, about 3 miles east and 1 mile south of Winchester. Drilled domestic well, diameter 4¼ inches, depth 156.5 feet. Penetrates limestone. Measuring point, top of casing, 5.87 feet below ceiling of pump pit, which is flush with surface. Measurements made by Artie V. Keys, Rural Route 3, Winchester.

Water level, in feet below measuring point, 1942

Feb. 16	9.19	May 2	8.38	Aug. 1	9.60	Oct. 15	10.00
Mar. 2	9.00	15	8.50	15	9.65	Nov. 1	10.55
16	7.64	June 1	9.07	Sept. 1	9.73	15	10.75
Apr. 1	7.79	15	8.79	15	9.90	Dec. 1	9.95
16	6.97	July 1	9.10	Oct. 1	10.08	15	10.05
May 1	8.18	15	10.43				

St. Joseph County

St. Joseph 1 (*817,p.52; 840,p.85; 845,p.82; 886,p.110; 906,p.33; *936, p.38). Mishawaka Water and Light Department. At pumping plant, Mishawaka. Measurements made by A. R. Klein, superintendent, Mishawaka Water and Light Department.

The average daily pumpage from wells at the Mishawaka waterworks in 1942 was about 2.6 million gallons, about 300,000 gallons a day less than in 1941. Probably largely as a result of the reduced pumpage, the water level in well 1 averaged about 1.7 feet higher in 1942 than in 1941. Precipitation at South Bend, near Mishawaka, was about the same in 1942 as in 1941, that is slightly below normal.

St Joseph 1 (*817,p.52; 840,p.85; 845,p.82; 886,p.110; 906,p.33; *936, p.38). Mishawaka Water and Light Department--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	8.45	Apr. 1	7.67	July 1	10.66	Oct. 16	9.58
16	9.68	15	7.84	Aug. 1	10.42	Nov. 2	9.43
Feb. 1	8.24	May 1	9.65	15	9.75	16	9.00
15	8.15	16	9.92	Sept. 1	9.67	Dec. 1	8.82
Mar. 1	9.00	June 1	10.51	15	9.92	16	9.75
16	7.31	15	9.42	Oct. 1	10.19		

St. Joseph 3 (*845,p.82; 886,p.110; 906,p.33; 936,p.39). John Hansler. SW¼SE¼ sec. 33, T. 36 N., R. 3E., at old farmhouse on north side of Quinn Road about 1 mile west of State Highway 331. Measurements made by J. F. Scott engineer, CCC camp SCS-24, South Bend, J. M. McCoid, project superintendent. Camp abandoned and regular measurements discontinued after Feb. 24. Water levels, in feet below measuring point, 1942: Jan. 21, 4.25; Feb. 12, 2.25; Feb. 24, 2.9; Aug. 9, 3.88.

Scott County

Scott 1. Scottsburg Water Department. At northeast corner of intersection of Hyland and Thomas Streets, Scottsburg. Unused drilled well, diameter 12 inches, depth 33.5 feet. Penetrates sand and gravel. Measuring point, base of pump (top of casing), 0.2 foot above floor of pump house and 1.4 feet above land surface. Measurements made by C. E. Robbins, superintendent, Scottsburg Water Department.

Water level, in feet below measuring point, 1942

May 4	21.21	June 15	19.04	Aug. 10	20.45	Oct. 5	24.85
5	21.75	22	17.90	17	20.75	19	22.25
8	23.44	29	17.95	24	21.70	25	24.12
11	23.46	July 7	22.65	31	21.38	Nov. 6	23.55
18	19.78	10	20.65	Sept. 2	24.53	27	22.36
26	20.63	13	18.73	14	25.07	30	20.69
June 1	21.39	22	21.05	25	25.70	Dec. 8	22.20
9	20.00	27	20.64	30	24.71	18	22.60

Spencer County

Spencer 1 (*840,p.86; 845,p.83; 886,p.110; 906,p.33; 936,p.39). Nancy Hanks Lincoln Memorial Park. About 300 yards northwest of ranger's cabin and north of Buckhorn Lake. Measurements made by Henry H. Morgan, project superintendent, CCC camp SP-15, Lincoln City. Camp abandoned and regular measurements discontinued after Mar. 18.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 15	1.66	Feb. 14	1.63	Mar. 18	1.58
Feb. 2	1.63	Mar. 1	1.54	May 8	1.53

Spencer 2 (*840,p.86; 845, p. 83; 886,p.110; 906,p.33; 936,p.39). Nancy Hanks Lincoln Memorial Park. About 15 feet southwest of well 1. Measurements made by Henry H. Morgan, project superintendent, CCC camp SP-15, Lincoln City. Camp abandoned and regular measurements discontinued after Mar. 18.

Water level, in feet below measuring point, 1942

Jan. 15	1.13	Feb. 14	0.84	Mar. 18	1.03
Feb. 2	1.04	Mar. 1	1.04	May 8	.79

Spencer 3 (*840,p.86; 845,p.83; 886,p.110; 906,p.33; 936,p.39). Nancy Hanks Lincoln Memorial Park. About 250 yards southeast of ranger's cabin. Measurements made by Henry H. Morgan, project superintendent, CCC camp SP-15, Lincoln City. Measurements discontinued after Jan. 15, owing to destruction of measuring point and bench mark. Water level Jan. 15, 1942, approximately 1.9 feet below measuring point.

Starke County

Starke 1 (*817,p.53; 840,p.86; 845,p.83; 886,p.111; 906,p.33; *936,p.39). Joe Tomassi. At Bass Lake State Fish Hatchery, about 200 feet north of superintendent's house. Measurements made by Richard Good, Bass Lake State Fish Hatchery, P. J. Lavery, superintendent.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	14.55	Apr. 1	12.78	July 1	13.14	Oct. 1	14.73
15	14.54	20	12.76	15	13.29	19	14.67
Feb. 2	14.5	May 6	12.84	Aug. 1	13.56	Nov. 4	14.65
16	13.87	16	12.78	15	13.80	14	14.58
Mar. 2	13.68	June 1	12.82	Sept. 2	14.41	Dec. 18	14.29
21	13.10	15	13.01				

Starke 2 (*817,p.53; 840,p.86; 845,p.83; 886,p.111; 906,p.33; 936,p.39). S. A. Craigmile. At mint still about 0.25 mile northeast of owner's residence, near junction of State Highways 10 and 29. 6-inch well. Measurements made by Richard Good, Bass Lake State Fish Hatchery, P. J. Lavery, superintendent.

Water level, in feet below measuring point, 1942

Jan. 2	3.84	Apr. 1	3.40	June 15	4.39	Oct. 1	4.85
15	4.44	20	3.63	July 1	4.50	19	4.89
Feb. 2	3.73	May 6	3.85	15	4.57	Nov. 4	4.66
16	3.18	16	3.71	Aug. 1	5.04	14	4.13
Mar. 2	3.82	June 1	4.20	Sept. 2	5.38	Dec. 18	4.21
21	3.03						

Starke 3 (*817,p.53; 840,p.86; 845,p.83; 886,p.111; 906,p.33; 936,p.39). S. A. Craigmile. About 1 foot from well 2. 2-inch well. Measurements made by Richard Good, Bass Lake State Fish Hatchery, P. J. Lavery, superintendent.

Water level, in feet below measuring point, 1942

Jan. 2	5.60	Apr. 1	5.15	July 1	6.23	Oct. 1	6.58
15	6.15	20	5.89	15	6.32	19	6.64
Feb. 2	5.45	May 6	5.61	Aug. 1	6.77	Nov. 4	6.42
16	4.92	16	5.44	15	7.25	14	5.72
Mar. 2	5.55	June 1	5.96	Sept. 2	7.12	Dec. 18	5.96
21	4.79	15	6.13				

Starke 5 (*936,p.40). Kankakee State Game Preserve. SW¼SE¼ sec. 10, T. 33 N., R. 3 W., about 350 feet north and 90 feet west of northwest corner of house, 20 feet north of barn, north of State Highway 8 and east of Kankakee River ditch. Measurements made by John Geiselman, superintendent, Kankakee State Game Preserve. Well destroyed and measurements discontinued after Apr. 30.

Water level, in feet below measuring point, 1942

Jan. 15	7.57	Feb. 15	4.94	Mar. 15	3.86	Apr. 17	4.71
Feb. 1	6.77	28	6.38	31	4.65	30	7.14

Steuben County

Steuben 1 (*817,p.53; 840,p.87; 845,p.83; 886,p.111; 906,p.34; 936,p.40). Pokagon State Park. Near superintendent's house, on south side of area formerly used for buffalo pen. Measurements made by R. N. Sprague, superintendent, Pokagon State Park.

Water level, in feet below measuring point, 1942

Jan. 15	4.25	May 2	2.55	July 31	3.85	Oct. 15	3.55
31	3.5	June 1	3.05	Aug. 15	3.00	31	3.15
Feb. 16	3.25	16	2.85	31	2.95	Nov. 15	2.70
Mar. 2	3.40	July 1	2.80	Sept. 15	3.15	30	2.70
16	2.15	15	4.65	30	3.30	Dec. 15	3.15
31	1.9						

Steuben 2 (*817,p.53; 840,p.87; 845,p.83; 886,p.111; 906,p.34; 936,p.40) Pokagon State Park. On north side of area formerly used for buffalo pen. Measurements made by R. N. Sprague, superintendent, Pokagon State Park.

Steuben 2 (*817,p.53; 840,p.87; 845,p.83; 886,p.111; 906,p.34; 936,p.40 Pokagon State Park--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 15	7.25	May 2	4.55	July 31	7.40	Oct. 15	7.15
31	6.3	June 1	6.00	Aug. 15	6.60	31	6.60
Feb. 16	5.80	16	5.95	31	6.35	Nov. 15	5.35
Mar. 2	5.65	July 1	6.10	Sept. 15	6.88	30	4.90
16	3.75	15	6.85	30	6.85	Dec. 15	5.45
31	3.45						

Tippecanoe County

Tippecanoe 1 (*840,p.87; 845,p.84; 886,p.111; 906,p.34; 936,p.41). Tippecanoe Township School. In basement of school building at Battle Ground. Water level, in feet below measuring point, 1942: Apr. 30, 35.05.

Tippecanoe 3 (*817,p.53; 840,p.87; 845,p.84; 886,p.111; 906,p.34; 936, p.41). Wallace Martin. NW¼NW¼ sec. 17, T. 24 N., R. 4 W., at residence of Benton Moore. Water level, in feet below measuring point, 1942: Apr. 30, 6.22.

Warrick County

Warrick 1 (*840,p.88; 886,p.112; 906,p.35; 936,p.41). Sunlight Stripper Co. On east side of railroad track, 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 made by Shelby McLemore, patrolman, Scales Lake State Forest, Boonville.

Water level, in feet below measuring point, 1942

May 8	21.90	July 15	22.6	Sept. 1	21.9	Oct. 15	22.55
June 2	20.7	Aug. 1	22.0	15	23.0	Nov. 1	22.0
July 1	21.1	15	21.5	Oct. 1	21.5	Dec. 15	21.9

White County

White 1 (*817,p.54; *840,p.88; *936,p.41). Town of Monon. In basement of municipal building. Measurements made by John M. Winkley, superintendent Monon Water Works.

The average daily pumpage from wells at the Monon water works during 1942 was a little less than 61,000 gallons, about the same as during the last quarter of 1941. During the last quarter of 1942, however, the water level in well 1 averaged about 6 feet higher than during the last quarter of 1941. Although there is no precipitation station at Monon, records at surrounding stations indicate that the precipitation in the area was several inches below normal in 1941 and several inches above normal in 1942. This would account for the higher water level in well 1 in 1942.

Water level, in feet below measuring point, 1942

Jan. 1	6.17	Apr. 1	2.5	July 1	4.94	Oct. 1	4.25
15	5.72	15	1.59	16	5.02	16	4.58
31	6.79	May 1	3.00	Aug. 3	3.07	Nov. 1	3.83
Feb. 15	3.6	15	3.30	15	4.04	15	2.79
Mar. 1	3.48	June 1	3.78	Sept. 1	4.19	Dec. 1	2.90
15	1.71	15	3.5	16	5.21		

MASSACHUSETTS

By M. L. Brashears, Jr.

The investigation of the ground-water resources of Massachusetts was continued in 1942 by the Federal Geological Survey in cooperation with the Massachusetts Department of Public Works. Periodic observations of ground-water levels were made in wells in Middlesex and Worcester Counties throughout the entire year. Observations were resumed in four wells in Berkshire, Essex, Franklin, and Hampden Counties during the latter part of the year. Regular weekly water-level measurements were made in 32 wells in the vicinity of Lowell and in the Aberjona Valley. During 1942, three automatic water-stage recorders were operated continuously at Leominster, Lowell, and Winchendon. A total of about 1,900 individual water-level measurements were made in 1942.

The observation wells in Berkshire, Essex, Franklin, and Hampden Counties penetrate unconsolidated glacial deposits composed of more or less unstratified sandy clay. The observation wells are located relatively distant from pumping wells, and ground-water withdrawals have no apparent effect on the water levels.

Descriptive headings for most of the observation wells included in this report were given in Water-Supply Papers 886 and 906. In the present report, descriptive data are given for observation wells that have not appeared in previous Water-Supply Papers and for those wells at which some change was made in 1942.

Considerable quantities of ground-water are withdrawn from the glacial outwash deposits that fill the buried preglacial bedrock valleys in the Lowell and Aberjona Valley areas of Middlesex County. The average pumpage of ground water in the Lowell area is estimated to be about 7,000,000 gallons a day, of which more than 5,000,000 gallons a day is for public supply. The average pumpage of ground water in the Aberjona Valley area is estimated to be about 5,500,000 gallons a day, of which about 2,000,000 gallons a day is for public supply. Ground-water withdrawal during 1942 was somewhat greater than in 1941. The amount of increase is not known, but estimates based on the figures for pumpage at one public supply plant indicate that the

withdrawal may have been nearly a fifth greater in 1942.

The following table summarizes data pertaining to ground-water levels in Massachusetts. The table is divided into two parts--in the first part water-levels are given in terms of height above mean sea level, and in the second part water levels are given in terms of depth below measuring point. The measuring points are located about at the land surface, the distance above or below land surface being given in the descriptive heading for each observation well.

Summary of data on ground-water levels in Massachusetts
(Measurements are in feet above mean sea level except as indicated)

Well	First measured	Lowest observed water level		Highest observed water level		Water level on last date of record in 1942
		Water level	Date	Water level	Date	
Brimfield 12	Feb. 6,1936	a16.05	Nov. 3,1942	a7.64	July 30,1938	a12.73
Chelmsford 68	July 27,1939	90.25	Oct. 4,1941	95.14	Apr. 23,1940	92.39
Chelmsford 69	Aug. 22,1939	97.57	Aug. 23,1941	102.59	Dec. 6,1942	101.47
Leominster 11	July 13,1939	353.97	Oct. 31,1939	362.36	Apr. 21,1940 Apr. 24,1940	361.68
Lowell 4	May 26,1939	90.08	Oct. 5,1941	94.70	May 7,1940	92.39
Lowell 9	May 29,1939	156.20	Oct. 11,1941	166.14	Apr. 23,1940	162.34
Lowell 14	May 29,1939	135.32	Nov. 7,1939	148.11	May 7,1940	143.47
Lowell 18	May 29,1939	117.26	Mar. 12,1940	119.28	May 24,1941	117.93
Lowell 22	Sept. 7,1939	108.02	Oct. 24,1939	112.05	Apr. 30,1940	110.13
Lowell 26	Aug. 9,1939	89.61	Oct. 18,1941	100.29	Apr. 2,1940 May 7,1940	92.52
Lowell 33	May 29,1939	90.50	Oct. 4,1941	95.41	Feb. 8,1941	94.07
Lowell 41	Aug. 22,1939	84.89	Oct. 17,1942	100.97	Feb. 15,1941	88.66
Lowell 43	May 28,1940	83.43	Dec. 24,1942	90.44	June 4,1940	83.43
Montague 5	Jan. 16,1936	a3.08	Oct. 14,1937	a0.23	Dec. 5,1942	a0.23
Reading 1	Aug. 25,1939	85.22	Aug. 25,1939 Sept.27,1941	94.21	Apr. 30,1940	88.60
Reading 3	June 20,1940	153.65	Nov. 1,1941	157.99	Feb. 8,1941	157.28
Topsfield 13	Feb. 6,1936	a17.48	Dec. 6,1939	a7.20	Apr. 22,1939	a12.55
Van Deusenville 20	Mar. 4,1936	a22.14	Oct. 11,1942	a16.91	Feb. 7,1938	a20.36
Wilmington 10	July 18,1940	(b)	Dec. 13,1941	112.62	Feb. 8,1941	110.87
Wilmington 29	July 24,1940	88.29	Sept.27,1941	91.59	Mar. 28,1942	89.85
Wilmington 44	July 26,1940	80.09	Oct. 11,1941	86.02	Feb. 8,1941	83.43
Wilmington 56	Aug. 12,1940	a7.97	Oct. 4,1941	a2.07	Feb. 8,1941	a4.59
Wilmington 58	July 27,1940	96.45	Nov. 1,1941	106.33	Mar. 23,1942	101.88
Winchendon 13	July 18,1939	1196.61	Nov. 27,1939	1206.63	May 5,1940	1203.50
Winchester 4	Aug. 22,1939	(c)	Dec. 26,1941	36.52	May 7,1940	28.62
Winchester 14	June 13,1940	101.30	Dec. 14,1941	110.67	Mar. 23,1942	106.73
Winchester 18	July 15,1940	(d)	Dec. 26,1941	a0.05	Mar. 23,1942	a6.30
Woburn 1	Aug. 14,1939	81.84	Oct. 17,1942	86.50	Feb. 8,1941	83.62
Woburn 3	Aug. 18,1939	70.17	Aug. 16,1941	73.29	Mar. 23,1942	72.32
Woburn 4	Sept.12,1939	65.63	Sept.26,1939	67.97	Apr. 23,1940	66.93
Woburn 5	Sept.12,1939	58.61	Sept.19,1939	59.83	Dec. 24,1942	59.83
Woburn 17	July 15,1940	(e)	Dec. 26,1941	176.35	Feb. 8,1941	174.23
Woburn 19	June 20,1940	23.80	Oct. 18,1941	32.40	Mar. 23,1942 Mar. 23,1942	31.95
Woburn 21	June 21,1940	109.09	Oct. 25,1941	112.98	Mar. 28,1942	111.31
Woburn 23	July 15,1940	92.67	Sept.27,1941	95.16	Feb. 8,1941	94.81
Woburn 36	June 28,1940	40.35	Nov. 2,1941	42.11	May 10,1941	41.54
Woburn 38	June 28,1940	33.51	Dec. 14,1941	43.87	Mar. 23,1942	41.71
Woburn 49	July 10,1940	59.00	Dec. 5,1941	64.84	Feb. 8,1941	64.13
Woburn 53	July 13,1940	95.27	Sept.27,1941	98.03	Mar. 23,1942	97.08

a Feet below measuring point.
b Well dry; water level below 104.6 feet above mean sea level.
c Well dry; water level below 21.4 feet above mean sea level.
d Well dry; water level below 13.0 feet below measuring point.
e Well dry; water level below 168.3 feet above mean sea level.

Net change in water level, in feet, in wells in Massachusetts, 1942

Well	Net change	Well	Net change	Well	Net change
Chelmsford 68	+0.55	Reading 1	+2.89	Woburn 3	+.67
Chelmsford 69	+1.10	Reading 3	+1.10	Woburn 4	+.28
Leominster 11	+3.96	Wilmington 10	+3.07	Woburn 5	+.59
Lowell 4	+.37	Wilmington 29	+.62	Woburn 17	+3.63
Lowell 9	+3.32	Wilmington 44	+.54	Woburn 19	+5.96
Lowell 14	+4.17	Wilmington 56	+.21	Woburn 21	+1.53
Lowell 18	+.18	Wilmington 58	+2.47	Woburn 23	+.77
Lowell 22	+1.01	Winchendon 13	+5.60	Woburn 36	+.83
Lowell 26	+1.55	Winchester 4	+5.42	Woburn 38	+7.72
Lowell 33	+1.21	Winchester 14	+4.48	Woburn 49	+4.40
Lowell 41	-7.09	Winchester 18	+6.30	Woburn 53	+.51
Lowell 43	-3.59	Woburn 1	-.51		

As indicated in the second of the foregoing tables, most of the observation wells in Massachusetts showed a net rise in water level during 1942. In general, the net rise was greatest in wells that penetrate deposits of more or less unstratified sandy clay. The average rise in such wells was about 2 feet greater than the rise in wells that penetrate stratified deposits of sand and gravel. The water levels in wells that penetrate sandy clay have an annual range of fluctuation about twice as great as that of the water levels in wells that end in stratified deposits.

It will be noted that three of the observation wells show a net decline in water level during 1942. The decline in two of these wells, Lowell 41 and Lowell 43, is the result of increased pumpage from nearby wells. The reason for the decline in water level in the other well, Woburn 1, is not definitely known but is believed to be the result of increased pumpage from nearby wells during December.

The relatively high stages of the ground-water levels near the end of 1942 are chiefly the result of heavy precipitation. The year 1942 is the first year since water-level measurements were begun (in 1939) in which above-normal precipitation has occurred, and the precipitation was about 3 inches greater in 1942 than the average for the preceding 10 years and about 12 inches greater than in 1941.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Observation wells in Massachusetts are listed alphabetically by counties and numerically within each county. Complete descriptions are given only for newly added wells. The numbers in parentheses immediately following a well number indicate 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 that paper. The water level in each well is expressed in feet below a fixed measuring point or in feet above an assumed datum plane.

Berkshire County

Van Deusenville 20. Mr. Kopf. Northwest corner of North Plains Road and Division Street, Van Deusenville. Unused dug domestic well, diameter 34 inches, depth 21.6 feet below land surface. Measuring point, chiseled arrowhead on top of concrete casing at east side of well, 2.2 feet above land surface. Land surface, about 720 feet above mean sea level.

Water level, in feet below measuring point, 1936-40, 1942

Date	Water level	Date	Water level	Date	Water level
Mar. 4, 1936	20.24	Oct. 17, 1937	18.30	Dec. 20, 1938	17.34
Apr. 1	17.45	Nov. 14	17.89	Jan. 26, 1939	18.52
29	17.73	Dec. 7	17.79	Feb. 2	18.72
June 26	19.75	Jan. 12, 1938	17.81	27	18.14
July 15	19.99	Feb. 7	16.91	Apr. 8	17.70
Sept. 3	20.75	Mar. 10	17.75	May 13	17.50
Oct. 2	21.19	May 20	18.64	Jan. 17, 1940	20.58
Dec. 3	20.98	June 13	19.00	Feb. 23	20.65
May 8, 1937	18.84	July 16	18.94	Oct. 11, 1942	22.14
June 12	18.65	Aug. 15	17.90	Nov. 4	21.56
July 16	18.88	Nov. 21	18.71	28	20.36
Sept.15	17.14				

Essex County

Topsfield 13. 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. Unused dug domestic well, diameter 30 inches, depth 22.0 feet below land surface. Measuring point, top edge of 1-inch hole in center of wooden well cover, about at land surface and 135 feet above mean sea level.

Water level, in feet below measuring point, 1936-40, 1942

Feb. 8, 1936	12.57	Feb. 5, 1938	9.55	Apr. 22, 1939	7.20
July 1	12.87	Mar. 2	10.32	Aug. 12	15.05
May 21, 1937	10.44	Apr. 6	10.19	Oct. 30	16.98
June 19	12.03	27	10.33	Dec. 6	17.48
Aug. 5	13.65	May 31	11.91	Jan. 12, 1940	15.20
18	14.23	July 7	11.60	Feb. 27	16.57
Sept.29	15.15	30	7.68	Apr. 8	13.33
Oct. 11	15.36	Feb. 3, 1939	12.34	Oct. 5, 1942	14.92
Nov. 9	14.95	18	11.92	Nov. 5	15.66
Dec. 13	8.14	Mar. 25	11.30	Dec. 5	12.55
Jan. 10, 1938	9.19				

Franklin County

Montague 5. Charles Kurtyka. On west side of Turners Falls-Montague road, about 1.3 miles north of Montague. Unused dug domestic well, diameter 38 inches, depth 7.2 feet below land surface. Measuring point, center of chiseled cross in stone projecting from northwest side of casing, 1.3 feet below land surface. Land surface is about 270 feet above mean sea level.

Water level, in feet below measuring point, 1936-39, 1942

Jan. 16, 1936	2.47	Nov. 9, 1937	2.43	Nov. 18, 1938	1.14
Feb. 20	3.07	Dec. 11	1.56	Dec. 17	.35
July 8	3.03	Jan. 9, 1938	1.67	Jan. 22, 1939	1.15
May 5, 1937	1.35	Feb. 4	1.08	Feb. 2	1.22
June 9	1.52	Mar. 7	1.10	22	.88
July 13	1.89	May 17	1.63	Apr. 5	.24
Aug. 25	2.89	June 10	2.40	May 19	.98
Sept.13	2.37	July 12	2.38	Oct. 31, 1942	2.26
Oct. 14	3.08	Aug. 12	2.26	Dec. 5	.23

Hampden County

Brimfield 12. Q. Q. Goodrich. On south side of Palmer-Brimfield road (State Highway 20), about 30 feet south of abandoned section of old Highway 20, 2.3 miles west of Brimfield. Unused dug domestic well, diameter 22 inches, depth 16.8 feet below land surface. Measuring point, center of chiseled cross in stone projecting from south side of well, 0.5 foot below land surface. Land surface is about 740 feet above mean sea level.

Water level, in feet below measuring point, 1936-39, 1942

Date	Water level	Date	Water level	Date	Water level
Feb. 6, 1936	14.55	Oct. 22, 1937	15.05	Dec. 30, 1938	10.77
17	14.93	Nov. 5	14.43	Feb. 1, 1939	12.46
May 2	7.74	Jan. 5 1938	12.37	4	12.49
July 11	12.23	Feb. 11	12.52	Mar. 8	12.55
May 12, 1937	11.96	Mar. 12	12.33	Apr. 8	9.98
July 19	13.58	Apr. 12	13.45	May 12	11.27
Aug. 10	14.07	June 16	12.51	July 29	14.00
13	14.12	July 30	7.64	Oct. 7, 1942	16.01
30	14.45	Aug. 18	10.18	Nov. 3	16.05
Sept.21	14.62	Sept.19	12.48	Dec. 9	12.75

Middlesex County

Chelmsford 68 (*886, p. 254; 906, p. 39; 936, p. 44). 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 above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	91.96	Apr. 4	93.66	July 4	92.31	Oct. 3	91.22
10	91.93	11	93.53	11	92.44	10	91.19
17	91.89	22	93.40	18	92.01	17	91.06
24	92.28	25	93.24	25	91.71	24	91.46
31	92.10	May 2	92.87	Aug. 1	92.17	31	91.66
Feb. 7	91.90	9	92.81	8	91.88	Nov. 8	91.74
14	92.08	16	92.58	15	91.82	14	91.76
21	92.40	23	92.80	22	91.74	22	91.93
28	92.04	30	92.62	29	91.48	28	92.32
Mar. 7	92.64	June 6	92.28	Sept. 5	91.25	Dec. 6	93.39
14	93.19	13	92.13	12	91.49	11	93.24
21	93.69	20	92.61	19	91.52	19	92.79
28	93.84	27	92.44	26	91.17	24	92.39

Chelmsford 69 (*886, p. 254; 906, p. 39; 936, p. 45). City of Lowell, Washington test well 2. About 2,100 feet southeast of Chelmsford Street, 300 feet southwest of Ecuador Road, 1.7 miles northeast of Chelmsford Center, Chelmsford.

Water level, in feet above mean sea level, 1942

Jan. 3	100.22	Apr. 4	101.34	July 4	101.02	Oct. 3	99.70
10	100.15	11	101.16	11	101.12	10	99.76
17	99.90	22	101.27	18	100.66	17	99.36
24	100.92	25	101.04	25	100.28	24	100.20
31	100.45	May 2	100.53	Aug. 1	101.16	31	100.78
Feb. 7	100.47	9	101.00	8	100.66	Nov. 8	101.20
14	100.68	16	100.82	15	100.67	14	101.16
21	101.15	23	100.69	22	100.33	22	101.27
28	100.42	30	100.37	29	99.88	28	101.85
Mar. 7	101.39	June 6	100.43	Sept. 5	99.73	Dec. 6	102.59
14	101.56	13	100.13	12	99.82	11	102.05
21	102.05	20	100.63	19	99.47	19	101.63
28	101.47	27	100.73	26	99.67	24	101.47

Lowell 4 (886, p. 254; 906, p. 39; 936, p. 45). Remington Arms Co. Inc. (formerly owned by New England and Southern Mills and known as well 1 About 135 feet north of Marginal Street, and 1,000 feet east of Pawtucket Street bridge over Boston and Maine Railroad tracks, Lowell.

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	91.90	91.85	91.85	93.50	92.91	92.68
2	91.73	92.06	91.95	93.47	92.88	92.52
3	91.71	91.95	92.03	93.42	92.88	92.38
4	91.75	91.81	92.39	93.40	92.80	92.29
5	91.93	91.66	92.44	93.40	92.72	a92.16
6	a91.99	91.57	92.41	93.44	92.71	92.09
7	a91.90	91.56	92.41	93.41	92.85	92.09
8	a91.79	91.68	92.44	93.39	a92.81	92.21
9	a91.69	92.06	92.53	93.39	a92.81	92.19
10	a91.63	92.16	92.95	93.47	92.86	92.17
11	a91.66	a92.10	93.15	93.53	92.88	92.17
12	a91.75	92.06	93.23	93.54	92.78	92.14
13	91.82	91.95	93.21	93.51	92.67	92.09
14	91.83	91.90	93.19	93.46	92.61	92.09
15	91.85	91.90	93.16	93.40	92.57	92.18
16	91.78	92.00	93.10	93.34	92.55	92.45
17	91.73	92.09	93.12	93.35	92.57	92.70
18	91.73	.....	93.64	93.41	92.69	92.89
19	91.77	a92.44	a93.73	93.43	92.73	92.97
20	91.99	a92.34	93.70	93.46	92.83	92.96
21	92.26	92.23	a93.70	93.42	92.89	92.96
22	a92.29	92.18	93.71	93.36	92.89	92.90
23	92.21	92.18	a93.85	93.30	92.92	92.77
24	92.18	92.12	93.91	93.24	92.95	92.58
25	92.18	92.02	93.89	93.21	a93.00	92.46
26	92.24	91.94	93.81	93.19	.....	a92.32
27	92.16	91.88	93.74	93.16	.....	92.19
28	92.04	91.85	93.69	93.13	.....	92.19
29	91.91	.....	93.66	93.08	.....	92.29
30	91.83	.....	93.60	92.99	a92.75	92.33
31	91.31	.....	93.53	.....	92.75	.....

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	92.29	92.40	91.54	91.32	91.56	92.93
2	92.19	92.46	91.47	91.27	91.59	93.03
3	92.19	92.43	91.39	91.21	91.62	a93.38
4	92.29	92.33	91.35	91.21	91.69	a93.67
5	92.40	92.25	91.35	91.35	91.73	93.88
6	92.52	92.15	91.35	91.30	91.74	93.89
7	92.56	92.00	91.49	91.29	91.60	93.81
8	92.68	91.90	91.62	91.28	91.60	93.71
9	92.67	91.88	91.65	91.26	91.79	93.62
10	92.62	91.93	91.66	91.17	91.90	93.48
11	92.51	92.03	91.67	91.16	91.86	93.38
12	92.51	92.10	91.74	91.18	91.77	93.30
13	92.45	92.10	91.77	91.15	a91.71	93.29
14	92.32	92.05	91.86	91.14	91.66	93.18
15	92.17	92.05	91.88	91.12	91.68	93.05
16	92.04	92.09	91.82	91.06	91.84	a93.05
17	a91.94	92.24	91.74	91.00	91.88	a93.00
18	91.88	92.27	91.62	91.00	91.85	a92.98
19	91.87	92.21	91.50	91.21	91.87	a92.82
20	91.88	92.13	91.44	91.34	91.88	a92.64
21	91.81	92.02	91.42	91.43	91.92	a92.45
22	91.75	91.94	91.36	91.51	92.00	a92.35
23	91.65	91.93	91.29	91.59	92.09	a92.25
24	91.56	91.96	91.24	91.58	92.09	92.16
25	91.54	91.91	91.18	91.58	92.09	92.16

a Estimated lowest daily water level.

Lowell 4. Remington Arms Co.--Continued.

Lowest daily water level, in feet above mean sea level, 1942

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	91.54	91.80	91.15	91.72	92.15	92.22
27	91.66	a91.71	91.15	91.78	92.39	92.26
28	91.91	91.60	91.24	91.79	a92.56	92.36
29	92.22	91.53	91.32	91.83	92.70	92.39
30	92.22	91.53	91.37	91.73	92.89	.....
31	92.35	91.55	.....	91.57	.....	.....

Lowell 9(*886, p. 255; 906, p. 40; 936, p. 46). Roark Estate. About 25 feet east of Wilder Street and 40 feet south of Parker Street, Lowell. Measuring point lowered 2.31 feet June 6, 1942. New measuring point, top edge of sharp black rock projecting from north wall of well, 1.7 feet below land surface and 172.16 feet above mean sea level. Water level, June 6, 1942, 10.45 feet below measuring point and 161.71 feet above mean sea level.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	159.38	Apr. 4	164.94	July 11	160.24	Oct. 10	158.20
10	159.75	11	164.53	18	160.06	17	157.91
17	159.80	22	164.04	25	159.81	24	157.92
24	160.16	25	163.91	Aug. 1	159.70	31	158.06
31	160.52	May 2	163.48	8	159.58	Nov. 8	158.23
Feb. 7	160.82	9	163.00	15	159.49	14	158.57
14	161.09	16	162.70	22	159.36	22	158.91
21	161.16	23	162.42	29	159.18	28	159.23
28	160.96	June 6	161.71	Sept. 5	158.98	Dec. 6	161.92
Mar. 7	160.94	13	161.25	12	158.76	11	162.95
14	161.92	20	160.92	19	158.58	19	162.59
21	163.97	27	160.63	26	158.39	24	162.34
28	164.84	July 4	160.42	Oct. 3	158.20		

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

Water level, in feet above mean sea level, 1942

Jan. 3	139.50	Apr. 4	143.94	July 4	144.14	Oct. 3	141.68
10	139.69	11	144.58	11	144.02	10	141.54
17	139.84	22	145.39	18	143.88	17	141.42
24	140.04	25	145.55	25	143.65	24	141.42
31	140.27	May 2	145.75	Aug. 1	143.47	31	141.34
Feb. 7	140.63	9	145.74	8	143.31	Nov. 8	141.26
14	140.67	16	145.70	15	143.16	14	141.24
21	140.81	23	145.58	22	143.00	22	141.23
28	140.91	30	145.38	29	142.80	28	141.38
Mar. 7	141.01	June 6	145.10	Sept. 5	142.59	Dec. 6	142.24
14	141.28	13	144.78	12	142.36	11	142.88
21	142.00	20	144.54	19	142.11	19	143.33
28	143.18	27	144.31	26	141.86	24	143.47

Lowell 18 (*886, p. 255; 906, p. 41; 936, p. 46). Mrs. Logan. About 130 feet west of Rolfe Street and 500 feet south of Pawtucket Street, Lowell.

Water level, in feet above mean sea level, 1942

Jan. 3	117.74	Apr. 4	118.29	July 4	118.02	Oct. 3	117.62
10	117.73	11	118,35	11	118.00	10	117.66
17	117.70	22	118.33	18	117.96	17	117.64
24	117.70	25	118.32	25	117.96	24	117.64
31	117.69	May 2	118.29	Aug. 1	117.93	31	117.62
Feb. 7	117.72	9	118.27	8	117.93	Nov. 8	117.61
14	117.85	16	118.25	15	117.92	14	117.63
21	117.93	23	118.23	22	117.87	22	117.61
28	117.99	30	118.21	29	118.73	28	117.61
Mar. 7	118.00	June 6	118.17	Sept. 5	117.79	Dec. 6	117.78
14	118.11	13	118.13	12	117.76	11	117.93
21	118.18	20	118.10	19	117.72	19	117.96
28	118.24	27	118.05	26	117.70	24	117.93

Lowell 22 (*886, p. 256; 906, p. 41; 936, p. 46). Shaw Paper Co. About 70 feet south of Shaw Street and 270 feet east of Smith Street, Lowell.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	109.27	Apr. 11	111.02	July 11	109,68	Oct. 3	108.43
10	109.45	22	110.84	18	109.59	10	108.39
17	109.28	25	110.63	25	109.29	17	108.32
24	108.98	May 2	110.47	Aug. 1	109.62	24	108.46
31	109.10	9	110.34	8	109.34	31	108.54
Feb. 14	108.68	16	110.17	15	109.34	Nov. 8	108.68
21	108.71	23	110.07	22	109.14	14	108.84
28	109.05	30	109.90	29	109.02	22	108.90
Mar. 7	108.73	June 6	109.75	Sept. 5	108.81	28	109.41
14	109.67	13	109.62	12	108.76	Dec. 6	110.70
21	110.87	20	109.85	19	108.63	11	110.78
28	111.22	27	109.51	26	108.52	24	110.13
Apr. 4	111.06	July 4	109.56				

Lowell 26 (*886, p. 256; 906, p. 41; 936, p. 47). A. W. Crosby (well 1). About 55 feet northeast of Pawtucket Boulevard Extension and about 4,500 feet west of East Avenue, Lowell.

Water level, in feet above mean sea level, 1942

Jan. 3	91.11	Apr. 4	96.53	July 4	93.25	Oct. 3	90.62
10	91.14	11	96.83	11	93.11	10	90.49
17	91.06	22	97.06	18	92.76	17	90.39
24	91.85	25	96.72	25	92.42	24	90.40
31	91.56	May 2	95.80	Aug. 1	92.80	31	90.63
Feb. 7	91.63	9	96.15	8	92.23	Nov. 8	90.69
14	91.93	16	95.61	15	92.01	14	90.83
21	92.45	23	95.54	22	91.80	22	90.85
28	92.04	30	94.90	29	91.57	28	91.09
Mar. 7	93.40	June 6	94.34	Sept. 5	91.30	Dec. 6	92.62
14	93.64	13	93.85	12	91.08	11	92.87
21	94.50	20	93.65	19	90.92	19	92.75
28	95.31	27	93.46	26	90.78	24	92.52

Lowell 33 (*886, p. 256; 906, p. 41; 936, p. 47). Thomas Varnum. About 400 feet south and 50 feet west of intersection of Varnum Avenue and West Meadow Road, Lowell.

Water level, in feet above mean sea level, 1942

Jan. 3	92.98	Apr. 4	94.81	July 4	93.93	Oct. 3	92.49
10	93.01	11	94.86	11	93.89	10	92.37
17	92.88	22	94.81	18	93.54	17	92.21
24	93.45	25	94.67	25	93.25	24	92.83
31	93.35	May 2	94.34	Aug. 1	94.02	31	92.93
Feb. 7	93.42	9	94.49	8	93.43	Nov. 8	93.23
14	93.66	16	94.35	15	93.60	14	93.32
21	93.93	23	94.42	22	93.29	22	93.53
28	93.61	30	93.98	29	93.02	28	94.00
Mar. 7	94.11	June 6	93.82	Sept. 5	92.77	Dec. 6	94.63
14	94.37	13	93.68	12	92.96	11	94.43
21	94.86	20	94.20	19	92.74	19	94.20
28	94.73	27	93.78	26	92.53	24	94.07

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

Water level, in feet above mean sea level, 1942

Jan. 3	95.47	Feb. 14	96.31	Mar. 28	97.95	May 9	95.69
10	95.39	21	96.95	Apr. 4	97.61	16	95.11
17	94.86	28	95.83	11	97.18	23	95.31
24	96.88	Mar. 7	97.35	22	97.02	June 6	94.73
31	96.23	14	98.00	25	96.53	13	94.47
Feb. 7	95.97	21	98.69	May 2	95.63	20	94.58

Lowell 41. City of Lowell--Continued.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 27	94.71	Aug. 15	94.25	Sept. 26	89.81	Nov. 8	88.36
July 11	95.56	22	93.19	Oct. 3	89.60	14	88.29
18	94.75	29	94.72	10	87.67	22	88.38
25	93.81	Sept. 5	93.07	17	84.89	28	90.62
Aug. 1	95.01	12	91.07	24	86.09	19	90.36
8	94.00	19	90.13	31	88.73	24	88.66

Lowell 43 (*906, p. 42; 936, p. 47). 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 above mean sea level, 1942

Jan. 3	85.33	Apr. 4	84.18	July 4	85.26	Oct. 3	84.49
10	84.36	11	84.95	11	85.35	10	94.22
17	85.25	22	84.29	18	84.41	17	84.06
24	85.48	25	84.17	25	83.92	24	84.73
31	84.38	May 2	84.09	Aug. 1	85.08	31	84.09
Feb. 7	84.68	9	84.50	8	84.14	Nov. 8	84.01
14	84.53	16	84.56	15	84.51	14	83.79
21	84.73	23	85.62	22	84.72	22	84.58
28	84.60	30	85.40	29	83.87	28	85.27
Mar. 7	84.30	June 6	84.40	Sept. 5	83.93	Dec. 6	85.90
14	84.99	13	84.73	12	85.05	11	84.50
21	84.63	20	86.15	19	84.43	19	83.60
28	84.54	27	84.39	26	84.14	24	83.43

Reading 1 (*886, p. 257; 906, p. 42; 936, p. 48). William Kelch. About 50 feet northeast 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 above mean sea level, 1942

Jan. 3	85.71	Apr. 23	92.22	July 13	88.36	Oct. 3	86.19
12	85.94	25	92.22	18	88.19	10	86.10
16	86.03	May 2	91.81	25	87.97	17	86.01
24	86.78	9	91.27	Aug. 1	87.77	24	85.93
31	87.50	16	90.86	8	87.56	31	85.86
Feb. 14	88.76	23	90.59	15	87.39	Nov. 8	85.79
21	89.07	30	90.25	22	87.21	14	85.78
28	89.01	June 6	89.80	29	86.97	22	85.74
Mar. 15	90.36	13	89.45	Sept. 5	86.86	28	85.77
23	93.03	20	89.12	12	86.67	Dec. 6	87.64
31	93.10	27	88.84	19	86.47	20	88.62
Apr. 8	92.74	July 4	88.60	26	86.35	24	88.60

Reading 3 (*906, p. 43; 936, p. 48). 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 above mean sea level, 1942

Jan. 3	156.53	Apr. 23	157.64	July 13	156.51	Oct. 3	155.08
12	156.30	25	157.45	20	156.18	10	155.15
16	156.24	May 2	157.31	25	155.80	17	154.86
24	157.16	9	157.64	Aug. 1	156.67	24	156.23
31	156.90	16	157.38	8	155.44	31	155.85
Feb. 14	157.17	23	157.54	15	156.50	Nov. 8	156.29
21	157.20	30	157.08	22	156.34	14	156.37
28	157.14	June 6	156.98	29	155.56	22	156.68
Mar. 15	157.74	13	166.73	Sept. 5	155.35	28	157.12
23	157.93	20	157.39	12	155.98	Dec. 6	157.45
31	157.93	27	156.75	19	155.33	20	157.18
Apr. 8	157.57	July 4	157.33	26	154.96	24	157.28
15	157.58						

Wilmington 10 (*906, p. 43; 936, p. 48). 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 above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	108.23	Apr. 22	112.23	July 11	109.74	Oct. 3	106.62
10	108.54	25	111.80	18	109.05	10	106.47
16	108.17	May 2	111.29	25	108.46	17	106.31
24	110.30	9	111.69	Aug. 1	109.83	24	106.70
31	109.90	16	111.21	8	108.73	31	106.79
Feb. 14	110.61	23	111.43	15	108.97	Nov. 8	107.59
28	110.35	30	110.45	22	108.46	14	107.85
Mar. 14	112.39	June 6	110.10	29	107.83	22	108.23
23	112.56	13	109.64	Sept. 5	107.44	28	109.89
28	112.28	20	109.89	12	107.33	Dec. 6	111.79
Apr. 4	112.28	27	109.47	19	107.05	20	111.02
15	112.08	July 4	110.53	26	106.80	24	110.87

Wilmington 29 (*906, p. 43; 936, p. 49). Oliver R. Surette. About 40 feet east of Andover Street, 2,700 feet northeast of intersection of Andover and Woburn Streets, 2.5 miles northeast of Wilmington Center.

Water level, in feet above mean sea level, 1942

Jan. 3	89.28	Apr. 22	90.11	July 11	89.51	Oct. 3	88.91
10	89.25	25	90.05	18	89.34	10	88.95
16	89.23	May 2	89.89	25	89.20	17	88.87
24	89.68	9	89.84	Aug. 1	89.51	24	89.19
31	89.57	16	89.73	8	89.94	31	89.15
Feb. 14	89.89	23	89.74	15	89.37	Nov. 8	89.29
21	89.94	30	89.57	22	89.23	14	89.34
28	89.80	June 6	89.50	29	89.09	22	89.39
Mar. 14	90.25	13	89.39	Sept. 5	89.00	28	89.67
23	90.77	20	89.55	12	89.10	Dec. 6	90.31
28	91.59	27	89.47	19	88.95	20	89.88
Apr. 4	90.42	July 4	89.65	26	88.89	24	89.85
15	90.21						

Wilmington 44 (*906, p. 44; 936, p. 49). 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, in feet above mean sea level, 1942

Jan. 3	82.93	Apr. 22	84.37	July 11	82.94	Oct. 3	81.15
10	82.90	25	83.98	18	82.45	10	81.25
16	82.65	May 2	83.56	25	82.15	17	81.20
24	84.08	9	83.66	Aug. 1	82.90	24	82.27
31	83.41	16	83.42	8	82.30	31	82.18
Feb. 14	83.54	23	83.64	15	82.30	Nov. 8	82.74
21	83.42	30	83.18	22	82.20	14	82.82
28	83.14	June 6	82.92	29	81.79	22	83.02
Mar. 14	84.37	13	82.74	Sept. 5	81.50	28	84.09
23	85.90	20	82.62	12	81.57	Dec. 6	84.81
28	84.90	27	82.70	19	81.32	20	83.61
Apr. 4	84.56	July 4	83.31	26	81.17	24	83.43
15	84.31						

Wilmington 56. D. P. Falkner. East side of Woburn Street, about 700 feet north of Lowell Street and 1.4 miles southeast of Wilmington Center, Wilmington. Unused dug domestic well, diameter 36 inches, depth 10.7 feet below land surface. Measuring point, top of stone casing, about at land surface and about 95 feet above mean sea level.

Water level, in feet below measuring point, 1940-42

Date	Water level	Date	Water level	Date	Water level
Aug. 12, 1940	6.41	Sept. 9, 1940	6.71	Oct. 5, 1940	6.18
19	6.77	16	6.76	12	6.29
26	6.92	23	6.52	19	6.30
Sept. 2	7.14	28	5.98	26	6.46

Wilmington 56. D. P. Falkner--Continued.

Water level, in feet below measuring point, 1940-42

Date	Water level	Date	Water level	Date	Water level
Nov. 2, 1940	6.16	July 26, 1941	7.20	Apr. 22, 1942	3.71
9	5.60	Aug. 2	6.37	25	4.07
16	3.85	9	6.89	May 2	4.64
23	4.56	16	7.40	9	4.32
30	4.74	23	7.66	16	4.58
Dec. 7	4.58	30	7.65	23	4.06
14	4.01	Sept. 6	7.02	30	4.74
21	4.11	13	7.32	June 6	5.05
28	4.14	20	7.74	13	5.24
Jan. 4, 1941	3.56	27	7.96	20	5.05
11	4.16	Oct. 4	7.97	27	5.17
18	3.78	11	7.80	July 4	4.53
Feb. 1	4.31	18	7.80	11	5.13
8	2.07	25	7.76	18	5.64
15	3.08	Nov. 1	7.69	25	6.06
22	4.14	8	6.76	Aug. 1	5.23
Mar. 1	4.44	15	6.52	8	6.07
8	4.33	22	6.57	15	5.59
15	4.38	29	6.48	22	5.80
22	4.05	Dec. 5	6.39	29	6.33
29	2.99	13	6.46	Sept. 5	6.57
Apr. 5	3.71	20	5.32	12	6.18
12	4.15	27	5.00	19	6.57
19	4.48	Jan. 3, 1942	4.80	26	6.75
26	4.55	10	5.11	Oct. 3	6.69
May 3	4.51	16	5.27	10	6.50
10	4.65	24	4.15	17	6.30
17	5.05	31	4.61	24	5.64
24	5.26	Feb. 14	4.57	31	5.74
31	5.49	21	4.55	Nov. 8	5.28
June 7	5.20	28	4.88	14	5.16
14	5.76	Mar. 14	3.07	22	4.92
21	6.01	23	2.35	28	4.09
28	6.42	28	3.40	Dec. 6	3.73
July 5	6.72	Apr. 4	3.55	20	4.51
12	7.10	15	3.83	24	4.59
19	7.08				

Wilmington 58 (*906, p. 44; 936, p. 49). 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 above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	99.97	Apr. 22	103.08	July 11	100.38	Oct. 3	97.83
10	100.45	25	102.86	18	99.93	10	97.71
16	100.48	May 2	102.22	25	99.55	17	97.59
24	102.86	9	102.03	Aug. 1	99.71	24	97.98
31	102.48	16	101.74	8	99.33	31	98.18
Feb. 14	103.34	23	101.96	15	99.21	Nov. 8	98.66
21	103.08	30	101.54	22	99.12	14	98.96
28	102.23	June 6	101.07	29	98.84	22	99.25
Mar. 14	104.53	13	100.72	Sept. 5	98.55	28	100.29
23	106.33	20	100.51	12	98.36	Dec. 6	103.90
28	105.12	27	100.30	19	98.19	20	102.21
Apr. 4	104.33	July 4	100.59	26	98.00	24	101.88
15	103.21						

Winchester 4 (*886, p. 257; 906, p. 44; 936, p. 49). 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 above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 24	23.20	May 2	30.30	July 20	27.32	Oct. 3	24.40
31	23.22	9	30.18	25	26.59	10	23.97
Feb. 14	26.13	16	29.89	Aug. 1	26.71	17	23.58
21	26.77	23	29.87	8	26.51	25	24.14
28	26.61	30	29.11	15	26.53	31	23.92
Mar. 15	29.76	June 6	28.67	22	26.42	Nov. 8	24.34
23	32.64	13	28.17	29	26.18	14	24.64
28	32.30	20	28.11	Sept. 5	25.67	22	25.13
Apr. 4	31.79	27	28.08	12	25.23	28	25.79
15	30.97	July 4	28.15	19	25.16	Dec. 6	29.45
23	30.74	13	27.82	26	24.72	24	28.62
25	30.80						

Winchester 14 (*906, p. 44; 936, p. 50). F. E. Gregory. About 105 feet north of Forest Street, 360 feet northeast of west intersection of Forest Street and Forest Circle, 1.7 miles northeast of Winchester.

Water level, in feet above mean sea level, 1942

Jan. 3	102.91	Apr. 23	107.50	July 13	104.72	Oct. 3	102.84
12	103.73	25	107.45	20	104.49	10	102.72
16	103.95	May 2	106.79	25	104.33	17	102.60
24	106.54	9	106.25	Aug. 1	104.10	24	102.58
31	106.80	16	105.92	8	103.88	31	102.71
Feb. 14	107.34	23	105.67	15	103.71	Nov. 8	102.96
21	106.65	30	105.42	22	103.66	14	103.31
28	106.09	June 6	105.11	29	103.55	22	103.70
Mar. 15	108.45	13	104.83	Sept. 5	103.38	28	104.97
23	110.67	20	104.60	12	103.22	Dec. 6	109.07
31	108.57	27	104.64	19	103.09	20	107.10
Apr. 8	107.73	July 4	104.62	26	102.97	24	106.73
15	107.36						

Winchester 18. Thomas N. Vinson. About 60 feet east of Ridge Street, 40 feet north of High Street, about 1.9 miles west of Winchester. Unused dug domestic well, diameter 24 inches, depth 14.1 feet below land surface. Measuring point, top of projecting stone in well casing, 1.1 feet below land surface. Land surface is about 280 feet above mean sea level.

Water level, in feet below measuring point, 1940-42

Date	Water level	Date	Water level	Date	Water level
July 15, 1940	9.81	Feb. 1, 1941	6.12	July 19, 1941	11.13
22	10.17	8	2.90	26	11.36
29	10.53	15	2.17	Aug. 2	11.86
Aug. 5	10.80	22	4.75	9	11.86
12	11.04	Mar. 1	6.36	16	12.20
19	11.23	8	7.17	23	12.57
26	11.47	15	7.67	30	(a)
Sept. 2	11.71	22	7.00	Jan. 3, 1942	12.59
9	11.85	29	4.80	12	11.42
16	12.07	Apr. 5	5.60	17	11.04
23	12.27	12	6.25	24	7.97
28	12.37	19	7.21	31	6.94
Oct. 5	12.58	26	7.62	Feb. 21	3.92
12	12.77	May 3	7.83	Feb. 28, 1942	6.04
19	12.97	10	8.05	Mar. 15	1.28
Nov. 16	12.37	17	7.95	23	.05
23	9.99	24	8.45	28	1.20
30	10.18	31	8.94	Apr. 4	2.83
Dec. 7	9.97	June 7	9.18	15	5.89
14	8.60	14	9.57	23	6.39
21	6.86	21	9.91	25	6.60
28	5.99	28	10.28	May 2	7.56
Jan. 11, 1941	5.10	July 5	10.64	9	7.83
18	5.03	12	10.91	16	8.36

Winchester 18. Thomas N. Vinson--Continued.

Water level, in feet below measuring point, 1940-42

Date	Water level	Date	Water level	Date	Water level
May 23, 1942	8.58	July 13, 1942	10.29	Aug. 29, 1942	11.76
30	8.97	20	10.60	Sept. 5	12.27
June 6	9.31	25	10.79	12	12.28
13	9.62	Aug. 1	10.97	Oct. 3	(a)
20	9.93	8	11.19	Dec. 6	6.90
27	9.71	15	11.39	24	6.30
July 4	10.10	22	11.58		

Woburn 1 (*886, p. 258; 906, p. 45; 936, p. 50). E. P. Fox. About 225 feet south of Green Street, 250 feet west of Highland Street, 3.5 miles north of Woburn.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	84.16	Apr. 15	84.81	July 4	84.21	Sept. 26	82.62
12	83.91	23	84.90	13	83.69	Oct. 3	82.31
17	83.69	25	84.81	20	83.37	10	82.17
24	84.86	May 2	84.49	25	83.17	17	81.84
31	84.29	9	84.51	Aug. 1	83.34	25	83.12
Feb. 14	84.66	16	84.34	8	83.21	31	82.67
21	84.55	23	84.35	15	83.54	Nov. 8	83.28
28	83.94	30	84.08	22	83.79	14	83.11
Mar. 15	85.25	June 6	83.98	29	83.24	22	83.31
23	85.92	13	83.54	Sept. 5	82.08	28	84.51
28	85.26	20	84.99	12	83.17	Dec. 6	85.24
Apr. 4	85.03	27	84.02	19	82.81	24	83.62

Woburn 3 (*886, p. 258; 906, p. 45; 936, p. 50). Lord Tannery. About 70 feet north of Lord Tannery well field concrete pump pit, 670 feet north of Ashburton Avenue, 200 feet east of Boston and Maine Railroad tracks, 2.7 miles north of Woburn.

Water level, in feet above mean sea level, 1942

Jan. 3	71.75	Apr. 25	72.69	July 20	71.69	Oct. 3	70.51
12	71.89	May 2	72.58	25	71.94	10	70.93
17	71.89	9	72.55	Aug. 1	71.94	17	71.11
24	72.40	16	72.48	8	71.85	24	71.43
Feb. 14	72.50	23	71.76	15	71.82	31	71.46
28	72.34	30	72.31	22	71.79	Nov. 8	71.54
Mar. 15	72.83	June 6	72.30	29	71.34	14	71.56
23	73.29	13	72.24	Sept. 5	70.84	22	71.64
31	73.07	20	72.16	12	71.59	28	71.91
Apr. 8	72.83	27	72.02	19	71.41	Dec. 6	72.75
15	72.54	July 4	72.18	26	71.22	24	72.32
23	72.69	13	71.31				

Woburn 4 (*886, p. 258; 906, p. 46; 936, p. 51). 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, and 3 miles north of Woburn.

Water level, in feet above mean sea level, 1942

Jan. 3	66.71	Apr. 23	66.87	July 13	66.38	Oct. 3	66.25
12	66.63	25	66.84	20	66.30	10	66.31
16	66.61	May 2	66.73	25	66.19	17	66.26
24	67.01	9	66.85	Aug. 1	66.51	24	66.62
31	66.76	16	66.74	8	66.13	31	66.57
Feb. 14	66.93	23	66.81	15	66.45	Nov. 8	66.58
21	66.93	30	66.58	22	66.30	14	66.58
28	66.75	June 6	66.52	29	66.18	22	66.69
Mar. 15	67.24	13	66.46	Sept. 5	66.18	28	66.97
23	67.81	20	66.68	12	66.37	Dec. 6	67.11
31	67.66	27	66.42	19	66.20	20	66.85
Apr. 8	67.27	July 4	66.72	26	66.15	24	66.93
15	66.93						

a Well dry, Oct. 3 to Nov. 28 inclusive.

Woburn 5 (*886, p. 259; 906, p. 46; 936, p. 51). Consolidated Chemical Industries, Inc. About 1,000 feet south of intersection of Merrimac and New Boston Streets, 350 feet east of New Boston Street, and 2.6 miles north of Woburn.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	59.28	May 9	59.30	July 25	59.05	Oct. 10	59.15
24	59.44	16	59.24	Aug. 1	59.24	17	59.12
Feb. 28	59.26	23	59.30	8	59.00	24	59.30
Mar. 15	59.39	30	59.14	15	59.24	31	59.25
23	59.52	June 6	59.14	22	59.22	Nov. 8	59.30
31	59.47	13	59.07	29	59.16	14	59.29
Apr. 8	59.27	20	59.28	Sept. 5	59.14	22	59.32
15	59.33	27	59.10	12	59.21	28	59.44
23	59.31	July 4	59.30	19	59.13	Dec. 6	59.52
25	59.27	13	59.08	26	59.09	24	59.83
May 2	59.21	20	59.06	Oct. 3	59.13		

Woburn 17 (*906, p. 46; 936, p. 51). J. D. Coakley. About 70 feet north end of north Ingalls Street, 370 feet north of intersection of Montvale Avenue and Ingalls Street, and 0.8 mile east of Woburn.

Water level, in feet above mean sea level, 1942

Jan. 3	170.60	Apr. 23	175.60	July 13	173.78	Oct. 3	172.11
12	172.39	25	175.40	20	173.66	10	171.99
16	172.72	May 2	174.75	25	173.51	17	171.89
24	175.42	9	174.86	Aug. 1	173.54	24	171.89
31	175.21	16	174.35	8	173.26	31	171.82
Feb. 14	174.96	23	174.30	15	173.20	Nov. 8	171.92
21	174.99	30	173.91	22	173.20	14	172.12
28	174.79	June 6	173.86	29	172.87	22	172.32
Mar. 15	176.07	13	173.84	Sept. 5	172.64	28	173.86
23	176.13	20	173.85	12	172.54	Dec. 6	175.87
31	176.11	27	173.83	19	172.37	20	175.26
Apr. 8	175.77	July 4	173.85	26	172.21	24	174.23
15	175.67						

Woburn 19 (*906, p. 47; 936, p. 52). De Greasing Co., Inc. About 230 feet north of Montvale Avenue and 300 feet west of Albany Street, East Woburn.

Water level, in feet above mean sea level, 1942

Jan. 3	26.85	Apr. 23	31.10	June 27	28.85	Sept. 19	26.87
12	26.93	25	30.94	July 11	28.90	26	26.51
16	26.60	May 2	30.54	20	27.90	Oct. 3	27.27
24	29.64	9	30.90	Aug. 1	27.42	10	29.55
31	29.00	16	30.41	8	27.06	17	29.59
Feb. 14	30.10	23	30.64	15	27.15	24	27.13
21	30.42	30	29.72	22	27.15	31	26.08
Mar. 23	32.40	June 6	29.34	29	26.83	Nov. 14	30.98
31	31.58	13	28.34	Sept. 5	26.67	28	29.82
Apr. 8	31.11	20	29.45	12	27.01	Dec. 24	31.95
15	31.08						

Woburn 21 (*906, p. 47; 936, p. 52). Morris Kaplan. About 150 feet south of Webster Street and 1,100 feet west of Kimball Lane, North Woburn.

Water level, in feet above mean sea level, 1942

Jan. 3	109.92	Apr. 15	112.64	July 4	111.41	Sept. 26	109.93
12	110.04	23	112.57	13	111.21	Oct. 3	109.78
17	110.05	25	112.55	18	111.10	10	109.74
24	110.65	May 2	112.34	25	110.90	17	109.64
31	110.75	9	112.23	Aug. 1	110.88	25	109.84
Feb. 14	111.22	16	112.04	8	110.68	31	109.78
21	111.33	23	112.07	15	110.64	Nov. 8	109.89
28	111.18	30	111.85	22	110.57	14	109.95
Mar. 14	111.91	June 6	111.67	29	110.42	22	109.98
23	112.98	13	111.55	Sept. 5	110.28	28	110.29
28	112.98	20	111.49	12	110.20	Dec. 6	111.34
Apr. 4	112.88	27	111.32	19	110.06	24	111.31

Woburn 23 (*906, p. 47; 936, p. 52). F. H. Bowser. About 490 feet southwest of intersection of Main and Elm Streets and 0.6 mile south of North Woburn.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 12	94.14	June 6	93.97	Aug. 8	93.32	Oct. 10	93.37
17	93.82	13	93.75	15	93.96	17	93.29
31	94.08	20	94.50	22	93.79	25	93.93
Feb. 28	94.30	27	93.90	29	93.56	31	93.79
Apr. 25	94.54	July 4	94.30	Sept. 5	93.45	Nov. 8	94.06
May 2	94.25	13	93.74	12	93.80	14	94.06
9	94.52	18	93.96	19	93.44	22	94.25
16	94.32	25	93.32	26	93.25	28	94.66
23	94.56	Aug. 1	93.95	Oct. 3	93.33	Dec. 6	94.81
30	94.04						

Woburn 36 (*906, p. 47; 936, p. 52). 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 house, 1.2 miles southwest of Woburn.

Water level, in feet above mean sea level, 1942

Jan. 3	40.81	Apr. 15	41.87	July 4	41.78	Sept. 26	41.33
12	40.91	23	41.96	13	41.77	Oct. 3	41.33
17	40.94	25	41.96	20	41.70	10	41.30
24	42.04	May 2	41.97	25	41.64	17	41.27
31	41.11	9	41.97	Aug. 1	41.60	25	41.26
Feb. 14	41.28	16	41.97	8	41.54	31	41.25
21	41.36	23	41.97	15	41.51	Nov. 8	41.27
28	41.42	30	41.93	22	41.52	14	41.29
Mar. 14	41.57	June 6	41.91	29	41.48	22	41.32
23	41.60	13	41.88	Sept. 5	41.42	28	41.35
28	41.73	20	41.85	12	41.39	Dec. 6	41.42
Apr. 4	41.79	27	41.82	19	41.37	24	41.54

Woburn 38 (*906, p. 48; 936, p. 53). Town of Woburn. On Woburn Country Club golf course, about 300 feet northwest of owner's Unit D pump house. Pump house is about 60 feet west of Woburn Parkway and 1.1 miles southwest of Woburn.

Water level, in feet above mean sea level, 1942

Jan. 3	34.06	Apr. 15	43.09	July 4	41.29	Sept. 26	39.33
12	34.13	23	42.94	13	41.27	Oct. 3	39.07
17	34.18	25	42.81	20	40.94	10	38.80
24	35.56	May 2	42.51	25	40.57	17	38.50
31	36.20	9	42.31	Aug. 1	40.55	25	38.35
Feb. 14	40.27	16	42.25	8	40.25	31	38.33
21	40.76	23	42.42	15	40.38	Nov. 8	38.15
28	41.24	30	42.24	22	40.67	14	38.37
Mar. 15	42.42	June 6	41.93	29	40.24	22	38.15
23	43.87	13	41.47	Sept. 5	39.81	28	38.44
28	43.70	20	41.71	12	39.66	Dec. 6	41.01
Apr. 4	43.47	27	41.47	19	39.54	24	41.71

Woburn 49 (*906, p. 48; 936, p. 53). 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 above mean sea level, 1942

Jan. 3	60.17	Apr. 25	64.34	July 20	63.36	Oct. 3	60.91
12	60.49	May 2	64.27	25	63.40	10	60.55
17	60.66	9	64.27	Aug. 1	63.25	17	60.27
24	62.47	16	64.19	8	62.91	25	60.31
Feb. 14	64.01	23	64.15	15	62.83	31	60.15
28	64.04	30	64.07	22	62.69	Nov. 8	60.23
Mar. 14	64.39	June 6	64.00	29	62.29	14	60.42
23	64.67	13	63.99	Sept. 5	62.14	22	60.59
28	64.57	20	64.05	12	62.00	28	61.44
Apr. 4	64.52	27	63.67	19	61.55	Dec. 6	63.65
15	64.43	July 4	63.75	26	61.29	24	64.13
23	64.36	13	63.39				

Woburn 53 (*906, p. 48; 936, p. 53). P. Flowers. About 240 feet north of Kilby Street, 550 feet west of Hart Street, and about 0.6 mile north of Woburn.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	96.78	Apr. 23	97.43	July 13	96.34	Oct. 3	95.67
12	96.73	25	97.41	18	96.13	10	95.73
24	97.30	May 2	97.26	25	95.90	17	95.67
31	97.13	9	97.23	Aug. 1	96.14	25	96.24
Feb. 14	97.32	16	97.10	8	95.76	31	96.14
21	97.28	23	97.10	15	96.01	Nov. 8	96.41
28	97.09	30	96.86	22	96.15	14	96.50
Mar. 14	97.50	June 6	96.79	29	95.89	22	96.61
23	98.03	13	96.56	Sept. 5	95.75	28	97.01
28	97.33	20	96.68	12	95.94	Dec. 6	97.59
Apr. 4	97.64	27	96.50	19	95.73	24	97.08
15	97.47	July 4	96.66	26	95.61		

Worcester County

Leominster 11 (*886, p. 259; 906, p. 48; 936, p. 53). C. S. Pierce. About 100 feet east of Nashua Street, 300 feet west of Boston and Maine Railroad tracks, 0.7 mile south of North Leominster, 1.2 miles east of Leominster.

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	357.74	359.70	359.30	361.09	359.06	359.00
2	357.76	360.04	359.39	360.90	358.97	358.89
3	357.89	359.65	359.53	360.69	358.88	358.86
4	358.16	359.41	361.00	360.64	358.82	358.86
5	358.32	359.28	360.76	360.56	358.87	358.86
6	358.39	359.22	360.72	360.48	358.76	358.78
7	358.43	359.22	360.90	360.39	358.75	358.72
8	358.43	359.36	360.81	360.30	359.40	358.85
9	358.41	359.60	360.83	360.24	359.44	358.79
10	358.36	359.57	361.57	360.23	359.30	358.65
11	358.31	359.53	361.41	360.33	359.16	358.53
12	358.27	359.47	361.33	360.63	359.08	358.41
13	358.20	359.39	361.20	360.89	359.08	358.32
14	358.20	359.28	361.16	360.71	359.14	358.32
15	358.25	359.20	361.17	360.60	359.07	358.42
16	358.16	359.18	361.12	360.69	358.99	359.69
17	358.15	359.20	361.69	360.64	358.97	359.66
18	358.13	360.20	362.13	360.44	359.15	359.62
19	358.13	360.12	361.76	360.30	359.19	359.46
20	358.19	359.94	361.48	360.25	359.12	361.38
21	360.01	359.79	361.34	360.39	359.11	361.17
22	360.09	359.48	361.74	360.20	359.58	360.89
23	360.06	359.38	361.69	360.05	359.85	360.87
24	360.00	359.33	361.35	359.92	359.69	360.59
25	359.91	359.46	361.14	359.79	359.51	360.30
26	359.87	359.56	361.00	359.62	359.35	360.08
27	359.79	359.44	360.91	359.49	359.18	359.92
28	359.76	359.33	360.80	359.40	359.02	359.86
29	359.64	.....	360.73	359.29	358.89	359.67
30	359.48	.....	360.73	359.18	358.76	359.48
31	359.44	.....	360.97	.....	358.76	.....

Leominster 11. C. S. Pierce--Continued.

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	359.37	360.04	357.94	356.77	357.43	361.07
2	359.87	359.86	357.83	356.66	357.50	361.29
3	359.70	359.62	357.70	356.59	357.77	361.40
4	359.88	359.41	357.61	356.55	358.17	361.16
5	359.69	359.23	357.54	356.51	358.62	361.07
6	359.52	359.08	357.45	356.45	358.70	360.97
7	360.40	358.94	357.35	356.42	358.69	360.84
8	360.15	358.81	357.22	356.40	358.67	360.69
9	359.87	.....	357.18	356.37	358.64	360.58
10	359.66	.....	357.26	356.33	358.64	360.49
11	359.64	.....	357.74	356.30	358.69	360.49
12	359.88	.....	357.91	356.23	358.84	360.51
13	359.64	.....	358.04	356.18	358.87	360.40
14	359.55	359.13	357.93	356.15	359.02	360.34
15	359.40	359.72	357.80	356.11	358.99	360.33
16	359.25	359.54	357.68	356.06	358.95	360.28
17	359.15	359.42	357.56	356.03	358.94	360.17
18	359.13	359.32	357.44	356.03	358.94	360.08
19	359.15	359.17	357.34	356.03	359.06	359.98
20	359.02	359.05	357.21	356.14	359.13	359.88
21	358.90	358.91	357.14	356.24	359.11	359.75
22	358.77	358.79	357.07	356.35	359.34	359.74
23	358.64	358.67	356.98	356.45	359.41	359.70
24	358.53	358.53	356.90	356.60	359.41	359.71
25	358.44	358.40	356.80	356.73	359.78	359.76
26	358.36	358.29	356.73	356.85	361.12	359.97
27	358.33	358.19	356.71	356.98	361.11	359.89
28	358.86	358.08	356.67	357.09	360.96	359.88
29	359.34	358.08	356.67	357.27	360.86	360.16
30	359.97	358.19	356.72	357.37	361.10	360.20
31	360.25	358.05	.....	357.41	.....	361.68

Winchendon 13 (*886, p. 260; 906, p. 50; 936, p. 55). W. B. Hart. About 10 feet east of Forristall Road, 800 feet south of intersection of Forristall and Crosby Roads, and 1.6 miles northeast of Winchendon.

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	1197.99	1202.85	.....	1205.17	a1204.01	1202.61
2	1198.10	1202.76	a1201.40	1205.19	.....	1202.54
3	1198.25	1202.64	1201.41	1205.20	.....	1202.48
4	1198.41	1202.56	1201.90	1205.22	.....	1202.43
5	1198.62	1202.51	1201.90	1205.37	.....	1202.36
6	1198.96	1202.43	1201.99	1205.43	.....	1202.29
7	1199.40	1202.40	1202.17	1205.49	.....	1202.22
8	1199.89	1202.28	1202.25	1205.56	.....	1202.22
9	1200.33	1202.12	1202.76	1205.52	.....	1202.22
10	1200.69	1202.06	1204.22	1205.45	.....	1202.18
11	1200.95	1202.03	1204.22	1205.34	.....	1202.10
12	1201.07	a1202.00	1204.33	1205.23	1203.97	1202.01
13	1201.23	.....	1204.49	1205.27	1203.84	1201.91
14	1201.27	.....	1204.58	1205.53	1203.72	1201.85
15	1201.34	.....	1204.62	1205.57	1203.64	1201.89
16	1201.30	.....	1204.56	1205.57	1203.57	1202.78
17	1201.26	.....	1204.61	1205.58	1203.52	1203.49
18	1201.25	.....	1205.51	1205.40	1203.51	1203.74
19	1201.23	.....	1205.61	1205.23	1203.47	1203.70
20	1201.46	.....	1205.43	1205.10	1203.43	1203.60
21	1201.69	.....	1205.40	1205.03	1203.39	1203.53
22	1202.15	.....	1205.60	1204.92	1203.39	1203.46
23	1202.53	.....	1205.82	1204.81	1203.49	1203.43
24	1202.80	.....	1205.57	1204.71	1203.47	1203.38
25	1202.87	.....	1205.43	1204.60	1203.34	1203.24

a Estimated lowest daily water level.

Winchendon 13. W. B. Hart--Continued.

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
26	1202.90	.....	1205.31	1204.47	1203.25	1203.11
27	1202.96	.....	1205.29	1204.36	1203.12	1203.04
28	1202.97	.....	1205.21	1204.30	1202.99	1202.98
29	1202.89	.....	1205.18	1204.21	1202.89	1202.87
30	1202.83	.....	1205.16	1204.11	1202.78	1202.77
31	1202.82	.....	1205.10	.....	1202.69	.....

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1202.67	1202.37	1200.53	1199.40	1200.03	1204.59
2	1202.66	1202.45	1200.45	1199.44	1200.16	1204.64
3	1202.78	.....	1200.37	1199.49	1200.29	1205.47
4	1203.22	.....	1200.30	1199.54	1200.52	1205.25
5	1203.61	.....	1200.22	1199.59	1200.99	1205.05
6	1204.06	1201.92	1200.14	1199.63	1201.55	1204.88
7	1204.27	1201.75	1200.08	1199.66	1201.97	1204.72
8	1204.50	1201.59	1200.02	1199.67	1202.20	1204.57
9	1204.23	1201.50	1199.97	1199.67	1202.34	1204.46
10	1204.02	1201.44	1199.92	1199.68	1202.38	1204.35
11	1203.97	1201.39	1199.87	1199.69	1202.50	1204.29
12	1204.03	1201.30	1199.85	1199.69	1202.52	1204.24
13	1203.93	1201.22	1199.83	1199.66	1202.58	1204.16
14	1203.78	1201.17	1199.83	1199.64	1202.69	1204.08
15	1203.57	1201.17	1199.82	1199.62	1202.73	1204.03
16	1203.39	1201.39	1199.81	1199.60	1202.78	1203.93
17	1203.22	1201.64	1199.79	1199.57	1202.82	1203.85
18	1203.09	1201.79	1199.76	1199.55	1202.86	1203.72
19	1202.96	1201.84	1199.73	1199.52	1202.91	1203.61
20	1202.80	1201.82	1199.70	1199.49	1202.99	1203.53
21	1202.60	1201.72	1199.66	1199.48	1203.12	1203.41
22	1202.42	1201.62	1199.63	1199.47	1203.23	1203.40
23	1202.24	1201.50	1199.59	1199.47	1203.39	1203.28
24	1202.05	1201.35	1199.55	1199.46	1203.54	1203.21
25	1201.88	1201.19	1199.50	1199.46	1203.68	1203.15
26	1201.71	1201.07	1199.46	1199.47	1203.97	1203.04
27	1201.60	1200.97	1199.44	1199.54	1204.34	1203.02
28	1201.60	1200.87	1199.41	1199.60	1204.62	1203.03
29	1201.76	1200.77	1199.39	1199.66	1204.67	1203.02
30	1201.95	1200.68	1199.39	1199.76	1204.62	1203.02
31	1202.19	1200.60	.....	1199.89	.....	1203.50

MICHIGAN

By C. L. McGuinness, Norman Billings, and O. F. Poindexter

INTRODUCTION

The program of water-level measurements in observation wells in Michigan, begun in 1932 by the Geological Survey, United States Department of the Interior, in cooperation with the Geological Survey Division of the Michigan Department of Conservation, was continued in 1942. The wells whose records are included in this report are in the Lower Peninsula, which, for the purpose of the program, is considered as made up of two parts--northern and southern. Each part is discussed separately. An earlier report contains an index map of the Lower Peninsula,[1/] divided into counties, showing the location of the wells and indicating the two main areas in the northern part in which the wells are grouped.

Northern part of Lower Peninsula

Measurements were made at least once during the year in 91 wells in the forested areas in the northern part of the Lower Peninsula. At the end of the year, monthly measurements were being made in 33 wells in Roscommon, Crawford, Kalkaska, and Otsego Counties. Regular measurements were discontinued in 1938 in Charlevoix, Grand Traverse, and Wexford Counties, in 1941 in Montmorency, Presque Isle, and Cheboygan Counties, and in 1942 in Missaukee County.

About 550 individual measurements of water level were made in the wells in the northern part of the Lower Peninsula during 1942, most of them by Norman Billings, hydrogeologist of the Michigan Geological Survey Division. Mr. Billings was in direct charge of the measurements during the year, under the supervision of O. F. Poindexter, associate geologist in the Michigan Geological Survey Division.

At the end of 1942 the water levels in the 33 wells in which measurements were being continued averaged several tenths of a foot lower than

1/Meinzer, O. E., and Wenzel, L. K., and others, Water levels and artesian pressure in observation wells in the United States in 1940, Part 1 Northeastern States: U. S. Geol. Survey Water-Supply Paper 906, p.52 (fig. 3), 1942.

the record high year-end stage of 1941 but were a few tenths of a foot higher than the average for the period of record. General rains near the end of December caused an average rise in water level of 0.20 foot from mid-December 1942 to mid-January 1943. Without these rains the water levels would probably have been at about average stages at the end of 1942.

Roscommon recorder well

The float-type automatic water-stage recorder that was installed in November 1934 on a well at the Forest Fire Experiment Station at Roscommon was in operation throughout the year. Weekly water levels in this well in 1942, measured when the recorder charts were changed, are given in this report. This is the only observation well in the northern part of the Lower Peninsula equipped with a recorder. It was therefore selected for a detailed study of the fluctuations in water level and their causes, which appear to be typical for wells in this part of the State.

Rains in October and November 1941 caused the water level in the Roscommon well to rise to about 6.4 feet below the measuring point, after which it declined slowly and irregularly until, at the end of 1941, it stood at about 6.7 feet below the measuring point. Except for a rise of about 0.07 foot on January 2, it continued to decline slowly during the first part of 1942, and reached a stage about 7.15 feet below the measuring point on March 7. The record for the period March 7 to 19 is missing, but at some time during this period the water level rose to about 6.52 feet below the measuring point and remained at this stage until March 19. The maximum daily air temperature was above freezing on most of the days in this period, and there was moderately heavy precipitation on March 10 and 17. Both the temperature and the precipitation were probably involved in this rise. Beginning on March 19, the water level then declined until March 25, when it reached a stage about 6.57 feet below the measuring point, after which it began to rise again, as the result of a thaw, and on April 15 reached a stage 5.66 feet below the measuring point, the highest stage of the year. It then declined irregularly until May 29, when it reached a stage 6.42 feet below the measuring point. The effects of transpiration by young trees in the vicinity became evident about May 20. From May 29 to June 2, owing to heavy rains, there was a rise in water level of 0.25 foot, to a stage 6.17 feet below the measuring point. Except for rises of a few hundredths of

a foot during the periods July 29-31 and September 26-29, also due to rains, the water level declined practically without interruption from June 2 to October 29, when the lowest stage of the year, 8.17 feet below the measuring point, was reached. This stage persisted until November 1. Following this low stage the water level slowly recovered to a stage 8.15 feet below the measuring point, which it reached on November 10. Owing to moderately heavy rains, it began to rise on November 10 and reached a stage 7.96 feet below the measuring point on November 17 and persisted at this stage until November 26. It then declined slowly until December 27, when it stood 8.13 feet below the measuring point. Additional heavy rains then caused it to rise rapidly, and a stage 7.73 feet below the measuring point was reached at the end of the year.

The high stage of 5.66 feet below the measuring point on April 15, 1942, was the second highest recorded stage, and only 0.08 foot below the highest on record--5.58 feet below the measuring point on April 2, 1938. The low stage of 8.17 feet below the measuring point during the period October 29 to November 1, 1942, was the fourth lowest seasonal low stage on record, those of 1936, 1935, and 1941 ranking lowest, next lowest, and third lowest, respectively. (In Water-Supply Paper 936, on page 59, the statement that the low stages of 1935 and 1936 ranked lowest and next lowest, respectively, is in error; the order should be reversed, as indicated in the preceding sentence.)

Southern part of Lower Peninsula

The program of water-level measurements in observation wells in the southern part of the Lower Peninsula, all of which are in municipalities, was continued in 1942. About 1,100 individual measurements were made in these wells during the year, including daily measurements in well 1 in Washtenaw County and about 150 measurements each in wells 1, 2, and 3 in Oakland County. Only selected measurements for these four wells are included in this report.

Ground-water conditions in the southern part of the Lower Peninsula, as shown by the observation wells, were on the whole somewhat better in 1942 than in 1941, owing largely to the excess in precipitation. At the seven cities in which observation wells are situated, the excesses in

precipitation in 1942 ranged from less than an inch at Three Rivers to 11.18 inches at Battle Creek and averaged more than 6 inches. In 1941 the precipitation was deficient at three and probably four of the cities (the record at Three Rivers was incomplete) and excessive at three, and the average precipitation for the seven cities was slightly less than normal.

The average daily pumpage decreased from 1941 to 1942 at five of the cities and increased at two, and the average change was a decrease of a few percent. Omitting well 2 in Jackson County, for which there is no record for 1941, the water levels in the observation wells averaged somewhat more than 1 foot higher in 1942 than in 1941. It is recognized that this figure is of qualitative rather than quantitative value, because the ground-water conditions differ so much from place to place that direct quantitative comparisons are scarcely justified. The average rise was due partly to the decreased pumpage but probably mostly to the excess in precipitation in 1942.

Discussions of water-level fluctuations in the wells in the southern part of the Lower Peninsula are given in the following section of this report under the individual counties.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Observation wells in Michigan are listed alphabetically by counties; those in the southern part of the Lower Peninsula are listed numerically within each county, and those in the northern part numerically by townships. Complete descriptions are given only for newly added wells. The numbers in parentheses immediately folowing a well number indicate 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 that paper. The water level in each well is expressed in feet below a fixed measuring point.

Calhoun County

Calhoun 1 (*886,p.267; 906,p.58; *936,pp.59-60). City of Battle Creek. Well 22 at Verona pumping station of city waterworks. Measurements made by S. C. Einhardt, Sr., operator, Verona pumping station.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 3	4.79	Mar. 2	4.68	Apr. 6	5.06	May 4	4.98
9	5.27	16	5.85	13	4.56	11	4.27
19	3.94	23	4.07	20	3.78	19	4.05
23	4.40	30	4.08	27	4.45	29	5.91

Calhoun 1. City of Battle Creek--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 1	3.77	July 27	3.94	Sept. 21	5.00	Nov. 10	4.47
8	4.35	Aug. 3	4.88	28	5.12	16	4.39
15	3.88	12	4.14	Oct. 5	4.04	24	4.32
23	3.55	17	4.11	12	4.55	Dec. 7	3.41
30	4.74	24	3.52	20	5.00	14	4.11
July 6	4.29	Sept. 3	4.82	26	4.22	22	4.37
13	3.84	7	4.92	Nov. 3	4.53	28	3.79
20	4.67	14	5.66				

The average daily withdrawal from wells at the Verona pumping station in 1942 ranged from 1.46 million gallons in February to 3.68 million gallons in January and averaged 2.79 million gallons. The average daily withdrawal in 1941 was about 3.75 million gallons, and that in 1940 was 2.49 million gallons. In 1942 the water level in well 1 averaged about 1.6 feet higher than in 1941 and about 1.25 feet higher than in 1940. It is thus apparent that the ground-water conditions in 1942 were considerably more favorable than in 1940, and probably somewhat more favorable than in 1941. Inasmuch as the sandstone aquifer from which the water is derived lies at a shallow depth and is recharged largely from local precipitation, the improvement in ground-water conditions is undoubtedly due to the continued excessive precipitation in 1942. The precipitation at Battle Creek was 3.60 inches above normal in 1941 and 11.18 inches above normal in 1942. There was also an excess in precipitation of 2.61 inches in 1940, so that the accumulated excess during the 3-year period 1940-42 was more than 17 inches.

Calhoun 2 (*886,pp.267,268; 906,p.58; *936,pp.60-61). City of Battle Creek. Armstrong test well 3 at Goguac pumping station of city waterworks. Measurements made by A. M. Stannard and C. A. Bunce, operators, Goguac pumping station.

Water level, in feet below measuring point, 1942

Jan. 5	29.2	Apr. 20	29.73	July 20	31.97	Oct. 12	27.00
12	29.2	27	29.75	27	31.96	19	26.75
19	29.2	May 4	29.90	Aug. 3	31.99	26	26.62
Feb. 13	20.82	11	30.08	10	31.99	Nov. 2	26.50
18	30.57	18	30.29	17	31.97	9	26.39
25	31.05	25	30.44	24	31.99	16	26.44
Mar. 4	30.90	June 1	30.62	31	31.97	23	27.01
16	26.66	8	31.19	Sept. 7	26.52	30	26.72
30	26.66	15	32.19	14	25.46	Dec. 7	26.40
Apr. 6	26.66	22	32.39	21	26.60	14	26.39
13	26.66	29	32.54	28	26.62	21	26.25
15	28.68	July 6	32.18	Oct. 5	26.55	28	26.52
17	29.31	13	31.99				

The average daily pumpage at the Goguac pumping station in 1942 was 1.34 million gallons, about 0.2 million gallons more than in 1941 and about 0.2 million gallons less than in 1940. The average daily pumpage in 1942 ranged from 190,000 gallons in January to 2.10 million gallons in July. Because of variations in the pumpage from the different wells at the station, it is difficult to compare the water levels in well 2 in 1942 with those in this well in 1941. In the latter part of April 1942 the water level in well 2 averaged about 0.6 foot lower than in the early part of March 1941. The same wells were pumping at both times. However, in the latter part of April 1942 the average daily pumpage at this station was about 1.9 million gallons, whereas in February and the early part of March 1941 it was slightly less than 1.5 million gallons. It thus appears that the ground-water conditions in 1942 were slightly improved over those of 1941. The improvement was not as apparent at the Goguac station as at the Verona station, which may indicate that the glacial sands and gravels penetrated by the wells at the Goguac station are not as permeable as the sandstone penetrated by the wells at the Verona station and therefore that they are not recharged as readily.

Charlevoix County

1 (*840,pp.125,126; 845,p.153; 886,p.268; 906,p.58; 936,p.61). T. 32 N. R. 4 W. No measurements made in 1942.

33 (*840,pp.125,126; 845,p.153; 886,p.268; 906,p.58;936,p.61). T. 32 N., R. 4 W. No measurements made in 1942.

34 (*840,pp.125,126; 845,p.153; 936,p.61). T. 32 N., R. 4 W. No measurements made in 1942.

31 (*840,pp.125,126; 845,p.153; 886,p.268; 936,p.61). T. 32 N.,R.4 W. No measurements made in 1942.

12 (*840,pp.125,126; 845,p.153; 886,p.268; 906,p.58; 936,p.61). T. 33 N., R. 5 W. No measurements made in 1942.

Cheboygan County

2 (*840,pp. 129,130; 845,p.153; 886,p.268; 906,p.59; 936,p.61). T. 33 N., R. 1 W. Water level Aug. 12, 1942, 6.09 feet below measuring point.

4 (*840,pp.129,130; 845,p.153; 886,p.268; 906,p.59; 936,p.61). T. 33 N., R. 1 W. Water level Aug. 12, 1942, 6.55 feet below measuring point.

11 (*840,pp.129,130; 845,p.153; 886,p.268; 906,p.59; 936,p.61). T. 33 N., R. 1 W. No measurements made in 1942.

5 (*886,p.268; 906,p.59; 936,p. 61). T. 33 N., R. 1 E. Water level Aug. 12, 1942, 3.98 feet below measuring point.

7 (*840,pp. 129,130; 845,p.153; 886,p.268; 906,p.59; 936,p.61). T. 33 N., R. 1 E. Water level Aug. 12, 1942, 3.34 feet below measuring point.

8 (*840,pp.129,130; 845,p.153; 886,p.268; 906,p.59; 936,p.61). T. 33 N., R. 1 E. Water level Aug. 12, 1942, 6.30 feet below measuring point.

17 (*840,pp.129,130; 845,p.153; 886,p.268; 906,p.59; 936,p.61). T. 33 N., R. 1 E. No measurements made in 1942.

11 (*840,pp.129,130; 845,p.153; 886,p.268; 906,p.59; 936,p.61). T. 34 N., R. 1 W. Water level Aug. 12, 1942, 5.07 feet below measuring point.

33 (*840,pp.129,131; 845,p.153; 886,p.268; 906,p.59; 936,p.61). T. 34 N., R. 1 W. Water level Aug. 12, 1942, 6.46 feet below measuring point.

Crawford County

8 (*886,pp.268,269; 906,p.59; 936,pp.61-62). T. 25 N., R. 3 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	10.64	Apr. 14	10.02	July 17	10.65	Nov. 16	11.02
Feb. 16	10.80	May 19	10.25	Aug. 14	10.79	Dec. 11	11.15
Mar. 25	10.59	June 20	10.45	Sept.22	10.98		

9 (*840,pp.134-137; 845,p.154; 886,p.269; 906,p.59; 936,pp.61-62). T. 26 N., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 13	5.91	Apr. 14	5.80	July 17	6.04	Oct. 23	5.84
Feb. 16	5.90	May 19	5.85	Aug. 14	6.01	Nov. 16	5.82
Mar. 25	5.80	June 20	6.00	Sept.22	5.90	Dec. 11	5.89

26 (*840,pp.134,137,138; 845,p.154; 886,p.269; 906,p.59; 936,pp.61-62) T. 26 N., R. 3 W.

Water level, in feet below measuring point, 1942

Jan. 13	11.14	Apr. 14	10.00	Aug. 14	11.06	Nov. 16	11.25
Feb. 16	11.42	June 20	10.64	Sept.22	11.48	Dec. 11	11.29
Mar. 25	11.13	July 17	10.93				

28 (*840,pp.134,137,138; 845,p.154; 886,p.269; 906,p.59; 936,pp.61-62) T. 26 N., R. 3 W.

28--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	8.44	Apr. 14	7.35	July 17	7.81	Oct. 23	8.40
Feb. 16	8.66	May 19	7.65	Aug. 14	8.07	Nov. 16	8.44
Mar. 25	8.66	June 20	7.50	Sept.22	8.40	Dec. 11	8.41

30 (*840,pp.134, 137,138; 845,p.154; 886,p.269; 906,p.59; 936,pp.61-62). T. 26 N., R. 3 W. Well destroyed after measurement made on July 17.

Water level, in feet below measuring point, 1942

Jan. 13	12.57	Mar. 25	12.08	May 19	11.51	July 17	12.97
Feb. 16	12.60	Apr. 14	11.59	June 20	12.65		

9 (*840,pp.134,138; 845,p.154; 886,p.269; 906,p.59; 936,p.62). T. 26 N., R. 4 W.

Water level, in feet below measuring point, 1942

Jan. 13	2.53	Apr. 14	0.99	July 17	3.02	Oct. 15	3.48
Feb. 16	2.83	May 19	1.66	Aug. 14	3.31	Nov. 28	3.03
Mar. 25	2.06	June 20	2.10	Sept.23	3.89	Dec. 10	3.20

10 (*840,pp.134,138; 845,p.154; 886,p.269; 906,p.59; 936,p.62). T. 26 N., R. 4 W.

Water level, in feet below measuring point, 1942

Jan. 13	6.26	Apr. 14	5.34	July 17	7.02	Oct. 15	6.88
Feb. 16	6.52	May 19	5.64	Aug. 14	7.40	Nov. 28	6.42
Mar. 25	5.42	June 20	6.20	Sept.23	7.36	Dec. 10	6.62

12 (*840,pp.134,138; 845,p.154; 886,p.269; 906,p.59; 936,p.62). T. 26 N., R. 4 W. Measurements discontinued after Oct. 15.

Water level, in feet below measuring point, 1942

Jan. 13	5.04	Apr. 14	3.67	July 17	5.27	Sept.23	6.14
Feb. 16	5.36	May 19	4.28	Aug. 14	5.65	Oct. 15	5.71
Mar. 25	4.80	June 20	4.47				

18 (*840,pp.134,138; 845,p.154; 886,p.269; 906,p.59; 936,p.62). T. 26 N., R. 4 W. Well destroyed after measurement of Aug. 14.

Water level, in feet below measuring point, 1942

Jan. 13	5.64	Mar. 25	5.33	May 19	5.55	July 17	5.90
Feb. 16	5.70	Apr. 14	5.07	June 20	5.67	Aug. 14	6.00

8 (*840,pp.134,139,140; 845,p.154; 886,p.269; 906,p.60; 936,p.62). T. 27 N., R. 1 W.

Water level, in feet below measuring point, 1942

Jan. 13	4.09	Apr. 13	3.83	July 17	4.38	Oct. 23	4.56
Feb. 16	4.57	May 19	4.07	Aug. 14	4.50	Nov. 16	4.41
Mar. 25	4.31	June 20	4.14	Sept.22	4.51	Dec. 11	4.59

22 (*840,pp.134,139,140; 845,p.154; 886,p.269; 906,p.60; 936,p.62). T. 27 N., R. 1 W.

Water level, in feet below measuring point, 1942

Jan. 13	4.63	Apr. 13	3.40	July 17	4.12	Oct. 23	5.25
Feb. 16	4.93	May 19	3.70	Aug. 14	4.57	Nov. 16	5.07
Mar. 25	4.51	June 20	3.64	Sept.22	5.04	Dec. 11	5.26

27 (*840,pp.134,139,140; 845,p.154; 886,p.269; 906,p.60; 936,p.62). T. 27 N., R. 1 W.

Water level, in feet below measuring point, 1942

Jan. 13	6.59	Apr. 13	5.50	July 17	6.25	Oct. 23	7.03
Feb. 16	6.80	May 19	5.96	Aug. 14	6.57	Nov. 16	6.96
Mar. 25	6.51	June 20	5.86	Sept.22	6.85	Dec. 11	7.14

20 (*840, pp. 135,141; 845,p.154; 886,p.269; 906,p.60; 936,p.62). T.27 N R. 4 W. Well destroyed after measurement of Sept. 22.

Water level, in feet below measuring point, 1942

Jan. 13	6.19	Apr. 13	4.67	June 20	5.31	Aug. 14	6.56
Feb. 16	6.52	May 19	5.46	July 17	6.00	Sept.22	7.23
Mar. 25	6.17						

42 (*840,pp.135,141; 845,p.154; 886,p.269; 906,p.60; 936,p.62). T. 27 N., R. 4 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	6.72	Apr. 13	5.91	July 17	6.54	Oct. 23	6.64
Feb. 16	6.92	May 19	6.31	Aug. 14	6.70	Nov. 16	6.43
Mar. 25	6.69	June 20	6.23	Sept.22	6.79	Dec. 11	6.51

51 (*886,pp.268,269; 906,p.60; 936,p.62). T. 27 N., R. 4 W.

Water level, in feet below measuring point, 1942

Jan. 13	14.74	Apr. 13	13.81	July 17	14.25	Oct. 23	14.67
Feb. 16	14.96	May 19	14.11	Aug. 14	14.47	Nov. 16	14.57
Mar. 25	14.78	June 20	13.94	Sept.22	14.72	Dec. 11	14.74

6 (*840,pp.135,141,142; 845,p.154; 886,p.269; 906,p.60; 936,p.62). T. 28 N., R. 1 W. Measurements discontinued after Oct. 23.

Water level, in feet below measuring point, 1942

Jan. 13	6.89	Apr. 13	5.48	July 17	5.91	Sept.22	6.98
Feb. 16	7.25	May 19	5.77	Aug. 14	6.44	Oct. 23	7.15
Mar. 25	7.33	June 20	5.40				

18 (*840,pp.135, 141,142; 845,p.154; 886,p.269; 906,p.60; 936,p.62). T. 28 N., R. 1 W.

Water level, in feet below measuring point, 1942

Jan. 13	6.25	Apr. 13	4.98	July 17	5.85	Oct. 23	7.08
Feb. 16	6.54	May 19	5.39	Aug. 14	6.37	Nov. 16	6.99
Mar. 25	6.40	June 20	5.27	Sept.22	6.91	Dec. 11	7.12

50 (*845,p.155; 886,p.269; 906,p.60; 936,p.62). T. 28 N., R. 4 W. No measurements made in 1942.

Grand Traverse County

6 (*840,pp.143,144; 936,p.62). T. 25 N., R. 9 W. Water level Sept. 3, 1942, 6.05 feet below measuring point.

24 (*840,pp.143,144; 936,p.62). T. 25 N., R. 9 W. Water level Sept. 3, 1942, 8.25 feet below measuring point.

27 (*840,pp.143,144; 936,p.62). T. 25 N., R. 9 W. Water level Sept. 3, 1942, 13.93 feet below measuring point.

25 (*840,pp.143-145; 936,p.62). T. 25 N., R. 10 W. Water level Sept. 3, 1942, 1.29 feet below measuring point.

26 (*840,pp.143-145; 936,p.62). T. 25 N., R. 10 W. Water level Sept. 3, 1942, 6.22 feet below measuring point.

2 (*840,pp. 143,145,146; 936,p. 62). T. 26 N., R. 9 W. Water level Sept. 3, 1942, 8.13 feet below measuring point.

2 (*840,pp.143,146; 936,p.63). T. 26 N., R. 11 W. Water level Sept. 3, 1942, 3.41 feet below measuring point.

4 (*840,pp.143,146; 936,p.63). T. 26 N., R. 11 W. No measurements made in 1942.

7 (*840,pp.143,146; 936,p.63). T. 26 N., R. 11 W. No measurements made in 1942.

14 (*840,pp.143,146; 936,p.63). T. 26 N., R. 11 W. Water level Sept. 3, 1942, 3.18 feet below measuring point.

1 (*840,pp.143,147,148; 936,p.63). T. 27 N., R. 9 W. Water level Sept. 3, 1942, 14.00 feet below measuring point.

6 (*840,pp.143,147,148; 936,p.63). T. 27 N., R. 9 W. Water level Sept. 3, 1942, 5.52 feet below measuring point.

15 (*840,pp.143,147,148; 936,p.63). T. 27 N., R. 9 W. Water level Sept. 3, 1942, 15.85 feet below measuring point.

18 (*840,pp.143,147,148; 936,p.63). T. 27 N., R. 9 W. Water level Sept. 3, 1942, 5.44 feet below measuring point.

25 (*840,pp.143,147,148; 936,p.63). T. 27 N., R. 9 W. Water level Sept. 3, 1942, 15.55 feet below measuring point.

Ingham County

Ingham 1 (*886,pp.270-272; *936,pp.63-64). City of Lansing. Well 2 at Cedar Street pumping station, near southeast corner of Cedar Street and Michigan Avenue, Lansing.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	66.25	Apr. 12	65.35	July 28	70.55	Oct. 29	67.95
Feb. 28	62.7	May 28	65.05	Aug. 26	68.8	Nov. 27	67.95
Mar. 30	65.8	June 25	67.3	Sept.18	70.35	Dec. 29	66.8

Ingham 2 (*886,pp.270-272; *936,pp.63-64). City of Lansing. Well 9 at Cedar Street pumping station, near northeast corner of Cedar and Kalamazoo Streets, Lansing. (In Water-Supply Paper 936, on p.64, the water level on Dec. 29, 1941, was erroneously published as 57.83 inches below measuring point. This should be corrected to read 47.85 inches below measuring point.)

Water level, in feet below measuring point, 1942

Jan. 28	44.5	Apr. 12	43.55	July 28	44.15	Oct. 29	43.15
Feb. 28	43.15	May 28	43.4	Aug. 26	44.2	Nov. 27	42.8
Mar. 30	42.35	June 25	43.0	Sept.18	43.9	Dec. 29	47.0

Ingham 3 (*886,pp.270-272; 906,pp.60-61; *936,pp.63-64). City of Lansing. Well 5 in Pennsylvania Avenue well field, at northwest corner of crossing of Pennsylvania Avenue and Grand Trunk Railroad, Lansing.

Water level, in feet below measuring point, 1942

Jan. 28	20.5	Apr. 12	21.8	July 28	29.85	Oct. 29	31.4
Feb. 28	18.75	May 28	25.75	Aug. 26	30.65	Nov. 27	28.5
Mar. 30	18.85	June 25	26.0	Sept.18	31.35	Dec. 29	28.35

Ingham 4 (*886,pp.265,270-272; 906,pp.60-61; *936,pp.63-64). City of Lansing. Well 9 in Pennsylvania Avenue well field, about 500 feet east of Pennsylvania Avenue and just north of Grand Trunk Railroad, Lansing.

Water level, in feet below measuring point, 1942

Jan. 28	29.6	Apr. 25	26.9	July 28	34.8	Oct. 29	35.95
Feb. 28	27.55	May 28	27.15	Aug. 26	35.55	Nov. 27	33.95
Mar. 30	25.65	June 25	30.2	Sept.18	36.3	Dec. 29	32.9

Ingham 5 (*886,pp.270-272; 906,pp.60-61). City of Lansing. Well 7 in Riverside well field, just north of Cedar River on approximate line of Mifflin Avenue, Lansing.

Water level, in feet below measuring point, 1942

Jan. 28	28.9	Apr. 12	27.55	July 28	53.85	Oct. 29	33.2
Feb. 28	25.95	May 28	27.85	Aug. 26	42.8	Nov. 27	31.7
Mar. 30	27.1	June 25	29.8	Sept.18	51.2	Dec. 29	29.85

Ingham 6 (*886,pp.270-272; 906,pp.60-61; *936,pp.63-64). City of Lansing. Logan well, at Logan Street pumping station, Lapeer and Logan Streets, Lansing.

Water level, in feet below measuring point, 1942

Jan. 28	56.45	May 28	74.6	Aug. 26	76.5	Nov. 27	73.9
Feb. 28	69.85	June 25	75.5	Sept.18	75.85	Dec. 29	73.1
Mar. 30	70.75	July 28	79.75	Oct. 29	73.4		

Ingham 7 (*886,pp.270-272; 906,pp.60-61; *936,pp.63-64). City of Lansing. Seymour well, at Seymour Avenue pumping station, on north side of Josephine Street about 500 feet east of Seymour (Grand River) Avenue, Lansing.

Water level, in feet below measuring point, 1942

Jan. 28	44.3	May 28	59.35	Aug. 26	68.15	Nov. 27	54.35
Feb. 28	52.0	June 25	59.4	Sept.18	58.75	Dec. 29	64.9
Mar. 30	64.6	July 28	61.0	Oct. 29	55.35		

Ingham 8 (*886, pp. 265,270-272; 906, pp. 60-61; *936, pp. 63-64). City of Lansing. Townsend well, at Townsend Street pumping station, on east side of Townsend Street opposite Olds Street, Lansing.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	20.9	May 28	22.45	Aug. 26	22.15	Nov. 27	21.7
Feb. 28	18.85	June 25	21.4	Sept.18	23.55	Dec. 29	20.9
Mar. 30	18.05	July 28	22.9	Oct. 29	22.2		

Measurements in wells 1, 2, 3, 4, 5, 6, 7, and 8 were made by members of the Mechanical Engineering Department, Board of Water and Electric Light Commissioners, Lansing.

In 1942 the average daily pumpage from municipal wells in Lansing was about 11.1 million gallons, as compared with about 10.8 million gallons in 1941 and 9.4 million gallons in 1940. The average daily pumpage in July 1942, the month of heaviest pumping during the year, was about 12.9 million gallons, as compared with about 14.2 million gallons in July 1941.

The water levels in wells 1 and 2 averaged about 5 feet lower in 1942 than in 1939, the last year of complete records prior to 1942. This decline might be expected in view of the increase in pumpage from about 8.9 million gallons a day in 1939 to 11.1 million gallons a day in 1942 and of the addition in 1941 of wells 1 to 7, inclusive, in the M group and wells 15,16, and 17 in the C group.

The water levels in wells 3 and 4 averaged about 8 feet higher in 1942 than in 1941, owing largely to the reduction in pumpage from the three old air-lift well fields, namely, the Cedar Street, Pennsylvania Avenue, and Riverside fields. The total pumpage from these fields in 1941 was about 1,250 million gallons; in 1942 it was only about 50 million gallons.

The water level in well 5 averaged about 18 feet higher in 1942 than in 1939, the last year of complete records prior to 1942. This was due largely to the reduction in pumpage from wells in the Riverside and Pennsylvania Avenue fields and other nearby wells.

The water levels in wells 6 and 7 averaged about 16 feet lower in the latter part of 1942 than in the latter part of 1941 (when the C and M wells were put into operation), owing to the increase in pumpage from wells equipped with turbine pumps. Most of these wells are in the northern part of the city, as are wells 6 and 7, whereas the old air-lift wells are in the southern part of the city.

The water level in well 8 averaged about 3 feet higher in 1942 than in 1941. In view of the fact that the total pumpage was greater in 1942 than in 1941, though by only a few percent, the recovery in water level in well 8 probably reflects the general shifting of the pumpage from the southern to the northern part of the city. In view of this shift, fluctuations in water level in well 8 cannot be considered to be representative of the average trend in the area as a whole, although well 8 is farther from heavily pumped wells than is any of the other observation wells.

The precipitation at Lansing was above normal during each of the 3 years 1940 (excess 6.35 inches), 1941 (excess 0.85 inch), and 1942 (excess 5.59 inches), and this was probably partly responsible for the generally favorable conditions shown by the observation wells in 1942. However, it is believed that the sandstones penetrated by the municipal wells are recharged largely in more or less remote areas, and thus that the effects of fluctuations in precipitation on the wells at Lansing are not very apparent and are felt only with a considerable lag. It is therefore believed that fluctuations in pumpage are largely responsible for fluctuations in water level in the observation wells at Lansing.

Kalamazoo County

Kalamazoo 1 (*886,pp.264,273,274; *906,pp.61-62; *936,pp.64-65). City of Kalamazoo. Well B at central (Burdick Street) pumping station of city waterworks.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	12.86	Apr. 26	11.00	July 19	12.53	Nov. 7	13.94
Mar. 1	13.51	May 24	12.43	Aug. 30	12.12	22	13.82
15	12.55	June 7	13.42	Sept.13	12.57	Dec. 6	13.62
28	9.42	21	12.46	Oct. 10	13.36	20	13.68
Apr. 12	10.76	July 12	12.70	25	14.02		

Kalamazoo 2 (*886,pp.264,273,274; *906,p.62; *936,pp.64-65). City of Kalamazoo. Well C at city waterworks, about 1,100 feet southwest of central pumping station.

Water level, in feet below measuring point, 1942

Feb. 1	13.39	Apr. 26	11.60	July 19	10.00	Nov. 7	a12.13
Mar. 1	13.44	May 24	11.03	Aug. 30	10.24	22	a11.86
15	13.03	June 7	11.46	Sept.13	10.66	Dec. 6	a11.56
28	9.02	21	10.83	Oct. 10	11.76	20	11.67
Apr. 12	10.73	July 12	9.78	25	12.13		

Kalamazoo 3 (*886,pp. 264,273,274; *906,p.62; *936,p.65). City of Kalamazoo. At Balch Street pumping station of city waterworks, between supply wells 1 and 2.

Water level, in feet below measuring point, 1942

Feb. 1	13.04	Apr. 26	11.88	July 19	10.92	Nov. 7	11.65
Mar. 1	12.77	May 24	9.86	Aug. 30	10.50	22	11.08
15	12.29	June 7	10.02	Sept.13	10.47	Dec. 6	10.83
28	10.00	21	9.90	Oct. 10	11.64	20	10.99
Apr. 12	10.06	July 12	9.35	25	11.52		

Measurements in wells 1, 2, and 3 were made by Leon L. Simkins, pumping station equipment supervisor, city waterworks, Leo Witters, superintendent.

The average daily pumpage from municipal wells in Kalamazoo in 1942 was 5.77 million gallons, about 0.4 million gallons less than in 1941. The average daily pumpage ranged from 5.09 million gallons in February to 6.88 million gallons in July. The water levels in wells 1, 2, and 3 averaged about 2.85 feet higher in 1942 than in 1941, when the lowest stages on record were reached. The recovery in water levels in 1942 was due to the reduction in pumpage and to the cumulative effects of excesses in precipitation in 1940 (excess 8.35 inches), 1941 (excess 4.41 inches), and 1942 (excess 4.52 inches).

If the average water levels and average daily pumpage during the year are compared, 1942 is shown to be about the third or fourth most favorable year on record. The years 1938 and 1939 rank first and second, respectively, and 1937 was about as favorable as 1942. The period of record goes back to 1931 but does not include 1933, for which the record is not sufficient to permit quantitative comparisons. However, the available records show that conditions in 1933 were much more favorable than in 1931.

Although the lowest stages on record were reached in 1941 in wells 1, 2, and 3, the year 1931 remains the most unfavorable year on record. In 1931 the average daily pumpage was only 4.85 million gallons, as compared with about 6.2 million gallons in 1941, yet the water level in well 3 averaged only about 0.3 foot lower in 1941 than in 1931.

Ground-water conditions in 1936 were on the whole about as unfavorable as in 1941. The water levels in wells 1, 2, and 3 averaged 2.34 feet higher in 1936 than in 1941, but the average daily pumpage was about 1.1 million gallons less in 1936 than in 1941.

a Approximate; determined from level in well a few feet distant.

Kalkaska County

100 (*886,p.274; 906,p.62; 936,p.65). T. 27 N., R. 5 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	14.98	Apr. 14	14.32	July 17	14.41	Oct. 15	14.97
Feb. 16	15.15	May 19	14.36	Aug. 14	14.64	Nov. 28	15.02
Mar. 25	15.42	June 19	14.19	Sept.22	14.91	Dec. 10	14.97

13. NE¼SW¼ sec. 27, T. 27 N., R. 5 W. North of small side trail leading to hunter's cabin, about a quarter of a mile southwest from State Highway 76 along trail. Diameter 2 inches, depth 19 feet. Penetrates medium-grained sand containing some stones. Measuring point, top of 2-inch casing, 0.4 foot above land surface.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Aug. 14	15.42	Oct. 15	15.62	Dec. 10	15.76
Sept.22	15.65	Nov. 28	15.73		

Missaukee County

1 (*840,pp.148,150,151; 845,p.155; 886,pp.274-275; 906,pp.62-63; 936, p.66). T. 22 N., R. 5 W. Measurements discontinued after Sept. 21.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 16	3.20	Apr. 14	1.09	July 13	3.75	Sept.21	5.54
Mar. 24	.97	June 19	2.53	Aug. 13	4.70		

17 (*840,pp.148,152,153; 845,p.155; 886,pp.274-275; 906,pp.62,63; 936, p.66). T. 23 N., R. 6 W. Measurements discontinued after Sept. 21.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Apr. 14	1.54	July 13	3.37	Sept.21	4.37
June 19	1.96	Aug. 13	3.90		

45 (*840,pp.149,154,155; 845,p.155; 886,pp.274-275; 906,pp.62,63; 936, p.66). T. 24 N., R. 6 W. Measurements discontinued after Sept. 21.

Water level, in feet below measuring point, 1942

Apr. 14	5.99	July 13	5.36	Sept.21	5.40
June 19	5.48	Aug. 13	5.32		

46 (*840,pp.149,154,155; 845,p.155; 886,pp.274-275; 906,pp. 62-63; 936, p.66). T. 24 N., R. 6 W. Measurements discontinued after Sept. 21.

Water level, in feet below measuring point, 1942

Apr. 14	1.16	July 13	2.35	Sept.21	2.86
June 19	1.98	Aug. 13	2.65		

Montmorency County

6 (*840,pp.156-158; 845,p.156; 886,p.275; 906,p.63; 936,p.66). T. 31 N., R. 2 E. Water level Aug. 11, 1942, 10.71 feet below measuring point.

15 (*840,pp.156-158; 845,p.156; 886,p.275; 906,p.63; 936,p.66). T. 31 N., R. 2 E. Water level Aug. 11, 1942, 9.85 feet below measuring point.

18 (*845,p.156; 886,p.275; 906,p.63). T. 31 N., R. 2 E. Water level Aug. 11, 1942, 13.98 feet below measuring point.

28 (*845,p.156; 886,p.275; 906,p.63; 936,p.66). T. 31 N., R. 2 E. Water level Aug. 11, 1942, 5.03 feet below measuring point.

22 (*840,pp.156,158,159; 845,pp.156,157; 886,p.275; 906,p.63; 936,p.66). T. 31 N., R. 3 E. Water level Aug. 11, 1942, 5.50 feet below measuring point.

30 (*840,pp.156,158,159; 845,pp.156,157; 886,p.275; 906,p.63; 936,p.66). T. 31 N., R. 3 E. Water level Aug. 11, 1942, 13.34 feet below measuring point.

40 (*840,pp.156,158,159; 845,pp.156,157; 886,p.275; 906,p.63; 936,p.66). T. 31 N., R. 3 E. Measurement attempted Aug. 11, 1942; well found to be full of stones.

1 (*840,pp.156,160; 845,p.157; 886,p.275; 906,p.63; 936,p.66). T. 31 N. R. 4 E. Water level Aug. 11, 1942, a/1.86 feet below measuring point.

12 (*840,pp.156,160; 845,p.157; 886,p.275; 906,p.63; 936,p.66). T.31 N., R. 4 E. Water level Aug. 11, 1942, 3.80 feet below measuring point.

Oakland County

Oakland 1 (*886,pp.266,276,277; 906,pp.63-64; *936,pp.66-67). City of Pontiac. Well 6 at Walnut Street pumping station, about 200 feet west of supply well 1.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	73.5	Apr. 1	70.5	June 29	75.0	Oct. 16	78.8
12	74.0	10	72.5	July 1	79.0	19	73.0
16	77.5	17	71.0	6	74.0	28	74.0
23	74.0	24	74.0	15	81.0	Nov. 6	75.8
30	83.7	27	71.0	27	79.0	11	72.0
Feb. 9	73.0	May 1	77.8	29	84.0	18	76.0
16	71.5	6	72.5	Aug. 10	75.0	23	70.0
23	73.0	15	77.0	20	81.8	Dec. 2	68.0
28	73.1	22	76.8	30	73.0	4	71.8
Mar. 9	71.5	June 1	78.6	Sept. 9	76.4	11	69.0
11	77.0	8	74.8	18	79.8	16	73.0
23	71.0	12	78.5	28	73.0	21	66.5
27	73.5	19	78.2	Oct. 9	76.8	30	73.0

Oakland 2 (*886,pp.266,276,277; 906,p.64; *936,pp.66-68). City of Pontiac. Well 21 in Walnut Street well group, about 40 feet northwest of supply well 3.

Water level, in feet below measuring point, 1942

Jan. 2	82.7	Mar. 27	83.6	July 6	82.7	Oct. 12	82.2
5	81.7	30	79.7	15	89.7	16	83.7
16	85.1	Apr. 6	81.7	27	87.7	19	81.0
28	81.7	13	83.0	29	92.9	30	83.2
30	84.5	20	81.7	Aug. 10	87.4	Nov. 6	80.9
Feb. 2	81.2	27	86.0	16	86.4	18	83.1
9	82.7	May 6	82.2	20	89.7	23	79.7
16	81.5	15	86.2	23	83.2	Dec. 2	78.7
27	80.7	22	84.1	30	82.2	9	76.3
Mar. 4	83.5	June 1	88.0	Sept. 4	86.5	14	80.2
9	80.7	8	84.0	14	82.7	18	74.6
13	85.9	22	87.4	18	87.5	28	76.6
16	80.5	29	85.7	30	82.7	30	80.1

Oakland 3 (*886,pp.266,276-277; 906,p.64; *936,pp.66-68). City of Pontiac. Just outside pump house of East Boulevard supply well, near intersection of East Boulevard and Mount Clemens Street.

Water level, in feet below measuring point, 1942

Jan. 2	29.0	Feb. 25	26.2	Apr. 20	17.6	June 8	23.2
12	28.4	Mar. 4	29.8	28	22.4	12	25.3
16	29.9	16	28.5	May 6	23.5	19	21.0
23	25.8	23	24.5	11	23.0	26	22.0
30	28.4	30	22.5	15	25.0	July 3	27.0
Feb. 6	27.0	Apr. 3	21.2	22	24.0	8	24.0
13	29.9	6	26.0	27	26.5	15	27.6
16	28.5	13	19.5	June 3	24.0	20	25.0

a Water level affected, as in 1941, by impounding of water behind dam on outlet of Avalon Lake, about 400 feet east of well.

Oakland 3. City of Pontiac--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 29	29.0	Sept. 7	19.5	Oct. 19	19.0	Nov. 20	15.5
Aug. 7	23.8	11	21.0	23	20.3	Dec. 2	15.0
10	26.0	21	20.0	26	18.5	11	17.4
18	21.5	28	21.0	30	17.4	14	14.0
25	20.0	Oct. 7	19.8	Nov. 6	15.5	23	17.0
30	19.0	9	21.3	13	15.0	30	15.0

Measurements in wells 1, 2, and 3 were made by members of the Department of Water Supply, Pontiac, H. L. Monroe, superintendent, H. W. MacDuff, chief engineer.

The average daily pumpage from municipal wells in Pontiac during 1942 ranged from 6.53 million gallons in April to 8.06 million gallons in July and averaged 7.07 million gallons. Of this, 3.59 million gallons a day was pumped from wells of the central or Walnut Street group and 3.48 million gallons a day from wells at outlying stations, including the East Boulevard station.

The average daily pumpage from municipal wells in 1941 was about 7.7 million gallons, of which about 3.3 million gallons was pumped from wells of the Walnut Street group and about 4.4 million gallons from wells at outlying stations. Thus, although the total pumpage decreased about 8 percent from 1941 to 1942, the pumpage from the Walnut Street wells increased about 9 percent. In spite of the increased pumpage, the water levels in wells 1 and 2, which are near wells of the Walnut Street group, averaged about 1.85 feet higher in 1942 than in 1941, according to the selected measurements given in th preceding tables and in Water-Supply Paper 936 on pages 67 and 68. This may be due partly to the over-all decrease in pumpage but is probably due mostly to the increase in precipitation at Pontiac. The precipitation at Pontiac was about 4 inches below normal in 1941, but it was a little more than 6 inches above normal in 1942.

An average of about 450,000 gallons a day was pumped at the East Boulevard station in 1942, as compared with about 475,000 gallons a day in 1941, a decrease of about 5 percent. Partly because of this, but mostly because of the increased precipitation in 1942, the water level in well 3 averaged 8.85 feet higher in 1942 than in 1941, according to the selected measurements given in the preceding table and in Water-Supply Paper 936, on page 68.

Otsego County

105 (*840,p.163; 845,p.157; 886,p.277; 906,p.64; 936,p.68). T. 29 N., R. 3 W. Measurements discontinued after Oct. 15.

Water level, in feet below measuring point, 1942

Jan. 13	4.88	Apr. 13	4.15	July 17	a4.86	Sept.23	a4.78
Feb. 17	5.32	May 19	4.71	Aug. 14	a4.93	Oct. 23	4.69
Mar. 25	5.40	June 20	a4.75				

106 (*840,p.163; 845.p.157; 886,p.277; 906,p.64; 936,p.68). T. 29 N., R. 3 W.

Water level, in feet below measuring point, 1942

Jan. 13	8.85	Apr. 13	8.16	July 17	a9.00	Oct. 23	9.25
Feb. 17	9.13	May 19	8.40	Aug. 14	a9.15	Nov. 16	9.16
Mar. 25	9.40	June 20	a8.79	Sept.23	a9.32	Dec. 11	9.02

Presque Isle County

13 (*840,pp.164-166; 845,pp.157-158; 886,p.277; 906,p.65; 936,p.68). T. 33 N., R. 2 E. Water level Aug. 12, 1942, 10.15 feet below measuring point.

16. NE¼SE¼ sec. 17, T. 33 N., R. 2 E. On west slope of grassy valley, about an eighth of a mile east of State Highway 33. Diameter 2 inches, depth 16 feet. Penetrates medium-grained sand. Measuring point, top of 2-inch casing, 0.75 foot above land surface. Water level Aug. 12, 1942, 6.11 ~~feet below measuring point.~~

a Date approximate.

17 (*845,pp.157-158; 886,p.277; 906,p.65; 936,p.68). T. 33 N., R. 2 E. No measurements made in 1942.

18 (*840,pp.164-166; 845,pp.157,158; 886,p.277; 906,p.65; 936,p.68). T. 33 N., R. 2 E. Water level Aug. 12, 1942, 3.11 feet below measuring point.

19 (*840,pp.165-166; 845,pp.157-158; 886,p.277; 906,p.65; 936,p.68). T. 33 N., R. 2 E. Water level Aug. 12, 1942, 9.75 feet below measuring point.

20 (*840,pp.165-166; 845,pp.157-158; 886,p.277; 906,p.65; 936,p.68). T. 33 N., R. 2 E. Water level Aug. 12, 1942, 4.16 feet below measuring point.

23 (*845,pp.157-158; 886,p.277; 906,p.65; 936,p.68). T. 33 N., R. 2 E. Water level Aug. 12, 1942, 4.90 feet below measuring point.

Roscommon County

3 (*840,pp.168,171-172; 845,p.158; 886,p.278; 906,p.65; 936,p.69). T. 21 N., R. 3 W. Measurements discontinued after Sept. 21.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Apr. 14	14.90	June 19	14.49	Aug. 13	14.89
May 18	14.46	July 16	14.63	Sept.21	15.31

15 (*840,pp.168,171,172; 845,p.158; 886,p.278; 906,p.65; 936,p.69). T. 21 N., R. 3 W.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 14	11.62	June 19	12.07	Aug. 13	12.40	Nov. 17	12.36
May 18	11.97	July 16	12.29	Sept.21	12.47	Dec. 9	12.45

8 (*840,pp.169,172-173; 845,p.158; 886,p.278; 906,p.65; 936,p.69). T. 21 N., R. 4 W.

Water level, in feet below measuring point, 1942

Apr. 14	3.47	June 19	4.27	Aug. 13	5.95	Nov. 17	4.67
May 18	3.92	July 16	5.18	Sept.21	5.90	Dec. 9	4.96

50 (*886,p.278; 906,p.65; 936,p.69). T. 21 N., R. 4 W.

Water level, in feet below measuring point, 1942

Jan. 12	4.77	Apr. 14	2.67	July 16	5.78	Nov. 17	5.77
Feb. 16	5.02	May 18	3.93	Aug. 13	6.73	Dec. 9	5.87
Mar. 24	2.29	June 19	4.64	Sept.21	6.93		

5 (*840,pp.169,174; 845,p.158; 886,p.278; 906,p.65; 936,p.69). T. 22 N., R. 1 W.

Water level, in feet below measuring point, 1942

Jan. 12	3.80	Apr. 14	3.01	July 16	3.88	Nov. 17	4.10
Feb. 16	3.96	May 18	3.07	Aug. 13	4.57	Dec. 9	4.31
Mar. 24	3.49	June 19	3.13	Sept.21	4.82		

3 (*840,pp.169,174-175; 845,p.158; 886,p.278; 906,p.65; 936,p.69). T. 22 N., R. 2 W. Measurements discontinued after Sept. 21.

Water level, in feet below measuring point, 1942

Jan. 12	8.64	Apr. 14	7.02	June 19	7.50	Aug. 13	9.38
Feb. 16	8.92	May 18	7.35	July 16	8.45	Sept.21	10.30
Mar. 24	8.11						

9 (*840,pp.169,174-175; 845,p.158; 886,p.278; 906,p.65; 936,p.69). T. 22 N., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 12	6.12	Apr. 14	5.24	July 16	6.54	Nov. 17	6.62
Feb. 16	6.23	May 18	5.73	Aug. 13	7.23	Dec. 9	6.63
Mar. 24	5.54	June 19	5.90	Sept.21	7.46		

15 (*840,pp.169,174-175; 845,p.158; 886,p.278; 906,p.65; 936,p.69). T. 22 N., R. 2 W.

15.--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 12	4.59	Apr. 14	3.60	July 16	5.12	Nov. 17	5.32
Feb. 16	4.77	May 18	4.06	Aug. 13	5.56	Dec. 9	5.38
Mar. 24	3.97	June 19	4.32	Sept.21	6.05		

16 (*840,pp.169,174-175; 845,p.158; 886,p.278; 906,p.65; 936,p.69). T. 22 N., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 12	4.98	Apr. 14	3.65	July 16	5.21	Nov. 17	5.70
Feb. 16	5.23	May 18	4.12	Aug. 13	5.77	Dec. 9	5.60
Mar. 24	4.30	June 19	4.38	Sept.21	6.38		

7 (*840,pp.169,176-177; 845,p.159; 886,p.278; 906,pp.65-66; 936,p. 69). T. 22 N., R. 3 W.

Water level, in feet below measuring point, 1942

Jan. 12	6.31	Apr. 14	4.99	July 16	6.07	Nov. 17	7.17
Feb. 16	6.98	May 18	5.18	Aug. 13	6.59	Dec. 9	7.43
Mar. 24	6.39	June 19	5.32	Sept.21	7.38		

20 (*840,pp.170,176-177; 845,p.159; 886,p.278; 906,pp.65-66; 936,p.69). T. 22 N., R. 3 W. Measurements discontinued after Sept. 21.

Water level, in feet below measuring point, 1942

Mar. 24	7.20	May 18	7.19	July 16	8.15	Sept.21	8.20
Apr. 14	6.62	June 19	7.45	Aug. 13	8.32		

26 (*840,pp.170,176-177; 886,p.278; 906,pp.65-66; 936,p.69). T. 22 N., R. 3 W. Measurements discontinued after Sept. 21.

Water level, in feet below measuring point, 1942

Mar. 24	6.52	May 18	4.54	July 16	5.18	Sept.21	6.43
Apr. 14	4.59	June 19	4.75	Aug. 13	5.70		

4 (*840,pp.170,177; 845,p.159; 886,p.278; 906,pp.65-66; 936,p.69). T. 22 N., R. 4 W.

Water level, in feet below measuring point, 1942

Jan. 12	4.00	Apr. 14	2.94	July 16	4.55	Nov. 17	4.50
Feb. 16	4.21	May 18	3.56	Aug. 13	5.11	Dec. 9	4.56
Mar. 24	2.85	June 19	3.37	Sept.21	5.93		

50 (*886,p.278; 906,pp.65-66; 936,p.69). T. 23 N., R. 1 W.

Water level, in feet below measuring point, 1942

Jan. 12	4.20	Apr. 14	2.96	July 16	4.49	Nov. 17	5.94
Feb. 16	4.54	May 18	3.66	Aug. 13	5.15	Dec. 9	6.03
Mar. 24	3.90	June 19	3.65	Sept.21	5.97		

5 (*840,pp.170,178; 845,p.159; 886,p.278; 906,pp.65-66; 936,p.69). T. 23 N., R. 3 W. Measurements discontinued after Sept. 21.

Water level, in feet below measuring point, 1942

Jan. 12	5.42	Apr. 14	4.50	June 19	5.42	Aug. 13	6.52
Feb. 16	5.60	May 18	5.08	July 16	6.20	Sept.21	6.61
Mar. 24	4.83						

75 (*845,pp.158,159; 886,p.278; 906,pp.65-66; 936,p.69). T. 23 N., R. 3 W.

Water level, in feet below measuring point, 1942

Jan. 12	7.59	Apr. 14	6.84	July 16	7.39	Nov. 17	8.00
Feb. 16	7.73	May 18	7.03	Aug. 13	7.70	Dec. 9	8.08
Mar. 24	7.35	June 19	7.02	Sept.21	8.10		

30 (*840,pp.170,178; 845,p.159; 886,pp.278-279; 906,p.66; 936,pp.69-70) T. 24 N., R. 1 W.

Water level, in feet below measuring point, 1942

Jan. 12	16.95	Apr. 14	16.00	July 16	16.50	Nov. 17	18.01
Feb. 16	17.13	May 18	16.11	Aug. 13	16.90	Dec. 9	18.12
Mar. 24	17.10	June 18	16.18	Sept.21	17.46		

Roscommon recorder well 1 (*817,pp.83-85; *840,pp.123-124,170,179; *845,pp.152,160; *886,pp.261,263,267,279; *906,pp.51,53,54,67; *936,pp.58-59,70). T.24 N., R. 2 W. Fluctuations in water level are discussed on pages

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	6.81	Apr. 30	5.93	July 24	7.26	Oct. 16	8.11
10	6.74	May 7	6.05	29	7.30	21	8.15
17	6.81	13	6.17	Aug. 5	7.38	29	8.17
26	6.86	18	6.27	13	7.48	Nov. 2	8.16
Feb. 1	6.91	24	6.36	15	7.52	6	8.15
14	7.00	29	6.42	23	7.72	10	8.15
21	7.06	30	6.22	28	7.78	14	8.00
28	7.11	June 2	6.17	Sept. 1	7.83	19	7.96
Mar. 7	7.15	8	6.30	5	7.88	27	7.97
19	6.52	15	6.46	12	7.95	Dec. 1	7.99
25	6.57	22	6.55	19	8.01	8	8.04
26	6.54	27	6.66	26	8.05	16	8.08
27	6.55	July 3	6.77	29	8.02	23	8.12
Apr. 7	5.82	11	6.95	Oct. 1	8.04	27	8.13
15	5.66	18	7.11	8	8.08	30	7.76
22	5.80						

81 (*840,pp. 170,179; 845,p.159; 886,pp.278-279; 906,p.66; 936,pp. 69-70). T. 24 N., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 12	3.60	Apr. 14	2.75	July 16	2.86	Nov. 17	3.91
Feb. 16	3.76	May 18	2.54	Aug. 13	3.07	Dec. 9	4.10
Mar. 24	3.74	June 18	2.63	Sept.21	3.40		

88 (*840,pp.170,179; 845,p.159; 886,pp.278-279; 906,p.66; 936,pp.69-70). T. 24 N., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 12	9.18	Apr. 14	7.97	July 16	8.83	Nov. 17	10.66
Feb. 16	9.44	May 18	8.21	Aug. 13	9.49	Dec. 9	10.70
Mar. 24	9.24	June 18	8.15	Sept.21	10.34		

107 (*840,pp.170,179; 845,p.159; 886,pp.278-279; 906,p.66; 936,pp.69-70). T. 24 N., R. 2 W. Measurements discontinued after Sept. 21.

Water level, in feet below measuring point, 1942

Jan. 12	8.65	Apr. 14	7.36	June 18	8.49	Aug. 13	9.08
Feb. 16	8.91	May 18	8.21	July 16	8.80	Sept.21	9.40
Mar. 24	8.58						

150 (*840,pp.171,179; 845,p.159; 886,pp.278-279; 906,p.66; 936,pp.69-70). T. 24 N., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 12	3.00	Apr. 14	2.21	July 16	3.61	Nov. 17	3.77
Feb. 16	3.30	May 18	2.44	Aug. 13	4.21	Dec. 9	4.29
Mar. 24	2.22	June 18	2.65	Sept.21	4.62		

1,000 (*886,pp.278-279; 906,p.66; 936,pp.69-70). T. 24 N., R. 2 W.

Water level, in feet below measuring point, 1942

Jan. 12	5.28	Apr. 14	3.86	July 16	5.72	Nov. 17	7.89
Feb. 16	5.75	May 18	4.58	Aug. 13	6.55	Dec. 9	8.07
Mar. 24	4.96	June 18	4.87	Sept.21	7.51		

1 (*840,pp.171,180-181; 845,p.159; 906,p.66; 936,pp.69,70). T. 24 N., R. 3 W. Measurements discontinued after Sept. 21.

Water level, in feet below measuring point, 1942

Jan. 12	8.52	Apr. 14	6.91	June 18	7.39	Aug. 13	8.64
Feb. 16	8.84	May 18	7.40	July 16	8.02	Sept.21	9.30
Mar. 24	8.39						

7 (*840,pp.171,180-181; 845,p.159; 906,p.66; 936,pp.69-70). T. 24 N., R. 3 W.

7--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 12	11.97	Apr. 14	10.02	July 16	11.97	Nov. 17	13.39
Feb. 16	12.30	May 18	10.92	Aug. 13	12.70	Dec. 9	13.39
Mar. 24	11.69	June 18	11.06	Sept.21	13.40		

17 (*840, pp. 171,180-181; 845, p. 159; 886, p. 279; 906, p. 66; 936, p. 70). T. 24 N., R. 3 W.

Water level, in feet below measuring point, 1942

Jan. 13	14.40	Apr. 14	13.65	July 16	14.20	Nov. 17	14.83
Feb. 10	14.57	May 18	13.93	Aug. 13	14.44	Dec. 9	14.92
Mar. 25	14.52	June 18	14.02	Sept.21	14.75		

19 (*840, pp. 171,180-181; 845, p. 159; 886, p. 279; 906, p. 66; 936, p. 70). T. 24 N., R. 3 W. Measurements discontinued after Sept. 21.

Water level, in feet below measuring point, 1942

Jan. 13	6.88	Apr. 14	6.88	June 18	6.49	Aug. 13	6.24
Feb. 10	6.89	May 18	6.77	July 16	6.35	Sept.21	6.20
Mar. 25	6.92						

St. Joseph County

St. Joseph 1 (*886, p. 279; 906, p. 67; *936, pp. 70-71). City of Three Rivers. About 350 feet south of West Michigan Street on island at confluence of St. Joseph and Rock Rivers. Measurements made by A. C. Walls, pumping station operator, city waterworks, O. O. Johnson, city manager, city of Three Rivers.

Water level, in feet below measuring point, 1942

Jan. 8	4.70	Apr. 11	2.70	July 18	4.78	Oct. 10	a1.50
17	4.70	18	2.80	31	4.64	17	4.20
24	3.07	30	4.45	Aug. 8	a.86	24	a1.30
30	a1.35	May 9	a1.65	15	4.20	31	a1.39
Feb. 7	a.97	16	a1.25	22	4.27	Nov. 7	4.45
14	3.19	23	a1.45	31	4.20	14	a1.36
21	a.80	29	4.20	Sept. 5	4.25	21	a1.10
28	4.27	June 6	4.44	12	3.70	28	2.10
Mar. 7	3.50	12	4.05	19	4.60	Dec. 5	a2.28
14	3.13	20	4.10	26	4.55	12	a2.28
20	3.14	30	4.40	30	4.20	22	4.20
28	2.90	July 3	a2.50	Oct. 3	4.35	31	a.35
Apr. 6	a1.40	11	4.70				

The average daily pumpage from municipal wells at Three Rivers during 1942 was about 380,000 or 390,000 gallons, a decrease of 12 to 15 percent from that in 1941. Records of precipitation at Three Rivers are incomplete for both 1941 and 1942, but it is probable that the precipitation was an inch or less below normal in 1941 and an inch or less above normal in 1942. The water level in well 1, according to measurements made at times when no municipal wells were pumping, averaged about 0.24 foot lower in 1942 than in 1941. The small decline in spite of the decrease in pumpage may represent a decrease in artesian storage or an increase in pumping from private wells, or both. According to measurements made at times when one of the nearby municipal wells (Layne well) was pumping, the water level in well 1 averaged about 0.05 foot higher in 1942 than in 1941, which probably reflects the decrease in pumpage in 1942.

Washtenaw County

Washtenaw 1 (*906, pp. 57, 67, 68; *936, p. 71). City of Ann Arbor. 200 feet south of main building of Steere Farm pumping station of city waterworks. Daily measurements made by members of Ann Arbor Water Department, H. H. Caswell, manager.

a No municipal wells pumping at time of measurement.

Washtenaw 1. City of Ann Arbor--Continued.
Highest and lowest water level each month, in feet below measuring point, 1942

Date	Highest water level	Lowest water level	Date	Highest water level	Lowest water level
Jan. 14	2.12	....	July	(c)	....
23	....	5.01	29	....	3.60
Feb. 7	2.26	....	Aug. 2	.18	....
26	....	5.12	21	....	3.77
Mar. 4	....	4.35	Sept. 1	....	2.98
30	.61	....	5,7	.74	....
Apr. 20	(a)	....	Oct. 23	2.24	....
25	....	3.20	31	....	6.80
May 1	....	2.79	Nov. 22	....	6.98
3-28	(a)	....	30	1.43	....
June	(b)	(b)	Dec. 1	1.46	....
			25	....	5.83

The average daily pumpage from wells at the Steere Farm pumping station in the individual months in 1942 ranged from 1.40 million gallons in June to 2.33 million gallons in October and averaged 1.75 million gallons for the year. The average daily pumpage in 1941 was 1.27 million gallons, and in 1940 it was 1.68 million gallons. The lowest water levels reached each month in well 1 averaged about 0.3 foot lower in 1942 than in 1941. In view of the substantial increase in pumpage at the station in 1942 over that of 1941 (about 38 percent), the moderate decline in water level indicates that conditions in 1942 were rather favorable in comparison with those of 1941. The lowest water level reached each month in well 1 averaged about 0.8 foot higher in 1942 than in 1940, when the pumpage was about the same as in 1942. This tends to confirm the belief that ground-water conditions in the area were comparatively favorable in 1942. The precipitation at Ann Arbor was 2.28 inches below normal in 1941 and 5.87 inches above normal in 1942, and this increase is probably responsible for the favorable conditions in 1942.

Wexford County

7 (*840,pp.181,182; 936,p.72). T. 24 N., R. 9 W. Water level Sept. 3, 1942, 12.39 feet below measuring point.

38 (*840,pp.181,182; 936,p.72). T. 24 N., R. 9 W. Water level Sept. 3, 1942, 3.47 feet below measuring point.

2 (*840,pp. 181,182; 936,p.72). T. 24 N., R. 10 W. Water level Sept. 3, 1942, 4.08 feet below measuring point.

3 (*840,pp.181,182; 936,p.72). T. 24 N., R. 10 W. Water level Sept. 3, 1942, 8.10 feet below measuring point.

4 (*840,pp.181,182; 936,p.72). T. 24 N., R. 10 W. Water level Sept. 3, 1942, 2.78 feet below measuring point.

42 (*840,pp.181,182; 936,p.72). T. 24 N., R. 10 W. Water level Sept.3, 1942, 5.43 feet below measuring point.

a Flowing.
b Flowing during entire month.
c Flowing during most of month.

NEW JERSEY

By E. J. Schaefer and G. D. De Buchananne

PROGRAM OF WORK

The cooperative investigation of the ground-water resources of New Jersey by the Geological Survey, United States Department of the Interior, and the New Jersey State Water Policy Commission, which has been in progress for some years, was continued in 1942. It consists in large part of quantitative studies of these resources in selected areas. A map of the State showing the counties in outline and name and with the areas shaded was published in an earlier report, which includes also a table listing the areas and the appropriate counties so arranged as to show the location of the areas. (See Water-Supply Paper 886, pp. 340 and 342). The water-level measurements given in the present report were obtained from wells in these areas.

About 4,100 measurements of water level were made during 1942, and at the end of the year 207 wells were under observation. Measurements were made monthly or less frequently in some of the wells, biweekly in some, weekly in some, and at least twice a day in one. Continuous records by water-stage recorders were obtained from 48 wells throughout the year. The State and Federal Governments owned and operated 41 of these recorders; municipalities and private water-supply companies or industries owned the remaining 7.

FLUCTUATIONS OF WATER LEVEL

The precipitation during 1942 was 4.80 inches above normal, but during the first 6 months of the year a deficit of 3.82 inches accumulated. The precipitation during April was the second lowest ever recorded for that month, only April 1896 being drier. In each of the last 6 months except October, however, the precipitation was above normal; in October there was a slight deficit.

The Morrell well (No. 29.11.1.2.3), a shallow well near Old Bridge, Middlesex County, is considered one of the best indices of ground-water

storage for this general region. A hydrograph made for this well showed a slight gain in ground-water storage for the first 3 months of the year. Even though the precipitation for this period was only normal, it was sufficient to build up slightly the ground-water storage, which had been very low as a result of the dry autumn of 1941. A combination during the succeeding 3 months of below-normal precipitation and a heavy draft on ground-water storage to meet the demands of vegetation resulted in a downward trend of the water table, which continued through August. The hydrograph showed an upward trend of the water table from then on, until at the end of the year the ground-water storage was again back to normal.

The average water levels in a group of shallow wells in Middlesex County, but not near enough to the center of public and industrial pumping in the Runyon area to be affected by it, do not seem to indicate anything not indicated by the Morrell well. The three sets of measurements in this group, made in January, June, and December, indicate that the total ground-water storage increased during the year. On the other hand, the average water levels in a small group of deeper water-table wells, also beyond the influence of the pumping in the Runyon area, indicate that the total ground-water storage decreased during the year. (See table on p. 83). It is thought that this discrepancy in the showing of the two groups may be due to a lag in the fluctuations of water level in the deeper wells, a lag to be expected because of their greater depth to water. If this is true, then the average water levels in the deeper wells will indicate an increase in ground-water storage in the first part of 1943, because by that time their fluctuations will have been affected by the precipitation of the last part of 1942.

Of the observation wells in Middlesex County other than those just discussed, 11 showed new record lows of water level during 1942. Two of these tap the Farrington sand member of the Raritan formation (the No. 1 sand of earlier reports), and the other nine tap the Old Bridge sand member of the Raritan formation (the No. 3 sand of earlier reports). These new lows, with the exception of the one in the Fischer well (No. 28.4.4.2.1), are thought to be due to pumping. The Fischer well is in the intake area of the Farrington sand member and is too far from any center of pumping to be appreciably affected by it. Therefore the new low in this well must be the result of natural conditions.

In the Penns Grove area in Salem County, nine wells reached new lows in 1942. All are within the influence of heavy pumping. These wells will probably continue to show new lows in future years until the rate of pumping and the water table reach a state of equilibrium.

As usual the fluctuations of water levels in the artesian aquifers under observation in the State were caused primarily by fluctuations of pumpage from these aquifers. The formations serving as aquifers are of wide extent and the intake areas of some of them are a long distance from the ground-water areas being studied, so that the water levels in these areas are not much affected by variations in precitiptation. The water levels in the 800-foot sand in the Atlantic City area were slightly higher in the summer and slightly lower in the fall and winter than they were during the preceding year. This was due to a change in the rate of pumping by military establishments in this area. There were, however, the usual seasonal fluctuations, with higher levels in the winter season, when pumping is light, than in the summer season, when it is heavy.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Observation wells in New Jersey are listed alphabetically by counties and by number within each county. For convenience, the appropriate ground-water area is added after the county name. Many of the wells in the Runyon area, Middlesex and Monmouth Counties, have been assigned field numbers also, such as F-31, J-5, P-2, and, to facilitate reference to these wells, their field numbers are included. Complete descriptions are given only for newly added wells. The numbers in parentheses immediately following a well number indicate the water-supply papers in which earlier records of that well are given and the pages on which they appear. An asterisk preceding the number of a water-supply paper indicates that a description of the well is given in the paper so marked. For most wells the water level is expressed in feet, either with reference to mean sea level--if the altitude of the measuring point has been satisfactorily determined--or in depth below the measuring point. For a few wells, the water level is expressed in feet below the top of the casing.

In the records of water levels obtained by tape measurements, the dates of measurements and the water levels as actually measured are given. In the records obtained from water-stage recorders, a single water level is given

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for each day. An attempt has been made, however, to give the most significant daily level for each well. For wells in which the fluctuation is small, the water level at the end of the day is given. For wells in which the daily fluctuation is large, because of the effect of nearby pumping or of tides, the lowest water level for each day is given. An exception is made of the Longport well (No. 36.23.1.9.6), in Atlantic County, in the records for which the water level given for each day is the average of the two high and the two low levels caused by tides on that day.

Atlantic County - Atlantic City area

36.13.2.9.1 (*845, p. 197; 886, p. 342; 906, p. 76; 936, p. 78). Atlantic City Water Works 600-foot well. Extremes of observed water level, in feet below mean sea level: Highest, 3.05 Mar. 28, 1925; lowest, 25.47 Sept. 28 and 29, 1929.

Water level at end of day, in feet below mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	20.55	19.69	19.36	19.50	19.16	19.48	20.39	20.20	20.87	21.08	20.89	20.26
2	20.66	19.78	.....	19.49	19.11	19.41	.....	20.25	20.89	21.13	20.90	20.43
3	20.62	19.80	19.96	19.46	19.11	19.45	.....	20.32	20.93	21.18	20.99	20.54
4	20.55	19.72	20.13	.....	19.13	19.44	.....	20.40	.....	21.12	21.04	20.60
5	20.57	19.60	20.08	.....	19.20	19.52	.....	20.44	21.01	21.07	20.99	20.61
6	20.43	19.39	20.07	19.44	19.16	19.58	.....	20.49	21.07	21.14	20.98	20.60
7	20.58	19.49	20.12	19.41	19.13	19.61	.....	20.54	21.04	21.18	20.98	20.60
8	20.58	19.69	19.92	19.51	19.16	19.69	.....	20.57	.....	21.21	20.93	20.58
9	20.46	19.76	20.01	19.34	.....	19.74	.....	.....	.....	21.20	20.92	20.49
10	20.52	19.71	20.07	19.24	.....	19.75	.....	.....	.....	21.17	20.80	20.42
11	20.51	19.66	19.98	19.26	19.24	19.74	.....	20.43	.....	21.13	20.84	20.32
12	20.43	19.69	20.08	19.33	19.21	19.74	.....	20.49	.....	21.14	20.76	20.33
13	20.51	19.71	20.00	19.41	19.23	19.74	.....	20.50	.....	21.13	.....	20.39
14	20.37	19.68	19.98	19.40	19.16	19.72	.....	20.55	.....	21.04	20.98	20.41
15	20.34	19.65	19.98	19.40	19.17	19.80	.....	20.60	.....	21.01	20.94	20.89
16	.....	19.42	19.87	19.40	19.29	19.84	.....	20.64	.....	20.60	20.92	20.34
17	20.38	19.47	19.74	19.27	19.28	19.85	.....	20.62	.....	20.70	20.87	.....
18	20.29	19.46	19.72	19.27	19.29	19.90	.....	20.66	.....	20.74	20.85	.....
19	20.12	19.48	19.83	19.29	19.13	19.91	.....	20.70	20.91	20.80	20.84	.....
20	20.14	19.47	.....	19.26	19.28	20.04	20.13	.....	21.00	20.86	20.78	.....
21	20.11	19.46	19.65	19.28	19.29	20.08	20.17	.....	20.92	20.80	20.76	.....
22	20.25	19.45	19.70	19.28	19.26	20.11	20.19	20.75	20.94	20.84	20.80	.....
23	20.14	.....	19.73	19.28	19.32	20.15	20.20	.....	20.96	20.93	20.67	.....
24	20.13	.....	19.80	.....	19.35	20.23	20.26	20.52	.....	21.00	20.47	.....
25	20.06	.....	19.80	19.26	19.36	20.32	20.28	20.64	.....	20.92	20.45	.....
26	19.87	.....	19.80	19.27	19.35	20.35	20.25	20.71	20.98	20.84	20.48	.....
27	19.88	.....	19.75	19.27	19.39	20.30	.....	20.73	20.96	20.96	20.55	.....
28	19.80	19.34	19.70	19.23	19.47	20.34	.....	20.73	21.11	21.05	20.65	.....
29	19.89	.....	19.49	19.20	.....	20.39	.....	20.77	21.14	21.07	20.50	.....
30	19.79	.....	19.50	19.17	19.42	20.41	.....	20.81	21.10	21.01	20.57	19.68
31	19.59	.....	19.47	.....	19.44	.....	.....	20.86	.....	20.86	.....	19.86

36.14.5.87 (*906, p. 77; 936, p. 79). Citizens Ice Co. well. Extremes of observed water level, in feet below mean sea level: Highest, 38.72 Mar. 13, 1939; lowest, 78.72 Aug. 2, 1929. Daily fluctuations, due to tide and nearby pumping, as umch as 3.5 feet; seasonal fluctuations, due to regional pumping, as much as 26 feet.

Atlantic County - Atlantic City area--Continued

36.14.5.8.7. Citizens Ice Co. well--Continued.

Lowest daily water level, in feet below mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	43.9	43.7	42.8	43.1	49.6	....	52.3	55.4	56.6	55.5	52.7
2	47.3	44.1	43.6	44.0	43.4	49.0	53.2	52.8	55.6	56.3	55.4	52.3
3	47.6	44.0	42.6	44.6	43.8	48.3	52.8	....	56.3	56.6	55.6	52.2
4	47.2	44.1	43.6	45.6	44.3	47.7	53.5	....	56.4	56.7	55.6	52.3
5	47.0	44.1	43.6	46.4	....	47.4	54.4	53.0	56.3	56.6	55.5	51.6
6	46.8	43.8	43.5	46.0	....	48.0	....	53.0	56.0	....	55.7	51.1
7	47.0	43.3	43.9	45.9	....	48.1	....	53.0	55.5	....	55.7	50.8
8	46.5	43.8	43.6	45.7	43.3	49.2	....	53.0	55.5	....	55.7	50.7
9	46.1	43.7	43.1	44.8	43.4	49.8	52.2	52.5	55.0	56.9	55.3	50.3
10	46.5	43.7	43.2	43.9	43.3	50.2	52.2	52.2	54.7	56.8	55.2	50.8
11	46.5	43.6	42.8	43.1	43.3	50.3	52.0	51.9	54.9	56.8	55.5	51.5
12	46.2	43.8	42.8	43.4	43.0	50.6	52.0	52.0	54.7	56.2	54.7	51.6
13	46.6	44.6	43.2	43.2	43.0	50.3	51.9	....	54.7	56.3	54.8	51.9
14	46.6	44.9	43.0	42.8	43.4	50.3	51.4	....	54.8	56.5	54.8	51.9
15	46.0	44.8	42.5	42.9	43.8	50.4	51.2	51.7	55.1	56.1	54.2	51.7
16	46.1	44.3	42.7	42.6	44.9	49.9	51.1	52.4	55.3	56.1	54.3	51.5
17	46.2	44.1	42.5	42.4	44.9	49.7	50.9	53.1	56.0	55.8	54.8	51.6
18	46.0	44.4	42.3	42.4	46.1	49.6	....	....	55.8	....	54.9	51.6
19	45.4	44.2	42.6	42.6	46.5	49.8	50.7	....	56.1	....	55.0	51.6
20	45.1	44.5	43.1	42.4	46.9	50.5	51.1	....	55.9	....	55.0	51.6
21	45.1	45.4	42.8	42.3	47.6	50.8	51.0	54.4	55.4	56.4	55.0	51.0
22	44.6	46.1	43.0	42.1	47.9	51.1	51.2	54.7	54.8	56.6	54.5	51.1
23	44.7	46.4	42.8	42.0	47.4	50.9	50.8	54.8	54.9	56.9	54.2	51.4
24	44.9	45.8	42.6	42.2	47.5	51.3	51.2	....	55.3	56.9	53.8	....
25	44.2	45.0	42.8	42.3	47.8	51.5	51.4	....	55.6	56.5	....	....
26	44.0	44.4	42.6	42.6	47.6	52.0	51.4	....	55.3	55.7	....	....
27	44.0	44.2	43.0	42.5	47.9	52.1	51.7	....	55.1	56.3	....	50.2
28	44.0	43.8	42.7	42.5	47.9	53.1	51.6	55.2	55.9	56.2	55.1	49.9
29	43.7	....	42.2	42.5	48.5	53.4	51.4	55.0	56.0	56.2	54.9	49.7
30	43.9	....	43.0	42.6	49.4	....	52.4	55.3	56.8	56.0	54.0	50.2
31	43.9	....	43.2	....	49.8	....	52.3	55.1	....	55.7	....	51.0

36.23.1.9.6 (777, p. 99; *817, p. 172; 840, p. 242; 845, p. 198; 886, 342; 906, p. 84; 936, p. 79). Longport Fourteenth Avenue well. Extremes of observed water level, in feet with reference to mean sea level: Highest about +19, in 1895, when well was drilled; lowest, -54.5 Sept. 4, 1929. Daily fluctuations, due to tide, 1942: 1.0 to 5.6 feet.

Average daily water level in feet below mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	33.8	31.7	31.0	30.2	31.9	....	40.1	43.0	43.5	38.5	35.6	33.7
2	33.0	32.1	30.8	30.3	32.3	....	39.6	43.1	43.6	38.4	35.8	34.0
3	33.7	32.0	29.5	30.5	32.7	35.7	39.5	43.4	43.6	38.2	35.8	35.2
4	32.8	31.8	30.6	30.3	33.2	35.4	39.9	43.5	43.6	38.1	35.8	34.7
5	33.3	31.6	30.8	30.4	33.0	35.4	40.6	43.7	43.7	38.2	35.7	34.6
6	33.6	31.3	30.6	30.5	33.2	35.6	41.0	43.7	44.0	38.0	35.5	34.1
7	....	30.5	31.2	30.6	32.8	36.4	41.6	44.2	44.1	....	35.5	34.2
8	....	31.4	31.3	30.7	31.9	36.8	42.0	44.3	44.0	38.0	35.1	33.9
9	33.4	32.0	30.6	30.5	32.1	36.6	42.3	43.7	43.3	38.0	35.1	33.3
10	33.2	31.9	31.6	29.9	32.3	36.7	42.6	43.4	42.8	37.8	35.1	33.4
11	33.8	31.6	31.0	30.1	32.6	36.8	42.5	43.2	42.6	37.4	35.3	33.4
12	33.6	31.6	30.9	30.6	32.8	37.0	42.0	43.3	42.4	37.0	35.1	33.2
13	....	32.2	30.9	30.8	33.1	36.7	42.5	43.2	42.4	36.9	35.4	33.3
14	33.3	32.3	30.4	30.7	33.2	37.2	42.9	43.1	42.4	37.1	35.6	34.1
15	33.3	31.7	....	30.9	33.5	....	43.5	43.3	42.3	36.9	35.4	33.8
16	33.2	31.1	30.5	31.0	33.4	....	43.8	43.4	42.1	36.5	35.5	33.2
17	....	31.0	30.2	30.6	33.6	37.4	44.0	43.8	42.0	36.2	35.2	33.3
18	....	31.4	30.1	30.7	33.5	37.7	43.9	43.8	41.7	36.4	34.9	33.7
19	32.5	31.4	30.5	30.9	33.6	38.3	43.6	43.6	41.0	36.5	34.8	33.7
20	32.5	31.5	30.8	30.9	33.7	38.6	44.2	43.5	40.8	36.6	34.6	33.8
21	32.6	31.8	30.2	30.8	33.8	39.0	44.8	43.7	40.0	36.3	34.3	33.5

Atlantic County - Atlantic City area--Continued

36.23.1.9.6. Longport Fourteenth Avenue well--Continued.

Average daily water level in feet below mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
22	32.7	31.8	30.2	31.0	33.8	39.7	44.9	43.8	39.8	36.1	34.1	33.3
23	32.4	31.2	30.5	31.2	33.4	39.8	44.9	44.0	39.9	36.3	34.3	33.3
24	32.5	31.1	30.4	31.3	34.2	40.2	45.3	44.0	39.8	36.2	33.5	33.0
25	32.1	30.6	30.5	31.4	34.7	40.8	45.0	43.7	40.0	35.7	33.5	32.7
26	31.7	31.1	30.4	31.6	34.9	41.3	45.0	43.8	39.7	35.6	33.5	33.1
27	32.0	31.4	30.3	31.4	35.0	40.9	44.3	43.8	39.2	36.2	33.8	33.0
28	....	31.2	29.9	31.7	35.2	39.9	43.7	43.9	39.3	36.3	34.6	32.8
29	....	....	29.1	31.8	35.8	39.9	43.9	43.9	39.0	36.2	34.6	32.3
30	....	....	29.6	31.9	....	40.5	43.6	43.1	....	36.1	34.3	32.2
31	31.5	....	30.2	....	....	....	43.2	43.3	....	35.9	....	33.4

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). 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 above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5.8	8.9	12.2	....	15.6	11.4	10.7	8.7	10.9	....	25.4
2	6.3	8.8	12.5	....	15.3	11.3	10.7	4.1	7.7	....	25.7
3	6.3	8.7	13.2	....	14.7	11.0	11.4	5.0	....	....	25.7
4	6.4	8.7	12.6	....	14.6	10.8	10.7	10.5	....	....	25.8
5	6.5	8.8	12.6	....	14.6	10.9	10.7	10.4	....	....	25.8
6	6.6	9.2	12.6	....	14.1	10.7	10.3	8.7	....	15.4	26.2
7	6.6	9.2	12.6	....	13.9	10.5	10.3	4.0	....	15.2	27.1
8	6.6	9.1	12.9	....	13.5	10.5	10.4	11.2	....	15.3	26.8
9	6.7	9.1	14.1	....	13.3	12.7	10.8	12.4	....	21.5	26.8
10	7.0	9.4	14.1	....	13.2	13.1	11.3	11.2	....	13.2	26.9
11	7.0	9.5	19.2	....	13.2	11.5	10.7	12.9	....	24.2	27.1
12	7.3	9.6	16.9	....	13.0	11.2	10.7	6.4	....	24.9	27.2
13	7.4	9.6	19.3	18.0	12.7	10.7	11.0	5.3	....	24.8	27.2
14	7.4	9.7	19.1	17.5	12.6	10.4	11.3	9.2	....	25.3	27.5
15	7.8	9.9	18.9	17.0	12.5	10.2	11.7	6.7	....	25.3	27.5
16	8.1	10.1	16.9	17.0	12.5	10.2	13.2	11.4	....	24.8	27.4
17	7.8	10.4	18.1	17.0	12.3	10.2	12.3	8.3	....	24.8	27.3
18	7.8	10.4	16.2	16.9	12.3	10.4	14.8	13.4	....	24.7	27.4
19	8.7	10.7	15.4	16.2	12.2	13.6	14.3	10.4	....	25.3	27.3
20	8.2	10.8	16.0	15.9	12.2	14.3	13.0	7.2	....	25.0	27.3
21	8.2	11.1	16.9	15.5	12.3	12.2	10.6	5.4	....	24.8	....
22	8.0	11.3	16.8	15.4	12.7	12.0	13.1	8.7	....	24.8	....
23	8.0	11.8	16.6	15.3	12.3	11.4	9.0	7.3	....	25.6	....
24	8.0	11.8	....	15.3	11.9	11.1	10.0	8.8	....	25.1	....
25	8.2	12.0	....	15.1	11.7	10.8	7.3	7.6	....	25.0	....
26	8.1	12.1	....	14.7	11.6	10.8	8.6	11.9	....	24.9	....
27	8.1	12.2	....	14.5	11.5	11.0	6.7	10.0	....	25.6	....
28	8.2	12.2	....	14.2	11.5	10.9	9.8	6.4	....	25.0	....
29	9.0	....	....	14.1	12.0	10.5	6.0	10.7	....	25.0	....
30	9.0	....	....	13.8	11.5	10.2	5.4	7.6	....	25.3	....
31	9.4	....	....	13.8	....	10.1	4.0	....	....	....	....

Camden County - Camden area

31.2.2.5.2 (*817, p. 174; 840, p. 242; 845, p. 200; 886, p. 343; 906, p. 80). Extremes of observed water level, in feet below mean sea level: Highest, 0.3 Mar. 19, 1936; lowest, 35.84 June 14, 1926. Daily fluctuation 1942: Less than 1 foot to about 6 feet.

Camden County - Camden area--Continued

31.2.2.5.2. Morris Station test well 3--Continued.

Lowest daily water level, in feet below mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.80	9.15	8.20	7.90	7.75	7.70	8.35	6.50	6.90	6.95	5.80	7.30
2	8.10	9.60	8.80	7.60	8.25	7.60	7.85	6.05	7.85	7.20	5.65	7.60
3	7.90	9.80	8.40	7.70	8.65	....	8.10	7.05	7.50	6.20	6.85	8.20
4	7.80	9.50	8.90	7.20	8.50	....	7.25	7.30	7.40	5.70	6.00	8.35
5	....	....	....	6.95	7.90	....	6.60	7.35	9.25	6.70	6.45	....
6	8.65	....	....	7.95	8.00	7.35	7.75	7.75	6.70	7.00	6.30	....
7	9.30	9.20	8.80	8.85	7.95	6.85	7.80	7.55	6.75	6.85	6.55	....
8	9.10	7.95	8.20	8.65	7.50	8.20	7.30	7.30	7.55	6.95	6.55	....
9	9.20	9.80	8.85	8.20	7.10	8.40	7.65	5.90	7.55	6.90	6.10	....
10	8.55	9.30	9.15	....	6.80	8.65	....	6.75	7.65	5.95	5.95	....
11	8.20	9.65	9.00	....	7.65	8.20	....	7.60	7.60	6.35	6.45	....
12	9.65	9.65	....	7.30	8.00	7.80	....	7.25	7.20	6.95	6.40	7.35
13	9.85	9.55	9.20	7.85	8.20	7.45	....	7.25	7.05	6.45	6.65	7.10
14	9.75	8.65	8.10	7.70	8.15	6.85	6.95	....	6.35	5.70	6.80	8.75
15	9.90	8.40	7.95	7.70	....	8.40	7.00	6.50	7.00	6.25	6.75	8.65
16	10.05	9.30	7.75	7.80	....	8.25	....	5.80	7.15	5.90	7.30	8.75
17	8.70	9.15	8.50	7.65	....	8.05	....	6.80	7.15	5.40	7.50	8.60
18	8.30	8.95	8.60	7.20	....	8.45	....	6.45	7.45	5.00	7.30	9.00
19	9.35	9.40	....	7.20	8.35	8.20	6.75	7.10	7.55	6.10	7.20	7.90
20	9.40	9.30	....	8.15	7.95	8.15	6.50	6.70	6.50	6.05	6.35	7.80
21	9.65	8.50	8.10	8.30	8.85	6.65	9.60	6.95	7.20	6.10	6.80	9.00
22	9.35	8.50	7.40	8.45	8.75	8.30	8.15	6.90	7.30	6.45	7.00	8.70
23	9.75	8.35	8.25	7.75	....	8.15	8.15	5.75	7.35	5.85	6.90	8.60
24	8.80	9.35	8.45	8.20	6.30	8.45	8.10	....	7.20	5.25	7.25	8.35
25	8.40	9.20	7.90	7.60	6.90	10.60	....	6.50	7.40	5.05	7.25	7.70
26	9.65	9.30	8.65	7.45	7.65	9.95	....	6.50	7.40	4.95	6.70	7.55
27	9.55	9.15	8.50	8.00	7.10	8.60	....	7.40	....	5.70	6.85	7.50
28	9.85	8.45	7.50	7.95	7.70	7.05	....	....	7.10	6.65	7.05	8.15
29	9.80	....	7.25	7.65	7.40	8.10	....	7.40	7.00	6.80	6.70	7.95
30	9.60	....	8.15	8.15	8.35	8.35	....	7.40	7.15	5.60	8.30	....
31	8.15	....	7.15	....	8.65	....	7.10	....	....	5.80	....	....

31.2.4.5.1 (*845, p. 201; 886, p. 344; 906, p. 86; 936, p. 81). 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, -19.3 July 2, 1941. Daily fluctuations, 1942: 2 to 10 feet.

Lowest daily water level, in feet below mean sea level, 1942
(From recorder charts)

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	14.8	15.8	....	17.4	16.2	17.7	15.4	14.1	15.1
2	....	14.6	15.8	....	15.9	15.4	17.4	16.0	15.0	14.8
3	....	13.5	15.8	....	16.3	17.3	17.9	15.3	12.9	13.2
4	....	13.5	14.8	....	15.9	17.1	17.8	14.1	13.0	13.2
5	....	13.0	16.3	....	15.4	16.8	17.5	14.3	13.0	13.2
6	....	15.1	16.6	....	16.8	16.8	15.7	15.8	13.2	13.1
7	....	14.5	16.4	....	17.0	16.2	16.5	16.0	13.6	14.9
8	....	13.6	15.0	15.8	17.5	17.6	17.6	15.4	13.0	13.0
9	....	13.2	14.7	17.1	17.8	15.5	16.4	15.4	15.4	13.2
10	....	13.2	14.5	17.2	16.8	16.1	16.1	15.2	13.2	13.2
11	....	13.6	13.7	17.2	16.3	17.7	16.4	....	14.8	13.1
12	....	13.5	15.5	17.0	15.6	15.5	16.2	....	14.9	13.0
13	....	14.8	16.1	16.0	17.8	16.9	16.0	....	14.8	12.8
14	....	14.4	17.4	15.0	17.9	17.3	17.3	....	15.0	14.8
15	....	15.1	17.2	16.8	17.6	17.0	17.5	....	15.0	13.0
16	....	15.1	17.0	16.9	17.4	16.6	17.7	....	15.6	13.3
17	....	14.8	15.6	16.2	17.3	17.1	17.5	....	15.6	13.8
18	....	14.4	14.7	17.0	17.2	17.6	18.1	....	15.5	13.8
19	....	13.9	15.4	17.2	16.6	17.2	17.3	....	15.0	13.4
20	....	14.8	15.7	18.0	18.8	18.1	16.8	....	15.2	15.1
21	....	14.5	16.2	16.2	18.2	17.9	16.4	....	15.2	16.8
22	....	14.8	16.5	17.6	....	17.8	16.1	....	13.8	16.1

Camden County - Camden area--Continued

31.2.4.5.1. New Jersey Water Co. well 10--Continued.

Lowest daily water level, in feet below mean sea level, 1942
(From recorder charts)

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
23	....	15.6	16.2	16.7	....	16.3	17.1	....	15.7	16.5
24	....	15.1	15.3	17.1	....	17.0	17.5	....	13.1	15.8
25	....	15.0	....	17.7	....	16.9	17.6	14.2	13.3	15.6
26	....	14.4	....	16.6	....	17.4	15.8	15.7	13.5	15.2
27	....	....	....	15.2	....	17.3	15.6	17.5	14.6	15.3
28	....	....	....	15.4	....	16.7	17.6	14.9	13.1	14.8
29	13.7	15.1	....	17.3	....	16.4	16.2	15.3	12.8	13.9
30	14.1	15.2	....	16.9	....	15.7	15.7	14.9	15.3	13.1
31	14.9	....	....	....	17.7	17.7	....	14.9	....	13.4

Cape May County - Atlantic City area

36.31.9.1.9 (*845, p. 199; 886, p. 345; 906, p. 87; 936, p. 82). Sea Isle City Water Department well 1. Extremes of observed water level, in feet below top of casing: Highest, 12.0 Apr. 7, 1930; lowest, 18.6 Sept. 13, 1931. Daily fluctuations, due to tides, 1942: 0.2 to 0.8 foot.

Lowest daily water level, in feet below top of casing, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Oct.	Nov.	Dec.
1	14.6	....	14.4	14.0	14.0	14.1	....	14.7	....	14.7	14.3
2	14.5	....	14.4	....	14.0	14.1	....	14.7	....	14.6	14.5
3	14.7	....	14.0	....	14.0	14.0	....	14.7	....	14.7	14.7
4	14.5	14.6	14.2	....	14.0	14.0	....	....	....	14.8	14.8
5	14.6	14.4	14.3	....	14.0	13.9	....	....	....	14.8	14.8
6	14.7	14.3	14.2	....	14.0	14.0	....	....	....	14.9	14.8
7	14.8	14.0	14.3	....	13.9	13.9	....	....	....	14.9	14.8
8	14.7	14.2	14.3	....	13.9	14.0	....	....	....	14.8	14.8
9	14.7	14.4	14.2	....	13.9	14.0	....	....	....	14.8	14.7
10	14.7	14.4	14.3	....	13.9	14.1	....	....	....	14.8	14.6
11	14.7	14.4	14.3	....	14.0	14.0	....	....	....	14.7	14.6
12	14.8	14.4	14.3	....	14.0	14.0	....	....	....	14.6	14.5
13	14.8	14.6	14.3	....	14.0	14.0	....	....	....	14.7	14.5
14	14.9	14.6	14.2	....	14.0	14.0	....	....	....	14.8	14.6
15	14.8	14.6	14.2	....	14.0	14.0	....	....	....	14.8	14.5
16	14.8	14.6	14.2	....	14.0	14.0	....	....	....	14.9	14.5
17	15.0	14.3	14.1	....	13.9	14.0	....	....	....	14.8	14.5
18	14.9	14.4	14.0	....	14.0	14.0	....	....	....	14.8	14.6
19	....	14.4	14.0	....	13.9	....	....	....	....	14.8	14.7
20	....	14.4	14.2	....	13.9	....	....	....	....	14.8	14.7
21	....	14.5	14.1	....	13.9	....	....	....	....	14.7	14.7
22	....	14.4	14.0	....	13.9	....	14.8	....	....	14.6	14.7
23	....	14.4	14.0	13.9	13.9	....	14.8	....	....	14.6	14.5
24	....	14.3	14.0	13.9	13.9	....	14.9	....	....	14.5	14.5
25	....	14.2	14.0	13.9	14.0	....	15.0	....	....	14.3	14.4
26	....	14.2	14.1	13.9	14.0	....	14.9	....	....	14.3	14.5
27	....	14.3	14.0	13.9	14.0	....	14.9	....	....	14.2	14.4
28	....	14.3	14.0	13.9	14.1	....	14.8	....	....	14.4	14.3
29	....	....	13.9	14.0	14.2	....	14.8	....	....	14.5	14.2
30	....	....	13.9	14.0	14.2	....	14.8	....	....	14.4	14.0
31	....	....	13.9	....	14.2	....	14.8	....	14.7	....	14.4

Essex County - Canoe Brook area

25.15.7.5.4 (*886, p. 345; 906, p. 88; 936, p. 82). Commonwealth Water Co. well 30. Extremes of observed water level, in feet below top of casing: Highest, 16.3 Aug. 25, 1931; lowest, 67.9 Sept. 5, 1929. Daily fluctuations, 1942: Less than 1 foot to 11 feet.

Lowest daily water level, in feet below top of casing, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Nov.	Dec.
1	.....	.....	45.30	.....	46.90	.....	49.00	44.80	.....	.....
2	.....	45.15	45.75	.....	46.90	.....	48.95	44.90	.....	.....
3	.....	46.25	.....	.....	45.60	.....	49.00	47.20	.....	.....
4	43.30	46.20	.....	44.35	46.10	.....	.....	47.80	.....	.....
5	.....	45.70	.....	43.25	47.15	.....	48.75	48.00	.....	.....
6	.....	.....	.....	43.95	47.15	48.00	48.35	48.30	.....	36.80
7	.....	.....	.....	44.65	.....	47.70	48.50	.....	39.80	36.70
8	.....	.....	45.00	.....	.....	47.90	48.55	48.70	39.80	36.90
9	.....	.....	43.85	.....	.....	48.05	48.40	48.70	38.70	.....
10	.....	.....	43.80	.....	44.45	47.70	.....	43.00	38.40	.....
11	.....	.....	44.80	44.55	46.25	47.35	48.25	41.20	38.25	.....
12	.....	.....	45.05	44.30	46.70	46.70	48.30	42.80	38.15	.....
13	.....	.....	.....	44.60	48.05	47.45	48.40	41.20	38.15	.....
14	.....	.....	.....	44.50	.....	47.00	48.50	.....	.....	.....
15	49.25	.....	42.95	45.00	.....	47.00	48.50	.....	37.90	.....
16	49.00	.....	44.15	44.90	47.05	47.70	.....	.....	38.00	.....
17	48.90	.....	42.55	44.60	46.20	46.75	.....	.....	40.40	.....
18	48.15	.....	.....	45.05	47.55	47.20	.....	.....	39.00	.....
19	48.80	.....	.....	45.50	48.55	.....	47.70	.....	38.30	.....
20	48.30	.....	.....	45.55	48.65	48.90	47.75	.....	.....	.....
21	47.40	.....	45.00	46.00	48.70	49.25	47.85	.....	.....	.....
22	47.10	.....	44.35	45.50	47.10	49.30	47.85	.....	36.90	.....
23	46.85	.....	45.25	.....	.....	50.25	.....	.....	37.20	.....
24	47.30	.....	45.35	.....	.....	56.70	.....	.....	36.00	.....
25	47.10	.....	44.85	.....	.....	54.55	.....	.....	.....	.....
26	46.90	.....	44.80	46.90	.....	.....	47.80	.....	.....	.....
27	46.10	.....	45.85	46.95	.....	49.30	47.60	.....	.....	.....
28	46.05	.....	52.30	47.00	.....	49.30	44.20	.....	.....	.....
29	46.70	.....	46.25	46.60	.....	49.00	46.40	.....	.....	.....
30	.....	.....	44.60	45.70	.....	48.95	47.20	.....	.....	.....
31	46.25	.....	.....	.....	.....	.....	47.20	.....	.....	.....

26.21.1.5.6 (*817, p. 189; 840, p. 244; 845, p. 202; 886, p. 355; 906, p. 88; 936, p. 83). Short Hills test well 10. Extremes of observed water level, in feet below top of casing: Highest, 3.90 May 12, 1933; lowest, 29.28 Oct. 31, 1941. Water levels, in feet below top of casing, 1942: Jan. 14, 27.28; May 12, 20.02; July 23, 23.84; Nov. 5, 20.44.

26.21.1.5.8 (*817, p. 190; 840, p. 244; 845, p. 202; 886, p. 355; 906, p. 88; 936, p. 83). Short Hills test well 14. Extremes of observed water level: Highest, 9.82 feet below top of casing Jan. 12, 1934; well dry Jan. 14 and May 12, 1942. Destroyed sometime prior to July 23, 1942, when last visited.

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, 1942

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
Jan. 6-7	18	9.82	5	6.52
June 17	19	10.16	5	7.02
Dec. 24-28	18	10.72	5	5.54

Middlesex County - Runyon area

29.1.4.6.8 (*840, p. 247; 845, p. 203; 886, p. 356; 906, p. 90; 936, p. 84). Browntown test well. Extremes of observed water level, in feet above mean sea level: Highest, 28.14 Apr. 9 and 10, 1939; lowest, 21.83 Nov. 18, 1932.

Water level at end of day, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	23.35	23.21	23.67	24.55	24.77	24.75	.....	24.40	24.11	23.72	23.51	24.00
2	23.35	23.21	23.81	24.56	24.77	24.74	24.61	24.39	24.10	23.71	23.51	24.05
3	23.34	23.20	23.85	24.57	24.77	24.74	24.61	24.38	24.09	.....	23.50	24.08
4	23.34	23.20	23.86	24.58	24.77	24.74	24.59	24.38	24.08	23.70	23.50	24.11
5	23.33	23.20	23.89	24.58	24.77	24.74	24.58	24.37	24.04	23.69	23.49	24.12
6	23.32	23.20	23.81	24.58	24.77	24.72	24.57	24.36	24.04	23.68	23.49	24.13
7	23.32	23.19	.....	24.58	24.77	24.72	24.58	24.35	24.04	23.67	23.49	24.13
8	23.30	23.19	.....	24.58	24.77	24.71	24.58	24.33	24.03	23.66	23.49	24.14
9	23.28	23.19	.....	24.58	24.77	24.71	24.58	24.33	24.02	23.65	23.48	24.14
10	23.27	23.20	.....	.....	24.77	24.71	24.58	24.32	24.01	.....	23.48	24.15
11	23.27	23.26	.....	.....	24.77	24.67	24.57	24.31	24.00	23.64	23.48	24.15
12	23.27	23.28	.....	.....	24.77	24.67	24.57	24.30	23.99	23.64	23.47	24.15
13	23.27	23.29	.....	.....	24.77	24.67	24.57	24.29	23.98	23.63	23.47	24.15
14	23.27	.....	23.96	.....	24.77	24.66	24.57	24.28	23.97	23.62	.....	24.15
15	23.27	.....	23.99	.....	24.77	24.66	24.56	24.26	23.96	23.61	23.47	24.15
16	23.27	.....	24.01	.....	24.77	24.66	24.56	24.26	23.95	23.60	23.48	24.15
17	23.26	.....	24.18	.....	24.77	24.66	24.55	24.25	23.93	23.59	23.48	24.15
18	23.26	.....	24.23	24.78	24.77	24.66	.....	24.24	23.92	23.58	23.48	24.15
19	23.25	.....	24.23	24.78	24.77	24.66	.....	24.23	23.86	23.58	23.48	24.15
20	23.25	.....	24.23	24.78	24.76	24.66	.....	24.22	23.85	23.57	23.47	24.13
21	23.24	23.48	24.24	24.78	24.76	24.66	.....	24.21	23.84	23.57	23.47	24.13
22	23.24	23.50	24.36	24.78	24.76	24.66	.....	24.19	23.83	23.56	23.47	24.13
23	23.24	23.50	24.38	24.78	24.75	24.65	.....	24.19	23.82	.....	23.47	24.13
24	23.24	23.51	24.39	24.78	24.75	24.65	.....	24.18	23.80	23.54	23.47	24.13
25	23.24	23.51	24.39	24.77	24.75	24.65	.....	24.17	23.79	23.54	23.59	24.13
26	23.23	23.51	24.39	24.77	24.75	24.64	.....	24.16	23.78	23.54	23.73	.....
27	23.23	23.51	24.39	24.77	24.75	24.63	24.45	24.15	23.77	23.53	23.81	.....
28	23.23	23.67	24.40	24.77	24.75	24.63	24.44	24.14	23.76	23.52	23.83	.....
29	23.22	.....	24.40	24.77	24.75	24.63	24.43	24.13	23.75	23.52	23.84	.....
30	23.22	.....	24.43	24.77	24.75	.....	24.42	24.13	23.74	23.51	23.93	.....
31	23.21	.....	24.51	.....	24.75	.....	24.41	24.12	.....	23.51	.....	.....

28.5.4.8.1 (*845, p. 203; 886, p. 357; 906, p. 91; 936, p. 84). Duhernal observation well 1. Extremes of observed water level, in feet above mean sea level: Highest, 7.58 Apr. 18, 1939; lowest, 4.06 Dec. 12, 1941.

Water level at end of day, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.42	4.46	4.90	5.86	6.01	5.51	5.28	5.12	....	4.79	4.72	5.25
2	4.43	4.44	4.93	5.91	6.03	5.51	5.28	5.11	4.88	4.78	4.72	5.30
3	4.42	4.43	5.00	5.93	6.03	5.41	5.28	5.07	4.87	4.77	4.72	5.31
4	4.45	4.44	5.02	5.96	5.99	5.41	5.28	5.05	4.86	4.76	....	5.33
5	4.46	4.46	5.05	5.97	5.95	5.40	5.27	5.04	4.84	4.75	....	5.34
6	4.44	4.49	5.07	5.98	5.92	5.39	5.27	5.02	4.82	4.73	....	5.38
7	4.40	4.55	5.07	5.98	5.91	5.35	5.25	5.01	4.81	....	....	5.42
8	4.37	4.57	5.08	5.97	5.89	5.33	5.23	4.99	4.80	....	....	5.44
9	4.36	4.58	5.09	5.98	5.87	5.32	5.22	5.01	4.85	....	....	5.48
10	4.36	4.59	5.07	6.03	5.83	5.31	5.22	5.03	4.86	....	....	5.51
11	4.34	4.61	5.09	6.05	5.81	5.31	5.22	5.02	4.85	....	4.80	5.53
12	4.31	4.62	5.10	6.03	5.79	5.30	5.22	5.01	4.87	....	4.80	5.54
13	4.28	4.62	5.12	6.01	5.76	5.31	5.21	5.01	4.85	....	4.79	5.54
14	4.29	4.62	5.17	6.02	5.73	5.32	5.20	5.01	4.83	4.78	4.74	5.50
15	4.28	4.65	5.21	6.01	5.72	5.32	5.16	5.00	4.82	4.78	4.72	5.50
16	4.26	4.70	5.26	5.99	5.71	5.32	5.15	4.99	4.81	4.78	4.68	5.50
17	4.27	4.74	5.30	6.03	5.69	5.34	5.15	4.98	4.81	4.78	4.68	5.48
18	4.26	4.78	5.35	6.01	5.67	5.33	5.15	4.98	4.81	4.78	4.68	5.45

Middlesex County - Runyon area--Continued

28.5.4.8.1. Duhernal observation well 1--Continued.

Water level at end of day, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
19	4.28	4.80	5.38	6.00	5.66	5.32	5.14	4.96	4.82	4.78	4.69	5.43
20	4.31	4.81	5.40	5.99	5.63	5.30	5.14	4.95	4.82	4.78	4.70	5.40
21	4.31	4.80	5.44	5.99	5.61	5.28	....	4.94	4.85	....	4.72	5.39
22	4.31	4.80	5.46	5.99	5.60	5.28	5.12	4.93	4.87	....	4.75	5.39
23	4.30	4.83	5.48	5.97	5.60	5.28	5.12	4.93	4.87	....	4.77	....
24	4.28	4.84	5.50	5.97	5.58	5.32	5.11	4.93	4.87	....	4.85	5.38
25	4.29	4.87	5.53	5.97	5.57	5.31	5.10	4.94	4.86	....	4.91	5.38
26	4.34	4.88	5.54	5.97	5.56	5.30	5.10	....	4.88	....	4.97	5.38
27	4.35	4.88	5.59	5.99	5.53	5.30	5.12	....	4.88	....	5.01	5.38
28	4.37	4.88	5.65	6.00	5.52	5.31	5.13	....	4.85	....	5.02	5.41
29	4.39	....	5.73	6.00	5.52	5.31	5.12	....	4.82	4.73	5.08	....
30	4.42	....	5.77	6.00	5.51	5.30	5.11	....	4.80	4.72	5.13	....
31	4.45	....	5.82	....	5.51	....	5.13	....	....	4.72	....	....

28.5.4.8.7 (*845, p. 204; 886, p. 358; 906, p. 91; 936, p. 85). Duhernal observation well 2. Extremes of observed water level, in feet above mean sea level: Highest, 15.65 Apr. 11, 1939; lowest, 8.84 Dec. 10, 1941.

Water level at end of day, in feet above mean sea level, 1942
(From recorder charts)

Date		Water level	Date		Water level	Date		Water level	Date		Water level
Jan.	28	9.12	Mar.	9	10.39	Apr.	7	11.65	May	6	11.75
	29	9.13		10	10.40		8	11.66		7	11.72
	30	9.25		11	10.50		9	11.75		8	11.66
	31	9.17		12	10.50		10	11.88		9	11.64
Feb.	1	9.16		13	10.61		11	11.89		10	11.58
	2	9.17		14	10.64		12	11.85		11	11.58
	3	9.25		15	10.68		13	11.84		12	11.59
	4	9.26		16	10.88		14	11.89		13	11.51
	5	9.29		17	10.92		15	11.92		14	11.48
	6	9.34		18	10.93		16	11.88		15	11.49
	7	9.42		19	10.87		17	12.02		16	11.45
	18	9.87		20	10.93		18	11.96		17	11.41
	19	9.88		21	11.16		19	11.96		18	11.39
	20	9.94		22	11.15		20	11.95		19	11.40
	21	9.98		23	11.17		21	11.93		20	11.39
	22	9.99		24	11.16		22	11.93		21	11.36
	23	10.01		25	11.23		23	11.91		22	11.39
	24	10.08		26	11.27		24	11.94		23	11.35
	25	10.06		27	11.37		25	11.93		24	11.32
	26	10.08		28	11.38		26	11.87		25	11.29
	27	10.08		29	11.46		27	11.85		26	11.28
	28	10.01		30	11.50		28	11.88		27	11.22
Mar.	1	10.04		31	11.59		29	11.89		28	11.24
	2	10.22	Apr.	1	11.62		30	11.87		29	11.22
	3	10.20		2	11.65	May	1	11.82		30	11.20
	4	10.10		3	11.66		2	11.82		31	11.18
	5	10.24		4	11.69		3	11.82	June	1	11.15
	6	10.21		5	11.69		4	11.74		2	11.13
	7	10.29		6	11.73		5	11.66		3	11.11
	8	10.40									

28.4.9.3.5 (*845, p. 206; 886, p. 359; 906, p. 93; 936, p. 86). Duhernal observation well 4. Extremes of observed water level, in feet, with reference to mean sea level: Highest, +11.75 Apr. 29, 1939; lowest, -0.20 Dec. 12, 1941.

Middlesex County - Runyon area--Continued

28.4.9.3.5. Duhernal observation well 4--Continued.

Water level at end of day, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Nov.	Dec.
1	2.95	0.95	1.15	2.20	1.75	1.40	0.95	0.95	....	2.20
2	3.00	1.00	1.15	2.00	1.60	1.45	1.05	1.00	....	2.20
3	3.15	.90	1.05	2.05	1.45	1.30	1.25	.95	....	2.10
4	3.30	.85	.95	2.75	1.50	1.40	1.35	.85	....	1.65
5	3.35	1.30	.90	3.05	1.60	1.30	1.35	.90	....	1.30
6	3.40	1.50	.80	2.90	1.80	1.35	1.35	.90	....	1.10
7	3.50	1.65	1.05	2.60	1.80	1.25	1.35	.85	....	.95
8	3.50	1.75	.85	2.50	2.00	1.15	1.40	.90	....	1.05
9	3.70	1.80	.90	2.85	2.25	1.15	1.30	1.00	....	1.15
10	3.80	1.30	.90	2.80	2.20	1.15	1.25	1.20	....	1.20
11	3.95	1.20	.90	2.85	2.10	1.15	1.30	1.15	1.70	1.25
12	3.80	1.05	.85	2.85	1.90	1.25	1.45	1.25	1.70	1.15
13	3.70	.95	.85	2.75	1.70	2.70	1.50	1.30	1.60	1.15
14	3.80	.90	1.10	4.10	1.65	3.25	1.50	1.45	1.55	.75
15	3.75	.90	1.95	3.30	1.50	2.15	1.40	1.55	1.50	.70
16	2.55	1.00	1.35	3.10	1.40	1.95	1.30	1.65	1.40	.50
17	2.15	1.10	1.50	3.20	1.35	1.80	1.20	1.65	1.35	.40
18	2.00	2.25	2.85	3.35	1.30	1.70	1.15	1.80	1.35	.45
19	1.80	2.65	1.80	3.35	1.45	1.60	1.10	1.85	1.30	.50
20	1.70	2.85	1.65	3.80	1.45	1.50	1.05	1.80	1.25	.35
21	1.55	3.05	1.60	3.95	1.50	1.45	1.00	1.80	1.25	.20
22	1.45	3.15	1.75	3.50	1.60	1.40	.95	1.65	1.20	.05
23	1.30	3.20	1.65	3.15	1.60	1.35	.90	1.75	1.20	.05
24	1.25	1.65	2.00	3.20	1.60	1.35	.85	1.75	1.25	.10
25	1.20	1.40	2.50	3.25	1.75	1.45	.85	1.75	1.50	.40
26	1.10	1.15	2.50	3.10	1.65	1.25	.80	....	1.90	.20
27	1.05	1.25	2.65	2.85	1.60	1.15	.80	....	1.85	.20
28	1.00	1.15	2.40	2.55	1.50	1.10	.90	....	2.00	.35
29	.95	....	2.10	2.10	1.45	1.05	.90	....	2.05	.50
30	.85	....	1.95	1.90	1.35	1.00	.85	....	2.05	.60
31	.90	....	2.00	....	1.35	....	.85	....	....	.70

28.5.7.1.5 (*886, p. 359; 906, p. 93; 936, p. 86). Duhernal observation well 5. Extremes of observed water level, in feet above mean sea level: Highest, 14.94 Apr. 7 and 8, 1939; lowest, 7.07 Dec. 10, 1941.

Water level at end of day, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	8.15	8.04	9.13	....	10.66	....	9.04	8.44	8.26	8.15	8.25	9.99
2	8.10	8.07	9.17	....	10.58	....	9.04	8.41	8.25	8.12	8.26	9.97
3	8.09	8.11	9.38	....	10.50	9.74	9.04	8.37	8.22	8.15	8.24	10.11
4	8.12	8.12	9.37	11.01	10.43	9.74	9.03	8.34	8.18	8.22	8.23	10.10
5	8.10	8.17	9.43	11.05	10.36	9.68	9.03	8.33	8.16	8.22	8.23	10.15
6	8.09	8.16	9.47	10.96	10.36	9.64	9.02	8.29	8.16	8.20	8.29	10.14
7	8.04	8.42	9.50	10.95	10.36	9.61	9.02	8.26	8.26	8.19	8.31	10.15
8	8.04	8.71	9.56	10.85	10.32	9.58	8.98	8.25	8.19	8.15	8.36	10.08
9	8.08	8.78	9.72	10.92	10.32	9.54	8.94	8.33	8.18	8.10	8.33	10.00
10	8.13	8.82	9.81	11.14	10.38	9.52	8.92	8.34	8.20	8.06	8.34	9.98
11	8.18	8.84	9.86	11.18	10.30	9.52	8.92	8.33	8.14	8.06	8.36	9.95
12	8.18	8.89	9.84	11.23	10.22	9.57	8.92	8.32	8.12	7.98	8.36	9.88
13	8.10	8.90	9.86	11.13	10.19	9.72	8.91	8.34	8.10	7.97	8.33	9.78
14	8.08	8.92	9.96	11.11	10.13	9.82	8.85	8.36	8.06	7.96	8.30	9.75
15	8.03	8.94	10.14	11.14	10.08	9.86	8.84	8.36	8.04	7.95	8.29	9.71
16	8.10	9.05	10.29	11.10	10.03	9.88	8.80	8.36	8.00	7.94	8.28	9.59
17	8.07	9.19	10.54	11.18	9.97	....	8.76	8.39	8.02	8.00	8.28	....
18	8.08	9.25	10.83	11.13	9.93	....	8.78	8.41	8.01	8.05	8.26	....
19	8.06	9.25	.....	11.21	9.88	....	8.75	8.42	8.05	8.06	8.25	....
20	8.07	9.25	.....	11.17	9.85	....	8.70	8.42	8.04	8.08	8.24	....
21	8.03	9.26	.....	11.12	9.83	....	8.65	8.40	8.05	8.09	8.21	....

Middlesex County - Runyon area--Continued

28.5.7.1.5. Duhernal observation well 5--Continued.
Water level at end of day, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
22	8.02	9.26	....	11.07	9.86	....	8.58	8.39	8.02	8.09	8.20	....
23	8.01	9.23	....	11.10	9.81	....	8.53	8.37	8.03	8.07	8.21	9.53
24	8.00	9.26	....	11.16	9.78	9.26	8.50	8.37	8.07	8.07	8.38	9.58
25	7.98	9.26	....	11.26	9.74	9.28	8.47	8.35	8.09	8.10	8.89	9.68
26	7.98	9.20	....	11.26	9.70	9.22	8.45	8.37	8.07	8.14	9.27	9.59
27	7.96	9.17	....	11.18	....	9.18	8.48	8.35	8.05	8.15	9.47	9.65
28	7.94	9.14	....	10.97	....	9.14	8.47	8.33	8.02	8.23	9.61	9.71
29	7.92	....	....	10.85	....	9.10	8.44	8.30	8.06	8.23	9.76	10.15
30	7.92	....	....	10.75	....	9.06	8.42	8.30	8.12	8.22	9.84	10.63
31	7.95	....	....	.....	....	....	8.46	8.38	....	8.23	....	10.80

28.4.9.5.1 (*886, p. 360; 906, p. 94; 936, p. 87). Duhernal observation well 9. Extremes of observed water level, in feet above mean sea level: Highest, 14.85 June 1, 1940; lowest, 9.05 Sept. 17, 1942.

Water level at end of day, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	10.55	.....	12.35	12.20	10.65	9.65	9.80	9.35	....	9.45	.....
2	.....	10.55	.....	12.30	12.25	10.65	10.05	9.80	9.35	....	9.45	10.20
3	.....	10.50	11.25	12.20	12.30	10.60	10.15	9.70	9.30	....	9.45	10.40
4	.....	10.50	11.25	12.15	12.05	10.60	10.20	9.65	9.25	....	9.45	10.05
5	.....	10.45	11.30	12.15	11.95	10.55	10.15	9.60	9.25	....	9.45	10.10
6	.....	10.45	.....	12.10	11.90	10.50	10.10	9.60	9.25	....	9.40	10.15
7	.....	10.85	.....	12.10	11.90	10.45	10.05	9.60	9.25	9.75	9.40	10.15
8	.....	11.10	.....	12.05	11.80	10.45	9.95	9.60	9.20	9.75	9.40	10.15
9	.....	10.95	.....	12.25	11.75	10.45	10.00	9.85	9.30	9.75	9.35	10.15
10	.....	10.85	.....	12.45	11.70	.....	10.00	9.90	9.30	9.70	9.40	10.15
11	.....	10.90	11.75	12.45	11.70	.....	10.05	....	9.30	9.70	9.45	10.20
12	.....	10.80	11.70	12.40	11.70	.....	10.25	....	9.30	9.70	9.45	10.25
13	.....	10.65	11.70	12.10	11.60	.....	10.25	....	9.30	9.70	9.45	10.30
14	10.35	10.65	11.85	11.95	11.60	.....	10.20	....	9.20	9.55	9.40	10.40
15	10.30	10.60	11.90	11.85	11.55	.....	10.05	....	9.20	9.50	9.35	10.45
16	10.30	10.65	11.95	11.85	11.55	.....	10.00	....	9.15	9.45	9.30	10.40
17	10.30	11.00	12.10	11.90	.....	.....	9.95	....	9.05	9.50	9.20	.....
18	10.30	11.05	12.40	11.90	.....	10.30	9.95	....	9.15	9.60	....	.....
19	10.40	11.00	12.10	11.85	.....	10.25	9.95	....	9.35	9.60	....	.....
20	10.50	10.85	12.05	11.85	11.55	10.15	9.90	....	9.40	9.60	....	.....
21	10.60	10.85	12.10	11.20	11.40	10.15	9.85	9.65	9.40	9.65	....	.....
22	10.60	10.80	12.40	11.60	11.40	10.10	9.75	9.65	9.35	9.65	....	9.95
23	10.60	10.70	12.40	11.75	11.35	10.05	9.75	9.60	9.35	9.60	....	9.90
24	10.60	10.70	12.30	11.80	11.30	9.95	9.80	9.60	9.25	9.55	....	10.15
25	10.55	10.65	12.30	11.80	11.25	10.20	9.85	9.60	9.20	9.55	....	10.35
26	10.55	10.70	12.55	11.80	11.15	10.10	9.85	9.55	9.15	9.55	....	10.15
27	10.55	.....	12.35	11.80	11.05	10.05	9.75	9.55	9.30	9.60	....	10.15
28	10.35	.....	12.15	11.80	10.90	10.00	9.75	9.50	9.35	9.50	....	10.55
29	10.35	.....	12.20	12.05	10.85	9.90	9.70	9.45	9.45	9.50	....	10.90
30	10.30	.....	12.20	12.15	10.75	9.70	9.70	9.45	....	9.45	....	11.15
31	10.45	.....	12.35	.....	10.70	....	9.80	9.40	....	9.45	....	11.30

28.4.9.8.2 (*845, p. 206; 886, p. 361; 906, p. 94; 936, p. 88). Duhernal observation well 10. Extremes of observed water level, in feet above mean sea level: Highest, 21.98 Feb. 8, 1941; lowest 13.56 Nov. 22, 1942.

Water level at end of day, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18.39	18.36	18.34	.....	18.84	18.19	.....	.....	14.25	13.82	13.79	14.53
2	18.36	18.33	18.39	19.22	18.84	18.18	.....	.....	14.21	13.76	.....	14.50
3	18.34	18.29	18.66	19.15	18.84	18.16	.....	.....	14.14	13.73	.....	15.15
4	18.37	18.29	18.58	19.10	18.80	18.15	.....	.....	14.11	13.73	13.72	14.47

Middlesex County - Runyon area--Continued

28.4.9.8.2. Duhernal observation well 10--Continued.
Water level at end of day, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
5	18.35	18.27	18.53	19.11	18.76	18.12	.....	17.49	14.06	13.78	13.72	14.39
6	18.32	18.26	18.54	19.09	18.71	18.08	.....	17.45	14.04	.....	13.70	14.34
7	.....	18.55	18.55	19.10	18.80	18.04	.....	17.42	14.04	13.78	13.68	14.29
8	.....	18.62	18.57	19.05	18.79	18.07	.....	17.41	13.95	13.78	13.68	14.27
9	.....	18.52	18.77	19.20	18.78	18.04	.....	17.60	14.00	13.75	13.68	14.24
10	.....	18.44	18.74	19.40	18.76	18.03	.....	17.62	14.00	13.73	13.75	14.25
11	.....	18.34	18.64	19.37	18.73	18.02	.....	17.63	13.94	13.73	13.78	14.38
12	.....	18.30	13.61	19.32	18.71	18.11	.....	.....	13.92	13.66	13.78	14.34
13	.....	18.25	18.60	19.23	18.68	18.29	.....	17.58	13.88	13.66	13.80	14.30
14	18.19	18.25	18.73	19.17	18.63	18.30	.....	17.61	13.83	13.66	13.80	14.26
15	18.16	18.23	19.04	19.14	18.60	18.25	.....	17.64	13.78	13.66	13.70	14.29
16	18.12	18.35	18.91	19.11	.....	.....	.....	15.46	.....	13.66	13.69	14.25
17	18.12	18.46	19.07	19.14	.....	.....	.....	15.03	13.76	13.82	13.69	14.24
18	18.14	18.45	.....	.....	.....	.....	.....	14.93	13.93	13.89	13.66	14.22
19	18.24	18.40	19.06	.....	.....	.....	.....	.....	.....	13.87	13.64	14.20
20	18.28	18.38	18.99	.....	18.55	.....	.....	14.80	.....	13.83	13.64	14.13
21	18.27	18.38	19.10	.....	18.53	.....	.....	14.71	.....	13.84	13.59	14.13
22	18.25	18.34	19.30	19.00	18.55	.....	17.58	14.63	.....	13.84	13.56	14.17
23	18.25	18.32	19.22	19.00	18.53	.....	17.53	14.53	13.83	13.74	13.57	14.17
24	18.23	18.31	19.19	18.98	18.48	.....	17.52	14.50	13.76	13.72	13.91	14.17
25	18.22	18.34	.....	18.98	18.45	.....	17.52	14.55	13.86	13.75	14.37	14.12
26	18.21	18.50	19.15	18.96	18.42	.....	17.46	14.51	.....	13.80	14.39	14.10
27	18.19	18.38	19.13	18.89	18.46	.....	17.54	14.43	.....	13.80	14.29	14.14
28	18.21	18.33	19.04	19.02	18.37	.....	17.55	14.39	.....	13.80	14.27	14.46
29	18.16	.....	19.11	18.87	18.32	.....	17.54	14.36	.....	13.76	14.38	14.68
30	18.16	.....	19.17	18.86	18.28	.....	.....	14.36	13.86	13.75	14.40	14.96
31	18.31	.....	19.25	.....	18.22	.....	.....	14.28	.....	13.75	.....	14.88

28.4.9.3.1 (*886, p. 361; 906, p. 95; 936, p. 88). Duhernal observation well 11. Extremes of observed water level, in feet, with reference to mean sea level. Highest, +14.23 June 1, 1940; lowest, -1.60 Dec. 23, 24, 26, and 27, 1942.

Water level at end of day, in feet with reference to mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+10.05	+10.15	+4.00	....	+2.70	+2.15	+2.10	+2.30	+2.25	+3.00	+1.25	-1.75
2	+10.05	+10.15	+3.95	+2.95	+2.70	+2.15	+2.20	+2.05	+2.25	+2.95	+.95	-.80
3	+10.05	+10.15	+3.95	+2.80	+2.30	+2.20	+2.30	+2.40	+2.25	+2.95	.....	-.85
4	+10.10	+10.05	.....	+2.85	+2.40	+1.80	+2.30	+2.40	+2.30	+2.90	+.55	-.90
5	+10.15	+10.10	.....	+2.95	+2.40	+2.15	+2.30	+2.40	+2.30	+2.95	+.45	-.90
6	+10.25	+10.15	.....	+2.90	+2.10	+2.10	+2.20	+2.35	+2.35	+2.95	+.45	-.90
7	+10.15	+10.30	.....	+2.90	+2.20	+2.10	+2.35	+2.35	+2.30	+2.85	+.30	-.90
8	+10.10	+10.35	.....	+3.00	+2.45	+2.10	+2.05	+2.35	+2.25	+2.80	+.20	-.90
9	+10.10	+10.30	.....	+3.05	+2.00	+2.10	+2.45	+2.50	+2.30	+2.75	+.20	.....
10	+10.20	+10.25	.....	+3.25	+2.25	+2.05	+2.40	+2.55	+2.30	+2.70	+.10	.....
11	+10.20	+10.10	.....	+3.25	+2.25	+2.05	+2.50	+2.55	+2.30	+2.70	+.15	.....
12	+10.20	+10.15	+3.00	+3.35	+2.30	+2.15	+2.65	+2.40	+2.35	+2.70	+.05	.....
13	+10.10	+10.15	+3.35	+2.70	+2.35	+2.25	+2.50	+2.40	+2.40	+2.70	-.05	.....
14	+10.10	+10.15	+3.10	+2.65	+2.35	+2.35	+2.45	+2.40	+2.40	+2.60	-.15	.....
15	+10.15	+10.15	+3.15	+2.55	+2.35	+2.25	+2.35	+2.50	+2.40	+2.60	-.20	.....
16	+10.15	+10.10	+3.10	+2.65	+2.40	+2.20	+2.30	+2.45	+2.50	+2.60	-.30	.....
17	+10.00	+10.20	+3.10	+2.60	+2.40	+2.25	+2.35	+2.50	+2.50	+2.70	-.35	.....
18	+10.00	+10.25	+3.05	+2.55	+2.30	+2.20	+2.35	+2.50	+2.60	+2.80	-.45	-1.40
19	+10.15	+10.25	+2.70	+2.60	+2.25	+2.20	+2.50	+2.50	+2.70	+2.80	-.50	-1.40
20	+10.20	+10.25	+2.85	+2.55	+2.30	+2.20	+2.35	+2.45	+2.80	+2.75	-.60	-1.50
21	+10.15	+10.25	+2.85	+2.50	+2.20	+2.15	+2.45	+2.45	+2.70	+2.80	-.65	-1.50
22	+10.10	+10.20	+3.25	+2.50	+2.35	+2.15	+2.50	+2.40	+2.70	+2.80	-.65	-1.55
23	+10.10	.....	+3.30	+2.40	+2.35	+2.10	+2.45	+2.40	+2.75	+2.75	-.75	-1.60
24	+10.20	.....	.....	+2.45	+2.30	+2.10	+2.45	+2.40	+2.75	+2.55	-.70	-1.60

Middlesex County - Runyon area--Continued

28.4.9.3.1. Duhernal observation well 11--Continued.

Water level at end of day, in feet with reference to mean sea level, 1942
(From recorer charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
25	+10.25	+4.50	.....	+2.50	+2.25	+2.05	+2.40	+2.40	+2.70	+2.60	-0.60	-1.55
26	+10.20	+4.30	+2.90	+2.75	+2.20	+2.10	+2.40	+2.40	+2.70	+1.85	-.55	-1.60
27	+10.15	+3.90	+2.90	+2.75	+2.25	+2.10	+2.45	+2.35	+2.85	+1.70	-.70	-1.60
28	+10.15	+4.10	+2.85	+2.65	+2.20	+2.10	+2.45	+2.30	+3.10	+1.40	-.60	-1.55
29	+10.10	.....	+2.80	+2.60	+2.15	+2.05	+2.30	+2.30	+3.10	+1.25	-.55	-1.40
30	+10.05	.....	+2.85	+2.70	+2.15	+2.10	+2.25	+2.30	+3.00	+1.30	-.65	-1.40
31	+10.05	.....	+3.00	.....	+2.15	.....	+2.25	+2.25	.....	+1.25	.....	-1.30

28.4.4.2.1 (*845, p. 207; 886, p. 364; 906, p. 98; 936, p. 89)
Fischer test well. Extremes of observed water level in feet below measuring point: Highest, 12.58 Apr. 26 and 27, 1939; lowest, 18.29 Jan. 30, 1942

Water level at end of day, in feet below measuring point, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18.14	18.25	17.74	16.52	16.00	16.26	.....	17.11	16.93	17.14	.....	17.42
2	18.14	18.26	17.71	16.47	15.99	16.27	.....	17.12	16.92	17.16	.....	17.39
3	18.15	18.27	17.68	16.44	15.98	16.28	.....	17.14	16.91	17.17	.....	17.38
4	18.16	18.27	17.66	16.41	15.98	16.28	.....	17.16	16.91	17.17	17.46	17.36
5	18.16	18.26	17.65	16.38	16.00	.....	.....	17.17	16.91	17.17	17.46	17.34
6	18.17	18.26	17.63	16.35	16.00	.....	16.73	17.19	16.92	17.19	17.47	17.32
7	18.18	18.20	17.62	16.32	15.98	.....	16.75	17.21	16.92	17.21	17.48	17.30
8	18.18	18.16	17.61	16.29	16.00	.....	16.76	17.23	16.92	17.22	17.48	17.29
9	18.18	18.14	17.58	16.27	16.00	.....	16.78	17.16	16.92	17.22	17.49	17.27
10	18.19	18.13	17.57	16.23	16.02	.....	16.80	17.20	16.92	.....	17.49	17.25
11	18.20	18.10	17.54	16.21	16.02	.....	16.81	17.23	16.93	.....	17.50	17.23
12	18.20	18.08	17.51	16.20	16.01	.....	16.83	17.25	16.93	.....	17.50	17.21
13	18.21	18.06	17.47	16.19	16.03	.....	16.84	17.22	16.94	.....	17.51	17.19
14	18.21	18.04	17.42	16.18	16.05	.....	16.85	17.20	16.95	.....	17.52	17.18
15	18.22	18.02	17.37	16.16	16.06	.....	16.87	17.21	16.96	.....	17.53	17.16
16	18.22	17.98	17.32	16.16	16.06	.....	16.88	17.20	16.97	.....	17.54	17.14
17	18.23	17.96	17.27	16.12	16.08	.....	16.90	17.17	16.98	.....	17.54	17.13
18	18.24	17.93	17.23	16.11	16.09	.....	16.91	17.14	16.99	.....	17.54	17.12
19	18.24	17.91	17.20	16.10	16.10	.....	16.92	17.11	16.99	.....	17.55	17.12
20	18.23	17.89	17.17	16.08	16.11	.....	16.93	17.09	17.02	.....	17.55	17.11
21	18.24	17.87	17.11	16.07	16.12	.....	16.96	17.07	17.03	.....	17.56	17.10
22	18.25	17.85	17.04	16.06	16.11	.....	16.97	17.05	17.04	.....	17.57	17.08
23	18.25	17.84	17.00	16.05	16.13	.....	16.99	17.03	17.06	.....	17.57	17.08
24	18.26	17.82	16.94	16.03	16.14	.....	17.01	17.02	17.07	.....	17.56	17.07
25	18.26	17.80	16.89	16.02	16.16	.....	17.03	17.02	17.09	.....	17.52	17.07
26	18.26	17.78	16.83	16.02	16.17	.....	17.04	16.99	17.09	.....	17.53	17.07
27	18.27	17.76	16.76	16.02	16.19	.....	17.05	16.98	17.10	.....	17.54	17.06
28	18.28	17.75	16.71	16.01	16.21	.....	17.06	16.96	17.12	.....	17.55	17.04
29	18.28	.....	16.65	16.00	16.22	.....	17.08	16.96	17.13	.....	17.50	17.01
30	18.29	.....	16.60	15.99	16.22	.....	17.10	16.95	17.13	.....	17.47	16.96
31	18.28	.....	16.55	.....	16.24	.....	17.11	16.94	.....	.....	.....	16.96

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). 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 above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	73.08	74.11	73.62	74.17	73.27	72.45	71.47	71.96	71.97	72.98	73.96	74.16
2	73.20	74.01	73.74	74.09	73.24	72.46	71.82	71.85	71.88	72.90	.....	74.18
3	73.19	73.96	74.34	74.01	73.22	72.44	73.62	71.67	71.78	72.82	.....	74.04
4	73.53	73.83	74.16	73.91	73.20	72.43	73.36	71.57	71.75	72.79	73.80	73.95
5	73.53	73.90	74.12	73.84	73.14	72.33	73.08	71.51	71.66	72.80	73.73	73.91
6	73.46	73.92	74.25	73.80	73.11	72.22	73.11	71.44	71.56	73.25	73.68	73.84

Middlesex County - Runyon area--Continued.

29.11.1.2.3. Morrell well--Continued.

Water level at end of day, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
7	73.37	74.44	74.17	73.75	73.85	72.11	73.03	71.36	71.49	73.12	73.64	73.80
8	73.29	74.31	74.13	73.67	73.71	72.26	72.81	71.33	71.47	.....	73.60	73.76
9	73.26	74.17	74.38	74.52	73.76	72.15	72.60	71.67	71.56	.....	73.57	73.72
10	73.19	74.12	74.18	74.29	73.62	72.10	72.50	72.37	71.69	.....	73.92	73.70
11	73.15	74.07	74.13	74.18	73.51	73.08	73.93	72.72	71.64	.....	.....	73.74
12	73.12	73.99	74.02	74.05	73.39	72.61	73.58	72.76	71.63	.....	73.79	73.78
13	73.08	73.91	73.96	73.94	73.27	73.10	73.30	72.91	71.50	.....	73.72	73.74
14	73.11	73.85	74.31	73.86	73.15	73.08	73.03	73.08	71.42	.....	73.61	73.70
15	73.18	73.80	74.16	73.79	73.06	72.84	72.78	72.91	71.33	.....	73.56	73.68
16	73.13	74.34	74.56	73.72	73.02	72.68	.....	73.08	71.27	.....	73.53	73.65
17	73.12	74.31	74.38	73.71	73.20	72.66	72.50	73.25	71.28	.....	73.51	73.62
18	73.13	74.19	74.23	73.65	73.11	72.51	72.59	73.15	71.65	73.96	73.49	73.57
19	73.95	74.11	74.10	73.59	73.06	72.35	72.41	72.94	72.16	.....	73.46	73.53
20	73.94	74.08	74.00	73.55	72.98	72.18	72.22	72.82	72.26	.....	73.46	73.50
21	73.85	74.02	74.56	73.51	73.71	72.06	72.08	72.70	72.22	73.68	73.43	73.45
22	73.77	73.90	74.34	73.49	73.72	71.99	71.96	72.53	72.15	73.62	73.39	73.52
23	73.72	73.84	74.17	73.45	73.54	71.94	71.86	72.42	72.09	73.53	73.53	73.66
24	73.67	73.82	74.06	73.43	73.34	71.82	71.80	72.71	71.99	73.48	74.64	73.81
25	73.63	73.76	73.98	73.41	73.17	71.72	71.70	72.59	71.88	73.45	74.43	73.84
26	73.59	73.73	73.90	73.38	73.04	71.66	71.62	72.49	71.95	73.82	74.23	73.83
27	73.56	73.70	73.86	73.34	72.92	71.74	71.59	.....	73.08	73.75	74.13	73.81
28	73.58	73.65	73.79	73.32	72.81	71.67	71.68	.....	73.28	.....	74.06	74.52
29	73.53	.....	73.91	73.32	72.72	71.58	71.62	.....	73.16	.....	74.45	74.47
30	73.51	.....	74.44	73.30	72.61	71.48	71.75	.....	73.07	.....	74.20	74.44
31	74.24	.....	74.33	.....	72.50	.....	71.83	.....	.....	.....	.....	74.24

28.4.3.1.5 (*845, p. 209; 886, p. 367; 906, p. 101; 936, p. 90). National Fireproofing dug well. Extremes of observed water level, in feet below measuring point: Highest, 6.57 Sept. 22, 1938; lowest, 11.68 Jan. 18, 1942.

Water level at end of day, in feet below measuring point, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	11.41	11.15	10.27	.....	11.01	11.02	.....	10.58	10.57	10.85	10.11
2	.....	11.33	11.13	.....	10.66	11.02	10.92	.....	10.60	10.61	10.37	10.12
3	.....	11.30	10.94	.....	10.67	11.02	10.85	.....	.....	10.65	10.89	10.17
4	.....	11.32	10.86	.....	10.68	11.02	10.85	.....	.....	10.67	10.90	10.22
5	.....	11.33	10.82	.....	10.71	.....	10.83	.....	10.68	10.68	10.91	10.26
6	.....	11.34	10.80	.....	10.72	11.04	10.83	.....	10.70	10.70	.....	10.30
7	.....	11.20	10.78	10.40	10.71	11.04	10.85	.....	10.73	10.73	10.94	10.34
8	.....	11.02	10.76	10.43	10.73	11.04	10.86	11.00	10.76	10.76	10.94	10.37
9	11.59	10.92	10.69	10.44	10.74	11.05	10.89	10.72	10.77	10.78	10.95	10.39
10	.....	10.90	10.62	10.34	10.76	11.06	.....	10.63	.....	10.80	10.90	10.40
11	11.59	10.90	10.58	10.28	10.77	11.07	10.94	10.59	.....	10.82	10.82	10.41
12	11.61	10.93	10.59	10.26	10.78	10.93	10.97	10.58	10.83	10.85	10.79	.....
13	11.63	10.98	10.62	10.29	10.79	10.88	10.99	10.30	10.85	10.87	10.77	.....
14	11.64	11.02	10.59	10.31	10.81	10.86	11.00	10.11	10.87	10.87	10.82	.....
15	11.64	11.07	10.54	10.33	.....	10.88	11.03	10.01	10.89	10.88	10.85	.....
16	11.66	11.08	10.49	10.38	10.82	10.91	11.05	10.02	10.90	10.88	10.88	.....
17	11.67	10.96	10.41	10.37	10.83	10.94	.....	10.02	10.91	10.88	10.90	.....
18	11.68	10.88	10.33	10.39	10.84	.....	10.98	10.02	10.77	10.75	10.91	.....
19	11.65	10.86	10.31	10.41	10.85	.....	10.97	10.07	10.66	10.71	10.93	10.59
20	11.58	10.88	10.33	10.43	10.86	10.99	10.99	10.12	10.62	10.72	10.94	10.61
21	11.55	10.90	10.31	10.46	10.87	11.01	11.02	10.18	10.62	10.72	10.95	10.63
22	11.55	10.94	10.23	10.48	.....	11.03	11.06	10.22	10.65	.....	10.98	10.63
23	11.55	10.98	10.15	10.51	10.89	11.05	11.09	10.26	10.69	.....	10.98	10.65
24	11.56	11.02	10.13	10.52	10.90	11.07	11.10	10.31	10.73	10.82	10.87	10.66
25	11.57	11.05	10.14	10.54	10.91	11.08	11.13	10.36	.....	10.84	10.41	.....
26	11.58	11.07	10.18	10.56	10.92	11.10	11.14	10.40	10.78	10.82	10.21	10.70
27	11.58	.....	10.22	10.59	10.93	11.02	11.08	10.43	10.64	10.81	10.14	10.71
28	11.58	11.13	10.29	10.60	10.95	11.03	10.92	10.46	10.58	10.84	10.13	10.59

Middlesex County - Runyon area--Continued

28.4.3.1.5. National Fireproofing dug well--Continued.

Water level at end of day, in feet below measuring point, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
29	11.60	.....	10.30	10.61	10.96	11.05	10.89	10.51	10.56	10.86	10.15	10.39
30	11.59	.....	10.30	.....	10.98	11.06	10.90	10.52	10.56	.....	10.17	9.98
31	11.54	.....	10.27	.....	10.99	.....	.....	10.55	.....	10.86	.....	9.74

28.5.4.7.2 (*845, p. 210; 886, p. 368; 906, p. 101; 936, p. 91). Old Bridge observation well. Extremes of observed water level: Above top of casing Sept. 22, 1938, and Apr. 21-25, 1940; lowest, 1.8 feet below sea level Jan. 3, 4, 6, and 7, 1940.

Lowest daily water level, in feet with reference to mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	-0.9	-0.2	-0.9	-0.2	....	-1.2	-1.3	-0.7	-0.4	-0.3	....	+0.4
2	-1.1	-.8	-1.2	-.5	....	....	-1.3	-.7	-.4	-.2	....	-.4
3	-1.2	-1.1	+.8	-.7	....	....	-.2	-.7	-.4	-.2	....	-.8
4	-.5	-1.1	+.1	-.7	....	....	-.5	-.8	-.4	-.5	....	-1.0
5	-.9	-1.0	-.2	-.7	....	....	-.8	-.6	-.4	-.6	-.9	-1.1
6	-1.2	-.7	-.3	-.7	....	-.7	-.8	-.6	-.8	-1.2	-1.1	-1.1
7	-1.4	+1.0	-.6	-.7	....	-.7	-.8	-.6	-1.0	-.9	-1.1	-1.0
8	-1.4	+.6	-.8	-.7	....	-.9	-.8	-.8	-1.1	-1.1	-1.0	-1.0
9	-1.4	-.4	....	-.5	....	....	-.9	-.6	-.9	-1.2	-1.1	-1.0
10	-1.5	-.7	....	-.0	....	....	-.9	+.1	-.5	-1.2	-1.0	-.8
11	-1.6	-.7	....	+.2	....	....	-.7	-.4	-.9	-1.1	-.9	-.9
12	-1.6	-.9	....	-.5	....	....	-.2	-.7	-1.0	-1.0	-.9	-.8
13	-1.6	-1.2	....	-.7	....	....	-.4	-.9	-.8	-.3	-1.1	-.9
14	-1.6	-1.3	....	-.8	....	....	-.9	-.5	-1.1	-.9	-1.3	-1.1
15	-1.6	....	....	-.9	....	....	-1.1	-.8	-1.2	-.6	-1.3	-1.2
16	-1.5	....	....	-1.0	....	....	-1.1	-.9	-.9	-.2	-1.3	....
17	-1.5	....	....	-.9	....	....	-1.1	-.8	-.9	-.1	-1.3	....
18	-1.6	....	....	-.8	....	....	-1.1	-.7	-.9	-.2	-1.2	....
19	-1.5	-.5	....	-.9	....	....	-.8	-.9	-.5	-.5	-1.2	....
20	-.5	-1.1	....	-.8	....	....	-.7	-1.0	-.3	-.6	-1.2	....
21	-.9	-1.2	....	-.7	....	....	-.8	-1.2	-.6	-.7	-1.2	....
22	-.9	-1.3	....	-.5	....	-.6	-.6	-1.3	-.6	-.7	-.9	....
23	-1.0	-.3	....	-.5	....	-.9	-.7	-1.3	-.7	-.9	-1.0	....
24	-.9	-.5	....	-.7	....	-1.2	-1.1	-1.2	-.9	-.9	-.3	....
25	-.3	-.2	....	-.7	....	-1.4	-1.3	-1.2	-.9	-.7	+1.2	....
26	-.0	-.9	....	....	....	-1.5	-1.3	....	-1.2	....	+1.3	....
27	-.8	-1.3	-.5	....	....	-1.4	-1.3	....	-.5	....	-.0	-.3
28	-.8	-1.3	-.7	....	....	-1.4	-1.0	....	-.5	....	-.6	-.1
29	-.5	....	+.6	....	....	-1.3	-1.1	....	-.5	....	-.6	+1.6
30	-.6	....	-.5	....	....	-1.4	-1.1	-1.1	-.5	....	-.0	+1.3
31	-.7	....	-.1	....	-1.4	....	-.9	-.5	....	....	....	+1.0

28.5.4.3.9 (*845, p. 227; 886, p. 368; 906, p. 102; 936, p. 91). Runyon old deep well 1. Extremes of observed water level, in feet, with reference to mean sea level: Highest, +9.6 Mar. 31, 1941; lowest, -46.6 Oct. 25, 1935. Daily fluctuations, 1942: Less than 1 foot to 21 feet.

Lowest daily water level, in feet with reference to mean sea level, 1942
(From recorder charts)

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	+1.7	....	+3.2	....	+2.2	-25.0	-25.3	....	....
2	+1.8	+2.6	....	+3.9	....	....	-24.9	-25.6	....	....
3	+2.0	+3.2	....	+3.9	....	....	-26.4	-25.6	-25.6	....
4	+1.4	+3.4	....	+3.3	+2.7	....	-27.1	-25.1	-27.4	....
5	+.7	+3.4	....	+3.1	+2.9	....	-27.3	-25.0	-26.6	+1.5
6	+.6	+3.7	+4.3	+3.0	+2.6	-22.7	-27.4	-25.5	-25.8	+1.2
7	+.1	+3.5	+5.2	+3.2	+1.8	.....	-27.2	-26.0	-25.6	....
8	+.1	+3.2	+6.0	+2.6	+1.3	-24.1	-26.3	-26.1	-25.5	....

Middlesex County - Runyon area--Continued

28.5.4.3.9. Runyon old deep well 1--Continued.
Lowest daily water level, in feet, with reference to mean sea level, 1942
(From recorder charts)

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
9	+.2	+3.2	+6.0	+2.7	+1.3	-24.1	-26.2	-26.1	-25.2	....
10	...	+3.4	+5.5	+2.7	....	-23.5	.....	-26.0	-25.0	....
11	...	+3.7	+5.3	+2.5	....	-24.1	-25.9	-26.4	-25.9	....
12	...	....	+5.3	+1.5	....	-24.3	-25.9	-25.5	-26.3	....
13	...	....	+5.2	+1.6	....	-24.9	-25.8	-25.8	-26.2	....
14	...	....	....	+1.6	....	-25.4	-25.4	-25.8	-26.2	....
15	...	....	....	+2.0	....	-25.8	-26.2	-26.8	-26.0	....
16	...	....	....	+2.4	....	-25.9	-26.3	-26.8	-24.8	....
17	...	....	....	+2.8	....	-25.9	-26.6	-26.7	-25.3	....
18	...	....	....	+3.2	....	-26.0	-26.7	-25.6	-26.1	....
19	...	....	....	+2.8	+0.7	-27.0	-26.8	-25.1	-26.0	....
20	...	....	....	+2.5	+.4	-26.8	-26.6	.....	-26.8	....
21	...	....	....	....	+.3	-26.4	-26.0	.....	-26.8	....
22	...	....	....	....	+.5	-27.5	-23.9	.....	-26.3	....
23	...	....	....	....	+1.1	-27.6	-23.4	.....	-25.3	....
24	...	....	....	....	+1.3	-27.2	-23.3	.....	-26.8	....
25	...	....	....	....	+.7	.....	-23.5	.....	-26.7	....
26	...	....	....	....	+.7	.....	-23.4	.....	-5.8	....
27	...	....	....	....	+1.5	-25.8	-24.8	.....	-1.9	....
28	-3.6	....	....	....	+1.2	-25.5	-24.6	.....	-.2	+4.4
29	-1.9	....	....	....	+.5	-25.5	-24.7	.....	+1.1	+4.7
30	-.1	.....	....	....	+.5	-25.4	-24.6	.....	+2.6	+4.8
31	+1.2	....	+3.1	....	+1.1	-25.0	.....	.....	....	.....

29.1.4.1.1 (*840, p. 248; 845, p. 229; 886, p. 369; 906, p. 103; 936, p. 92). Runyon old deep well 8. Extremes of observed water level, in feet, with reference to mean sea level: Highest, +8.8 Apr. 3, 1933; lowest, -40.6 Oct. 25, 1935. Daily fluctuations, 1942: Less than 1 foot to 5.8 feet.
Lowest daily water level, in feet, with reference to mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	-12.9	-15.1	....	-1.6	0.0	+0.1	-2.3	-1.3	-12.2	-12.4	-14.9	+0.2
2	-11.7	-15.3	....	-.4	+.2	+.7	-2.3	-1.1	-12.1	-12.5	-14.4	+.9
3	-12.2	-14.2	....	+.1	+.7	+.5	-1.1	-5.2	-12.9	-12.5	-13.5	....
4	-12.2	.....	....	+.1	+.8	....	-1.0	-7.8	-13.8	-12.1	-14.1	....
5	-12.1	.....	....	+.2	+.8	....	-.7	-8.7	-13.8	-12.2	-14.1	....
6	-12.6	.....	....	+.5	+1.1	....	-1.2	-9.7	-13.9	-12.8	-13.9	....
7	-12.8	.....	....	0.0	+2.2	....	-2.0	-10.7	-12.9	-13.4	-13.8	-.2
8	-12.3	-3.4	....	-.1	+3.2	....	-2.5	-11.1	-12.4	-13.9	-13.6	0.0
9	.....	-3.4	....	-.2	+2.7	-.8	-2.5	-11.0	-12.4	-13.7	-13.1	+1.0
10	.....	+.2	....	+.1	+2.1	-.5	-1.9	-10.7	-12.1	-13.7	-13.1	+1.3
11	-14.6	+2.2	....	+.5	+1.9	-1.6	-.7	-11.6	-13.0	.....	-14.5	+1.2
12	-13.8	+4.8	....	+.7	+1.9	-2.4	0.0	-11.9	-13.0	-12.6	-14.7	+1.2
13	.....	+5.4	....	+.7	+1.7	-2.3	-.1	-12.6	-12.9	-13.0	-14.6	+1.2
14	....	+6.0	....	+.4	+1.1	-2.2	-1.4	-13.1	-12.4	-12.8	-14.5	+1.6
15	.....	+6.9	....	+.4	+.9	-1.2	-1.8	-13.7	-12.6	-14.3	.....	+1.9
16	.....	+8.0	....	+.9	+.6	-1.1	-1.6	-13.7	-12.7	-14.2	-12.9	+1.8
17	-15.3	+8.1	....	+.9	+.5	-.5	-1.5	-13.6	-13.1	-14.0	-13.6	+.5
18	-15.8	+8.1	....	+1.0	+.8	-.2	-1.8	-13.7	-13.2	-14.0	-14.5	+.2
19	-15.2	+8.5	....	+1.2	+1.0	-.9	-3.6	-13.7	-13.5	-13.0	-14.6	+.8
20	-15.8	+8.7	....	+1.4	+1.0	-1.4	-3.7	-13.2	-13.5	-13.2	-15.3	+1.0
21	-15.8	....	....	+1.4	+1.1	-1.3	-3.7	-13.9	-12.2	-13.1	-15.2	+1.0
22	-14.9	....	....	+1.5	+1.2	-1.4	-3.2	-14.5	-11.7	-13.6	-14.5	+.4
23	-14.9	....	....	+.5	+1.7	-2.3	-2.1	-14.5	-11.3	-13.7	-13.3	....
24	-14.5	....	....	-.3	+1.7	-2.5	-2.4	-14.1	-11.1	-14.1	-13.9	....
25	-13.9	....	....	-1.2	+2.2	-4.9	-2.9	-13.8	-11.2	-14.0	-14.0	0.0
26	-13.6	....	....	-1.4	+1.4	-4.2	....	-13.8	-11.0	-12.8	-8.2	+.6
27	-13.5	....	....	-1.4	+1.3	-2.8	....	-12.7	-10.8	-13.6	-3.9	+.7

Middlesex County - Runyon area--Continued

29.1.4.1.1. Runyon old deep well-8--Continued.
Lowest daily water level in feet, with reference to mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
28	-13.7	....	....	-0.9	+0.8	-2.2	-2.6	-12.8	-11.4	-13.9	-2.6	+1.5
29	-13.7	....	-5.5	+.5	+.3	-.6	-3.4	-12.8	-11.5	-14.1	-1.5	+1.6
30	-14.1	....	-3.4	+.5	-.1	-1.9	-3.4	-12.7	-11.5	-14.2	+.2	+1.9
31	-15.1	....	-2.2	...	-.1	....	-2.4	-12.2	.....	-14.4	....	+1.9

28.5.4.7.3 (*845, p. 212; 886, p. 369; 906, p.103; 936, p. 93). Runyon well 123. Extremes of observed water level, in feet above mean sea level: Highest, 6.14 Sept. 22, 1938 (flooded); lowest, 0.53 Jan. 23, 1940.

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	1.63	1.33	2.03	1.73	1.63	1.98	1.78	1.78	1.78	1.73	2.13
2	....	1.28	1.33	1.93	1.83	1.73	2.03	1.73	1.73	1.78	1.53	1.68
3	....	1.18	....	1.83	1.73	1.78	2.28	1.68	1.73	....	1.28	1.38
4	1.53	1.23	....	1.83	1.68	1.73	2.23	1.63	1.68	1.63	1.28	1.23
5	1.43	1.38	....	1.88	1.68	1.73	2.13	1.63	1.48	1.63	1.38	1.18
6	1.18	1.53	....	1.88	1.68	1.83	2.13	1.68	1.43	1.28	1.28	1.23
7	.98	2.18	....	1.93	1.73	1.78	2.08	1.63	1.38	1.33	1.33	1.33
8	....	1.98	1.48	1.88	1.83	1.68	2.08	1.58	1.48	1.33	1.43	1.38
9	....	1.58	1.83	1.93	1.78	1.68	2.08	1.68	1.73	1.28	1.43	1.48
10	....	1.48	1.53	2.33	1.73	1.63	2.08	2.03	1.63	1.28	1.53	1.58
11	1.33	1.38	1.53	2.08	1.68	1.58	....	1.78	1.58	1.53	1.43	1.58
12	1.38	1.28	1.48	1.88	1.58	1.68	....	1.68	1.68	1.53	1.43	1.68
13	1.28	1.18	1.43	1.78	1.58	1.73	....	1.63	1.58	1.98	1.28	1.58
14	1.28	....	1.43	1.78	1.63	1.78	....	1.78	1.48	1.73	1.03	1.33
15	....	....	1.83	1.73	1.63	1.78	....	1.68	1.58	1.78	....	1.38
16	....	....	1.78	1.63	1.63	1.73	....	1.58	1.58	1.88	....	1.38
17	....	....	2.08	1.78	1.73	1.88	....	1.63	1.53	1.98	....	1.38
18	.88	....	2.03	1.78	1.73	1.88	....	1.68	1.68	1.83	....	1.38
19	.88	....	1.78	1.78	1.78	1.78	....	1.58	1.73	1.68	....	1.28
20	1.38	....	1.58	1.83	1.78	1.78	....	1.48	1.68	1.63	....	1.18
21	1.28	....	1.68	1.88	1.78	1.78	1.66	1.43	1.83	1.63	....	1.23
22	1.33	.93	1.98	1.93	1.88	1.73	1.68	1.33	1.78	1.73	....	1.38
23	1.18	1.28	1.93	1.93	1.93	1.73	1.58	1.33	1.73	1.63	....	1.43
24	1.28	1.48	1.83	1.78	1.73	2.53	1.73	1.43	1.73	1.58	....	1.48
25	1.58	1.68	1.88	1.78	1.63	....	1.68	1.43	1.58	1.68	....	1.63
26	1.78	1.23	1.73	1.78	1.53	....	1.53	1.43	1.58	1.78	2.28	1.58
27	1.43	1.13	1.73	1.93	1.48	....	1.43	1.48	1.93	1.48	1.98	1.88
28	1.58	1.03	2.28	1.78	1.48	1.93	1.63	1.53	1.68	1.38	1.63	1.93
29	1.63	....	2.48	1.63	1.43	1.98	1.63	1.53	1.68	1.43	1.63	2.58
30	1.58	....	2.03	1.63	1.33	1.98	1.58	1.73	1.68	1.58	1.78	2.48
31	1.68	....	2.08	....	1.43	....	1.78	1.83	....	1.63	....	2.23

28.5.4.6.3.A (*936, p. 94). A-2. Perth Amboy Water Department. Extremes of observed water level, in feet above mean sea level: Highest, 13.65 May 27, 1940; lowest, 3.86 Oct. 23, 1941. Water levels, in feet above mean sea level: Jan. 8, 4.55; June 14, 5.98; Nov. 28, 8.89.

28.5.4.6.6 (*936, p. 95). A-3. Perth Amboy Water Department. Extremes of observed water level, in feet above mean sea level: Highest, 15.89 May 10, 1933; lowest, 5.80 Oct. 19, 1935. Water levels, in feet above mean sea level, 1942: Jan. 8, 7.91; June 14, 11.14; Nov. 28, 10.40.

28.5.4.6.6.A (*936, p. 96). A-40. Perth Amboy Water Department. Extremes of observed water level: Well flowing Apr. 24, 1940; lowest, 8.89 feet above mean sea level Oct. 29, 1939. Water levels, in feet above mean sea level, 1942: Jan. 8, 9.36; June 14, 16.89; Nov. 28, 16.27.

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Middlesex County - Runyon area--Continued

28.5.4.6.6.A (*845, p. 230; 886, p. 356; 906, p. 89; 936, p. 97). B-2. Perth Amboy Water Department. Extremes of observed water level, in feet above mean sea level: Highest, 14.49 July 29, 1938; lowest, 1.08 Dec. 29, 1939. Water levels, in feet above mean sea level, 1942: Jan. 7, 3.72; June 14, 4.74; Nov. 28, 6.94.

28.5.4.6.2.B (*845, p. 230; 886, p. 356; 906, p. 89; 936, p. 97). B-3. Perth Amboy Water Department. Extremes of observed water level, in feet above mean sea level: Highest, 10.59 May 5, 1939; lowest, 2.11 Oct. 19, 1935. Water levels, in feet above mean sea level, 1942: Jan. 7, 3.14; June 14, 5.67; Nov. 28, 8.26.

28.5.4.6.5 (*845, p. 231; 886, p. 356; 906, p. 89; 936, p. 97). B-4. Perth Amboy Water Department. Extremes of observed water level, in feet above mean sea level: Highest, 11.54 May 22, 1937; lowest, 5.08 Oct. 24, 1941. Water levels, in feet above mean sea level, 1942: Jan. 7, 6.04; June 14, 7.18; Nov. 28, 8.07.

28.5.4.5.9 (*936, p. 97). B-5. Perth Amboy Water Department. Extremes of observed water level, in feet above mean sea level: Highest, 9.50 Apr. 29, 1937; lowest, 6.20 Oct. 27, 1941. Water levels, in feet above mean sea level, 1942: Jan. 7, 7.19; June 14, 9.26; Nov. 28, 8.28.

28.5.4.3.7 (*845, p. 231; 886, p. 357; 906, p. 90; 936, p. 98). C-1. Perth Amboy Water Department. Extremes of observed water level, in feet above mean sea level: Highest, 7.30 Mar. 29, 1938; lowest, 2.43 Jan. 27, 1940. Water levels, in feet above mean sea level, 1942: Jan. 7, 3.66; June 18, 4.88; Nov. 27, 4.29.

28.5.4.3.7.A (*845, p. 232; 886, p. 357; 906, p. 90; 936, p. 98). C-2. Perth Amboy Water Department. Extremes of observed water level, in feet above mean sea level: Highest, 8.89 Nov. 23, 1940; lowest, 2.79 Jan. 7, 1940. Destroyed by railroad construction. Water level, in feet above mean sea level, 1942: Jan. 7, 3.74.

28.5.4.3.6 (*845, p. 233; 886, p. 257; 906, p. 90; 936, p. 99). D-1. Perth Amboy Water Department. Extremes of observed water level, in feet above mean sea level: Highest, 12.29 July 29, 1938; lowest, 5.19 Nov. 13, 1941. Water levels, in feet above mean sea level, 1942: Jan. 7, 6.12; June 17, 7.86; Nov. 27, 8.17.

28.5.4.3.2 (*845, p. 233; 886, p. 357; 906, p. 91; 936, p. 100). D-2. Perth Amboy Water Department. Extremes of observed water level, in feet above mean sea level: Highest, 14.34 July 29, 1938; lowest, 7.91 Nov. 13, 1941. Water levels, in feet above mean sea level, 1942: Jan. 7, 8.37; June 17, 10.46; Nov. 27, 9.83.

29.1.4.5.2 (*845, p. 213; 886, p. 362; 906, p. 96; 936, p. 101). F-2. H. C. Perrine. 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 levels, in feet above mean sea level, 1942: Jan. 8, 15.67; June 13, 17.27; Nov. 28, 21.21.

29.1.4.3.9 (*817, p. 186; 840, p. 251; *845, p. 214; 886, p. 362; 906, p. 96; 936, p. 101). F-3. Clyde Bowne. Extremes of observed water level, in feet above mean sea level: Highest, 31.91 June 17, 1939; lowest, 24.07 Nov. 24, 1942. Water levels, in feet above mean sea level, 1942: Jan. 6, 26.41; June 13, 25.99; Nov. 24, 24.07.

29.1.5.1.4 (*845, p. 215; 886, p. 363; 906, p. 96; 936, p. 101). F-4. A. R. Brown. Extremes of observed water level, in feet above mean sea level: Highest, 29.47 July 12, 1939; lowest, 22.89 Mar. 11, 1932. Water levels, in feet above mean sea level, 1942: Jan. 6, 25.07; June 13, 23.99; Nov. 24, 23.41.

29.1.5.1.9 (*845, p. 215; 886, p. 363; 906, p. 96; 936, p. 101). F-5. A. Hanley. Extremes of observed water level, in feet above mean sea level: Highest, 105.73 Jan. 24, 1934; lowest 97.69 Sept. 24, 1932. Water levels, in feet above mean sea level, 1942: Jan. 6, 100.75; June 13, 101.90; Nov. 24, 101.68.

Middlesex County - Runyon area--Continued

29.1.5.6.3 (*845, p. 216; 886, p. 363; 906, p. 96; 936, p. 101). F-9. Owner unknown. Extremes of observed water level, in feet above mean sea level: Highest, 106.79 Apr. 15, 1932; lowest, 98.43 Oct. 27, 1941. Water levels, in feet above mean sea level, 1942: Jan. 6, 105.88; June 13, 105.01; Nov. 24, 104.83.

29.1.5.6.3.A (*845, p. 217; 886, p. 363; 906, p. 96; 936, p. 102). F-10. Maude Lamberton. Extremes of observed water level, in feet above mean sea level: Highest, 126.71 Mar. 27, 1936; lowest, 119.12 Oct. 27, 1941. Water levels, in feet above mean sea level, 1942: Jan. 6, 125.18; June 13, 124.30; Nov. 24, 125.50.

29.1.5.4.6 (*845, p. 218; 886, p. 363; 906, p. 97; 936, p. 102). F-11. Charles Schunck. Extremes of observed water level, in feet above mean sea level: Highest, 33.94 Apr. 18, 1941; lowest, 22.75 Mar. 11, 1932. Water levels, in feet above mean sea level, 1942: Jan. 6, 24.45; June 13, 25.56; Nov. 24, 24.16.

29.1.5.4.8 (*845, p. 218; 886, p. 363; 906, p. 97; 936, p. 102). F-12. George Burlew. Extremes of observed water level, in feet above mean sea level: Highest, 34.98 May 4, 1939; well dry on several days during 1932. Water levels, in feet above mean sea level, 1942: Jan. 6, 27.38; June 13, 27.10; Nov. 24, 27.16.

29.1.5.4.8.A (*845, p. 219; 886, p. 363; 906, p. 97; 936, p. 102). F-13. Extremes of observed water level, in feet above mean sea level: Highest, 46.54 Sept. 7, 1934; lowest, 41.54 June 19, 1925. No measurements made in 1942.

29.1.5.7.2 (*817, p. 187; 840, p. 251; *845, p. 220; 886, p. 363; 906, p. 97; 936, p. 102). F-14. William Jurman. Extremes of observed water level: Highest, 38.94 feet above mean sea level July 27, 1938; well dry, Oct. 21, 1925, and Nov. 13, 1931. Water levels, in feet above mean sea level, 1942: Jan. 6, 29.18; June 13, 33.73; Nov. 24, 31.62.

29.1.5.7.5.A (*845, p. 220; 886, p. 364; 906, p. 97; 936, p. 102). F-16. Amos Burlew. Extremes of observed water level, in feet above mean sea level: Highest, 89.34 Mar. 17, 1939; lowest, 82.92 Aug. 10, 1936. Water levels, in feet above mean sea level, 1942: Jan. 6, 87.91; June 13, 87.42; Nov. 24, 87.19.

29.1.4.7.6 (*845, p. 221; 886, p. 364; 906, p. 97; 936, p. 102). F-20. A. Fredda. Extremes of observed water level, in feet above mean sea level: Highest, 36.62 Apr. 11, 1939; lowest, 28.54 Sept. 24, 1932. Water levels, in feet above mean sea level, 1942: Jan. 6, 29.70; June 13, 31.51; Nov. 24, 30.34.

29.1.4.9.8 (*845, p. 222; 886, p. 364; 906, p. 97; 936, p. 102). F-21. Mrs. A. Green. Extremes of observed water level, in feet above mean sea level: Highest, 66.47 Sept. 17, 1934; 59.78 July 19, 1935. Water levels, in feet above mean sea level, 1942: Jan. 6, 63.45; June 13, 64.33; Nov. 24, 63.12.

29.1.7.3.5 (*845, p. 222; 886, p. 364; 906, p. 97; 936, p. 102). F-22. Reuben Miller. Extremes of observed water level, in feet above mean sea level: Highest, 88.76 Sept. 17, 1934; lowest, 76.19 Oct. 20, 1932. Water levels, in feet above mean sea level, 1942: Jan. 6, 84.95; June 13, 84.10; Nov. 24, 85.89.

29.11.1.2.5 (*845, p. 224; 886, p. 364; 906, p. 98; 936, p. 103). F-26. Ambrose Green. Extremes of observed water level, in feet above mean sea level: Highest, 88.10 Apr. 11, 1939; lowest, 82.51 Sept. 18, 1925. Water levels, in feet above mean sea level, 1942: Jan. 6, 85.45; June 13, 85.96; Nov. 24, 84.19.

29.11.1.2.5.A (*845, p. 225; 886, p. 364; 906, p. 98; 936, p. 103). F-27. Mrs. J. Green. Extremes of observed water level, in feet above mean sea level: Highest, 88.38 Aug. 5, 1939; lowest, 82.33 Aug. 11, 1925. Water levels, in feet above mean sea level, 1942: Jan. 6, 85.32; June 13, 85.76; Nov. 24, 85.41.

Middlesex County - Runyon area--Continued

29.1.1.7.8 (*845, p. 234; 886, p. 365; 906, p. 98; 936, p. 103). G-1. Perth Amboy Water Department. Extremes of observed water level, in feet with reference to mean sea level: Highest, +23.79 May 10, 1933; lowest, -17.43 Oct. 27, 1941. Water levels, in feet above mean sea level, 1942: Jan. 7, 17.47; June 15, 18.62; Nov. 27, 19.62.

29.1.1.7.8.A (*845, p. 234; 886, p. 365; 906, p. 99; 936, p. 103). G-2. Perth Amboy Water Department. Extremes of observed water level, in feet above mean sea level: Highest, 25.45 Nov. 17, 1934; lowest, 20.84 Oct. 27, 1941. Water levels, in feet above mean sea level, 1942: Jan. 7, 20.97; June 15, 22.82; Nov. 27, 23.32.

29.1.1.7.9 (*845, p. 235; 886, p. 365; 906, p. 99; 936, p. 103). G-3. Perth Amboy Water Department. Extremes of observed water level, in feet above mean sea level: Highest, 28.43 June 12, 1937; lowest, 24.51 Jan. 7, 1942. Water levels, in feet above mean sea level, 1942: Jan. 7, 24.51; June 15, 25.94; Nov. 27,26.30.

29.1.1.8.4 (*845, p. 235; 886, p. 365; 906, p. 99; 936, p. 103). G-4. Perth Amboy Water Department. Extremes of observed water level, in feet above mean sea level: Highest, 31.91 May 23, 1938; lowest, 27.00 Jan. 7, 1942. Water levels, in feet above mean sea level, 1942: Jan. 7, 27.00; June 15, 28.07; Nov. 27, 28.61.

29.1.1.7.9.A (*936, p. 103). G-20. Perth Amboy Water Department. 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 levels, in feet above mean sea level, 1942: Jan. 8, 20.75; June 15, 22.90; Nov. 27, 23.69.

29.1.4.2.4 (*936, p. 104). H-1. Owner unknown. Extremes of observed water level, in feet above mean sea level: Highest, 23.45 Apr. 19, 1941; lowest, 17.75 Aug. 6, 1935. Water levels, in feet above mean sea level, 1942: Jan. 8, 19.09; June 18, 20.87; Nov. 27, 21.29.

29.1.4.1.4 (*845, p. 236; 886, p. 365; 906, p. 99; 936, p. 104). J-1. Owner unknown. Extremes of observed water level, in feet above mean sea level: Highest, 15.61 Oct. 16, 1933; lowest, 9.10 Oct. 24, 1941. Water levels, in feet above mean sea level, 1942: Jan. 8, 9.95; June 15, 10.46; Nov. 28, 12.25.

29.1.4.1.6 (*845, p. 236; 886, p. 366; 906, p. 99; 936, p. 105). J-2. Owner unknown. Extremes of observed water level, in feet above mean sea level: Highest, 16.52 Jan. 27, 1937 and July 29, 1938; lowest, 11.49 Jan. 11, 1935. Water levels, in feet above mean sea level, 1942: Jan. 8, 12.88; June 15, 14.36; Nov. 28, 15.14.

29.1.4.2.7 (*845, p. 237; 886, p. 366; 906, p. 99; 936, p. 105). J-3. Owner unknown. Extremes of observed water level, in feet above mean sea level: Highest, 17.69 July 29, 1938; lowest, 13.23 Sept. 24, 1932. Water levels, in feet above mean sea level, 1942: Jan. 8, 14.27; June 15, 15.46; Nov. 28, 16.50.

29.1.4.2.7.A (*845, p. 237; 886, p. 366; 906, p. 99; 936, p. 105). J-4. Owner unknown. Extremes of observed water level, in feet above mean sea level: Highest, 18.35 Sept. 18, 1934; lowest, 13.76 Oct. 24, 1941. Water levels, in feet above mean sea level, 1942: Jan. 8, 14.89; June 15, 15.95; Nov. 28, 17.01.

29.1.4.5.2.A (*845, p. 238; 886, p. 366; 906, p. 99; 936, p. 105). J-5. Owner unknown. Extremes of observed water level, in feet above mean sea level: Highest, 23.60 Feb. 22, 1938; lowest, 14.71 June 15, 1942. Water levels, in feet above mean sea level, 1942: Jan. 8, 16.21; June 15, 14.71; Nov. 28, 15.25.

29.1.4.4.6 (*936, p. 105). K-1. Perth Amboy Water Department. No measurements made in 1942.

Middlesex County - Runyon area--Continued

28.5.4.5.6 (*845, p. 238; 886, p. 366; 906, p. 100; 936, p. 105). L-1. Perth Amboy Water Department. Extremes of observed water level, in feet above mean sea level: Highest, 7.56 Apr. 16, 1935; lowest, 2.86 May 27, 1940. Water levels, in feet above mean sea level, 1942: Jan. 7, 4.57; June 13, 6.12; Nov. 29, 6.17.

28.5.4.6.7.A (*845, p. 239; 886, p. 366; 906, p. 100; 936, p. 105). L-2. Perth Amboy Water Department. Extremes of observed water level, in feet above mean sea level: Highest, 9.06 July 29, 1938; Lowest, 4.82 Oct. 24, 1941. Water levels, in feet above mean sea level, 1942: Jan. 7, 5.79; June 13, 7.85; Nov. 29, 6.94.

28.5.4.6.7.B (*845, p. 239; 886, p. 366; 906, p. 100; 936, p. 106). L-3. Perth Amboy Water Department. Extremes of observed water level, in feet above mean sea level: Highest, 11.51 July 29, 1938; lowest, 3.84 Sept. 30, 1937. Water levels, in feet above mean sea level, 1942: June 13, 9.63; Nov. 29, 8.64.

28.5.4.5.1.A (*936, p. 106). M-1. Perth Amboy Water Department. No measurements made in 1942.

28.5.4.5.1.B (*936, p. 106). M-2. Perth Amboy Water Department. No measurements made in 1942.

28.5.4.4.9.A (*936, p. 106). N-1. New Jersey State Water Policy Commission. Extremes of observed water level: Well flowing June 23, 1940, and Jan. 18, 1941; lowest, 2.87 feet above mean sea level Jan. 27, 1940. Water levels, in feet above mean sea level, 1942: Jan. 7, 3.48; June 18, 4.33; Nov. 28, 4.28.

28.5.4.4.9.B (*936, p. 107). N-2. New Jersey State Water Policy Commission. Extremes of observed water level, in feet above mean sea level: Highest, 6.48 June 12, 1937; lowest, 3.65 Nov. 13, 1941. Water levels, in feet above mean sea level, 1942: Jan. 7, 3.76; June 18, 5.06; Nov. 28, 3.79.

28.5.4.8.1.A (*936, p. 107). N-3. New Jersey State Water Policy Commission. Extremes of observed water level, in feet above mean sea level Highest, 11.18 May 10, 1933; lowest, 4.66 Nov. 13, 1941. Water levels, in feet above mean sea level, 1942: Jan. 8, 4.79; June 18, 5.79; Nov. 28, 5.92.

29.1.1.7.5.A (*936, p. 107). P-1. New Jersey State Water Policy Commission. Extremes of observed water level, in feet above mean sea level: Highest, 25.15 Mar. 27, 1936; lowest, 21.03 Nov. 13, 1941, and Nov. 28, 1942. Water levels, in feet above mean sea level, 1942: Jan. 8, 21.17; June 14, 22.45; Nov. 28, 21.03.

29.1.1.7.5.B (*936, p. 108). P-2. New Jersey State Water Policy Commission. Extremes of observed water level, in feet above mean sea level: Highest, 28.72 Apr. 27, 1939; lowest, 24.34 Jan. 7, 1942. Water levels, in feet above mean sea level, 1942: Jan. 7, 24.34; June 14, 25.73 Nov. 28, 25.83.

29.1.4.1.8 (*936, p. 108). R-1. Perth Amboy Water Department. Extremes of observed water level, in feet above mean sea level: Highest, 12.41 Apr. 24, 1940; lowest, 7.22 Oct. 13, 1936. Water levels, in feet above mean sea level, 1942: Jan. 8, 9.18; June 14, 9.36; Nov. 28, 11.57.

29.1.4.4.2.A (*936, p. 109). R-2. Perth Amboy Water Department. Extremes of observed water level, in feet above mean sea level: Highest, 12.16 Aug. 15, 1938; lowest, 6.39 Dec. 29, 1939. Water levels, in feet above mean sea level, 1942: Jan. 8, 8.55; June 14, 7.81; Nov. 28, 9.97.

29.1.4.4.1.A (*817, p. 185; 840, p. 250; *845, p. 230; 886, p. 370; 906, p. 104; 936, p. 110). S-1. Perth Amboy Water Department. Extremes of observed water level, in feet above mean sea level: Highest, 11.46 Apr. 15, 1935; lowest, 2.80 Oct. 23, 1941. Water levels, in feet above measuring point, 1942: Jan. 8, 4.34; June 14, 3.35; June 18, 3.35; Nov.28 9.14.

Middlesex County - Runyon area--Continued

28.5.1.8.4 (*886, p. 370; 906, p. 104; 936, p. 110). Sayreville Borough test well 4. Extremes of observed water level, in feet, with reference to mean sea level: Highest, +7.10 Mar. 31, 1941; lowest, -32.9 Oct. 25, 1935.

Lowest daily water level, in feet with reference to mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	-6.25	.....	+0.40	-0.05	+0.75	+1.00	-1.70	+0.10	-5.30	-5.00	-7.60	.....
2	-5.55	.....	-.10	+1.05	+1.35	+1.20	-1.30	+.35	-5.60	-5.85	-6.60	.....
3	-6.20	.....	+.15	+1.45	+1.95	+1.05	+.40	-.20	-5.75	-6.00	-6.70	.....
4	-6.20	.....	+1.00	+1.25	+1.80	+.20	+.50	-1.50	-6.70	-5.60	.....	.....
5	-5.85	-6.90	-1.70	+1.45	+1.60	+.20	+.75	-2.25	-6.90	-5.45	.....	.....
6	-6.40	-6.80	-1.65	+1.85	+2.40	+.35	-.50	-3.10	-6.70	-6.25	.....	.....
7	.....	-7.05	-2.60	+1.35	+3.75	+.35	-1.50	-4.00	-6.00	-6.50	-7.15	.....
8	.....	-6.80	-2.05	+.75	+4.75	-.50	-2.10	-4.45	-5.15	-7.15	-6.70	.....
9	.....	-6.90	-2.20	+.90	+4.10	-.40	-1.80	-3.85	-4.70	-6.70	-6.45	.....
10	.....	-5.85	-2.35	+1.10	+3.65	+.65	-.50	-4.00	-4.85	-7.00	-6.50	.....
11	.....	-4.80	-1.25	+1.30	+3.15	-.75	+.75	-4.75	-5.95	-6.45	-7.40	+2.85
12	.....	-3.40	-.40	.....	+3.20	-1.95	+1.15	-4.80	-5.95	-5.40	-8.35	+2.90
13	.....	-2.80	-.30	+1.65	+2.65	-1.40	+.55	-5.65	-5.70	-6.00	-7.80	+2.75
14	.....	-2.55	-.35	+1.30	+1.95	-1.40	-.90	-6.45	-5.50	-5.80	-7.55	+3.60
15	-7.45	-1.65	-3.75	+1.30	+1.75	-.50	-1.50	-7.00	-5.70	-7.30	-6.95	+3.55
16	-9.65	-.25	-4.10	+2.00	+1.25	-.30	-.85	-6.70	-5.70	-7.00	-6.00	.....
17	.....	-.20	-2.80	+2.00	+1.35	+.45	-.70	-6.95	-6.05	-7.55	-6.75	.....
18	.....	+.15	-5.20	+1.95	+1.45	+1.00	-.80	-7.20	-6.05	-6.95	-7.95	.....
19	.....	+.50	-5.95	+1.85	+1.45	+.40	-2.55	-6.55	-6.40	.....	-7.90	+2.05
20	.....	.....	-4.35	+2.00	+1.90	-.20	-2.85	-5.90	-6.25	.....	-8.90	.....
21	.....	.....	-2.60	+2.15	+1.90	-.20	-2.80	-6.75	-5.40	-6.20	-8.65	.....
22	.....	.....	-1.45	+2.40	+2.40	-.50	-2.30	-7.55	-4.95	-6.70	-7.50	.....
23	.....	.....	-.10	+1.25	+2.30	-1.65	-1.25	-7.55	-4.40	-6.85	-6.40	.....
24	.....	.....	-1.30	-.50	+2.90	-1.60	-1.15	-6.55	-4.30	-7.55	-7.00	.....
25	.....	.....	-4.85	-1.65	+3.00	-3.90	-2.20	-6.65	-4.65	-7.05	-7.35	.....
26	.....	+.85	.....	.....	+2.00	-3.05	-2.15	-6.40	-4.45	-5.45	-5.60	.....
27	.....	+.85	-7.75	.....	+1.95	-1.70	-.90	-5.75	-3.65	-6.65	-1.35	.....
28	.....	+.45	-6.80	.....	+1.40	-1.00	-1.25	-6.10	-4.65	-6.95	+.05	.....
29	.....	.....	-4.05	.....	+.90	+.50	-2.05	-6.00	-4.65	-7.15	.....	.....
30	.....	.....	-1.75	+1.50	+.40	-1.20	-2.00	-5.45	-4.35	-7.25	.....	.....
31	-9.10	.....	.....	.....	+.15	.....	-.80	-5.65	.....	-7.50	.....	+3.10

26.41.5.9.5 (*845, p. 240; 886, p. 374; 906, p. 105; 936, p. 110). South Amboy waterworks old deep well 3. Extremes of observed water level, in feet below measuring point: Highest, 20.6 sometime between July 23 and Aug. 2, 1938; lowest, 48.7 Aug. 22, 1937.

Water level at end of day, in feet below measuring point, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	30.23	30.88	25.36	28.46	27.80	.....	29.50	.....	29.82
2	30.62	31.12	24.42	29.30	27.78	.....	28.94	.....	29.66
3	30.31	31.38	23.66	29.72	28.28	.....	29.00	.....	29.44
4	29.92	31.26	24.62	29.92	28.08	.....	29.28	.....	29.22
5	30.14	31.10	24.82	29.68	27.76	.....	29.36	.....	29.48
6	30.69	30.58	25.74	28.92	27.42	.....	29.28	.....	29.34
7	31.32	29.60	26.46	28.72	26.70	.....	29.26	31.82	29.18
8	31.32	29.92	26.48	28.32	26.64	28.00	29.34	31.86	28.60
9	31.00	30.06	26.10	28.34	26.60	28.02	29.82	30.94	28.08
10	31.94	30.02	26.68	27.66	26.76	28.10	30.48	30.82	28.40
11	32.64	29.90	25.82	27.30	26.70	28.02	30.70	31.14	28.50
12	32.70	29.70	26.22	27.58	26.84	28.26	30.96	31.12	28.32
13	32.58	30.58	26.32	28.02	26.82	28.68	30.44	30.78	28.62
14	32.10	30.54	26.04	27.80	27.12	29.20	30.26	31.02	28.64
15	32.14	29.96	26.24	28.10	27.70	29.66	30.30	30.68	28.94
16	31.94	29.20	29.32	28.46	28.14	29.82	30.64	30.36	29.14
17	31.82	28.96	28.84	27.88	28.42	29.62	30.82	30.62	29.51
18	31.46	28.90	28.08	27.60	.....	29.92	30.46	31.52	29.18

Middlesex County - Runyon area--Continued

26.41.5.9.5. South Amboy waterworks old deep well 3--Continued.

Water level at end of day, in feet below measuring point, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
19	30.86	28.92	30.32	27.78	.....	29.20	30.52	32.26	28.60
20	31.22	29.06	29.78	27.54	.....	28.86	30.52	32.34	28.36
21	31.56	29.08	28.40	27.04	.....	28.32	30.98	32.48	27.96
22	31.30	28.48	27.90	27.16	.....	27.76	30.92	31.78	27.62
23	31.68	27.18	27.88	26.42	.....	27.50	32.60	31.40	.....
24	31.28	26.16	27.46	26.16	.....	27.40	33.34	31.18	.....
25	31.12	25.66	26.56	26.22	.....	28.30	33.28	30.76	.....
26	31.06	26.04	26.62	26.18	.....	29.00	.....	30.32	.....
27	31.32	25.84	27.36	26.18	.....	29.74	.....	29.72	.....
28	30.32	25.42	27.84	26.90	.....	30.62	.....	29.58	.....
29	29.74	.....	27.76	27.36	.....	30.26	.....	29.78	.....
30	29.50	.....	27.60	27.60	.....	29.88	.....	29.74	.....
31	29.26	.....	27.84	.....	.....	.....	.....	29.68	.....

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). Avon well 1. Extremes of observed water level, in feet below mean sea level: Highes, 4.46 Apr. 12, 1937; lowest, 132.0 Aug. 4, 1925, while well was being pumped. Water levels, in feet, with reference to mean sea level, 1942: July 27, -69.60; Nov. 6, -25.39.

29.24.4.8.4 (*817, p. 178; 840, p. 243; *845, p. 197; 886, p. 375; 906, p. 105; 936, p. 111). Bradley Beach 650-foot well. Extremes of observed water level, in feet below mean sea level: Highest, 5.17 Apr. 17, 1935; lowest, 136.88 Aug. 27, 1925. Water levels, in feet, with reference to mean sea level, 1942: July 27, -23.21; Nov. 6, -14.58.

Monmouth County - Runyon area

(For table of average water levels in water-table wells in Runyon area see p. 83.)

29.11.2.1.1 (*845, p. 226; 886, p. 375; 906, p. 106; 936, p. 111). F-30. Edward Huffrey. Extremes of observed water level, in feet above mean sea level: Highest, 75.85 Dec. 14, 1940; lowest, 59.93 June 28, 1929. Water levels, in feet above mean sea level, 1942: Jan. 6, 64.87; June 13, 63.55; Nov. 24, 64.25.

29.1.8.9.4 (*845, p. 227; 886, p. 375; 906, p. 106; 936, p. 112). F-31. W. Gibson. Extremes of observed water level, in feet above mean sea level: Highest, 85.48 Apr. 16, 1935; lowest, 80.02 Oct. 21, 1925. Water levels, in feet above mean sea level, 1942: Jan. 6, 81.03; June 13, 81.65; Nov. 24, 81.30.

29.11.1.2.9 (*817, p. 185; 840, p. 247; 845, p. 208; 886, p. 375; 906, p. 106; 936, p. 112). 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.

Monmouth County - Runyon area--Continued

29.11.1.2.9. Hulsart well--Continued.

Water level, at end of day, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	96.03	.....	97.00	97.62	97.24	96.84	96.75	96.55	96.33	.....	96.59
2	96.01	.....	97.05	97.62	97.23	96.83	96.73	96.54	96.32	.....	96.65
3	95.95	.....	97.08	97.63	97.21	96.86	96.71	96.52	96.31	.....	96.67
4	95.95	.....	97.10	97.62	97.21	96.91	96.70	96.50	96.31	96.25	96.70
5	95.95	.....	97.14	97.60	97.19	96.95	96.67	96.49	96.32	96.25	96.73
6	95.95	.....	97.17	97.61	97.17	96.97	96.65	96.47	96.30	96.25	96.75
7	95.95	.....	97.20	97.62	97.15	96.95	96.70	96.46	96.30	96.24	96.76
8	95.95	.....	97.24	97.61	97.14	96.95	96.68	96.45	96.30	96.23	96.78
9	.....	.....	97.28	97.61	97.12	96.92	96.66	96.44	96.30	96.22	96.79
10	.....	96.35	97.30	97.59	97.10	96.90	96.66	96.42	.....	96.22	96.80
11	.....	96.36	97.34	97.59	97.10	96.93	96.66	96.41	.....	96.20	96.80
12	.....	96.40	97.35	97.60	97.09	96.97	96.66	96.40	.....	96.20	96.81
13	.....	96.41	97.38	97.59	97.10	97.00	96.67	96.38	.....	96.20	96.80
14	.....	96.44	97.41	97.56	97.07	97.02	96.67	96.37	.....	96.19	96.80
15	.....	96.46	97.44	97.54	97.06	97.01	96.67	96.36	.....	96.18	96.82
16	.....	96.51	97.44	97.53	97.05	97.00	96.67	96.35	.....	96.17	96.80
17	.....	96.53	97.49	97.49	97.04	96.99	96.68	96.33	.....	96.16	96.82
18	.....	96.55	97.49	97.48	97.03	97.00	96.68	96.32	.....	96.16	96.80
19	.....	96.58	97.51	97.47	97.01	96.99	96.68	96.32	.....	96.15	96.79
20	.....	96.61	97.53	97.46	97.00	96.96	96.68	96.30	.....	96.15	96.79
21	.....	96.67	97.54	97.44	96.99	96.93	96.66	96.30	.....	96.14	96.78
22	.....	96.68	97.55	97.44	96.97	96.90	96.65	96.30	.....	96.12	96.80
23	.....	96.72	97.56	97.44	96.95	96.89	96.65	96.28	.....	96.11	96.78
24	.....	96.75	97.58	97.43	96.94	96.85	96.63	96.27	.....	96.14	96.78
25	.....	96.78	97.59	97.41	96.91	96.84	96.62	96.25	.....	96.17	96.77
26	.....	96.81	97.59	97.39	96.90	96.82	96.61	96.28	.....	96.25	96.75
27	.....	96.85	97.59	97.37	96.88	96.81	96.60	96.30	.....	96.33	96.77
28	.....	96.87	97.60	97.34	96.86	96.80	96.60	96.25	.....	96.39	96.80
29	.....	96.90	97.61	97.34	96.85	96.78	96.57	96.27	.....	96.47	96.83
30	.....	96.94	97.62	97.30	96.85	96.76	96.56	96.30	.....	96.51	96.88
31	.....	96.97	.....	97.25	.....	96.75	96.55	.....	.....	.....	96.93

Salem County - Penns Grove area

30.23.1.8.5 (*936, p. 112). Penns Grove observation well 6. Extremes of observed water level, in feet below measuring point: Highest, 3.68 Aug. 14, 1942; lowest, 6.46 Sept. 27, 1941.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	4.90	Apr. 13	4.34	July 3	4.95	Sept. 25	4.79
15	5.00	25	4.87	17	4.82	Oct. 9	4.53
30	4.86	May 9	4.97	31	4.73	23	4.18
Feb. 12	4.70	23	4.82	Aug. 14	3.68	Nov. 6	4.43
26	4.81	June 7	5.24	28	4.37	19	4.55
Mar. 13	4.68	20	5.38	Sept. 14	4.61	Dec. 4	4.29
27	4.62						

30.23.4.1.9 (*936, p. 113). Penns Grove observation well 7. Extremes of observed water level, in feet below measuring point: Highest, 3.03 Aug. 14, 1942; lowest, 7.28 Nov. 22, 1941.

Salem County - Penns Grove area--Continued

30.23.4.1.9. Penns Grove observation well 7--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	5.06	Apr. 13	4.13	July 3	5.55	Sept.25	5.10
15	5.00	25	4.30	17	5.35	Oct. 9	5.30
30	4.50	May 9	4.56	31	5.55	23	4.37
Feb. 12	4.25	23	4.70	Aug. 14	3.03	Nov. 6	4.36
26	4.30	June 7	5.07	28	4.23	19	4.42
Mar. 13	4.15	20	5.40	Sept.14	4.69	Dec. 4	4.05
27	4.10						

30.22.6.6.7 (*936, p. 113). Penns Grove observation well 9. Extremes of observed water level, in feet below measuring point: Highest, 3.24 feet Mar. 13, 1941; lowest, 7.30 Oct. 25, 1941.

Water level, in feet below measuring point, 1942

Jan. 3	4.78	Apr. 13	3.86	July 3	6.12	Sept.25	5.63
15	5.02	25	4.43	17	6.00	Oct. 9	5.35
30	4.48	May 9	4.89	31	5.45	23	4.32
Feb. 12	4.17	23	4.96	Aug. 14	3.45	Nov. 6	4.44
26	4.25	June 7	5.58	28	4.33	19	4.65
Mar. 13	3.96	20	5.97	Sept.14	5.10	Dec. 4	3.94
27	3.95						

30.22.6.9.3 (*936, p. 113). Penns Grove observation well 10. Extremes of observed water level, in feet below measuring point: Highest, 1.83 Mar. 13, 1941; lowest, 6.90 Oct. 25, 1941.

Water level, in feet below measuring point, 1942

Jan. 3	4.24	Apr. 13	2.72	July 3	5.68	Sept.25	4.97
15	4.25	25	3.39	17	5.42	Oct. 9	4.95
30	3.45	May 9	3.85	31	5.48	23	3.26
Feb. 12	2.98	23	4.04	Aug. 14	2.54	Nov. 6	3.40
26	3.14	June 7	4.80	28	3.55	19	3.58
Mar. 13	2.80	20	5.26	Sept.14	4.43	Dec. 4	2.60
27	2.84						

30.23.4.7.8 (*936, p. 114). Penns Grove observation well 11. Extremes of observed water level, in feet below measuring point: Highest, 5.80 Dec. 11, 1940; lowest, 11.37 Feb. 12, 1942.

Water level, in feet below measuring point, 1942

Jan. 3	11.26	Apr. 13	10.20	July 3	9.86	Sept.25	9.90
15	11.30	25	9.95	17	9.90	Oct. 9	9.94
30	11.36	May 9	9.80	31	9.97	23	9.97
Feb. 12	11.37	23	9.77	Aug. 14	10.01	Nov. 6	9.98
26	11.32	June 7	9.76	28	9.94	19	10.00
Mar. 13	11.15	20	9.80	Sept.14	10.00	Dec. 4	10.00
27	10.78						

30.22.8.3.5 (*936, p. 114). Penns Grove observation well 12. Extremes of observed water level, in feet below measuring point; Highest, 1.16 Mar. 13, 1941; lowest, 3.82 Oct. 11, 1941.

Water level, in feet below measuring point, 1942

Jan. 3	2.55	Apr. 13	1.59	July 3	3.75	Sept.25	2.72
15	2.58	25	1.88	17	3.80	Oct. 9	2.66
30	2.33	May 9	2.25	31	3.69	23	1.98
Feb. 12	2.08	23	2.48	Aug. 14	2.68	Nov. 6	2.02
26	2.00	June 7	2.70	28	2.50	19	2.25
Mar. 13	1.89	20	3.34	Sept.14	2.57	Dec. 4	1.95
27	1.60						

Salem County - Penns Grove area--Continued

30.22.9.2.1 (*936, p. 114). Penns Grove observation well 13. Extremes of observed water level, in feet below measuring point: Highest, 1.83 Mar. 13, 1941; lowest, 7.90 Nov. 22, 1941.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	6.14	Apr. 13	2.95	July 3	6.42	Sept. 25	6.00
15	6.10	25	4.06	17	6.54	Oct. 9	6.20
30	5.39	May 9	4.78	31	6.80	23	4.40
Feb. 12	4.46	23	5.07	Aug. 14	3.70	Nov. 6	4.46
26	4.26	June 7	5.69	28	4.58	19	4.85
Mar. 13	3.40	20	6.05	Sept. 14	5.49	Dec. 4	3.40
27	3.22						

30.22.9.6.2 (*936, p. 115). Penns Grove observation well 14. Extremes of observed water level, in feet above mean sea level: Highest, 22.51 Mar. 13, 1941; lowest, 16.94 Oct. 25, 1941.

Water level, in feet above mean sea level, 1942

Jan. 3	18.91	Apr. 13	21.25	July 3	18.06	Sept. 25	18.30
15	18.88	25	20.28	17	18.01	Oct. 9	18.12
30	19.53	May 9	19.65	31	17.76	23	19.59
Feb. 12	20.46	23	19.44	Aug. 14	21.01	Nov. 6	19.59
26	20.37	June 7	18.83	28	19.63	19	19.30
Mar. 13	21.03	20	18.40	Sept. 14	18.43	Dec. 4	20.75
27	21.23						

30.22.9.5.8 (*936, p. 115). 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 above mean sea level, 1942

Jan. 3	3.50	Apr. 13	5.27	July 3	4.22	Sept. 25	3.44
15	3.44	25	5.51	17	3.88	Oct. 9	3.29
30	3.35	May 9	5.38	31	3.58	23	3.16
Feb. 12	3.48	23	5.13	Aug. 14	3.38	Nov. 6	3.15
26	3.75	June 7	4.81	28	3.78	19	3.19
Mar. 13	4.05	20	4.51	Sept. 14	3.61	Dec. 4	3.25
27	4.61						

30.22.9.5.5 (*936, p. 115). Penns Grove observation well 21. Extremes of observed water level, in feet above mean sea level: Highest, 14.87 Mar. 13, 1941; lowest, 8.56 Dec. 6, 1941.

Water level, in feet above mean sea level, 1942

Jan. 3	8.95	Apr. 13	11.99	July 3	9.49	Sept. 25	9.15
15	8.99	25	11.69	17	9.13	Oct. 9	8.83
30	9.06	May 9	11.19	31	8.80	23	8.85
Feb. 12	9.55	23	10.70	Aug. 14	9.41	Nov. 6	9.14
26	10.17	June 7	10.24	28	9.77	19	9.14
Mar. 13	10.80	20	9.87	Sept. 14	9.42	Dec. 4	9.53
27	11.64						

30.22.9.4.9 (*936, p. 116). Penns Grove observation well 22. Extremes of observed water level: Highest, 14.92 feet above mean sea level Aug. 18, 1939; well dry after July 11, 1942.

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts Mar. 21 to May 29; tape measurements after May 29)

Mar. 21	20.20	Apr. 4	20.31	Apr. 14	19.96	Apr. 24	19.95
22	19.85	5	20.33	15	19.96	25	20.12
23	19.80	6	20.33	16	19.90	26	20.18
24	20.00	7	20.35	17	19.87	27	20.23
25	20.09	8	20.35	18	19.80	28	20.28
26	20.17	9	20.34	19	19.85	29	20.28
27	20.45	10	20.33	20	19.80	30	20.21
Apr. 1	19.96	11	20.20	21	19.77	May 1	20.19
2	20.22	12	20.00	22	19.70	2	20.21
3	20.30	13	19.96	23	19.81	3	20.30

Salem County - Penns Grove area--Continued

30.22.9.4.9. Penns Grove observation well 22--Continued.

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts Mar. 21 to May 29; tape measurements after May 29)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 4	20.29	May 13	20.20	May 21	20.00	May 29	20.25
5	19.91	14	20.25	22	20.00	30	a20.32
6	19.96	15	20.25	23	19.81	June 7	b20.46
7	19.96	16	20.25	24	19.82	13	c20.24
8	19.87	17	20.25	25	20.00	20	d20.36
9	19.86	18	20.20	26	20.00	27	e20.50
10	19.95	19	20.09	27	20.12	July 4	f20.25
11	19.96	20	20.00	28	20.21	11	g20.47
12	20.10						

30.22.9.7.3 (*936, p. 117). Penns Grove observation well 24. Extremes observed water level, in feet below measuring point: Highest, 0.04 Apr. 10-16, 1941; lowest, 5.62 Nov. 30 and Dec. 3, 1942.

Water level at end of day, in feet, below mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5.02	5.34	5.14	4.18	3.21	3.50	4.13	4.79	4.94	5.22	5.50	5.56
2	5.04	5.36	5.11	4.12	3.20	3.51	4.16	4.82	4.95	5.24	5.51	5.61
3	5.05	5.38	5.10	4.07	3.18	3.52	4.18	4.83	4.96	5.24	5.51	5.62
4	5.08	5.38	5.11	4.04	3.17	3.53	4.20	4.86	4.98	5.26	5.52	5.61
5	5.09	5.38	5.07	3.99	3.18	3.56	4.23	4.87	4.99	5.27	5.52	5.60
6	5.10	5.38	5.05	3.95	3.17	3.57	4.24	4.90	5.01	5.28	5.52	5.59
7	5.12	5.38	5.02	3.91	3.15	3.60	4.27	4.92	5.01	5.29	5.52	5.59
8	5.13	5.38	4.99	3.88	3.16	3.60	4.28	4.94	5.02	5.30	5.53	5.58
9	5.14	5.36	4.96	3.84	3.16	3.61	4.32	4.96	5.03	5.31	5.53	5.58
10	5.15	5.33	4.95	3.79	3.18	3.62	4.33	4.97	5.03	5.32	5.54	5.56
11	5.17	5.32	4.92	3.75	3.19	3.62	4.36	5.00	5.04	5.34	5.54	5.55
12	5.17	5.32	4.91	3.72	3.17	3.63	4.39	5.02	5.05	5.36	5.55	5.54
13	5.18	5.32	4.88	3.70	3.19	3.67	4.40	5.03	5.07	5.37	5.56	5.53
14	5.19	5.32	4.86	3.65	3.21	3.74	4.41	4.89	5.08	5.38	5.56	5.52
15	5.20	5.33	4.83	3.61	3.22	3.77	4.44	4.82	5.08	5.39	5.57	5.50
16	5.21	5.30	4.79	3.58	3.23	3.78	4.46	4.79	5.09	5.40	5.57	5.50
17	5.22	5.32	4.76	3.52	3.26	3.81	4.49	4.77	5.10	....	5.57	5.48
18	5.23	5.29	4.73	3.50	3.27	3.83	4.50	4.76	5.11	5.41	5.57	5.48
19	5.23	5.26	4.70	3.47	3.28	3.85	4.52	4.76	5.11	5.42	5.58	5.48
20	5.24	5.24	4.67	3.44	3.29	3.88	4.54	4.76	5.14	5.42	5.58	5.46
21	5.26	5.22	4.60	3.41	3.30	3.91	4.56	4.77	5.14	5.43	5.59	5.46
22	5.26	5.21	4.58	3.39	3.30	3.92	4.59	4.78	5.15	5.44	5.60	5.44
23	5.27	5.19	4.55	3.37	3.32	3.95	4.61	4.81	5.16	5.45	5.60	5.44
24	5.28	5.18	4.52	3.34	3.36	3.98	4.63	4.84	5.17	5.45	5.59	5.43
25	5.29	5.17	4.47	3.32	3.37	4.02	4.66	4.86	5.18	5.46	5.60	5.42
26	5.30	5.16	4.43	3.28	3.38	4.03	4.67	4.87	5.18	5.46	5.60	5.42
27	5.31	5.14	4.38	3.29	3.41	4.05	4.69	4.89	5.19	5.47	5.61	5.41
28	5.32	5.14	4.34	3.27	3.43	4.09	4.71	4.90	5.20	5.48	5.61	5.39
29	5.33	....	4.30	3.25	3.44	4.10	4.73	4.92	5.21	5.48	5.61	5.37
30	5.33	....	4.27	3.23	3.45	4.12	4.76	4.94	5.21	5.48	5.62	5.32
31	5.33	....	4.22	....	3.49	....	4.78	4.94	....	5.49	....	5.28

30.32.2.2.3 (*936, p. 118). Penns Grove observation well 31. Extremes of observed water level, in feet with reference to mean sea level: Highest, +0.26 Mar. 13, 1941; lowest, -4.23 Nov. 22, 1941.

a 9:00 a.m.
b 11:15 and 11:30 a.m.
c 8:20 and 8:30 a.m.
d 2:30 and 2:35 p.m.
e 10:30 a.m.
f 9:00 and 9:10 a.m.
g 8:00 a.m.

Salem County - Penns Grove area--Continued

30.32.2.2.3. Penns Grove observation well 31--Continued.

Water level, in feet below mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	3.68	Apr. 13	1.16	July 3	2.95	Sept.25	3.30
15	3.67	25	1.58	17	3.25	Oct. 9	3.37
30	3.45	May 9	1.93	31	3.48	23	2.68
Feb. 12	2.98	23	2.15	Aug. 14	2.74	Nov. 6	2.57
26	2.70	June 7	2.40	28	2.67	19	2.73
Mar. 13	2.02	20	2.67	Sept.14	3.03	Dec. 4	2.10
27	1.60						

30.22.8.9.5 (*936, p. 119). Penns Grove observation well 32. Extremes of observed water level, in feet, with reference to mean sea level: Highest, +1.65 Mar. 13, 1941; lowest,-1.06 Nov. 22, 1941.

Water level, in feet, with reference to mean sea level, 1942

Jan. 3	-0.52	Apr. 13	+0.80	July 3	-0.51	Sept.25	-0.66
15	-.52	25	+.51	17	-.66	Oct. 9	-.70
30	-.30	May 9	+.30	31	-.82	23	-.22
Feb. 12	+.18	23	+.03	Aug. 14	+.48	Nov. 6	-.16
26	+.25	June 7	-.32	28	-.16	19	-.32
Mar. 13	+.60	20	-.22	Sept.14	-.47	Dec. 4	+.16
27	+.79						

30.22.9.8.6 (*936, p. 119). Penns Grove observation well 35. Extremes of observed water level, in feet above mean sea level: Highest, 18.66 Nov. 29, 1940; lowest, 0.35 Oct. 9, 1942.

Water level, in feet above mean sea level, 1942

Jan. 3	0.95	Apr. 13	2.87	July 3	1.37	Sept.25	0.52
15	.88	25	2.94	17	1.02	Oct. 9	.35
30	1.01	May 9	2.74	31	.66	23	.75
Feb. 12	1.25	23	2.52	Aug. 14	.95	Nov. 6	.99
26	1.56	June 7	2.11	28	1.17	19	1.02
Mar. 13	1.93	20	1.74	Sept.14	.73	Dec. 4	1.35
27	2.43						

30.22.9.8.4 (*936, p. 119). Penns Grove observation well 36. Extremes of observed water level, in feet below mean sea level: Highest, 0.76 Dec. 17, 1940; lowest, 9.39 Dec. 4, 1942.

Water level, in feet below mean sea level, 1942

Jan. 3	8.89	Apr. 13	7.94	July 3	8.25	Sept.25	9.13
15	8.99	25	7.39	17	8.60	Oct. 9	9.22
30	9.09	May 9	7.09	31	8.91	23	9.35
Feb. 12	9.23	23	7.27	Aug. 14	9.16	Nov. 6	9.32
26	9.22	June 7	7.59	28	9.26	19	9.31
Mar. 13	9.04	20	7.91	Sept.14	9.15	Dec. 4	9.39
27	8.67						

30.32.2.3.3 (*936, p. 120). Penns Grove observation well 41. Extremes of observed water level, in feet above mean sea level: Highest, 10.4 Apr. 7 and 8, 1941; lowest, 4.9 on several days in October, November, and December 1941.

Water level at end of day, in feet above mean sea level, 1942

(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
1	....	8.95	10.30	9.00	7.75	6.70	6.50	7.30	6.25	....
2	....	9.05	10.25	8.95	7.75	6.80	6.50	7.25	6.50	....
3	....	9.55	10.20	8.90	7.75	6.85	6.45	7.20	6.40	....
4	....	9.60	10.10	8.80	7.75	6.85	6.35	7.10	6.30	....
5	....	9.70	10.00	8.70	7.70	6.80	....	7.05	6.30	....
6	....	9.85	10.00	8.70	7.60	6.75	....	7.00	6.25	7.80
7	....	9.85	10.00	8.80	7.55	6.70	....	7.00	6.20	7.75
8	....	9.90	10.10	8.75	7.55	6.60	....	7.00	6.15	7.75

Salem County - Penns Grove area--Continued

30.32.2.3.3. Penns Grove observation well 41--Continued.

Water level at end of day, in feet above mean sea level, 1942
(From recorder charts)

Day	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.
9	8.45	10.20	10.00	8.75	7.55	6.55	....	6.95	6.10	7.70
10	8.50	10.25	9.75	8.70	7.50	6.50	....	6.90	6.05	7.80
11	8.55	10.25	9.80	8.60	7.50	6.65	....	6.80	6.05	....
12	8.55	10.35	9.90	8.55	7.40	6.90	....	6.80	6.00	....
13	8.55	10.35	9.95	8.50	7.40	6.90	....	6.70	5.95	....
14	8.55	10.10	10.00	8.40	7.45	6.85	....	6.65	5.95	....
15	8.50	10.10	9.95	8.35	7.35	6.80	....	6.60	5.95	....
16	8.70	10.00	9.85	8.35	7.30	6.60	....	6.55	6.80	....
17	8.95	9.90	9.85	8.75	7.25	6.55	....	6.55	7.15	....
18	9.10	9.95	9.75	8.70	7.15	6.50	....	6.55	7.35	....
19	9.10	9.95	9.65	8.65	7.10	6.45	....	6.50	7.40	7.60
20	9.15	9.90	9.55	8.55	7.05	6.50	....	....	7.40	7.60
21	9.15	10.10	9.50	8.45	7.00	6.45	....	....	7.50	7.60
22	9.10	10.25	9.45	8.45	7.00	6.35	....	....	7.50	7.50
23	9.10	10.20	9.40	8.40	6.95	6.35	....	....	7.50	7.50
24	9.10	10.10	9.35	8.30	6.85	6.35	....	....	7.50	7.60
25	9.05	10.00	9.30	8.25	6.75	6.30	....	....	7.50	7.95
26	9.05	10.00	9.20	8.15	6.75	6.30	....	....	7.60	8.20
27	9.00	9.95	9.20	8.10	6.80	6.35	....	....	....	8.30
28	8.95	9.85	9.15	7.95	6.80	6.30	7.50	....	....	8.30
29	....	10.10	9.10	7.90	6.75	6.25	7.50	....	....	....
30	....	10.25	9.05	7.85	6.70	6.20	7.40	....	....	....
31	....	10.35	....	7.80	....	6.35	7.35	....	....	....

30.32.2.3.9 (*936, p. 120). Penns Grove observation well 51. Extremes of observed water level, in feet above mean sea level: Highest, 10.99 Mar. 13, 1941; lowest, 4.60 Oct. 25, 1941.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	7.29	Apr. 13	10.53	July 3	6.58	Sept.25	5.63
15	7.51	25	9.54	17	6.31	Oct. 9	5.60
30	8.66	May 9	8.89	31	5.84	23	7.21
Feb. 12	9.67	23	8.68	Aug. 14	6.39	Nov. 6	7.83
26	9.64	June 7	7.71	28	7.01	19	7.90
Mar. 13	10.35	20	7.11	Sept.14	6.21	Dec. 4	9.64
27	10.28						

30.32.2.5.1 (*936, p. 121). Penns Grove observation well 52. Extremes of observed water level, in feet below mean sea level: Highest, 8.91 Mar. 29, 1941; lowest, 13.65 Feb. 12, 1942.

Water level, in feet below mean sea level, 1942

Jan. 3	13.59	Apr. 13	11.62	July 3	11.14	Sept.25	11.94
15	13.57	25	11.20	17	11.51	Oct. 9	12.15
30	13.62	May 9	11.16	31	11.88	23	12.05
Feb. 12	13.65	23	11.16	Aug. 14	11.88	Nov. 6	11.92
26	13.27	June 7	10.86	28	11.59	19	12.06
Mar. 13	12.88	20	10.86	Sept.14	11.62	Dec. 4	12.05
27	12.60						

30.32.2.6.5 (*936, p. 121). Penns Grove observation well 54. Extremes of observed water level: Well flowing Mar. 13, 1941; lowest, 7.99 feet above mean sea level Nov. 22, 1941.

Water level, in feet above mean sea level, 1942

Jan. 3	10.24	Mar. 27	12.90	June 20	10.16	Sept.14	9.29
15	10.37	Apr. 13	13.13	July 3	9.83	25	9.17
30	11.09	25	12.34	17	9.49	Oct. 9	9.19
Feb. 12	11.92	May 9	11.71	31	9.06	23	10.87
26	12.04	23	11.45	Aug. 14	9.85	Nov. 6	(a)
Mar. 13	12.65	June 7	10.76	28	10.11		

a Well pipe broken off. Altitude of new measuring point not yet determined.

Salem County - Penns Grove area--Continued

30.32.3.5.5 (*936, p. 121). Penns Grove observation well 55. Extremes of observed water level, in feet above mean sea level: Highest, 7.22 Dec. 2, 1940; lowest, 2.70 feet Oct. 25, 1941.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	5.36	Apr. 13	6.62	July 3	4.02	Sept.25	3.72
15	5.25	25	5.92	17	3.89	Oct. 9	3.81
30	6.00	May 9	5.53	31	3.42	23	5.54
Feb. 12	6.43	23	5.42	Aug. 14	5.00	Nov. 6	5.63
26	6.24	June 7	4.69	28	4.57	19	5.37
Mar. 13	6.51	20	4.15	Sept.14	3.76	Dec. 4	6.44
27	6.52						

30.32.2.5.8 (*936, p. 122). Penns Grove observation well 62. Extremes of observed water level, in feet below top of casing: Highest, 18.94 Apr. 26, 1941; lowest, 22.00 Feb. 13, 1942.

Water level, in feet below top of casing, 1942

Feb. 13	22.00	May 9	20.50	July 31	20.87	Oct. 9	21.35
26	21.96	23	20.42	Aug. 14	21.00	23	21.00
Mar. 13	21.77	June 7	20.26	28	21.02	Nov. 6	21.45
27	21.46	20	20.34	Sept.14	21.13	19	21.57
Apr. 13	21.12	July 3	20.60	25	21.26	Dec. 4	21.60
25	20.70	17	20.72				

30.32.2.9.1 (*936, p. 122). Penns Grove observation well 63. Extremes of observed water level, in feet above mean sea level: Highest, 15.10 Mar. 13, 1941; lowest, 8.70 Nov. 22, 1941.

Water level, in feet above mean sea level, 1942

Jan. 3	10.49	Apr. 13	14.46	July 3	10.47	Sept.25	9.86
15	10.72	25	13.49	17	10.09	Oct. 9	9.78
30	11.46	May 9	12.71	31	9.73	23	11.13
Feb. 12	12.68	23	12.28	Aug. 14	10.21	Nov. 6	11.67
26	13.07	June 7	11.51	28	10.79	19	11.58
Mar. 13	13.97	20	10.92	Sept.14	9.99	Dec. 4	12.96
27	14.27						

30.32.2.9.5 (*936, p. 122). Penns Grove observation well 64. Extremes of observed water level, in feet with reference to mean sea level: Highest, +2.00 Mar. 13, 1941; lowest, -0.34 Oct. 25, 1941.

Water level, in feet, with reference to mean sea level, 1942

Jan. 3	+0.85	Apr. 13	+1.10	July 3	+0.28	Sept.25	+1.05
15	+.30	25	+1.08	17	+.32	Oct. 9	+1.13
30	+1.17	May 9	+.67	31	+.16	23	+1.40
Feb. 12	+1.14	23	+.63	Aug. 14	+1.79	Nov. 6	+1.33
26	+.87	June 7	+.17	28	+1.04	19	+1.29
Mar. 13	+1.04	20	-.17	Sept.14	+.60	Dec. 4	+1.32
27	+1.00						

30.32.6.1.6 (*936, p. 123). Penns Grove observation well 65. Extremes of observed water level, in feet above mean sea level: Highest, 8.63 Mar. 13, 1941; lowest, 2.45 Nov. 22, 1941.

Water level, in feet above mean sea level, 1942

Jan. 3	4.05	Apr. 13	8.04	July 3	4.52	Sept.25	4.25
15	4.21	25	7.24	17	4.12	Oct. 9	4.07
30	4.78	May 9	6.65	31	3.68	23	5.34
Feb. 12	5.96	23	6.25	Aug. 14	4.57	Nov. 6	5.59
26	6.39	June 7	5.52	28	4.59	19	5.37
Mar. 13	7.31	20	4.87	Sept.14	3.83	Dec. 4	6.72
27	7.67						

Salem County - Penns Grove area--Continued

30.32.1.9.5 (*936, p. 123). Penns Grove observation well 71. Extremes of observed water level, in feet below top of casing: Highest, 6.67 Mar. 13, 1941; lowest, Dec. 6, 1941.

Water level, in feet below top of casing, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	10.98	Apr. 13	7.25	July 3	9.79	Sept.25	10.44
15	10.95	25	7.91	17	10.05	Oct. 9	10.66
30	10.78	May 9	8.35	31	10.37	23	10.10
Feb. 12	10.23	23	8.70	Aug. 14	9.87	Nov. 6	9.80
26	9.60	June 7	9.12	28	9.70	19	9.85
Mar. 13	9.00	20	9.44	Sept.14	10.17	Dec. 4	9.54
27	8.28						

30.32.5.1.3 (*936, p. 123). Penns Grove observation well 72. Extremes of observed water level, in feet below top of casing: Highest, 4.02 Mar. 13, 1941; lowest, 9.41 Nov. 22, 1941.

Water level, in feet below top of casing, 1942

Jan. 3	8.38	Apr. 13	4.95	July 3	7.78	Sept.25	8.16
15	8.30	25	5.75	17	8.02	Oct. 9	8.29
30	7.90	May 9	6.36	31	8.27	23	7.16
Feb. 12	7.13	23	6.74	Aug. 14	7.63	Nov. 6	6.96
26	6.76	June 7	7.13	28	7.32	19	7.30
Mar. 13	5.90	20	7.52	Sept.14	7.95	Dec. 4	6.32
27	5.36						

30.32.4.6.4 (*936, p. 124). Penns Grove observation well 73. Extremes of observed water level, in feet below top of casing: Highest, 1.91 Mar. 13, 1941; lowest, 5.92 Oct. 25, 1941.

Water level, in feet below top of casing, 1942

Jan. 3	3.23	Apr. 13	2.25	July 3	3.69	Sept.25	3.81
15	3.22	25	2.70	17	4.14	Oct. 9	3.67
30	2.85	May 9	3.24	31	4.45	23	2.46
Feb. 12	2.55	23	3.08	Aug. 14	2.53	Nov. 6	2.60
26	2.69	June 7	3.64	28	3.14	19	2.79
Mar. 13	2.43	20	3.97	Sept.14	3.70	Dec. 4	2.31
27	2.38						

30.32.5.4.6 (*936, p. 124). Penns Grove observation well 74. Extremes of observed water level, in feet below top of casing: Highest, 2.27 Dec. 3, 1940; lowest, 8.70 Dec. 6, 1941.

Water level, in feet below top of casing, 1942

Jan. 3	8.48	Apr. 13	6.24	July 3	7.92	Sept.25	7.87
15	8.38	25	6.40	17	8.13	Oct. 9	8.00
30	8.23	May 9	6.72	31	8.29	23	7.45
Feb. 12	7.78	23	7.05	Aug. 14	8.26	Nov. 6	7.09
26	7.38	June 7	7.37	28	7.47	19	7.22
Mar. 13	6.79	20	7.65	Sept.14	7.72	Dec. 4	7.04
27	6.39						

30.32.4.8.7 (*936, p. 124). Penns Grove observation well 81. Extremes of observed water level, in feet below top of casing: Highest, 5.94 Mar. 13, 1941; lowest, 13.56 Dec. 6, 1941.

Water level, in feet below top of casing, 1942

Jan. 3	12.87	Apr. 13	7.23	July 3	11.71	Sept.25	11.46
15	12.71	25	7.58	17	11.93	Oct. 9	11.77
30	12.42	May 9	9.60	31	12.17	23	10.12
Feb. 12	11.49	23	10.24	Aug. 14	11.98	Nov. 6	9.32
26	9.92	June 7	10.82	28	10.05	19	9.77
Mar. 13	8.14	20	11.29	Sept.14	11.04	Dec. 4	8.07
27	7.47						

Salem County - Penns Grove area--Continued

30.32.5.7.7 (*936, p. 125). Penns Grove observation well 84. Extremes of observed water level, in feet below top of casing: Highest, 0.56 Dec. 17, 1940; lowest, 7.08 Nov. 22, 1941.

Water level, in feet below top of casing, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	5.71	Apr. 13	1.09	July 3	4.84	Sept.25	4.95
15	5.35	25	2.28	17	5.16	Oct. 9	5.09
30	3.90	May 9	2.96	31	5.52	23	2.08
Feb. 12	2.22	23	3.25	Aug. 14	3.55	Nov. 6	2.00
26	2.25	June 7	4.10	28	3.30	19	2.40
Mar. 13	1.40	20	4.75	Sept.14	4.55	Dec. 4	1.32
27	1.32						

30.31.9.6.6 (*936, p. 125). Penns Grove observation well 91. Extremes of observed water level, in feet below top of casing: Highest, 4.28 Mar. 13, 1941; lowest, 8.79 Oct. 11, 1941.

Water level, in feet below top of casing, 1942

Jan. 3	6.64	Apr. 13	4.94	July 3	7.45	Sept.25	7.08
15	6.70	25	5.86	17	7.57	Oct. 9	7.15
30	6.10	May 9	6.34	31	7.59	23	5.44
Feb. 12	5.48	23	6.67	Aug. 14	5.74	Nov. 6	5.70
26	5.73	June 7	7.07	28	5.94	19	6.06
Mar. 13	5.09	20	7.45	Sept.14	6.84	Dec. 4	5.13
27	5.12						

30.32.7.6.9 (*936, p. 125). Penns Grove observation well 92. Extremes of observed water level, in feet below top of casing: Highest, 3.40 Mar. 13, 1941; lowest, 12.47 Dec. 6, 1941.

Water level, in feet below top of casing, 1942

Jan. 3	12.36	Apr. 13	7.38	July 3	10.68	Sept.25	10.19
15	12.30	25	7.89	17	10.92	Oct. 9	10.47
30	12.23	May 9	8.72	31	11.18	23	8.98
Feb. 12	11.87	23	9.33	Aug. 14	11.07	Nov. 6	8.37
26	11.24	June 7	9.85	28	9.02	19	8.80
Mar. 13	9.96	20	10.30	Sept.14	9.84	Dec. 4	7.70
27	8.40						

30.22.9.4.3 (*936, p. 126). Penns Grove observation well E14. Extremes of observed water level, in feet above mean sea level: Highest, 16.69 May 24, 1940; lowest, 9.82 Dec. 6, 1941.

Water level, in feet above mean sea level, 1942

Jan. 3	10.48	Mar. 27	13.68	July 3	10.88	Sept.25	10.66
15	10.56	Apr. 13	14.04	17	10.54	Oct. 9	10.34
30	10.79	25	13.39	31	10.22	23	10.59
Feb. 12	11.42	May 9	12.65	Aug. 14	10.56	Nov. 6	10.95
26	12.02	23	12.19	28	11.45	19	10.84
Mar. 13	12.79	June 20	11.28	Sept.14	10.99	Dec. 4	11.49

30.22.9.5.4 (*936, p. 126). Penns Grove observation well E15. Extremes of observed water level, in feet above mean sea level: Highest, 15.12 Apr. 23, 1940; lowest, 6.12 Oct. 23, 1942.

Water level, in feet above mean sea level, 1942

Jan. 3	6.48	Apr. 13	8.93	July 3	6.93	Sept.25	6.46
15	6.52	25	8.81	17	6.56	Oct. 9	6.24
30	6.52	May 9	8.39	31	6.33	23	6.12
Feb. 12	6.76	23	8.00	Aug. 14	6.17	Nov. 6	6.28
26	7.13	June 7	7.56	28	6.81	19	6.36
Mar. 13	7.70	20	7.25	Sept.14	6.65	Dec. 4	6.49
27	8.46						

Salem County - Penns Grove area--Continued

30.32.2.6.4 (*936, p. 127). Penns Grove observation well E16. Extremes of observed water level, in feet above mean sea level: Highest, 14.78 Mar. 13, 1941; lowest, 10.31 Nov. 22, 1941.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	12.00	Apr. 13	14.69	July 3	12.12	Sept.25	11.41
15	12.08	25	13.95	17	11.65	Oct. 9	11.28
30	12.97	May 9	13.32	31	11.34	23	12.81
Feb. 12	13.95	23	13.30	Aug. 14	12.52	Nov. 6	13.18
26	14.09	June 7	12.65	28	12.08	19	12.95
Mar. 13	14.55	20	12.25	Sept.14	11.57	Dec. 4	14.25
27	14.63						

30.22.9.9.8 (*936, p. 127). Penns Grove test well R5. Extremes of observed water level, in feet above mean sea level: Highest, 10.30 Apr. 24, 1940; lowest, 4.41 Oct. 25, 1941.

Water level, in feet above mean sea level, 1942

Jan. 3	6.09	Apr. 13	7.97	July 3	5.52	Sept.25	4.99
15	6.04	25	7.55	17	5.30	Oct. 9	4.90
30	6.48	May 9	7.14	31	5.10	23	6.07
Feb. 12	6.98	23	6.86	Aug. 14	6.09	Nov. 6	6.32
26	7.07	June 7	6.26	28	5.98	19	6.24
Mar. 13	7.50	20	5.81	Sept.14	5.34	Dec. 4	7.04
27	7.79						

30.23.7.1.4 (*936, p. 128). Penns Grove test well R7. Extremes of observed water level, in feet above mean sea level: Highest, 23.90 Apr. 30, 1940; lowest, 18.85 Nov. 22, 1941.

Water level, in feet above mean sea level, 1942

Jan. 3	20.76	Apr. 13	22.84	July 3	20.12	Sept.25	20.08
15	20.75	25	22.17	17	20.01	Oct. 9	19.98
30	21.35	May 9	21.76	31	19.68	23	21.54
Feb. 12	22.12	23	21.60	Aug. 14	22.21	Nov. 6	21.63
26	22.15	June 7	20.82	28	21.36	19	21.42
Mar. 13	22.60	20	20.36	Sept.14	20.55	Dec. 4	22.56
27	22.75						

30.32.3.6.5 (*936, p. 128). Penns Grove observation well R8. Extremes of observed water level, in feet above mean sea level: Highest, 5.96 May 2, 1940; lowest, 2.46 Oct. 25, 1941.

Water level, in feet above mean sea level, 1942

Jan. 3	3.96	Apr. 13	5.22	July 3	3.33	Sept.25	3.25
15	3.93	25	4.93	17	3.27	Oct. 9	3.30
30	4.25	May 9	4.61	31	2.99	23	4.00
Feb. 12	4.61	23	4.44	Aug. 14	3.50	Nov. 6	4.29
26	4.67	June 7	3.97	28	3.73	19	4.26
Mar. 13	4.97	20	3.58	Sept.14	3.33	Dec. 4	4.75
27	5.10						

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CENTRAL NEW YORK

By G. R. Ayer

The periodic observation of water levels in a few wells in the central part of the State of New York, begun in connection with a study made to determine the effects of reforestation on stream flow, was continued in 1942 by the Geological Survey, United States Department of the Interior, in cooperation with the New York State Department of Conservation. At the end of the year seven wells were under observation--four in Cortland County, two in Chenango County, and one in Delaware County. It is to be noted that none of the wells is affected by pumping or by any other act of man.

Four of the observation wells in central New York are equipped with automatic water-stage recorders, which are inspected weekly by local observers and occasionally by an engineer of the Geological Survey. The records presented in this report are limited to the weekly measurements of water level in these four wells. In all, 251 measurements were made in these wells during 1942.

FLUCTUATIONS OF WATER LEVEL

Ground-water conditions in the areas in which the observation wells are situated are briefly discussed in Water-Supply Paper 886, especially as they are affected by the topography and geology, which are similar in the three areas. Of the four well records included in this report, that of Shackham Brook well 1, in Cortland County, best reflects the effect of climatologic variations on the fluctuation of water levels in these areas. The year 1942 was characterized generally by several heavy rains during the summer and early fall, particularly in August, and as a result the decline in water levels was not as great as is usual during that period--they were higher than in 1941, about the same as in 1940, and higher than in 1939. By the latter part of August the water levels had risen until they were about as high as on May 1, and at the end of December they were slightly higher than at the beginning of the year. In all wells the water level showed a small net gain for the year. Temperatures, particularly during the summer months, averaged about the same as in 1941.

WATER-LEVEL MEASUREMENTS

The four observation wells in central New York whose records are included in this report are listed alphabetically by counties and by name within each county. Complete descriptions of the wells are not given because they have already been published in earlier reports of the Geological Survey. The numbers in parentheses immediately following the name of a well indicate the water-supply papers in which earlier records of that well are given and the pages on which they appear. An asterisk preceding the number of a water-supply paper indicates that a description of the well is given in the paper so marked. The water level in each well is expressed in feet below a fixed measuring point.

Chenango County

Sage Brook well 2 (*777, p. 128; 817, p. 198; 840, p. 256; *845, p. 302; *886, p. 469; *906, p. 108; *936, p. 130). Latitude 42°31'55", longitude 75°25'30". About 50 feet upstream from gaging station, 100 feet to left of Sage Brook, and about 2.5 miles west of South New Berlin. Extremes of water level, in feet below measuring point, 1942: Highest, 0.90 May 23; lowest, 2.78 Aug. 29. Calendar-year gain, 0.05 foot (1.73-1.68). Bottom of well is 8.5 feet below measuring point; land surface is 1.0 foot below measuring point.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	1.70	Apr. 6	1.70	July 6	1.95	Oct. 5	1.73
12	1.77	13	1.52	13	1.83	12	1.74
19	1.67	20	1.66	20	1.81	19	1.71
26	1.73	27	1.71	27	1.92	26	1.16
Feb. 2	1.74	May 4	1.67	Aug. 3	1.76	Nov. 2	1.66
9	1.78	11	1.74	10	1.72	9	1.73
16	1.83	18	1.76	17	1.80	16	1.76
23	1.88	25	1.68	24	2.26	23	1.72
Mar. 2	1.89	June 1	1.26	31	1.92	30	1.74
9	1.12	8	1.70	Sept. 7	2.01	Dec. 7	1.76
16	1.69	15	1.67	14	1.75	14	1.81
23	1.60	22	1.67	20	1.80	21	1.84
30	1.66	29	1.95	28	1.57	28	1.37

Cortland County

East Homer Creek well 1 (*845, p. 303; 886, p. 470; *906, p. 109; *936, p. 131). Latitude 42°43'05", longtitude 76°06'50". On side of hill, about 70 feet to right of creek and about 2.5 miles above gaging station, in East Homer. Extremes of water level, in feet below measuring point, 1942: Highest, 1.56 Aug. 17; lowest, 6.50 Aug. 10. Calendar-year gain, 0.69 foot (3.15-2.46). Bottom of well is 11.0 feet below measuring point; land surface is 2.3 feet below measuring point.

Water level, in feet below measuring point, 1942

Jan. 4	3.05	Feb. 15	4.36	Mar. 29	2.74	May 10	3.74
11	4.59	22	3.77	Apr. 5	2.83	17	4.26
18	4.16	Mar. 1	3.70	12	2.92	24	2.81
25	2.71	8	3.66	19	3.11	31	3.72
Feb. 1	3.59	15	2.46	26	3.70	June 7	3.99
8	3.76	22	2.60	May 3	4.15	14	4.43

East Homer Creek well 1--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 21	4.73	Aug. 9	6.50	Sept. 25	4.50	Nov. 15	1.87
28	5.11	16	2.51	Oct. 3	3.95	22	1.94
July 5	5.49	22	2.09	10	3.98	29	2.14
12	5.76	29	4.12	18	4.14	Dec. 6	2.04
19	6.07	Sept. 5	4.71	25	4.04	15	3.04
26	6.25	12	2.05	Nov. 1	3.67	25	3.60
Aug. 2	6.42	19	3.92	8	3.40		

Shackham Brook well 1 (*777, p. 127; 817, p. 198; 840, p. 255; *845, p. 301; 886, p. 469; *906, p. 108; *936, p. 430). Latitude 42°46'00", longitude 76°01'10". On side of hill, about 300 feet upstream from gaging station, 500 feet to left of Shackham Brook, and about 5 miles north of Truxton. Extremes of water level, in feet below measuring point, 1942: Highest, 0.33 Dec. 30-31; lowest, 4.12 Aug. 13. Calendar-year gain, 0.18 foot (0.51-0.33). Bottom of well is at 6.1 feet below measuring point; land surface is at 0.3 foot below measuring point.

Water level, in feet below measuring point, 1942

Jan. 4	0.57	Apr. 5	0.41	July 5	2.83	Oct. 3	0.80
11	.95	12	.51	12	3.06	10	.90
18	1.38	19	.49	18	3.28	18	.83
25	.81	26	.51	25	3.52	25	.88
Feb. 1	.93	May 3	1.07	Aug. 1	3.80	Nov. 1	.61
8	1.17	10	1.03	9	3.99	8	.66
15	1.34	17	1.37	16	1.92	15	.75
22	.76	24	.57	23	.67	22	.54
Mar. 1	1.07	31	1.16	29	1.07	29	.55
8	.74	June 7	1.33	Sept. 5	1.60	Dec. 6	.57
15	.37	14	1.86	12	.70	13	.63
22	.36	21	2.09	19	.95	25	.99
29	.38	28	2.57	26	1.32		

Delaware County

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). Latitude 42°09'35", longitude 75°23'35". On side of hill, about 150 feet to left of stream-gaging station, about 1 mile upstream from China and 2 miles west of Upper Barbourville. Extremes of water level, in feet below measuring point, 1942: Highest, 2.70 May 23; lowest, 8.15 Sept. 8. Calendar-year gain, 1.00 foot (3.98-2.98). Bottom of well is 12 feet below measuring point; land surface is 2.0 feet below measuring point.

Water level, in feet below measuring point, 1942

Jan. 3	3.26	Apr. 4	3.27	July 4	6.77	Oct. 3	5.24
11	4.65	11	3.50	11	6.88	10	5.80
17	5.84	18	4.34	18	6.96	17	6.88
24	4.19	26	6.10	25	7.38	24	4.00
31	4.92	May 2	6.57	Aug. 1	4.52	31	3.94
Feb. 7	5.39	9	6.86	8	6.60	Nov. 7	5.32
14	5.77	16	7.23	15	5.59	14	4.99
21	4.31	23	2.82	22	6.84	21	3.22
28	6.05	30	5.44	30	7.44	28	3.90
Mar. 7	5.22	June 6	3.68	Sept. 5	7.95	Dec. 5	3.67
14	3.56	13	6.30	12	5.80	12	5.98
21	3.35	20	4.76	19	6.74	19	6.60
28	3.36	27	6.28	26	7.46	26	7.05

LONG ISLAND

By M. L. Brashears, Jr.

The investigations of ground-water conditions on Long Island was continued during 1942 by the Geological Survey, United States Department of the Interior, in cooperation with the New York State Water Power and Control Commission and with Nassau and Suffolk Counties. During the year the Suffolk County Water Authority, in cooperation with the Geological Survey, began additional ground-water studies in Suffolk County. A part of the ground-water investigation consisted of periodic observations of ground-water levels on Long Island. Observations were made in all four of the counties on Long Island, but in Suffolk County only in the area lying west of Riverhead. Observations were begun in 1942, as a part of the cooperative studies being made with the Suffolk County Water Authority, in about 40 test wells situated in the central part of Suffolk County. The wells were installed by the New York City Board of Water Supply at the beginning of the century, and water-level observations for 1907, 1908, and 1909 have been made available by that organization. By including these wells the area covered by periodic observations of water levels under the cooperative program has been extended approximately 25 miles eastward. In addition, at the end of the year automatic water-stage recorders were in operation on 20 observation wells. During the year, water-level measurements were made weekly in about 110 observation wells and monthly in about 40 observation wells. In all, about 9,100 individual measurements were made during 1942.

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 1942 (feet)
		Water level (feet)	Date	Water level (feet)	Date	
K10	Nov. 8, 1937	-18.53	Sept.19, 1942	-11.52	Mar. 26, 1938	-16.81
K19	Sept.10, 1940	a-26.80	Sept.26, 1941	a-24.37	July 28, 1941	a-25.70
K30	June 14, 1935	a-29.75	Nov. 8, 1941	a-24.34	June 14, 1935	a-28.83
K65	Nov. 8, 1937	-28.34	Aug. 25, 1939	-24.01	Apr. 9, 1938	-25.91
K67	Nov. 8, 1937	-20.75	Oct. 11, 1941	-18.49	Mar. 26, 1938	-19.26
K92	Dec. 11, 1937	-29.69	Dec. 11, 1937	-21.29	May 3, 1941	-22.48
K104	Aug. 27, 1940	-26.87	Nov. 15, 1941	-25.49	Mar. 25, 1941	-26.42
K502	Oct. 18, 1941	-10.08	Oct. 31, 1942	-9.41	Jan. 17, 1942	-9.74
K533	Sept. 8, 1932	a-23.89	Sept.16, 1942	a-12.73	Dec. 20, 1932	-23.31
K535	Nov. 5, 1936	+1.25	Apr. 9, 1938	+2.81	Sept.30, 1938	+1.71
K537	Feb. 1, 1936	-8.03	Nov. 21, 1942	-4.77	Sept.30, 1938	-8.03
K539	Oct. 28, 1939	-8.28	Feb. 21, 1942	-3.56	Mar. 15, 1941	-4.32
K921	Feb. 12, 1938	-27.23	Dec. 16, 1938	-22.77	Oct. 14, 1938	-25.79
K1057	Mar. 29, 1939	a+.89	Feb. 13, 1940	+10.15	Dec. 29, 1942	ab+10.15
K1139	Oct. 28, 1939	a-9.51	Mar. 10, 1942	a-1.74	Mar. 15, 1941	a-2.40
K1194	Nov. 2, 1940	-8.36	Mar. 7, 1942	-2.86	Mar. 15, 1941	-3.75
K1198	Nov. 2, 1940	-8.45	Mar. 14, 1942	-5.49	Mar. 29, 1941	-6.32
K1199	Nov. 16, 1940	-16.70	Oct. 17, 1942	-15.28	May 10, 1941	-16.52
K1235	Jan. 25, 1941	-10.65	June 27, 1942	-8.84	Apr. 26, 1941	-9.70
K1236	Jan. 25, 1941	-19.42	Oct. 4, 1941	-17.41	May 3, 1941	-18.41
K1237	Jan. 18, 1941	-34.55	Dec. 6, 1941	-31.56	Apr. 12, 1941	-34.07
K1263	Apr. 21, 1933	-11.97	July 21, 1936	-7.58	Nov. 2, 1933	-10.76
K1264	Apr. 21, 1933	-15.17	July 25, 1942	-9.42	June 28, 1933	-14.83
K1265	Apr. 21, 1933	-11.55	Aug. 22, 1942	-6.34	Apr. 21, 1933	-11.13
K1266	Apr. 21, 1933	-7.49	June 27, 1942	-2.02	Apr. 21, 1933	-6.55
K1296	Sept. 6, 1941	-8.27	Mar. 7, 1942	-2.30	Dec. 19, 1942	-2.35
N7	July 24, 1936	a+6.16	Aug. 15, 1937	a+12.75	Mar. 9, 1941	a+12.10
N9	July 3, 1936	+20.99	Sept.11, 1936	+23.57	Sept.23, 1938	+21.86
N53	Jan. 21, 1934	+12.05	Feb. 17, 1940	+16.49	Apr. 15, 1939	+13.38
N67	Mar. 16, 1932	a+13.48	Aug. 15, 1937	a+18.89	Mar. 9, 1941	a+14.84
N157	Sept.22, 1932	+75.71	May 5, 1933	a+88.84	Oct. 31, 1939	+82.37
N844	June 27, 1938	a+78.87	Apr. 16, 1942	a+85.48	Aug. 5, 1939	.....
N1101	Apr. 21, 1939	+42.93	Sept.29, 1941	+45.64	Apr. 28, 1939	+43.32
N1102	Apr. 21, 1939	+53.81	July 31, 1942	+58.64	July 28, 1939	+54.20
N1103	Apr. 21, 1939	+55.10	May 29, 1942	+60.46	June 30, 1939	+56.00
N1104	Apr. 21, 1939	+55.27	May 1, 1942	+61.15	June 2, 1939	+56.27
N1105	Apr. 21, 1939	+52.88	Mar. 30, 1942	+58.85	June 2, 1939	+53.71
N1106	Jan. 6, 1939	+48.56	Feb. 28, 1942	+54.82	May 20, 1939	.....
N1107	Apr. 21, 1939	+41.64	Feb. 27, 1942	+48.21	Apr. 28, 1939	+43.05
N1108	Apr. 21, 1939	+36.94	Jan. 30, 1942	+43.62	Apr. 28, 1939	+38.43
N1109	Apr. 21, 1939	+25.28	Jan. 30, 1942	+30.04	Apr. 21, 1939	+26.41
N1110	Apr. 21, 1939	+18.68	Dec. 1, 1941	+21.05	Apr. 21, 1939	+19.82
N1111	Apr. 21, 1939	+11.95	Nov. 3, 1939	+14.11	Mar. 30, 1942	+13.86
N1112	Jan. 6, 1939	+6.84	Dec. 13, 1941	+10.17	Apr. 8, 1939	+8.93
N1113	Apr. 21, 1939	+3.91	Oct. 31, 1941	+6.76	Apr. 21, 1939	+5.99
N1114	Apr. 21, 1939	+7.97	Dec. 1, 1941	+11.87	Apr. 21, 1939	+9.06
N1115	Apr. 21, 1939	+8.57	Dec. 1, 1941	+12.93	Apr. 21, 1939	+9.66
N1126	Mar. 12, 1938	+55.27	Jan. 31, 1942	+62.21	Apr. 29, 1939	+56.49
N1132	Apr. 2, 1938	+6.06	Feb. 24, 1940	+9.77	Sept.23, 1938	+7.71
N1140	Jan. 7, 1939	+58.32	Feb. 7, 1942	+66.09	Apr. 29, 1939	+59.59
N1147	Jan. 6, 1939	+16.62	Dec. 13, 1941	+19.72	Apr. 8, 1939	+17.46
N1160	Jan. 7, 1939	+63.37	Jan. 31, 1942	+70.90	Apr. 15, 1939	+64.87
N1167	Mar. 12, 1938	+9.63	Dec. 13, 1941	+12.92	Apr. 15, 1939	+10.67
N1174	Nov. 1, 1940	+70.77	Mar. 30, 1942	+73.89	Nov. 1, 1940	+71.73
N1175	Nov. 1, 1940	+78.13	July 31, 1942	+82.02	Nov. 1, 1940	+78.82
N1176	Nov. 1, 1940	+81.04	July 31, 1942	+85.15	Nov. 29, 1940	+81.68
N1177	Sept.27, 1940	+82.27	July 31, 1942	+86.17	Sept.27, 1940	+82.87
N1179	Apr. 29, 1940	+72.37	Jan. 30, 1942	+76.30	May 31, 1940	+74.06
N1180	Mar. 5, 1938	+65.58	Jan. 31, 1942	+71.55	Apr. 15, 1939	.....
N1181	Apr. 29, 1940	+56.30	Jan. 30, 1942	+58.85	May 31, 1940	+57.71
N1182	Mar. 5, 1938	+49.03	Jan. 30, 1942	+53.15	Sept.30, 1938	+50.39

a Based on instrumental records of lowest daily water level.
b Estimated.

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 1942 (feet)
		Water level (feet)	Date	Water level (feet)	Date	
N1183	Apr. 29, 1940	+35.10	Dec. 1, 1941	+37.73	Apr. 29, 1940	+36.39
N1184	Apr. 29, 1940	+20.69	Oct. 31, 1941	+23.30	Apr. 29, 1940	+21.88
N1185	Apr. 2, 1938	+10.50	Dec. 13, 1941	+15.39	Apr. 8, 1939	+12.74
N1186	Apr. 29, 1940	+3.48	June 29, 1942	+5.59	Mar. 28, 1941	+4.79
N1198	Jan. 6, 1939	+63.46	Feb. 7, 1942	+70.49	May 6, 1939	+65.02
N1204	Jan. 6, 1939	+5.58	Feb. 17, 1940	+12.26	Apr. 8, 1939	+10.91
N1216	Jan. 7, 1939	+62.31	Feb. 14, 1942	+69.16	May 20, 1939	+63.60
N1222	Jan. 6, 1939	+1.27	Jan. 31, 1942	+9.67	Apr. 8, 1939	+8.52
N1234	Jan. 7, 1939	+59.01	Feb. 14, 1942	+66.64	May 6, 1939	+60.36
N1240	Jan. 6, 1939	-1.08	Jan. 24, 1942	+11.29	Apr. 8, 1939	+10.09
N1242	Apr. 21, 1939	+23.30	Oct. 2, 1942	+27.77	Sept. 1, 1939	+26.36
N1243	Nov. 3, 1939	+54.94	Oct. 30, 1942	+58.22	Dec. 1, 1939	+55.00
N1244	May 31, 1940	+71.31	Oct. 30, 1942	+76.50	May 31, 1940	+71.38
N1245	Feb. 2, 1940	+75.96	Oct. 30, 1942	+82.98	Feb. 2, 1940	+76.05
N1246	May 31, 1940	+77.14	Aug. 31, 1942	+82.12	May 31, 1940	+77.51
N1247	Apr. 21, 1939	+70.52	July 31, 1942	+76.98	July 28, 1939	+71.38
N1248	Jan. 7, 1939	+57.41	Jan. 31, 1942	+65.51	Apr. 15, 1939	.....
N1249	Apr. 21, 1939	+50.34	Jan. 30, 1942	+58.18	Apr. 21, 1939	+51.99
N1250	Apr. 21, 1939	+43.20	Jan. 30, 1942	+49.64	Apr. 21, 1939	+44.71
N1251	Apr. 21, 1939	+35.57	Jan. 30, 1942	+40.18	Apr. 21, 1939	+36.96
N1252	Apr. 21, 1939	+22.48	Jan. 30, 1942	+26.19	Apr. 21, 1939	.....
N1253	Jan. 6, 1939	+11.31	Jan. 31, 1942	+16.89	Apr. 8, 1939	+14.80
N1254	Apr. 21, 1939	+2.55	Feb. 2, 1940	+4.08	Apr. 28, 1939	+3.20
N1255	May 12, 1913	+58.57	Nov. 11, 1918	+65.59	Apr. 15, 1939	+60.03
N1256	May 12, 1913	+70.30	Feb. 27, 1933	+80.97	May 20, 1939	+75.44
N1257	Aug. 17, 1932	+5.83	Dec. 13, 1941	+10.17	Apr. 8, 1939	+7.10
N1258	Oct. 8, 1931	+33.68	Dec. 28, 1931	+39.58	Apr. 8, 1939	+36.18
N1259	Feb. 5, 1909	+47.83	Jan. 24, 1933	+56.43	Apr. 29, 1939	+50.75
N1260	June 6, 1903	+16.52	Dec. 20, 1916	+23.68	Apr. 8, 1939	+19.92
N1262	Oct. 5, 1931	+32.66	Oct. 5, 1942	+36.20	Apr. 8, 1939	+34.29
N1263	Nov. 3, 1911	+46.22	Oct. 31, 1932	+54.98	Apr. 22, 1939	+49.15
N1264	Mar. 7, 1932	+2.70	Feb. 17, 1940	+9.41	Apr. 8, 1939	+7.90
N1265	Mar. 9, 1939	+2.43	Dec. 1, 1941	+4.34	Dec. 31, 1942	+4.34
N1266	Mar. 9, 1939	+3.72	Dec. 1, 1941	+5.84	Mar. 14, 1939	.....
N1269	Mar. 9, 1939	+3.52	Oct. 1, 1942	+9.57	Mar. 14, 1939	+7.87
N1271	Mar. 9, 1939	+1.21	Sept. 30, 1941	+3.66	Dec. 31, 1942	+3.66
N1273	Nov. 1, 1939	+4.34	Jan. 2, 1940	+6.96	Mar. 31, 1941	+6.68
N1275	Nov. 1, 1939	+1.89	Oct. 31, 1941	+4.07	Dec. 31, 1942	+4.07
N1278	Nov. 3, 1939	+4.87	Jan. 30, 1942	+6.68	Mar. 31, 1941	+6.62
N1280	Jan. 2, 1940	+2.22	Jan. 30, 1942	+9.72	Mar. 31, 1941	+8.97
N1282	Nov. 1, 1939	+.34	Apr. 1, 1940	+2.58	Jan. 2, 1942	+1.60
N1285	Nov. 1, 1939	+2.12	Jan. 31, 1940	+4.03	Dec. 31, 1942	+4.03
N1288	Nov. 1, 1939	+2.21	Jan. 2, 1940	+4.23	Dec. 31, 1942	+4.23
N1290	Nov. 1, 1939	+2.60	Nov. 1, 1939	+4.94	Dec. 1, 1939	.....
N1613	July 3, 1936	+21.73	Dec. 6, 1941	+24.38	Apr. 15, 1939	+22.85
N1614	Apr. 2, 1913	+61.90	Feb. 27, 1933	+71.03	May 1, 1914	+66.93
N1615	Mar. 17, 1913	+41.49	Oct. 27, 1932	+47.17	Mar. 28, 1939	+43.70
N1616	Mar. 17, 1913	+74.05	Feb. 27, 1933	+85.42	June 1, 1939	+79.97
N1617	Nov. 26, 1903	+2.32	Dec. 21, 1912	+4.80	Nov. 5, 1905	+3.01
N1672	Oct. 4, 1940	+55.42	Dec. 6, 1941	+58.40	Feb. 8, 1941	+56.50
N1682	Nov. 30, 1940	+41.29	Feb. 28, 1942	+43.21	June 28, 1941	+42.28
N1683	Dec. 3, 1940	+53.46	Jan. 31, 1942	+55.57	Feb. 8, 1941	+54.56
N1684	Nov. 30, 1940	+55.33	Feb. 7, 1942	+58.22	Nov. 30, 1940	+56.70
N1685	Mar. 19, 1932	+3.63	Oct. 16, 1937	+11.04	Feb. 17, 1938	+6.93
N1828	June 10, 1942	a +58.45	July 27, 1942	a+60.03	Sept. 3, 1942	a+58.79
N1829	June 10, 1942	a+66.39	July 18, 1942	a+67.97	Sept. 3, 1942	a+67.37
N1830	June 3, 1942	a+49.05	June 7, 1942	a+50.14	Oct. 11, 1942	a+49.65
Q268	Apr. 21, 1933	a+12.80	Aug. 21, 1933	a+17.53	Apr. 11, 1939	.....
Q273	Mar. 15, 1938	a+1.12	Mar. 21, 1942	a+8.47	Apr. 20, 1939	a+4.21
Q287	Apr. 13, 1939	a+.35	Feb. 13, 1940	a+9.65	Mar. 8, 1941	ab+9.35
Q350	Mar. 17, 1937	-2.00	Oct. 31, 1941	+3.51	Apr. 29, 1939	-.14

a Based on instrumental records of lowest daily water level.
b Estimated.

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 1942 (feet)
		Water level (feet)	Date	Water level (feet)	Date	
Q470	Sept.21, 1933	a-12.75	July 15, 1937	a+6.78	Jan. 8, 1938	a+4.43
Q471	Mar. 31, 1939	+13.69	Mar. 31, 1939	+16.47	June 15, 1940	+15.80
Q503	Feb. 1, 1936	a+7.61	Feb. 28, 1942	a+12.61	Apr. 30, 1939	.....
Q543	May 17, 1932	a-28.36	Feb. 13, 1940	a+10.48	Mar. 12, 1939	a+8.75
Q1027	Jan. 1, 1942	a+4.08	Mar. 20, 1942	a+5.83	Oct. 22, 1942	a+5.30
Q1089	Oct. 10, 1911	-.42	Oct. 17, 1932	+4.04	Sept.23, 1938	+1.41
Q1090	Oct. 10, 1911	+1.19	Oct. 17, 1932	+8.29	May 12, 1913	+3.55
Q1222	Apr. 1, 1940	-9.19	Feb. 28, 1942	+3.52	Feb. 8, 1941	+2.24
Q1223	Jan. 28, 1933	+5.78	Dec. 12, 1935	+10.23	Apr. 4, 1939	+7.35
Q1224	Apr. 20, 1933	+6.88	July 18, 1942	+12.41	May 29, 1939	+7.37
Q1225	Apr. 20, 1933	+26.72	Feb. 7, 1942	+32.19	Apr. 4, 1939	+27.31
Q1237	Feb. 10, 1939	ab-6.38	Mar. 1, 1942	a+5.03	May 4, 1939	a+1.35
Q1248	Oct. 12, 1940	+34.48	Feb. 14, 1942	+36.26	May 17, 1941	+35.15
Q1249	Oct. 19, 1940	+30.46	Feb. 7, 1942	+32.26	Apr. 26, 1941	+31.02
Q1250	Oct. 19, 1940	+19.36	Feb. 7, 1942	+21.68	Mar. 29, 1941	+20.23
Q1251	Oct. 19, 1940	+9.85	Feb. 14, 1942	+13.02	Oct. 19, 1940	+11.20
Q1252	Oct. 26, 1940	+11.69	Feb. 28, 1942	+13.70	Feb. 15, 1941	+12.20
Q1253	Nov. 2, 1940	+2.32	Aug. 8, 1942	+4.58	Apr. 26, 1941	+2.96
Q1254	Oct. 26, 1940	-2.24	June 20, 1942	+.29	Apr. 12, 1941	-1.21
Q1255	Oct. 12, 1911	-5.95	Apr. 11, 1942	+12.03	May 12, 1914	-4.37
Q1256	Oct. 26, 1940	-6.98	Mar. 14, 1942	-2.55	Mar. 1, 1941	-3.84
Q1281	Oct. 11, 1911	-3.62	Mar. 7, 1942	+8.59	June 4, 1913	-1.58
Q1282	Jan. 31, 1933	+.17	Jan. 31, 1933	+2.49	May 10, 1941	+1.05
Q1283	Oct. 12, 1911	+2.12	Mar. 3, 1933	+13.33	Nov. 10, 1911	+4.11
Q1284	Oct. 12, 1911	+5.01	Jan. 28, 1933	+11.55	June 2, 1913	+6.49
Q1285	Apr. 20, 1933	+5.74	Feb. 21, 1942	+8.05	May 31, 1941	-6.48
Q1286	Apr. 20, 1933	+9.06	Aug. 1, 1942	+11.29	Apr. 26, 1941	+9.62
Q1287	Apr. 20, 1933	+11.53	Dec. 13, 1941	+15.80	Oct. 5, 1934	+12.40
Q1288	Apr. 20, 1933	+16.22	Jan. 31, 1942	+22.06	Oct. 5, 1934	+17.14
Q1289	Apr. 20, 1933	+30.10	Feb. 7, 1942	+34.56	Nov. 8, 1934	+30.90
Q1290	Apr. 20, 1933	+15.25	Jan. 31, 1942	+19.48	Oct. 5, 1934	+16.53
Q1292	May 10, 1941	+26.41	Feb. 28, 1942	+28.01	May 17, 1941	+26.74
S28	Nov. 28, 1936	a+92.00	Feb. 7, 1942	a+97.71	May 20, 1939	.....
S202	Nov. 25, 1936	a+36.93	Feb. 1, 1939	a+47.17	Apr. 10, 1937	a+38.50
S203	Feb. 14, 1937	a+70.94	Feb. 17, 1937	a+77.13	Oct. 31, 1939	ab+71.42
S1803	Oct. 18, 1912	+14.93	Oct. 25, 1941	+18.19	Apr. 22, 1913	+15.96
S1804	Oct. 16, 1912	+10.10	Oct. 29, 1935	+11.47	Sept.23, 1938	.....
S1805	Oct. 16, 1912	+37.90	Oct. 27, 1932	+47.01	Apr. 8, 1939	+41.13
S1806	Oct. 18, 1912	+50.61	Jan. 5, 1933	+61.69	Apr. 22, 1939	+54.44
S1807	Oct. 19, 1912	+20.59	Sept.12, 1932	+23.48	Oct. 14, 1938	+21.58
S1808	Oct. 21, 1912	+9.45	Sept.12, 1932	+12.94	Sept.23, 1938	+11.00
S1809	Oct. 21, 1912	+25.00	Nov. 2, 1932	+32.56	Apr. 15, 1939	+27.84
S1810	Oct. 21, 1912	+45.24	Feb. 23, 1933	+56.19	Apr. 29, 1939	+49.63
S1811	Feb. 28, 1937	+51.41	Aug. 28, 1941	+55.56	Apr. 20, 1940	+53.07
S1812	Apr. 17, 1937	+45.12	Mar. 7, 1942	+51.09	May 27, 1939	+45.98
S1813	Nov. 4, 1939	+37.05	Jan. 31, 1942	+39.64	June 15, 1940	+37.87
S1814	Nov. 4, 1939	+35.01	Feb. 14, 1942	+38.28	June 29, 1940	+35.88
S1815	Dec. 2, 1939	+43.80	Mar. 14, 1942	+47.81	June 29, 1940	+44.51
S1816	Dec. 2, 1939	+55.01	Feb. 14, 1942	+59.93	June 1, 1940	+55.97
S1817	Dec. 2, 1939	+50.24	Jan. 17, 1942	+53.95	June 1, 1940	+50.90
S2454	Sept.21, 1940	+6.70	Oct. 4, 1941	+8.28	Aug. 15, 1942	+7.36
S2455	June 23, 1933	a+19.98	Nov. 6, 1937	a+24.85	Sept.23, 1938	a+22.01
S2543	Mar. 23, 1907	+33.21	Dec. 3, 1909	+36.20	May 30, 1908	+33.97
S3112	Aug. 30, 1941	+51.65	Feb. 7, 1942	+54.64	Sept. 5, 1942	+52.83
S3515	Mar. 5, 1907	+32.13	Nov. 10, 1908	+34.64	May 8, 1907	+32.42
S3516	Mar. 5, 1907	+35.76	Dec. 2, 1909	+39.72	July 24, 1907	+37.30
S3517	Apr. 2, 1907	+11.60	Dec. 4, 1909	+13.86	Mar. 2, 1908	+12.80
S3518	Mar. 22, 1907	+31.01	Nov. 30, 1942	+33.04	May 8, 1907	+31.30
S3519	Mar. 22, 1907	+23.69	Dec. 3, 1909	+26.69	Aug. 21, 1942	+25.62

a Based on instrumental records of lowest daily water level.
b Estimated.

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 1942 (feet)
		Water level (feet)	Date	Water level (feet)	Date	
S3520	Mar. 5, 1907	+18.11	Nov. 30, 1942	+19.38	Aug. 1, 1907	+18.45
S3521	Feb. 28, 1907	+36.71	Nov. 30, 1942	+38.44	Aug. 2, 1907	+36.87
S3522	Feb. 6, 1907	+19.27	Aug. 7, 1909	+19.99	Apr. 4, 1942	+19.70
S3523	Jan. 2, 1907	+26.19	Nov. 30, 1942	+27.96	June 8, 1907	+26.31
S3524	Mar. 8, 1907	+21.47	Dec. 11, 1909	+23.28	Apr. 6, 1908	+22.04
S3525	July 15, 1907	+25.72	Nov. 30, 1942	+28.24	June 8, 1908	+25.85
S3527	Mar. 7, 1907	+31.35	Apr. 2, 1942	+35.69	June 4, 1908	+31.75
S3528	Apr. 22, 1907	+48.31	Nov. 2, 1942	+52.55	Aug. 14, 1908	.....
S3529	Mar. 8, 1907	+25.03	Nov. 2, 1942	+28.07	Apr. 27, 1907	+25.50
S3530	Mar. 8, 1907	+31.85	Aug. 14, 1942	+34.78	Aug. 5, 1908	+32.25
S3531	Aug. 9, 1907	+9.14	Dec. 11, 1909	+10.37	May 7, 1908	+9.68
S2532	Apr. 21, 1907	+46.82	Dec. 30, 1942	+51.74	June 8, 1908	+46.82
S3533	Apr. 4, 1907	+45.62	Nov. 30, 1942	+49.48	June 8, 1908	+45.72
S3534	June 9, 1907	+26.73	Dec. 31, 1942	+31.75	June 9, 1907	+26.73
S3535	Aug. 13, 1907	+18.13	Dec. 31, 1942	+21.75	Aug. 13, 1908	+18.13
S3536	Apr. 10, 1907	+23.68	Dec. 31, 1942	+28.62	June 5, 1908	+23.68
S3537	Jan. 11, 1908	+14.52	Nov. 30, 1942	+16.35	Jan. 11, 1908	+14.85
S3538	Jan. 11, 1908	+14.79	Nov. 30, 1942	+17.56	Aug. 19, 1908	+15.01
S3539	Apr. 12, 1907	+22.26	Dec. 31, 1942	+26.72	June 5, 1908	+22.26
S3540	Mar. 9, 1907	+19.11	Dec. 31, 1942	+23.02	May 8, 1908	+19.11
S3541	Mar. 9, 1907	+11.38	Nov. 30, 1942	+14.06	July 8, 1908	+11.86
S3542	Apr. 12, 1907	+18.71	Dec. 31, 1942	+22.89	June 10, 1908	+18.71
S3543	Mar. 18, 1907	+15.84	Dec. 31, 1942	+19.49	June 10, 1908	+15.84
S3544	Mar. 18, 1907	+10.27	Nov. 30, 1942	+13.17	Apr. 4, 1908	+10.27
S3545	Mar. 12, 1907	+35.27	Apr. 14, 1942	+38.00	June 7, 1907	+35.43

During 1942 a general rise of ground-water levels occurred in Kings County, at the western end of Long Island, where excessive pumping has lowered the water table below sea level in an area of more than 45 square miles. Prior to 1942 water levels had been progressively declining for a considerable period of time. The preceding table shows that the lowest observed water level since the start of record in most of the observation wells in Kings County occurred in the latter part of 1941 or during the first half of 1942, thus indicating a rise of water level during the latter part of 1942 and a trend toward more favorable ground-water conditions in the area. Further evidence of a more favorable relationship between ground-water recharge and withdrawal in Kings County during 1942 is provided by the record of water level for well K30, situated near the bottom of the depression in the water table in Kings County. A water-stage recorder was put in operation at this well in July 1935. By November 1941 the water level had declined progressively more than 5 feet, the lowest recorded stage being 29.75 feet below mean sea level in November 1941. A reversal in the trend of the water level in this well occurred in 1942, the net rise from

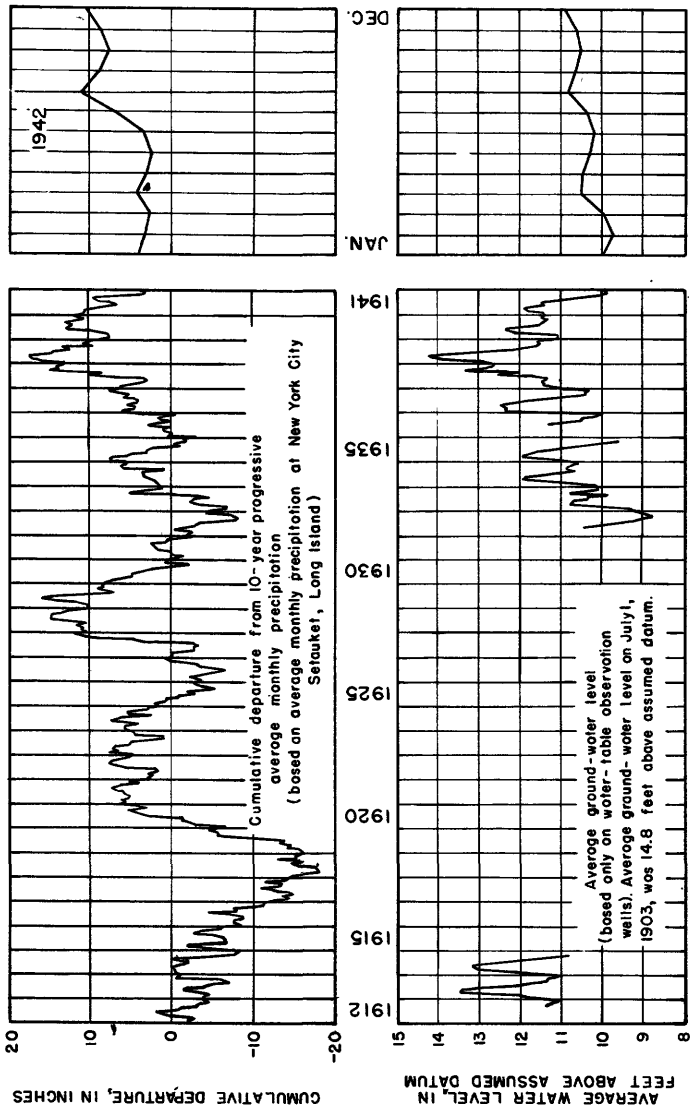

Figure 2.--Graphs showing cumulative departure from 10-year progressive average monthly precipitation and average ground-water level on Long Island, N. Y.

November 1941 to the end of 1942 being somewhat greater than 0.9 foot. The rise of water level during 1942 is believed to be chiefly the result of a general decline in the rate of ground-water withdrawal in the overpumped area. According to a recent survey, the rate of withdrawal of ground water at the industrial plants situated within about half a mile of well K30 was approximately the same during 1941 and 1942. Accordingly, it would appear that the rise of water level in the observation well is the cumulative result of a gradual decline in the rate of withdrawal throughout the overpumped area rather than the cessation of or decrease in the rate of pumping of nearby wells. The rise of water level may be due in part, however, to the favorable distribution of precipitation during the year, particularly during the summer.

In the other three Long Island counties, particularly in Nassau and Suffolk Counties, the major fluctuations of ground-water level in most areas are chiefly the result of differences in amount and distribution of precipitation. As shown in the summary table, the lowest observed water level in most wells that have been measured for a period of about 10 years or more occurred late in 1932 or early in 1933. The lowest water level in most of the wells with shorter periods of record occurred in the latter part of 1941 or during the first half of 1942. The highest observed water level in most of the wells in the three eastern counties of Long Island occurred in the spring of 1939.

The following table shows the net change in water level during 1942 in each of the observation wells that was measured throughout the year.

Net change in water level in wells on Long Island, N. Y., 1942

Well number	Net change (feet)	Well number	Net change (feet)	Well number	Net change (feet)	Well number	Net change (feet)
K10	-0.56	K1199	-0.24	N1104	+0.48	N1174	+0.04
K19	+.57	K1235	+.29	N1105	+.49	N1175	-.78
K30	+.57	K1236	+.21	N1107	+.87	N1176	-.99
K65	+.84	K1237	+.19	N1108	+.98	N1177	-.67
K67	+1.35	K1263	+.62	N1109	+1.03	N1179	+1.25
K92	+.37	K1264	+.07	N1110	+1.14	N1181	+1.28
K104	+.30	K1265	-.35	N1111	+1.17	N1182	+1.33
K502	-.14	K1266	+.29	N1112	+1.42	N1183	+1.29
K533	+.16	K1296	+3.92	N1113	++1.34	N1184	+1.08
K535	+.06	N7	+.90	N1114	+1.09	N1185	+1.50
K537	-.21	N9	+.55	N1115	+1.09	N1186	+1.00
K539	+3.56	N53	+.69	N1126	+.91	N1198	+1.33
K921	+.44	N67	+.25	N1132	+.78	N1204	+3.61
K1057	+1.19	N157	-1.36	N1140	+1.02	N1216	+.89
K1139	+5.31	N1101	+.34	N1147	+.31	N1222	+7.05
K1194	+4.28	N1102	-.48	N1160	+1.13	N1234	+.86
K1198	+1.60	N1103	+.04	N1167	+.58	N1240	+10.95

Net change in water level in wells on Long Island, N. Y., 1942--Continued

Well number	Net change (feet)	Well number	Net change (feet)	Well number	Net change (feet)	Well number	Net change (feet)
N1242	-0.25	N1275	+2.00	Q1090	+0.89	Q1290	+0.81
N1243	-.96	N1278	+1.74	Q1222	-.34	Q1292	+.06
N1244	-2.11	N1280	+6.23	Q1223	+.61	S202	-.25
N1245	-2.14	N1282	+.26	Q1224	+.22	S203	a-2.28
N1246	-1.29	N1285	+1.65	Q1225	+.37	S1803	+.21
N1247	-.27	N1288	+1.99	Q1237	+5.64	S1805	+1.61
N1249	+1.27	N1613	+.84	Q1248	+.39	S1806	+.83
N1250	+1.26	N1614	-.04	Q1249	+.36	S1807	+.38
N1251	+1.35	N1615	+1.41	Q1250	+.50	S1808	+.27
N1253	+3.16	N1616	+.34	Q1251	+.84	S1809	+1.46
N1254	+.60	N1617	+.32	Q1252	+.31	S1810	+.09
N1255	+.98	N1672	+.58	Q1253	+.21	S1811	-.27
N1256	+.36	N1682	+.58	Q1254	+.50	S1812	+.30
N1257	+.45	N1683	+.86	Q1255	+1.09	S1813	+.52
N1258	+1.09	N1684	+1.10	Q1256	+2.80	S1814	+.49
N1259	+.88	N1685	-2.69	Q1281	+1.74	S1815	+.14
N1260	+2.26	Q273	+.17	Q1282	+.46	S1816	+.33
N1262	+.59	Q287	a+1.54	Q1283	+.78	S1817	+.18
N1263	+1.05	Q350	+1.48	Q1284	+.87	S2454	+.12
N1264	+3.30	Q470	+.11	Q1285	+.50	S2455	+1.26
N1265	+1.91	Q471	+.19	Q1286	+.02	S2543	+.38
N1269	+3.75	Q543	-.10	Q1287	+.13	S3112	+.86
N1271	+1.93	Q1027	+.14	Q1288	+.63	.....	.....
N1273	+1.76	Q1089	+.54	Q1289	+.56	.....	.....

As shown by the foregoing table, there was a considerable rise of water level in most of the observation wells during 1942. The rise was the result, in large part, of excess precipitation during the year, about 6 inches above average. A large rise occurred in some of the observation wells situated in the southern part of Nassau County as the result of a reduction in ground-water withdrawal at nearby pumping wells. The water level in 24 of the wells showed a net decline during the year. All of these wells are known to be affected to a considerable extent either by nearby pumping or by fluctuation of barometric pressure. The average pressure of the atmosphere for the day during which the water level measurements for the end of 1942 were made was nearly 0.5 inch of mercury greater than on the corresponding day for 1941. Such a "net rise" in atmospheric pressure during the year may produce a decline of water level of as much as 0.5 foot, depending upon the individual characteristics of each well and the formation which it penetrates. In addition, the water level in some of the observation wells is as much as 190 feet below the land surface. Because of this great depth of cover, the interval of time between a given wet or dry period and the corresponding rise or decline of water level in such an observation well may be as much as 6 months. For example, the time of occurrence of the lowest stage of water level resulting from the prolonged

a Estimated.

dry period that ended in late 1941 was at about the end of March 1942 for wells in which the water level ranges from about 40 to 60 feet below land surface, at about the end of July 1942 for wells in which the depth to water level ranges from about 90 to 130 feet below land surface, and at about the end of October 1942 for wells in which the water level ranges from about 170 to 190 feet below land surface. Thus the water level in the deeper observation wells continued to decline during the first half of 1942 as a result of the preceding dry period, causing an apparent net decline during a period of favorable precipitation.

Figure 2 shows the relation between average ground-water level and precipitation on Long Island. The method used for determining the average water level each month is described in Geological Survey Water-Supply Paper 886. The average water level at the end of 1942 is based on 156 observation wells, 80 in Nassau County, 25 in Queens County, and 51 in Suffolk County.

At the beginning of 1942, ground-water levels on Long Island were, in general, at the lowest stage recorded since 1935. The average ground-water level, as shown by the diagram, declined more or less steadily from the early part of 1939 to the beginning of 1942 as a result of a considerable deficiency in precipitation during that 3-year period. During 1942 conditions became more favorable for recharge, the precipitation being slightly more than 6 inches above the average for the preceding 10 years. In addition, intense storms occurred during July and August, causing a rise of ground-water level during the growing season, when the withdrawal of a great amount of water by plants generally causes a steady decline of water level on Long Island. As a result of these more favorable conditions, a net rise in average ground-water level of 0.92 foot occurred during 1942.

On Long Island, large quantities of ground water are withdrawn from the underground reservoirs for public supply and for industrial, cooling, and irrigational uses, the greater part of the pumpage being derived from glacial sands and gravels at the western end of the island. The greatest use of ground water is for public supply, approximately two-thirds of the daily withdrawal being used for this purpose. A considerable part of the ground water used for cooling is returned to the ground by means of recharge wells and consequently does not affect materially the ground-water storage. Although much of the water pumped for irrigation is consumed by plants, it

seems probable that a considerable part finally percolates back to the water table. A part of the ground water used by public-supply systems in Nassau and Suffolk Counties is returned eventually to the ground at sewage-disposal plants. Nearly 90 percent of the total ground-water withdrawal, however, is discharged into the bodies of sea water surrounding Long Island, and it is this large amount of pumpage that affects the position of the water table.

Estimates based mainly on records obtained from water-supply organizations indicate that in 1942 the average rate of withdrawal from public-supply wells was about 183,000,000 gallons a day, or about 15,000,000 gallons a day more than in the previous year. The pumpage from public-supply wells was distributed by counties approximately as follows: 26,000,000 gallons a day in Kings County, 97,000,000 gallons a day in Nassau County, 45,000,000 gallons a day in Queens County, and 15,000,000 gallons a day in Suffolk County. The estimates of the withdrawal for 1941 and 1942 have been compiled on the same basis as that used by Thompson and Leggette [1/] in compiling the pumpage for public supply for previous years, except that the totals given herein include an estimate of the withdrawal in Suffolk County. It is estimated that the average rate of pumpage in Suffolk County during 1941 and 1942 was about 15,000,000 gallons a day. The rise in the rate of withdrawal for public supply during 1942 was chiefly the result of an increase in the average rate of pumping from wells of the New York City supply system in the southern part of Queens and Nassau Counties.

Most of the industrial plants on Long Island are in Kings and Queens Counties, which make up the more densely populated part of the island. Consequently most of the ground-water withdrawal for industrial use occurs at the western end of the island. On the other hand, nearly all the ground water used for irrigation is pumped in Nassau and Suffolk Counties. Unfortunately, the data necessary to compile reasonably accurate estimates of pumpag from industrial and irrigation wells are widely scattered and, for many wells inadequate. Because of this it is not feasible to compile records of pumpage from privately owned wells on a year-by-year basis. In 1936, A. D. Henderson collected records of pumpage for nearly all the industrial wells in Kings and Queens Counties. This compilation indicates that the average rate of pumpage

1/ Thompson, D. G. , and Leggette, R. M., Withdrawal of ground water on Long Island, N. Y.: New York State Water Power and Control Commission Bull. GW-1, 1936.

2/ Suter, Russell, Engineering report on the water supplies of Long Island: New York State Water Power and Control Commission, Bull. GW-2, pp. 36-37 1937.

in that year was about 60,000,000 gallons a day. Since then a slight net decline in the rate of industrial withdrawal apparently has occurred, resulting chiefly from a decrease or discontinuance of the use of ground water by the many ice-manufacturing plants in western Long Island. Records of pumpage for the wells that together produced more than one-third of the total pumpage in 1936 as reported by Henderson indicate that the net withdrawal in Kings and Queens Counties during 1942 was probably not greater than 55,000,000 gallons a day. This total includes an estimate of withdrawal for wells constructed since 1936 that do not discharge water into recharge wells. Because of the war, the manufacture of certain types of products in the westernmost part of Long Island has apparently been curtailed during the past year, and this has probably brought about a further decrease in pumpage.

It is estimated that the average rate of withdrawal for industrial and irrigational uses in Nassau and Suffolk Counties during 1942 was about 35,000,000 gallons a day. Although this estimate is based on insufficient data, it is believed to be reasonably comprehensive in scope. It is probable that approximately half of this withdrawal is returned to the ground by means of either recharge wells or by infiltration at irrigation projects or at sewage-leaching pits.

The withdrawal of ground-water on Long Island during 1942, not taking into account the pumpage from numerous small domestic wells in the eastern part of the island, most of which goes back into the ground, thus amounted to about 106,000,000,000 gallons, or an average of about 290,000,000 gallons a day. Of this amount, at least 30,000,000 gallons a day was returned to the ground, leaving a net average pumpage of not more than 260,000,000 gallons a day. The most noteworthy feature with respect to the withdrawal of ground water on Long Island is the recent decrease in industrial pumpage at the western end of the Island. Although this decrease has been relatively small, apparently, as previously mentioned, it has caused a noticeable recovery of water levels in parts of the excessively overpumped area in Kings County. If the rate of pumping in Kings County continues to decline, further rises in water level may be expected.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Observation wells on Long Island are listed alphabetically by counties and numerically within each county. Complete descriptions are given only for newly added wells. The numbers in parentheses immediately following a

well number indicate the water-supply papers in which earlier records of that well are given and the pages on which they appear. An asterisk indicate that a description of the well is given in that paper. The water level in each well is expressed in feet and referred to mean sea level.

Kings County

K10 (*840, p. 258; 845, p. 307; 886, p. 483; 906, p. 115; 936, p. 140). Rubel Ice Corporation well 1. Bond Street and Third Avenue, Brooklyn. Measuring point lowered 2.54 feet on Nov. 7, 1942. New measuring point, top of 16-inch casing, about 2.0 feet below land surface and 8.21 feet above mean sea level. Water level, Nov. 7, 1942, 26.49 feet below measuring point and 18.28 feet below mean sea level.

Water level, in feet, with reference to mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	-16.49	Apr. 4	-15.97	July 4	-17.52	Oct. 3	-18.25
10	-16.13	11	-16.58	11	-18.21	10	-17.84
17	-16.43	18	-16.43	18	-17.65	17	-18.01
24	-16.19	25	-16.46	25	-17.83	24	-17.95
31	-16.19	May 2	-16.65	Aug. 1	-17.94	31	-17.56
Feb. 7	-15.95	9	-17.27	8	-17.92	Nov. 7	-18.28
14	-16.90	16	-16.95	15	-17.77	14	-17.74
21	-16.11	23	-17.15	22	-18.39	21	-17.69
28	-16.78	30	-16.97	29	-17.85	28	-17.51
Mar. 7	-16.42	June 6	-17.40	Sept. 5	-18.13	Dec. 5	-17.86
14	-16.51	13	-17.50	12	-18.21	12	-17.11
21	-15.93	20	-17.38	19	-18.53	19	-17.58
28	-16.55	27	-17.90	26	-17.93	26	-16.81

K19 (*906, p. 116; 936, p. 140). Kew-Pacific Garage. About 110 feet northeast of Dean Street and 130 feet northwest of Fifth Avenue, Brooklyn.

Lowest daily water level, in feet below mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	26.26	25.95	25.87	25.80	25.88	25.82	26.20	26.31	26.40	26.42	26.19	26.00
2	26.22	26.04	25.75	25.79	25.87	25.84	26.20	26.30	26.45	26.48	26.18	26.05
3	26.24	26.06	25.81	25.78	25.75	25.84	26.22	26.24	26.50	26.48	26.29	26.08
4	26.22	26.06	25.94	25.77	25.77	25.84	26.22	26.30	26.51	26.38	26.30	26.08
5	26.22	26.04	25.94	25.72	25.86	25.93	26.09	26.30	26.51	26.29	26.30	a26.06
6	26.25	26.04	25.94	25.69	25.86	25.92	26.15	26.28	26.44	26.42	26.30	.....
7	26.26	26.03	25.94	25.78	25.82	25.86	26.17	26.28	26.31	26.43	26.29	.....
8	26.27	25.93	25.81	25.83	25.85	25.92	26.20	26.29	26.35	26.43	26.22	.....
9	26.27	26.01	25.79	25.83	25.85	25.95	26.22	26.23	26.41	26.43	26.16	.....
10	26.23	26.01	25.87	25.77	25.73	26.00	26.23	26.22	26.46	26.43	26.18	.....
11	26.21	26.00	25.88	25.77	25.74	26.02	26.20	26.34	26.55	26.35	26.22	.....
12	26.15	25.99	25.91	25.69	25.77	26.06	.....	26.37	26.55	26.29	26.22	.....
13	a26.16	26.01	25.92	25.76	25.84	26.05	.....	26.37	26.41	26.31	26.25	.....
14	.....	26.01	25.88	25.78	25.86	25.99	.....	26.39	26.42	26.32	26.25	.....
15	.....	25.95	25.78	25.79	25.86	26.03	.....	26.39	26.52	26.35	26.20	.....
16	.....	25.86	25.78	25.83	25.85	26.07	.....	26.36	26.53	26.36	26.10	.....
17	.....	25.98	25.79	25.83	25.76	26.08	.....	26.39	26.51	26.36	26.13	.....
18	.....	25.99	25.83	25.78	25.78	26.08	.....	26.41	26.55	26.20	26.18	.....
19	.....	25.97	25.89	25.76	25.81	26.15	.....	26.42	26.55	26.26	26.18	a25.85
20	a26.16	25.97	25.89	25.72	25.81	26.13	.....	26.46	25.36	26.31	26.17	25.83
21	26.17	25.98	25.87	25.79	25.85	26.09	.....	26.46	25.36	26.31	26.16	25.77
22	26.17	25.85	25.68	25.79	25.85	26.05	.....	26.46	26.45	26.32	26.13	25.77
23	26.17	25.86	25.75	25.82	25.83	26.13	.....	26.39	26.46	26.38	26.02	25.80
24	26.17	25.87	25.82	25.83	25.79	26.16	a26.33	26.41	26.51	26.38	26.05	25.80
25	26.08	25.90	25.82	25.83	25.84	26.20	26.33	26.41	26.30	26.30	26.10	25.75
26	26.07	25.90	25.84	25.73	25.86	26.21	a26.28	26.41	26.51	26.23	26.10	25.65
27	26.12	25.92	25.85	25.77	25.92	26.19	a26.25	26.41	26.35	26.33	26.05	25.65
28	26.13	25.92	25.84	25.79	25.93	26.11	26.34	26.41	26.41	26.34	26.06	25.61
29	26.17	.....	25.75	25.81	25.91	26.14	26.34	26.41	26.44	26.35	26.03	25.65
30	26.17	.....	25.73	25.84	25.89	26.18	26.37	26.39	26.45	26.32	25.99	25.64
31	26.13	.....	25.75	.....	25.77	.....	26.37	26.34	.....	26.31	.....	25.70

a Estimated.

K30 (*817, p. 201; *840, p. 258; 845, p. 307; 886, p. 483; 906, p. 116; 936, p. 141). C. J. Tagliabue Manufacturing Co. Park and Nostrand Avenues, Brooklyn.

Lowest daily water level, in feet below mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	29.40	29.20	29.12	29.00	28.93	28.89	28.79	28.87	28.67	28.89	28.94	29.02
2	29.30	29.38	29.08	29.00	28.93	a28.84	28.83	28.87	28.69	28.91	28.91	29.04
3	29.37	29.18	29.03	29.01	28.91	.....	28.86	28.83	28.74	28.92	28.90	29.08
4	29.35	29.19	29.09	29.02	28.87	.....	28.88	28.79	28.77	28.92	28.95	29.09
5	29.33	29.21	29.09	29.01	28.87	.....	28.85	28.81	28.78	28.86	28.96	29.10
6	29.30	29.22	29.12	28.95	28.90	a28.85	28.79	28.83	28.78	28.82	28.98	29.10
7	29.31	29.21	29.12	28.93	28.93	28.84	28.75	28.85	28.75	28.86	28.99	29.06
8	29.32	29.20	29.09	28.97	28.96	28.81	28.78	28.85	28.70	28.89	28.97	29.03
9	29.32	29.17	29.03	28.98	28.96	a28.79	28.82	28.82	28.69	28.92	28.93	29.05
10	29.32	29.15	29.05	28.97	28.95	a28.79	28.83	28.76	28.73	28.92	28.89	29.06
11	29.31	29.17	29.06	28.98	28.91	a28.80	28.83	28.72	28.78	28.91	28.92	29.06
12	29.28	29.19	29.12	28.98	28.87	a28.80	28.82	28.73	28.78	28.87	28.94	29.06
13	29.37	29.20	29.12	28.94	28.89	a28.81	28.77	28.75	28.78	28.83	28.99	29.06
14	29.27	29.20	29.12	28.93	28.92	.....	28.73	28.75	28.76	28.84	29.01	29.02
15	29.28	29.18	29.10	28.94	28.93	.....	28.74	28.75	28.73	28.88	29.01	28.97
16	29.32	29.15	29.06	28.97	28.93	.....	26.78	28.75	28.79	28.89	28.98	29.00
17	29.32	29.12	29.03	28.97	28.93	.....	28.79	28.72	28.81	28.90	28.95	29.02
18	29.26	29.12	29.05	28.97	28.90	.....	28.79	28.69	28.83	28.89	28.99	29.06
19	29.23	29.14	29.10	28.97	28.86	.....	28.78	28.71	28.83	28.84	29.01	29.06
20	29.21	29.15	29.11	28.94	28.88	a28.85	28.72	28.73	28.83	28.83	29.02	29.05
21	29.23	29.14	29.10	28.91	28.91	28.85	28.71	28.75	28.82	28.84	29.05	28.99
22	29.25	29.13	29.06	28.94	28.92	28.80	28.73	28.75	28.79	28.89	29.05	28.94
23	29.25	29.11	29.02	28.97	28.93	a28.77	28.77	28.72	28.83	28.95	29.01	28.96
24	29.25	29.06	29.03	28.98	28.92	a28.80	28.80	28.68	28.86	28.96	28.97	28.96
25	29.24	29.07	29.06	28.98	28.88	a28.82	28.80	28.70	28.88	28.96	29.04	28.96
26	29.20	29.09	29.08	28.96	28.84	a28.84	28.80	28.72	28.89	28.90	29.06	28.96
27	29.19	29.11	29.08	28.93	28.89	a28.86	28.74	28.74	28.87	28.88	29.06	28.92
28	29.21	29.12	29.10	28.90	28.92	28.86	28.72	28.75	28.83	28.93	29.06	28.87
29	29.24	.....	29.08	28.90	28.92	28.82	28.77	28.76	28.84	28.95	29.05	28.83
30	29.24	.....	29.01	28.91	28.93	28.77	28.84	28.75	28.86	28.95	29.02	28.82
31	29.23	.....	28.98	.....	28.93	.....	28.85	28.70	.....	28.96	.....	28.83

K65 (*840, p. 259; 845, p. 308; 886, p. 484; 906, p. 117; 936, p. 142). A. Ludwig Co. well 2. 123 Middleton Street, Brooklyn.

Water level, in feet with reference to mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	-26.85	Apr. 4	-26.46	July 4	-25.93	Oct. 3	-25.91
10	-26.65	11	-26.36	11	-25.73	10	-25.94
17	-26.85	18	-26.37	18	-25.66	17	-25.89
24	-26.72	25	-26.40	25	-25.78	24	-26.02
31	-26.61	May 2	-26.36	Aug. 1	-25.69	31	-25.92
Feb. 7	-26.47	9	-26.33	8	-25.52	Nov. 7	-26.02
14	-26.58	16	-26.25	15	-25.60	14	-26.08
21	-26.57	23	-26.17	22	-25.58	21	-26.07
28	-26.60	30	-26.14	29	-25.71	28	-26.03
Mar. 7	-26.73	June 6	-26.13	Sept. 4	-25.79	Dec. 5	-26.14
14	-26.51	13	-26.08	12	-25.77	12	-26.01
21	-26.54	20	-26.02	19	-25.80	19	-26.15
28	-26.49	27	-25.99	26	-25.90	26	-25.91

a Estimated.

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K67 (*840, p. 259; 845, p. 308; 886, p. 484; 906, p. 117; 936, p. 143). Young Men's Christian Association, 179 Marcy Avenue, Brooklyn.

Water level, in feet, with reference to mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	-20.59	Apr. 4	-20.16	July 4	-19.55	Sept. 26	-19.17
10	-20.55	11	-20.15	11	-19.48	Oct. 10	-19.16
17	-20.52	18	-20.14	18	-19.42	17	-19.16
24	-20.49	25	-20.11	25	-19.38	24	-19.15
31	-20.46	May 2	-20.08	Aug. 1	-19.34	31	-19.13
Feb. 7	-20.37	9	-20.04	8	-19.31	Nov. 7	-19.13
14	-20.35	16	-19.99	15	-19.39	14	-19.11
21	-20.30	23	-19.95	22	-19.25	21	-19.13
28	-20.30	30	-19.93	29	-19.22	28	-19.14
Mar. 7	-20.26	June 6	-19.88	Sept. 5	-19.19	Dec. 5	-19.15
14	-20.24	13	-19.80	12	-19.18	12	-19.15
21	-20.24	20	-19.71	19	-19.18	26	-19.26
28	-20.21	27	-19.62				

K92 (*840, p. 260; 845, p. 309; 886, p. 484; 906, p. 117; 936, p. 143). St. John's University. 75 Lewis Avenue, Brooklyn.

Water level, in feet, with reference to mean sea level, 1942

Jan. 3	-22.81	Apr. 4	-22.23	July 11	-22.78	Oct. 10	-23.30
10	-22.71	11	-22.18	18	-22.86	17	-23.19
17	-22.67	18	-22.15	25	-22.98	24	-23.10
24	-22.61	25	-22.12	Aug. 1	-23.04	31	-22.98
31	-22.54	May 2	-22.10	8	-23.15	Nov. 7	-22.90
Feb. 7	-22.49	9	-22.08	15	-23.20	14	-22.81
14	-22.45	16	-22.06	22	-23.25	21	-22.75
21	-22.41	23	-22.03	29	-23.29	28	-22.68
28	-22.39	30	-22.04	Sept. 5	-23.31	Dec. 5	-22.64
Mar. 7	-22.36	June 6	-22.10	12	-23.34	12	-22.56
14	-22.30	13	-22.24	19	-23.35	19	-22.52
21	-22.25	20	-22.38	26	-23.40	26	-22.48
28	-22.25	27	-22.53	Oct. 3	-23.41		

K104 (*906, p. 118; 936, p. 143). The Borden Co. Near corner of Clermont Avenue and Fulton Street, Brooklyn.

Water level, in feet, with reference to mean sea level, 1942

Jan. 3	-26.67	Apr. 4	-26.36	July 4	-26.44	Oct. 3	-26.62
10	-26.61	11	-26.36	11	-26.43	10	-26.66
17	-26.55	18	-26.34	18	-26.42	17	-26.68
24	-26.51	25	-26.34	25	-26.45	24	-26.69
31	-26.48	May 2	-26.34	Aug. 1	-26.48	31	-26.68
Feb. 7	-26.45	9	-26.35	8	-26.49	Nov. 7	-26.65
14	-26.44	16	-26.32	15	-26.49	14	-26.62
21	-26.43	23	-26.31	22	-26.51	21	-26.59
28	-26.42	30	-26.35	29	-26.53	28	-26.55
Mar. 7	-26.42	June 6	-26.37	Sept. 5	-26.53	Dec. 5	-26.53
14	-26.41	13	-26.39	12	-26.56	12	-26.51
21	-26.42	20	-26.41	19	-26.58	19	-26.47
28	-26.40	27	-26.41	26	-26.59	26	-26.42

K502 (*936, p. 144). New York Water Service Corporation well F 2. About 250 feet north of Foster Avenue and 90 feet west of East 31st Street, Brooklyn.

Water level, in feet, with reference to mean sea level, 1942

Jan. 3	-9.52	Feb. 21	-9.45	Apr. 11	-9.28	May 30	-9.63
10	-9.45	28	-9.51	18	-9.56	June 6	-9.63
17	-9.41	Mar. 7	-9.55	25	-9.64	13	-9.71
24	-9.53	14	-9.57	May 2	-9.66	20	-9.81
31	-9.44	21	-9.56	9	-9.63	27	-9.77
Feb. 7	-9.49	28	-9.58	16	-9.43	July 4	-9.64
14	-9.50	Apr. 4	-9.63	23	-9.52	11	-9.56

K502 (*936, p. 144)--Continued.

Water level, in feet, with reference to mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 18	-9.64	Aug. 29	-9.54	Oct. 10	-9.87	Nov. 21	-9.92
25	-9.60	Sept. 5	-9.60	17	-9.88	28	-9.81
Aug. 1	-9.54	12	-9.67	24	-10.01	Dec. 5	-9.79
8	-9.52	19	-9.63	31	-10.08	12	-9.73
15	-9.47	26	-9.65	Nov. 7	-10.03	19	-9.70
22	-9.52	Oct. 3	-9.85	14	-9.96	26	-9.74

K533 (*777, p. 120; *817, p. 200; *840, p. 261; 845, p. 310; 886, p. 486 *906, p. 118; 936, p. 144). New York Water Service Corporation test well. On southwest side of East 98th Street near Rutland Road, Brooklyn.

Lowest daily water level, in feet below mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	23.37	23.39	23.45	23.40	23.40	23.55	23.66	23.76	23.79	23.78	23.47	23.34
2	23.35	23.49	23.44	23.40	23.42	23.51	23.65	23.76	23.79	23.83	23.43	23.32
3	23.41	23.51	23.31	23.35	23.40	23.50	23.68	23.77	23.80	23.83	23.50	23.36
4	23.38	23.52	23.37	23.35	23.43	23.48	23.67	23.79	23.81	23.80	23.50	23.39
5	23.43	23.49	23.37	23.36	23.46	23.54	23.61	23.79	23.82	23.71	23.53	23.37
6	23.45	23.44	23.38	23.30	23.47	23.52	23.62	23.80	23.84	23.77	23.51	23.42
7	23.45	23.41	23.38	23.31	23.44	23.52	23.64	23.82	23.81	23.80	23.51	23.35
8	23.47	23.44	23.36	23.40	23.38	23.56	23.67	23.82	23.83	23.81	23.47	23.36
9	23.48	23.52	23.25	23.40	23.37	23.58	23.69	23.76	23.83	23.79	23.43	23.33
10	23.44	23.52	23.33	23.32	23.41	23.51	23.69	23.69	23.84	23.80	23.39	23.32
11	23.44	23.44	23.32	23.27	23.46	23.53	23.66	23.74	23.86	23.76	23.45	23.29
12	23.44	23.45	23.35	23.31	23.45	23.52	23.70	23.78	23.81	23.80	23.45	23.27
13	23.50	23.47	23.34	23.37	23.51	23.51	23.71	23.81	23.80	23.82	23.46	23.30
14	23.50	23.47	23.33	23.37	23.53	23.49	23.70	28.82	23.84	23.79	23.45	23.26
15	23.40	23.46	23.35	23.34	23.50	23.54	.....	23.81	23.88	23.76	23.50	23.25
16	23.52	23.44	23.37	23.40	23.49	23.57	.....	23.80	23.89	23.75	23.41	23.24
17	23.52	23.42	23.36	23.40	23.48	23.56	.....	23.81	23.88	23.75	23.41	23.24
18	23.45	23.43	23.26	23.30	23.50	23.55	.....	23.82	23.86	23.66	23.42	23.30
19	23.40	23.45	23.35	23.32	23.51	23.58	.....	23.82	23.83	23.69	23.43	23.29
20	23.43	23.44	23.36	23.33	23.50	23.58	.....	23.83	23.84	23.72	23.40	a23.33
21	23.45	23.42	23.36	23.35	23.50	23.57	.....	23.84	23.78	23.72	23.41	.....
22	23.45	23.38	23.30	23.36	23.49	23.56	.....	23.81	23.77	23.67	23.50	.....
23	23.44	23.38	23.31	23.39	23.42	23.59	.....	23.79	23.82	23.73	23.35	.....
24	23.40	23.35	23.35	23.38	23.46	23.62	.....	23.82	23.86	23.76	23.36	.....
25	23.38	23.35	23.39	23.37	23.46	23.67	.....	23.82	23.87	23.75	23.35	.....
26	23.41	23.35	23.40	23.34	23.50	23.66	.....	23.83	23.87	23.70	23.41	23.27
27	23.43	23.36	23.40	23.38	23.54	23.65	.....	23.83	23.79	23.65	23.38	23.32
28	23.43	23.43	23.41	23.36	23.53	23.65	a23.79	23.79	23.83	23.69	23.41	23.22
29	23.51	.....	23.43	23.36	23.51	23.68	23.79	23.80	23.86	23.70	23.44	23.20
30	23.52	.....	23.40	23.37	23.52	23.68	23.80	23.80	23.82	23.69	23.36	23.18
31	23.47	.....	23.40	.....	23.55	.....	23.79	23.81	.....	23.51	.....	23.31

K535 (*840, p. 261; 845, p. 310; 886, p. 486; *906, p. 119; 936, p. 145) New York City Department of Water Supply, Gas and Electricity well Gravesend 1. Avenue S and East 16th Street, Brooklyn.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	1.64	Apr. 18	1.92	July 11	1.98	Oct. 3	2.00
10	1.60	25	1.90	18	1.99	10	1.95
17	1.51	May 2	1.87	25	1.96	17	1.92
24	1.49	9	1.84	Aug. 1	2.01	24	1.89
31	1.51	16	1.81	8	2.03	31	1.85
Feb. 7	1.50	23	1.79	15	2.07	Nov. 14	1.87
14	1.65	30	1.78	22	2.05	21	1.88
21	1.65	June 6	1.75	29	2.11	28	1.90
28	1.61	13	1.78	Sept. 5	2.13	Dec. 5	1.93
Mar. 7	1.66	20	1.78	12	2.12	12	1.79
14	1.73	27	1.69	19	2.14	19	1.75
21	1.78	July 4	1.94	26	2.02	26	1.71
Apr. 11	1.90						

a Estimated.

K537 (*840, p. 262; 845, p. 310; 886, p. 487; 906, p. 119; 936, p. 146). New York City Department of Water Supply, Gas and Electricity well Canarsie 5. Avenue D and Remsen Avenue, Brooklyn. Measurements temporarily discontinued after Nov. 21, 1942.

Water level, in feet, with reference to mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	-7.83	Apr. 4	-7.47	June 27	-7.88	Sept. 12	-7.73
17	-7.92	11	-7.41	July 4	-7.68	19	-7.75
24	-7.92	18	-7.39	11	-7.63	26	-7.78
31	-7.93	25	-7.43	18	-7.63	Oct. 3	-7.78
Feb. 7	-7.92	May 2	-7.52	25	-7.73	10	-7.76
14	-7.84	9	-7.54	Aug. 1	-7.74	17	-7.73
21	-7.78	16	-7.62	8	-7.78	24	-7.95
28	-7.78	23	-7.66	15	-7.72	31	-7.99
Mar. 7	-7.74	30	-7.71	22	-7.76	Nov. 7	-7.97
14	-7.67	June 6	-7.75	29	-7.59	14	-8.02
21	-7.60	13	-7.77	Sept. 5	-7.65	21	-8.03
28	-7.54	20	-7.83				

K539 (*906, p. 120; 936, p. 146). New York City Department of Water Supply, Gas and Electricity. About 120 feet north of Atlantic Avenue and 300 feet east of Logan Street, Brooklyn.

Water level, in feet, with reference to mean sea level, 1942

Jan. 3	-7.95	Apr. 4	-8.03	July 4	-6.47	Oct. 3	-4.76
10	-7.99	11	-7.96	11	-6.55	10	-4.69
17	-8.06	18	-7.91	18	-6.24	17	-4.64
24	-8.10	25	-7.87	25	-5.96	24	-4.58
31	-8.16	May 2	-7.74	Aug. 1	-5.77	31	-4.54
Feb. 7	-8.19	9	-7.79	8	-5.64	Nov. 7	-4.51
14	-8.26	16	-7.75	15	-5.75	14	-4.45
21	-8.28	23	-7.66	22	-5.35	21	-4.46
28	-8.27	30	-7.55	29	-5.19	28	-4.38
Mar. 7	-8.27	June 6	-7.41	Sept. 5	-5.09	Dec. 5	-4.38
14	-8.24	13	-7.15	12	-5.00	12	-4.29
21	-8.18	20	-6.92	19	-4.88	19	-4.34
28	-8.11	27	-6.70	26	-4.85	26	-4.32

K921 (*845, p. 311; 886, p. 487; 906, p. 120; *936, p. 146). Knox Hats. Grand and St. Marks Avenues, Brooklyn.

Water level, in feet, with reference to mean sea level, 1942

Jan. 3	-26.31	Apr. 4	-26.00	July 4	-26.08	Oct. 3	-26.41
10	-26.18	11	-26.02	18	-25.95	17	-26.36
17	-26.19	18	-26.09	25	-26.10	24	-26.42
24	-26.22	25	-26.14	Aug. 1	-26.00	31	-26.35
31	-26.11	May 2	-26.10	8	-25.93	Nov. 7	-26.45
Feb. 7	-26.07	9	-26.03	15	-26.15	14	-26.41
14	-26.11	16	-26.06	22	-26.27	21	-26.38
21	-26.07	23	-26.04	29	-26.28	28	-26.23
28	-26.14	30	-25.12	Sept. 5	-26.30	Dec. 5	-26.20
Mar. 7	-26.16	June 6	-26.05	12	-26.41	12	-26.31
14	-25.99	13	-26.18	19	-26.42	19	-26.09
21	-26.05	20	-26.22	26	-26.43	26	-25.79
28	-26.09	27	-26.28				

K1057 (*840, p. 260;*845, p. 309;*886, p. 487; 906, p. 120;*936, p. 147) Thomas F. White Estate. About 0.6 mile northeast of Marine Parkway Bridge and about 800 feet from Jamaica Bay, on Barren Island, Brooklyn. Measurements discontinued on Dec. 29, 1942.

Lowest daily water level, in feet, above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	8.94	8.90	8.81	a8.39	....	8.72	8.62	....	8.01	8.11	9.06	....
2	9.24	8.50	8.80	a8.45	a8.63	8.72	8.80	....	8.06	8.11	9.05	....
3	8.61	8.62	9.65	a8.35	8.69	8.77	8.74	....	8.22	8.19	8.54	....
4	9.18	8.64	8.66	8.82	8.75	8.84	8.78	....	8.22	8.28	8.55	....
5	9.11	8.70	8.45	8.83	8.58	8.98	8.69	....	8.17	8.45	8.58	a8.72
6	8.75	8.96	8.87	8.95	8.48	8.93	8.91	....	7.89	8.19	8.63	8.81
7	8.37	a9.09	8.38	a8.90	8.82	9.04	8.72	....	7.85	7.99	8.44	8.75
8	8.57	....	a8.60	a8.95	a8.90	8.93	a8.87	....	7.95	7.86	8.77	8.73
9	8.69	a8.45	9.14	8.90	....	8.84	....	....	8.06	7.90	8.73	8.94
10	8.57	8.61	a8.05	a9.50	....	8.79	....	a8.46	8.03	7.83	8.88	9.04
11	8.25	8.66	8.35	a9.45	....	8.90	....	8.31	8.03	8.15	....	9.07
12	8.40	8.26	....	8.86	....	9.03	....	8.18	8.09	8.27	....	9.40
13	8.18	7.66	....	8.76	....	9.09	....	8.08	7.98	8.39	....	9.10
14	8.18	7.66	....	8.75	....	....	....	8.05	7.86	8.27	a8.07	8.63
15	8.31	....	....	8.73	....	....	....	7.97	7.96	8.35	8.10	8.95
16	7.99	....	....	8.62	a8.94	....	....	7.83	7.93	8.53	....	9.23
17	7.90	....	....	a9.00	....	....	....	7.86	7.93	8.77	....	9.10
18	8.00	....	....	a9.08	....	....	....	7.84	8.03	8.58	....	8.94
19	8.35	....	....	9.18	....	....	....	7.85	8.07	8.58	....	8.85
20	8.78	....	....	....	....	a9.26	....	7.82	8.05	8.43	....	....
21	8.62	8.10	a8.75	....	....	9.17	....	7.79	8.02	8.48	a9.21	....
22	8.46	8.52	....	....	....	9.11	....	7.85	8.35	8.73	9.11	....
23	8.50	a8.70	....	....	a9.34	9.13	....	7.95	8.13	8.55	9.00	....
24	8.50	a8.82	....	....	9.17	....	....	7.93	8.16	8.35	a9.30	....
25	9.01	9.18	....	....	9.06	....	....	7.72	7.87	8.49	....	....
26	9.35	....	....	....	8.94	....	....	7.63	7.82	8.98	....	a9.28
27	9.06	....	....	....	8.38	a8.34	....	7.64	8.40	8.68	....	a9.55
28	9.03	a8.85	a8.80	....	8.63	8.40	....	7.76	7.73	8.41	a9.10	a9.70
29	9.09	....	8.88	....	8.48	8.50	....	7.87	7.72	8.53	8.73	a10.15
30	8.98	....	a8.79	a8.68	8.50	8.50	....	7.92	7.83	8.72	a8.90	....
31	8.89	....	8.57	....	8.63	....	....	8.03	....	8.88	....	....

K1139 (*906, p. 121; 936, p. 147). New York City Department of Water Supply, Gas and Electricity well New Lots 1. Chestnut Street and Blake Avenue, Brooklyn.

Lowest daily water level, in feet, below mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.72	8.89	9.49	8.50	7.21	....	4.89	....	3.10	2.81	2.66	2.58
2	7.74	8.88	9.45	8.59	7.18	....	4.84	....	3.08	2.81	2.68	2.49
3	7.75	8.72	9.43	8.58	7.14	....	4.79	....	3.06	2.81	2.69	2.56
4	7.75	8.80	9.41	8.51	7.12	....	4.76	....	3.05	2.80	2.72	2.57
5	7.75	8.75	9.47	8.46	7.10	....	4.72	....	3.04	2.77	2.72	2.59
6	a7.78	8.66	9.47	8.51	7.10	a5.84	4.96	....	3.06	2.80	2.69	2.58
7	a7.80	8.68	9.39	8.54	7.07	5.83	4.65	....	3.05	2.81	2.68	2.58
8	a7.82	8.72	9.48	8.51	7.04	5.75	4.90	....	3.03	2.81	2.65	2.58
9	a7.84	8.86	9.40	8.44	7.04	5.67	4.60	....	3.03	2.80	2.64	2.57
10	7.86	8.84	9.51	8.36	7.01	5.62	4.72	....	3.09	2.79	2.62	2.54
11	7.88	8.62	9.38	8.51	7.01	5.57	4.55	....	3.07	2.78	2.60	2.51
12	7.89	8.71	9.39	8.45	6.97	5.54	4.51	....	2.96	2.79	2.60	2.47
13	7.91	8.87	9.32	8.45	6.91	5.50	4.61	....	2.96	2.80	2.59	2.52
14	7.90	8.74	a9.21	8.39	6.86	5.46	4.45	a3.67	2.96	2.78	2.66	2.55
15	7.90	9.06	9.21	8.19	6.83	5.42	4.42	3.47	2.95	2.74	2.65	2.52
16	7.96	9.21	9.06	8.24	6.80	5.39	4.41	3.47	2.95	2.73	2.64	2.51
17	7.97	9.03	9.04	8.39	6.76	5.49	4.38	3.43	2.95	2.72	2.63	2.53
18	7.98	9.23	8.95	8.23	6.71	5.66	4.35	3.40	2.94	2.69	2.63	2.54
19	7.98	9.17	8.90	8.40	6.69	5.27	4.29	3.38	2.94	2.68	2.63	2.57
20	8.02	9.16	8.90	8.38	6.68	5.23	4.73	3.36	2.90	2.68	2.59	2.57
21	8.02	9.11	8.83	8.40	6.63	5.22	a4.22	3.38	2.88	2.68	2.64	2.57
22	8.10	8.97	8.72	8.53	6.62	5.41	....	3.32	2.88	2.66	2.66	2.57
23	7.95	9.16	8.78	8.24	6.58	5.13	....	3.26	2.86	2.68	2.66	2.51

a Estimated.

K1139 (*906, p. 121; 936, p. 147)--Continued

Lowest daily water level, in feet below mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
24	7.98	....	8.88	8.49	6.55	5.11	....	3.25	2.86	2.70	2.61	2.52
25	8.03	....	8.97	8.47	6.55	5.41	....	3.24	2.86	2.70	2.55	2.52
26	8.10	....	8.72	8.49	6.53	5.45	....	3.22	2.86	2.65	2.56	2.58
27	....	....	8.75	8.17	6.50	5.04	....	3.20	2.80	2.67	2.57	2.58
28	....	a9.27	8.79	7.31	6.45	5.00	....	3.17	2.84	2.71	2.60	2.53
29	....	....	8.63	7.28	6.38	4.97	....	3.13	2.87	2.72	2.59	2.46
30	....	....	8.66	7.26	6.34	5.21	....	3.12	2.85	2.72	2.55	2.42
31	a8.61	....	8.52	....	6.33	....	....	3.11	....	2.68	....	2.40

K1194 (*906, p. 122;*936, p. 148). New York City Department of Water Supply, Gas and Electricity. Northeast corner of Atlantic and Nichols Avenues, Brooklyn.

Water level, in feet, with reference to mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	-8.07	Apr. 4	-8.11	July 4	-6.31	Oct. 3	-4.34
10	-8.10	11	-8.05	11	-6.37	10	-4.25
17	-8.12	18	-8.00	18	-5.90	17	-4.29
24	-8.16	25	-7.98	25	-5.76	24	-4.12
31	-8.19	May 2	-7.96	Aug. 1	-5.59	31	-4.05
Feb. 7	-8.26	9	-7.90	8	-5.40	Nov. 7	-4.02
14	-8.31	16	-7.88	15	-5.20	14	-4.00
21	-8.31	23	-7.82	22	-5.03	21	-3.93
28	-8.36	30	-7.72	29	-4.91	28	-3.87
Mar. 7	-8.36	June 6	-7.51	Sept. 5	-4.76	Dec. 5	-3.93
14	-8.33	13	-7.18	12	-4.68	12	-3.81
21	-8.26	20	-6.84	19	-4.55	19	-3.80
28	-8.19	27	-6.90	26	-4.41	26	-3.75

K1198 (*906, p. 122; 936, p. 148). New York City Department of Water Supply, Gas and Electricity. East side of Cleveland Street, 180 feet north of Fulton Street, Brooklyn.

Water level, in feet, with reference to mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	-7.97	Apr. 4	-8.39	July 4	-7.92	Oct. 3	-6.83
10	-8.05	11	-8.36	11	-7.84	10	-6.76
17	-8.11	18	-8.35	18	-7.77	17	-6.70
24	-8.11	25	-8.34	25	-7.65	24	-6.65
31	-8.17	May 2	-8.33	Aug. 1	-7.56	31	-6.61
Feb. 7	-8.20	9	-8.32	8	-7.47	Nov. 7	-6.58
14	-8.20	16	-8.30	15	-7.37	14	-6.52
21	-8.35	23	-8.26	22	-7.28	21	-6.48
28	-8.33	30	-8.25	29	-7.19	28	-6.45
Mar. 7	-8.40	June 6	-8.20	Sept. 5	-7.10	Dec. 5	-6.45
14	-8.45	13	-8.14	12	-7.02	12	-6.38
21	-8.40	20	-8.08	19	-6.94	19	-6.36
28	-8.40	27	-8.00	26	-6.88	26	-6.32

K1199 (*906, p. 123; 936, p. 149). New York City Department of Water Supply, Gas and Electricity. South side of Jefferson Avenue, about 110 feet east of Howard Avenue, Brooklyn.

Water level, in feet, with reference to mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	-16.20	Apr. 4	-16.13	July 4	-16.26	Oct. 3	-16.65
10	-16.31	11	-16.18	11	-16.33	10	-16.67
17	-16.26	18	-16.15	18	-16.35	17	-16.70
24	-16.22	25	-16.14	25	-16.36	24	-16.68
31	-16.20	May 2	-16.13	Aug. 1	-16.38	31	-16.67
Feb. 7	-16.24	9	-16.13	8	-16.42	Nov. 7	-16.66
14	-16.17	16	-16.15	15	-16.44	14	-16.62
21	-16.22	23	-16.12	22	-16.48	21	-16.63
28	-16.18	30	-16.15	29	-16.43	28	-16.61
Mar. 7	-16.15	June 6	-16.17	Sept. 5	-16.53	Dec. 5	-16.61
14	-16.17	13	-16.18	12	-16.56	12	-16.57
21	-16.17	20	-16.22	19	-16.61	26	-16.52
28	-16.13	27	-16.25	26	-16.62		

K1235 (*936, p. 149). New York City Department of Water Supply, Gas and Electricity. Northwest corner of Fulton Street and Pennsylvania Avenue, Brooklyn.

Water level, in feet, with reference to mean sea level, 1942

Jan. 3	-10.03	Apr. 4	-10.36	July 4	-10.63	Oct. 3	-10.21
10	-10.06	11	-10.39	11	-10.61	10	-10.12
17	-10.10	18	-10.42	18	-10.62	17	-10.08
24	-10.13	25	-10.42	25	-10.63	24	-10.06
31	-10.13	May 2	-10.46	Aug. 1	-10.58	31	-10.01
Feb. 7	-10.15	9	-10.48	8	-10.57	Nov. 7	-9.95
14	-10.19	16	-10.51	15	-10.50	14	-9.90
21	-10.23	23	-10.52	22	-10.45	21	-9.85
28	-10.27	30	-10.59	29	-10.41	28	-9.83
Mar. 7	-10.31	June 6	-10.61	Sept. 5	-10.37	Dec. 5	-9.78
14	-10.33	13	-10.63	12	-10.32	12	-9.72
21	-10.38	20	-10.63	19	-10.29	19	-9.70
28	-10.40	27	-10.65	26	-10.26	26	-9.70

K1236 (*936, p. 149). New York City Department of Water Supply, Gas and Electricity. Southeast corner of Lexington and Patchen Avenues, Brooklyn. Measuring point lowered 0.03 foot on Aug. 31, 1942, by tightening coupling at top of well. New measuring point, top of coupling, about level with land surface and 50.91 feet above mean sea level. Water level Aug. 31, 1942, 69.86 feet below measuring point and 18.95 feet below mean sea level.

Water level, in feet, with reference to mean sea level, 1942

Jan. 3	-18.39	Apr. 18	-18.18	July 11	-18.71	Oct. 3	-19.10
10	-18.54	25	-18.16	18	-18.69	10	-19.05
17	-18.52	May 2	-18.13	25	-18.73	17	-19.00
24	-18.48	9	-18.12	Aug. 1	-18.55	24	-18.89
31	-18.50	16	-18.12	8	-18.82	31	-18.83
Feb. 7	-18.44	23	-18.10	15	-18.73	Nov. 7	-18.77
14	-18.38	30	-18.11	22	-18.89	14	-18.76
28	-18.34	June 6	-18.16	31	-18.95	21	-18.72
Mar. 14	-18.26	13	-18.23	Sept. 5	-18.98	28	-18.68
21	-18.26	20	-18.35	12	-19.01	Dec. 5	-18.66
28	-18.26	27	-18.41	19	-18.96	12	-18.65
Apr. 4	-18.23	July 4	-18.35	26	-19.07	26	-18.41
11	-18.35						

K1237 (*936, p. 150). New York City Department of Water Supply, Gas and Electricity. East corner of Delmonico Place and Hopkins Street, Brooklyn.

K1237 (*936, p. 150)--Continued

Water level, in feet, with reference to mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	-33.96	Apr. 4	-34.30	July 4	-33.98	Oct. 3	-33.78
10	-34.03	11	-34.28	11	-33.83	10	-33.89
17	-34.15	18	-34.34	18	-33.69	17	-33.76
24	-34.38	25	-34.25	25	-33.73	24	-33.91
31	-34.14	May 2	-34.13	Aug. 1	-33.59	31	-34.02
Feb. 7	-34.51	9	-34.18	8	-33.04	Nov. 7	-34.06
14	-33.62	16	-34.16	15	-33.21	14	-34.16
21	-34.35	23	-34.18	22	-33.37	21	-34.32
28	-34.39	30	-34.16	29	-33.53	28	-34.27
Mar. 7	-34.18	June 6	-34.12	Sept. 5	-33.72	Dec. 5	-34.28
14	-34.13	13	-34.16	12	-33.71	12	-34.30
21	-34.09	20	-34.11	19	-33.71	19	-34.36
28	-34.36	27	-34.08	26	-33.67	26	-34.07

K1263 (*936, p. 150). New York City Department of Water Supply, Gas and Electricity. West side of East 16th Street, 95 feet north of Cortelyou Road, Brooklyn.

Water level, in feet, with reference to mean sea level, 1942

Jan. 3	-11.35	Apr. 4	-11.49	July 4	-11.62	Oct. 3	-11.19
10	-11.28	11	-11.48	11	-11.59	10	-11.10
17	-11.27	18	-11.48	18	-11.53	17	-11.18
24	-11.24	25	-11.47	25	-11.53	24	-11.13
31	-11.31	May 2	-11.46	Aug. 1	-11.49	31	-11.07
Feb. 7	-11.23	9	-11.48	8	-11.45	Nov. 7	-11.03
14	-11.22	16	-11.48	15	-11.41	14	-11.00
21	-11.21	23	-11.48	22	-11.33	21	-10.93
28	-11.32	30	-11.49	29	-11.27	28	-10.91
Mar. 7	-11.40	June 6	-11.52	Sept. 5	-11.25	Dec. 5	-10.81
14	-11.49	13	-11.56	12	-11.15	12	-10.78
21	-11.49	20	-11.62	19	-11.17	19	-10.72
28	-11.49	27	-11.64	26	-11.20	26	-10.76

K1264 (*936, p. 151). New York City Department of Water Supply, Gas and Electricity. Southeast corner of Snyder Avenue and East 37th Street, Brooklyn.

Water level, in feet, with reference to mean sea level, 1942

Jan. 3	-14.88	Apr. 4	-14.91	July 4	-15.07	Sept. 26	-15.06
10	-14.89	11	-14.91	11	-15.08	Oct. 3	-15.01
17	-14.79	18	-14.91	18	-15.00	10	-15.04
24	-14.77	25	-14.91	25	-15.17	17	-15.04
31	-14.74	May 2	-14.94	Aug. 1	-15.12	24	-15.02
Feb. 7	-14.75	9	-14.95	8	-15.09	31	-15.03
14	-14.85	16	-14.95	15	-15.07	Nov. 7	-15.02
21	-14.83	23	-14.94	22	-15.15	14	-14.99
28	-14.85	30	-14.94	29	-14.97	21	-14.97
Mar. 7	-14.89	June 6	-14.95	Sept. 5	-15.02	28	-14.92
14	-14.91	13	-14.93	12	-15.13	Dec. 12	-14.96
21	-14.96	20	-14.95	19	-15.02	26	-14.83
28	-14.92	27	-14.98				

K1265 (*936, p. 151). New York City Department of Water Supply, Gas and Electricity. Southwest corner of Riverdale Avenue and Thatford Street, Brooklyn.

Water level, in feet, with reference to mean sea level, 1942

Jan. 3	-10.80	Feb. 21	-10.88	Apr. 11	-11.13	May 30	-11.28
10	-10.85	28	-10.88	18	-11.20	June 6	-11.33
17	-10.87	Mar. 7	-10.88	25	-11.20	13	-11.36
24	-10.87	21	-10.96	May 2	-11.20	20	-11.40
Feb. 7	-10.89	28	-11.04	16	-11.23	27	-11.43
14	-10.88	Apr. 4	-11.09	23	-11.25	July 4	-11.44

K1265 (*936, p. 151)--Continued.

Water level, in feet, with reference to mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 11	-11.43	Aug. 29	-11.53	Oct. 10	-11.24	Nov. 21	-11.21
18	-11.43	Sept. 5	-11.54	17	-11.21	28	-11.19
25	-11.40	12	-11.53	24	-11.18	Dec. 5	-11.16
Aug. 1	-11.50	19	-11.44	31	-11.22	12	-11.17
8	-11.54	26	-11.28	Nov. 7	-11.20	19	-11.18
15	-11.54	Oct. 3	-11.33	14	-11.19	26	-11.13
22	-11.55						

K1266 (*936, p. 152). New York City Department of Water Supply, Gas and Electricity. Southeast corner of Vermont Street and Livonia Avenue, Brooklyn.

Water level, in feet, with reference to mean sea level, 1942

Jan. 3	-6.77	Apr. 18	-7.37	July 18	-7.26	Oct. 17	-6.87
17	-6.77	25	-7.47	Aug. 1	-7.25	24	-6.86
24	-7.21	May 2	-7.45	8	-7.25	31	-6.83
Feb. 7	-7.10	16	-7.46	15	-7.18	Nov. 7	-6.85
14	-7.15	23	-7.46	22	-7.23	14	-6.87
21	-7.37	30	-7.47	29	-7.08	21	-6.81
28	-7.38	June 6	-7.49	Sept. 5	-7.00	28	-6.81
Mar. 7	-7.22	13	-7.49	12	-6.98	Dec. 5	-6.70
21	-7.27	20	-7.49	19	-6.91	12	-6.59
28	-7.19	27	-7.49	26	-6.84	19	-6.31
Apr. 4	-7.42	July 4	-7.46	Oct. 3	-6.90	26	-6.55
11	-7.47	11	-7.38	10	-6.88		

K1296 (*936, p. 152). New York City Department of Water Supply, Gas and Electricity. About 40 feet north of Blake Avenue extended and 165 feet west of Crystal Street extended, Brooklyn.

Water level, in feet, with reference to mean sea level, 1942

Jan. 3	-6.20	Apr. 4	-7.32	July 4	-4.56	Oct. 3	-2.56
10	-6.62	11	-7.23	11	-4.30	10	-2.57
17	-6.82	18	-7.14	18	-4.40	17	-2.51
24	-6.64	25	-7.11	25	-3.88	24	-2.52
31	-7.40	May 2	-6.24	Aug. 1	-3.61	31	-2.46
Feb. 7	-7.57	9	-5.90	8	-3.42	Nov. 7	-2.44
14	-7.70	16	-5.75	15	-3.18	14	-2.43
21	-7.95	23	-5.52	22	-2.95	21	-2.41
28	-8.14	30	-5.43	29	-2.80	28	-2.37
Mar. 7	-8.27	June 6	-5.42	Sept. 5	-2.70	Dec. 5	-2.34
14	-8.06	13	-5.37	12	-2.69	12	-2.32
21	-7.70	20	-5.00	19	-2.66	19	-2.30
28	-7.38	27	-4.81	26	-2.63	26	-2.35

Nassau County

N7 (*840, p. 263; 845, p. 311; 886, p. 488;*906, p. 123;*936, p. 153). Citizens Water Supply Co. well Valley Stream 26. About 130 feet north of Remsen Street and 150 feet west of Corona Avenue, Valley Stream. Measuring point lowered 3.28 feet on July 6, 1942. New measuring point, top of 10-inch coupling, about 2.0 feet above land surface and 22.80 feet above mean sea level. Water level, July 6, 1942, 12.70 feet below measuring point and 10.10 feet above mean sea level. About 115 feet of sand and gravel was removed from well during July. Measured depth after removal of sand and gravel, 851 feet below land surface.

N7 (*840, p. 263; 845, p. 311; 886, p. 488;*906, p. 123;*936, p. 153). --Continued.

Lowest daily water level, in feet above mean sea level, 1942
(Record from Jan. 3 through July 18, 1942, taken from tape measurements; record after July 18 based on recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	.....	.....	.....	.....	.....	9.26	8.92	9.64	10.90	11.77
2	.....	.....	.....	.....	8.62	.....	.....	9.26	8.94	9.70	11.08	11.94
3	11.12	.....	.....	.....	.....	.....	.....	9.25	8.98	9.73	11.05	11.87
4	.....	.....	.....	7.27	.....	.....	.....	9.20	9.04	9.73	10.98	11.87
5	.....	.....	.....	.....	.....	.....	.....	9.17	9.07	9.80	10.95	11.79
6	.....	.....	.....	.....	.....	10.31	10.10	9.15	9.01	9.97	10.94	11.73
7	.....	9.01	8.43	.....	.....	.....	.....	9.11	8.97	10.04	10.98	11.64
8	.....	.....	.....	.....	.....	.....	.....	9.07	8.96	9.99	11.00	11.56
9	.....	.....	.....	.....	9.02	.....	.....	9.06	8.95	9.98	11.10	11.55
10	10.60	.....	.....	.....	.....	.....	.....	9.09	8.95	9.98	11.12	11.52
11	.....	.....	.....	9.24	.....	.....	10.04	9.12	8.98	9.99	11.39	11.53
12	.....	.....	.....	.....	.....	.....	.....	9.11	9.01	10.08	11.38	11.60
13	.....	.....	.....	.....	.....	10.56	.....	9.10	9.06	10.07	11.40	a11.72
14	.....	8.78	8.28	.....	.....	.....	.....	9.10	9.11	10.08	11.43	.....
15	.....	.....	.....	.....	.....	.....	.....	9.10	9.15	10.15	11.31	.....
16	.....	.....	.....	.....	9.96	.....	.....	9.12	9.18	10.26	11.25	.....
17	9.44	.....	.....	.....	.....	.....	.....	9.12	9.21	10.32	11.24	.....
18	.....	.....	.....	8.98	.....	.....	9.90	9.13	9.24	10.46	11.24	.....
19	.....	.....	.....	.....	.....	.....	.....	9.12	9.27	10.61	11.28	11.60
20	.....	.....	.....	.....	.....	.....	.....	9.11	9.34	10.65	11.28	11.54
21	.....	8.71	8.31	.....	.....	.....	.....	9.11	9.41	10.66	11.35	11.47
22	.....	.....	.....	.....	.....	.....	a9.74	9.11	9.45	10.73	11.35	11.44
23	.....	.....	.....	.....	10.25	.....	a9.65	9.11	9.51	10.85	11.34	11.52
24	9.35	.....	.....	.....	.....	.....	a9.56	9.11	9.54	10.81	11.36	11.64
25	.....	.....	.....	8.79	.....	.....	9.35	9.04	9.58	10.80	11.63	11.62
26	.....	.....	.....	.....	.....	.....	9.32	8.99	9.58	10.81	11.82	11.53
27	.....	.....	.....	.....	.....	.....	9.32	8.95	9.59	11.03	11.81	11.48
28	.....	8.70	8.50	.....	.....	.....	9.31	8.94	9.72	10.92	11.75	11.48
29	.....	.....	.....	.....	.....	.....	9.30	8.94	9.65	10.81	11.72	11.71
30	.....	.....	.....	.....	10.27	.....	9.27	8.93	9.63	10.79	11.77	11.74
31	9.22	.....	.....	.....	.....	.....	9.26	8.92	....	10.79	.....	12.10

N9 (*840, p. 264; 845, p. 312; 886, p. 489;*906, p. 124; 936, p. 153). Citizens Water Supply Co. well Valley Stream 7. On west side of Corona Avenue, 650 feet north of Remsen Street, Valley Stream. About 15 feet of sand and gravel was removed from well during July. Measured depth after removal of sand and gravel, 136.5 feet below land surface.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	21.23	Apr. 4	21.83	July 6	21.68	Oct. 3	21.82
10	21.18	11	21.92	11	21.74	10	21.84
17	21.07	18	21.80	18	21.88	17	21.78
24	21.12	25	21.69	25	21.61	24	21.78
31	21.07	May 2	21.62	Aug. 1	21.99	31	21.75
Feb. 7	21.41	9	21.64	8	21.83	Nov. 7	21.83
14	21.28	16	21.54	15	22.28	14	21.83
21	21.39	23	21.55	22	22.23	21	21.77
28	21.33	30	21.43	29	22.20	28	21.91
Mar. 7	21.52	June 6	21.40	Sept. 5	22.04	Dec. 5	21.94
14	21.65	13	21.48	12	21.98	12	21.94
21	21.71	20	21.42	19	22.05	19	21.89
28	21.84	27	21.39	26	21.84	26	21.86

N53 (*777, p. 123;*817, p. 201;*840, p. 265; 845, p. 312; 886, p. 489; *906, p. 124; 936, p. 154). Village of Rockville Centre. In basement of municipal power station, Morris and Maple Avenues, Rockville Centre.

N53. Village of Rockville Centre--Continued.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	12.63	Apr. 4	13.64	July 6	13.14	Oct. 3	13.13
10	12.57	11	13.70	11	13.07	10	13.17
17	12.46	18	13.75	18	13.14	17	13.04
24	12.48	25	13.68	25	13.02	24	13.01
31	12.41	May 2	13.55	Aug. 1	13.14	31	12.96
Feb. 7	12.57	9	13.46	8	13.07	Nov. 7	13.07
14	12.79	16	13.34	15	13.45	14	13.16
21	12.93	23	13.27	22	13.56	21	13.15
28	12.94	30	13.17	29	13.59	28	13.25
Mar. 7	12.97	June 6	13.09	Sept. 5	13.47	Dec. 5	13.34
14	13.07	13	13.04	12	13.33	12	13.39
21	13.26	20	12.99	19	13.24	19	13.40
28	13.51	27	12.93	26	13.16	26	13.38

N67 (*777, p. 122; *817, p. 201; *840, p. 266; *845, p. 313; 886, p. 490; 906, p. 125; 936, p. 154). Village of Freeport. On north side of Sunrise Highway, about 200 feet west of Long Beach Avenue, Freeport.

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	17.66	17.37	16.73	16.85	16.64	16.59	16.57	15.82	15.38	16.07	17.21	17.70
2	17.87	17.12	16.71	16.82	16.61	16.60	16.62	15.79	15.45	16.11	17.17	18.15
3	17.67	16.95	17.05	16.85	16.62	16.68	16.57	15.75	15.57	16.04	17.08	17.70
4	17.75	16.91	16.96	16.82	16.58	16.74	16.50	15.69	15.55	16.14	16.96	17.56
5	17.72	17.05	16.89	16.82	16.36	16.85	16.54	15.58	15.48	16.34	16.95	17.53
6	17.62	17.21	16.93	16.83	16.30	16.86	16.56	15.57	15.31	16.38	17.05	17.51
7	17.53	17.34	16.73	16.92	16.43	16.91	16.45	15.52	15.32	16.33	17.06	17.43
8	17.49	17.28	16.75	16.76	16.53	16.81	16.46	15.43	15.36	16.25	17.12	17.40
9	17.48	16.98	16.92	16.74	16.52	16.74	16.39	15.50	15.39	16.31	17.16	17.42
10	17.49	16.97	16.74	16.87	16.48	16.77	16.26	15.69	15.53	16.35	17.22	17.47
11	17.39	17.06	16.70	17.19	16.41	16.88	16.35	15.61	15.58	16.41	17.37	17.62
12	17.37	17.09	16.68	17.01	16.48	16.95	16.27	15.53	15.61	16.36	17.38	17.75
13	17.20	16.95	16.64	16.83	16.56	17.02	16.20	15.52	15.72	16.32	17.49	17.73
14	17.20	16.84	16.63	16.76	16.50	17.12	16.30	15.56	15.67	16.40	17.15	17.53
15	17.48	16.80	16.75	16.81	16.48	16.99	16.25	15.57	15.68	16.55	17.07	17.63
16	17.08	16.80	16.65	16.67	16.57	16.94	16.13	15.54	15.68	16.62	17.13	17.73
17	17.02	17.11	16.81	16.70	16.62	16.97	16.06	15.52	15.70	16.68	17.15	17.66
18	17.17	16.97	17.04	16.91	16.57	17.04	16.15	15.49	15.76	16.89	17.27	17.61
19	17.24	16.91	16.81	16.92	16.59	17.04	16.16	15.45	15.86	16.91	17.26	17.39
20	17.34	16.90	16.61	16.89	16.65	17.00	16.18	15.46	16.02	16.87	17.30	17.34
21	17.25	16.90	16.61	16.83	16.67	17.01	16.04	15.48	15.97	16.87	17.41	17.31
22	17.25	16.85	16.92	10.79	16.69	16.92	15.99	15.49	16.11	17.11	17.34	17.32
23	17.26	16.85	16.82	16.72	16.82	16.98	15.99	15.55	16.08	16.97	17.33	17.61
24	17.24	16.92	16.63	16.73	16.85	16.85	15.87	15.47	16.14	16.89	17.51	17.60
25	17.21	17.05	16.57	16.77	16.83	16.69	15.75	15.32	15.97	16.90	17.91	17.60
26	17.24	17.06	16.53	16.75	16.84	16.56	15.66	15.28	15.96	17.08	17.91	17.35
27	17.29	17.01	16.52	16.66	16.86	16.53	15.70	15.30	16.14	17.05	17.86	17.32
28	17.29	16.81	16.60	16.65	16.70	16.51	15.81	15.37	15.95	16.87	17.59	17.60
29	17.19	.....	16.62	16.69	16.68	16.51	15.32	15.33	15.86	16.81	17.58	17.78
30	17.16	.....	16.81	16.68	16.76	16.49	15.75	15.28	15.91	16.83	17.71	17.99
31	17.24	.....	16.80	.....	16.70	.....	15.72	15.34	.....	16.96	.....	17.84

N157 (*777, p. 122; *817, p. 201; *840, p. 267; 845, p. 314; 886, p. 491; *906, p. 125; 936, p. 155). J. N. Hill. About 0.4 mile south of Cedar Swamp Road and 450 feet west of Wheatley Road, Wheatley Hills.

N157. J. N. Hill--Continued.

Lowest daily water level, in feet above mean sea level, 1942
(Record from Jan. 1 through Aug. 8, 1942, based on recorder charts; record after Aug. 8, taken from tape measurements)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	83.36	82.77	82.82	82.55	82.26	82.44	82.25	.....	.....	.....	.....
2	.....	83.20	82.89	82.79	82.54	82.31	82.36	82.25	.....	.....	.....	.....
3	a83.40	83.08	83.34	82.81	82.63	82.43	82.21	82.18	.....	82.12	.....	.....
4	83.57	83.13	82.73	82.68	82.62	82.49	82.20	82.15	.....	.....	.....	.....
5	83.51	83.38	82.71	82.68	82.40	82.42	82.32	82.08	82.07	.....	.....	82.33
6	83.54	83.46	83.01	82.74	82.36	82.37	82.38	82.15	.....	.....	.....	.....
7	83.59	83.52	82.72	82.87	82.58	82.45	82.20	82.10	.....	.....	82.38	.....
8	83.58	83.06	83.00	82.58	82.54	82.23	82.28	a82.08	.....	.....	.....	.....
9	83.58	82.97	83.20	82.58	82.52	82.19	82.15	.....	.....	.....	.....	.....
10	83.55	83.02	82.88	82.78	82.41	82.27	82.10	.....	.....	82.17	.....	.....
11	83.51	83.35	82.86	82.91	82.36	82.45	82.25	.....	.....	.....	.....	.....
12	83.50	83.26	82.82	82.61	82.49	82.44	82.16	.....	82.16	.....	.....	82.81
13	83.40	83.17	82.79	82.50	82.52	82.43	82.16	.....	.....	.....	.....	.....
14	83.40	83.12	82.94	82.49	82.41	82.38	82.32	.....	.....	.....	82.31	.....
15	83.69	83.14	82.92	82.69	82.40	82.21	82.21	82.16	.....	.....	.....	.....
16	83.19	83.14	82.86	82.52	82.48	82.21	82.15	.....	.....	.....	.....	.....
17	83.18	83.13	83.07	82.55	82.42	82.29	82.14	.....	.....	82.42	.....	.....
18	83.60	82.99	83.19	82.79	82.38	82.35	82.28	.....	.....	.....	.....	.....
19	83.71	83.13	82.76	82.70	82.43	82.36	82.30	.....	82.24	.....	.....	82.34
20	83.51	83.09	82.64	82.67	82.47	82.29	82.27	.....	.....	.....	.....	.....
21	83.47	83.22	82.73	82.61	82.48	82.29	82.14	.....	.....	.....	82.65	.....
22	83.47	83.14	83.08	82.58	82.48	82.26	82.13	82.15	.....	.....	.....	.....
23	83.52	83.12	82.89	82.53	82.57	82.34	82.20	.....	.....	.....	.....	.....
24	83.45	83.15	82.66	82.60	82.47	82.20	82.15	.....	.....	82.10	.....	.....
25	83.38	83.14	82.66	82.69	82.42	82.12	82.15	.....	.....	.....	.....	.....
26	83.44	83.12	82.76	82.55	82.45	82.11	82.11	.....	82.11	.....	.....	82.37
27	83.47	83.12	82.76	82.47	82.38	82.21	82.18	.....	.....	.....	.....	.....
28	83.50	82.82	82.79	82.49	82.23	82.77	82.33	.....	.....	.....	82.32	.....
29	83.22	.....	82.80	82.66	82.29	82.27	82.28	82.19	.....	.....	.....	.....
30	83.22	.....	82.93	82.66	82.46	82.30	82.12	.....	.....	.....	.....	.....
31	83.45	.....	82.92	.....	82.33	.....	82.09	.....	.....	82.58	.....	.....

N844 (*906, p. 126; 936, p. 155). Long Island Railroad. About 60 feet east of Jerusalem Avenue and 110 feet north of railroad tracks, Hicksville. Measurements discontinued Aug. 8, 1942.

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
1	79.52	79.22	79.04	78.90	78.94	79.02	79.10	79.20
2	79.49	79.18	79.02	78.91	78.94	79.03	79.10	79.25
3	79.47	79.15	79.06	78.91	78.98	79.05	79.08	79.26
4	79.49	79.16	79.00	78.89	78.96	79.05	79.09	79.28
5	79.46	79.17	79.00	78.91	78.94	79.05	79.11	79.30
6	79.45	79.14	78.98	78.91	78.95	79.04	79.10	79.30
7	79.45	79.17	78.97	78.91	78.97	79.09	79.09	79.32
8	79.43	79.13	79.00	78.87	78.97	79.05	79.09	a79.32
9	79.41	79.10	79.00	78.87	78.97	79.05	79.08	.....
10	79.40	79.10	78.98	78.91	79.00	79.07	79.06	.....
11	79.39	79.09	78.98	78.91	78.98	79.08	79.07	.....
12	79.38	79.07	78.95	78.91	79.00	79.08	79.09	.....
13	79.35	79.08	78.95	78.87	79.00	79.09	79.06	.....
14	79.36	79.06	78.95	78.88	78.98	79.12	79.09	.....
15	79.35	79.08	78.96	78.89	78.99	79.08	79.06	.....
16	79.30	79.07	78.94	78.87	79.00	79.09	79.05	.....
17	79.31	79.08	78.97	78.89	79.03	79.10	79.04	.....
18	79.32	79.07	79.00	78.91	79.01	79.10	79.06	.....
19	79.31	79.07	78.95	78.93	79.01	79.10	79.06	.....
20	79.29	79.07	78.94	78.91	79.03	79.09	79.06	.....
21	79.29	79.09	78.96	78.91	79.02	79.12	79.04	.....
22	79.29	79.09	78.99	78.93	79.04	79.09	79.04	.....
23	79.29	79.06	78.96	78.92	79.04	79.11	79.04	.....

a Estimated lowest daily water level.

N844 (*906, p. 126; 936, p. 155)--Continued.

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
24	79.27	79.08	78.93	78.93	79.07	79.09	79.02	.....
25	79.28	79.06	78.93	78.93	79.05	79.08	79.02	.....
26	79.26	79.06	78.91	78.95	79.05	79.07	79.03	.....
27	79.25	79.05	78.93	78.92	79.04	79.07	79.03	.....
28	79.25	79.02	78.90	78.92	79.03	79.10	79.05	.....
29	79.22	.....	78.91	78.95	79.04	79.08	79.11	.....
30	79.22	.....	78.90	78.95	79.06	79.08	79.15	.....
31	79.24	.....	78.90	.....	79.06	.....	79.17	.....

N1101 (*886, p. 491; 906, p. 127; 936, p. 156). Nassau County Department of Public Works. On north side of Valley Road, about 0.8 mile north of Willets Road, Manhasset.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	43.03	Mar. 30	43.44	June 29	42.94	Oct. 2	43.56
30	42.98	May 1	43.29	July 31	43.37	30	43.28
Feb. 27	43.10	29	43.13	Aug. 31	43.65	Nov. 30	43.32

N1102 (*886, p. 491; 906, p. 128; 936, p. 156). Nassau County Department of Public Works. 41 feet north of Willets Road and 149 feet west of Valley Road, Lake Success.

Water level, in feet above mean sea level, 1942

Jan. 2	54.83	Mar. 30	54.24	June 29	53.91	Oct. 2	54.18
30	54.38	May 1	54.11	July 31	53.81	30	54.20
Feb. 27	54.32	29	53.96	Aug. 31	54.11	Nov. 30	54.20

N1103 (*886, p. 493; 906, p. 128; 936, p. 156). Nassau County Department of Public Works. North side of Marcus Avenue, 253 feet east of Lakeville Road, Lake Success.

Water level, in feet above mean sea level, 1942

Jan. 2	55.93	Mar. 30	55.57	June 29	55.33	Oct. 2	55.54
30	55.55	May 1	55.14	July 31	55.35	30	55.92
Feb. 27	55.51	29	55.10	Aug. 31	55.73	Nov. 30	56.00

N1104 (*886, p. 493; 906, p. 128; 936, p. 156). Nassau County Department of Public Works. North side of 80th Avenue, 73 feet west of Rhodes Street, New Hyde Park.

Water level, in feet above mean sea level, 1942

Jan. 2	55.77	Mar. 30	55.33	June 29	55.62	Oct. 2	56.32
30	55.58	May 1	55.27	July 31	55.58	30	56.35
Feb. 27	55.47	29	55.47	Aug. 31	56.02	Nov. 30	56.27

N1105 (*886, p. 493; 906, p. 128; 936, p. 156). Nassau County Department of Public Works. West side of Emerson Avenue, 41 feet north of Whittier Avenue, New Hyde Park.

Water level, in feet above mean sea level, 1942

Jan. 2	53.20	Mar. 30	52.88	June 29	53.02	Oct. 2	53.90
30	52.99	May 1	52.99	July 31	53.02	30	53.89
Feb. 27	52.93	29	53.04	Aug. 31	53.48	Nov. 30	53.71

N1106 (*886, p. 493; 906, p. 128; 936, p. 156). Nassau County Department of Public Works. South side of Magnolia Avenue, 56 feet east of Plainfield Avenue, Floral Park. Measurements discontinued May 30, 1942. Well replaced by N1830.

Water level, in feet above mean sea level, 1942

Jan. 3	48.90	Feb. 14	48.61	Mar. 28	48.84	May 2	49.12
10	48.87	21	48.62	Apr. 4	48.88	9	49.14
17	48.77	28	48.56	11	48.96	16	49.16
24	48.72	Mar. 7	48.63	18	49.04	23	49.18
31	48.65	14	48.70	25	49.09	30	49.13
Feb. 7	48.62	21	48.73				

N1107 (*886, p. 493; 906, p. 128; 936, p. 157). Nassau County Department of Public Works. Northeast corner of Kingston Avenue and Bertha Street, South Floral Park.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	41.93	Mar. 30	42.08	June 29	42.20	Oct. 2	43.34
30	41.66	May 1	42.39	July 31	42.46	30	43.22
Feb. 27	41.64	29	42.21	Aug. 31	43.22	Nov. 30	43.05

N1108 (*886, p. 492; 906, p. 128; 936, p. 157). Nassau County Department of Public Works. Southwest corner of Jacob Street and Rosalind Avenue, Elmont.

Water level, in feet above mean sea level, 1942

Jan. 2	37.19	Mar. 30	37.44	June 29	37.56	Oct. 2	38.77
30	36.94	May 1	37.94	July 31	37.76	30	38.59
Feb. 27	37.02	29	37.65	Aug. 31	38.49	Nov. 30	38.43

N1109 (*886, p. 492; 906, p. 128; 936, p. 157). Nassau County Department of Public Works. South side of Dutch Broadway, 57 feet east of Henry Street, Elmont.

Water level, in feet above mean sea level, 1942

Jan. 2	25.55	Mar. 30	26.49	June 29	26.02	Oct. 30	26.49
30	25.28	May 1	26.53	July 31	26.20	Nov. 30	26.41
Feb. 27	25.71	29	26.26	Aug. 31	26.99		

N1110 (*886, p. 492; 906, p. 129; 936, p. 157). 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, 1942

Jan. 2	19.05	Mar. 30	19.99	June 29	19.22	Oct. 2	19.75
30	18.75	May 1	19.66	July 31	19.61	30	19.62
Feb. 27	19.22	29	19.34	Aug. 31	20.07	Nov. 30	19.82

N1111 (*886, p. 492; 906, p. 129; 936, p. 157). Nassau County Department of Public Works. Northwest corner of Fletcher and Teneyck Avenues, Valley Stream.

Water level, in feet above mean sea level, 1942

Jan. 2	13.20	Mar. 30	14.11	June 29	13.72	Oct. 2	13.99
30	12.72	May 1	13.13	July 31	14.07	30	13.57
Feb. 27	13.48	29	13.39	Aug. 31	14.09	Nov. 30	13.86

N1112 (*886, p. 492; 906, p. 129; 936, p. 157). Nassau County Department of Public Works. On north side of Sunrise Highway, 37 feet southeast of Second Street extended, Valley Stream.

Water level, in feet above mean sea level, 1942

Jan. 3	7.35	Apr. 4	8.34	July 6	9.06	Oct. 3	8.84
10	7.26	11	8.40	11	8.97	10	9.03
17	7.11	18	8.33	18	9.11	17	8.87
24	7.07	25	8.06	25	8.85	24	8.89
31	6.98	May 2	8.09	Aug. 1	9.15	31	8.86
Feb. 7	7.26	9	8.44	8	8.88	Nov. 7	9.05
14	7.51	16	8.52	15	9.64	14	9.06
21	7.67	23	8.57	22	9.44	21	8.93
28	7.51	30	8.44	29	9.27	28	9.18
Mar. 7	7.76	June 6	8.42	Sept. 5	9.06	Dec. 5	9.31
14	8.08	13	8.57	12	8.98	12	9.16
21	8.35	20	8.49	19	8.97	19	9.02
28	8.54	27	8.44	26	8.82	26	8.93

N1113 (*886, p. 494; 906, p. 129; 936, p. 157). Nassau County Department of Public Works. On south side of Du Bois Avenue, on Drew Street extended, Gibson.

N1113. Nassau County Department of Public Works--Continued.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	5.11	Mar. 30	6.03	June 29	4.48	Oct. 2	5.21
30	4.92	May 1	5.29	July 31	5.14	30	5.38
Feb. 27	5.34	29	4.85	Aug. 31	5.66	Nov. 30	5.99

N1114 (*886, p. 494; 906, p. 129; 936, p. 158). Nassau County Department of Public Works. On south side of West Broadway, 115 feet east of Hamilton Avenue, Hewlett.

Water level, in feet above mean sea level, 1942

Jan. 2	8.24	Mar. 30	9.40	June 29	9.22	Oct. 2	9.13
30	8.31	May 1	9.83	July 31	9.27	30	9.06
Feb. 27	8.67	29	9.60	Aug. 31	9.66	Nov. 30	8.94

N1115 (*886, p. 494; 906, p. 129; 936, p. 158). Nassau County Department of Public Works. At southwest corner of Wood Street and Brower Avenue, Woodmere.

Water level, in feet above mean sea level, 1942

Jan. 2	9.05	Mar. 30	10.56	June 29	9.95	Oct. 2	10.08
30	8.88	May 1	10.61	July 31	10.29	30	9.71
Feb. 27	9.62	29	10.21	Aug. 31	10.75	Nov. 30	9.66

N1126 (*845, p. 322; 886, p. 494; 906, p. 129; 936, p. 158). 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, 1942

Jan. 3	55.51	Apr. 4	56.06	July 6	56.17	Oct. 3	57.17
10	55.47	11	56.24	11	56.07	10	57.13
17	55.36	18	56.35	18	56.15	17	57.02
24	55.34	25	56.37	25	55.99	24	56.93
31	55.27	May 2	56.35	Aug. 1	56.43	31	56.88
Feb. 7	55.31	9	56.36	8	56.49	Nov. 7	56.83
14	55.39	16	56.29	15	56.70	14	56.76
21	55.47	23	56.23	22	56.93	21	56.69
28	55.41	30	56.13	29	57.13	28	56.64
Mar. 7	55.50	June 6	56.06	Sept. 5	57.24	Dec. 5	56.62
14	55.56	13	56.28	12	57.29	12	56.59
21	55.65	20	56.21	19	57.28	19	56.53
28	55.84	27	56.12	26	57.23	26	56.49

N1132 (*845, p. 320; 886, p. 494; 906, p. 130; 936, p. 158). Nassau County Department of Public Works. On west side of Lakewood Boulevard, 111 feet south of Sunrise Highway, Lynbrook.

Water level, in feet above mean sea level, 1942

Jan. 3	6.80	Apr. 4	7.83	July 6	7.18	Oct. 3	7.12
10	6.67	11	7.88	11	7.04	10	7.16
17	6.56	18	7.81	18	6.94	17	7.04
24	6.62	25	7.70	25	7.03	24	7.26
31	6.58	May 2	7.52	Aug. 1	7.16	31	7.37
Feb. 7	6.75	9	7.38	8	7.08	Nov. 7	7.59
14	6.88	16	7.16	15	7.56	14	7.68
21	7.08	23	7.04	22	7.71	21	7.70
28	6.97	30	6.90	29	7.67	28	7.82
Mar. 7	7.05	June 6	6.94	Sept. 5	7.55	Dec. 5	7.86
14	7.21	13	6.95	12	7.49	12	7.87
21	7.51	20	6.96	19	7.43	19	7.77
28	7.60	27	6.77	26	7.35	26	7.71

N1140 (*886, p. 495; 906, p. 130; 936, p. 158). Nassau County Department of Public Works. On west side of Kellum Place, 37 feet north of Ninth Street, Garden City.

N1140. Nassau County Department of Public Works--Continued.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	58.50	Apr. 4	59.17	July 6	59.26	Oct. 3	60.28
10	58.36	11	59.47	11	59.21	10	60.29
17	58.40	18	59.69	18	59.17	17	60.28
24	58.37	25	59.80	25	59.16	24	60.28
31	58.40	May 2	59.74	Aug. 1	59.23	31	60.14
Feb. 7	58.32	9	59.67	8	59.44	Nov. 7	60.13
14	58.35	16	59.63	15	59.65	14	60.05
21	58.41	23	59.67	22	59.78	21	59.96
28	58.48	30	59.65	29	59.92	28	59.87
Mar. 7	58.55	June 6	59.55	Sept. 5	60.04	Dec. 5	59.77
14	58.64	13	59.47	12	60.16	12	59.72
21	58.73	20	59.45	19	60.21	19	59.64
28	58.95	27	59.38	26	60.26	26	59.59

N1147 (*886, p. 495; 906, p. 130; 936, p. 159). 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, 1942

Jan. 3	17.05	Apr. 4	17.96	July 6	17.33	Oct. 3	17.17
10	16.97	11	17.93	11	17.29	10	17.15
17	16.88	18	17.87	18	17.25	17	17.09
24	16.90	25	17.76	25	17.22	24	17.06
31	16.84	May 2	17.67	Aug. 1	17.32	31	17.00
Feb. 7	17.02	9	17.61	8	17.25	Nov. 7	17.09
14	17.24	16	17.52	15	17.57	14	17.19
21	17.37	23	17.48	22	17.65	21	17.21
28	17.35	30	17.39	29	17.61	28	17.31
Mar. 7	17.41	June 6	17.33	Sept. 5	17.47	Dec. 5	17.42
14	17.57	13	17.28	12	17.36	12	17.47
21	17.76	20	17.22	19	17.28	19	17.43
28	17.95	27	17.17	26	17.21	26	17.46

N1160 (*886, p. 495; 906, p. 130; 936, p. 159). Nassau County Department of Public Works. On south side of Stewart Avenue, about 75 feet east of Mitchell Field, about 1.5 miles east of Garden City.

Water level, in feet above mean sea level, 1942

Jan. 3	63.61	Apr. 4	64.76	July 6	64.59	Oct. 3	65.52
10	63.45	11	64.82	11	64.50	10	65.55
17	63.41	18	64.39	18	64.46	17	65.37
24	63.43	25	64.74	25	64.45	24	65.27
31	63.37	May 2	64.64	Aug. 1	64.97	31	65.17
Feb. 7	63.56	9	64.57	8	65.21	Nov. 7	65.14
14	63.76	16	64.48	15	65.45	14	65.11
21	63.90	23	64.45	22	65.83	21	65.05
28	63.85	30	64.34	29	66.00	28	64.99
Mar. 7	64.05	June 6	64.26	Sept. 5	65.99	Dec. 5	65.00
14	64.16	13	64.66	12	65.90	12	65.03
21	64.31	20	64.68	19	65.76	19	64.91
28	64.59	27	64.55	26	65.62	26	64.87

N1167 (*845, p. 321; 886, p. 496; 906, p. 131; 936, p. 159). 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, 1942

Jan. 3	10.03	Apr. 4	11.27	July 6	10.60	Oct. 3	10.50
10	9.99	11	11.22	11	10.52	10	10.47
17	9.93	18	11.22	18	10.50	17	10.41
24	10.01	25	11.09	25	10.51	24	10.39
31	9.96	May 2	10.98	Aug. 1	10.58	31	10.36
Feb. 7	10.11	9	10.91	8	10.56	Nov. 7	10.53
14	10.30	16	10.84	15	10.86	14	10.53
21	10.46	23	10.87	22	10.92	21	10.48
28	10.52	30	10.78	29	10.92	28	10.59
Mar. 7	10.57	June 6	10.71	Sept. 5	10.81	Dec. 5	10.73
14	10.70	13	10.66	12	10.70	12	10.75
21	10.92	20	10.59	19	10.60	19	10.73
28	11.18	27	10.52	26	10.53	26	10.67

N1174 (*936, p. 159). Nassau County Department of Public Works. On south side of Chicken Valley Road about 0.8 mile west of Hegemans Lane, Old Brookville.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	71.34	Mar. 30	70.77	June 29	70.79	Oct. 2	71.62
30	71.08	May 1	70.91	July 31	70.81	30	71.75
Feb. 27	70.88	29	70.89	Aug. 31	71.27	Nov. 30	71.73

N1175 (*936, p. 160). Nassau County Department of Public Works. About 0.8 mile southwest of Cedar Swamp Road, about 0.4 mile southeast of North Hempstead Turnpike, Old Westbury.

Water level, in feet above mean sea level, 1942

Jan. 2	79.39	Mar. 30	78.49	June 29	78.13	Oct. 2	78.46
30	79.05	May 1	78.30	July 31	78.13	30	78.78
Feb. 27	78.82	29	78.25	Aug. 31	78.23	Nov. 30	78.82

N1176 (*936, p. 160). Nassau County Department of Public Works. On northeast side of Post Avenue at intersection of Old Westbury-Wheatley Road, Old Westbury.

Water level, in feet above mean sea level, 1942

Jan. 2	82.87	Mar. 30	81.97	June 29	81.37	Oct. 2	81.33
30	82.37	May 1	81.57	July 31	81.04	30	81.56
Feb. 27	82.27	29	81.30	Aug. 31	81.25	Nov. 30	81.68

N1177 (*906, p. 131; 936, p. 160). Nassau County Department of Public Works. On east side of Hitchcock Lane, 100 feet south of Powell Lane, Old Westbury.

Water level, in feet above mean sea level, 1942

Jan. 2	83.38	Mar. 30	82.46	June 29	82.29	Oct. 2	82.50
30	83.04	May 1	82.30	July 31	82.27	30	82.81
Feb. 27	82.83	29	82.32	Aug. 31	82.34	Nov. 30	82.87

N1179 (*906, p. 131; 936, p. 160). Nassau County Department of Public Works. On west side of School Street, 300 feet south of Old Country Road, Westbury.

Water level, in feet above mean sea level, 1942

Jan. 2	72.57	Mar. 30	73.25	June 29	73.44	Oct. 2	74.84
30	72.37	May 1	73.85	July 31	73.58	30	74.44
Feb. 27	72.69	29	73.57	Aug. 31	74.84	Nov. 30	74.06

N1180 (*845, p. 321; 886, p. 496; 906, p. 131; 936, p. 160). Nassau County Department of Public Works. On south side of Stewart Avenue, 700 feet west of Newbridge Avenue, Salisbury. Measurements discontinued June 6, 1942. Well replaced by N1829.

Water level, in feet above mean sea level, 1942

Jan. 3	65.74	Feb. 14	65.96	Mar. 28	66.78	May 9	66.75
10	65.66	21	66.19	Apr. 4	66.88	16	66.67
17	65.59	28	66.07	11	66.94	23	66.65
24	65.66	Mar. 7	66.31	18	66.93	30	66.56
31	65.58	14	66.42	25	66.88	June 6	66.49
Feb. 7	66.01	21	66.53	May 2	66.79		

N1181 (*906, p. 131; 936, p. 161). Nassau County Department of Public Works. On north side of Fulton Street, 400 feet east of Merrick Avenue, East Meadow.

Water level, in feet above mean sea level, 1942

Jan. 2	56.41	Mar. 30	57.81	June 29	57.47	Oct. 2	58.23
30	56.30	May 1	57.77	July 31	57.66	30	57.88
Feb. 27	56.91	29	57.49	Aug. 31	58.69	Nov. 30	57.71

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N1182 (*906, p. 132; 936, p. 161). Nassau County Department of Public Works. At northeast corner of Spring Street and Merrick Avenue, East Meadow.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	49.15	Mar. 30	50.68	June 29	50.27	Oct. 2	50.71
30	49.03	May 1	50.46	July 31	50.58	30	50.41
Feb. 27	49.62	29	50.26	Aug. 31	51.15	Nov. 30	50.39

N1183 (*906, p. 132; 936, p. 161). Nassau County Department of Public Works. On north side of William Street, 50 feet east of Jerusalem Avenue, North Merrick.

Water level, in feet above mean sea level, 1942

Jan. 2	35.40	Mar. 30	37.08	June 29	36.07	Oct. 2	36.45
30	35.31	May 1	36.65	July 31	36.70	30	36.08
Feb. 27	35.99	29	36.33	Aug. 31	37.11	Nov. 30	36.39

N1184 (*906, p. 132; 936, p. 161). Nassau County Department of Public Works. Northeast corner of Meader and Camp Avenues, North Merrick.

Water level, in feet above mean sea level, 1942

Jan. 2	21.19	Mar. 30	22.63	June 29	21.22	Oct. 2	21.49
30	21.10	May 1	22.00	July 31	21.77	30	21.25
Feb. 27	21.80	29	21.57	Aug. 31	22.11	Nov. 30	21.88

N1185 (*845, p. 321; 886, p. 496; 906, p. 132; 936, p. 161). Nassau County Department of Public Works. Northwest corner of West Grand Avenue and Lingren Street, Merrick.

Water level, in feet above mean sea level, 1942

Jan. 3	11.04	Apr. 4	12.17	July 6	11.03	Oct. 3	10.85
10	10.93	11	12.14	11	10.90	10	10.78
17	10.81	18	12.17	18	10.99	17	10.64
24	10.90	25	11.92	25	10.93	24	10.76
31	10.79	May 2	11.65	Aug. 1	11.38	31	10.79
Feb. 7	11.17	9	11.48	8	11.54	Nov. 7	11.25
14	11.50	16	11.35	15	12.11	14	11.55
21	11.67	23	11.38	22	12.09	21	11.65
28	11.54	30	11.19	29	11.87	28	11.95
Mar. 7	11.78	June 6	11.01	Sept. 5	11.61	Dec. 5	12.53
14	12.07	13	11.12	12	11.35	12	12.71
21	12.29	20	10.99	19	11.12	19	12.76
28	12.45	27	10.88	26	10.97	26	12.74

N1186 (*906, p. 133; 936, p. 161). Nassau County Department of Public Works. At northwest corner of Merrick Road and Central Parkway, Merrick.

Water level, in feet above mean sea level, 1942

Jan. 2	4.16	Mar. 30	5.00	June 29	3.48	Oct. 2	3.61
30	3.88	May 1	4.18	July 31	4.07	30	3.53
Feb. 27	4.38	29	3.81	Aug. 31	4.23	Nov. 30	4.79

N1198 (*886, p. 496; 906, p. 133; 936, p. 161). 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, 1942

Jan. 3	63.70	Apr. 4	64.18	July 6	64.39	Oct. 3	65.75
10	63.59	11	64.33	11	64.36	10	65.69
17	63.56	18	64.44	18	64.31	17	65.61
24	63.53	25	64.54	25	64.28	24	65.57
31	63.47	May 2	64.58	Aug. 1	64.79	31	65.47
Feb. 7	63.46	9	64.57	8	64.86	Nov. 7	65.41
14	63.72	16	64.58	15	64.96	14	65.36
21	63.92	23	64.55	22	65.18	21	65.29
28	63.85	30	64.48	29	65.43	28	65.23
Mar. 7	63.92	June 6	64.44	Sept. 5	65.63	Dec. 5	65.17
14	63.92	13	64.48	12	65.76	12	65.10
21	63.93	20	64.49	19	65.78	19	65.06
28	64.03	27	64.43	26	65.78	26	65.02

N1204 (*886, p. 497; 906, p. 133; 936, p. 162). Nassau County Department of Public Works. At northwest corner of Harris Court and John Street, Bellemore.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	7.11	Apr. 4	7.99	July 6	7.41	Oct. 3	7.03
10	6.90	11	7.91	11	7.36	10	7.00
17	6.68	18	7.89	18	7.32	17	6.74
24	6.60	25	7.78	25	7.29	24	7.46
31	6.47	May 2	7.66	Aug. 1	7.92	31	8.90
Feb. 7	6.76	9	7.59	8	7.77	Nov. 7	9.72
14	6.87	16	7.42	15	8.15	14	10.07
21	7.06	23	7.28	22	8.15	21	10.34
28	6.98	30	7.18	29	8.05	28	10.56
Mar. 7	7.11	June 6	7.16	Sept. 5	7.93	Dec. 5	10.79
14	7.41	13	7.44	12	7.60	12	10.90
21	7.85	20	7.25	19	7.41	19	10.87
28	8.14	27	7.18	26	7.24	26	10.91

N1216 (*886, p. 497; 906, p. 133; 936, p. 162). 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, 1942

Jan. 3	62.63	Apr. 4	62.73	July 4	63.40	Oct. 3	64.23
10	62.47	11	62.88	11	63.33	10	64.19
17	62.49	18	63.03	18	63.41	17	64.15
24	62.43	25	63.09	25	63.33	24	64.07
31	62.34	May 2	63.21	Aug. 1	63.48	31	64.05
Feb. 7	62.33	9	63.26	8	63.74	Nov. 7	63.98
14	62.31	16	63.30	15	64.06	14	63.92
21	62.48	23	63.32	22	63.98	21	63.83
28	62.53	30	63.33	29	64.05	28	63.77
Mar. 7	62.44	June 6	63.28	Sept. 5	64.15	Dec. 5	63.71
14	62.54	13	63.42	12	64.23	12	63.66
21	62.54	20	63.39	19	64.26	19	63.63
28	62.61	27	63.30	26	64.29	26	63.60

N1222 (*886, p. 497; 906, p. 134; 936, p. 162). Nassau County Department of Public Works. At southwest corner of Cecelia Place and John Street, Seaford.

Water level, in feet above mean sea level, 1942

Jan. 3	1.40	Apr. 4	2.29	July 6	1.45	Oct. 3	3.20
10	1.34	11	2.19	11	1.40	10	3.21
17	1.29	18	2.17	18	1.41	17	3.23
24	1.31	25	2.18	25	1.49	24	3.63
31	1.27	May 2	2.06	Aug. 1	1.88	31	4.96
Feb. 7	1.42	9	1.90	8	1.72	Nov. 7	5.98
14	1.62	16	1.79	15	1.83	14	6.77
21	1.74	23	1.70	22	2.36	21	7.30
28	1.72	30	1.62	29	2.47	28	7.77
Mar. 7	1.75	June 6	1.54	Sept. 5	2.69	Dec. 5	8.12
14	1.85	13	1.50	12	2.81	12	8.37
21	2.03	20	1.45	19	3.06	19	8.44
28	2.24	27	1.41	26	3.17	26	8.52

N1234 (*886, p. 498; 906, p. 134; 936, p. 162). 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, 1942

Jan. 3	59.33	Feb. 14	59.01	Mar. 28	59.40	May 9	60.20
10	59.36	21	59.11	Apr. 4	59.58	16	60.24
17	59.26	28	59.08	11	59.80	23	60.27
24	59.20	Mar. 7	59.09	18	59.94	30	60.23
31	59.26	14	59.20	25	59.95	June 6	60.18
Feb. 7	59.16	21	59.30	May 2	60.13	13	60.23

N1234. Nassau County Department of Public Works--Continued.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 20	60.18	Aug. 8	60.19	Sept. 26	60.91	Nov. 14	60.62
27	60.07	15	60.30	Oct. 3	60.90	21	60.64
July 4	60.07	22	60.46	10	60.90	28	60.51
11	60.07	29	60.57	17	60.91	Dec. 5	60.46
18	60.07	Sept. 5	60.72	24	60.76	12	60.53
25	59.96	12	60.84	31	60.80	19	60.42
Aug. 1	60.13	19	60.91	Nov. 7	60.68	26	60.36

N1240 (*886, p. 498; 906, p. 134; 936, p. 163). 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 with reference to mean sea level, 1942

Jan. 3	-0.94	Apr. 4	+0.34	July 6	-0.58	Oct. 3	+2.78
10	-.90	11	+.43	11	-.68	10	+2.80
17	-1.08	18	+.38	18	-.65	17	+2.89
24	-1.08	25	+.63	25	+.13	24	+4.55
31	-1.02	May 2	+.33	Aug. 1	+.22	31	+6.27
Feb. 7	-1.05	9	-.15	8	-.37	Nov. 7	+7.26
14	-.83	16	-.32	15	-.12	14	+7.98
21	-.84	23	-.42	22	+1.34	21	+8.50
28	-.78	30	-.62	29	+1.02	28	+8.92
Mar. 7	-.71	June 6	-.62	Sept. 5	+1.97	Dec. 5	+9.39
14	-.69	13	-.28	12	+2.31	12	+9.76
21	-.45	20	-.49	19	+2.59	19	+9.95
28	-.01	27	-.46	26	+2.75	26	+10.09

N1242 (*886, p. 498; 906, p. 134; 936, p. 163). Nassau County Department of Public Works. On south side of Route 25A, about 1,000 feet west of Cold Spring Harbor Road, and about 1 mile south of Cold Spring Harbor.

Water level, in feet above mean sea level, 1942

Jan. 2	26.62	Mar. 30	26.65	June 29	26.35	Oct. 2	26.30
30	26.48	May 1	26.49	July 31	26.40	30	26.32
Feb. 27	26.45	29	26.41	Aug. 31	26.43	Nov. 30	26.36

N1243 (*906, p. 135; 936, p. 163). Nassau County Department of Public Works. On south side of Velsor-Stillwell Road, about 250 feet west of Cold Spring Harbor Road, about 2 miles south of Cold Spring Harbor.

Water level, in feet above mean sea level, 1942

Jan. 2	55.96	Mar. 30	55.97	June 29	55.17	Oct. 30	54.94
30	55.80	May 1	55.67	July 31	55.08	Nov. 30	55.00
Feb. 27	55.86	29	55.42	Aug. 31	55.42		

N1244 (*906, p. 135; 936, p. 163). 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, 1942

Jan. 2	73.81	Mar. 30	72.69	June 29	71.89	Oct. 2	71.41
30	73.08	May 1	72.37	July 31	71.70	30	71.31
Feb. 27	72.99	29	72.12	Aug. 31	71.52	Nov. 30	71.38

N1245 (*906, p. 135; 936, p. 163). 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, 1942

Jan. 2	78.34	Mar. 30	77.35	June 29	76.50	Oct. 2	76.02
30	77.81	May 1	76.98	July 31	76.27	30	75.96
Feb. 27	77.64	29	76.76	Aug. 31	76.09	Nov. 30	76.05

N1246 (*906, p. 135; 936, p. 163). Nassau County Department of Public Works. On east side of Plainview-Melville Road, just west of Suffolk County Line, Plainview.

N1246 (*906, p. 135; 936, p. 163)--Continued

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	78.77	Mar. 30	77.75	June 29	77.25	Oct. 2	77.27
30	78.30	May 1	77.47	July 31	77.14	30	77.47
Feb. 27	78.09	29	77.39	Aug. 31	77.14	Nov. 30	77.51

N1247 (*886, p. 498; 906, p. 135; 936, p. 164). 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, 1942

Jan. 2	71.54	Mar. 30	70.58	June 29	70.61	Oct. 2	71.34
30	70.88	May 1	70.67	July 31	70.52	30	71.31
Feb. 27	70.73	29	70.63	Aug. 31	70.82	Nov. 30	71.38

N1248 (*886, p. 499; 906, p. 136; 936, p. 164). Nassau County Department of Public Works. On northwest side of Melville Road near Suffolk County line, Farmingdale. Measurements discontinued June 6, 1942. Well replaced by N1828.

Water level, in feet above mean sea level, 1942

Jan. 3	57.67	Feb. 14	57.65	Mar. 28	58.88	May 9	58.95
10	57.59	21	57.87	Apr. 4	59.25	16	58.88
17	57.52	28	58.09	11	59.31	23	58.76
24	57.50	Mar. 7	58.07	18	59.34	30	58.68
31	57.41	14	58.17	25	60.11	June 6	58.57
Feb. 7	57.46	21	58.49	May 2	59.01		

N1249 (*906, p. 136; 936, p. 164). Nassau County Department of Public Works. On northeast corner of Secatogue Avenue and Wall Street, Farmingdale.

Water level, in feet above mean sea level, 1942

Jan. 2	50.62	Mar. 30	52.54	June 29	51.74	Oct. 2	52.71
30	50.34	May 1	52.33	July 31	52.12	30	52.18
Feb. 27	51.19	29	51.98	Aug. 31	53.34	Nov. 30	51.99

N1250 (*886, p. 499; *906, p. 136; 936, p. 164). Nassau County Department of Public Works. 37 feet northwest of Old Carmans Road and about 2,200 feet northeast of Great Neck Road, Farmingdale.

Water level, in feet above mean sea level, 1942

Jan. 2	43.47	Mar. 30	45.62	June 29	44.68	Oct. 2	45.49
30	43.20	May 1	45.35	July 31	44.89	30	44.92
Feb. 27	44.15	29	44.94	Aug. 31	46.28	Nov. 30	44.71

N1251 (*886, p. 499; 906, p. 136; 936, p. 164). 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, 1942

Jan. 2	35.83	Mar. 30	38.11	June 29	37.18	Oct. 2	37.63
30	35.57	May 1	37.87	July 31	37.31	30	37.04
Feb. 27	36.64	29	37.46	Aug. 31	38.38	Nov. 30	36.96

N1252 (*906, p. 136; 936, p. 164). 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, 1942

Jan. 2	22.76	Mar. 30	24.62	June 29	23.67	Oct. 2	25.07
30	22.48	May 1	24.46	July 31	23.63	30	23.70
Feb. 27	23.36	29	24.09	Aug. 31	24.61		

N1257 (*840, p. 278; 845, p. 319; *886, p. 500; 906, p. 138; 936, p. 165) New York City Department of Water Supply, Gas and Electricity. Carman and Scranton Avenues, East Rockaway.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	6.54	Apr. 4	7.93	July 6	6.98	Oct. 3	6.82
10	6.50	11	7.92	11	6.87	10	6.93
17	6.34	18	7.95	18	6.78	17	6.80
24	6.45	25	7.70	25	6.79	24	6.84
31	6.44	May 2	7.46	Aug. 1	6.87	31	6.80
Feb. 7	6.70	9	7.36	8	6.83	Nov. 7	6.98
14	6.97	16	7.22	15	7.34	14	7.11
21	7.14	23	7.11	22	7.51	21	7.01
28	7.04	30	6.96	29	7.42	28	7.20
Mar. 7	7.19	June 6	6.84	Sept. 5	7.22	Dec. 5	7.36
14	7.47	13	6.78	12	7.06	12	7.32
21	7.74	20	6.71	19	6.93	19	7.38
28	8.02	27	6.63	26	6.85	26	7.10

N1258 (*840, p. 278; 845, p. 320; 886, p. 500; 906, p. 138; 936, p. 166) New York City Department of Water Supply, Gas and Electricity. West side of Carmans Road about 300 feet north of Southern State Parkway, Farmingdale.

Water level, in feet above mean sea level, 1942

Jan. 3	34.99	Apr. 4	37.19	July 6	36.16	Oct. 3	36.56
10	34.90	11	37.08	11	36.11	10	36.42
17	34.83	18	37.08	18	36.11	17	36.26
24	34.82	25	36.99	25	35.95	24	36.14
31	34.79	May 2	36.86	Aug. 1	36.37	31	36.04
Feb. 7	35.13	9	36.76	8	36.36	Nov. 7	36.01
14	35.47	16	36.64	15	36.78	14	35.98
21	35.72	23	36.58	22	37.51	21	35.95
28	35.82	30	36.48	29	37.42	28	35.95
Mar. 7	35.82	June 6	36.37	Sept. 5	37.21	Dec. 5	36.17
14	36.23	13	36.51	12	37.05	12	36.33
21	36.58	20	36.35	19	36.86	19	36.29
28	37.15	27	36.26	26	36.80	26	36.18

N1259 (*777, p. 125;*840, p. 279; 845, p. 320; 886, p. 501; 906, p. 138 936, p. 166). 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, 1942

Jan. 3	49.82	Apr. 4	50.91	July 6	50.77	Oct. 3	51.50
10	49.76	11	51.14	11	50.74	10	51.43
17	49.68	18	51.25	18	50.70	17	51.36
24	49.66	25	51.28	25	50.69	24	51.26
31	49.61	May 2	51.26	Aug. 1	51.03	31	51.18
Feb. 7	49.61	9	51.22	8	51.12	Nov. 7	51.10
14	49.79	16	51.14	15	51.20	14	51.02
21	49.97	23	51.09	22	51.36	21	50.95
28	50.07	30	51.00	29	51.52	28	50.88
Mar. 7	50.12	June 6	50.93	Sept. 5	51.65	Dec. 5	50.82
14	50.20	13	50.96	12	51.71	12	50.69
21	50.33	20	50.39	19	51.68	19	50.76
28	50.57	27	50.81	26	51.58	26	50.75

N1260 (*777, p. 126; *817, p. 202; *840, p. 281; 845, p. 322; 886, p. 501; *906, p. 139; 936, p. 166). Nassau County Department of Public Works. On west side of Main Street, 100 feet south of Pittsburg Avenue, Massapequa.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	17.54	Apr. 4	19.64	July 6	18.25	Oct. 3	18.66
10	17.44	11	19.52	11	18.17	10	18.57
17	17.36	18	19.56	18	18.08	17	18.48
24	17.35	25	19.55	25	18.03	24	18.42
31	17.30	May 2	19.40	Aug. 1	18.31	31	18.41
Feb. 7	17.49	9	19.27	8	18.48	Nov. 7	18.56
14	17.88	16	19.14	15	18.64	14	18.68
21	18.16	23	19.01	22	19.02	21	18.81
28	18.31	30	18.87	29	19.24	28	18.97
Mar. 7	18.38	June 6	18.72	Sept. 5	19.14	Dec. 5	19.30
14	18.67	13	18.61	12	18.98	12	19.64
21	19.04	20	18.48	19	18.88	19	19.82
28	19.54	27	18.32	26	18.76	26	19.92

N1262 (*840, p. 282; 845, p. 323; 886, p. 502; 906, p. 139; 936, p. 166) New York City Department of Water Supply, Gas, and Electricity. On east side of Wantagh Avenue, about 0.25 mile south of Southern State Parkway, Wantagh.

Water level, in feet above mean sea level, 1942

Jan. 3	33.61	Apr. 4	34.68	July 6	34.16	Oct. 3	34.20
10	33.50	11	34.83	11	34.19	10	34.16
17	33.40	18	34.57	18	34.30	17	34.10
24	33.60	25	34.44	25	33.89	24	34.10
31	33.47	May 2	34.35	Aug. 1	34.58	31	34.03
Feb. 7	34.54	9	34.36	8	34.29	Nov. 7	34.15
14	33.88	16	34.19	15	34.82	14	34.15
21	34.16	23	34.20	22	34.75	21	34.06
28	34.05	30	34.00	29	34.74	28	34.22
Mar. 7	34.32	June 6	33.93	Sept. 5	34.50	Dec. 5	34.26
14	34.42	13	34.11	12	34.46	12	34.28
21	34.52	20	33.98	19	34.38	19	34.23
28	34.69	27	33.89	26	34.24	26	34.29

N1263 (*840, p. 283; 845, p. 323; 886, p. 502; *906, p. 139; 936, p. 167). 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, 1942

Jan. 3	48.03	Apr. 4	49.35	July 6	48.97	Oct. 3	49.69
10	47.96	11	49.48	11	48.95	10	49.62
17	47.89	18	49.51	18	48.97	17	49.54
24	47.99	25	49.49	25	48.89	24	49.45
31	47.84	May 2	49.43	Aug. 1	49.44	31	49.36
Feb. 7	48.07	9	49.38	8	49.43	Nov. 7	49.32
14	48.31	16	49.30	15	49.59	14	49.29
21	48.61	23	49.24	22	49.74	21	49.23
28	48.56	30	49.17	29	49.85	28	49.17
Mar. 7	48.67	June 6	49.08	Sept. 5	49.91	Dec. 5	49.14
14	48.75	13	49.24	12	49.91	12	49.17
21	48.87	20	49.12	19	49.85	19	49.15
28	49.15	27	49.03	26	49.76	26	49.15

N1264 (*840, p. 285; 845, p.323; 886, p. 502; 906, p. 140; 936, p.167). New York City Department of Water Supply, Gas, and Electricity. On west side of Newbridge Road and about 300 feet south of Sunrise Highway, Bellemore.

Water level, in feet above mean sea level, 1942

Jan. 3	4.38	Feb. 14	4.68	Mar. 28	5.51	May 9	4.88
10	4.22	21	4.87	Apr. 4	5.25	16	4.84
17	3.99	28	4.54	11	5.28	23	4.80
24	4.00	Mar. 7	4.85	18	5.30	30	4.61
31	4.02	14	5.06	25	5.06	June 6	4.54
Feb. 7	4.41	21	5.41	May 2	4.89	13	4.50

N1264. New York City Department of Water Supply, Gas, and Electricity--Continued.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 20	4.30	Aug. 8	4.44	Sept. 26	3.91	Nov. 14	7.09
27	4.16	15	5.07	Oct. 3	3.71	21	7.29
July 6	4.32	22	4.94	10	3.52	28	7.82
11	4.12	29	5.10	17	3.09	Dec. 5	7.99
18	4.10	Sept. 5	4.67	24	3.71	12	7.96
25	3.93	12	4.40	31	5.45	19	7.85
Aug. 1	4.71	19	4.20	Nov. 7	6.63	26	7.90

N1265 (*906, p.140; 936, p. 167). Nassau County Department of Public Works. At southwest corner of Albany Avenue and Merrick Road, Freeport.

Water level, in feet above mean sea level, 1942

Jan. 2	2.82	May 1	2.53	July 31	3.40	Oct. 29	3.17
30	2.57	29	2.92	Aug. 31	3.21	Nov. 27	3.77
Feb. 27	2.47	June 29	2.91	Oct. 1	3.07	Dec. 31	4.34
Mar. 31	2.90						

N1266 (*906, p. 140; 936, p. 167). Nassau County Department of Public Works. At southwest corner of Albany Avenue and Merrick Road, Freeport. Measurements discontinued Mar. 31, 1942. Water levels, in feet above mean sea level, 1942: Jan. 2, 4.22; Jan. 30, 3.85; Feb. 27, 3.82; Mar. 31, 4.29.

N1269 (*906, p. 140; 936, p. 168). Nassau County Department of Public Works. At southwest corner of Babylon Turnpike and Poplar Street, Merrick.

Water level, in feet above mean sea level, 1942

Jan. 2	4.66	May 11	4.87	July 31	3.90	Oct. 29	3.57
30	4.28	29	4.35	Aug. 31	4.32	Nov. 27	5.86
Feb. 27	5.17	June 29	3.88	Oct. 1	3.52	Dec. 31	7.87
Mar. 31	5.63						

N1271 (*906, p. 141; 936, p. 168). Nassau County Department of Public Works. At northeast corner of Beach Drive and Florence Street, Merrick. Measuring point lowered 0.01 foot on Jan. 2, 1942. New measuring point, top of pipe, about level with land surface and 4.62 feet above mean sea level. Water level, Jan. 2, 1942, 2.66 feet below measuring point and 1.96 feet above mean sea level.

Water level, in feet above mean sea level, 1942

Jan. 2	1.96	May 1	1.67	July 31	2.18	Oct. 29	1.79
30	1.78	29	1.52	Aug. 31	1.81	Nov. 27	2.69
Feb. 27	1.89	June 29	1.29	Oct. 1	1.65	Dec. 31	3.66
Mar. 31	2.35						

N1273 (*906, p. 141; 936, p. 168). Nassau County Department of Public Works. At northwest corner of Cypress Street and Walters Avenue, Wantagh.

Water level, in feet above mean sea level, 1942

Jan. 2	5.03	May 1	5.63	July 31	5.33	Oct. 29	4.82
30	4.70	29	5.13	Aug. 31	5.72	Nov. 27	5.53
Feb. 27	5.36	June 29	4.69	Oct. 1	5.07	Dec. 31	6.68
Mar. 31	6.17						

N1275 (*906, p. 141; 936, p. 168). Nassau County Department of Public Works. At northeast corner of Byron and Willow Streets, Wantagh.

Water level, in feet above mean sea level, 1942

Jan. 2	2.55	May 1	2.61	July 31	3.16	Oct. 29	2.44
30	2.42	29	2.30	Aug. 31	3.03	Nov. 27	2.98
Feb. 27	2.70	June 29	2.08	Oct. 1	2.42	Dec. 31	4.07
Mar. 31	3.34						

N1278 (*906, p. 142; 936, p. 168). Nassau County Department of Public Works. At southeast corner of Nassau Street and Bay Drive, Massapequa.

N1278. Nassau County Department of Public Works--Continued.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	5.17	May 1	5.71	July 31	5.64	Oct. 29	5.44
30	4.87	29	5.37	Aug. 31	5.86	Nov. 27	5.66
Feb. 27	5.44	June 29	5.08	Oct. 1	5.32	Dec. 31	6.62
Mar. 31	6.19						

N1280 (*906, p. 142; 936, p. 169). Nassau County Department of Public Works. At northwest corner of Harmony Drive and Park Boulevard, Massapequa.

Water level, in feet above mean sea level, 1942

Jan. 2	2.54	May 1	3.82	July 31	3.04	Oct. 29	4.72
30	2.22	29	3.21	Aug. 31	4.05	Nov. 27	7.01
Feb. 27	2.89	June 29	2.89	Oct. 1	4.44	Dec. 31	8.97
Mar. 31	3.79						

N1282 (*906, p. 143; 936, p. 169). Nassau County Department of Public Works. On west side of Wantagh State Parkway, about 0.9 mile south of Merric. Road, Wantagh. Measuring point raised 0.02 foot on Jan. 2, 1942. New measuring point, top of pipe, 0.2 foot above land surface and 7.45 feet above mean sea level. Water level, Jan. 2, 1942, 4.87 feet below measuring point and 2.58 feet above mean sea level.

Water level, in feet above mean sea level, 1942

Jan. 2	2.58	May 1	1.74	July 31	2.09	Oct. 29	1.55
30	1.93	29	1.48	Aug. 31	2.27	Nov. 27	2.56
Feb. 27	.83	June 29	1.48	Oct. 1	1.56	Dec. 31	1.60
Mar. 31	1.86						

N1285 (*906, p. 143; 936, p. 169). Nassau County Department of Public Works. At northwest corner of Spruce and Melvin Streets, Wantagh. Measuring point lowered 0.03 foot on Jan. 2, 1942. New measuring point, top of pipe, about level with land surface and 6.66 feet above mean sea level. Water level, Jan. 2, 1942, 3.93 feet below measuring point and 2.73 feet above mean sea level.

Water level, in feet above mean sea level, 1942

Jan. 2	2.73	May 1	2.55	July 31	3.06	Oct. 29	2.54
30	2.61	29	2.39	Aug. 31	2.86	Nov. 27	3.16
Feb. 27	2.44	June 29	2.27	Oct. 1	2.51	Dec. 31	4.03
Mar. 31	2.98						

N1288 (*906, p. 143; 936, p. 169). Nassau County Department of Public Works. On west side of Bay View Avenue at St. Regis Street, Wantagh.

Water level, in feet above mean sea level, 1942

Jan. 2	2.77	May 1	2.98	July 31	3.37	Oct. 29	2.72
30	2.55	29	2.66	Aug. 31	3.40	Nov. 27	3.22
Feb. 27	2.91	June 29	2.45	Oct. 1	2.82	Dec. 31	4.23
Mar. 31	3.63						

N1290 (*906, p. 144; 936, p. 169). Nassau County Department of Public Works. On west side of Bay View Avenue at St. Regis Street, Wantagh. Measurements discontinued Mar. 31, 1942. Water level, in feet above mean sea level, 1942: Jan. 2, 3.68; Jan. 30, 3.53; Feb. 27, 3.58.

N1613 (*840, p. 263; 835, p. 312; *886, p. 489; *906, p. 144; 936, p.170 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, 1942

Jan. 3	21.87	Feb. 21	22.12	Apr. 11	22.88	May 30	22.45
10	21.89	28	22.04	18	22.83	June 6	22.45
17	21.75	Mar. 7	22.16	25	22.70	13	22.52
24	21.78	14	22.36	May 2	22.62	20	22.47
31	21.78	21	22.52	9	22.70	27	22.37
Feb. 7	21.98	28	22.69	16	22.59	July 6	22.62
14	21.95	Apr. 4	22.79	23	22.62	11	22.62

N1613 (*840, p. 263; 845, p. 312;* 886, p. 489;*906, p. 144; 936, p. 170). --Continued.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 18	22.62	Aug. 29	23.28	Oct. 10	22.94	Nov. 21	22.84
25	22.48	Sept. 5	23.16	17	22.89	28	22.87
Aug. 1	22.80	12	23.13	24	22.83	Dec. 5	22.92
8	22.71	19	23.08	31	22.85	12	23.01
15	23.10	26	22.98	Nov. 7	22.86	19	22.91
22	23.24	Oct. 3	22.96	14	22.86	26	22.85

N1614 (*906, p. 144; 936, p. 170). 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, 1942

Jan. 3	66.87	Apr. 4	67.19	July 4	67.19	Oct. 3	67.53
10	66.76	11	67.19	11	67.16	10	67.44
17	66.69	18	67.22	18	67.11	17	67.35
24	66.70	25	67.23	25	67.11	24	67.30
31	66.64	May 2	67.23	Aug. 1	67.33	31	67.25
Feb. 7	66.75	9	67.21	8	67.40	Nov. 7	67.20
14	66.78	16	67.21	15	67.66	14	67.16
21	66.75	23	67.22	22	67.77	21	67.06
28	66.78	30	67.17	29	67.72	28	67.01
Mar. 7	66.75	June 6	67.09	Sept. 5	67.72	Dec. 5	67.07
14	66.90	13	67.23	12	67.70	12	66.98
21	67.02	20	67.20	19	67.62	19	66.98
28	67.25	27	67.13	26	67.59	26	66.93

N1615 (*906, p. 145; 936, p. 170). 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, 1942

Jan. 2	42.46	Mar. 30	44.27	June 29	43.56	Oct. 30	43.62
30	42.34	May 1	44.05	July 31	43.92	Nov. 30	43.70
Feb. 27	43.03	29	43.72	Aug. 31	44.77		

N1616 (*906, p. 146; 936, p. 170). 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, 1942

Jan. 3	79.54	Apr. 4	79.15	July 4	79.52	Oct. 3	80.17
10	79.45	11	79.29	11	79.48	10	80.23
17	79.35	18	79.44	18	79.44	17	80.26
24	79.33	25	79.47	25	79.37	24	80.24
31	79.25	May 2	79.54	Aug. 1	79.55	31	80.23
Feb. 7	79.22	9	79.61	8	79.55	Nov. 7	80.18
14	79.10	16	79.64	15	79.70	14	80.18
21	79.09	23	79.69	22	79.73	21	80.14
28	79.03	30	79.65	29	79.80	28	80.07
Mar. 7	78.98	June 6	79.63	Sept. 5	79.88	Dec. 5	80.04
14	79.01	13	79.69	12	79.97	12	80.02
21	78.95	20	79.61	19	80.06	19	79.97
28	79.02	27	79.51	26	80.13	26	79.97

N1617 (*906, p. 147; 936, p. 170). New York City Department of Water Supply, Gas and Electricity. On south side of Merrick Road, 200 feet west of East Shore Drive, West Amityville.

Water level, in feet above mean sea level, 1942

Jan. 3	2.67	Mar. 7	2.68	May 9	3.11	July 11	2.92
10	2.68	14	2.72	16	3.08	18	2.89
17	2.63	21	2.78	23	3.07	25	2.87
24	2.63	28	2.90	30	3.05	Aug. 1	2.86
31	2.61	Apr. 4	3.01	June 6	3.03	8	2.89
Feb. 7	2.62	11	3.08	13	3.01	15	2.90
14	2.63	18	3.11	20	2.99	22	2.93
21	2.66	25	3.12	27	2.97	29	2.98
28	2.66	May 2	3.12	July 6	2.94	Sept. 5	3.00

N1617. New York City Department of Water Supply, Gas, and Electricity --Continued.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 12	3.01	Oct. 10	3.01	Nov. 7	2.99	Dec. 5	2.99
19	3.02	17	3.00	14	2.98	12	2.99
26	3.02	24	3.00	21	2.96	19	3.00
Oct. 3	3.02	31	3.00	28	2.97	26	3.01

N1672 (*906, p. 151; 936, p. 171). U. S. War Department well Camp Mills 6. About 0.5 mile south of Commercial Avenue and about 0.5 mile east of Clinton Road, Garden City.

Water level, in feet above mean sea level, 1942

Jan. 3	55.81	Apr 4	57.20	July 6	56.85	Oct. 3	57.10
10	55.67	11	57.19	11	56.77	10	57.22
17	55.55	18	57.09	18	57.01	17	56.99
24	55.56	25	56.98	25	56.91	24	56.92
31	56.80	May 2	56.86	Aug. 1	57.95	31	56.83
Feb. 7	55.89	9	56.76	8	57.61	Nov. 7	56.99
14	55.94	16	56.64	15	58.35	14	56.83
21	56.13	23	56.57	22	58.25	21	56.75
28	56.02	30	56.48	29	57.94	28	56.92
Mar. 7	56.34	June 6	56.38	Sept. 5	57.69	Dec. 5	56.89
14	57.08	13	57.15	12	57.51	12	56.73
21	56.90	20	56.89	19	57.34	19	56.58
28	57.30	27	56.70	26	57.09	26	56.50

N1682 (*906, p. 151; 936, p. 171). Nassau County Department of Public Works. On southwest corner of Crocus and Elm Avenues, Bellerose.

Water level, in feet above mean sea level, 1942

Jan. 3	41.66	Apr. 4	41.60	July 6	41.88	Oct. 3	42.68
10	41.62	11	41.71	11	41.88	10	42.67
17	41.63	18	41.81	18	41.83	17	42.65
24	41.48	25	41.77	25	41.88	24	42.63
31	41.44	May 2	41.91	Aug. 1	41.96	31	42.59
Feb. 7	41.38	9	41.91	8	42.08	Nov. 7	42.55
14	41.34	16	41.95	15	42.17	14	42.53
21	41.31	23	41.94	22	42.31	21	42.47
28	41.29	30	41.90	29	42.46	28	42.47
Mar. 7	41.30	June 6	41.82	Sept. 5	42.57	Dec. 5	42.38
14	41.32	13	41.90	12	42.77	12	42.36
21	41.49	20	41.87	19	42.69	19	42.45
28	41.47	27	41.86	26	42.69	26	42.28

N1683 (*906, p. 151; 936, p. 171). 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, 1942

Jan. 3	53.66	Apr. 4	54.01	July 6	54.19	Oct. 3	55.22
10	53.67	11	54.19	11	54.15	10	55.19
17	53.55	18	54.30	18	54.24	17	55.21
24	53.51	25	54.36	25	54.08	24	55.05
31	53.46	May 2	54.38	Aug. 1	54.45	31	54.98
Feb. 7	53.47	9	54.37	8	54.45	Nov. 7	54.92
14	53.52	16	54.32	15	54.67	14	54.87
21	53.58	23	54.28	22	54.78	21	54.79
28	53.53	30	54.20	29	54.97	28	54.74
Mar. 7	53.58	June 6	54.11	Sept. 5	55.11	Dec. 5	54.71
14	53.64	13	54.29	12	55.23	12	54.68
21	53.72	20	54.27	19	55.28	19	54.60
28	53.86	27	54.19	26	55.25	26	54.56

N1684 (*906, p. 151; 936, p. 172). Nassau County Department of Public Works. About 150 feet west of Madison Avenue and 690 feet north of Stewart Avenue, Garden City.

N1684 (*906, p. 151;*936, p. 172)--Continued

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	55.56	Apr. 4	56.02	July 6	56.40	Oct. 3	57.52
10	55.45	11	56.33	11	56.37	10	57.48
17	55.45	18	56.56	18	56.33	17	57.42
24	55.41	25	56.70	25	56.30	24	57.36
31	55.36	May 2	56.72	Aug. 1	56.43	31	57.28
Feb. 7	55.33	9	56.71	8	56.66	Nov. 7	57.21
14	55.45	16	56.68	15	56.85	14	57.13
21	55.52	23	56.65	22	57.02	21	57.04
28	55.54	30	56.56	29	57.23	28	56.67
Mar. 7	55.56	June 6	56.46	Sept. 5	57.46	Dec. 5	56.58
14	55.61	13	56.48	12	57.58	12	56.79
21	55.67	20	56.53	19	57.61	19	56.76
28	55.79	27	56.47	26	57.58	26	56.70

N1685 (*840, p. 265; 845, p. 313; 886, p. 490; 906, p. 124; 936, p. 172) Nassau County Department of Public Works. Sunrise Highway about 200 feet west of Long Beach Avenue, Freeport.

Water level, in feet above mean sea level, 1942

Jan. 3	9.55	Apr. 4	7.35	July 4	10.12	Oct. 3	10.32
10	10.56	11	10.79	11	10.30	10	10.32
17	10.63	18	9.46	18	10.22	17	10.36
24	10.59	25	10.76	25	9.73	24	10.12
31	10.47	May 2	10.01	Aug. 1	10.30	31	9.76
Feb. 7	10.71	9	10.70	8	10.27	Nov. 7	7.84
14	10.65	16	10.74	15	10.28	14	8.53
21	10.82	23	10.56	22	10.11	21	8.94
28	10.82	30	10.39	29	10.65	28	7.75
Mar. 7	10.44	June 6	10.50	Sept. 5	10.57	Dec. 5	8.12
14	10.87	13	10.27	12	10.40	12	8.43
21	10.83	20	9.80	19	10.04	19	8.30
28	10.14	27	10.02	26	10.32	26	6.93

N1828 (*886, p. 499; 906, p. 136; 936, p. 164). Replaces N1248. Nassau County Department of Public Works. On northwest side of Melville Road near Suffolk County line, and about 40 feet northeast of Well N1248. Farmingdale, Diameter 6 inches, depth 37.0 feet below measuring point. Measuring point, top of casing, 2.0 feet above land surface and 83.89 feet above mean sea level. Water level, June 10, 1942, 25.25 feet below measuring point and 58.64 feet above mean sea level.

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	58.53	58.73	60.01	59.52	59.06	58.78
2	.....	58.53	58.73	60.02	59.50	59.06	58.80
3	.....	58.57	58.75	60.03	59.48	59.04	58.77
4	.....	58.55	58.77	60.01	59.47	59.02	58.75
5	.....	58.56	58.79	60.00	59.46	59.01	58.75
6	.....	58.56	58.81	59.96	59.45	59.00	58.75
7	.....	58.56	58.83	59.94	59.43	58.98	58.75
8	.....	58.55	58.84	59.92	59.40	58.97	58.74
9	.....	58.53	58.86	59.90	59.38	58.95	58.73
10	a58.64	58.52	58.95	59.89	59.36	58.95	58.73
11	58.64	58.52	58.95	59.87	59.35	58.96	58.73
12	58.64	58.52	58.95	59.86	59.32	58.94	58.75
13	58.64	a58.51	58.95	59.84	59.30	58.94	58.76
14	58.64	.....	59.06	59.82	59.28	58.92	58.74
15	58.63	.....	59.09	59.80	59.27	58.91	58.75
16	58.62	.....	59.09	59.78	59.26	58.89	58.76
17	58.62	.....	59.16	59.76	59.25	58.89	58.74
18	58.64	58.55	59.28	59.74	59.26	58.88	58.74
19	58.62	58.52	59.42	59.73	59.24	58.86	58.72
20	58.61	58.52	59.53	59.71	59.21	58.86	58.71
21	58.61	58.50	59.64	59.70	59.20	58.85	58.70
22	58.62	58.49	59.72	59.68	59.19	58.83	58.70
23	58.61	58.48	59.79	59.67	59.16	58.83	58.72
24	58.60	58.47	59.86	59.64	59.15	58.83	58.71
25	58.57	58.46	59.90	59.62	59.15	58.83	58.70

a Estimated.

N1828 (*886, p. 499; 906, p. 130; 936, p. 164)--Continued.

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	58.56	58.45	59.91	59.61	59.15	58.82	58.70
27	58.55	58.45	59.92	59.61	59.13	58.80	58.69
28	58.54	58.62	59.94	59.59	59.10	58.78	58.70
29	58.54	58.62	59.96	59.56	59.08	58.78	58.74
30	58.54	58.62	60.00	59.54	59.06	58.78	58.74
31	.....	58.65	60.00	.....	59.06	.....	58.79

N1829 (*845, p. 321; 886, p. 496; 906, p. 131; 936, p. 160). Replaces N1180. Nassau County Department of Public Works. On south side of Stewart Avenue, 700 feet west of Newbridge Avenue and about 15 feet southeast of Well N1180, Salisbury. Diameter 6 inches, depth 29.2 feet below measuring point. Measuring point, top of casing, 2.5 feet above land surface and 79.17 feet above mean sea level. Water level, June 10, 1942, 12.28 feet below measuring point and 66.89 feet above mean sea level.

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	66.51	67.18	67.96	67.63	67.29	67.12
2	.....	66.52	67.18	67.96	67.60	67.45	67.15
3	.....	66.55	67.17	67.97	67.59	67.43	67.11
4	.....	66.53	67.17	67.95	67.59	67.40	67.10
5	.....	66.52	67.17	67.94	67.58	67.40	67.10
6	.....	66.51	67.16	67.92	67.63	67.39	67.09
7	.....	66.50	67.15	67.91	67.65	67.37	67.07
8	.....	66.49	67.15	67.91	67.61	67.36	67.06
9	.....	66.46	67.16	67.90	67.59	67.33	67.05
10	a66.89	66.45	67.38	67.90	67.57	67.34	67.05
11	66.86	66.45	67.37	67.87	67.55	67.32	67.05
12	66.83	66.45	67.37	67.87	67.52	67.31	67.05
13	66.80	66.44	67.37	67.85	67.51	67.29	67.03
14	66.78	66.42	67.55	67.83	67.50	67.26	67.02
15	66.75	66.41	67.68	67.81	67.48	67.24	67.02
16	66.73	66.40	67.70	67.80	67.48	67.23	67.01
17	66.72	66.39	67.72	67.79	67.47	67.23	67.00
18	66.71	66.39	67.76	67.78	67.47	67.21	66.99
19	66.70	66.57	67.78	67.78	67.45	67.20	66.97
20	66.67	66.53	67.79	67.77	67.43	67.19	66.97
21	66.67	66.50	67.82	67.75	67.43	67.17	66.95
22	66.66	66.48	67.85	67.73	67.42	67.15	66.95
23	66.63	66.44	67.87	67.71	67.38	67.14	66.96
24	66.61	66.42	67.90	67.68	67.37	67.15	66.96
25	66.58	66.41	67.91	67.66	67.36	67.17	66.95
26	66.57	66.40	67.92	67.66	67.36	67.14	66.93
27	66.57	66.40	67.92	67.68	67.34	67.13	66.93
28	66.55	67.27	67.94	67.66	67.31	67.11	66.96
29	66.53	67.19	67.95	67.64	67.29	67.11	67.15
30	66.52	67.16	67.95	67.64	67.29	67.12	67.21
31	.....	67.15	67.95	.....	67.28	.....	67.37

N1830 (*886, p. 493; 906, p. 128; 936, p. 156). Replaces Well N1106. Nassau County Department of Public Works. On west side of Tyson Avenue just north of Creedmoor spur of Long Island Railroad and about 1,600 feet northwest of N1106, Floral Park. Diameter 6 inches, depth 68.1 feet below measuring point. Measuring point, top of casing, 2.3 feet above land surface and 97.32 feet above mean sea level. Water level, June 3, 1942, 48.21 feet below measuring point and 49.11 feet above mean sea level.

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	49.29	49.56	50.04	50.12	49.99	49.79
2	.....	49.28	49.58	50.05	50.12	49.98	49.82
3	a49.11	49.30	49.60	50.06	50.12	49.98	49.79
4	49.09	49.35	49.61	50.07	50.12	49.97	49.79
5	49.09	49.36	49.62	50.07	50.13	49.97	49.78
6	49.07	49.36	49.63	50.07	50.12	49.93	49.78
7	49.05	49.38	49.64	50.08	50.12	49.97	49.76
8	49.07	49.38	49.64	50.08	50.12	49.96	49.77

a Estimated.

N1830. Nassau County Department of Public Works--Continued.
Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
9	49.15	49.38	49.64	50.09	50.13	49.94	49.75
10	49.20	49.38	49.66	50.09	50.13	49.93	49.75
11	49.22	49.36	49.71	50.09	50.14	49.93	49.75
12	49.25	49.35	49.73	50.10	50.13	49.92	49.74
13	49.26	49.34	49.74	50.11	50.11	49.92	49.72
14	49.27	49.32	49.76	50.10	50.11	49.90	49.71
15	49.28	49.32	49.79	50.10	50.11	49.89	49.71
16	49.29	49.31	49.83	50.11	50.10	49.88	49.69
17	49.29	49.26	49.84	50.10	50.09	49.88	49.69
18	49.30	49.26	49.87	50.11	50.09	49.87	49.67
19	49.31	49.32	49.89	50.11	50.08	49.86	49.66
20	49.31	49.36	49.92	50.11	50.07	49.85	49.65
21	49.30	49.37	49.94	50.11	50.08	49.83	49.64
22	49.31	49.36	49.95	50.12	50.08	49.82	49.64
23	49.32	49.36	49.97	50.12	50.06	49.81	49.63
24	49.32	49.34	49.98	50.11	50.05	49.81	49.62
25	49.32	49.33	49.98	50.12	50.05	49.80	49.61
26	49.31	49.31	49.98	50.12	50.05	49.82	49.60
27	49.31	49.30	49.99	50.11	50.03	49.81	49.59
28	49.32	49.38	50.00	50.10	50.02	49.80	49.59
29	49.30	49.46	50.01	50.10	50.01	49.80	49.58
30	49.30	49.50	50.02	50.11	50.00	49.80	49.60
31	.....	49.53	50.03	.....	50.00	.....	49.65

Queens County

Q268 (*777, p. 121; *817,p.201; *840,p.268; 845,p.314; *886,p.502; 906, p.152; 936,p.172). New York City Department of Water Supply, Gas,and Electricity. At former Citizens Water Supply Co. pumping station 1, on southeast side of Cornish Street between Queens Boulevard and Poyer Street, Elmhurst. Measurements discontinued May 30, 1942.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	15.35	Feb. 14	15.62	Mar. 28	16.13	May 2	15.99
10	15.57	21	15.79	Apr. 4	16.11	9	16.01
17	15.32	28	15.63	11	16.31	16	16.01
24	15.49	Mar. 7	15.71	18	16.21	23	16.11
31	15.60	14	16.01	25	16.06	30	16.03
Feb. 7	15.97	21	15.99				

Q273 (*817,p.201; *840,p.268; 845,p.315; *886,p.503; 906,p.153; 936, p.173). New York City Department of Water Supply, Gas,and Electricity well 1. At former Citizens Water Supply Co. pumping station 3 on south side of Grand Central Parkway, about 1,000 feet east of Queens Boulevard,Forest Hill

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.06	2.17	1.18	1.90	1.51	3.22	3.43	3.42	3.51	3.63	4.08	4.03
2	4.20	1.95	1.18	1.93	1.61	3.24	3.53	3.43	3.56	3.69	4.02	4.24
3	4.05	1.76	1.29	1.95	1.80	3.31	3.44	3.42	3.63	3.64	3.92	4.06
4	3.98	1.69	1.39	1.84	2.00	3.38	3.41	3.37	3.56	3.65	3.78	3.92
5	3.80	1.73	1.27	1.75	2.14	3.46	3.42	3.33	3.50	3.74	3.77	3.86
6	3.66	1.93	1.27	1.71	2.15	3.45	3.45	3.33	3.41	3.80	3.80	3.86
7	3.57	1.93	1.20	1.72	2.27	3.46	3.46	3.29	3.40	3.68	3.86	3.82
8	a3.44	1.86	1.21	1.57	2.56	3.45	3.43	3.25	3.45	3.62	3.88	3.80
9	a3.31	1.63	1.30	1.52	2.67	3.37	3.38	3.28	3.49	3.63	3.91	3.80
10	3.13	1.60	1.29	1.57	2.87	3.37	3.31	3.48	3.53	3.71	3.91	3.88
11	2.94	1.64	1.22	1.69	3.01	3.43	3.33	3.45	3.59	3.85	4.02	3.95
12	2.98	1.68	1.20	1.56	3.15	3.49	3.32	3.38	3.59	3.91	4.01	4.10
13	a2.78	1.61	1.13	1.40	3.40	3.49	3.29	3.37	3.62	3.86	4.04	4.13
14	a2.66	1.56	1.13	1.35	3.45	3.52	3.34	3.39	3.60	3.86	3.88	3.98
15	a2.54	1.52	1.18	1.37	3.47	3.42	3.38	3.40	3.58	4.00	3.80	3.98
16	a2.41	1.52	1.14	1.34	3.53	3.36	3.31	3.44	3.55	4.10	3.80	4.06
17	2.34	1.72	1.20	1.34	3.52	3.36	3.28	3.49	3.55	4.20	2.83	4.00
18	2.34	1.58	1.39	1.50	3.44	3.39	3.31	3.52	3.56	4.34	3.95	3.95
19	2.39	1.54	1.29	1.51	3.42	3.44	3.41	3.51	3.60	4.32	3.98	3.80
20	2.43	1.52	1.13	1.48	3.42	3.49	3.41	3.52	3.66	4.28	3.99	3.80

a Estimated.

Q273. New York City Department of Water Supply--Continued.
Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	2.34	1.53	1.12	1.46	3.42	3.49	3.33	3.57	3.64	4.29	4.00	3.78
22	2.29	1.55	1.33	1.45	3.43	3.47	3.28	3.56	3.66	4.41	3.86	3.78
23	a2.26	1.51	1.30	1.36	3.46	3.50	3.30	3.56	3.66	4.31	3.86	3.99
24	2.20	1.51	1.15	1.33	3.44	3.43	3.27	3.47	3.66	4.20	3.94	3.98
25	2.09	1.53	1.13	1.35	3.38	3.32	3.24	3.37	3.56	4.20	4.19	3.93
26	2.05	1.50	1.19	1.32	3.36	3.28	3.20	3.35	3.56	4.24	4.14	3.80
27	2.05	1.48	1.30	1.20	3.34	3.29	3.22	3.39	3.64	4.21	4.05	3.77
28	2.05	1.32	1.48	1.15	3.24	3.32	3.33	3.47	3.62	3.98	3.94	3.85
29	2.04	....	1.54	1.22	3.20	3.35	3.41	3.53	3.53	3.88	3.93	4.11
30	2.02	....	1.68	1.36	3.25	3.38	3.42	3.48	3.53	3.88	4.04	4.16
31	2.02	....	1.80	....	3.29	....	3.38	3.48	....	3.94	....	4.21

Q287 (*886, p. 504; 906, p. 153; 936, p. 174). Broad Channel Corporation well 2. On southeast side of Shad Creek Road, about 100 feet southwest of Ninth Road, Broad Channel.
Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.76	7.40	6.92	7.22	7.00	7.24	7.08	6.68	6.45	7.24	8.29	8.90
2	7.92	7.07	6.83	7.17	6.94	7.24	7.16	6.72	6.59	7.25	8.20	8.19
3	7.50	6.99	7.57	7.18	7.02	7.38	7.25	6.80	6.78	7.31	7.75	7.90
4	7.93	7.09	6.80	7.38	7.04	7.42	7.20	6.84	6.82	7.41	7.64	7.79
5	7.74	7.29	6.62	7.33	6.95	7.61	7.25	6.80	6.53	7.43	7.63	7.73
6	7.57	7.42	6.88	7.38	6.92	7.60	7.44	6.84	6.42	7.01	7.69	7.94
7	7.39	8.05	6.53	7.53	7.28	7.80	7.30	6.73	6.44	6.99	7.52	7.81
8	7.58	7.23	6.50	7.44	7.39	7.64	7.37	6.69	6.49	6.85	7.72	7.71
9	7.70	6.94	7.28	7.33	7.37	7.64	7.18	6.83	6.56	6.88	7.60	7.88
10	7.57	7.13	6.52	7.78	7.39	7.64	7.15	6.80	6.48	6.80	7.76	7.93
11	7.24	7.14	6.66	7.70	7.32	7.72	7.26	6.71	6.54	7.09	7.63	8.01
12	7.38	6.84	6.55	7.30	7.48	7.84	7.22	6.61	6.59	7.14	7.83	8.37
13	7.17	6.75	6.46	7.18	7.58	7.88	7.07	6.49	6.54	7.26	7.74	8.19
14	7.16	6.50	6.53	7.13	7.62	7.98	7.09	6.46	6.47	7.20	7.37	7.80
15	7.23	6.71	6.61	7.17	7.68	7.91	7.01	6.38	6.60	7.37	7.65	8.14
16	6.94	6.85	6.52	7.03	7.76	7.81	6.98	6.40	6.65	7.61	7.75	8.39
17	6.85	7.19	6.85	7.18	7.90	7.94	6.92	6.38	6.69	7.82	7.68	a8.20
18	6.98	6.82	6.88	7.49	7.84	7.98	7.04	6.39	6.86	7.60	7.88	....
19	7.18	6.92	6.69	7.52	7.89	7.92	6.97	6.42	6.88	7.47	7.83	7.88
20	7.44	6.92	6.37	7.57	7.93	7.96	7.11	6.39	6.70	7.47	7.89	7.62
21	7.34	6.90	6.62	7.61	8.00	8.00	6.99	6.37	6.97	7.53	8.03	8.09
22	7.52	7.19	6.89	7.64	8.04	7.88	6.96	6.42	6.77	....	7.99	8.22
23	7.60	7.48	7.04	7.56	8.22	7.89	6.90	6.43	6.74	....	7.91	8.29
24	7.67	7.64	6.94	7.53	8.09	7.59	6.67	6.35	6.78	a7.41	8.30	8.42
25	7.82	7.82	6.93	7.54	7.90	7.25	6.65	6.07	6.52	7.52	8.77	8.37
26	7.96	7.33	6.82	7.44	7.78	7.08	6.43	5.99	6.50	7.93	8.68	8.23
27	7.60	7.19	7.01	7.40	7.64	7.03	6.44	6.00	7.29	7.72	8.65	8.45
28	7.63	7.12	7.34	7.08	7.41	7.03	6.50	6.13	6.69	7.52	8.23	8.75
29	7.60	....	7.33	6.99	7.27	7.02	6.50	6.24	6.76	7.66	8.25	9.18
30	7.45	....	7.28	6.95	7.24	6.97	6.50	6.30	6.88	7.88	8.59	a9.35
31	7.41	....	7.02	....	7.29	....	6.57	6.36	....	8.09	....	....

Q350 (*840,p.269; 845,p.315; 886,p.504; 906,p.154; 936,p.174). Aqueduct deep test well of New York Water 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.
Lowest daily water level, in feet, with reference to mean sea level, 1942
(Record from Jan. 1 through Aug. 1, 1942, taken from recorder charts; record after Aug. 1 based on tape measurement).

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	-1.62	-1.71	-1.72	-1.25	-1.93	.....	-1.29a	-0.36	.....	.....	.....	.....
2	-1.51	-1.72	-1.70	-1.23	-1.98	.....	-1.31	.....	.....	.....	.....	.....
3	-1.57	-1.75	-1.63	-1.20	-1.99	.....	-.90	.....	.....	+.58	.....	.....
4	-1.56	-1.72	-1.63	-1.24	-2.09	.....	-.85	.....	.....	.....	.....	.....
5	-1.56	-1.70	-1.60	-1.23	-2.10	.....	.....	.....	+.36	.....	.....	+.03

a Estimated.

Q350 (*840, p. 269; 845, p. 315; 886, p. 504; 906, p. 154; 936, p. 174). --Continued.

Lowest daily water level, in feet, with reference to mean sea level, 1942 (Record from Jan. 1 through Aug. 1, 1942, taken from recorder charts; record after Aug. 1 based on tape measurements).

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	-1.57	-1.62	-1.56	-1.24	-1.80	-1.04	.....	.....	.....	.....	.....	.....
7	-1.57	-1.64	-1.61	-1.20	-1.68	-1.08	.....	.....	.....	.....	+.43	.....
8	-1.59	-1.62	-1.59	-1.20a	-1.39	-.98	.....	-.85	.....	.....	.....	.....
9	-1.71	-1.65	-1.52	-1.13a	-1.33	-.83	.....	.....	.....	.....	.....	.....
10	-1.72	-1.58	-1.50	-.98	.....	-.87	.....	.....	.....	+.52	.....	.....
11	-1.73	-1.56	-1.46	-.99	.....	-.80a	-.56	.....	.....	.....	.....	.....
12	-1.74	-1.56	-1.40	-1.01	.....	-.71a	-.65	.....	+.36	.....	.....	+.03
13	-1.77	-1.52	-1.44	-1.00a	-1.33	-.78	.....	.....	.....	.....	.....	.....
14	-1.79	-1.61	-1.41	-.95	-1.42	a-.74	.....	.....	.....	.....	+.13	.....
15	-1.72	-1.60	-1.52	-.98	-1.44	.....	.....	-.02	.....	.....	.....	.....
16	-1.73	-1.61a	-1.53	-1.00	-1.41	.....	.....	.....	.....	.....	.....	.....
17	-1.82	-1.49	-1.37	-.96	-1.35	.....a	-.88	.....	.....	+.64	.....	.....
18	-1.82	-1.51	-1.40	-1.09	-1.26	.....	-.83	.....	.....	.....	.....	.....
19	-1.79	-1.54	-1.38	-1.06	-1.19	.....a	-.78	.....	+.39	.....	.....	+.08
20	-1.74	-1.45	-1.45	-1.02	-1.12a	-1.24	.....	.....	.....	.....	.....	.....
21	-1.74	-1.55	-1.44	-1.24a	-1.09	.....	.....	.....	.....	.....	-.22	.....
22	-1.73	-1.56	-1.43	-1.64	.....	.....	.....	+.11	.....	.....	.....	.....
23	-1.72	-1.60	-1.43	-1.89a	-1.03	.....	.....	.....	.....	.....	.....	.....
24	-1.77	-1.61	-1.34	-1.88	-1.12	.....	.....	.....	.....	+.72	.....	.....
25	-1.78	-1.63	-1.31	-1.76	-1.23	.....a	-.83	.....	.....	.....	.....	.....
26	-1.78	-1.62	-1.26	-1.70	-1.34	.....	.....	.....	+.38	.....	.....	-.14
27	-1.73	-1.63	-1.29	-1.58	-1.38a	-1.28a	-.81	.....	.....	.....	.....	.....
28	-1.73	-1.68	-1.35	-1.68a	-1.32	-1.11	-.75	.....	.....	.....	+.02	.....
29a	-1.71	.....	-1.32	-1.71	-1.24	-1.24	-.75	+.30	.....	.....	.....	.....
30	.....	.....	-1.27	-1.88	-1.46	-1.29	-.63	.....	.....	.....	.....	.....
31a	-1.71	.....	-1.22	.....	-1.47	.....	-.52	.....	.....	+.64	.....	.....

Q470 (*777, p. 123;*817, p. 201;*840, p. 269;*845, p. 315;*886, p. 505; *906, p. 155; 936, p. 175). New York City Department of Water Supply, Gas and Electricity well Bayside 10. About 325 feet south of Northern Boulevard and 100 feet west of Øross Island Parkway (Belt Parkway), Bayside.

Lowest daily water level, in feet, with reference to mean sea level, 1942 (From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+3.63	-10.55	-12.26	-11.91	-8.84	+3.52	+1.47	a+0.19	+0.33	+0.60	+2.58	+4.56
2	+2.77	-10.60	-12.27	-11.82	-7.51	+3.44	+1.45	+.22	+.34	+.51	+3.19	+4.59
3	+1.83	-10.51	-12.27	-11.73	-6.27	+3.27	+1.43	+.23	+.30	+.43	+3.60	+4.61
4	+.96	-9.87	-12.16	-11.66	-5.25	+3.14	+1.40	+.26	+.23	+.37	+3.92	+4.55
5	+.06	-10.11	-12.24	-11.59	-4.38	+2.97	+1.40	+.25	+.13	+.34	+4.12	+4.47
6	-.91	-10.39	-12.26	-11.54	-3.66	+2.73	+1.41	+.18	a+.02	+.32	+4.28	+4.45
7	-1.97	-10.57	-12.31	-11.48	-3.06	+2.52	+1.45	+.10	-.04	+.25	+4.41	+4.42
8a	-2.93	-10.80	-12.33	-11.42	-2.41	+2.42	+1.46	.00	-.06	+.20	+4.50	+4.39
9a	-3.90	-10.95	-12.33	-11.43	-1.81	+2.27	+1.44	-.02	-.06	+.16	+4.59	+4.37
10	-5.05	-11.07	-12.29	-11.43	-1.28	+2.14	+1.38	-.02	-.06	+.15	+4.66	+4.38
11	-5.73	-11.22	-12.29	-11.39	-.80	+2.10	+1.33	+.01	-.06	+.15	+4.76	+4.37
12	-6.45	-11.35	-12.18	-11.39	-.36	+2.06	+1.28	a+.04	-.05	+.17	+4.82	+4.39
13	-7.08	-11.50	-12.01	-11.42	+.11	+2.03	+1.23	a+.07	-.02	+.22	+4.87	+4.40
14	-7.63	-11.65	-11.89	-11.47	+.54	+2.03	+1.21	a+.11	+.02	+.27	+4.89	+4.42
15	-8.13	-11.77	-11.84	-11.50	+.92	+2.01	+1.18	a+.14	+.07	+.31	+4.84	+4.42
16	-8.62	-11.83	-11.93	-11.54	+1.28	+1.97	+1.10	+.17	+.11	+.37	+4.80	+4.42
17	-9.04	-11.85	-11.95	-11.57	+1.60	+1.92	+1.02	+.21	+.10	+.43	+4.72	+4.44
18	-9.38	-11.95	-11.97	-11.57	+1.86	+1.86	+.98	+.29	+.07	+.50	+4.65	+4.44
19	-9.65	-12.04	-12.02	-11.57	+2.11	+1.83	+.95	+.38	+.04	+.59	+4.58	+4.40
20	-9.88	-12.12	-12.10	-11.57	+2.33	+1.78	+.95	+.45	+.05	+.67a	+4.53	+4.37
21	-10.11	-12.17	-12.14	-11.56	+2.50	+1.74	+.94	+.42	+.08	+.73a	+4.52	+4.36
22	-10.31	-12.17	-12.14	-11.54	+2.66	+1.69	+.89	+.39	+.13	+.82	+4.50	+4.36
23	-10.46	-12.19	-12.12	-11.54	+2.85	+1.68	.....	+.38	+.20	+.90	+4.49	+4.39
24	-10.59	-12.18	-12.15	-11.53	+3.06	+1.73	.....	+.38	+.22	+.93	+4.49	+4.43
25	-10.74	-12.17	-12.21	-11.56	+3.24	+1.68	.....	+.37	+.22	+.94	+4.53	+4.45
26	-10.86	-12.18	-12.24	-11.61	+3.41	+1.62	.....	+.36	+.22	+.95	+4.59	+4.44
27	-10.90	-12.20	-12.25	-11.66	+3.55	+1.59	a+.22	+.35	+.24	....	+4.61	+4.42
28	-10.90	-12.21	-12.23	-11.70	+3.61	+1.55	a+.21	+.36	+.31	....	+4.56	+4.42
29	-10.80	.....	-12.18	-11.58	+3.65	+1.53	a+.21	+.35	+.39	....	+4.54	+4.43
30	-10.67	.....	-12.11	-10.39	+3.64	+1.50	.....	+.32	+.59	....	+4.55	+4.46
31	-10.59	.....	-12.00	.....	+3.59	.....	a+.19	+.32	....	a+2.07	.....	+4.53

a Estimated lowest daily water level.

Q471 (*906, p. 155; 936, p. 176). 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, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	15.44	Apr. 4	15.07	July 4	14.57	Oct. 3	14.32
10	15.20	11	15.03	11	14.52	10	14.41
17	14.95	18	15.08	18	14.51	17	14.36
24	14.87	25	14.98	25	14.30	24	14.38
31	15.10	May 2	15.50	Aug. 1	14.29	31	15.55
Feb. 7	15.02	9	15.64	8	14.21	Nov. 7	15.90
14	14.77	16	15.78	15	14.31	14	15.91
21	14.70	23	15.91	22	14.29	21	15.68
28	14.69	30	16.13	29	14.20	28	15.75
Mar. 7	14.77	June 6	14.97	Sept. 5	14.21	Dec. 5	15.76
14	14.99	13	14.83	12	14.29	12	15.92
21	14.97	20	14.72	19	14.18	19	15.75
28	15.07	27	14.68	26	14.43	26	15.80

Q503 (*840, p. 270; 845, p. 316;*886, p. 505; 906, p. 156; 936, p. 176). Urban Water Supply Co. well 3. Maurice and 54th Avenues, Maspeth. Measurements discontinued Apr. 18, 1942.

Water level, in feet above mean sea level, 1942

Jan. 3	7.74	Jan. 31	7.68	Feb. 28	7.61	Mar. 28	7.80
10	7.78	Feb. 7	7.72	Mar. 7	7.63	Apr. 4	7.83
17	7.68	14	7.63	14	7.71	11	7.86
24	7.68	21	7.66	21	7.73	18	7.81

Q543 (*840, p. 271;*845, p. 316;*886, p. 506; 906, p. 156; 936, p. 176). New York City Department of Water Supply, Gas and Electricity well Rockaway Park 3. Rockaway Beach Boulevard and Beach 110th Street, Rockaway Park.

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	8.73	8.50	8.31	8.10	8.24	8.09	7.95	7.69	7.51	8.04	9.03	9.83
2	8.95	....	8.20	8.08	8.25	8.18	8.13	7.71	7.58	7.91	8.91	8.54
3	8.36	....	9.21	8.05	8.32	8.35	8.20	7.72	7.65	7.99	8.24	8.02
4	8.95	....	8.14	8.36	8.34	8.46	8.13	7.84	7.74	8.12	8.33	8.01
5	8.68	....	7.99	8.30	8.18	8.68	8.14	7.71	7.54	8.13	8.31	7.97
6	8.32	....	8.30	8.44	8.20	8.67	8.39	7.86	7.43	7.61	8.28	8.46
7	8.02	a9.90	7.90	8.62	8.52	8.92	8.22	7.74	7.24	7.60	8.17	8.34
8	8.35	a8.40	7.88	8.64	8.65	8.70	8.22	7.71	7.34	7.48	8.48	8.23
9	8.42	8.08	8.72	8.39	8.52	8.66	8.04	7.88	7.48	7.58	8.33	8.50
10	8.34	8.32	7.60	9.02	8.42	8.61	7.99	7.87	7.51	7.45	8.56	8.56
11	7.94	8.29	8.10	8.93	8.22	8.71	8.19	7.77	7.53	7.73	8.32	8.71
12	8.08	7.80	8.03	8.43	8.41	8.96	8.07	7.69	7.54	7.78	8.58	9.13
13	7.87	7.68	7.88	8.28	8.43	8.90	7.91	7.50	7.42	8.05	8.42	8.76
14	8.05	7.43	7.98	8.31	8.50	8.96	7.93	7.23	7.37	7.94	7.73	8.31
15	7.88	7.70	7.97	8.29	8.55	8.93	7.84	7.42	7.50	8.16	8.25	8.77
16	7.64	7.96	7.81	8.19	8.66	8.82	7.80	7.27	7.51	8.44	8.23	a9.40
17	7.55	8.44	8.18	8.47	8.73	8.93	7.78	7.34	7.57	8.59	8.46	....
18	7.49	7.98	8.30	8.77	8.73	9.05	7.88	7.32	7.79	8.29	8.52	....
19	8.10	8.02	7.99	8.84	8.80	8.93	7.90	7.25	7.71	8.03	8.50	8.30
20	8.45	8.09	7.59	8.89	9.00	8.90	8.00	7.17	7.51	8.03	8.67	a7.97
21	8.38	7.83	8.02	8.97	9.11	9.04	7.84	7.23	7.51	8.21	8.78	....
22	8.58	8.33	8.13	8.90	9.00	8.80	7.81	7.20	7.78	8.39	a8.95	....
23	8.67	8.78	8.22	8.76	9.24	8.83	7.68	7.31	7.55	8.15	....	....
24	8.81	8.89	8.10	8.72	9.08	8.43	7.33	7.23	7.61	7.92	....	....
25	9.15	9.30	8.07	8.80	8.84	8.01	7.26	6.70	7.19	8.14	....	....
26	9.32	8.54	7.80	8.70	8.59	7.72	7.13	6.73	7.30	8.78	....	8.99
27	8.85	8.43	8.10	8.70	8.55	7.86	7.22	6.80	8.09	8.27	....	9.33
28	8.79	8.28	8.08	8.31	8.16	7.85	7.30	6.90	7.28	8.06	a8.93	9.67
29	8.84	....	8.55	8.17	8.09	7.83	7.41	7.03	7.39	8.34	8.99	10.14
30	8.72	....	8.28	8.05	8.04	7.84	7.43	7.23	7.53	8.66	9.33	10.19
31	8.67	....	8.00	....	8.09	....	7.85	7.36	....	8.85	....	8.75

a Estimated.

Q1027. New York City Department of Parks. Formerly recharge well for Japanese Pavilion at 1939 New York World's Fair Grounds. About 370 feet west of Rodman Street and 35 feet north of 58th Avenue extended, Flushing Meadow Park, Flushing. Unused drilled well, diameter 8 inches, depth 266.8 feet below measuring point. Measuring point, top of metal plate on instrument shelf, 1.1 feet above land surface and 9.68 feet above mean sea level. Water level, Jan. 1, 1942, 4.52 feet below measuring point, and 5.16 feet above mean sea level.

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5.16	....	4.12	4.45	4.49	5.11	5.13	a5.19	5.28	5.22	5.50	5.14
2	5.23	....	4.09	4.46	4.48	5.14	5.22	5.21	5.31	5.20	5.45	5.30
3	5.14	....	4.31	4.43	4.51	5.14	5.20	5.20	5.34	5.18	5.41	5.14
4	5.21	....	4.15	4.48	4.55	5.18	5.21	5.19	5.31	5.18	5.28	5.10
5	5.12	....	4.15	4.49	4.53	5.22	5.18	5.06	5.24	5.22	5.26	5.07
6	5.09	....	4.15	4.50	4.54	5.20	5.21	5.09	5.17	5.22	5.27	5.08
7	5.04	a4.56	4.09	4.50	4.63	5.15	5.25	5.06	5.15	5.17	5.25	4.96
8	5.01	4.28	4.13	4.45	4.77	5.23	5.27	5.00	5.17	5.13	5.28	4.97
9	5.01	4.24	4.23	4.45	4.77	5.22	5.25	5.06	5.19	5.14	5.24	5.04
10	4.93	4.22	4.12	4.59	4.81	5.17	5.19	5.24	5.27	5.18	5.25	5.06
11	4.86	4.26	4.12	4.60	4.76	5.21	5.16	5.08	5.28	5.26	5.26	5.07
12	4.83	4.25	4.09	4.52	4.81	5.24	5.13	5.10	5.29	5.30	5.26	5.13
13	4.75	4.21	4.08	4.49	4.90	5.24	5.12	5.13	5.27	5.30	5.24	5.13
14	4.76	4.19	4.10	4.48	4.92	5.23	5.18	5.22	5.26	5.37	5.14	5.06
15	4.78	4.20	4.18	4.54	4.94	5.13	5.17	5.14	5.24	5.49	5.11	5.07
16	4.58	4.19	4.16	....	5.01	5.10	5.12	5.14	5.23	5.51	5.14	5.12
17	4.58	4.32	4.33	....	5.10	5.12	5.09	5.18	5.13	5.57	5.11	5.08
18	4.58	4.22	4.25	a4.64	5.09	5.09	5.11	5.31	5.16	5.75	5.15	5.05
19	4.58	4.21	4.21	4.63	5.13	5.12	5.13	5.27	5.21	5.77	5.12	4.97
20	4.60	4.23	4.08	4.56	5.17	5.14	5.17	5.29	5.28	5.67	5.14	4.96
21	4.57	4.24	4.11	4.59	5.18	5.13	5.16	5.31	5.25	5.70	5.11	4.95
22	4.56	4.24	4.44	4.60	5.15	5.15	5.15	5.32	5.32	5.83	5.06	4.98
23	4.56	4.25	4.31	4.59	5.20	5.22	5.14	5.32	5.31	5.76	5.07	5.06
24	4.50	4.28	4.31	4.60	5.21	5.19	5.09	5.30	5.31	5.65	5.16	5.07
25	4.49	4.31	4.25	4.63	5.20	5.13	4.95	5.27	5.24	5.69	5.34	5.07
26	4.50	4.26	4.27	4.61	5.20	5.07	4.94	5.27	4.24	5.77	5.23	4.99
27	4.44	4.25	4.29	4.55	5.21	5.07	a5.00	5.22	5.35	5.64	5.18	4.99
28	4.44	4.18	4.34	4.53	5.15	5.09	....	5.22	5.14	5.51	5.10	5.13
29	4.40	....	4.34	4.54	5.12	5.10	....	5.28	5.14	5.44	5.10	5.31
30	4.36	....	4.42	4.53	5.17	5.07	....	5.29	5.16	5.44	5.15	5.40
31	a4.40	....	4.42	....	5.15	....	a5.06	5.26	....	5.45	....	5.30

Q1089 (*840, p. 274; 845, p. 318;*886, p. 506;*936, p. 177). New York City Department of Water Supply, Gas and Electricity. North side of North Conduit Avenue, about 800 feet east of Far Rockaway Branch of Long Island Railroad, Aqueduct.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	0.86	Apr. 4	1.15	July 4	1.47	Oct. 3	1.77
10	.61	11	1.32	11	1.46	10	1.77
17	.52	18	1.17	18	1.38	17	1.87
24	.49	25	.95	25	1.41	24	1.99
31	.76	May 2	.98	Aug. 1	1.70	31	1.71
Feb. 7	.86	9	1.01	8	1.55	Nov. 7	1.76
14	.69	16	1.03	15	1.71	14	1.67
21	.63	23	1.07	22	1.91	21	1.64
28	.60	30	1.09	29	1.86	28	1.71
Mar. 7	.82	June 6	1.19	Sept. 5	1.88	Dec. 5	1.58
14	.99	13	1.31	12	1.88	12	1.57
21	.98	20	1.24	19	1.83	26	1.41
28	1.06	27	1.17	26	1.93		

a Estimated.

Q1090 (*840, p. 275; 845, p. 318; 886, p. 507; 906, p. 157;*936, p. 178). New York City Department of Water Supply, Gas and Electricity. On east side of Hawtree Creek Road, about 350 feet south of 133d Avenue, Aqueduct.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	2.61	Apr. 4	3.04	July 4	3.14	Oct. 3	3.97
10	2.56	11	3.14	11	3.22	10	3.94
17	2.49	18	3.22	18	3.25	17	3.87
24	2.46	25	3.19	25	3.28	24	3.90
31	2.42	May 2	3.13	Aug. 1	3.31	31	3.90
Feb. 7	2.38	9	3.08	8	3.39	Nov. 7	3.74
14	2.55	16	3.09	15	3.62	14	3.72
21	2.57	23	3.14	22	3.74	21	3.66
28	2.56	30	3.12	29	3.92	28	3.64
Mar. 7	2.59	June 6	3.09	Sept. 5	4.00	Dec. 5	3.62
14	2.69	13	3.16	12	4.05	12	3.65
21	2.80	20	3.15	19	3.99	19	3.69
28	2.93	27	3.05	26	4.03	26	3.55

Q1222 (*906, p. 158; 936, p. 178). 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 with reference to mean sea level, 1942

Jan. 3	+2.48	Apr. 25	-8.60	July 18	+1.91	Oct. 10	+1.60
Feb. 4	-7.82	May 2	-6.76	25	+1.90	17	+1.88
7	-7.12	9	-2.54	Aug. 1	+1.92	24	+2.10
16	-9.05	16	+.24	8	+1.69	31	+1.96
21	-9.12	23	+1.52	15	+1.95	Nov. 7	+2.12
28	-9.11	30	+1.80	22	+1.81	14	+2.31
Mar. 7	-8.96	June 6	+2.08	29	+1.81	21	+2.22
14	-9.17	13	+2.10	Sept. 5	+1.88	28	+2.77
21	-9.15	20	+2.21	12	+1.82	Dec. 5	+2.09
28	-9.19	27	+2.01	19	+1.74	12	+2.28
Apr. 4	-8.83	July 4	+2.08	26	+1.75	19	+2.19
11	-8.25	11	+2.00	Oct. 3	+1.70	26	+2.24
18	-8.65						

Q1223 (*906, p. 159; *936, p. 178). 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, 1942

Jan. 3	6.66	Apr. 4	7.46	July 4	7.23	Oct. 3	7.81
10	6.61	11	7.48	11	7.32	10	7.76
17	6.52	18	7.50	18	7.32	17	7.73
24	6.44	25	7.46	25	7.39	24	7.67
31	6.48	May 2	7.35	Aug. 1	7.46	31	7.51
Feb. 7	6.63	9	7.30	8	7.57	Nov. 7	7.53
14	6.75	16	7.24	15	7.86	14	7.49
21	6.81	23	7.25	22	7.80	21	7.42
28	6.83	30	7.17	29	8.28	28	7.39
Mar. 7	6.91	June 6	7.10	Sept. 5	8.20	Dec. 5	7.47
14	7.03	13	7.15	12	8.12	12	7.49
21	7.15	20	7.08	19	7.98	19	7.49
28	7.36	27	6.99	26	7.90	26	7.35

Q1224 (*906, p. 159;* 936, p. 179). New York City Department of Water Supply, Gas and Electricity. On north side of 102d Avenue, about 100 feet east of Van Wyck Boulevard, Jamaica.

Water level, in feet above mean sea level, 1942

Jan. 3	7.32	Feb. 14	6.96	Mar. 28	7.31	May 9	7.31
10	7.29	21	6.90	Apr. 4	7.05	16	7.27
17	7.22	28	6.92	11	7.24	23	7.19
24	7.05	Mar. 7	7.25	18	7.21	30	7.19
31	7.01	14	7.08	25	7.32	June 6	7.13
Feb. 7	7.01	21	7.10	May 2	7.33	13	7.04

Q1224 (*906, p. 159;*936, p. 179)--Continued

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 20	7.02	Aug. 8	6.94	Oct. 10	7.42	Nov. 21	7.32
27	6.97	Sept. 5	7.15	17	7.36	28	7.46
July 4	6.91	12	7.20	24	7.52	Dec. 5	7.34
11	6.92	19	7.28	31	7.49	12	7.47
18	6.88	26	7.59	Nov. 7	7.70	19	7.65
25	6.89	Oct. 3	7.57	14	7.38	26	7.37
Aug. 1	6.91						

Q1225 (*906, p. 160;*936, p. 179). 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, 1942

Jan. 3	26.89	Apr. 4	27.24	July 4	27.14	Oct. 3	27.52
10	26.84	11	27.27	11	26.98	10	27.52
17	26.81	18	27.39	18	27.15	17	27.49
24	26.80	25	27.45	25	26.95	24	27.46
31	26.75	May 2	27.46	Aug. 1	27.03	31	27.41
Feb. 7	26.72	9	27.40	8	27.10	Nov. 7	27.39
14	26.73	16	27.33	15	27.20	14	27.36
21	26.77	23	27.32	22	27.35	21	27.34
28	26.79	30	27.24	29	27.46	28	27.31
Mar. 7	26.84	June 6	27.17	Sept. 5	27.52	Dec. 5	27.32
14	26.91	13	27.15	12	27.53	12	27.32
21	27.01	20	27.10	19	27.52	19	27.32
28	27.12	27	27.04	26	27.53	26	27.31

Q1237 (*906, p. 160; 936, p. 179). New York City Department of Water Supply, Gas and Electricity. At Baisley pumping station about 1,450 feet west of 150th Street, and 200 feet north of Belt Parkway, Baisley Park.

Lowest daily water level, in feet, with reference to mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	-4.26	-5.13a	-6.38	-5.66	-2.27	-0.87	+0.52	+1.58	+1.79	+2.60	+2.00	+1.85
2	-4.17a	-5.28	-6.37	-5.58	-1.80	+.13	+1.05	+1.53	+1.64	+2.69	+2.02	+2.20
3	-4.51a	-5.33	-6.24	-5.53	-1.65	+1.08	+1.36	+1.24	+1.55	+2.48	+2.06	+1.77
4	-4.41	-5.47	-6.06	-5.51	-1.33	+1.55	+1.46	+1.19	+1.36	+2.29	+1.90	+1.60
5	-4.49	-5.48	-6.06	-5.53	-.94	+1.19	+1.52	+1.16	+1.44	+2.50	+2.00	+1.52
6	-4.51	-5.47	-5.82	-5.50	-.88	+.59	+1.34	+.89	+1.45	+2.55	+2.02	+1.53
7	-4.43	-5.40	-6.03	-5.58	-.37	+.54	+1.39	+.57	+1.54	+2.62	+1.88	+1.57
8	-4.43a	-5.24	-6.20	-5.63	+.22	+.72	+1.14	+.47	+1.58	+2.32a	+1.91	+1.63
9	-4.33	-5.56	-6.19	-5.63	+.24	+.88	+.86	+.88	+1.92	+2.19	.....	+1.67
10	-4.57	-5.81	-5.93	-5.50	+.35	+1.02	+.58	+1.91	+2.07	+1.76	.....	+1.84
11	-4.57	-5.93	-6.00	-5.33	+.31	+.79	+.93	+1.54	+2.04	+1.81	.....	+1.91
12	-4.52	-5.74	-5.91	-5.46	+.12	+.98	+1.32	+1.24	+2.14	+1.93	.....	+1.95
13	-4.91	.....	-5.93	-5.61	-.07	a+1.10	+1.13	+1.69	+2.24	+2.15	.....	+1.97
14	-4.92	-5.88	-5.35	-5.49	-.33	+1.31	+.78	+1.93	+2.06	+2.30a	+1.61	+1.76
15	-5.00	-6.19	-5.77	-5.48	-.43	+1.15	+.95	+1.25	+1.85	+2.37	+1.57	+1.74
16	-5.16	-6.20	-5.69	-5.47	-.12	+.72	+.53	+1.29	+1.73	+2.43	+1.53	+1.83
17	-5.15	-6.17	-5.24	-5.37	+.24	+.72	+.40	+1.64	+1.65	+2.50	+1.55	+1.80
18	-5.21	-6.29	-5.40	-5.21	+.48	+1.33	+.63	+1.53	+1.74	+2.39	+1.62	+1.76
19	-5.21	-6.37	-5.59	-5.22	+.58	+1.50	+.78	+1.52	+1.91	+2.45	+1.69	+1.53
20	-5.05	-6.37	-5.79	-5.22	+.96	+1.14	+.68	+1.49	+2.03	+2.59a	+1.69a	+1.45
21	-5.06	-6.06	-5.77	-5.14	+1.15	+1.18	+.16	+1.44	+2.07	+2.73a	+1.69	.....
22	-5.12a	-5.98	-5.63	-5.17	+.88	+1.19	-.03	+1.17	+2.31	+2.75	+1.65	.....
23	-5.23	.....	-5.70	-5.23	+.87	+1.35	+.04	+1.19	+2.33	+2.64	+1.68	.....
24	-5.39	.....	-5.72	-5.36	+.81	+1.40	+.17	+1.25	+2.40	+2.49	+1.80	.....
25	-5.74	.....	-5.93	-5.72	+.47	+1.20	a+.11	+1.43	+2.24	+2.54	+2.12	.....
26	-5.91	.....	-6.01	-5.84	+.07	+.96	-.07	+1.42	+2.28	+2.70	+2.10a	+1.33
27	-5.92	.....	-6.02	-5.89	-.14	+1.07	+.41	+1.47	+2.56	+2.67	+2.12	+1.33
28	-5.95a	-6.35	-5.96	-5.89	-.48	+1.13	+1.39	+1.51	+2.17	+2.46	+1.90	+1.52
29	-6.06	.....	-5.77	-5.85	-.64	+.87	+1.34	+1.70	+2.10	+2.29	+1.90	+1.75
30	-6.01	.....	-5.56	-4.60	-.92	+.51	+1.36	+1.65	+2.44	+2.07	+1.85	+1.90
31	-4.98	.....	-5.69	.....	-1.37	.....	+1.55	+1.77	.....	+2.00	.....	+1.35

a Estimated.

Q1248 (*906, p. 161;*936, p. 180). 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, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	34.73	Apr. 4	34.82	July 4	35.05	Oct. 3	34.78
10	34.67	11	34.90	11	34.95	10	35.09
17	34.61	18	34.99	18	34.93	17	35.23
24	34.58	25	35.08	25	34.89	24	35.30
31	34.52	May 2	35.13	Aug. 1	34.78	31	35.34
Feb. 7	34.50	9	35.15	8	34.64	Nov. 7	35.34
14	34.48	16	35.18	15	34.63	14	35.34
21	34.52	23	35.19	22	34.66	21	35.30
28	34.54	30	35.18	29	34.72	28	35.29
Mar. 7	34.53	June 6	35.08	Sept. 5	34.77	Dec. 5	35.23
14	34.54	13	35.14	12	34.80	12	35.17
21	34.59	20	35.10	19	34.81	19	35.17
28	34.70	27	35.04	26	34.85	26	35.15

Q1249 (*906, p. 161;*936, p. 180). 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, 1942

Jan. 3	30.65	Apr. 4	30.83	July 4	30.86	Oct. 3	31.16
10	30.59	11	30.95	11	30.80	10	31.17
17	30.56	18	31.04	18	30.78	17	31.18
24	30.54	25	31.12	25	30.74	24	31.20
31	30.50	May 2	31.16	Aug. 1	30.87	31	31.16
Feb. 7	30.46	9	31.16	8	30.86	Nov. 7	31.16
14	30.47	16	31.12	15	30.95	14	31.15
21	30.57	23	31.15	22	31.00	21	31.12
28	30.57	30	31.03	29	31.06	28	31.11
Mar. 7	30.55	June 6	30.96	Sept. 5	31.11	Dec. 5	31.09
14	30.58	13	31.00	12	31.15	12	31.07
21	30.65	20	30.92	19	31.15	19	31.07
28	30.74	27	30.86	26	31.15	26	31.02

Q1250 (*906, p. 161;*936, p. 181). 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, 1942

Jan. 3	19.64	Apr. 4	20.02	July 4	19.99	Oct. 3	20.51
10	19.54	11	20.10	11	20.04	10	20.45
17	19.46	18	20.16	18	19.96	17	20.38
24	19.45	25	20.16	25	20.09	24	20.31
31	19.38	May 2	20.11	Aug. 1	20.25	31	20.27
Feb. 7	19.36	9	20.08	8	20.27	Nov. 7	20.25
14	19.42	16	20.06	15	20.46	14	20.20
21	19.48	23	20.05	22	20.61	21	20.15
28	19.45	30	19.98	29	20.67	28	20.18
Mar. 7	19.53	June 6	19.92	Sept. 5	20.72	Dec. 5	20.21
14	19.66	13	19.98	12	20.71	12	20.21
21	19.78	20	19.88	19	20.63	19	20.23
28	19.92	27	19.85	26	20.57	26	20.23

Q1251 (*906, p. 161;*936, p. 181). 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, 1942

Jan. 3	10.30	Apr. 4	10.43	July 4	10.45	Oct. 3	11.56
10	10.21	11	10.51	11	10.63	10	11.62
17	10.14	18	10.61	18	10.66	17	11.57
24	10.06	25	10.64	25	10.69	24	11.41
31	9.99	May 2	10.57	Aug. 1	10.75	31	11.33
Feb. 7	9.96	9	10.61	8	10.90	Nov. 7	11.29
14	9.85	16	10.56	15	11.05	14	11.23
21	9.92	23	10.60	22	11.25	21	11.16
28	9.91	30	10.60	29	11.42	28	11.09
Mar. 7	10.05	June 6	10.53	Sept. 5	11.54	Dec. 5	11.09
14	10.21	13	10.53	12	11.58	12	11.18
21	10.34	20	10.50	19	11.57	19	11.24
28	10.42	27	10.44	26	11.51	26	11.20

Q1252 (*906, p. 161;*936, p. 181). 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, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	11.86	Apr. 4	11.97	July 4	11.69	Oct. 3	12.11
10	11.83	11	11.97	11	11.71	10	12.09
17	11.79	18	11.97	18	11.72	17	12.08
24	11.75	25	11.95	25	11.74	24	12.07
31	11.71	May 2	11.90	Aug. 1	11.82	31	12.06
Feb. 7	11.73	9	11.86	8	11.83	Nov. 7	12.02
14	11.70	16	11.82	15	11.94	14	12.04
21	11.71	23	11.80	22	12.02	21	12.00
28	11.69	30	11.75	29	12.07	28	12.01
Mar. 9	11.78	June 6	11.68	Sept. 5	12.09	Dec. 5	12.03
14	11.81	13	11.67	12	12.13	12	12.05
21	11.83	20	11.63	19	12.12	19	12.12
28	11.94	27	11.59	26	12.13	26	12.20

Q1253 (*906, p. 161;*936, p. 182). New York City Department of Water Supply, Gas and Electricity. At northeast corner of 101st Avenue and 121st Street, Richmond Hill.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	2.72	Apr. 4	2.48	July 4	2.41	Oct. 3	2.72
10	2.68	11	2.53	11	2.42	10	2.79
17	2.69	18	2.58	18	2.39	17	2.81
24	2.67	25	2.62	25	2.44	24	2.84
31	2.65	May 2	2.67	Aug. 1	2.36	31	2.87
Feb. 7	2.64	9	2.68	8	2.32	Nov. 7	2.87
14	2.60	16	2.69	15	2.33	14	2.89
21	2.56	23	2.68	22	2.37	21	2.90
28	2.52	30	2.67	29	2.43	28	2.92
Mar. 7	2.49	June 6	2.62	Sept. 5	2.50	Dec. 5	2.92
14	2.47	13	2.57	12	2.56	12	2.93
21	2.47	20	2.53	19	2.68	19	2.95
28	2.46	27	2.47	26	2.75	26	2.96

Q1254 (*906, p. 162;*936, p. 182). New York City Department of Water Supply, Gas and Electricity. At northeast corner of 101st Avenue and 108th Street, Richmond Hill. Measuring point lowered 0.05 foot Nov. 7, 1942. New measuring point, top of coupling, about level with land surface and 45.46 feet above mean sea level. Water level, Nov. 7, 1942, 47.14 feet below measuring point and 1.68 feet below mean sea level.

Water level, in feet, with reference to mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	-1.74	Mar. 7	-2.05	May 2	-1.91	Nov. 7	-1.68
10	-1.82	14	-2.09	9	-1.93	14	-1.58
17	-1.84	21	-2.11	16	-1.92	21	-1.47
24	-1.86	28	-2.13	23	-1.94	28	-1.41
31	-1.89	Apr. 4	-2.13	30	-1.99	Dec. 5	-1.37
Feb. 7	-1.94	11	-2.13	June 6	-2.10	12	-1.35
14	-1.97	18	-2.09	13	-2.19	19	-1.24
21	-1.99	25	-1.96	20	-2.24	26	-1.21
28	-2.04						

Q1255 (*936, p. 182). New York City Department of Water Supply, Gas and Electricity. At northwest corner of Atlantic Avenue and Woodhaven Boulevard, Woodhaven.

Water level, in feet, with reference to mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	-5.49	Apr. 11	-5.95	July 11	-5.83	Oct. 3	-4.99
17	-5.53	18	-5.87	18	-5.84	10	-4.94
24	-5.59	25	-5.77	25	-5.76	17	-4.90
31	-5.69	May 2	-5.70	Aug. 1	-5.76	24	-4.63
Feb. 7	-5.82	9	-5.74	8	-5.67	31	-4.77
14	-5.73	16	-5.79	15	-5.62	Nov. 7	-4.73
21	-5.79	23	-5.81	22	-5.53	14	-4.63
28	-5.76	30	-5.83	29	-5.51	21	-4.61
Mar. 7	-5.62	June 6	-5.84	Sept. 5	-5.31	28	-4.46
14	-5.67	13	-5.87	12	-5.25	Dec. 5	-4.43
21	-5.87	20	-5.87	19	-5.17	12	-4.53
28	-5.76	27	-5.85	26	-4.96	19	-4.50
Apr. 4	-5.76	July 4	-5.81	Oct. 3	-4.99	26	-4.37

Q1256 (*906, p. 162;*936, p. 184). New York City Department of Water Supply, Gas and Electricity. At southeast corner of 95th Avenue and 82d Street, Woodhaven.

Water level, in feet, with reference to mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	-6.69	Apr. 11	-6.82	July 11	-5.94	Oct. 10	-4.37
10	-6.71	18	-6.80	18	-5.82	17	-4.31
17	-6.75	25	-6.79	25	-5.72	24	-4.26
24	-6.79	May 2	-6.71	Aug. 1	-5.53	31	-4.24
31	-6.82	9	-6.67	8	-5.42	Nov. 7	-4.17
Feb. 7	-6.87	16	-6.72	15	-5.23	14	-4.13
14	-6.92	23	-6.72	22	-5.09	21	-4.09
21	-6.96	30	-6.70	29	-4.98	28	-4.02
28	-6.98	June 6	-6.64	Sept. 5	-4.94	Dec. 5	-4.00
Mar. 14	-6.98	13	-6.54	12	-4.72	12	-3.95
21	-6.93	20	-6.36	19	-4.75	19	-3.90
28	-6.88	27	-6.19	26	-4.64	26	-3.84
Apr. 4	-6.82	July 4	-6.04	Oct. 3	-4.42		

Q1281 (*936, p. 184). 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, with reference to mean sea level, 1942

Jan. 3	-3.36	Apr. 4	-3.41	July 4	-3.32	Oct. 3	-2.10
10	-3.38	11	-3.37	11	-3.25	10	-2.06
17	-3.42	18	-3.32	18	-3.28	17	-2.01
24	-3.48	25	-3.32	25	-3.12	24	-1.86
31	-3.57	May 2	-3.35	Aug. 1	-3.02	31	-1.83
Feb. 7	-3.62	9	-3.35	8	-2.88	Nov. 7	-1.68
14	-3.56	16	-3.31	15	-2.82	14	-1.64
21	-3.58	23	-3.27	22	-2.81	21	-1.75
28	-3.60	30	-3.32	29	-2.52	28	-1.77
Mar. 7	-3.62	June 6	-3.38	Sept. 5	-2.46	Dec. 5	-1.62
14	-3.60	13	-3.39	12	-2.40	12	-1.75
21	-3.52	20	-3.39	19	-2.38	19	-1.69
28	-3.47	27	-3.35	26	-2.15	26	-1.58

Q1282 (*936, p. 185). 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, 1942

Jan. 3	0.55	Apr. 11	0.32	July 11	.36	Oct. 3	0.88
10	.51	18	.42	18	.34	10	.92
17	.51	25	.48	25	.36	17	1.05
24	..49	May 2	.52	Aug. 1	.34	24	1.06
31	.46	9	.53	8	.39	31	.98
Feb. 7	.52	16	.56	15	.41	Nov. 7	.98
14	.37	23	.56	22	.45	14	.99
21	.35	30	.59	29	.62	21	1.01
28	.37	June 6	.53	Sept. 5	.62	28	1.04
Mar. 7	.35	13	.52	12	.69	Dec. 5	1.06
14	.23	20	.49	19	.81	12	1.04
28	.26	27	.43	26	.85	26	1.05
Apr. 4	.33	July 4	.55				

Q1283 (*936, p. 186). 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, 1942

Jan. 3	3.29	Apr. 4	3.57	July 4	3.74	Oct. 3	4.65
10	3.25	11	3.69	11	3.83	10	4.63
17	3.22	18	3.75	18	3.92	17	4.55
24	3.22	25	3.77	25	3.97	24	4.53
31	3.14	May 2	3.81	Aug. 1	4.05	31	4.40
Feb. 7	3.08	9	3.79	8	4.23	Nov. 7	4.38
14	3.23	16	3.82	15	4.20	14	4.36
21	3.18	23	3.86	22	4.36	21	4.33
28	3.18	30	3.85	29	4.47	28	4.31
Mar. 7	3.18	June 6	3.79	Sept. 5	4.50	Dec. 5	4.21
14	3.25	13	3.83	12	4.62	12	4.20
21	3.40	20	3.79	19	4.64	19	4.15
28	3.55	27	3.70	26	4.78	26	4.11

Q1284 (*936, p. 187). New York City Department of Water Supply, Gas and Electricity. At northwest corner of Rockaway Boulevard and Lincoln Street South Ozone Park.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	5.57	Apr. 11	6.19	July 11	6.29	Oct. 3	7.39
17	5.46	18	6.21	18	6.30	10	7.39
24	5.44	25	5.97	25	6.24	17	6.93
31	5.38	May 2	6.12	Aug. 1	6.31	24	6.84
Feb. 7	5.38	9	6.20	8	6.44	31	6.76
14	5.54	16	6.27	15	6.79	Nov. 7	6.77
21	5.57	23	6.28	22	6.73	14	6.70
28	5.59	30	6.26	29	6.94	21	6.64
Mar. 7	5.66	June 6	6.19	Sept. 5	7.14	28	6.62
14	5.76	13	6.19	12	7.24	Dec. 12	6.56
21	5.90	20	6.06	19	7.16	19	6.60
28	5.98	27	5.99	26	7.34	26	6.49
Apr. 4	6.10	July 4	6.16				

Q1285 (*936, p. 187). 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, 1942

Jan. 3	6.02	Apr. 11	6.21	July 11	6.31	Oct. 10	6.95
10	5.89	18	6.36	18	6.33	17	6.92
17	5.86	25	6.42	25	6.36	24	6.88
24	5.85	May 2	6.47	Aug. 1	6.43	31	6.75
31	5.84	9	6.50	8	6.44	Nov. 7	6.73
Feb. 14	5.75	16	6.50	15	6.50	14	6.69
21	5.74	23	6.52	22	6.48	21	6.66
28	5.76	30	6.51	29	6.67	28	6.67
Mar. 7	5.79	June 6	6.43	Sept. 5	6.77	Dec. 5	6.56
14	5.76	13	6.38	12	6.85	12	6.59
21	5.90	20	6.34	19	6.90	19	6.50
28	6.01	27	6.25	26	6.97	26	6.48
Apr. 4	6.09	July 4	6.25	Oct. 3	6.93		

Q1286 (*936, p. 188). 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, 1942

Jan. 3	9.58	Apr. 18	9.49	July 18	9.06	Oct. 10	9.38
17	9.53	25	9.49	25	9.09	17	9.40
24	9.49	May 2	9.44	Aug. 1	9.06	24	9.44
31	9.45	9	9.39	8	9.07	31	9.44
Feb. 7	9.38	16	9.36	15	9.16	Nov. 7	9.47
14	9.40	23	9.34	22	9.25	14	9.55
21	9.39	30	9.30	31	9.31	21	9.55
28	9.35	June 6	9.26	Sept. 5	9.36	28	9.56
Mar. 7	9.34	13	9.25	12	9.39	Dec. 5	9.55
21	9.39	20	9.17	19	9.40	12	9.57
28	9.45	27	9.15	26	9.38	19	9.59
Apr. 4	9.51	July 4	9.12	Oct. 3	9.36	26	9.62
11	9.52	11	9.07				

Q1287 (*936, p. 188). 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, 1942

Jan. 3	12.12	Feb. 28	12.40	Apr. 25	12.78	June 20	12.05
10	11.99	Mar. 7	12.67	May 2	12.63	27	11.96
17	11.86	14	11.98	9	12.60	July 4	12.34
24	11.95	21	13.14	16	12.47	11	12.35
31	11.85	28	13.36	23	12.42	18	12.42
Feb. 7	12.18	Apr. 4	13.19	30	12.27	25	12.46
14	12.34	11	13.12	June 6	12.13	Aug. 1	12.53
21	12.52	18	12.98	13	12.22	8	12.43

Q1287 (*936, p. 188)--Continued.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Aug. 15	13.04	Sept. 19	12.37	Oct. 24	12.13	Nov. 28	12.20
22	12.97	26	12.27	31	12.09	Dec. 5	12.22
29	12.66	Oct. 3	12.20	Nov. 7	12.18	12	12.23
Sept. 5	12.68	10	12.18	14	12.19	19	12.25
12	12.56	17	12.07	21	12.16	26	12.40

Q1288 (*936, p. 189). 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, 1942

Jan. 3	16.44	Apr. 4	17.36	June 27	16.85	Oct. 10	17.34
10	16.38	11	17.42	July 4	16.94	17	17.21
17	16.29	18	17.43	11	17.00	24	17.21
24	16.25	25	17.40	18	16.99	31	17.07
31	16.22	May 2	17.30	25	16.95	Nov. 7	17.11
Feb. 7	16.24	9	17.25	Aug. 1	16.91	14	17.01
14	16.35	16	17.19	8	17.29	21	16.99
21	16.47	23	17.16	Sept. 5	17.94	28	16.94
28	16.51	30	17.09	12	17.84	Dec. 5	16.91
Mar. 7	16.57	June 6	17.00	19	17.70	12	17.00
14	16.73	13	17.01	26	17.66	19	17.03
21	16.95	20	16.93	Oct. 3	17.50	26	17.14
28	17.17						

Q1289 (*936, p. 189). 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, 1942

Jan. 3	30.43	Apr. 4	30.41	July 4	30.63	Oct. 3	31.12
10	30.27	11	30.47	11	30.53	10	31.03
17	30.23	18	30.72	18	30.64	17	30.94
24	30.20	25	30.83	25	30.56	24	31.08
31	30.21	May 2	30.88	Aug. 1	30.60	31	31.03
Feb. 7	30.10	9	30.97	8	30.79	Nov. 7	31.00
14	30.22	16	30.96	15	30.75	14	30.84
21	30.27	23	30.87	22	30.77	21	30.83
28	30.30	30	30.94	29	30.93	28	30.97
Mar. 7	30.30	June 6	30.71	Sept. 5	30.96	Dec. 5	30.90
14	30.24	13	30.71	12	30.94	12	30.80
21	30.32	20	30.69	19	31.04	19	30.80
28	30.45	27	30.67	26	31.01	26	30.90

Q1290 (*936, p. 190). 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, 1942

Jan. 3	15.52	Apr. 4	16.07	July 4	15.92	Oct. 3	16.30
10	15.46	11	16.15	11	15.84	10	16.28
17	15.29	18	16.18	18	16.23	17	16.25
24	15.25	25	15.97	25	16.28	24	16.33
31	15.25	May 2	15.88	Aug. 1	16.21	31	16.24
Feb. 7	15.36	9	15.93	8	16.10	Nov. 7	16.31
14	15.32	16	15.81	15	16.37	14	16.40
21	15.38	23	15.85	22	16.42	21	16.42
28	15.26	30	15.72	29	16.53	28	16.35
Mar. 7	15.55	June 6	15.65	Sept. 5	16.55	Dec. 5	16.33
14	15.67	13	15.82	12	16.44	12	16.37
21	15.81	20	15.68	19	16.44	19	16.55
28	15.97	27	15.69	26	16.35	26	16.53

Q1292 (*936, p. 190). New York City Department of Water Supply, Gas and Electricity. About 96 feet south of Union Turnpike and 81 feet east of 185th Street, Jamaica.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	26.67	Apr. 4	26.73	July 4	26.66	Oct. 10	27.21
10	26.59	11	26.82	18	26.77	17	27.20
17	26.67	18	26.82	25	26.72	24	27.10
24	26.55	25	26.84	Aug. 1	26.81	31	27.17
31	26.73	May 2	26.83	8	26.85	Nov. 7	27.06
Feb. 7	26.58	9	26.77	15	26.96	14	26.93
14	26.51	16	26.73	22	27.11	21	26.86
21	26.53	23	26.71	29	27.08	28	26.87
28	26.41	30	26.71	Sept. 5	27.22	Dec. 5	26.87
Mar. 7	26.51	June 6	26.62	12	27.31	12	26.93
14	26.58	13	26.69	19	27.31	19	26.73
21	26.73	20	26.70	26	27.28	26	26.74
28	26.66	27	26.69	Oct. 3	27.24		

Suffolk County

S28 (*840, p. 271; 845, p. 316; 886, p. 507; 906, p. 162; 936, p. 191). South Huntington Water District well 2. On west side of Hillside Avenue, about 1 mile south of Huntington station of Long Island Railroad and about 1,000 feet west of New York Avenue, South Huntington. Measurements discontinued on Apr. 18, 1942.

Water level, in feet above mean sea level, 1942

Jan. 3	92.34	Jan. 31	92.24	Feb. 28	92.12	Mar. 28	92.34
10	92.37	Feb. 7	92.00	Mar. 7	92.09	Apr. 4	92.44
17	92.35	14	92.11	14	92.17	11	92.53
24	92.24	21	92.10	21	92.21	18	92.61

S202 (*840, p. 273; *845, p. 317; 886, p. 509; *906, p. 164; 936, p. 191). New York Water Service Corporation. On west side of Spring Street about 450 feet south of Gains Avenue, Huntington.

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	38.75	38.82	38.43	38.50	38.36	38.13	38.09	37.90	38.00	37.95	38.00	38.31
2	38.96	38.69	38.43	38.50	38.34	38.16	38.10	37.92	38.02	37.92	37.93	38.51
3	38.71	38.68	38.57	38.53	38.36	38.20	38.09	37.88	38.04	37.84	37.95	38.32
4	38.71	38.72	38.60	38.46	38.40	38.23	38.04	37.88	37.99	37.85	37.89	38.29
5	38.74	38.75	38.59	38.44	38.40	38.18	38.02	37.82	37.97	37.91	37.90	38.27
6	38.75	38.78	38.68	38.47	38.31	38.13	38.02	37.78	37.93	37.99	37.94	38.27
7	38.73	38.78	38.53	38.51	38.35	38.14	38.07	37.78	37.93	37.86	37.98	38.28
8	38.74	38.72	38.56	38.42	38.40	38.10	38.00	37.78	37.98	37.84	37.98	38.28
9	38.72	38.57	38.63	38.43	38.37	38.12	37.96	37.79	38.03	37.85	38.01	38.38
10	38.69	38.59	38.67	38.54	38.33	38.17	37.94	a38.01	a38.01	37.91	38.02	38.40
11	38.59	38.73	38.60	38.61	38.33	38.18	37.94	.....	.....	37.92	38.08	38.41
12	38.59	38.70	38.62	38.50	38.30	38.20	37.93	.....	a38.02	37.89	38.08	38.50
13	38.64	38.70	38.56	38.42	38.33	38.16	37.93	.....	.....	37.89	38.18	38.52
14	38.65	38.62	38.57	38.43	38.33	38.16	37.95	.....	.....	37.99	38.03	38.46
15	38.70	38.58	38.62	38.52	38.22	38.07	37.98	37.98	.....	38.05	38.00	38.51
16	38.57	38.59	38.63	38.54	38.23	39.09	37.98	37.96	.....	38.03	38.02	38.58
17	38.57	38.73	38.69	38.57	38.26	38.09	38.02	37.98	.....	38.04	38.10	38.50
18	38.61	38.57	38.82	38.54	38.19	38.14	38.13	38.02	.....	38.06	38.21	38.44
19	38.72	38.58	38.65	38.50	38.19	38.18	37.95	38.00	.....	38.00	38.16	38.34
20	38.83	38.54	38.53	38.48	38.22	38.09	37.94	38.01	.....	38.00	38.17	38.34
21	38.78	38.53	38.53	38.49	38.23	38.09	37.94	38.03	.....	38.00	38.13	38.38
22	38.79	38.51	38.74	38.51	38.24	38.05	37.86	38.03	.....	38.03	38.03	38.39
23	38.79	38.52	38.65	38.36	38.27	38.09	37.86	38.03	.....	37.90	38.03	38.42
24	38.72	38.55	38.66	38.37	38.23	38.03	37.86	37.97	.....	37.82	38.12	38.37
25	38.65	38.65	38.65	38.36	38.22	38.05	37.86	37.96	.....	37.82	38.29	38.34
26	38.67	38.66	38.66	38.29	38.24	37.97	37.80	37.93	37.85	37.98	38.25	38.23
27	38.72	38.60	38.50	38.24	38.26	37.98	37.80	37.93	37.88	37.99	38.26	38.23
28	38.84	38.50	38.36	38.25	38.21	37.98	38.01	37.97	37.85	37.81	38.21	38.30
29	38.78	.....	38.37	38.37	38.21	37.98	37.96	38.00	37.84	37.81	38.22	38.55
30	38.70	.....	38.41	38.39	38.23	37.98	37.85	37.96	37.89	37.86	38.31	38.62
31	38.71	.....	38.56	.....	38.16	.....	37.85	37.99	.....	37.87	.....	38.50

a Estimated.

S203 (*840, p. 273; 845, p. 318; 886, p. 510;*906, p. 164; 936, p. 192). C. A. Gould. About 125 feet north of Wolf Hill Road and about 1.4 miles west of Deer Park Avenue, Dix Hills.

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	73.73	73.43	73.10	72.37	72.64	72.38	72.32	72.14	71.96	71.87	71.72	71.59
2	73.68	73.35	73.13	72.87	72.65	72.41	72.31	72.13	71.97	71.79	71.72	71.68
3	73.61	73.33	73.33	72.87	72.67	72.44	72.23	72.08	71.98	71.77	71.65	71.54
4	73.65	73.34	73.05	72.81	72.66	72.45	72.22	72.07	71.93	71.80	71.61	71.52
5	73.65	73.43	73.05	72.81	72.58	72.42	72.26	72.05	71.89	71.88	71.64	71.52
6	73.64	73.45	73.08	72.83	72.58	72.40	72.26	72.06	71.84	71.78	71.70	71.53
7	73.65	73.49	73.02	72.87	72.67	72.52	72.20	72.04	71.88	71.76	71.67	71.50
8	73.64	73.31	73.12	72.75	72.61	72.35	72.23	72.03	71.91	71.74	71.69	71.50
9	73.63	73.29	73.17	72.76	72.61	72.35	72.18	72.07	71.90	71.79	71.64	71.53
10	73.59	73.32	73.06	72.88	72.54	72.37	72.16	72.10	71.92	71.79	71.67	71.52
11	73.57	73.41	73.05	72.88	72.53	72.42	72.21	72.02	71.88	71.81	71.68	71.59
12	73.57	73.34	73.00	72.76	72.57	72.42	72.17	72.01	71.88	71.70	71.69	71.61
13	73.52	73.30	73.00	72.72	72.56	72.40	72.17	72.02	71.87	71.69	71.68	71.50
14	73.54	73.29	73.06	72.72	72.53	72.37	72.23	72.04	71.87	71.75	71.57	71.44
15	73.65	73.28	73.01	72.78	72.53	72.32	72.17	72.03	71.87	71.84	71.57	71.56
16	73.44	73.28	73.00	72.69	72.56	72.32	72.15	72.04	71.86	71.82	71.63	71.50
17	73.45	73.27	73.11	72.73	72.51	73.33	72.15	72.03	71.87	71.82	71.65	71.48
18	73.58	73.24	73.11	72.80	72.49	72.35	72.21	72.01	71.87	71.83	71.63	71.43
19	73.61	73.27	72.94	72.76	72.51	72.35	72.19	72.01	71.88	71.78	71.60	71.42
20	73.55	73.27	72.91	72.75	72.51	72.31	72.18	72.01	71.84	71.75	71.63	71.42
21	73.52	73.31	72.95	72.72	72.50	72.32	72.13	72.01	71.84	71.75	71.58	71.42
22	73.53	73.25	73.05	72.71	72.50	72.31	72.13	72.01	71.86	71.81	71.55	71.44
23	73.53	73.24	72.98	72.69	72.54	72.31	72.14	72.02	71.83	71.69	71.58	71.50
24	a73.53	73.26	72.89	72.71	72.50	72.28	72.12	71.92	71.81	71.67	71.68	71.49
25	.....	73.23	72.89	72.73	72.48	72.24	72.12	71.89	71.78	71.70	71.72	71.46
26	.....	73.23	72.90	72.65	72.48	72.24	72.10	71.92	71.80	71.79	71.66	71.34
27	.....	73.21	72.90	72.65	72.43	72.27	72.13	71.94	71.87	71.70	71.60	71.33
28	.....	73.10	72.88	72.65	72.39	72.27	72.19	71.98	71.73	71.66	71.55	71.51
29	.....	.....	72.89	72.70	72.42	72.27	72.16	71.93	71.73	71.66	71.55	71.50
30	.....	.....	72.91	72.68	72.48	72.27	72.09	71.92	71.79	71.69	71.59	71.54
31	a73.68	.....	72.91	.....	72.40	.....	72.09	71.95	.....	71.76	.....	a71.42

S1803 (*840, p. 285; 845, p. 324; 886, p. 510; 906, p. 165; 936, p. 192) New York City Department of Water Supply, Gas and Electricity. At north corne of Belmont Avenue and Farmingdale Road, about 1.5 miles west of Babylon.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	15.64	Apr. 4	16.63	July 6	15.93	Oct. 3	15.87
10	15.61	11	16.55	11	15.90	10	15.77
17	15.52	18	16.46	18	15.97	17	15.68
24	15.54	25	16.33	25	15.98	24	15.67
31	15.52	May 2	16.18	Aug. 1	16.42	31	15.67
Feb. 7	15.96	9	16.09	8	16.20	Nov. 7	15.76
14	16.15	16	15.97	15	16.88	14	15.85
21	16.32	23	15.91	22	17.13	21	15.77
28	16.11	30	15.82	29	16.81	28	16.07
Mar. 7	16.38	June 6	15.72	Sept. 5	16.55	Dec. 5	16.22
14	16.61	13	16.03	12	16.34	12	16.17
21	16.82	20	15.90	19	16.16	19	16.22
28	16.89	27	15.82	26	15.99	26	15.96

S1804 (*840, p. 286; 845, p. 324; 886, p. 510; 906, p. 165; 936, p. 192) New York City Department of Water Supply, Gas and Electricity. On north side of Oak Street, about 50 feet west of Amityville Creek, Amityville. Measurements discontinued Apr. 18, 1942.

Water level, in feet above mean sea level, 1942

Jan. 3	10.27	Jan. 31	10.21	Feb. 28	10.48	Mar. 28	10.67
10	10.23	Feb. 7	10.55	Mar. 7	10.60	Apr. 4	10.63
17	10.18	14	10.43	14	10.67	11	10.72
24	10.23	21	10.50	21	10.59	18	10.70

a Estimated.

S1805 (*840, p. 287; 845, p. 324; 886, p. 511; 906, p. 166; *936, p. 193). 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. Measuring point lowered 0.12 foot on Jan. 10, 1942. New measuring point, top of pipe, 0.6 foot above land surface and 57.19 feet above mean sea level. Water level, Jan. 10, 1942, 17.87 feet below measuring point and 39.32 feet above mean sea level.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	39.41	Apr. 4	41.78	July 6	41.26	Oct. 3	42.24
10	39.32	11	41.93	11	41.18	10	42.06
17	39.30	18	41.90	18	41.15	17	41.86
24	39.27	25	41.89	25	40.92	24	41.67
31	39.22	May 2	41.81	Aug. 1	41.69	31	41.51
Feb. 7	40.40	9	41.71	8	41.80	Nov. 7	41.35
14	40.66	16	41.59	15	42.01	14	41.23
21	39.92	23	41.50	22	42.84	21	41.11
28	40.06	30	41.40	29	43.05	28	41.03
Mar. 7	40.19	June 6	41.29	Sept. 5	42.95	Dec. 5	41.14
14	40.58	13	41.45	12	42.77	12	41.30
21	40.97	20	41.48	19	42.61	19	41.34
28	41.62	27	41.35	26	42.42	26	41.13

S1806 (*840, p. 288; 845, p. 325; 886, p. 511; 906, p. 166; 936, p. 193) New York City Department of Water Supply, Gas and Electricity. On northeast corner of Wellwood and Long Island Avenues, Pinelawn.

Water level, in feet above mean sea level, 1942

Jan. 3	53.52	Apr. 4	55.08	July 4	54.75	Oct. 3	55.98
10	53.44	11	55.33	11	54.72	10	55.81
17	53.36	18	55.48	18	54.70	17	55.65
24	53.31	25	55.47	25	54.60	24	55.52
31	53.19	May 2	55.38	Aug. 1	54.75	31	55.31
Feb. 7	53.24	9	55.29	8	54.85	Nov. 7	55.19
14	53.32	16	55.22	15	65.04	14	55.02
21	53.30	23	55.15	22	55.60	21	54.87
28	53.52	30	55.05	29	56.24	28	54.73
Mar. 7	53.63	June 6	54.94	Sept. 5	56.48	Dec. 5	54.60
14	53.75	13	54.88	12	56.43	12	54.35
21	53.97	20	54.80	19	56.30	19	54.46
28	54.44	27	54.75	26	56.13	26	54.44

S1807 (*840, p. 289; 845, p. 325; 886, p. 511; 906, p. 166; 936, p. 193) 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, 1942

Jan. 3	21.17	Apr. 4	22.05	July 6	21.67	Oct. 3	21.69
10	20.98	11	22.02	11	21.73	10	21.59
17	20.98	18	21.91	18	21.78	17	21.51
24	21.03	25	21.81	25	21.56	24	21.50
31	20.92	May 2	21.78	Aug. 1	22.25	31	21.45
Feb. 7	21.37	9	21.74	8	22.00	Nov. 7	21.42
14	21.28	16	21.64	15	22.42	14	21.43
21	21.41	23	21.59	22	22.48	21	21.37
28	21.33	30	21.41	29	22.33	28	21.54
Mar. 7	21.50	June 6	21.28	Sept. 5	22.14	Dec. 5	21.64
14	21.62	13	21.60	12	22.04	12	21.67
21	21.76	20	21.69	19	21.91	19	21.61
28	21.94	27	21.63	26	21.78	26	21.58

S1808 (*777, p. 124;*817, p. 202;*840, p. 290; 845, p. 325; 886, p. 511; 906, p. 166; 936, p. 194). 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.

S1808 (*777, p. 124; 817, p. 202; 840, p. 290; 845, p. 325; 886, p. 511; 906, p. 166; 936, p. 194)--Continued.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	10.61	Apr. 4	11.15	July 6	10.69	Oct. 3	10.47
10	10.54	11	11.43	11	10.76	10	10.43
17	10.42	18	11.11	18	10.94	17	10.40
24	10.69	25	10.89	25	10.53	24	10.73
31	10.62	May 2	10.75	Aug. 1	11.59	31	10.72
Feb. 7	11.28	9	11.00	8	10.90	Nov. 7	10.81
14	11.00	16	10.71	15	11.88	14	10.86
21	11.18	23	10.69	22	11.51	21	10.66
28	10.86	30	10.50	29	11.15	28	11.16
Mar. 7	11.55	June 6	10.41	Sept. 5	10.84	Dec. 5	11.13
14	11.34	13	10.85	12	10.79	12	10.93
21	11.42	20	10.58	19	10.65	19	10.84
28	11.37	27	10.45	26	10.51	26	11.00

S1809 (*777, p. 124;*817, p. 202;*840, p. 291; 845, p. 326; 886, p. 512; 906, p. 167; 936, p. 194). New York City Department of Water Supply, Gas and Electricity. At northwest corner of Sagtikos Manor Lane and road 0.1 mile south of Bay Shore Road, about 1.5 miles northwest of Bay Shore.

Water level, in feet above mean sea level, 1942

Jan. 3	26.41	Apr. 11	28.81	July 11	28.37	Oct. 10	28.47
10	26.38	18	28.74	18	28.21	17	28.29
17	26.30	25	28.72	25	28.07	24	28.14
24	26.28	May 2	28.62	Aug. 1	28.50	31	27.96
31	26.24	9	28.52	8	28.69	Nov. 7	27.83
Feb. 14	26.67	16	28.40	15	28.71	14	27.72
21	27.00	23	28.29	22	29.35	21	27.64
28	27.23	30	28.19	29	29.53	28	27.60
Mar. 7	27.36	June 6	28.10	Sept. 5	29.37	Dec. 5	27.78
14	27.59	13	28.63	12	29.19	12	27.95
21	27.95	20	28.80	19	29.02	19	28.00
28	28.53	27	28.57	26	28.84	26	27.84
Apr. 4	28.79	July 6	28.41	Oct. 3	28.66		

S1810 (*777, p. 124;*817, p. 202;*840, p. 291; 845, p. 326; 886, p. 512; 906, p. 167; 936, p. 194). Geological Survey, U. S. Department of Interior. on east side of Sagtikos Manor Lane, 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, 1942

Jan. 3	49.44	Apr. 4	49.25	July 4	49.89	Oct. 3	50.64
10	49.30	11	49.71	11	49.82	10	50.58
17	49.18	18	50.00	18	49.77	17	50.52
24	49.09	25	50.19	25	49.71	24	50.42
31	48.99	May 2	50.29	Aug. 1	49.66	31	50.34
Feb. 7	48.86	9	50.32	8	49.61	Nov. 7	50.23
14	48.76	16	50.31	15	49.59	14	50.18
21	48.71	23	50.28	22	49.70	21	50.13
28	48.65	30	50.19	29	49.86	28	49.99
Mar. 7	48.61	June 6	50.10	Sept. 5	50.15	Dec. 5	49.85
14	48.61	13	50.07	12	50.43	12	49.77
21	48.77	20	50.00	19	50.60	19	49.72
28	49.03	27	49.92	26	50.68	26	49.63

S1811 (*840, p. 292; 845, p. 326;*886, p. 512;*906, p. 167;*936, p. 194). Geological Survey, U. S. Dept. of Interior. About 75 feet north of shore of Lake Ronkonkoma, Ronkonkoma.

Water level, in feet above mean sea level, 1942

Jan. 3	53.37	Feb. 21	53.48	Apr. 11	53.78	May 30	53.36
10	53.34	28	53.44	18	53.67	June 6	53.32
17	53.31	Mar. 7	53.58	25	53.67	13	53.30
24	53.34	14	53.69	May 2	53.41	20	53.24
31	53.38	21	53.70	9	53.41	27	53.20
Feb. 7	53.55	28	53.85	16	53.39	July 4	53.14
14	53.43	Apr. 4	53.73	23	53.39	11	53.08

S1811 (*840, p. 292; 845, p. 326;*886, p. 512;*906, p. 167;*936, p. 194). --Continued.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 18	53.12	Aug. 29	53.25	Oct. 10	53.03	Nov. 21	53.00
25	53.04	Sept. 5	53.13	17	53.04	28	53.04
Aug. 1	53.02	12	53.16	24	53.02	Dec. 5	53.05
8	53.02	19	53.13	31	53.00	12	53.05
15	53.24	26	53.08	Nov. 7	52.99	19	53.05
22	53.34	Oct. 3	53.08	14	53.03	26	53.07

S1812 (*840, p. 292; 845, p. 327; 886, p. 512;*906, p. 168; 936, p. 195). 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, 1942

Jan. 3	45.59	Apr. 4	45.69	July 4	45.86	Oct. 3	46.63
10	45.48	11	45.88	11	45.82	10	46.58
17	45.39	18	46.01	18	45.77	17	46.50
31	45.25	May 2	46.14	Aug. 1	45.64	31	46.38
Feb. 7	45.18	9	46.17	8	45.58	Nov. 7	46.30
14	45.15	16	46.14	15	46.07	14	46.25
21	45.17	23	46.14	22	46.22	21	46.17
28	45.13	30	46.07	29	46.35	28	46.11
Mar. 7	45.12	June 6	46.00	Sept. 5	46.51	Dec. 5	46.11
14	45.16	13	45.98	12	46.63	12	46.06
21	45.27	20	45.82	19	46.71	19	45.99
28	45.47	27	45.86	26	46.69	26	45.98

S1813 (*906, p. 168; 936, p. 195). 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, 1942

Jan. 3	37.29	Apr. 4	37.68	July 4	37.60	Oct. 3	38.15
10	37.21	11	37.64	11	37.54	10	38.12
17	37.14	18	37.62	18	37.50	17	38.08
24	37.11	25	37.61	25	37.43	24	38.05
31	37.05	May 2	37.60	Aug. 1	37.41	31	38.14
Feb. 7	37.12	9	37.62	8	37.35	Nov. 7	37.98
14	37.13	16	37.60	15	37.68	14	37.97
21	37.21	23	37.64	22	38.20	21	37.94
28	37.15	30	37.60	29	38.17	28	37.89
Mar. 7	37.16	June 6	37.58	Sept. 5	38.12	Dec. 5	37.99
14	37.32	13	37.68	12	38.15	12	38.00
21	37.46	20	37.65	19	38.16	19	37.91
28	37.66	27	37.55	26	38.16	26	37.87

S1814 (*906, p. 169; 936, p. 196). 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, 1942

Jan. 3	35.33	Apr. 4	35.74	July 4	35.84	Oct. 3	36.53
10	35.25	11	35.91	11	35.82	10	36.46
17	35.18	18	36.00	18	35.79	17	36.39
24	35.13	25	36.04	25	35.74	24	36.33
31	35.05	May 2	36.05	Aug. 1	35.69	31	36.27
Feb. 7	35.01	9	36.05	8	35.65	Nov. 7	36.21
14	35.01	16	36.03	15	35.73	14	36.13
21	35.06	23	36.02	22	36.02	21	36.06
28	35.06	30	35.96	29	36.38	28	36.00
Mar. 7	35.07	June 6	35.92	Sept. 5	36.55	Dec. 5	35.95
14	35.14	13	35.96	12	36.62	12	35.92
21	35.30	20	35.93	19	36.62	19	35.91
28	35.48	27	35.87	26	36.59	26	35.88

S1815 (*906, p. 169; 936, p. 196). Geological Survey, U. S. Dept. of Interior. On northwest corner of Suffolk and Eastern Avenues, Brentwood.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	44.55	Apr. 4	44.17	July 4	44.55	Oct. 3	45.13
10	44.44	11	44.39	11	44.53	10	45.10
17	44.31	18	44.51	18	44.50	17	45.07
24	44.24	25	44.58	25	44.42	24	45.01
31	44.15	May 2	44.65	Aug. 1	44.42	31	44.98
Feb. 7	44.53	9	44.68	8	44.35	Nov. 7	44.89
14	43.99	16	44.69	15	44.65	14	44.85
21	43.99	23	44.72	22	44.70	21	44.79
28	43.90	30	44.69	29	44.64	28	44.73
Mar. 7	43.85	June 6	44.64	Sept. 5	44.98	Dec. 5	44.67
14	43.80	13	44.69	12	45.06	12	44.60
21	43.81	20	44.63	19	45.12	19	44.57
28	43.93	27	44.57	26	45.15	26	44.51

S1816 (*906, p. 170; 936, p. 196). Geological Survey, U. S. Dept. of Interior. On northeast corner of Brentwood and Commack Roads, Deer Park.

Water level, in feet above mean sea level, 1942

Jan. 3	55.54	Apr. 4	56.25	July 4	56.40	Oct. 3	57.28
10	55.41	11	56.61	11	56.34	10	57.17
17	55.31	18	56.78	18	56.33	17	57.07
24	55.23	25	56.86	25	56.23	24	56.94
31	55.14	May 2	56.87	Aug. 1	56.24	31	56.84
Feb. 7	55.07	9	56.84	8	56.16	Nov. 7	56.71
14	55.01	16	56.76	15	56.35	14	56.58
21	55.06	23	56.74	22	56.62	21	56.45
28	55.08	30	56.65	29	57.04	28	56.32
Mar. 7	55.17	June 6	56.57	Sept. 5	57.36	Dec. 5	56.20
14	55.25	13	56.56	12	57.50	12	56.10
21	55.43	20	56.48	19	57.51	19	56.04
28	55.72	27	56.40	26	57.38	26	55.97

S1817 (*906, p. 170; 936, p. 196). 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, 1942

Jan. 3	50.55	Apr. 4	51.78	July 4	51.19	Oct. 3	51.13
10	50.39	11	51.84	11	51.01	10	51.05
17	50.24	18	51.70	18	51.13	17	50.94
24	50.37	25	51.51	25	50.79	24	50.95
31	50.27	May 2	51.38	Aug. 1	51.59	31	50.98
Feb. 7	50.80	9	51.37	8	51.19	Nov. 7	51.19
14	50.77	16	51.24	15	52.33	14	51.19
21	50.99	23	51.33	22	51.98	21	50.94
28	50.78	30	51.15	29	51.80	28	51.31
Mar. 7	51.25	June 6	50.99	Sept. 5	51.63	Dec. 5	51.35
14	51.36	13	51.49	12	51.51	12	51.08
21	51.58	20	51.19	19	51.36	19	50.93
28	51.77	27	50.99	26	51.24	26	50.90

S2454 (*906, p. 171; 936, p. 197). 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, 1942

Jan. 3	7.15	Apr. 11	7.72	July 11	7.59	Oct. 10	7.18
10	7.09	18	7.46	18	7.66	17	7.22
24	7.09	25	7.31	25	7.31	24	7.39
31	7.13	May 2	7.21	Aug. 1	8.01	31	7.35
Feb. 7	7.66	9	7.30	8	7.60	Nov. 7	7.31
14	7.39	16	7.15	15	8.28	14	7.44
21	7.52	23	7.18	22	7.97	21	7.26
28	7.24	30	7.10	29	7.79	28	7.71
Mar. 7	7.71	June 6	7.07	Sept. 5	7.53	Dec. 5	7.64
14	7.66	13	7.44	12	7.44	12	7.44
21	7.78	20	7.27	19	7.35	19	7.36
28	7.71	27	7.22	26	7.32	26	7.36
Apr. 4	7.53	July 6	7.42	Oct. 3	7.27		

S2455 (*777, p. 121;*817, p. 201;*840, p. 272; 845, p. 317;*886, p. 508; *906, p. 172; 936, p. 198). 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.

Lowest daily water level, in feet above mean sea level, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	20.75	20.66	21.66	22.99	22.53	21.99	22.17	23.17	23.24	22.27	21.58	21.68
2	20.75	20.69	21.66	22.97	22.51	21.98	22.16	23.15	23.21	22.24	21.57	21.76
3	20.74	20.72	21.68	22.94	22.49	21.97	22.18	23.08	23.17	22.21	21.55	21.79
4	a20.74	20.74	21.71	22.89	22.47	21.96	22.15	23.01	23.14	22.19	21.53	21.80
5	a20.74	20.77	21.71	22.87	a22.44	a21.93	22.13	22.96	23.10	22.17	21.52	21.82
6	a20.73	20.80	21.73	22.85	22.42	21.91	22.12	22.91	23.06	22.14	21.51	21.85
7	a20.73	20.82	21.76	22.82	22.42	21.89	22.09	22.87	23.03	22.11	21.50	21.89
8	a20.72	20.86	21.77	22.77	22.41	21.95	22.07	22.83	23.00	22.08	21.49	21.90
9	a20.71	20.90	21.81	22.76	22.38	22.13	22.05	22.82	22.97	22.05	21.48	21.93
10	20.69	20.96	21.86	22.76	22.36	22.37	22.03	22.87	22.95	22.02	21.48	21.95
11	20.67	21.03	21.91	22.78	22.33	22.53	22.03	22.85	22.91	22.00	21.49	21.97
12	20.67	21.10	22.00	22.75	22.32	22.62	22.02	22.84	22.89	21.96	21.50	21.99
13	20.65	21.17	22.07	22.72	22.29	22.67	22.01	22.83	22.86	21.93	21.50	21.99
14	20.64	21.22	22.15	22.71	22.27	22.69	22.00	22.89	22.82	21.91	21.47	21.97
15	20.64	21.28	22.20	22.71	22.25	22.65	21.98	22.97	22.78	21.89	21.46	21.99
16	20.61	21.31	22.25	22.70	22.23	22.61	21.95	23.15	22.75	21.86	21.46	21.97
17	20.60	21.35	22.28	22.70	22.22	22.58	21.94	23.30	22.71	21.84	21.47	21.96
18	20.60	21.39	22.34	22.74	22.20	22.55	21.93	23.40	22.68	21.84	21.48	21.92
19	20.60	21.43	22.39	22.73	22.18	22.52	22.00	23.47	22.65	21.82	21.47	21.98
20	20.60	21.46	22.44	22.71	22.17	22.47	22.02	23.54	22.62	21.80	21.47	21.86
21	20.62	21.49	22.51	22.69	22.15	22.45	22.03	23.60	22.59	21.78	21.46	21.83
22	20.63	21.52	22.60	22.68	22.14	22.44	22.03	23.63	22.55	21.76	21.45	21.83
23	20.63	21.55	22.66	22.67	22.13	22.41	22.04	23.61	22.52	21.73	21.45	21.82
24	20.61	21.58	22.72	22.66	22.11	22.38	22.02	23.54	22.48	21.71	21.45	21.81
25	20.60	21.61	22.80	22.65	22.10	22.33	22.00	23.47	22.44	21.70	21.50	21.79
26	20.60	21.63	22.88	22.62	22.08	22.30	21.97	23.42	22.42	21.69	21.54	21.75
27	20.60	21.65	22.94	22.60	22.06	22.28	21.96	23.39	22.40	21.67	21.56	21.74
28	20.60	21.66	22.98	22.59	22.04	22.25	22.24	23.36	22.36	21.65	21.57	21.75
29	20.59	.....	23.00	22.57	22.03	22.22	22.81	23.32	22.32	21.63	21.58	21.81
30	20.58	.....	23.01	22.55	22.03	22.20	23.07	23.29	22.30	21.61	21.64	21.88
31	20.59	.....	23.01	.....	22.01	.....	23.16	23.26	.....	21.60	.....	22.01

S2543 (*936, p. 198). New York City Board of Water Supply test well 106. About 100 feet south of Suffolk Avenue and 200 feet east of Blydenburgh Road, Central Islip.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	33.52	Apr. 4	34.67	July 4	33.94	Oct. 3	34.40
10	33.45	11	34.69	11	33.92	10	34.32
17	33.39	18	34.57	18	33.88	17	34.22
24	33.36	25	34.41	25	33.82	24	34.16
31	33.28	May 2	34.32	Aug. 1	33.76	31	34.13
Feb. 7	33.39	9	34.22	8	33.70	Nov. 7	34.09
14	33.43	16	34.15	15	33.94	14	34.06
21	33.51	23	34.10	22	34.48	21	34.02
28	33.53	30	34.04	29	34.97	28	33.99
Mar. 7	33.60	June 6	33.97	Sept. 5	34.97	Dec. 5	34.04
14	33.73	13	34.09	12	34.79	12	34.03
21	34.00	20	34.02	19	34.65	19	33.99
28	34.35	27	33.94	26	34.52	26	33.97

S3112 (*936, p. 199). 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, 1942

Jan. 3	51.90	Feb. 7	51.65	Mar. 14	52.33	Apr. 18	53.98
10	51.85	14	51.69	21	52.68	25	53.91
17	51.78	21	51.85	28	53.13	May 2	53.80
24	51.74	28	52.02	Apr. 4	53.67	9	53.73
31	51.70	Mar. 7	52.18	11	53.98	16	53.65

a Estimated.

S3112. New York City Department of Water Supply--Continued.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 27	53.22	Aug. 15	55.47	Oct. 3	54.15	Nov. 21	53.09
July 4	53.22	22	55.94	10	54.01	28	52.97
11	53.17	29	54.44	17	53.85	Dec. 5	52.87
18	53.13	Sept. 5	54.64	24	53.69	12	52.83
25	53.00	12	54.61	31	53.52	19	52.85
Aug. 1	53.08	19	54.45	Nov. 7	53.36	26	52.83
8	53.25	26	54.31	14	53.33		

S3496. Geological Survey, U. S. Dept. of Interior. On east side of Coates Avenue about 100 feet north of Long Island Railroad, Holbrook. Driven test well, diameter 1¼ inches, depth 75.8 feet below measuring point. Measuring point, top of pipe, about 0.2 feet above land surface and 115.87 feet above mean sea level. Water level, Nov. 2, 1942, 67.75 feet below measuring point. Water levels, in feet above mean sea level, 1942: Nov. 2, 48.12; Nov. 30, 48.17; Dec. 31, 47.93.

S3497. Geological Survey, U. S. Dept. of Interior. On northeast corner of Waverly and Long Island Avenues, Holtsville. Driven test well, diameter 1¼ inches, depth 64.9 feet below measuring point. Measuring point, top of pipe, about 0.2 feet above land surface and 103.81 feet above mean sea level. Water level, Nov. 2, 1942, 56.16 feet below measuring point. Water levels, in feet above mean sea level, 1942: Nov. 2, 47.65; Nov. 30, 47.64; Dec. 31, 47.41.

S3498. Geological Survey, U. S. Dept. of Interior. On south side of Long Island Avenue about 1,000 feet west of State Highway 112, Medford. Driven test well, diameter 1¼ inches, depth 60.5 feet below measuring point. Measuring point, top of pipe, about 0.8 foot above land surface and 94.71 feet above mean sea level. Water level, Sept. 11, 1942, 50.12 feet below measuring point and 44.50 feet above mean sea level.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level
Sept.11	44.50	Sept.28	44.68	Nov. 30	44.40
18	44.65	Nov. 2	44.58	Dec. 31	44.25

S3512. 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. Unused drilled construction well, diameter 8 inches, depth 60.9 feet below measuring point. Measuring point, top of coupling, about 0.7 feet above land surface and 107.41 feet above mean sea level. Water level, Apr. 24, 1942, 39.99 feet below measuring point and 67.42 feet above mean sea level.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 24	67.42	June 12	67.91	July 31	67.51	Sept.11	67.84
30	67.57	19	67.86	Aug. 7	67.45	18	67.95
May 8	67.71	26	67.77	14	67.62	28	68.10
15	67.79	July 3	67.77	21	67.69	Nov. 2	68.06
22	67.88	10	67.69	28	67.66	30	67.83
29	67.89	17	67.64	Sept. 4	67.74	Dec. 30	67.44
June 5	67.93	24	67.58				

S3513. New York State Division of Highways. On south side of Middle Country Road (State Highway 25), about 0.9 mile west of Selden. Unused drilled construction well, diameter 8 inches, depth 64.2 feet below measuring point. Measuring point, top of coupling, about 0.9 foot above land surface and 102.10 feet above mean sea level. Water level, Apr. 17, 1942, 39.46 feet below measuring point and 62.64 feet above mean sea level.

S3513. New York State Division of Highways--Continued.

Water level, in feet above mean sea level, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 24	62.80	June 12	63.14	July 31	62.68	Sept.11	62.80
30	62.90	19	63.10	Aug. 7	62.60	18	62.86
May 8	62.99	26	62.98	14	62.53	28	62.88
15	63.04	July 3	62.95	21	62.56	Nov. 2	62.72
22	63.10	10	62.87	28	62.63	30	62.44
29	63.10	17	62.80	Sept. 4	62.73	Dec. 30	62.26
June 5	63.12	24	62.74				

S3514. Herman Jurgens. On south side of Jericho Turnpike (State Highway 25), about 0.5 mile east of Larkfield Avenue, Commack. Unused dug domestic well, diameter 30 inches, depth 94.5 feet below measuring point. Measuring point, west top edge of brick well curb, about 0.6 foot above land surface and 154.22 feet above mean sea level. Water level, May 15, 1942, 87.59 feet below measuring point and 66.63 feet above mean sea level.

Water level, in feet above mean sea level, 1942

May 15	66.63	July 17	66.36	Sept.11	66.49	Nov. 7	66.36
22	66.63	24	66.35	18	66.50	14	66.28
29	66.55	31	66.36	26	66.53	21	66.29
June 5	66.55	Aug. 7	66.32	Oct. 3	66.48	28	66.24
12	66.55	14	66.34	10	66.48	Dec. 5	66.26
19	66.52	21	66.38	17	66.50	12	66.31
26	66.41	28	66.49	24	66.32	19	66.17
July 3	66.40	Sept. 4	66.48	31	66.47	26	66.09
10	66.40						

S3515. 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. Driven test well, diameter 2 inches, depth 35.0 feet below measuring point. Measuring point, top of pipe, about 0.2 foot above land surface and 44.15 feet above mean sea level. Water level, Mar. 5, 1907, 10.50 feet below measuring point and 33.65 feet above mean sea level. Measurements from beginning of record on Mar. 5, 1907, to Aug. 9, 1909, by New York City Board of Water Supply; measurements thereafter by Geological Survey, U. S. Dept. of Interior.

Water level, in feet above mean sea level, 1907-09, 1942

Date	Water level	Date	Water level	Date	Water level
Mar. 5, 1907	33.65	June 6, 1942	32.45	Sept.19, 1942	33.26
27	34.50	13	32.73	26	33.11
Apr. 4	34.38	20	32.80	Oct. 3	32.98
May 8	34.64	27	32.72	10	32.84
July 19	34.22	July 6	32.63	17	32.71
24	34.15	11	32.55	24	32.61
Aug. 3, 1908	33.80	18	32.47	31	32.50
Nov. 10	32.13	25	32.39	Nov. 7	32.42
Aug. 9, 1909	32.49	Aug. 1	32.52	14	32.36
24, 1942	32.95	8	32.47	21	32.29
30	32.88	15	32.64	28	32.25
May 8	32.82	22	33.37	Dec. 5	32.36
15	32.73	29	33.64	12	32.50
22	32.65	Sept. 5	33.56	19	32.50
30	32.56	12	33.39	26	32.42

S3516. New York City Board of Water Supply test well 58. On east side of East Third Avenue, about 105 feet south of Walbridge Avenue, Bayshore. Driven test well, diameter 2 inches, depth 37.7 feet below measuring point. Measuring point, top of pipe, about 0.3 foot above land surface and 60.50 feet above mean sea level. Water level Mar. 5, 1907, 21.85 feet below measuring point and 38.65 feet above mean sea level. Measurements from beginning of record on Mar. 5, 1907, to Dec. 2, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

S3516. New York City Board of Water Supply test well 58--Continued.
Water level, in feet above mean sea level, 1907-09, 1942

Date	Water level	Date	Water level	Date	Water level
Mar. 5, 1907	38.65	May 8, 1942	37.77	Sept. 5, 1942	38.61
27	39.15	15	37.69	12	38.52
July 24	39.72	22	37.62	19	38.38
Nov. 10, 1908	37.48	30	37.54	26	38.25
Jan. 8, 1909	36.56	June 6	37.46	Oct. 3	38.12
Feb. 19	36.14	13	37.59	10	38.00
Mar. 16	37.37	20	37.59	17	37.87
Apr. 26	37.97	27	37.60	24	37.75
June 14	38.59	July 6	37.59	31	37.63
Aug. 9	37.62	11	37.53	Nov. 7	37.50
Sept.30	36.73	18	37.44	14	37.42
Nov. 4	36.20	25	37.36	21	37.31
Dec. 2	35.76	Aug. 1	37.43	28	37.21
Apr. 14, 1942	37.95	8	37.33	Dec. 5	37.16
17	37.97	15	37.52	12	37.25
24	37.90	22	38.09	19	37.14
30	37.84	29	38.50	26	37.30

S3517. New York City Board of Water Supply test well 60. On southwest corner of Lakeland Avenue and Tariff Street, Sayville. Driven test well, diameter 2 inches, depth 19.6 feet below measuring point. Measuring point, top of pipe, about 0.2 foot above land surface and 31.56 feet above mean sea level. Water level, Apr. 2, 1907, 18.05 feet below measuring point and 13.51 feet above mean sea level. Measurements from beginning of record on Apr. 2, 1907, to Dec. 4, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1907-09, 1942

Apr. 2, 1907	13.51	Jan. 18, 1909	11.68	June 12, 1942	12.81
26	13.63	Feb. 23	11.82	19	12.70
Mar. 29	13.51	Mar. 22	12.77	26	12.67
June 7	13.53	Apr. 17	12.95	July 6	12.79
July 31	12.94	June 4	13.26	10	12.70
Sept. 9	12.40	July 10	12.65	17	12.68
Nov. 1	12.08	Aug. 12	12.27	24	12.68
Dec. 4	12.59	Oct. 8	11.83	31	12.64
Jan. 2, 1908	13.16	Nov. 19	11.61	Aug. 7	12.60
Feb. 4	13.66	Dec. 4	11.60	14	12.95
Mar. 2	13.86	Apr. 10, 1942	13.37	21	13.52
Apr. 7	13.71	17	13.23	28	13.55
June 6	13.32	24	13.11	Sept. 4	13.38
July 3	13.05	30	13.04	11	13.24
Aug. 10	12.55	May 8	12.98	18	13.11
11	12.54	15	12.90	28	12.95
Sept.16	12.21	22	12.84	Nov. 2	12.60
Oct. 13	12.02	29	12.75	30	12.49
Nov. 18	11.86	June 5	12.68	Dec. 31	12.80

S3518. New York City Board of Water Supply test well 79. East side of Islip Avenue, about 190 feet north of Locust Street, Central Islip. Driven test well, diameter 2 inches, depth 34.7 feet below measuring point. Measuring point, top of pipe, 0.2 foot above land surface and 51.73 feet above mean sea level. Water level, Mar. 22, 1907, 19.02 feet below measuring point and 32.71 feet above mean sea level. Measurements from beginning of record, Mar. 22, 1907, to Aug. 5, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1907-09, 1942

Mar. 22, 1907	32.71	May 15, 1942	31.59	Aug. 7, 1942	31.09
Apr. 5	32.91	22	31.51	14	31.18
May 8	33.04	29	31.40	21	31.86
July 18	32.71	June 5	31.31	28	32.06
25	32.56	12	31.44	Sept.4	32.46
Aug. 1, 1908	32.42	19	31.55	11	32.27
5, 1909	31.36	26	31.55	18	32.09
Apr. 14, 1942	32.00	July 6	31.51	28	31.87
17	31.97	10	31.42	Nov. 2	31.25
24	31.85	17	31.32	30	31.01
30	31.78	24	31.25	Dec.31	31.30
May 8	31.68	31	31.18		

S3519. 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. Driven test well, diameter 2 inches, depth 33.8 feet below measuring point. Measuring point, top of pipe, about 0.3 foot above land surface and 32.60 feet above mean sea level. Water level, Mar.22, 1907, 6.20 feet below measuring point and 26.40 feet below mean sea level. Measurements from beginning of record, Mar. 22, 1907, to Dec. 3, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1907-09, 1942

Date	Water level	Date	Water level	Date	Water level
Mar. 22, 1907	26.53	Feb. 20, 1909	24.40	June 19, 1942	25.87
July 18	25.69	Mar. 26	25.49	26	25.71
25	25.57	Apr. 27	25.97	July 6	25.66
Sept. 7	24.89	June 15	25.67	10	25.54
Oct. 10	24.68	Aug. 11	24.72	17	25.43
Nov. 1	24.54	Oct. 1	24.17	24	25.38
Dec. 9	25.43	Nov. 5	23.85	31	25.38
Jan. 3, 1908	25.90	Dec. 3	23.69	Aug. 7	25.27
Feb. 4	26.32	Apr. 2, 1942	26.02	14	25.77
Mar. 4	26.54	10	25.92	21	26.69
Apr. 1	26.62	17	25.83	28	26.48
May 2	26.34	24	25.75	Sept. 4	26.23
30	26.27	30	25.68	11	26.07
June 30	25.87	May 8	25.61	18	25.94
Aug. 4	25.22	15	25.52	28	25.73
Sept.15	24.69	22	25.47	Nov. 2	25.35
Oct. 15	24.37	29	25.41	30	25.36
Nov. 19	24.13	June 5	25.31	Dec. 31	25.62
Jan. 9, 1909	23.93	12	25.99		

S3520. New York City Board of Water Supply test well 146. At southwest corner of Sylvan Avenue and Church Street, about 1 mile northwest of Blue Point. Driven test well, diameter 2 inches, depth 42.6 feet below measuring point. Measuring point, top of pipe, about 0.2 foot above land surface and 41.54 feet above mean sea level. Water level,Mar. 5, 1907, 22.25 feet below measuring point and 19.29 feet above mean sea level. Measurements from beginning of record, Mar. 5, 1907, to Aug. 7, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1907-09, 1942

Mar. 5, 1907	19.29	June 19, 1942	18.85	Aug. 21, 1942	18.68
Aug. 1	19.38	26	18.99	28	18.85
9, 1908	19.03	July 6	19.05	Sept. 4	19.01
7, 1909	18.68	10	19.00	11	19.07
May 8, 1942	18.99	17	18.89	18	19.06
15	18.90	24	18.79	28	18.87
22	18.84	31	18.72	Nov. 2	18.43
29	18.77	Aug. 7	18.64	30	18.11
June 5	18.72	14	18.63	Dec. 31	18.45
12	18.74				

S3521. 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. Driven test well, diameter 2 inches, depth 49.5 feet below measuring point. Measuring point, top of pipe, about 0.3 foot above land surface and 72.57 feet above mean sea level. Water level, Feb. 28, 1907, 34.60 feet below measuring point and 37.97 feet above mean sea level. Measurements from beginning of record, Feb. 28, 1907, to Aug. 14, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1907-09, 1942

Feb. 28, 1907	37.97	May 29, 1942	37.21	Aug. 14, 1942	36.97
Aug. 2	38.44	June 5	37.16	21	37.08
15, 1908	38.35	12	37.21	28	37.09
14, 1909	37.44	19	37.17	Sept. 4	37.10
Apr. 14, 1942	37.33	26	37.14	11	37.12
17	37.37	July 6	37.21	18	37.14
24	37.41	10	37.17	28	37.10
30	37.41	17	37.14	Nov. 2	36.90
May 8	37.37	24	37.10	30	36.71
15	37.31	31	37.04	Dec. 31	36.87
22	37.28	Aug. 7	37.00		

S3522. New York City Board of Water Supply test well 166. On east side of Waverly Avenue, 1.0 mile north of Main Street, Patchogue. Driven test well, diameter 2 inches, depth 43.7 feet below measuring point. Measuring point, top of pipe, about 0.2 foot above land surface and 43.35 feet above mean sea level. Water level, Feb. 6, 1907, 23.56 feet below measuring point and 19.79 feet above mean sea level. Measurements from beginning of record, Feb. 6, 1907, to Aug. 7, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1907-09, 1942

Date	Water level	Date	Water level	Date	Water level
Feb. 6, 1907	19.79	May 15, 1942	19.69	Aug. 7, 1942	19.51
Mar. 30	19.82	22	19.67	14	19.55
Apr. 25	19.90	29	19.63	21	19.76
June 7	19.92	June 5	19.60	28	19.74
Aug. 1	19.52	12	19.80	Sept. 4	19.71
9, 1908	19.49	19	19.80	11	19.68
7, 1909	19.27	26	19.80	18	19.66
Apr. 14, 1942	19.99	July 6	19.81	28	19.61
17	19.95	10	19.75	Nov. 2	19.48
24	19.35	17	19.70	30	19.47
30	19.79	24	19.62	Dec. 31	19.70
May 8	19.73	31	19.56		

S3525. 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. Driven test well, diameter 2 inches, depth 39.5 feet below measuring point. Measuring point, top of pipe, about 0.4 foot above land surface and 49.24 feet above mean sea level. Water level, Jan. 2, 1907, 22.50 feet below measuring point and 26.74 feet above mean sea level. Measurements from beginning of record, Jan. 2, 1907, to Aug. 14, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1907-09, 1942

Jan. 2, 1907	26.74	May 15, 1942	26.81	Aug. 7, 1942	26.54
Mar. 27	27.74	22	26.78	14	26.65
Apr. 26	27.84	29	26.72	21	26.70
June 8	27.96	June 5	26.68	28	26.64
Aug. 10	27.66	12	26.82	Sept. 4	26.72
15, 1908	27.54	19	26.76	11	26.61
14, 1909	26.80	26	26.73	18	26.59
Apr. 10, 1942	26.76	July 6	26.78	28	26.53
17	26.95	10	26.74	Nov. 2	26.34
24	26.96	17	26.69	30	26.19
30	26.94	24	26.64	Dec. 31	26.31
May 8	26.87	31	26.60		

S3524. 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. Driven test well, diameter 2 inches, depth 35.2 feet below measuring point. Measuring point, top of pipe, about at land surface and 46.45 feet above mean sea level. Water level, Mar. 8, 1907, 23.85 feet below measuring point and 22.60 feet above mean sea level. Measurements from beginning of record, Mar. 8, 1907, to Dec. 11, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1907-09, 1942

Mar. 8, 1907	22.60	Apr. 6, 1908	23.28	June 10, 1909	22.60
Apr. 27	22.38	May 5	23.01	July 9	22.30
June 8	22.99	June 8	22.93	Aug. 19	22.01
24	22.36	July 6	22.43	Oct. 15	21.65
Aug. 8	22.62	Aug. 5	22.48	Nov. 13	21.54
Sept. 10	22.33	Oct. 10	22.08	Dec. 11	21.47
Nov. 3	21.91	Nov. 14	21.93	Apr. 10, 1942	22.61
Dec. 6	22.56	Jan. 16, 1909	21.70	17	22.60
Jan. 9, 1908	22.96	Feb. 27	21.83	24	22.47
Feb. 10	23.16	Mar. 20	22.38	30	22.40
Mar. 9	23.23	Apr. 22	22.41	May 8	22.33

S3524--Continued.

Water level, in feet above mean sea level, 1907-09, 1942

Date	Water level	Date	Water level	Date	Water level
May 15, 1942	22.28	June 26	21.98	Sept.18, 1942	22.06
22	22.24	July 6	21.98	28	21.96
29	22.17	10	21.89	Nov. 2	21.80
June 5	22.11	Sept. 4	22.41	30	21.70
12	22.09	11	22.11	Dec. 31	22.04
19	22.04				

S3525. 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. Driven test well, diameter 2 inches, depth 35.7 feet below measuring point. Measuring point, top of pipe, about at land surface and 54.02 feet above mean sea level. Water level, July 15, 1907, 26.02 feet below measuring point and 28.00 feet above mean sea level. Measurements from beginning of record, July 15, 1907, to Dec. 10, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1907-09, 1942

July 15, 1907	28.00	Apr. 21, 1909	26.80	June 19, 1942	26.38
Aug. 8	27.71	June 9	26.91	26	26.36
Sept.10	27.55	July 8	26.76	July 6	26.38
Nov. 3	27.19	Aug. 18	26.73	10	26.34
Dec. 6	27.54	Oct. 14	26.42	17	26.34
Jan. 9, 1908	27.79	Nov. 12	26.27	24	26.32
Feb. 10	27.79	Dec. 10	26.21	31	26.31
Mar. 9	28.01	Apr. 2, 1942	26.74	Aug. 7	26.28
Apr. 6	28.06	10	26.74	14	26.34
May 5	27.79	17	26.54	21	26.48
June 8	28.24	24	26.54	28	26.47
July 6	28.06	30	26.48	Sept. 4	26.44
Aug. 5	27.83	May 8	26.44	11	26.42
Oct. 9	27.46	15	26.41	18	26.38
Nov. 13	27.19	22	26.40	28	26.31
Jan. 15, 1909	26.77	29	26.37	Nov. 30	25.72
Feb. 26	26.65	June 5	26.36	Dec. 31	25.85
Mar. 19	26.91	12	26.42		

S3527. 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. Driven test well, diameter 2 inches, depth 88.2 feet below measuring point. Measuring point, top of pipe, about 2.4 feet below land surface and 87.71 feet above mean sea level. Water level, Mar. 7, 1907, 54.42 feet below measuring point and 33.29 feet above mean sea level. Measurements from beginning of record, Mar. 7, 1907, to Dec. 8, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1907-09, 1942

Mar. 7, 1907	33.29	Feb. 24, 1909	32.11	June 12, 1942	32.15
27	33.69	Mar. 17	31.97	19	32.20
Apr. 27	34.14	Apr. 19	31.78	26	32.16
June 8	34.55	June 7	32.52	July 6	32.19
Aug. 7	35.05	July 6	33.19	10	32.21
Sept. 5	34.78	Aug. 21	33.15	17	32.15
Nov. 7	33.96	Oct. 12	32.65	24	32.12
Dec. 5	33.60	Nov. 10	32.26	31	32.09
Jan. 3, 1908	33.33	Dec. 8	31.92	Aug. 7	32.04
Feb. 5	33.47	Apr. 2, 1942	31.35	14	32.01
Mar. 4	34.10	10	31.41	21	32.04
Apr. 8	34.95	17	31.49	28	32.05
May 6	35.36	24	31.57	Sept. 4	32.08
June 4	35.69	30	31.64	11	32.03
July 1	35.62	May 8	31.75	18	32.00
Aug. 14	35.24	15	31.85	28	31.97
Oct. 7	35.44	22	31.95	Nov. 2	31.92
Nov. 11	33.86	29	32.03	30	31.82
Jan. 13, 1909	32.78	June 5	32.10	Dec. 31	31.75

S3528. New York City Board of Water Supply test well 226. At southeast corner of trail intersection, about 1.5 miles east of Patchogue--Coram Road (State Highway 112), and about 1.1 miles north of Horseblock Road, Plainfield. Driven test well, diameter 2 inches, depth 68.4 feet below measuring point. Measuring point, top of pipe, about 0.3 foot above land surface and 107.08 feet above mean sea level. Water level, Apr. 22, 1907, 56.63 feet below measuring point and 50.45 feet above mean sea level. Measurements from beginning of record, Apr. 22, 1907, to Dec. 8, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1907-09, 1942

Date	Water level	Date	Water level	Date	Water level
Apr. 22, 1907	50.45	Mar. 17, 1909	49.98	June 12, 1942	48.44
June 11	50.72	Apr. 19	49.53	19	48.44
Aug. 7	51.39	June 7	49.41	26	48.44
Sept. 5	51.58	July 6	49.63	July 6	48.45
Nov. 7	51.31	Aug. 21	49.77	10	48.46
Dec. 5	51.02	Oct. 12	49.49	17	48.42
Jan. 3, 1908	50.73	Nov. 10	49.24	24	48.41
Feb. 3	50.63	Dec. 8	49.03	31	48.39
Mar. 4	50.39	Apr. 2, 1942	48.45	Aug. 7	48.38
Apr. 8	51.38	10	48.42	14	48.35
May 6	51.75	17	48.40	21	48.35
June 4	52.24	24	48.39	28	48.32
July 1	52.49	30	48.39	Sept. 4	48.32
Aug. 14	52.55	May 8	48.39	11	48.31
Oct. 7	52.17	15	48.39	18	48.31
Nov. 11	51.99	22	48.41	28	48.32
Jan. 13, 1909	50.94	29	48.41	Nov. 2	48.31
Feb. 24	50.24	June 5	48.43		

S3529. 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. Driven test well, diameter 2 inches, depth 34.1 feet below measuring point. Measuring point, top of pipe, about 0.2 foot above land surface and 38.42 feet above mean sea level. Water level, Mar. 8, 1907, 11.72 feet below measuring point and 26.70 feet above mean sea level. Measurements from beginning of record, Mar. 8, 1907, to Aug. 16, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1907-09, 1942

Mar. 8, 1907	26.70	May 22, 1942	25.61	Aug. 7, 1942	25.32
9	26.22	29	25.57	14	25.39
Apr. 27	28.07	June 5	25.54	21	25.62
June 8	28.00	12	25.67	28	25.71
Aug. 7	27.27	19	25.73	Sept. 4	25.63
5, 1908	27.21	26	25.68	11	25.50
16, 1909	25.83	July 6	25.61	18	25.42
Apr. 17, 1942	25.81	10	25.57	28	25.30
24	25.77	17	25.51	Nov. 2	25.03
30	25.74	24	25.45	30	25.07
May 8	25.70	31	25.39	Dec. 31	25.50
15	25.65				

S3530. 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. Driven test well, diameter 2 inches, depth 45.5 feet below measuring point. Measuring point, top of pipe, about 0.3 foot above land surface and 65.92 feet above mean sea level. Water level, Mar. 8, 1907, 32.32 feet below measuring point and 33.60 feet above mean sea level. Measurements from beginning of record, Mar. 8, 1907, to Dec. 8, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

S3530--Continued.

Water level, in feet above mean sea level, 1907-09, 1942

Date	Water level	Date	Water level	Date	Water level
Mar. 8, 1907	33.60	Oct. 12, 1909	32.46	July 10, 1942	32.39
Apr. 27	34.41	Nov. 10	32.18	17	32.36
June 8	34.58	Dec. 8	31.93	24	32.34
20	34.59	Apr. 17, 1942	32.84	31	32.32
Aug. 7	34.56	24	32.78	Aug. 7	32.29
5, 1908	34.78	30	32.73	14	31.85
Oct. 7	33.96	May 8	32.67	21	32.31
Nov. 11	33.50	15	32.62	28	32.45
Jan. 13, 1909	32.68	22	32.59	Sept. 4	32.56
Feb. 24	32.26	29	32.54	11	32.60
Mar. 17	32.67	June 5	32.51	18	32.57
Apr. 19	32.87	12	32.46	28	32.48
June 7	33.30	19	32.43	Nov. 2	32.18
July 6	33.20	26	32.40	30	31.99
Aug. 16	32.95	July 6	32.40	Dec. 31	32.25

S3531. New York City Board of Water Supply test well 254. On east side of north-south dirt road between Carmans River and South Haven road, about 0.5 mile north of Montauk Highway (State Highway 27), and about 0.3 mile east of Carmans River, South Haven. Driven test well, diameter 2 inches, depth 35.5 feet below measuring point. Measuring point, top of pipe, about at land surface and 25.29 feet above mean sea level. Water level, Aug. 9, 1907, to Dec. 11, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1907-09, 1942

Aug. 9, 1907	10.17	Jan. 16, 1909	9.32	July 17, 1942	9.94
Sept. 10	9.96	Feb. 27	9.66	24	9.91
Nov. 3	9.70	Mar. 20	9.47	31	9.92
Dec. 6	9.95	Apr. 22	9.50	Aug. 7	9.86
Jan. 4, 1908	9.91	June 10	9.76	14	9.96
Feb. 7	10.01	July 9	9.78	21	10.05
Mar. 7	10.10	Aug. 19	9.75	28	9.95
Apr. 6	10.34	Oct. 15	9.43	Sept. 4	9.91
May 7	10.37	Nov. 13	9.31	11	9.88
June 8	10.28	Dec. 11	9.14	18	9.84
July 6	10.00	May 6, 1942	9.80	28	10.13
Aug. 8	9.98	June 26	9.99	Nov. 2	9.69
Oct. 10	9.62	July 6	10.02	30	9.72
Nov. 14	9.53	10	9.99	Dec. 31	9.68

S3532. 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 Country Road (State Highway 25), Ridge. Driven test well, diameter 2 inches, depth 69.8 feet below measuring point. Measuring point, top of pipe, about 0.2 feet above land surface and 85.00 feet above mean sea level. Water level, Apr. 21, 1907, to Dec. 10, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1907-09, 1942

Apr. 21, 1907	49.36	Mar. 19, 1909	48.04	July 3, 1942	47.68
July 11	51.05	Apr. 21	48.39	10	47.62
Aug. 8	51.05	June 9	49.19	17	47.56
Sept. 11	50.64	July 8	49.37	24	47.50
Dec. 6	49.19	Aug. 18	48.95	31	47.44
Jan. 10, 1908	49.24	Oct. 14	48.15	Aug. 7	47.37
Feb. 11	49.89	Nov. 12	47.67	14	47.31
Mar. 10	50.61	Dec. 10	47.46	21	47.32
Apr. 4	51.26	Apr. 29, 1942	47.48	28	47.28
May 6	51.54	May 8	47.64	Sept. 4	47.27
June 8	51.74	15	47.71	11	47.26
July 6	51.62	22	47.78	18	47.26
Aug. 7	51.28	29	47.81	28	47.28
Oct. 9	50.30	June 5	47.86	Nov. 2	47.10
Nov. 13	49.66	12	47.86	30	46.88
Jan. 15, 1909	48.47	19	47.82	Dec. 30	46.92
Feb. 27	47.81	26	47.78		

S3533. 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. Driven test well, diameter 2 inches, depth 31.5 feet below measuring point. Measuring point, top of pipe, about at land surface and 61.46 feet above mean sea level. Water level, Aug. 4, 1907, 13.44 feet below measuring point and 48.02 feet above mean sea level. Measurements from beginning of record, Apr. 4, 1907, to Dec. 9, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1907-09, 1942

Date	Water level	Date	Water level	Date	Water level
Apr. 4, 1907	48.02	Apr. 20, 1909	46.85	July 3, 1942	46.23
21	48.30	June 8	47.74	10	46.16
Aug. 6	48.55	July 7	47.55	17	46.10
Dec. 6	47.38	Aug. 17	46.97	24	46.03
Jan. 10, 1908	47.63	Oct. 13	46.36	31	45.96
Feb. 11	48.28	Nov. 11	46.02	Aug. 7	45.89
Apr. 7	49.35	Dec. 9	45.70	14	45.86
May 6	49.43	May 6, 1942	46.63	21	46.09
June 8	49.48	8	46.60	28	46.21
July 6	49.20	15	46.59	Sept. 4	46.21
Aug. 7	48.80	22	46.57	11	46.17
Oct. 8	47.91	29	46.52	18	46.14
Nov. 12	47.42	June 5	46.48	28	46.09
Jan. 14, 1909	46.62	12	46.42	Nov. 2	45.79
Feb. 25	46.26	19	46.35	30	45.62
Mar. 18	46.62	26	46.30	Dec. 30	45.72

S3534. 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. Driven test well, diameter 2 inches, depth 67.0 feet below measuring point. Measuring point, top of pipe, about 0.2 foot above land surface and 68.21 feet above mean sea level. Water level, June 9, 1907, 36.46 feet below measuring point and 31.75 feet above mean sea level. Measurements from beginning of record, June 9, 1907, to Dec. 11, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1907-09, 1942

June 9, 1907	31.75	Dec. 11, 1909	27.52	July 24, 1942	27.62
July 7	31.43	Apr. 22, 1942	27.28	31	27.57
Aug. 13	30.94	30	27.46	Aug. 7	27.52
13, 1908	30.98	May 8	27.59	14	27.47
Oct. 10	29.96	15	27.68	21	27.42
Nov. 14	29.54	22	27.77	28	27.37
Jan. 16, 1909	29.36	29	27.80	Sept. 4	27.32
Feb. 27	27.57	June 5	27.84	11	27.27
Mar. 20	27.58	12	27.86	18	27.24
June 10	28.56	19	27.87	28	27.16
July 9	28.96	26	27.82	Nov. 2	26.98
Aug. 26	28.68	July 7	27.78	30	26.81
Oct. 14	28.14	10	27.75	Dec. 31	26.73
Nov. 13	27.73	17	27.68		

S3535. 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. Driven test well, diameter 2 inches, depth 54.4 feet below measuring point. Measuring point, top of pipe, about 2.6 feet above land surface and 53.51 feet above mean sea level. Water level, Aug. 13, 1907, 32.08 feet below measuring point and 21.43 feet above mean sea level. Measurements from beginning of record, Aug. 13, 1907, to Aug. 26, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

S3535--Continued.

Water level, in feet above mean sea level, 1907-09, 1942

Date	Water level	Date	Water level	Date	Water level
Aug. 13, 1907	21.43	June 19, 1942	19.44	Aug. 21, 1942	18.96
13, 1908	21.75	26	19.33	28	18.91
26, 1909	20.05	July 7	19.32	Sept. 4	18.86
Apr. 30, 1942	19.26	10	19.28	11	18.80
May 8	19.39	17	19.23	18	18.74
15	19.45	24	19.18	28	18.68
22	19.48	31	19.12	Nov. 2	18.42
29	19.49	Aug. 7	19.06	30	18.23
June 5	19.50	14	19.02	Dec. 31	18.13
12	19.48				

S3536. 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. Driven test well, diameter 2 inches, depth 67.3 feet below measuring point. Measuring point, top of pipe, about 0.3 foot above land surface and 74.48 feet above mean sea level. Water level Apr. 10, 1907, 47.81 feet below measuring point and 26.67 feet above mean sea level. Measurements from beginning of record, Apr. 10, 1907, to Dec. 15, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1907-09, 1942

Apr. 10, 1907	26.67	June 3, 1909	24.95	June 26, 1942	24.72
Aug. 13	27.80	July 12	25.63	July 7,	24.75
Nov. 2	26.86	Aug. 20	25.74	10	24.78
Dec. 6	26.63	Oct. 7	25.29	17	24.72
Jan. 4, 1908	26.40	Nov. 17	24.85	24	24.68
Feb. 7	26.63	Dec. 15	24.49	31	24.63
Mar. 7	27.19	Apr. 2, 1942	23.75	Aug. 7	24.57
Apr. 6	27.81	14	23.89	14	24.52
May 7	28.43	17	23.94	21	24.47
June 5	28.62	24	24.05	28	24.44
July 2	28.50	30	24.14	Sept. 4	24.39
Aug. 16	28.13	May 8	24.24	11	24.36
Oct. 6	27.45	15	24.33	18	24.32
Nov. 16	26.77	22	24.41	28	24.27
Jan. 11, 1909	25.81	29	24.49	Nov. 2	24.06
Mar. 1	25.04	June 5	24.57	30	23.87
23	24.79	12	24.64	Dec. 31	23.68
Apr. 15	24.61	19	24.67		

S3537. New York City Board of Water Supply test well 331. On west side of trail, about 1,000 feet north of old country road, about 1 mile west of Speonk--Riverhead road, and about 1.1 miles northwest of Speonk. Driven test well, diameter 2 inches, depth 42.9 feet below measuring point. Measuring point, top of pipe, about 0.3 foot above land surface and about 43.34 feet above mean sea level. Water level, Jan. 11, 1908, 26.99 feet below measuring point and 16.35 feet above mean sea level. Measurements from beginning of record, Jan. 11, 1908, to Aug. 13, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1908-09, 1942

Jan. 11, 1908	16.35	June 5, 1942	15.46	Aug. 14, 1942	15.03
Aug. 17	16.31	12	15.43	21	15.03
13, 1909	15.70	19	15.37	28	14.95
Apr. 14, 1942	15.49	26	15.31	Sept. 4	14.90
17	15.55	July 7	15.24	11	14.87
24	15.61	10	15.21	18	14.82
30	15.64	17	15.16	28	14.77
May 8	15.62	24	15.11	Nov. 2	14.61
15	15.58	31	15.06	30	14.52
22	15.54	Aug. 7	15.01	Dec. 31	14.35
29	15.49				

S3538. New York City Board of Water Supply test well 339. On northwest side of 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. Driven test well, diameter 2 inches, depth 39.3 feet below measuring point. Measuring point, top of pipe, about 0.2 foot above land surface and 33.75 feet above mean sea level. Water level, Jan. 11, 1908, 16.72 feet below measuring point and 17.03 feet above mean sea level. Measurements from beginning of record, Jan. 11, 1908, to Aug. 24, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1908-09, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 11, 1908	17.03	June 12, 1942	15.67	Aug. 21, 1942	15.38
Aug. 19	17.56	19	15.67	28	15.34
24, 1909	15.95	26	15.63	Sept. 4	15.31
Apr. 23, 1942	15.62	July 3	15.62	11	15.27
30	15.64	10	15.59	18	15.23
May 8	15.65	17	15.55	28	15.18
15	15.63	24	15.52	Nov. 2	14.94
22	15.67	31	15.49	30	14.79
29	15.67	Aug. 7	15.45	Dec. 30	15.01
June 5	15.68	14	15.41		

S3539. New York City Board of Water Supply test well 403. On west side of trail, about 0.4 mile west of Speonk--Riverhead Road, about 1.8 miles north of Old Country Road, and about 2.3 miles north of Speonk. Driven test well, diameter 2 inches, depth 87.9 feet below measuring point. Measuring point, top of pipe, about 0.3 foot above land surface and 79.33 feet above mean sea level. Water level, Apr. 12, 1907, 53.97 feet below measuring point and 25.36 feet above mean sea level. Measurements from beginning of record, Apr. 12, 1907, to Dec. 16, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1907-09, 1942

Apr. 12, 1907	25.36	Aug. 13, 1909	24.24	July 6, 1942	23.47
Aug. 14	25.99	Oct. 6	23.77	10	23.47
Jan. 6, 1908	24.89	Nov. 18	23.29	17	23.41
Feb. 8	25.22	Dec. 16	23.04	24	23.36
Apr. 4	26.10	Apr. 14, 1942	22.85	31	23.31
May 8	26.63	17	22.95	Aug. 7	23.27
June 5	26.72	24	23.06	14	23.22
July 2	26.62	30	23.16	21	23.19
Aug. 17	26.38	May 8	23.27	28	23.14
Oct. 12	25.82	15	23.36	Sept. 4	23.09
Nov. 17	25.39	22	23.42	11	23.04
Jan. 12, 1909	24.63	29	23.47	18	22.99
Mar. 2	23.96	June 5	23.51	28	22.91
24	24.18	12	23.53	Nov. 2	22.64
Apr. 24	23.49	19	23.53	30	22.43
June 1	23.88	26	23.50	Dec. 31	22.26
July 13	24.45				

S3540. New York City Board of Water Supply test well 404. On west side of trail, about 0.4 mile west of Speonk--Riverhead Road, 1.0 mile north of Old Country Road, and 1.6 miles north of Speonk. Driven test well, diameter 2 inches, depth 35.9 feet below measuring point. Measuring point, top of pipe, about 0.3 foot above land surface and 31.94 feet above mean sea level. Water level, Mar. 9, 1907, 10.85 feet below measuring point and 21.09 feet above mean sea level. Measurements from beginning of record, Mar. 9, 1907, to Dec. 16, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1907-09, 1942

Mar. 9, 1907	21.09	June 5, 1908	22.79	Mar. 2, 1909	20.18
Apr. 17	21.89	July 2	22.54	24	20.10
Aug. 14	22.04	Aug. 17	22.24	Apr. 24	20.25
Feb. 3, 1908	21.88	Oct. 12	21.56	June 1	21.15
Apr. 4	22.70	Nov. 17	21.12	July 13	21.14
May 8	23.02	Jan. 12, 1909	20.47	Aug. 13	20.81

S3540--Continued.

Water level, in feet above mean sea level, 1907-09, 1942

Date	Water level	Date	Water level	Date	Water level
Oct. 6, 1909	20.17	June 5, 1942	20.18	Aug. 14, 1942	19.92
Nov. 18	19.68	12	20.20	21	19.88
Dec. 16	19.39	19	20.20	28	19.84
Apr. 14, 1942	19.62	26	20.19	Sept. 4	19.79
17	19.64	July 6	20.15	11	19.74
24	19.74	10	20.14	18	19.69
30	19.83	17	20.10	28	19.61
May 8	19.95	24	20.04	Nov. 2	19.35
15	20.04	31	20.01	30	19.15
22	20.11	Aug. 7	19.96	Dec. 31	19.11
29	20.15				

S3541. New York City Board of Water Supply test well 410. About 200 feet west of trail, about 0.2 mile north of Old Country Road, and about 1.3 miles northeast of Speonk. Driven test well, diameter 2 inches, depth 26.4 feet below measuring point. Measuring point, top of pipe, about 0.2 foot above land surface and 26.37 feet above mean sea level. Water level, Mar. 9, 1907, 13.50 feet below measuring point and 12.87 feet above mean sea level. Measurements from beginning of record, Mar. 9, 1907, to Dec. 16, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1907-09, 1942

Mar. 9, 1907	12.87	Nov. 18, 1909	11.70	July 17, 1942	12.33
Apr. 12	13.70	Dec. 16	11.53	24	12.27
Aug. 16	13.70	Apr. 17, 1942	12.61	31	12.21
July 8, 1908	14.06	24	12.72	Aug. 7	12.14
Aug. 20	13.50	30	12.77	14	12.09
Oct. 12	12.79	May 8	12.79	21	12.06
Nov. 17	12.37	15	12.77	28	12.01
Jan. 12, 1909	11.85	22	12.75	Sept. 4	11.97
Mar. 2	11.92	29	12.70	11	11.91
24	12.36	June 5	12.67	18	11.86
Apr. 24	12.59	12	12.62	28	11.78
June 1	13.58	19	12.55	Nov. 2	11.53
July 13	13.26	26	12.50	30	11.38
Aug. 25	12.73	July 6	12.42	Dec. 31	11.86
Oct. 6	12.19	10	12.39		

S3542. New York City Board of Water Supply test well 413. On west side of trail, about 1.5 miles north of Old Country Road, and about 2.1 miles northeast of Speonk. Driven test well, diameter 2 inches, depth 54.3 feet below measuring point. Measuring point, top of pipe, about 0.3 foot above land surface and 72.11 feet above mean sea level. Water level, Apr. 12, 1907, 50.12 feet below measuring point and 21.99 feet above mean sea level. Measurements from beginning of record, Apr. 12, 1907, to Dec. 16, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1907-09, 1942

Apr. 12, 1907	21.99	Dec. 16, 1909	19.37	July 17, 1942	19.90
Aug. 16	22.16	Apr. 17, 1942	19.12	24	19.85
June 10, 1908	22.89	24	19.31	31	19.81
July 8	22.75	30	19.46	Aug. 7	19.76
Aug. 20	22.47	May 8	19.63	14	19.71
Nov. 17	21.28	15	19.75	21	19.67
Jan. 12, 1909	20.43	22	19.84	28	19.60
Mar. 2	19.75	29	19.92	Sept. 4	19.55
24	20.16	June 5	19.97	11	19.49
Apr. 24	19.59	12	20.00	18	19.49
June 1	20.25	19	19.73	28	19.35
July 13	21.00	26	20.01	Nov. 2	19.03
Aug. 25	20.66	July 6	20.00	30	18.82
Oct. 6	20.20	10	19.93	Dec. 31	18.71
Nov. 18	19.64				

S3543. New York City Board of Water Supply test well 418. On west side of Bishop's Lane, about 0.9 mile north of Montauk Division of Long Island Railroad at Westhampton station, Westhampton. Driven test well, diameter 2 inches, depth 58.1 feet below measuring point. Measuring point, top of pipe, about 0.4 foot above land surface and 64.44 feet above mean sea level. Water level, Mar. 18, 1907, 46.07 feet below measuring point and 18.37 feet above mean sea level. Measurements from beginning of record, Mar. 18, 1907, to Dec. 16, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1907-09, 1942

Date	Water level	Date	Water level	Date	Water level
Mar. 18, 1907	18.37	June 1, 1909	17.42	June 26, 1942	17.03
Aug. 15	18.95	July 13	17.84	July 6	17.01
Nov. 5	18.12	Aug. 25	17.47	10	16.96
Jan. 6, 1908	17.55	Oct. 6	17.02	17	16.91
Feb. 8	18.01	Nov. 18	16.52	24	16.87
Mar. 5	18.55	Dec. 16	16.03	31	16.82
Apr. 4	19.04	Apr. 14, 1942	16.31	Aug. 7	16.78
May 8	19.44	17	16.39	14	16.73
June 10	19.49	24	16.55	21	16.68
July 8	19.35	30	16.68	28	16.63
Aug. 20	19.02	May 8	16.82	Sept. 4	16.58
Oct. 12	18.36	15	16.90	11	16.52
Nov. 17	17.87	22	16.97	18	16.47
Jan. 12, 1909	17.05	29	17.01	28	16.39
Mar. 2	16.53	June 5	17.04	Nov. 2	16.11
24	16.51	12	17.06	30	15.90
Apr. 24	16.66	19	17.06	Dec. 31	15.34

S3544. New York City Board of Water Supply test well 421. About 200 feet north of Montauk Division of Long Island Railroad and 0.7 mile east of old Riverhead Road, Westhampton. Driven test well, diameter 2 inches, depth 39.3 feet below measuring point. Measuring point, top of pipe, about 0.3 foot above land surface and 25.52 feet above mean sea level. Water level, Mar. 18, 1907, 13.30 feet below measuring point and 12.22 feet above mean sea level. Measurements from beginning of record, Mar. 18, 1907, to Dec. 16, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

Water level, in feet above mean sea level, 1907-09, 1942

Mar. 18, 1907	12.22	Apr. 24, 1909	11.47	July 10, 1942	11.33
Aug. 15	12.42	June 1	12.35	17	11.26
Jan. 6, 1908	11.77	July 13	12.00	24	11.19
Feb. 8	12.53	Aug. 24	11.45	31	11.12
Mar. 5	12.88	Oct. 6	10.83	Aug. 7	11.05
Apr. 4	13.17	Nov. 18	10.47	14	10.95
May 2	13.16	Dec. 16	10.28	21	10.95
June 10	12.96	May 22, 1942	11.71	28	10.89
July 8	12.69	29	11.66	Sept. 4	10.83
Aug. 19	12.15	June 5	11.63	11	10.77
Oct. 12	11.48	12	11.58	18	10.72
Nov. 17	11.10	19	11.52	28	10.64
Jan. 12, 1909	10.69	26	11.45	Nov. 2	10.40
Mar. 2	10.95	July 3	11.41	30	10.27
24	11.36				

S3545. 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. Driven test well, diameter 2 inches, depth 46.0 feet below measuring point. Measuring point, top of pipe, about 0.2 foot above land surface and 56.56 feet above mean sea level. Water level, Mar. 12, 1907, 19.35 feet below measuring point and 37.21 feet above mean sea level. Measurements from beginning of record on Mar. 12, 1907, to Aug. 6, 1909, by New York City Board of Water Supply; measurements thereafter by U. S. Geological Survey.

S3545--Continued.

Water level, in feet above mean sea level, 1907-09, 1942

Date	Water level	Date	Water level	Date	Water level
Mar. 12, 1907	37.21	May 15, 1942	35.48	Aug. 7, 1942	35.62
29	37.49	22	35.46	14	35.71
Apr. 25	37.62	29	35.40	21	35.78
June 7	38.00	June 5	35.36	28	35.96
July 31	37.32	12	35.47	Sept. 4	36.16
Aug. 12, 1908	37.73	19	35.55	11	36.29
6, 1909	35.82	26	35.63	18	36.34
Apr. 14, 1942	35.27	July 6	35.79	28	36.28
17	35.36	10	35.80	Nov. 2	35.89
24	35.45	17	35.80	30	35.55
30	35.49	24	35.77	Dec. 31	35.43
May 8	35.52	31	35.70		

OHIO

By F. H. Klaer, Jr.

PROGRAM OF WORK

An observation-well program intended to cover the greater industrial areas of the State was begun in Ohio during 1942 by the Geological Survey, United States Department of the Interior, in cooperation with the Ohio Engineering Experiment Station of Ohio State University. The purpose of the program was to begin and continue records of water level in areas in which pumpage from wells for industrial and municipal use is large and from the records obtained to determine the general trends of ground-water levels over long periods. The pumping of ground water for use in industry has increased during the last few years with increased industrial activity, and it is believed that adequate information on the trends of water level in the greater industrial areaswill be an aid in future development and should therefore be available.

As part of the program, brief surveys of existing wells were made in Canton, Chillicothe, Columbus, Dayton, Mansfield, Marietta, Marion, Newark, Massillon, Springfield, and Zanesville. Observation wells were located and equipped with water-stage recorders in Columbus, Dayton, Mansfield, Marietta, Massillon, Newark, and Zanesville, and it was planned to establish observation wells in several other industrial cities, also. Lack of personnel, however, compelled curtailment of the program.

In two wells in the city of Canton not included in the cooperative program just outlined, measurements of water level have been made since 1939 under the direction of the Federal Geological Survey. Records for these wells and also records for wells of the Canton Water Department are included in this report.

On March 6, 1942, with the informal cooperation of the Dayton Water Department, city of Dayton, a water-stage recorder was installed by the Federal Geological Survey on an unused well in the Rohrer's Island municipal

well field to obtain a record of the fluctuations of water level caused by artificial recharge of surface water to the ground.

In Butler and Hamilton Counties, where an intensive ground-water investigation was begun in 1938 in cooperation with the Boards of Commissioners of these counties, measurements of water level in observation wells were continued during 1942. For information on the progress of this work, see pages 199-228.

Records of water level listed in this report other than those for wells in Butler and Hamilton Counties are not yet sufficiently long to show any general trends. Only after they have covered several more years will they show significant long-time trends.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Observation wells in Ohio are listed alphabetically by counties and numerically within each county. Complete descriptions are given only for newly added wells. The numbers in parentheses immediately following a well number indicate the water-supply papers in which earlier records of that well are given and the pages on which they appear. An asterisk preceding the number of a water-supply paper indicates that a description of the well is given in the paper so marked. The water level in each well, with the exception of most of the wells in the city of Canton, is expressed in feet below a fixed measuring point. The water level in most of the Canton wells is expressed in feet below land surface.

For more specific information on the water-level measurements listed for wells in Butler and Hamilton Counties, see page 199.

FRANKLIN COUNTY

Columbus

Wells in Columbus obtain water from two sources: (1) The sands and gravels filling a preglacial channel of the ancestral Scioto River at depths of about 100 feet or less and (2) the Columbus and other limestones at depths of 200 to 400 feet. In the central part of the city, large quantities of water are pumped for air conditioning from wells ending in the Columbus limestone. Although several of the air-conditioning systems use return wells for the disposal of the water pumped, there appears to be a large seasonal fluctuation of water level due to increased pumpage during the summer months.

The records obtained in 1942 from an automatic water-stage recorder on an unused well in the Spring Street garage of the Moores & Ross Dairy Co. show that the water level declined nearly 14 feet from April 27, when the recorder was installed, to September 20 and then rose about 8 feet during the period September 21 to December 31. It is believed that the heavy seasonal pumping for air conditioning was sharply reduced during the last two weeks in September.

Columbus 1. Moores & Ross Dairy Co. At Spring Street garage, Ninth and Spring Streets, 2 feet south of north wall and 65 feet east of west wall of garage. Unused drilled well, diameter 10 inches, depth 252 feet. Reported to end in Columbus (?) limestone. Measuring point, top of wooden floor of recorder, 1.75 feet above top of 10-inch casing and 0.5 foot above concrete floor of garage. Automatic water-stage recorder installed Apr. 27, 1942; maintained by Geological Survey.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	102.15	106.52	.....	111.45	113.42	108.92	105.62	106.16
2	.....	102.00	106.83	.....	111.16	113.77	.....	106.66	106.86
3	.....	101.65	107.90	109.84	111.66	113.78	110.44	106.62	106.79
4	.....	103.51	109.93	109.45	111.71	113.54	110.40	106.25	106.65
5	.....	103.70	108.26	108.95	111.94	113.30	109.73	106.45	105.97
6	.....	103.54	107.85	109.12	111.85	.....	109.68	107.33	105.62
7	.....	103.65	107.60	109.48	112.65	.....	.....	106.92	105.76
8	.....	103.76	108.18	109.67	112.78	112.98	.....	106.12	106.26
9	.....	103.70	109.03	110.09	112.65	.....	.....	106.00	106.10
10	.....	102.15	109.70	110.20	112.72	.....	109.92	106.67	106.12
11	.....	102.54	109.92	110.39	112.72	.....	109.33	106.96	105.82
12	.....	102.67	109.83	110.23	112.66	.....	.....	107.00	105.56
13	.....	103.65	109.71	110.97	112.50	112.90	.....	107.37	105.78
14	.....	105.27	109.64	111.36	112.95	112.75	.....	107.25	106.05
15	.....	105.96	108.15	111.39	112.85	113.23	.....	106.15	106.71
16	.....	.....	107.90	111.40	112.10	113.48	.....	105.43	.....
17	.....	.....	107.75	111.73	112.35	113.75	.....	105.87	.....
18	.....	.....	.....	111.95	112.28	.....	.....	106.67	107.11
19	.....	.....	.....	111.95	113.08	113.94	.....	106.65	106.53
20	.....	.....	.....	111.51	113.26	113.94	.....	106.50	105.04
21	.....	.....	.....	111.75	113.52	112.23	.....	106.45	105.50
22	.....	103.55	.....	112.25	113.51	111.64	.....	105.63	106.00
23	.....	103.42	.....	.....	113.40	111.56	.....	105.88	106.82
24	.....	103.37	.....	.....	112.30	111.29	.....	.....	106.50
25	.....	103.94	.....	111.68	112.35	111.05	.....	.....	106.10
26	.....	104.07	107.86	111.60	111.92	110.40	.....	.....	105.85
27	100.07	104.57	.....	111.30	112.35	110.06	.....	106.15	106.20
28	101.31	104.62	.....	111.78	112.86	109.85	.....	106.11	106.85
29	101.40	105.09	.....	111.72	112.74	109.73	.....	105.55	108.83
30	102.04	105.13	.....	111.82	112.86	109.40	.....	105.74	106.54
31	.....	104.53	.....	111.55	113.37	.....	106.24	.....	106.12

HAMILTON COUNTY

(See special report on Butler and Hamilton Counties, pp.199-228.)

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MONTGOMERY COUNTY

Dayton

Part of the municipal water supply of Dayton is pumped from wells on Rohrer's Island, in the Mad River several miles northeast of the city. The island is crossed by several branches of the braided channel of the Mad River, and gates have been constructed to control the flow of water in some of these. During certain times of the year these subchannels are kept filled with water. At other times they are emptied, and the accumulated silt and debris are cleaned out in order to expose the underlying gravels. When water is again allowed to flow in the subchannels, the water levels in wells on the island rise rapidly, as shown by the record of Dayton well 1 during the period April 22-25.

An automatic water-stage recorder was installed on an unused well in this field on March 6, 1942, to obtain a continuous record of the fluctuations of water level, which are dependent primarily on the variations in pumpage from nearby wells and in recharge from the Mad River.

In order to obtain information on ground-water levels in the downtown part of Dayton, an automatic water-stage recorder was installed May 26, 1942, on an unused well at the Fourth Street steam-distribution plant of the Dayton Power & Light Co. It is believed that the fluctuation of the water level in the well is typical of fluctuation of the water levels in wells in the central part of the city. In general, the water levels declined during June and July, remained approximately the same during August and part of September, and rose during the period September 19 to December 31. This seasonal fluctuation appears to be dependent on variations in pumpage during the air-conditioning season.

Dayton 1. City of Dayton water department. Well is in Rohrer's Island well field, 54 feet southwest from well T77. Drilled test well, diameter 6 inches, depth 57 feet. Measuring point, top of 6-inch pipe, 4.0 feet above land surface and 780.06 feet above sea level. Automatic water-stage recorder installed Mar. 6, 1942; maintained by water department, city of Dayton.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	20.90	11.90	10.50	13.15	16.00	17.12	17.54	19.20	.....
2	.....	20.96	12.19	11.05	13.15	15.95	17.67	17.56	19.85	.....
3	.....	21.03	12.34	13.83	12.71	17.13	18.20	18.09	19.85	.....
4	.....	21.06	12.48	14.63	12.85	18.10	17.75	18.09	19.47	.....
5	.....	20.92	12.50	15.25	12.85	17.87	18.04	17.37	19.36	.....
6	12.34	20.83	11.00	16.20	12.79	16.85	18.35	17.83	18.88	.....

Dayton 1--Continued.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
7	12.10	21.34	9.75	16.77	12.72	17.70	18.12	18.05	18.90	19.20
8	11.93	21.36	9.50	17.87	13.10	17.87	18.77	18.12	18.36	19.25
9	14.10	20.80	9.50	17.80	13.18	17.88	19.22	17.02	18.96	19.85
10	14.43	20.80	9.05	18.54	12.43	16.68	19.19	18.26	18.96	19.80
11	15.40	20.30	9.12	18.20	13.91	16.62	19.05	18.33	18.88	20.20
12	16.22	19.77	9.15	15.55	14.09	17.00	18.95	17.73	18.76	.....
13	17.55	19.14	8.60	13.50	13.27	15.30	19.43	17.82	17.64	.....
14	17.45	20.02	8.80	11.47	14.34	13.33	19.47	18.12	17.64	20.46
15	17.56	19.86	9.91	9.32	15.07	13.16	19.26	18.33	18.05	20.53
16	17.90	20.35	10.08	10.48	14.95	13.17	17.72	18.15	17.50	19.56
17	17.55	20.73	11.47	10.55	14.77	13.20	17.50	18.31	18.40	19.02
18	18.37	20.70	13.10	10.45	14.42	13.03	17.92	18.25	18.55	17.15
19	18.34	20.67	14.43	10.64	12.98	13.83	18.37	17.46	19.05	15.95
20	18.96	19.90	15.20	11.76	12.93	14.33	18.48	17.96	.....	15.87
21	19.32	20.40	16.02	12.03	12.67	14.52	18.37	18.06	.....	15.12
22	18.94	20.42	17.45	12.45	13.95	14.40	18.20	18.40	.....	15.33
23	19.55	17.08	17.30	12.75	14.75	14.83	17.94	18.70	.....	15.00
24	19.58	12.83	17.39	13.05	14.86	14.65	18.48	18.73	.....	15.85
25	20.75	10.43	17.03	13.15	13.75	15.37	18.51	18.37	.....	15.93
26	20.55	10.80	14.90	12.27	14.81	15.97	18.23	17.85	.....	15.00
27	20.32	11.66	11.71	12.27	15.07	15.94	18.25	18.14	.....	13.95
28	20.52	11.05	10.60	12.21	15.30	16.72	18.43	18.29	.....	15.36
29	20.52	11.45	10.60	12.21	16.02	17.35	19.08	18.38	.....	16.40
30	20.95	11.80	10.66	11.76	16.38	17.42	18.35	18.02	.....	16.61
31	20.75	.....	10.20	.....	16.37	17.10	.....	18.70	.....	16.25

Dayton 2. Dayton Power & Light Co. At steam-distribution plant, 118 East Fourth Street, in fan room. Unused drilled well, diameter 8 inches, depth 57 feet. Measuring point, top of 8-inch casing, 0.2 foot above concrete floor and 2.5 feet above land surface. Automatic water-stage recorder installed May 27, 1942; maintained by Dayton Power & Light Co.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	28.13	29.39	30.81	30.38	29.86	29.25	28.66
2	.....	28.37	29.40	30.67	30.45	29.80	29.26	28.62
3	.....	28.53	29.46	30.35	30.54	29.78	29.25	28.57
4	.....	28.70	29.40	30.40	30.58	29.67	29.24	29.10
5	.....	28.86	29.24	30.33	30.59	29.62	29.24	29.02
6	.....	29.00	20.32	30.27	30.52	29.63	29.25	28.95
7	.....	29.00	.....	30.26	30.29	29.65	29.23	28.94
8	.....	28.97	.....	30.25	30.33	29.66	29.16	28.92
9	.....	29.05	29.50	30.16	30.41	29.65	29.13	28.94
10	.....	29.13	29.60	30.18	30.42	.....	29.15	28.92
11	.....	29.29	29.69	30.23	30.49	.....	29.11	28.83
12	.....	29.38	29.61	30.29	30.53	29.36	29.10	28.81
13	.....	29.46	29.65	30.36	30.48	29.39	29.10	28.80
14	.....	29.42	29.75	30.40	30.40	29.39	29.12	28.81
15	.....	29.19	29.85	30.42	30.50	29.40	29.02	28.80
16	.....	29.10	29.94	30.35	30.58	29.40	29.07	28.82
17	.....	29.04	20.06	30.29	30.68	29.37	29.11	28.77
18	.....	29.05	30.15	30.35	30.75	29.27	29.14	28.34
19	.....	29.11	30.10	30.36	30.82	29.28	29.16	28.30
20	.....	29.15	30.20	30.39	30.75	29.32	29.18	28.21
21	.....	29.08	30.29	30.44	30.53	29.34	29.17	28.21
22	.....	29.08	30.36	30.48	30.48	29.36	29.04	28.24
23	.....	29.11	30.40	30.40	30.40	29.34	29.00	28.25
24	.....	29.10	30.46	30.24	.....	29.33	29.03	28.29
25	.....	29.12	30.52	30.15	30.30	29.25	28.97	28.20
26	.....	29.16	30.47	30.14	30.21	29.15	28.83	28.12
27	27.85	29.16	30.50	30.16	30.05	29.22	28.76	28.04
28	27.96	29.10	30.60	30.25	29.96	29.26	28.74	27.90

Dayton 2--Continued.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
29	28.09	29.15	30.68	30.32	29.93	29.36	28.67	27.75
30	28.09	29.29	30.86	30.26	29.89	29.38	28.67	27.58
31	27.96	.....	30.90	30.28	.....	29.38	.....	27.40

MUSKINGUM COUNTY

Zanesville

The municipal water supply of Zanesville is obtained from wells along the east bank of the Muskingum River. The water occurs in sand and gravel deposits in the river valley. An automatic water-stage recorder was installed on an unused well, No. 14 of the city field, on May 21, 1942. The water level in this well is affected by the pumping of wells in the municipal field to the extent of about 0.5 foot. During the period May 21 to December 31 it declined nearly 8 feet.

Zanesville 1. City of Zanesville water department. On east bank of Muskingum River, 0.5 mile north of north corporation line. Unused drilled well, diameter 18 inches, depth 54 feet. Measuring point, top of booster, 2.6 feet below top of metal manhole cover at land surface. Automatic water-stage recorder installed May 21, 1942. Maintained by William Koch, of the Zanesville water department.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	18.53	18.75	20.86	21.80	22.30	23.77	24.44
2	.....	18.83	18.63	20.99	21.90	22.45	23.90	24.45
3	.....	18.70	18.70	20.95	21.93	22.60	23.97	24.62
4	.....	18.70	18.57	21.21	22.00	22.55	23.97	24.70
5	.....	18.70	18.39	21.10	22.00	22.65	23.96	24.77
6	.....	18.78	18.55	21.18	21.95	22.90	24.03	24.85
7	.....	18.77	18.55	21.18	21.95	22.90	24.03	24.85
8	.....	18.71	18.50	21.15	22.01	22.97	23.97	25.01
9	.....	18.67	18.53	21.02	22.10	23.07	24.08	25.08
10	.....	18.73	18.50	21.00	22.14	23.09	24.15	25.13
11	.....	18.85	18.60	21.09	22.06	23.02	24.30	25.23
12	.....	18.93	18.45	21.15	22.04	23.12	24.28	25.24
13	.....	19.02	18.55	21.20	21.82	23.18	24.28	25.29
14	.....	19.06	18.65	21.30	21.81	23.18	24.32	25.40
15	.....	18.67	18.70	21.45	21.93	23.20	24.19	25.63
16	.....	18.41	18.93	21.55	22.05	23.23	24.25	25.76
17	.....	18.35	19.20	21.53	22.09	23.24	24.28	25.93
18	.....	18.35	19.40	21.58	22.10	23.06	24.40	26.02
19	.....	18.44	19.68	21.67	22.17	23.18	24.45	26.14
20	.....	18.57	19.94	21.70	22.17	23.27	24.50	26.20
21	18.43	18.38	20.15	21.78	22.02	23.29	24.40	26.33
22	18.37	18.26	20.30	21.76	22.07	23.40	24.17	26.51
23	18.33	18.35	20.33	21.70	22.10	23.53	23.86	26.66
24	18.16	18.37	20.50	21.62	22.45	23.87	23.82	26.79
25	18.17	18.24	20.57	21.66	22.62	23.71	23.77	26.75
26	18.20	18.29	20.66	21.63	22.46	23.72	23.69	26.71
27	18.19	18.45	20.67	21.60	22.38	23.76	23.60	26.65
28	18.25	18.55	20.70	21.63	22.41	23.79	23.60	26.55
29	18.42	18.76	20.66	21.68	22.40	23.78	23.93	26.45
30	18.48	18.85	20.68	21.66	22.34	23.81	24.15	26.20
31	18.51	.....	20.61	21.71	.....	23.82	.....	26.04

RICHLAND COUNTY

Mansfield

The present municipal water supply of Mansfield is obtained from seven wells near the Maxwell Springs pumping station, about 2 miles southwest of the city limits. Five of the wells end in sandstone and two end in sand and gravel. The average pumpage in April 1942 was about 4 million gallons a day. Many industries within the city limits obtain water from wells ending in sand and gravel that fill a preglacial channel running south and southeast through the city. The municipal supply was formerly obtained in part from wells at the North Main Street pumping station, which is now abandoned. An automatic water-stage recorder was installed on an unused well at that plant on May 5, 1942. This well is believed to end in gravel, and its water level is affected by pumped wells in the vicinity. The water-level record is incomplete largely because of faulty recorder operation. The range in fluctuation during 1942 was about 12 feet.

Mansfield 1. City of Mansfield water department. At North Main Street pumping station. On north side of abandoned pumping station, near southeast corner of reservoir. Unused drilled well, diameter 14 inches, depth 129 feet. Measuring point, top of wooden recorder platform, 1.3 feet above land surface, 2.3 feet above top of 14-inch steel casing and 0.3 foot above top of 12-inch tile covering casing. Automatic water-stage recorder installed May 5, 1942; maintained by William Kissell. Recorder out of service May 17, to Oct. 13, 1942.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 5	42.15	Oct. 16	39.70	Nov. 6	35.92	Nov. 27	39.34
6	42.20	17	39.15	7	35.10	28	39.00
7	42.74	18	36.35	13	40.14	Dec. 4	40.65
8	42.96	20	38.77	14	39.70	5	40.37
9	42.00	21	39.59	15	39.26	6	39.38
10	40.38	22	40.64	16	38.66	7	38.88
11	39.75	23	40.49	17	39.74	8	40.57
12	40.98	24	40.32	18	39.67	9	40.83
13	41.34	25	38.50	19	39.94	13	36.20
14	41.40	26	34.23	20	40.03	14	34.38
15	41.25	28	40.14	21	39.63	26	37.44
16	40.95	29	39.63	22	38.39	27	37.51
17	39.78	30	39.64	23	36.75	28	37.85
18	40.43	31	39.26	24	38.83	29	39.19
Oct. 13	39.41	Nov. 1	36.04	25	39.48	30	39.66
14	40.04	5	36.25	26	39.33	31	39.96
15	40.06						

STARK COUNTY

Canton

By A. N. Sayre and F. H. Klaer, Jr.

Nine wells in the city of Canton were under observation in 1942. Weekly measurements of water level in seven of these were made by the Canton Water Department; in one, the Republic Steel Corporation's test well, measurements were made by E. V. Beftoulides; and on one, an unused well at the Ohio Power Co.'s steam plant, an automatic water-stage recorder was maintained by C. R. Phillips under the direction of the Geological Survey. All the wells end in the outwash gravel that underlies a large part of the city.

The water levels in the wells of the Northeast Park well field of the city of Canton, in general, rose 1 to 4 feet, largely because of decreased pumpage from this field and the more nearly normal precipitation in 1942 than in 1941.

The pumpage from the municipal well fields was nearly 16 percent greater during 1942 than during 1940 and about 10 percent greater than during 1941. The average daily pumpage from these fields was 13.464 million gallons a day.

Monthly pumpage, in gallons, from wells supplying the city of Canton, 1942

Month	Pumpage	Month	Pumpage	Month	Pumpage
Jan.	382,481,360	May	415,543,040	Sept.	427,728,080
Feb.	334,110,080	June	439,354,240	Oct.	433,005,760
Mar.	374,364,840	July	462,593,600	Nov.	397,816,400
Apr.	381,489,920	Aug.	464,848,640	Dec.	401,079,480

The water level in the Republic Steel Corporation's test well, which had declined each year since it was first observed, continued to decline during 1942. During the period January to April, however, it rose nearly 1 foot, but it declined nearly 4 feet during the period May to December. The water level in December 1942 was nearly 15 feet lower than in December 1939, about 10½ feet lower than in December 1940, and nearly 3 feet lower than in December 1941.

The water level in the Ohio Power Co.'s well declined almost continuously a total of 5 feet during the year. In December 1942 it was nearly 17 feet lower than in December 1939, nearly 12 feet lower than in December 1940, and nearly 5 feet lower than in December 1941.

The measurements given in this report of water levels in wells observed by the Canton Water Department were made on the Monday nearest the end of each month. All measurements made under the direction of the Geological Survey are also given.

2 (*886, p. 589; 906, p. 210; 936, p. 236). City of Canton. Northeast Park well field. Measurements discontinued.

3 (*886, p. 589; *906, p. 210; *936, p. 236). City of Canton. In Northeast Park well field.

Water level, in feet below land surface, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	45	May 4	42	Aug. 3	45	Nov. 2	42
Feb. 2	45	June 1	43	31	42	30	43
Mar. 2	45	29	40	Sept.28	41	Dec. 28	41
30	44						

4 (*886, p. 589; 906, p. 210; 936, p. 236). City of Canton. In Northeast Park well field. Measurements discontinued.

5 (*886, p. 589; *906, p. 210; *936, p. 236). City of Canton. Northeast Park well field.

Water level, in feet below land surface, 1942

Jan. 1	46	May 4	43	Aug. 3	46	Nov. 2	44
Feb. 2	46	June 1	45	31	42	30	44
Mar. 2	45	29	40	Sept.28	41	Dec. 28	43
30	44						

8 (*886, p. 590; 906, p. 210; 936, p. 236). City of Canton. In Northeast Park well field. Measurements discontinued.

9 (*886, p. 590; *906, p. 210; *936, p. 236). City of Canton. In Northeast Park well field.

Water level, in feet below land surface, 1942

Jan. 1	44	May 4	42	Aug. 3	44	Nov. 2	40
Feb. 2	44	June 1	41	31	41	30	42
Mar. 2	43	29	38	Sept.28	41	Dec. 28	40
30	43						

10 (*886, p. 590; 906, p. 210; 936, p. 236). City of Canton. In Northeast Park well field.

Water level, in feet below land surface, 1942

Jan. 1	45	May 4	43	Aug. 3	47	Nov. 2	44
Feb. 2	45	June 1	45	31	43	30	44
Mar. 2	45	29	43	Sept.28	37	Dec. 28	43
30	44						

11 (*886, p. 590; 906, p. 210; 936, p. 236). City of Canton. In Northeast Park well field.

Water level, in feet below land surface, 1942

Jan. 1	40	May 4	38	Aug. 3	40	Nov. 2	37
Feb. 2	40	June 1	36	31	36	30	38
Mar. 2	40	29	35	Sept.28	37	Dec. 28	37
30	39						

12 (*936, p. 236). Goughnour well, in area northeast of Northeast Park well field.

Water level, in feet below land surface, 1942

Jan. 1	21.75	Mar. 30	17.75	June 29	17.0	Sept.28	19.92
Feb. 2	22.42	May 4	16.67	Aug. 3	18.25	Nov. 2	20.58
Mar. 2	20.33	June 1	16.67	31	19.50	30	20.92

13. (*936, p. 237). Harrisburg well.

Water level, in feet below land surface, 1942

Date		Water level	Date		Water level	Date		Water level	Date		Water level
Jan.	1	44.33	May	4	41.58	Aug.	3	43.50	Nov.	2	40.83
Feb.	2	44.17	June	1	41.33		31	40.25		30	41.67
Mar.	2	43.42		29	38.83	Sept.	28	38.75	Dec.	28	39.83
	30	42.33									

14 (*936, p. 237). Ninth Street well. City of Canton. In City Park, near West Branch Nimishillen Creek and Ninth Street.

Water level, in feet below land surface, 1942

Jan.	1	19	May	4	21	Aug.	3	23	Nov.	2	25
Feb.	2	22	June	1	22		31	23		30	27
Mar.	2	21		29	22	Sept.	28	23	Dec.	28	28
	30	21									

20 (*886, p. 590; 906, p. 210; 936, p. 237). Republic Steel Corporation test well. At Lippert Street and Warner Road N.E.

Water level, in feet below measuring point, 1942

Jan.	7	46.75	Apr.	7	46.46	July	7	46.50	Oct.	6	48.50
	14	46.83		14	46.17		14	46.58		13	48.62
	21	46.87		21	46.17		21	46.46		20	48.85
	27	46.89		29	46.04		28	46.75		27	49.04
Feb.	4	46.92	May	5	46.12	Aug.	4	46.83	Nov.	3	49.17
	11	46.79		12	46.17		10	47.00		10	49.73
	18	46.64		18	46.08		18	47.08		17	49.50
	24	46.67		26	46.12		26	47.21		24	49.67
Mar.	5	46.75	June	2	46.12	Sept.	1	47.42	Dec.	1	49.71
	12	46.67		8	46.17		8	47.58		8	49.81
	18	46.39		18	46.50		15	47.87		15	49.89
	25	46.42		23	46.29		22	48.04		23	50.00
	31	46.42		30	46.39		29	48.17		29	49.83

21 (*886, p. 590; 906, p. 211; 936, p. 237). Ohio Power Co. On Second Street at Savannah Street, S.E.

Water level, in feet below measuring point, 1942

Jan.	5	22.34	Apr.	6	23.05	July	6	23.80	Oct.	5	26.31
	12	22.47		13	22.99		13	23.98		12	26.40
	19	22.54		20	22.94		20	24.09		19	26.33
	26	22.62		27	22.90		28	24.20		26	26.23
Feb.	2	22.71	May	5	23.02	Aug.	3	24.30	Nov.	2	26.38
	9	22.73		11	23.05		10	24.50		9	26.60
	16	22.81		18	23.05		17	24.70		16	26.78
	23	22.77		25	23.01		24	25.00		23	26.97
Mar.	2	22.85	June	1	23.09		31	25.30		30	27.09
	9	22.94		8	23.20	Sept.	7	25.50	Dec.	7	26.94
	16	22.96		15	23.24		14	25.72		14	27.06
	23	22.97		22	23.35		21	26.00		21	27.20
	30	23.01		29	23.43		28	26.13		28	27.31

Massillon

Large quantities of ground water are pumped for industrial use and municipal supply from the sands and gravels filling the interglacial valley of the Tuscarawas River at Massillon. In addition, some water is taken from rock wells penetrating the Massillon sandstone. In June 1942 an automatic water-stage recorder was installed on an unused well in the basement of the main office building of the Republic Steel Corporation, in the southern part of Massillon. This well is believed to end in gravel.

The record of its water level shows that the well is apparently unaffected by the pumping of any individual well in the vicinity but is probably affected by the combined pumping of rather distant wells. In 1942 the water level fluctuated as follows: It declined about 2.25 feet during the period June 19 to December 25 and then rose about 0.5 foot during the period December 26-31.

Massillon 1. Republic Steel Corporation. In basement of main office building of corporation, on Oberlin Avenue. Unused drilled well, diameter 6 inches, depth 48 feet. Measuring point, top of concrete base, 0.45 foot above concrete floor and 6.0 feet below land surface. Automatic water-stage recorder installed June 23, 1942; maintained by S. J. Hoffee, of the Republic Steel Corporation.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	.....	39.96	40.70	41.65	42.40	42.52
2	.....	39.85	39.95	40.71	41.65	42.37	42.57
3	.....	39.86	39.97	40.75	41.66	42.43	42.60
4	.....	39.86	40.00	40.76	41.65	42.44	42.60
5	.....	39.85	40.05	40.79	41.63	42.45	42.61
6	.....	39.81	40.15	40.80	41.65	42.48	42.60
7	.....	39.82	40.19	40.81	41.73	42.50	42.59
8	.....	39.85	40.24	40.84	41.80	42.49	42.63
9	.....	39.85	40.25	40.88	41.80	42.50	42.65
10	.....	39.85	40.28	40.90	41.80	42.52	42.67
11	.....	39.85	40.28	40.94	41.81	42.52	42.69
12	.....	39.89	40.30	40.98	41.81	42.51	42.70
13	.....	39.87	40.34	41.00	41.86	42.54	42.68
14	.....	39.90	40.38	41.05	41.91	42.54	42.70
15	.....	39.87	40.39	41.13	41.95	42.50	42.74
16	.....	39.78	40.40	41.17	41.97	42.46	42.77
17	.....	39.81	40.40	41.20	41.98	42.51	42.80
18	.....	39.83	40.44	41.28	41.99	42.52	42.87
19	.....	39.84	40.45	41.35	41.99	42.52	42.88
20	.....	39.84	40.49	41.36	42.03	42.54	42.87
21	.....	39.86	40.51	41.40	42.10	42.55	42.90
22	.....	39.87	.....	41.45	42.17	42.52	42.93
23	.....	39.87	.....	41.48	42.23	42.47	42.95
24	39.75	39.90	.....	41.52	42.25	42.48	43.00
25	39.76	39.91	.....	41.56	42.26	42.53	42.98
26	39.77	39.91	.....	41.57	42.25	42.56	42.91
27	39.79	39.91	40.66	41.58	42.31	42.58	42.85
28	39.79	39.91	40.67	41.59	42.36	42.58	42.78
29	39.80	39.93	40.67	41.61	42.40	42.55	42.75
30	39.80	39.95	40.68	41.64	42.40	42.51	42.68
31	.....	39.96	40.69	.....	42.41	.....	42.55

WASHINGTON COUNTY

Marietta

The city of Marietta, which is situated at the mouth of the Muskingum River, is mainly a residential and farm community, although several industries have located plants there. The municipal water supply is obtained from three wells in the gravel fill of the valley of the Muskingum River at the north end of the city. In May 1942, an automatic water-stage recorder was installed on an unused well at the rear of the Marietta

Osteopathic Clinic, in the central part of the city, to obtain a continuous record of water level in the sands and gravels in the valleys of the Muskingum and Ohio Rivers. It was found that the water level in the observation well was affected by pumping from a nearby air-conditioning well. The record obtained is incomplete and therefore not adequate to show the effect on the water level of local precipitation or of high stages of the Muskingum or Ohio River.

Marietta 1. Marietta Osteopathic Clinic. At Fourth and Putnam Streets. On southwest side of clinic, at rear. Unused drilled well, diameter 6 inches, depth 42 feet. Measuring point, top of 6-inch pipe, 1.2 feet above land surface. Automatic water-stage recorder installed May 18, 1942; maintained by J. R. Bartlett and T. P. Long.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 18	29.75	June 10	30.42	Sept. 11	31.50	Oct. 4	31.56
19	29.66	11	30.56	12	31.73	5	31.57
20	29.49	12	30.59	13	31.70	6	31.37
21	29.56	13	30.66	14	31.70	7	31.38
22	29.53	14	30.62	15	31.67	8	31.39
23	29.69	15	30.32	16	31.75	9	31.37
24	29.45	16	30.28	17	31.73	10	31.39
25	29.35	17	30.26	18	31.75	11	31.37
26	29.23	18	30.55	19	31.80	Nov. 30	30.52
27	29.26	19	30.60	20	31.60	Dec. 1	30.56
28	29.66	20	30.67	21	31.50	2	30.55
29	29.81	21	30.75	22	31.41	3	30.45
30	29.97	22	30.71	23	31.40	4	30.32
31	30.05	Sept. 1	31.46	24	31.43	5	30.24
June 1	30.06	2	31.75	25	31.40	6	30.25
2	30.14	3	31.76	26	31.36	7	30.33
3	30.17	4	31.62	27	31.40	8	30.33
4	30.24	5	31.55	28	31.37	9	30.37
5	30.24	6	31.72	29	31.37	10	30.38
6	30.30	7	31.77	30	31.33	11	30.40
7	30.34	8	31.78	Oct. 1	31.31	12	30.44
8	30.35	9	31.85	2	31.30	13	30.49
9	30.38	10	31.77	3	31.31	14	30.49

BUTLER AND HAMILTON COUNTIES

The observation-well program in Butler and Hamilton Counties, Ohio, begun in June 1938, was continued during 1942 by the Geological Survey, United States Department of the Interior, in cooperation with the Boards of Commissioners of Butler and Hamilton Counties. The program has been continued in order to check the results and conclusions of the more detailed investigation of ground-water conditions in these two counties completed in June 1941.

During the last half of 1941 and the first half of 1942, the engineering firm of Shoecraft, Drury & McNamee, of Ann Arbor, Mich., was employed by the Mill Creek Valley Conservation Association to make a detailed study of the buried valleys of Butler and Hamilton Counties and to prepare engineering plans for the development of a supplemental water supply. In connection with the work of this firm, 11 test wells were drilled in the Little Miami Valley near Linwood and Newtown and 11 were drilled in the Big Miami Valley south of Hamilton. Records of water-level measurements in these wells--Nos. B1 to B11--are included in this report.

A project consisting of the development of a well field in the Big Miami Valley several miles south of Hamilton and the construction of a pipe line and storage reservoir was begun in June 1942 by the War Public Works Division of the Federal Works Agency, based on the engineering plans of Alvord, Burdick & Howson, consulting engineers, of Chicago, Ill. The Federal Geological Survey was asked to make several detailed pumping tests to determine certain hydrologic characteristics of the area and to draw up and supervise a program of test drilling and observation wells designed to show any effect of the new well field on the existing water supplies in the Hamilton area. In connection with this work, 27 test wells were planned and were in course of being drilled in December 1942.

At the end of 1942, water levels were being measured in 75 wells at weekly intervals and in 15 wells at monthly intervals. During the year about 5,000 measurements of water level were made by H. F. Pittman, M. S. Cook, B. Clegg, J. J. Higgins, J. J. Reese, R. G. Kazmann, and F. H. Klaer, Jr., for the Geological Survey. Measurements of water level in 12 wells were discontinued and measurements in 25 new wells were begun during the year.

Automatic water-stage recorders were in operation on observation wells many of which are in areas of heavy pumping, where fluctuations of water level are so great that individual tape measurements made at weekly intervals are of little value. Recorders were maintained throughout the year on 8 wells and for shorter periods on 5 other wells. At the end of the year, recorders were in operation on 13 wells in Butler and Hamilton Counties.

Precipitation in southwestern Ohio during 1942 was several inches above normal. A long period of generally deficient rainfall, beginning in July 1940, continued throughout 1941 and ended in April 1942. The cumulative deficiency in rainfall for this period was nearly 20 inches. Rainfall from April to December 1942 was generally above normal, and the total excess during this period was about 8 inches. Although the first 6 months of the year was relatively dry, conditions were favorable for allowing recharge to the ground-water reservoir. During the last 6 months of the year, during which precipitation was in general above normal, the rainfall was sufficient to keep water levels in most wells from dropping to the low stages of 1941.

Pumpage from wells in the Mill Creek and Miami Valleys during 1942 is believed to have been greater than in former years, largely because of the increased industrial activity in connection with the war effort. It is estimated that the pumpage was 10 to 15 percent greater during 1942 than during 1941. The total pumpage from the Mill Creek Valley and the Norwood trough during 1942 was estimated to be nearly 21 million gallons of water a day. The increase in the rate of pumpage from wells in the Middletown and Hamilton areas is believed to be similar.

In the Lockland area, where most of the water pumped is for industrial use, the average daily pumpage from wells increased from an estimated 7,941,000 gallons a day during 1941 to an estimated 8,760,000 gallons a day, or 10.3 percent. This increase is due primarily to increased pumpage at a large war plant. The total pumpage for the other large users of well water in this area was somewhat smaller during 1942 than during 1941.

Water levels in January 1942, in general, were low, although in most wells in areas unaffected by heavy withdrawal of ground water they were higher than the lowest levels reached during 1941. The rise in water levels which began in December 1941 was due mainly to the more normal precipitation.

Water levels in the upper Mill Creek Valley and in the Miami Valley continued to rise generally until April, and in some wells until July and August. Above normal precipitation during the period April to August allowed the water levels in some wells to reach their highest levels since the spring of 1940.

In the Middletown area, the water levels in the shallow water-bearing beds, which declined slightly or rose slowly during January, rose 2 to 6 feet during February, and again rose rapidly an additional 2 to 4 feet in April. They declined rapidly in May, fluctuated within narrow limits during June and July, and then generally declined until late in November. The lowest levels reached in November 1942 were 2 to 4 feet higher than the lowest levels reached during 1941.

In the Hamilton area, water levels rose in most wells during the period February to April and generally declined during the rest of the year. The lowest levels reached during the fall of 1942, however, were, in general, slightly higher than those reached during December 1941 and January 1942.

In the Miami Valley south of Hamilton and in the divide area between the Mill Creek Valley and the Miami Valley, the lowest levels reached during 1942 were 1 to 3 feet higher than those reached during 1941.

In the Mill Creek Valley south of the Hamilton County line, water levels in wells in the deeper water-bearing beds declined in general during the entire year, although between the Glendale-Milford road and Crescentville their rate of decline was less during the 3-month period February to April than during the remainder of the year. The continued decline was probably caused mainly by the increase in pumpage in the Lockland area. The lowest stages reached by the water levels during 1942 were 2 to 18 feet lower than the lowest reached during 1941.

In the lower Mill Creek Valley, in the stretch from Carthage to Saint Bernard, water levels continued to decline during 1942 at approximately the same rate as during previous years--about 3 feet a year. Changes in the distribution of pumpage within several large well fields caused variations in the rates of decline in several observation wells, but these are of only local importance.

The general trend of water levels in many wells in the buried valleys of Butler and Hamilton Counties during the 4-year period 1938-42 has been generally downward. However, in the Middletown area, the water level in the shallow water-bearing beds was approximately 1 to 2 feet higher at the end of 1942 than at the end of 1938. In the deeper water-bearing beds, water levels continued to decline in general throughout the period, but data are not available to show the average rate of decline in the Middletown area.

In the Hamilton area, the water levels in the deeper water-bearing beds in general declined from 1939 to August or September 1941 and rose slightly during 1942. The lowest level reached during the period 1939-42 was reached during the summer of 1941. Water levels in December 1942 were about 1 foot above the lowest levels of 1941.

In the Miami Valley south of Hamilton and in the Mill Creek Valley, water levels in general followed the same general trend, reaching their lowest recorded stages for the period 1938-42 in 1941 and showing a net gain of several feet at the end of 1942 over the low stages of 1941.

In the Mill Creek Valley south of Sharon Avenue, where water levels are greatly affected by the heavy withdrawal of ground water for industrial and municipal use, the general trend of water levels up to 1942 was similar to that in other areas. The rates of decline, however, were somewhat greater in 1942, and in most wells no rise in water levels occurred. This condition was due primarily to the increasing pumpage for war industries.

In the Ivorydale area, the same 4-year period shows a steady decline in water levels. No fluctuations of water level indicative of a recharge or replenishment can be identified, and the downward trend has been very consistent.

WELL DESCRIPTIONS AND WATER-LEVEL MEASUREMENTS

Observation wells in Butler and Hamilton Counties are listed by their numbers, based on geographic location. In general, the wells are grouped by townships, beginning in the northern part of Butler County. Complete descriptions are given for only newly added wells. The numbers in parentheses immediately following a well number indicate 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

that paper. For wells, the water level is expressed in feet below a fixed measuring point; for gravel pits it is expressed in feet above the zero reading of staff gages. For wells on which automatic water-stage recorders have been in operation, the lowest water level reached each day, as determined from recorder charts, is given.

Butler County

12-1 (*887, p. 565; 906, p. 177; 936, p. 207). Village of Trenton. 2.3 miles west of Excello. Municipal water-supply well. In Trenton.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	17.45	May 12	15.15	Sept. 8	15.95	Nov. 17	16.75
Mar. 17	15.73	June 16	15.31	Oct. 20	16.52	Dec. 15	16.48
Apr. 14	14.63	July 21	15.74				

12-2. Village of Trenton. In Trenton, 2.3 miles west of Excello. New drilled municipal water-supply well, diameter 8 inches, depth 89 feet. Measuring point, top of casing, 4.8 feet below land surface. Water levels, in feet below measuring point, 1942: Sept. 8, 34.30; Oct. 20, 34.95; Nov. 17, 35.15.

25-5 (*936, p. 207). City of Middletown. Boiler pit well, at municipal water plant. On Columbia Avenue, in Middletown.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	38.20	38.75	33.33	33.06	31.41	33.79	34.15	35.05	34.90	35.40	38.00	37.28
2	38.13	38.78	33.43	33.10	31.65	34.00	34.24	34.80	35.00	35.39	38.74	37.40
3	38.08	38.62	33.53	33.11	31.76	34.27	34.29	34.31	35.00	35.41	38.08	37.50
4	38.06	38.57	33.60	33.08	31.92	34.33	34.20	34.02	34.96	35.35	38.25	37.62
5	37.85	38.75	33.79	32.55	32.12	34.42	33.70	33.87	34.90	35.35	38.34	37.67
6	37.57	38.80	33.94	32.55	32.25	34.42	33.55	33.87	34.84	35.50	38.27	37.60
7	37.51	38.75	34.12	32.62	32.40	34.33	33.60	33.89	34.58	36.07	38.05	37.46
8	37.48	38.39	33.22	32.55	32.61	34.35	33.74	33.89	34.67	36.30	37.94	37.35
9	37.52	36.92	34.39	32.42	32.67	34.29	33.61	33.70	34.89	36.42	37.71	37.33
10	37.55	35.74	34.49	32.35	32.57	34.21	33.56	33.78	34.95	36.68	37.54	37.37
11	37.48	35.18	34.50	31.80	32.83	34.00	33.51	33.85	35.00	36.70	37.90	37.48
12	37.36	34.81	34.40	30.00	33.10	34.10	33.32	34.00	34.95	36.37	38.11	37.50
13	37.54	34.64	34.20	28.97	33.43	34.12	33.28	34.10	35.03	36.80	38.28	37.35
14	37.77	34.52	34.10	28.64	33.53	33.81	33.52	34.17	35.10	37.17	38.32	37.25
15	37.85	34.42	33.98	28.90	33.60	33.82	33.62	34.25	35.25	37.39	37.87	37.39
16	37.88	34.41	33.72	29.25	33.66	33.70	33.76	34.56	35.37	37.60	37.87	37.52
17	37.90	34.45	33.70	29.48	33.65	33.69	33.82	34.62	35.51	37.74	38.19	37.57
18	37.94	34.38	33.70	29.68	33.46	33.70	33.79	34.55	35.57	37.56	38.33	37.61
19	37.97	33.98	33.55	29.76	33.48	33.77	33.79	34.49	35.65	37.77	38.34	37.65
20	38.06	33.38	33.36	29.71	33.54	33.76	33.93	34.55	35.50	37.90	38.20	37.67
21	38.17	33.26	33.27	30.02	33.50	33.41	34.10	34.65	35.57	37.93	38.17	37.51
22	38.31	33.05	33.03	30.20	33.39	33.53	34.24	34.47	35.50	37.90	38.03	37.53
23	38.48	32.96	32.87	30.41	33.41	33.51	34.35	34.20	35.59	38.05	37.80	37.52
24	38.55	33.02	32.72	30.53	33.40	33.55	34.53	34.15	35.60	38.09	37.96	37.60
25	38.66	33.06	32.71	30.60	33.44	33.53	34.60	34.26	35.44	37.80	37.95	37.45
26	38.71	33.04	32.80	30.73	33.55	33.70	34.67	34.34	35.46	38.14	37.84	37.25
27	38.72	33.12	32.90	30.83	33.63	33.67	34.30	34.40	35.40	38.23	37.85	37.03
28	38.65	33.22	32.96	30.95	33.66	33.54	34.57	34.49	35.55	38.35	37.75	36.68
29	38.69	.....	33.10	31.04	33.39	33.65	34.72	34.53	35.58	38.45	37.68	36.47
30	38.81	.....	33.08	31.16	33.58	34.05	34.81	34.60	35.54	38.50	37.46	36.04
31	38.71	.....	33.07	.....	33.71	.....	35.02	34.75	.....	38.46	.....	35.41

Pit J (*845, p. 373; *886, pp. 560-561; 906,p.180;936,pp.207-208).Moorma Sand & Gravel Co. Gravel pit, on Columbia Avenue, in Middletown. Zero of staff gage, 618.0 feet above sea level.

Water level, in feet, with reference to zero of staff gage, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	1.02	Apr. 7	4.44	July 7	3.35	Oct. 13	1.04
13	1.02	14	8.42	14	3.31	20	.54
20	.70	21	7.47	21	3.02	27	.18
27	.44	28	6.19	28	2.63	Nov. 3	.08
Feb. 3	.25	May 5	5.02	Aug. 4	3.12	10	.16
10	2.94	12	4.31	11	3.46	17	.15
17	3.63	19	4.00	18	3.14	24	.58
24	4.80	26	3.93	25	2.90	Dec. 1	.98
Mar. 3	4.25	June 2	3.35	Sept. 1	2.70	8	1.02
10	3.44	9	3.15	8	2.56	15	1.02
17	4.19	16	3.59	14	2.30	22	3.20
24	4.84	23	3.64	22	2.02	29	1.58
31	4.62	30	3.44	29	1.86		

Pit L (*886, pp. 560-561; 906, p. 180; *936, p. 208). Smith Farm gravel pit. Abandoned pit, 0.3 mile north of Middletown. Zero of staff gage, 623.4 feet above sea level.

Water level, in feet, with reference to zero of staff gage, 1942

Jan. 6	-2.13	Apr. 21	2.18	July 14	0.66	Oct. 6	-0.30
13	-1.85	28	2.41	21	.56	13	-.45
20	-1.68	May 5	2.11	28	.34	20	-.65
27	-1.67	12	1.75	Aug. 4	.20	27	-.86
Feb. 3	-1.60	19	1.40	11	.32	Nov. 3	.....
10	-1.55	26	1.16	18	.38	10	-1.07
Mar. 10	.30	June 2	.90	25	.35	17	-1.18
17	.34	9	.63	Sept. 1	.30	Dec. 1	-1.04
24	.54	16	.54	8	.27	8	-1.80
31	.81	23	.60	15	.10	15	-.70
Apr. 7	.91	30	.58	22	-.07	22	-.70
14	1.22	July 7	.76	29	-.20	29	-.70

29-1 (*886, pp. 565-566; 906, p. 178; 936, p. 208). Young Men's Christian Association. At Manchester Avenue and Broad Street, in Middletown.

Water level, in feet below measuring point, 1942

Jan. 6	26.12	Apr. 7	19.90	July 7	20.52	Oct. 6	22.46
13	25.60	14	16.93	14	20.25	13	23.38
20	25.88	21	17.40	21	20.69	20	24.40
27	26.39	28	17.99	28	21.34	27	24.78
Feb. 3	26.57	May 5	18.79	Aug. 4	21.08	Nov. 3	24.90
10	25.48	12	19.53	11	20.68	10	25.07
17	25.20	19	20.21	18	21.41	17	25.18
24	20.85	26	20.22	25	21.19	24	25.35
Mar. 3	20.98	June 2	20.57	Sept. 1	21.57	Dec. 1	24.85
10	21.68	9	21.20	8	21.55	8	24.90
17	21.22	16	20.73	14	22.07	15	24.85
24	20.32	23	20.59	22	22.86	22	25.15
31	20.30	30	20.64	29	22.71	29	24.13

29-2. Young Men's Christian Association. At Manchester Avenue and Broad Street, in Middletown. Drilled supply well, diameter 12 inches, depth 88 feet. Measuring point, top of 12-inch casing, 15 feet below land surface. Elevation of measuring point, 636.6 feet above sea level.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 13	32.44	Nov. 17	32.44	Dec. 8	32.45	Dec. 22	33.43
20	32.47	24	33.42	15	33.31	29	31.87
Nov. 10	32.45	Dec. 1	32.45				

33-1 (*886, p. 569; 906, p. 178; 936, p. 208). Wardlow-Thomas Paper Co. At Vanderveer and Fifth Avenues, in Middletown.

Water level, in feet below measuring point, 1942

Apr. 14	43.90	June 16	42.83	Aug. 25	42.38	Oct. 27	43.80
21	42.73	23	43.26	Sept. 1	42.63	Nov. 10	44.35
28	42.20	30	43.45	8	42.75	17	44.55
May 5	42.37	July 14	43.57	15	43.42	24	44.05
12	42.34	21	43.78	22	43.70	Dec. 1	43.38
19	42.52	28	43.26	29	43.56	8	43.13
26	42.75	Aug. 4	42.86	Oct. 6	43.55	15	43.63
June 2	42.43	11	42.00	13	43.53	22	44.26
9	42.37	18	41.63	20	43.69	29	43.74

36-13 (*845, p. 375; 886, pp. 568-569; 906, p. 179; 936, pp. 209-210). American Rolling Mill Co. well 13. At East End of company's plant, in Middletown.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	126.40	128.12	127.47	128.30	129.48	128.87
2	126.92	127.59	127.01	128.54	128.90	129.21
3	127.18	127.68	127.08	128.69	128.07	129.37
4	126.82	127.73	128.11	128.48	127.94	129.43
5	127.12	128.01	128.52	127.62	128.03	129.89
6	127.50	127.92	128.84	128.40	128.20	129.29
7	127.62	127.83	128.75	129.00	128.27	128.52
8	127.50	127.50	127.89	129.14	128.95	129.03
9	127.38	127.31	128.02	129.22	128.35	129.26
10	127.42	127.90	127.34	129.52	127.76	129.41
11	127.41	128.24	127.49	129.40	127.63	129.76
12	127.58	128.83	127.61	128.68	.....	129.99
13	127.64	128.94	127.74	128.23	.....	129.30
14	127.84	128.15	127.81	128.33	.....	128.38
15	128.10	127.98	127.60	129.48	.....	127.98
16	128.09	128.03	127.30	129.57	.....	128.72
17	127.58	127.56	127.50	129.84	.....	128.85
18	127.13	127.62	127.62	129.25	.....	129.11
19	127.11	127.67	127.75	128.16	128.55	129.26
20	127.30	127.77	128.01	128.40	128.91	128.77
21	127.89	127.63	127.82	128.88	129.11	127.85
22	128.33	127.04	127.57	129.08	129.41	127.46
23	128.60	127.47	127.32	129.45	128.95	127.23
24	128.68	127.07	127.49	129.62	128.21	127.21
25	127.20	127.18	127.61	129.13	128.33	127.23
26	127.68	127.37	127.78	128.65	128.38	127.24
27	127.89	128.38	127.99	128.30	128.94	127.10
28	128.55	128.20	127.99	128.41	129.24	126.35
29	128.79	.....	127.82	128.55	129.43	126.12
30	128.86	.....	128.12	129.20	128.77	126.22
31	128.60	.....	128.18	.....	128.32	.....

36-13. American Rolling Mill Co. well 13--Continued.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	126.34	124.20	122.36	121.05	119.88	118.15
2	126.49	123.72	122.10	120.70	119.80	118.37
3	126.50	123.73	122.25	120.70	121.00	118.41
4	126.16	123.95	122.37	121.40	119.94	118.65
5	125.50	124.10	122.16	120.20	119.83	118.64
6	125.42	124.24	121.46	120.18	120.69	118.14
7	125.60	124.30	121.50	120.40	119.63	118.22
8	125.80	124.41	121.60	120.50	119.27	118.23
9	125.80	123.73	121.78	120.62	118.93	119.52
10	125.83	123.16	121.96	120.68	119.27	118.68
11	125.83	123.31	122.06	120.95	119.11	118.69
12	125.80	123.50	121.82	120.44	119.97	118.69
13	124.97	123.70	121.40	120.53	120.06	118.56
14	124.52	123.77	121.40	120.63	119.50	118.38
15	124.70	123.73	121.50	121.52	118.15	118.35
16	124.89	123.25	121.67	120.95	119.26	118.54
17	125.04	122.83	122.72	120.46	118.48	118.54
18	125.02	122.80	122.65	119.89	118.55	118.80
19	124.60	122.82	121.25	120.18	118.70	118.80
20	124.52	122.96	120.75	120.40	118.84	118.35
21	124.92	123.07	120.50	120.64	118.28	118.43
22	124.90	123.00	120.80	120.96	117.66	118.64
23	125.00	122.41	120.90	121.07	117.87	118.80
24	125.11	121.92	121.17	120.85	118.07	118.88
25	125.10	121.87	121.26	119.85	118.10	118.80
26	124.30	122.14	121.24	119.96	118.45	118.37
27	123.70	122.26	120.60	120.06	118.54	118.60
28	123.85	122.33	120.33	120.20	119.60	118.89
29	124.13	122.30	120.87	120.27	118.32	119.20
30	124.25	121.53	120.40	120.31	118.05	120.65
31	124.35	121.66	.....	120.76	.....	119.91

Pit P (*906, p. 180; 936, p. 210). South Middletown Sand & Gravel Co. Gravel pit, 0.1 mile west of 2100 South Main Street, Middletown. Zero of staff gage, 616.6 feet above sea level.

Water level, in feet, with reference to zero of staff gage, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	1.60	Apr. 28	4.81	July 21	1.62	Oct. 13	0.68
13	1.10	May 5	3.76	28	1.39	20	-.50
20	.72	12	3.21	Aug. 4	3.00	27	.34
27	.47	19	3.24	11	2.54	Nov. 3	.26
Feb. 2	.25	26	2.82	18	2.10	10	.26
10	6.12	June 2	2.30	25	2.10	17	.22
Mar. 10	3.33	9	2.52	Sept. 1	1.83	24	.92
17	4.28	16	2.94	8	1.73	Dec. 1	1.10
24	4.31	23	2.80	14	1.66	8	1.02
31	3.62	30	2.38	22	1.32	15	.95
Apr. 7	3.35	July 7	2.04	29	1.08	22	.80
14	8.51	14	1.90	Oct. 6	.90	29	4.10
21	6.20						

85-7 (*886, pp. 567-568; 906, p. 181; 936, pp. 210-211). City of Hamilton. West test well in new well field, 0.9 mile north of Hamilton on U. S. Highway 127, in Fairfield Township.

85-7. City of Hamilton--Continued.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	27.95	27.83	25.27	25.66	25.74	27.89	28.02	28.04	29.10	28.08	29.10	27.15
2	27.70	28.57	26.47	25.27	26.13	28.14	28.10	27.44	29.22	28.22	.....	27.05
3	27.63	28.54	26.97	24.60	26.40	28.22	27.41	28.00	29.13	28.20	.....	28.30
4	27.69	27.83	26.60	24.55	26.43	28.41	27.41	27.71	29.15	28.24	.....	28.52
5	.....	28.58	26.78	26.05	26.06	28.00	28.02	28.18	29.12	28.77	.....	28.25
6	.....	28.60	26.96	26.41	25.45	28.13	27.51	28.15	29.11	27.15	.....	28.24
7	27.48	25.81	26.58	24.87	25.90	28.30	27.87	28.25	28.61	27.13	.....	28.24
8	28.25	25.26	25.74	24.86	24.48	27.63	27.35	28.23	28.05	27.55	.....	27.45
9	28.52	.....	26.25	24.69	24.26	26.82	27.65	27.50	27.90	28.00	.....	27.37
10	28.67	.....	25.40	24.38	25.75	27.15	28.05	27.77	28.39	28.05	.....	27.36
11	28.76	25.73	24.78	23.80	26.21	27.42	28.10	27.65	28.50	28.13	.....	27.66
12	29.24	25.92	24.50	21.75	26.33	28.15	27.65	27.90	28.72	28.05	.....	28.45
13	29.22	26.61	24.16	21.20	26.05	28.05	28.69	28.22	28.87	27.93	.....	28.85
14	29.42	25.03	24.11	23.03	24.92	27.42	28.73	28.48	28.70	28.37	.....	28.90
15	.....	25.04	25.35	23.68	24.89	27.11	28.42	28.65	28.45	28.33	.....	28.97
16	.....	25.70	25.92	23.77	24.67	26.90	28.54	28.71	28.70	26.64	.....	28.16
17	.....	25.26	24.64	22.26	25.70	26.94	28.28	28.45	28.80	27.57	27.82	27.75
18	29.18	24.40	24.02	23.25	25.92	27.50	28.40	28.15	28.84	28.35	27.80	27.77
19	29.38	25.17	24.12	24.00	24.22	27.77	28.51	28.46	29.00	28.45	27.23	28.70
20	29.10	25.47	25.64	24.59	24.16	27.86	28.80	29.06	28.95	28.20	27.15	29.21
21	29.13	24.28	26.15	23.11	24.46	27.95	28.35	29.07	28.81	28.20	27.89	29.23
22	29.31	24.39	25.25	23.00	24.56	27.34	27.38	28.78	28.46	28.11	28.20	27.95
23	29.37	25.59	26.22	24.30	24.66	26.90	28.20	28.85	28.48	27.63	28.23	27.91
24	29.33	26.32	26.46	24.60	26.23	26.73	28.55	28.47	28.13	27.63	26.86	27.75
25	29.32	25.87	26.67	24.71	26.75	26.80	28.80	28.14	28.70	28.31	26.84	27.18
26	29.69	25.28	25.50	24.87	26.00	26.78	28.90	28.33	28.76	28.21	26.91	27.07
27	29.50	25.12	24.92	25.16	24.97	27.93	28.91	28.23	28.75	28.32	27.78	27.67
28	28.42	25.15	24.81	25.20	25.25	27.87	28.57	27.76	28.28	28.22	28.21	27.80
29	28.23	.....	26.22	25.24	26.90	27.93	28.53	27.92	28.37	28.31	28.50	27.60
30	27.58	.....	26.73	23.95	27.23	28.20	28.67	27.90	28.29	27.06	27.68	25.03
31	27.89	.....	.....	.....	27.40	.....	28.48	28.94	.....	26.96	.....	23.91

86-7 (*886, p. 567; 906, pp. 181-182; 936, p. 211). City of Hamilton. In old city well field, 0.2 mile north of Hamilton on U. S. Highway 127, in Fairfield Township.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	18.00	Apr. 21	15.40	July 21	16.90	Oct. 13	17.72
13	18.24	28	15.41	28	16.98	20	17.76
20	18.32	May 5	15.60	Aug. 4	16.67	27	17.92
27	18.37	12	15.75	11	16.78	Nov. 3	18.15
Feb. 3	18.44	19	15.87	18	16.95	10	18.19
10	17.50	26	16.00	25	16.98	17	18.29
Mar. 10	16.95	June 2	16.26	Sept. 1	17.15	24	17.91
17	16.51	9	16.42	8	17.11	Dec. 1	17.86
24	16.34	16	16.43	14	17.23	8	17.97
31	16.48	23	16.30	22	17.39	15	18.09
Apr. 7	16.42	July 7	16.31	29	17.49	22	18.20
14	15.52	14	16.55	Oct. 6	17.59	29	17.58

89-3 (*845, p. 374; 886, p. 566; 906, p. 182; 936, pp. 211-212). General Machinery Co. (Niles Tool Works). In Hamilton. No measurements made in 1942.

104-1 (*845, p. 377; 886, pp. 565-566; 906, p. 183; 936, p. 212). McGreevy Dairy Co. At Dixie Highway and Laurel Avenue, in Hamilton.

104-1. McGreevy Dairy Co.--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	(a)	June 9	39.65	Aug. 18	38.99	Oct. 27	40.22
Apr. 7	(a)	16	39.65	25	38.71	Nov. 3	40.29
14	40.16	23	38.91	Sept. 1	38.88	10	40.42
21	39.50	30	37.32	8	39.16	17	40.47
28	39.37	July 7	37.17	14	39.36	24	40.42
May 5	39.52	14	37.31	22	39.45	Dec. 1	40.34
12	39.50	21	37.52	29	39.55	8	40.39
19	39.59	28	37.82	Oct. 6	38.75	15	40.40
26	39.56	Aug. 4	38.08	13	39.90	22	40.43
June 2	39.67	11	38.29	20	40.01	29	40.18

104-2. McGreevy Dairy Co. At Dixie Highway and Laurel Avenue, in Hamilton. New test well, diameter 6 inches, depth 70 feet. Measuring point, top of 6-inch pipe, 1.0 foot above land surface.

Water level, in feet below measuring point, 1942

Oct. 20	38.34	Nov. 17	33.91	Dec. 8	37.69	Dec. 22	38.74
27	38.76	24	35.81	15	38.27	29	39.10
Nov. 10	30.37	Dec. 1	36.98				

Pit D (*845, p. 372; 886, pp. 560-561; 906, p. 183; 936, p. 212). Paul Benninghofen. Gravel pit (Symmes Lake), 2.1 miles west of Symmes, in Fairfield Township. Zero of staff gage, 543.0 feet above sea level.

Water level, in feet, with reference to zero of staff gage, 1942

Jan. 6	2.20	Apr. 28	3.72	July 28	1.97	Oct. 20	1.10
13	2.00	May 5	3.06	Aug. 4	2.97	27	1.06
20	1.74	12	2.76	8	2.80	Nov. 3	1.00
27	1.56	19	2.90	12	2.68	10	1.00
Feb. 3	1.25	26	2.62	21	2.24	17	1.10
10	4.43	June 2	2.32	25	2.30	24	1.80
Mar. 10	2.73	9	2.60	Sept. 1	2.10	Dec. 1	1.80
17	3.71	16	3.02	8	1.88	8	1.60
24	3.71	23	3.47	15	2.08	15	1.50
31	3.22	30	3.22	22	1.70	22	1.40
Apr. 7	3.12	July 7	2.72	29	1.50	29	2.90
14	6.15	14	2.56	Oct. 6	1.38	31	4.70
21	4.63	21	2.19	13	1.24		

110 (*845, p. 373; 886, pp. 563-564; 906, p. 183). Joe Conrad, 2.2 miles west and 0.7 mile south from Symmes, on River Road, Fairfield Township.

Water level, in feet below measuring point, 1942

Sept. 15	19.87	Oct. 13	20.55	Nov. 10	20.89	Dec. 8	20.29
22	20.09	20	20.68	17	20.84	15	19.39
29	20.26	27	20.76	24	20.33	22	20.54
Oct. 6	20.39	Nov. 3	20.84	Dec. 1	20.15	29	19.87

114 (*886, pp. 563-564; 906, p. 183; 936, p. 212). George Groh. 1.4 miles west of Symmes along River Road, in Fairfield Township.

Water level, in feet below measuring point, 1942

Jan. 13	19.30	Apr. 14	16.34	June 16	17.55	Sept. 1	18.10
Mar. 16	17.50	May 12	17.70	July 14	17.16		

117 (*845, p. 376; 886, pp. 563-564; 906, p. 183; 936, p. 212). Anna Magie. On River Road 0.7 mile northeast of Symmes, in Fairfield Township.

Water level, in feet below measuring point, 1942

Jan. 6	31.18	Mar. 17	29.19	May 12	28.45	July 7	27.85
13	31.16	24	28.98	19	28.60	14	28.00
20	31.10	31	29.07	26	28.62	21	28.14
27	30.90	Apr. 7	28.92	June 2	28.80	28	28.37
Feb. 3	30.80	14	28.52	9	28.80	Aug. 4	28.55
10	30.50	21	28.02	16	28.79	8	28.60
17	30.02	28	27.99	23	27.85	11	28.70
Mar. 10	29.45	May 5	28.29	30	27.76	25	28.99

a Dry.

117. Anna Magie--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 1	29.12	Oct. 6	29.89	Nov. 10	30.50	Dec. 8	29.63
8	29.32	13	30.04	17	30.59	15	30.23
15	29.44	20	30.18	24	30.37	22	30.13
22	29.59	27	30.29	Dec. 1	30.33	29	30.09
29	29.77	Nov. 3	30.39				

Pit M. Edward Hieb. Abandoned gravel pit, 3,500 feet south of Miami River and 100 feet west of River Road, in Fairfield Township. Staff gage installed Oct. 17, 1939. Zero of staff gage, 543.9 feet above sea level.

Water level, in feet above zero of gage, 1939-42

Date	Water level	Date	Water level	Date	Water level
Oct. 17, 1939	11.80	May 21, 1940	14.48	May 15, 1941	10.74
31	11.89	28	14.08	June 18	11.71
Nov. 7	11.92	June 4	15.38	July 18	11.31
21	11.68	11	15.12	Aug. 15	10.32
Dec. 5	11.60	18	13.90	Sept.15, 1942	11.54
19	11.46	July 2	13.90	22	11.30
Jan. 17, 1940	11.36	9	13.42	29	11.20
Feb. 6	11.32	16	13.03	Oct. 6	11.06
17	12.54	23	12.80	13	11.90
20	12.88	30	12.50	20	11.20
27	13.08	Aug. 16	12.02	27	11.50
Mar. 5	13.44	Sept.17	11.50	Nov. 3	11.40
12	14.31	Oct. 16	11.10	10	11.40
19	13.58	Nov. 8	11.08	17	11.30
26	13.00	16	11.10	24	11.50
Apr. 2	12.60	Dec. 14	11.02	Dec. 1	11.20
9	12.60	Jan. 15, 1941	11.58	8	11.50
16	13.68	Feb. 15	11.72	15	11.40
30	18.98	Mar. 15	11.36	22	11.20
May 7	16.46	Apr. 16	11.50	29	11.70
14	15.18				

Pit N. Edward Hieb. Abandoned gravel pit, 3,500 feet south of Miami River and 2,300 feet west of River Road, in Fairfield Township. Staff gage installed October 17, 1939. Zero of staff gage, 553.8 feet above sea level.

Water levels, in feet, with reference to zero of gage, 1939-42

Oct. 17, 1939	0.99	May 14, 1940	3.60	May 15, 1941	0.10
31	1.17	21	3.00	June 18	1.05
Nov. 7	1.22	28	2.78	July 18	.52
21	1.02	June 4	4.30	Aug. 15	-.30
Dec. 5	.95	11	3.76	Sept.15, 1942	.80
19	.86	18	3.36	22	.60
Jan. 17, 1940	.75	July 2	2.60	29	.50
Feb. 6	.73	9	2.12	Oct. 6	.38
17	1.84	16	1.80	13	.20
20	2.15	23	1.50	20	1.20
27	2.21	30	1.20	27	.10
Mar. 5	2.90	Aug.16	.80	Nov. 3	1.10
12	3.41	Sept.18	.37	10	1.10
19	2.58	Oct.16	.08	17	.90
26	2.05	Nov. 8	.10	24	.60
Apr. 2	1.68	16	.14	Dec. 1	.80
9	1.71	Dec.14	.20	8	.80
16	2.96	Jan.15, 1941	.74	15	.80
23	9.94	Feb.15	.96	22	.40
30	7.04	Mar.15	.54	29	1.10
May 7	4.70	Apr.16	.165		

121 (*906, p. 184; 936, p. 212). Edward Hieb. On River Road, 0.5 mile west and 1.3 miles north from Symmes, in Fairfield Township. Water level in feet below measuring point, 1942: Sept. 15, 29.23.

T-50 (*886, pp. 563-564; *906, p. 184; *936, p. 213). Mary Gerber. Geological Survey test well, on River Road, 0.5 mile south of Hamilton, in Fairfield Township.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	17.00	Apr. 28	14.86	July 21	15.64	Oct. 13	16.68
13	17.01	May 5	15.14	28	15.80	20	16.71
20	17.06	12	15.32	Aug. 4	15.69	27	16.83
27	17.04	19	15.40	8	15.64	Nov. 3	16.40
Feb. 3	17.08	26	15.52	11	15.68	10	16.90
10	16.55	June 2	15.69	18	15.81	17	17.03
Mar. 10	16.02	9	15.75	25	15.87	24	16.80
17	15.65	16	15.65	Sept. 1	15.96	Dec. 1	16.64
24	15.40	23	14.98	8	16.12	8	16.66
31	15.38	30	15.13	22	16.31	15	17.18
Apr. 7	15.50	July 7	15.30	29	16.44	22	16.59
14	14.77	14	15.48	Oct. 6	16.57	29	16.57
21	14.65						

T-51 (*886, p. 564; 906, p. 184; 936, p. 213). Miami Conservancy District. Geological Survey test well, on River Road, 0.1 mile south of Fairview Avenue, in Hamilton.

Water level, in feet below measuring point, 1942

Jan. 6	16.80	Apr. 28	16.39	July 28	17.86	Oct. 13	18.36
13	17.49	May 5	16.91	Aug. 4	16.30	20	18.43
20	17.45	12	17.10	8	17.14	27	18.40
27	17.65	19	16.50	11	16.37	Nov. 3	18.39
Feb. 3	17.63	26	17.16	18	17.53	10	18.39
10	14.61	June 2	17.48	25	17.20	17	18.35
Mar. 10	15.74	9	16.52	Sept. 1	17.58	24	16.86
17	14.35	16	15.97	8	16.94	Dec. 1	17.27
24	15.57	23	15.80	15	17.51	8	17.58
31	16.04	30	17.15	22	18.02	15	17.68
Apr. 7	16.18	July 7	17.45	29	17.09	22	17.80
14	13.32	14	17.44	Oct. 6	18.26	29	14.30
21	15.58	21	17.91				

122 (*886, pp. 563-564). Carl Federle. On U. S. Highway 127, at Pleasant and Saint Clair Avenues, in Hamilton.

Water level, in feet below measuring point, 1942

Sept. 15	42.75	Oct. 20	44.69	Nov. 17	45.18	Dec. 15	44.89
22	44.49	27	44.83	24	45.10	22	44.98
29	44.39	Nov. 3	45.04	Dec. 1	44.98	29	44.95
Oct. 13	44.85	10	45.04	8	44.95		

Pit E (*845, p. 372; 886, pp. 560-561; 906, pp. 184-185; 936, p. 213). South Hamilton Sand & Gravel Co. Gravel pit, 1.4 miles north of Symmes and 0.4 mile east of U. S. Highway 127, in Fairfield Township. Zero of staff gage, 552.6 feet above sea level.

Water level, in feet above zero of staff gage, 1942

Jan. 13	5.19	Apr. 7	6.40	Aug. 11	9.20	Oct. 27	8.06
20	5.08	14	6.50	18	9.08	Nov. 3	8.00
27	5.05	21	6.75	25	9.00	10	7.91
Feb. 3	5.04	28	6.95	Sept. 1	8.90	17	7.80
10	5.28	May 5	7.05	8	8.90	24	7.82
17	5.47	12	7.20	15	8.80	Dec. 1	7.62
24	5.57	July 14	8.84	22	8.68	8	7.60
Mar. 10	5.82	21	8.90	29	8.50	15	7.65
17	5.85	28	9.10	Oct. 6	8.43	22	7.60
24	6.00	Aug. 4	9.10	13	8.31	29	7.48
31	6.20	8	9.18	20	8.20		

128 (*886, pp. 562-563; 906, p. 185; 936, p. 213). George Shearer. Near crossing of State Highway 4 and Baltimore & Ohio Railroad in Schenck, a suburb of Hamilton.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	55.87	Mar. 31	54.88	June 23	52.85	Sept. 29	52.09
13	55.99	Apr. 7	54.70	30	52.35	Oct. 6	52.20
20	55.96	14	54.48	July 7	52.05	13	52.32
27	55.93	21	54.13	14	51.78	20	52.42
Feb. 3	55.97	28	53.84	21	51.68	27	52.53
10	55.80	May 5	53.66	28	51.50	Nov. 3	52.77
17	55.78	12	53.46	Aug. 4	51.55	10	52.90
24	55.58	19	53.41	25	51.34	17	53.00
Mar. 3	55.45	26	53.25	Sept. 1	51.69	24	53.02
10	55.32	June 2	53.21	8	51.73	Dec. 1	52.90
17	55.45	9	53.15	14	51.80	29	53.22
24	55.00	16	53.14	22	51.95		

133 (*886, pp. 562-563; 906, p. 185; 936, p. 214). J. E. Ryan. 0.7 mile south of Schenk on road to Symmes and 0.2 mile east of State Highway 4, in Fairfield Township.

Water level, in feet below measuring point, 1942

Jan. 13	44.53	Apr. 28	42.65	July 14	40.12	Oct. 6	40.20
20	44.52	May 5	42.40	21	39.82	13	40.34
27	44.50	12	42.10	28	39.52	20	40.33
Feb. 10	44.57	19	42.08	Aug. 4	39.60	27	40.59
Mar. 3	44.45	26	41.82	18	39.53	Nov. 3	40.82
10	44.06	June 2	41.83	25	30.60	10	41.05
17	43.98	9	41.70	Sept. 1	39.62	17	41.00
23	43.83	16	41.70	8	39.71	24	41.08
31	43.60	23	41.45	14	39.78	Dec. 1	40.98
Apr. 7	43.40	30	40.71	22	39.87	22	41.22
14	43.24	July 7	40.42	29	40.04	29	41.32
21	42.90						

150-2 (*845, p. 376; 886, pp. 562-563; 906, p. 186; 936, p. 214). Harry A. Morris. At Flockton, in Fairfield Township.

Water level, in feet below measuring point, 1942

Mar. 17	2.94	June 9	8.62	Sept. 1	14.15	Nov. 3	17.34
24	3.35	16	5.60	8	14.89	10	17.19
31	3.22	23	2.72	14	15.35	17	17.25
Apr. 14	2.75	30	4.72	22	15.78	24	14.97
21	3.83	July 7	5.57	29	16.02	Dec. 1	14.55
28	4.84	14	4.00	Oct. 6	16.37	8	14.39
May 5	5.70	21	6.10	13	16.91	15	14.40
12	6.25	28	7.55	20	17.13	22	14.45
19	6.63	Aug. 4	9.32	27	17.24	29	7.02
26	6.32						

151-2 (*906, p. 187; 936, p. 215). Geological Survey test well. Harry A. Morris. At Flockton, in Fairfield Township. Shallow well.

Water level, in feet below measuring point, 1942

Jan. 6	31.99	Apr. 21	27.44	July 21	23.46	Oct. 13	25.62
13	31.93	28	27.14	28	23.44	20	25.80
20	31.95	May 5	27.03	Aug. 4	23.50	27	26.09
27	31.95	12	26.96	11	23.68	Nov. 3	26.37
Feb. 3	31.76	19	26.97	18	23.84	10	26.58
10	31.38	26	26.83	25	24.08	17	26.82
Mar. 10	30.12	June 2	26.92	Sept. 1	24.28	24	26.82
17	29.70	9	26.94	8	24.47	Dec. 1	26.67
24	29.31	16	26.59	14	24.69	8	26.75
31	28.94	23	25.40	22	24.91	15	26.79
Apr. 7	28.80	30	24.28	29	25.18	22	26.85
14	28.06	July 7	23.99	Oct. 6	25.41	29	26.60

156. Ray Milder's Inn. At northwest corner of U. S. Highway 127 and Milles Road, in Symmes, Fairfield Township. Unused driven well, diameter 2 inches, depth 48 feet. Measuring point, top of 2-inch pipe, 2.0 feet above floor of concrete pump pit and 4.4 feet below top of metal rim of manhole cover, 0.3 foot above land surface. Elevation of measuring point is 588.4 feet above sea level.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 3	32.70	Nov. 24	33.70	Dec. 8	33.62	Dec. 22	33.55
Nov. 17	33.69	Dec. 1	33.63	15	33.57	29	33.42

157. Carl Schiering. On River Road, 5,800 feet west of U. S. Highway 127, in Fairfield Township. Drilled farm well, diameter 4 inches, depth 42 feet. Measuring point, top of concrete platform over well, 0.3 foot above land surface. Water levels, in feet below measuring point, 1942: Dec. 15, 25.02; Dec. 22, 25.05; Dec. 29, 24.76.

151-1 (*906, pp. 186,187; *936, pp. 214-215). Geological Survey test well. Harry A. Morris. At Flockton, in Fairfield Township. Deep well.

Lowest daily water level, in feet below measuring point, 1942

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	33.00	32.86	31.45	30.24	28.43	28.34	24.80	24.56	25.48	26.43	27.39	27.70
2	32.96	32.88	31.41	30.21	28.40	28.36	24.79	24.59	25.51	26.47	27.48	27.75
3	32.96	32.89	31.35	30.16	28.39	28.34	24.90	24.61	25.53	26.50	27.52	27.77
4	32.93	32.84	31.35	30.15	28.44	28.32	24.82	24.64	25.58	26.53	27.55	27.81
5	32.93	32.78	31.31	31.13	28.49	28.30	24.82	24.66	25.60	26.59	27.57	27.82
6	32.91	32.75	31.30	30.12	28.49	28.28	24.81	25.68	25.64	26.61	27.63	27.82
7	32.89	32.67	31.28	30.15	28.46	28.30	24.84	24.70	25.66	26.64	27.64	27.87
8	32.87	32.61	31.25	30.18	28.46	28.35	24.82	24.70	25.69	26.68	27.66	27.85
9	32.86	32.54	31.26	30.10	28.47	28.35	24.84	24.73	25.72	26.71	27.66	27.89
10	32.88	32.41	31.28	29.95	28.48	28.33	24.83	24.78	25.76	26.73	27.72	27.88
11	32.89	32.33	31.18	29.77	28.46	28.28	24.79	24.85	25.79	26.76	27.74	27.87
12	32.91	32.26	31.16	29.65	28.43	28.26	24.65	24.88	25.80	26.81	27.75	27.87
13	32.93	32.20	31.14	29.47	28.40	28.25	24.59	24.91	25.83	26.82	27.82	27.95
14	32.95	32.15	31.06	29.32	28.42	28.18	24.50	24.93	25.86	26.82	27.84	27.95
15	32.95	32.07	31.03	29.14	28.42	28.08	24.47	24.96	25.89	26.86	27.85	27.88
16	32.97	32.00	30.95	29.01	28.45	27.97	24.40	25.02	25.93	26.91	27.88	27.96
17	32.97	31.96	30.86	28.90	28.47	27.95	24.37	25.04	25.95	26.94	27.90	27.96
18	32.95	31.95	30.84	28.80	28.46	27.92	24.36	25.07	25.98	26.96	27.94	28.03
19	32.95	31.89	30.78	28.75	28.48	27.86	24.35	25.09	26.00	27.00	27.95	28.04
20	32.93	31.82	30.73	28.70	28.46	27.80	24.34	25.14	26.07	27.02	27.94	28.06
21	32.95	31.76	30.64	28.65	28.45	27.45	24.37	25.18	26.08	26.99	27.95	28.07
22	32.90	31.70	30.59	28.60	28.40	27.05	.....	25.20	26.11	27.05	27.95	28.00
23	32.90	31.62	30.53	28.57	28.35	26.62	.....	25.25	26.11	27.13	27.91	28.02
24	32.86	31.54	30.49	28.55	28.35	26.15	.....	25.30	26.21	27.17	27.84	28.02
25	32.84	31.52	30.46	28.52	28.35	25.75	24.47	25.29	26.23	27.20	27.84	28.01
26	32.85	31.50	30.42	28.49	28.30	25.40	24.50	25.32	26.19	27.22	27.82	27.98
27	32.84	31.45	30.39	28.49	28.32	25.20	24.52	25.34	26.29	27.26	27.82	27.93
28	32.87	31.45	30.36	28.47	28.33	25.05	24.51	25.36	26.35	27.30	27.82	27.85
29	32.87	.....	30.34	28.46	28.34	24.94	24.50	25.39	26.41	27.33	27.76	27.77
30	32.86	.....	30.31	28.45	28.35	24.85	24.55	25.43	26.40	27.34	27.75	27.63
31	32.85	.....	30.27	.....	28.34	.....	24.56	25.46	.....	27.37	.....	27.57

158-1. Ralph Miller. On Seward Road 0.3 mile south from Tylersville Road (Deerfield Pike), in Fairfield Township. Drilled farm well, diameter 4 inches, depth 79 feet. Measuring point, top of 4-inch pipe, 1.4 feet above land surface. Elevation of measuring point, 619.6 feet above sea level.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	50.38	May 19	45.47	Aug. 4	42.03	Oct. 27	44.42
10	50.30	26	45.42	25	42.51	Nov. 3	44.67
Mar. 10	48.92	June 2	45.38	Sept. 1	42.60	10	44.91
17	48.65	9	45.40	8	42.82	17	45.12
24	48.29	16	45.25	15	43.01	24	45.25
Apr. 7	47.61	23	44.54	22	43.24	Dec. 1	45.22
14	47.08	30	43.46	29	43.50	8	45.30
21	46.44	July 7	42.90	Oct. 6	43.75	15	45.26
28	45.98	14	42.52	13	43.99	22	45.35
May 5	45.70	21	42.20	20	44.17	29	45.18
12	45.55	28	42.06				

158-2. Ralph Miller. On Seward Road, 0.3 mile south from Tylersville Road (Deerfield Pike), in Fairfield Township. Drilled well, diameter 4 inches, depth 38 feet. Measuring point, top of 4-inch pipe, 1.4 feet above land surface. Elevation of measuring point, 619.6 feet above sea level.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	2.41	May 19	5.70	Aug. 4	5.96	Oct. 27	8.37
10	3.02	26	5.49	25	6.48	Nov. 3	8.31
Mar. 10	2.98	June 2	5.89	Sept. 1	6.70	10	8.08
17	2.96	9	6.00	8	6.87	17	7.44
24	3.30	16	4.55	15	7.20	24	3.74
31	2.84	23	3.14	22	7.35	Dec. 1	3.24
Apr. 14	2.91	30	4.40	29	7.51	8	4.10
21	3.55	July 7	5.03	Oct. 6	7.60	15	3.80
28	4.30	14	4.16	13	7.99	22	4.10
May 5	5.26	21	5.03	20	8.19	29	2.65
12	5.60	28	5.36				

160-1 (*906, p. 188; 936, p. 215). Orin James. 0.9 mile east of Flockton, in Union Township. Deep well.

Water level, in feet below measuring point, 1942

Jan. 13	36.40	Apr. 28	32.25	July 14	28.80	Oct. 13	31.07
20	36.26	May 5	34.95	21	28.78	20	31.01
27	36.26	12	31.35	28	28.52	27	31.55
Feb. 3	36.19	19	31.70	Aug. 4	28.68	Nov. 3	32.07
6	35.29	26	31.43	25	29.35	10	32.05
Mar. 10	34.52	June 2	31.50	Sept. 1	29.42	17	35.26
17	34.10	9	31.52	8	29.66	24	31.88
24	34.06	16	31.30	15	31.60	Dec. 1	31.48
31	33.66	23	30.62	22	30.14	8	31.89
Apr. 7	(a)	30	29.59	29	30.59	15	31.69
14	32.75	July 7	29.09	Oct. 6	30.76	29	31.48
21	32.08						

160-2 (*845, p. 376; 886, pp. 562-563; 906, p. 188; 936, p. 216). Orin James. 0.9 mile east of Flockton, in Union Township. Shallow well.

Water level, in feet below measuring point, 1942

Jan. 20	28.20	Apr. 28	8.05	July 21	7.10	Oct. 20	21.87
27	28.20	May 5	10.42	28	9.38	27	22.54
Feb. 3	26.25	12	11.98	Aug. 4	11.09	Nov. 3	23.21
6	22.85	19	12.77	25	14.87	10	23.85
10	18.66	26	11.74	Sept. 1	15.90	17	24.40
Mar. 10	9.75	June 2	12.45	8	16.89	24	24.76
17	4.77	9	13.12	15	17.84	Dec. 1	25.00
24	5.20	16	9.08	22	18.75	8	25.20
31	5.25	23	3.61	29	19.62	15	25.31
Apr. 7	6.63	30	5.41	Oct. 6	20.35	22	25.35
14	3.47	July 7	6.97	13	21.18	29	21.55
21	5.55	14	5.80				

165-1. E. C. Shepherd. On Princeton Pike, 0.7 mile north of Port Union, in Union Township. Drilled farm well, diameter 6 inches, depth 128 feet. Measuring point, top of pump base, 1.0 foot above land surface. Elevation of measuring point, 613.5 feet above sea level.

Water level, in feet below measuring point, 1942

July 14	37.42	Sept. 8	40.69	Oct. 27	42.93	Dec. 1	41.65
21	37.64	15	40.95	Nov. 3	43.28	8	42.07
28	38.23	22	41.30	10	43.02	15	41.68
Aug. 4	38.72	29	41.65	17	43.55	22	41.62
25	39.92	Oct. 6	42.07	24	42.57	29	40.17
Sept. 1	40.25	13	42.46				

165-2 (*845, p. 375; 886, pp. 561-562; 906, p. 188; 936, p. 216). E. C. Shepherd. On Princeton Pike, 0.7 mile north from Port Union, in Union Township. Shallow well.

a Pumping.

165-2. E. C. Shepherd--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	27.76	Apr. 7	28.44	July 7	13.23	Oct. 13	16.09
13	27.67	14	27.82	14	12.19	20	16.19
20	27.78	21	27.90	21	12.17	27	16.15
27	27.68	28	28.02	28	12.13	Nov. 3	15.94
Feb. 3	27.57	May 5	27.97	Aug. 4	12.29	10	15.72
10	29.20	12	27.74	25	12.88	17	15.69
17	28.90	19	27.25	Sept. 1	13.34	24	15.11
24	28.74	26	26.17	8	13.93	Dec. 1	15.28
Mar. 3	28.60	June 2	25.31	15	14.28	8	15.55
10	28.55	9	24.30	22	14.86	15	15.55
17	28.42	16	22.92	29	14.95	22	15.54
24	29.00	23	20.98	Oct. 6	15.35	29	15.22
31	28.75	30	17.12				

168 (*906, pp. 188-189; 936, p. 216). M. Haugbers. At Princeton Pike and Rialto Road, in Port Union, Union Township.

Water level, in feet below measuring point, 1942

Jan. 13	23.20	Apr. 7	20.27	June 23	16.75	Sept. 22	23.43
20	22.66	14	18.28	30	18.40	29	23.40
27	22.44	21	19.24	July 7	18.72	Oct. 13	24.20
Feb. 6	19.91	28	19.62	14	18.95	20	24.45
10	19.49	May 5	20.36	21	18.89	27	23.65
17	19.00	12	20.32	28	19.55	Nov. 3	25.39
Mar. 3	20.00	19	20.63	Aug. 4	20.17	10	25.31
10	20.37	26	20.46	25	21.30	17	25.66
17	19.94	June 2	20.62	Sept. 1	22.08	24	23.57
24	19.79	9	20.80	8	22.43	Dec. 1	22.37
31	19.87	16	18.68	15	22.79	29	19.42

173 (*845, p. 374; 886, pp.561-562; 906, p. 189; 936, p. 216). Margaret Bramble Estate. In Rialto, Union Township. Measurements discontinued May 5, 1942; pump installed.

Water level, in feet below measuring point, 1942

Jan. 6	6.07	Jan. 27	6.64	Mar. 17	3.59	Apr. 28	5.02
13	6.75	Feb. 3	6.34	Apr. 7	4.69	May 5	5.77
20	6.65	10	3.45	14	3.06		

175 (*845, p. 375; 886, pp. 561-562; 906, p. 189; 936, p. 216). J. W. Margonett. In Rialto, Union Township.

Water level, in feet below measuring point, 1942

Mar. 17	6.31	June 16	6.90	Sept. 1	11.86	Nov. 3	12.50
Apr. 7	7.97	23	12.62	8	11.62	10	12.37
14	6.43	30	8.40	15	12.02	17	12.18
28	8.83	July 7	8.78	22	11.98	24	10.78
May 5	9.68	14	7.20	29	11.84	Dec. 1	9.92
12	10.24	21	8.90	Oct. 6	14.28	8	9.76
19	10.29	28	10.03	13	12.12	15	10.14
26	9.69	Aug. 4	10.84	20	12.26	22	10.23
June 2	10.70	25	11.51	27	12.32	29	6.00
9	10.85						

180 (*845, p. 373; 886, pp. 561-562; 906, p. 189; 936, p. 217). Fox Paper Co. In Crescentville, Union Township.

Water level, in feet below measuring point, 1942

Jan. 6	15.38	Apr. 7	11.24	July 7	10.63	Oct. 6	16.95
13	15.75	14	9.52	14	10.42	13	17.29
20	15.02	21	10.24	21	10.78	20	17.29
27	14.25	28	11.06	28	12.58	27	17.79
Feb. 3	14.16	May 5	12.33	Aug. 4	13.18	Nov. 3	18.25
10	11.84	12	12.42	11	14.05	10	17.88
17	11.35	19	12.14	18	14.50	17	18.17
24	10.88	26	10.95	25	15.22	24	14.97
Mar. 3	11.14	June 2	12.07	Sept. 1	15.30	Dec. 1	13.26
10	11.48	9	12.84	8	15.71	8	14.10
17	10.96	16	10.57	15	15.89	15	13.70
24	11.02	23	9.03	22	16.20	22	13.22
31	11.04	30	9.37	29	16.92	29	11.52

B1. Ohio State Highway Department. Along State Highway 4, 330 feet south from Symmes road, east of highway, in Fairfield Township. Drilled test well, diameter 6 inches, depth 245 feet (casing opened at 160 feet). Measuring point, top of 6-inch plug flush with top of 6-inch coupling, 0.2 foot below land surface, and 605.3 feet above sea level (U. S. Geol. Survey).

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 6	42.58	Aug. 1	42.65	Sept. 29	43.69	Nov. 17	42.89
8	43.28	3	42.63	Oct. 6	42.54	24	42.90
11	43.22	8	42.54	13	42.69	Dec. 1	42.30
14	43.10	25	42.52	20	42.73	8	42.80
18	42.99	Sept. 1	42.50	27	42.78	15	43.00
21	42.88	8	42.49	Nov. 3	42.85	22	43.05
24	42.77	15	42.53	10	42.83	29	43.03
28	42.72	22	42.58				

B2. Ohio State Highway Department. Along U. S. Highway 127, 90 feet north of Symmes road, 12 feet west of highway in Fairfield Township. Drilled test well, diameter 6 inches, depth 228 feet (casing opened at 196 feet). Measuring point, top of 6-inch casing, 1.0 foot above land surface and 594.3 feet above sea level (U. S. Geol. Survey datum).

Water level, in feet below measuring point, 1942

July 6	36.73	Aug. 11	37.05	Sept. 29	37.79	Nov. 17	38.63
8	36.34	18	37.17	Oct. 6	37.20	24	38.49
11	36.31	25	37.28	13	38.06	Dec. 1	38.49
18	36.30	Sept. 1	37.32	20	38.17	8	38.58
21	36.31	8	37.45	27	38.29	15	38.59
24	36.34	15	37.53	Nov. 3	38.54	22	38.56
Aug. 1	36.37	22	37.67	10	38.54	29	38.50
8	36.31						

B3. E. H. Zinsmeister. Along River Road 0.6 mile north of Nilles Road, 107 feet west of River Road in Fairfield Township. Drilled test well, diameter 6 inches, depth 146 feet (casing opened at 124 feet). Measuring point, top of 6-inch plug flush with top of 6-inch casing, 0.8 foot above land surface and 575.4 feet above sea level (U.S. Geol. Survey datum).

Water level, in feet below measuring point, 1942

July 6	20.32	Aug. 18	21.32	Oct. 6	22.34	Nov. 24	22.80
11	20.40	25	21.43	13	22.49	Dec. 1	22.66
14	20.45	Sept. 1	21.60	20	22.63	8	22.66
21	20.60	8	21.77	27	22.75	15	22.65
Aug. 1	21.03	15	21.90	Nov. 3	22.78	22	22.68
8	21.09	22	22.04	10	22.60	29	22.46
11	21.16	29	22.19	17	23.03		

B4. A. H. Kollstadt. Along River Road 0.3 mile north of Symmes road, 186 feet east of River Road, in Fairfield Township. Drilled test well diameter 6 inches, depth 221 feet (casing opened at 120 feet). Measuring point, top of 6-inch casing, 1.0 foot above land surface and 582.8 feet above sea level (U.S. Geol. Survey datum).

Water level, in feet below measuring point, 1942

July 6	30.77	Sept. 1	31.33	Oct. 13	32.23	Nov. 24	29.69
11	30.92	8	31.59	20	29.15	Dec. 1	28.56
14	30.96	15	31.55	27	29.19	8	28.71
21	31.20	22	31.78	Nov. 3	30.25	15	28.84
Aug. 1	31.29	29	31.86	10	30.29	22	28.60
8	30.79	Oct. 6	32.16	17	29.25	29	28.02
26	31.26						

B5. L. Haviland. 0.45 mile south of River (Nilles) Road and 0.15 mile east of Muskoff Road, in Fairfield Township. Drilled test well, diameter 6 inches, depth 247 feet (casing opened at 126 feet). Measuring point, top of 6-inch plug flush with top of 6-inch coupling, 2.3 feet above land surface and 579.2 feet above sea level (U. S. Geol. Survey datum).

Water level, in feet below measuring point, 1942

July 6	33.30	July 24	33.07	Aug. 18	33.09	Sept. 15	33.10
11	33.14	Aug. 1	33.07	25	33.08	22	33.14
14	33.15	8	33.07	Sept. 1	33.05	29	33.12
21	33.10	11	33.08	8	33.08	Oct. 6	29.68

B5. L. Haviland--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 13	33.13	Nov. 3	33.23	Nov. 24	33.15	Dec. 15	32.12
20	33.14	10	33.23	Dec. 1	33.17	22	32.60
27	32.66	17	33.28	8	33.12	29	32.78

B6. Andrew Groh. 3,900 feet west of River Road and 2,500 feet north of River (Nilles) Road, about 250 feet south of Pleasant Run, in Fairfield Township. Drilled test well, diameter 6 inches, depth 189 feet (casing opened at 130 feet). Measuring point, top of 6-inch casing, 1.5 feet above land surface and 571.7 feet above sea level (U.S. Geol. Survey datum).

Water level, in feet below measuring point, 1942

July 6	20.42	Aug. 18	21.40	Sept. 29	22.24	Nov. 17	22.81
11	20.63	21	21.44	Oct. 6	22.35	24	22.34
14	20.68	25	21.46	13	22.49	Dec. 1	22.20
21	20.98	Sept. 1	21.59	20	22.65	8	22.28
Aug. 1	21.24	8	21.81	27	22.69	15	22.38
6	21.10	15	21.84	Nov. 3	22.57	22	22.38
8	21.03	22	22.05	10	22.82	29	21.59
11	21.25						

B7. Louis M. Conrad. Along River Road, 0.45 mile south of River (Nilles) Road, in Fairfield Township. Drilled test well, diameter 6 inches, depth 183 feet. Measuring point, top of 6-inch plug, flush with top of 6-inch coupling, 1.2 feet above land surface and 562.7 feet above sea level (U.S. Geol. Survey datum).

Water level, in feet below measuring point, 1942

July 6	17.90	Aug. 11	17.70	Sept. 29	17.47	Nov. 17	17.47
11	17.80	18	17.65	Oct. 6	17.45	24	17.44
14	17.79	25	17.64	13	17.53	Dec. 1	17.43
21	17.76	Sept. 1	17.55	20	17.52	8	17.39
24	17.75	8	17.53	27	17.55	15	17.36
Aug. 1	17.80	15	17.52	Nov. 3	17.53	22	17.34
8	17.72	22	17.50	10	17.49	29	17.29

B8. Pauline Benninghofen. 2,500 feet west of River Road and 400 feet south of Miami River, in Fairfield Township. Drilled test well, diameter 6 inches, depth 178 feet (casing opened at 120 feet). Measuring point, top of 6-inch plug flush with top of 6-inch coupling, 0.9 foot above land surface and 558.1 feet above sea level (U.S. Geol. Survey datum).

Water level, in feet below measuring point, 1942

July 6	17.04	Aug. 8	17.04	Sept. 22	16.98	Nov. 17	17.09
11	17.04	11	17.03	29	17.00	24	16.88
14	17.06	18	17.01	Oct. 6	17.00	Dec. 1	16.74
21	17.07	21	17.01	13	17.05	8	16.74
24	17.09	25	17.04	20	17.05	15	16.77
28	17.16	Sept. 1	16.98	27	17.08	22	16.29
Aug. 1	17.15	8	16.98	Nov. 3	17.09	29	16.77
6	17.08	15	16.98	10	17.09		

B9. Henrietta Joyce. About 5,100 feet west of River Road and 6,700 feet north of River (Nilles) Road, in Fairfield Township. Drilled test well, diameter 6 inches, depth 182 feet (casing opened at 80 feet). Measuring point, top of 6-inch plug, flush with top of 6-inch coupling, 0.9 foot above land surface and 566.8 feet above sea level (U.S. Geol. Survey datum)

Water level, in feet below measuring point, 1942

July 6	15.94	Aug. 18	16.15	Oct. 6	16.86	Nov. 24	16.27
11	15.82	25	15.86	13	16.70	Dec. 1	16.16
14	15.79	Sept. 1	16.13	20	17.07	8	16.29
21	16.30	8	16.36	27	17.07	15	16.45
Aug. 1	15.78	15	16.38	Nov. 3	17.09	22	16.56
8	15.62	22	16.59	10	16.50	29	15.69
11	15.59	29	16.75	17	16.80		

B10. Elizabeth Groh. Formerly owned by Carl Schering. About 660 feet west of River Road and 4,000 feet north from River (Nilles) Road, in Fairfield Township. Drilled test well, diameter 6 inches, depth 120 feet (casing opened at 97 feet). Measuring point, top of 6-inch coupling, 1.1 feet above land surface and 562.7 feet above sea level (U.S. Geol. Survey datum). Automatic water-stage recorder installed Aug. 14, 1942.

Lowest daily water level, in feet below measuring point, 1942

Date	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	13.43	14.01	14.36	13.52
2	.....	13.49	14.03	14.35	13.54
3	.....	13.54	14.05	14.37	13.60
4	.....	13.61	14.07	14.40	13.64
5	.....	13.67	14.10	14.40	13.66
6	.....	13.73	14.10	14.39	13.70
7	.....	13.80	14.13	14.41	13.72
8	.....	12.67	14.15	14.42	13.76
9	.....	12.96	14.16	14.42	13.81
10	.....	13.17	14.19	14.45	13.83
11	.....	13.25	14.22	14.23	13.84
12	.....	13.33	14.24	14.18	13.84
13	.....	13.42	14.23	14.20	13.88
14	13.07	13.50	14.25	14.24	13.93
15	13.16	13.55	14.25	14.31	13.93
16	13.25	13.60	14.26	14.34	13.88
17	13.33	13.64	14.27	14.32	13.90
18	13.35	13.68	14.28	14.27	13.92
19	13.14	13.74	14.32	13.40	13.94
20	13.17	13.76	14.33	13.62	13.99
21	13.26	13.76	14.33	13.72	14.04
22	13.35	13.81	14.30	13.64	14.04
23	13.35	13.83	14.28	13.62	13.90
24	12.98	13.85	14.28	13.39	13.51
25	13.10	13.87	14.30	13.41	13.39
26	13.21	13.90	14.33	13.45	13.25
27	13.31	13.92	14.33	13.50	12.51
28	13.39	13.93	14.36	13.55	12.05
29	13.42	13.96	14.37	13.58	11.56
30	13.23	13.98	14.38	13.58	11.10
31	13.35	.....	14.37	.....	10.27

B11. Fred Bandtel. Along Gilmore Road, 0.35 mile south of Miami & Erie Canal, 25 feet east of Gilmore Road, in Fairfield Township. Drilled test well, diameter 6 inches, depth 247 feet (casing opened at 151 feet). Measuring point, top of 6-inch plug flush with top of 6-inch coupling, 3.7 feet above land surface and 616.4 feet above sea level (U.S.Geol.Survey datum)

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 30	43.38	Aug. 1	42.52	Sept.22	43.45	Nov. 17	45.08
July 6	43.15	4	42.51	29	43.82	24	45.07
7	43.16	8	42.48	Oct. 6	43.95	Dec. 1	44.91
8	43.07	18	42.76	13	44.19	8	45.26
14	42.75	25	42.60	20	44.23	15	45.10
21	42.55	Sept. 1	42.98	27	44.55	22	45.15
24	42.55	8	43.16	Nov. 3	44.89	29	45.15
28	42.45	15	43.32	10	44.90		

Hamilton County

T-74 (906, p. 190; *936, p. 217). Frederick Hauck. Geological Survey test well. On Crescentville road 0.5 mile east of Crescentville, in Sycamore Township.

T-74. Frederick Hauck--Continued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 6	10.35	May 4	9.66	July 20	9.59	Oct. 26	14.46
9	10.12	11	9.78	27	9.86	Nov. 9	14.84
10	10.08	18	10.02	Aug. 3	10.31	16	14.95
Mar. 17	9.68	25	9.41	31	12.37	23	13.16
24	9.65	June 8	9.79	Sept. 7	12.71	30	12.72
31	9.60	15	8.60	14	12.87	Dec. 7	12.47
Apr. 7	9.59	22	6.94	21	13.18	14	12.19
9	6.92	29	8.50	Oct. 5	13.72	21	12.00
14	8.08	July 6	9.23	12	14.01	28	9.94
20	8.84	13	9.24	19	14.18	29	9.69
27	9.32						

T-75 (*906, p. 190; 936, p. 217). Frederick Hauck. Geological Survey test well. On Crescentville Road 0.1 mile east of Crescentville, in Sycamore Township.

Water level, in feet below measuring point, 1942

Feb. 6	8.36	May 4	10.11	Aug. 3	10.38	Nov. 2	13.28
9	8.95	11	10.19	24	11.30	9	13.40
10	9.11	25	9.63	31	11.52	16	13.48
Mar. 17	9.33	June 8	10.09	Sept. 7	11.79	23	10.80
24	9.65	15	8.27	14	11.92	30	10.85
31	9.71	22	5.66	21	12.17	Dec. 7	10.98
Apr. 7	9.91	29	8.87	28	12.44	14	10.94
9	5.53	July 6	9.49	Oct. 5	12.56	21	10.94
14	8.16	13	9.15	12	12.79	28	8.07
20	9.30	20	9.72	19	12.96	29	8.00
27	9.82	27	9.86	26	13.16		

204-4 (*886, p. 587; 906, p. 190; 936, p. 217). Albert Sorter Estate. 0.2 mile north of Kemper Road and 100 feet east of Mill Creek, in Sycamore Township.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	15.92	14.76	13.06	12.56	12.34	12.49	11.51	12.99	14.19	14.93	15.66	14.87
2	15.68	14.74	13.06	12.57	12.36	12.53	11.63	13.04	14.21	14.97	15.65	14.75
3	15.71	14.72	13.02	12.58	12.38	12.56	11.72	13.10	14.23	15.05	15.66	14.83
4	15.71	14.68	13.05	12.59	12.43	12.59	11.80	13.15	14.26	15.04	15.67	14.83
5	15.70	14.53	13.04	12.60	12.49	12.62	11.89	13.19	14.33	15.06	15.68	14.83
6	15.67	14.42	13.04	12.61	12.51	12.65	11.98	13.24	14.41	15.07	15.70	14.82
7	15.64	13.96	13.04	12.63	12.52	12.68	12.05	13.28	14.42	15.08	15.71	14.83
8	15.62	13.85	13.04	12.63	12.55	12.70	12.11	13.32	14.43	15.09	15.72	14.82
9	15.59	13.81	12.93	12.64	12.57	12.71	12.19	13.35	14.38	15.10	15.73	14.82
10	15.58	13.79	12.91	9.96	12.59	12.73	12.20	13.45	14.33	15.12	15.75	14.81
11	15.55	13.73	12.90	10.63	12.63	12.74	11.82	13.50	14.39	15.15	15.76	14.80
12	15.54	13.69	12.87	10.89	12.64	12.76	11.93	13.54	14.43	15.17	15.77	14.78
13	15.54	13.67	12.87	11.10	12.65	12.77	11.98	13.58	14.47	15.20	15.79	14.77
14	15.51	13.65	12.83	11.26	12.66	12.59	11.96	13.62	14.49	15.22	15.80	14.77
15	15.47	13.61	12.79	11.38	12.68	12.04	11.94	13.65	14.50	15.25	15.81	14.77
16	15.42	13.56	12.76	11.45	12.69	12.09	12.03	13.70	14.51	15.27	15.82	14.75
17	15.40	13.29	12.64	11.47	12.71	.....	12.12	13.73	14.53	15.31	15.83	14.74
18	15.37	13.18	12.60	11.58	12.72	.....	12.18	.....	14.58	15.34	15.83	14.74
19	15.31	13.17	12.60	11.82	12.73	.....	12.22	13.81	14.63	15.35	15.79	14.74
20	15.25	13.11	12.61	11.88	12.74	.....	12.29	13.84	14.66	15.37	15.70	14.73
21	15.22	13.07	12.60	11.89	12.58	.....	12.33	13.88	14.69	15.39	15.62	14.73
22	15.19	13.03	12.54	11.91	12.35	9.22	12.36	13.91	14.71	15.41	15.55	14.71
23	15.16	13.01	12.55	11.94	12.32	.....	12.42	13.94	14.72	15.43	15.48	14.65
24	15.12	12.99	12.56	11.96	12.34	.....	12.47	13.95	14.75	15.48	15.20	14.49
25	15.08	13.00	12.58	12.07	12.36	10.50	12.54	13.98	14.78	15.50	15.07	14.41
26	15.05	13.00	12.59	12.15	12.37	.....	12.63	14.02	14.79	15.50	15.03	14.34
27	14.98	12.99	12.60	12.23	12.39	.....	12.70	14.03	14.81	15.51	15.01	14.09
28	14.97	13.04	12.58	12.27	12.40	.....	12.76	14.07	14.86	15.56	.....	13.86
29	14.94	.....	12.56	12.31	12.42	11.41	12.82	14.10	14.89	15.61	.....	13.50
30	14.90	.....	12.55	12.32	12.43	11.45	12.89	14.14	14.91	15.63	14.88	12.80
31	14.84	.....	12.56	.....	12.45	.....	12.94	14.17	.....	15.64	.....	11.19

T-68 (*906, p. 191; 936, p. 218). Emmit Ferris. Geological Survey test well. On Kemper Road 30 feet east of Mill Creek, in Sycamore Township. No measurements made during 1942.

T-67 (*906, p. 191; *936, p. 218). Emmit Ferris. Geological Survey test well. On Kemper Road, 0.2 mile east of Mill Creek, in Sycamore township.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 12	8.90	Apr. 14	2.65	July 13	4.20	Oct. 19	7.98
19	8.79	20	3.70	20	4.71	26	8.14
26	8.41	27	4.11	27	5.20	Nov. 2	8.22
Feb. 2	8.17	May 4	4.59	Aug. 3	5.64	9	8.23
9	4.58	11	4.78	24	6.65	16	7.95
10	4.73	18	3.86	31	7.01	23	4.02
Mar. 16	4.14	25	3.47	Sept. 7	7.22	30	4.98
17	3.90	June 1	4.25	14	7.05	Dec. 7	5.56
24	4.09	15	3.28	21	7.25	14	5.92
30	4.19	22	1.80	28	7.58	21	6.20
Apr. 7	4.42	29	3.79	Oct. 5	7.68	28	3.13
13	2.39	July 6	4.38	12	7.86		

T-46 (*886, p. 587; 906, p. 191; 936, p. 218). L. Smizer. Geological Survey test well. On Sharon Avenue, 0.5 mile east from Mostellar Road, in Sycamore Township. Well dry throughout 1942. Measurements discontinued Dec. 28, 1942.

207-3 (*845, p. 381; 886, p. 586; 906, p. 192; 936, p. 218). Village of Glendale. At municipal waterworks plant, on Sharon Avenue 0.2 mile east from Mostellar Road, in Sycamore Township.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	49.39	49.29	49.48	48.67	49.10	48.60	49.00	50.32	51.73	54.45	53.98
2	50.25	49.57	48.70	49.22	49.40	49.08	49.22	49.25	51.00	52.31	52.88	54.30
3	50.09	50.29	48.85	49.27	49.13	49.50	48.66	49.42	50.64	52.30	53.68	54.20
4	49.00	50.00	49.92	50.15	49.55	48.98	48.58	49.91	51.26	52.85	54.21	54.70
5	50.05	49.40	49.75	49.58	48.45	49.90	48.43	49.52	51.46	52.11	54.14	54.50
6	48.82	49.35	49.65	50.30	48.32	50.15	48.12	49.72	51.68	51.74	54.38	54.94
7	50.18	49.65	49.74	50.00	48.80	48.89	48.28	49.35	51.46	51.51	53.73	55.20
8	50.05	50.03	49.48	50.08	48.66	49.30	48.62	49.30	50.35	52.10	54.40	54.88
9	49.49	50.41	50.04	49.50	49.09	49.48	48.21	50.61	50.74	52.42	53.38	54.70
10	50.19	49.29	49.83	50.89	49.04	49.23	48.57	50.05	50.07	52.58	53.70	54.90
11	51.28	49.49	49.77	49.58	48.63	49.18	48.69	50.15	50.80	51.99	53.83	54.41
12	50.29	.....	49.60	49.61	48.31	49.82	48.69	50.15	50.80	51.99	53.83	54.41
13	50.11	48.86	50.01	49.77	49.30	49.12	48.71	49.82	51.03	52.88	54.00	55.72
14	49.83	49.81	50.11	49.51	48.40	50.12	49.00	50.08	51.95	52.81	54.43	55.30
15	50.20	50.86	49.36	49.01	48.38	48.83	48.65	49.93	51.18	52.78	54.50	54.80
16	49.93	49.51	49.12	48.98	48.31	48.20	48.57	50.28	51.61	52.46	54.66	55.25
17	50.41	49.02	49.21	48.91	49.13	48.38	48.64	50.08	51.22	53.07	53.72	55.31
18	49.80	49.33	49.98	50.72	49.29	49.55	49.55	50.00	50.89	54.20	54.22	55.40
19	49.12	50.00	50.11	51.52	49.21	49.12	48.54	49.86	51.58	53.13	54.49	57.25
20	50.33	49.19	49.70	48.78	48.59	49.11	49.06	50.29	52.42	52.48	54.83	55.50
21	49.82	48.71	49.70	48.83	49.58	49.20	49.21	50.85	52.15	52.66	54.00	55.60
22	49.48	50.05	50.31	49.30	48.55	49.02	48.67	50.01	51.20	52.58	54.81	55.25
23	50.38	49.73	50.12	48.73	48.86	48.62	48.92	50.61	51.41	53.08	54.21	55.47
24	50.23	48.82	49.95	49.09	49.34	49.18	49.48	50.19	50.98	53.28	54.04	55.32
25	51.00	49.50	49.85	49.38	49.08	48.93	49.28	50.34	51.55	53.12	53.83	56.22
26	51.00	.....	49.81	49.12	48.58	48.51	49.61	50.00	51.93	53.21	54.29	55.03
27	50.38	48.72	49.98	49.21	49.27	49.20	49.50	50.45	51.56	53.01	54.90	55.87
28	50.48	49.17	49.30	48.93	49.98	49.10	49.40	50.51	52.12	53.40	54.55	55.50
29	49.57	.....	49.74	48.12	49.62	48.83	49.25	50.77	51.90	53.98	55.17	54.91
30	49.98	.....	49.40	50.00	49.65	48.85	49.14	50.68	52.22	53.37	54.82	55.51
31	49.23	.....	49.48	.....	49.63	.....	48.73	50.82	.....	54.13	.....	55.10

207-5 (*845, p. 381; *886, p. 586; *906, p.192; *936,p.219). Village of Glendale. Geological Survey test well. At municipal waterworks plant on Sharon Avenue 0.2 mile east from Mostellar Road, in Sycamore township. Well dry throughout 1942. Measurements discontinued Dec. 28, 1942.

T-47 (*886, p. 585; 906, p. 193; 936, p. 219). Drackett Chemical Co. Geological Survey test well. On Sharon Avenue 0.1 mile west of Mostellar Road, in Sycamore Township. No measurements made during 1942.

212-1 (*845, pp.382-383; *886, p. 585; *906, pp.193-194; *936, pp.219-220). Johns-Manville Corporation. 0.1 mile north of Glendale-Milford road, in Sycamore Township.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	49.07	.....	49.36	50.60	49.65	50.81	50.93	51.86	53.20	54.68	56.44	57.36
2	49.20	50.27	49.52	50.42	49.73	50.93	50.96	51.75	53.39	55.08	56.52	57.92
3	49.60	50.45	49.85	50.35	49.38	51.11	51.23	51.83	53.32	54.92	56.96	58.03
4	49.57	49.92	49.74	50.45	49.76	51.24	50.82	52.28	53.35	54.99	56.82	58.07
5	49.40	49.89	49.73	50.38	49.42	51.16	50.46	52.12	53.81	54.66	56.84	58.38
6	.....	49.92	49.60	50.39	49.50	51.32	50.70	52.14	53.57	55.14	56.93	58.15
7	.....	49.93	49.95	50.85	49.94	51.43	50.72	52.05	53.75	55.22	56.87	58.23
8	.....	50.17	49.75	50.83	50.15	51.18	50.83	52.09	53.65	55.27	56.88	58.17
9	.....	50.10	50.05	50.57	49.85	51.27	50.85	52.06	53.73	55.09	56.68	58.22
10	.....	49.73	49.97	50.32	49.87	51.09	50.95	52.32	53.60	55.42	57.03	58.25
11	.....	49.80	50.15	50.11	49.80	51.21	51.00	52.35	53.73	55.14	57.10	58.15
12	50.03	49.94	50.03	49.82	49.93	51.12	51.06	52.31	53.55	55.40	57.06	58.17
13	49.85	50.04	50.10	.....	50.10	51.38	51.00	52.32	54.16	55.45	57.30	58.40
14	49.93	49.94	50.01	.....	50.06	51.17	51.12	52.37	53.80	55.48	57.44	58.42
15	49.98	50.01	49.94	.....	49.86	50.97	51.13	52.50	53.92	55.57	57.08	58.15
16	49.96	49.64	49.89	.....	50.40	50.90	51.17	52.40	54.25	55.74	57.35	58.40
17	49.83	49.91	49.90	.....	50.09	51.24	51.33	52.45	54.29	55.35	57.43	58.10
18	49.62	50.00	49.98	50.00	49.94	51.30	51.60	52.61	54.06	55.88	57.46	58.40
19	49.80	50.16	50.20	49.94	50.05	51.12	51.26	52.78	54.29	55.75	57.40	58.40
20	50.13	49.90	50.15	49.55	50.65	51.43	51.43	52.65	54.28	55.76	57.60	53.41
21	.....	49.63	49.92	49.57	50.69	51.47	51.47	53.36	54.41	55.56	57.47	58.41
22	.....	49.82	49.92	49.61	50.38	50.95	51.37	52.75	54.47	55.71	57.63	58.45
23	.....	49.67	50.14	49.63	50.38	51.14	51.55	52.76	54.56	56.08	57.57	58.80
24	49.70	49.59	50.34	49.76	50.51	50.95	51.75	53.27	54.51	56.19	57.49	58.85
25	49.78	50.01	50.26	49.73	50.43	51.07	51.52	53.51	54.72	56.01	57.50	58.75
26	50.00	50.01	50.26	49.73	50.43	51.07	51.60	52.91	54.25	56.07	57.49	58.70
27	50.15	49.27	50.37	49.67	50.62	50.97	51.67	53.25	54.35	56.23	57.74	58.65
28	50.50	49.40	50.24	49.67	50.68	50.67	51.75	53.13	55.14	56.26	57.98	58.70
29	50.40	.....	50.35	49.67	51.05	51.09	51.67	53.46	54.81	56.42	57.80	58.61
30	50.42	.....	50.15	49.96	50.81	51.01	51.86	53.22	54.67	56.30	57.67	58.40
31	50.33	.....	50.21	.....	50.71	.....	51.88	53.37	.....	56.44	.....	58.48

T-8 (*886,pp.583-585; 906, p. 194; 936,p.220). Saint Rita School for Deaf Children. Geological Survey test well. Near crossing of Glendale-Milford road and Pennsylvania Railroad.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 12	20.51	May 11	18.43	Sept.14	18.61	Nov. 23	19.24
Mar. 16	20.31	June 15	18.12	21	18.66	Dec. 15	19.31
Apr. 13	19.70	July 20	18.29				

214-3 (*886, pp.583-585; 906,p.195; 936,p.220). Tennessee Corporation Near crossing of Glendale-Milford road and Big Four Route tracks at rear of old office, in Sycamore Township.

Water level, in feet below measuring point, 1942

Jan. 5	33.00	Apr. 6	31.64	July 6	29.19	Oct. 5	32.18
12	32.84	13	30.87	13	29.34	12	32.43
19	32.66	20	30.44	20	29.41	19	32.65
26	32.74	27	30.15	27	29.57	Nov. 2	33.05
Feb. 2	32.84	May 4	29.94	Aug. 3	29.78	9	33.27
9	32.82	11	29.80	10	30.08	16	33.44
16	32.51	18	29.74	18	30.39	23	33.29
23	32.11	25	29.67	24	30.66	30	33.37
Mar. 2	31.85	June 1	29.67	31	30.90	Dec. 7	33.46
9	31.84	8	29.82	Sept. 7	31.16	14	33.56
16	32.10	15	29.79	14	31.43	21	33.64
23	31.84	22	29.39	29	31.95	28	33.67
30	31.64	29	29.18				

215-1 (*906,p.196; 936,p.221). Pennsylvania Railroad. On Harry F. Pittman farm, on Jackson Road 1.3 miles north of Lockland, Sycamore Township. Deep well.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	49.68	Mar. 30	52.54	June 22	57.22	Oct. 5	61.55
12	49.62	Apr. 6	53.40	29	57.90	26	62.31
19	50.18	13	53.32	July 6	57.95	Nov. 2	63.05
26	50.38	20	53.50	13	57.40	9	62.80
Feb. 2	50.85	27	53.31	20	59.30	16	63.59
9	50.95	May 4	52.54	Aug. 3	59.74	23	63.60
16	50.37	11	54.72	24	60.49	30	63.88
23	50.75	18	54.53	31	60.29	Dec. 7	64.60
Mar. 2	51.22	25	56.37	Sept. 7	60.27	14	64.68
9	51.75	June 1	55.45	14	61.10	21	65.51
16	54.55	8	57.67	21	61.07	28	65.31
23	52.55	15	57.88	28	61.66		

215-2 (*845,p.383; 886,pp.582-583; 906,p.196; 936,p.221). Pennsylvania Railroad. On Harry F. Pittman farm, on Jackson Road 1.3 miles north of Lockland, in Sycamore Township. Shallow well.

Water level, in feet below measuring point, 1942

Jan. 5	31.76	Mar. 30	31.81	June 22	31.81	Sept. 28	31.70
12	31.81	Apr. 6	31.82	29	31.81	Oct. 5	31.70
19	31.79	13	31.81	July 6	31.79	26	31.69
26	31.79	20	31.83	13	31.79	Nov. 2	31.69
Feb. 2	31.78	27	31.83	20	31.79	9	31.69
9	31.79	May 4	31.83	27	31.79	16	31.69
16	31.80	11	31.83	Aug. 3	31.79	23	31.68
23	31.81	18	31.83	24	31.73	30	31.68
Mar. 2	31.81	25	31.82	31	31.71	Dec. 7	31.68
9	31.81	June 1	31.82	Sept. 7	31.71	14	31.68
16	31.81	8	31.83	14	31.71	21	31.68
23	31.81	15	31.81	21	31.71	28	31.68

T-59 (*886,pp. 581-582; 906,p.197; 936,p.222). Mary I. Jackson Estate. Geological Survey test well. 0.6 mile north of Lockland, at Big Four Route tracks in Sycamore Township. Measurements discontinued May 16, 1942.

Water levels, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level
Jan. 19	24.19	Feb. 9	23.45	May 16	22.91
Feb. 2	24.02				

T-20 (*886,pp.581-582; *906,p.198; *936,p.222). Wright Aeronautical Corporation. Geological Survey test well. At Shepherd Road and Big Four Route tracks, in Lockland. Measurements discontinued Feb. 9, 1942.

Water levels, in feet below measuring point, 1942

Jan. 5	43.80	Jan. 26	43.61	Feb. 9	43.15
12	43.70	Feb. 2	43.54		

216-0 (*936,p.222). Wright Aeronautical Corporation. 0.25 mile north of Shepherd Road and 0.25 mile east of Lockland Road, Lockland. Well destroyed Apr. 6, 1942. Measurements discontinued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	78.39	Jan. 26	78.60	Feb. 16	78.28	Mar. 9	78.99
12	79.59	Feb. 2	78.98	23	78.76	16	78.88
19	78.83	9	78.90	Mar. 2	78.75	23	79.53

216-A (*936,p.222). Wright Aeronautical Corporation. 0.5 mile north of Shepherd Road and 200 feet east of Big Four Route tracks, in Lockland. Well destroyed Jan. 26, 1942; measurements discontinued. Water levels, in feet below measuring point, 1942: Jan. 5, 69.45; Jan. 12, 69.92; Jan. 19, 70.07.

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216-C (*936,p.223). Wright Aeronautical Corporation. At southeast corner of intersection of Lockland and Jackson Roads, in Lockland.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	73.36	Apr. 20	77.62	July 13	80.55	Oct. 20	90.95
12	73.49	27	77.18	20	81.90	27	91.53
19	74.00	May 4	76.75	27	82.62	Nov. 2	91.90
26	74.10	11	78.90	Aug. 3	84.48	9	91.73
Feb. 2	73.81	18	79.38	24	85.43	16	92.57
9	74.84	25	80.71	31	85.39	23	92.77
Mar. 9	76.00	June 1	78.68	Sept. 7	85.45	30	92.91
16	77.45	8	82.30	14	86.39	Dec. 7	93.48
23	77.02	15	82.62	21	86.25	14	94.04
30	75.95	22	80.65	28	90.78	21	94.71
Apr. 6	77.37	29	81.00	Oct. 5	89.92	28	94.23
13	77.09	July 6	80.72	12	90.36		

216-D (*936,p.223). Wright Aeronautical Corporation. 1,100 feet south of Jackson Road and 120 feet east of Lockland Road, Lockland.

Water levels, in feet below measuring point, 1942

Jan. 5	78.53	Apr. 20	81.50	July 13	86.09	Oct. 19	91.73
12	79.29	27	81.38	20	86.45	26	92.23
19	78.29	May 4	81.68	27	87.10	Nov. 2	92.33
26	78.80	11	82.51	Aug. 3	87.55	9	92.72
Feb. 2	79.46	18	83.13	24	89.23	16	93.21
9	79.62	25	83.82	31	89.36	23	93.15
Mar. 9	79.19	June 1	84.00	Sept. 7	89.77	30	93.52
16	79.75	8	85.30	14	90.04	Dec. 7	94.28
23	80.69	15	85.70	21	90.67	14	94.57
30	80.78	22	86.08	28	91.34	21	94.97
Apr. 6	81.42	29	85.80	Oct. 5	90.95	28	94.42
13	81.57	July 6	85.14	12	91.49		

216-E (*936,p.224). Wright Aeornautical Corporation. At southwest corner of crossing of Jackson Road and Big Four Route tracks, Lockland.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	59.65	61.47	62.16	67.39	65.70	70.40	71.64	72.30	74.02	74.97	75.22	76.82
2	62.38	61.60	62.76	67.91	65.31	71.72	71.70	71.98	72.10	74.82	76.39	75.35
3	62.41	61.77	63.56	66.45	64.33	72.48	72.35	72.42	71.78	74.28	76.82	76.80
4	60.99	61.13	62.63	66.75	64.28	72.71	71.00	72.48	72.34	73.60	74.65	77.74
5	61.18	61.28	63.10	65.55	65.51	72.70	69.59	72.70	72.40	74.41	75.81	77.70
6	61.11	61.86	63.46	66.60	66.32	72.85	71.39	72.60	72.53	75.08	76.53	76.78
7	61.06	62.49	63.30	66.84	70.00	69.75	71.48	72.70	73.52	73.00	76.22	77.63
8	60.92	61.60	62.65	66.31	69.56	70.52	71.60	72.53	74.31	74.55	75.02	77.90
9	60.94	62.32	63.46	66.15	67.82	71.12	69.61	72.20	72.30	75.05	76.10	75.89
10	61.40	61.87	62.84	66.65	66.95	70.92	69.32	72.21	72.38	75.00	76.50	75.62
11	59.87	61.91	63.60	65.78	67.21	70.91	71.54	72.28	73.42	73.30	76.69	77.86
12	61.18	61.73	63.42	64.18	67.35	70.88	69.49	72.76	72.70	75.18	76.79	77.27
13	61.46	62.89	63.51	65.32	69.63	70.85	69.82	73.61	72.50	75.45	76.97	77.22
14	61.23	62.64	64.07	.....	67.92	69.50	71.91	74.00	74.85	73.23	77.26	78.05
15	61.10	61.66	62.75	65.33	66.62	70.40	69.96	72.55	74.62	74.58	76.90	77.72
16	61.39	61.28	68.75	65.92	66.60	70.89	73.12	72.01	72.65	75.08	76.72	78.20
17	60.71	61.83	64.20	67.02	65.88	70.72	72.87	71.98	73.81	75.20	77.05	78.12
18	59.82	62.44	67.51	66.70	67.30	70.78	73.01	71.43	74.38	73.70	77.10	78.78
19	61.18	62.89	63.76	64.32	68.40	.....	72.05	72.22	73.47	75.11	77.12	78.63
20	61.70	62.83	63.60	67.32	68.31	.....	72.32	73.30	73.15	75.39	77.18	78.80
21	61.35	62.85	73.13	66.14	68.52	.....	73.63	73.21	74.59	73.37	77.28	78.58
22	62.92	62.74	62.95	66.30	68.38	69.46	73.60	73.90	74.40	74.97	75.88	78.25
23	63.75	62.28	.....	68.10	68.60	69.51	73.50	73.65	74.40	75.46	76.96	78.72
24	61.21	62.86	64.08	65.82	68.23	69.47	73.65	74.25	72.56	75.70	77.12	78.62
25	60.33	63.14	67.56	65.72	69.88	71.16	73.32	72.15	72.95	73.85	75.30	76.37
26	61.43	62.64	67.07	64.81	71.69	72.62	72.18	71.80	73.82	75.81	76.80	78.10
27	62.30	63.25	66.90	65.16	69.18	71.70	73.00	72.53	73.38	76.00	77.58	78.23
28	62.54	63.28	66.02	65.53	69.40	70.62	73.02	73.41	74.84	76.28	77.55	78.40
29	63.75	.....	68.16	65.60	69.84	71.30	73.30	74.28	75.01	76.32	75.90	78.70
30	63.28	.....	64.02	66.00	71.16	71.58	72.73	71.80	73.81	76.44	77.00	76.70
31	61.08	.....	66.07	.....	68.65	.....	72.09	73.80	.....	76.12	.....	76.40

220-4 (*886,pp.581-582; 906,p.198; 936,p.225). City of Reading. At municipal water plant, on Walnut Street, in Reading. Well destroyed May 4, 1942; measurements discontinued.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	95.45	Feb. 2	96.15	Mar. 2	95.55	Mar. 30	96.22
12	95.18	9	96.04	9	96.07	Apr. 6	96.90
19	95.40	16	95.15	16	95.88	10	96.32
26	95.62	23	95.63	23	96.26	27	96.45

226 (*886,pp.577-578; 906,p.199; 936,p.225). On W. S. Burkhardt property, 500 feet north of Clark Road and 300 feet east of Mill Creek, in Reading. Well dry Apr. 28, 1941, to Dec. 28, 1942. Measurements discontinued Dec. 28, 1942.

T-80 (*906,pp.199-200; 936,p.225). On W. S. Burkhardt property, on east bank of Mill Creek 250 feet north of Amity Road, Reading. Well dry from Apr. 14, 1941, to Dec. 28, 1942. Measurements discontinued Dec. 28, 1942.

236-4 (*936,p.226). Grasselli Chemicals Division, E. I. du Pont de Nemours & Co. At company's plant on Wayne Avenue at crossing of West Fork of Mill Creek, in Lockland.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	106.66	107.25	107.71	108.10	108.16	109.71
2	106.65	107.70	107.83	108.03	108.10	109.70
3	106.76	107.81	107.25	108.37	108.05	109.71
4	107.00	107.58	107.45	107.95	109.02	109.73
5	107.22	107.08	107.33	107.95	109.51	109.74
6	107.22	106.97	107.40	108.65	109.27	109.73
7	107.80	107.22	107.39	108.36	108.18	109.79
8	107.25	107.55	107.33	109.15	109.37	109.95
9	107.05	107.69	107.45	108.77	109.29	110.11
10	107.19	107.50	107.63	108.93	109.56	110.35
11	106.97	108.00	107.50	108.95	109.38	110.46
12	107.01	107.58	108.26	108.30	109.14	110.96
13	107.18	107.76	107.72	109.26	108.97	110.76
14	107.43	107.72	107.73	109.00	109.12	110.96
15	107.12	107.45	107.74	108.78	108.78	111.64
16	107.21	107.10	107.62	108.36	108.75	111.53
17	107.19	107.35	107.53	108.18	109.55	111.77
18	106.88	107.63	107.65	108.22	109.32	111.23
19	107.00	107.67	107.96	108.32	109.49	110.65
20	107.56	107.66	108.34	108.30	109.52	111.37
21	107.05	107.71	107.80	108.26	109.67	111.10
22	107.01	107.66	107.80	108.25	109.67	111.51
23	107.02	107.44	107.90	108.25	109.66	112.01
24	106.87	107.17	108.00	108.24	109.66	112.58
25	106.74	107.33	108.00	108.15	109.69	112.95
26	106.92	107.31	108.00	108.04	109.70	113.08
27	106.90	107.34	107.97	108.05	109.70	113.00
28	107.63	107.59	108.81	108.09	109.67	113.18
29	107.40	.....	108.14	108.20	109.70	112.35
30	107.20	.....	108.13	108.20	109.70	112.87
31	107.03	.....	108.10	.....	109.70	.....

236-4. E. I. du Pont de Nemour & Co.--Continued.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	112.54	113.18	111.58	112.05	112.87	113.49
2	112.96	113.23	112.52	112.09	112.90	114.82
3	113.03	113.02	111.43	112.11	113.47	115.97
4	113.06	113.06	111.54	111.96	114.70	114.20
5	112.09	113.07	111.62	111.82	113.34	114.30
6	112.76	113.10	111.67	112.13	114.74	114.27
7	112.96	113.10	111.50	112.27	113.58	113.61
8	113.07	111.40	111.57	112.37	113.42	114.52
9	113.24	111.10	111.60	112.42	112.96	114.49
10	113.04	111.12	111.65	112.42	114.33	114.41
11	113.00	112.76	111.70	112.35	113.55	114.28
12	113.40	111.45	111.67	112.50	113.41	114.09
13	113.62	111.26	111.57	112.55	113.52	114.61
14	113.39	113.17	112.77	112.56	113.73	115.00
15	113.41	111.35	111.67	112.39	113.58	114.43
16	113.27	111.25	111.74	114.05	114.62	114.35
17	113.44	111.34	113.05	112.60	113.50	114.75
18	113.37	.....	111.76	112.51	113.55	114.87
19	113.46	111.35	111.75	113.58	113.60	114.95
20	113.37	111.36	112.01	112.44	113.57	114.95
21	113.46	111.40	111.98	112.29	113.70	114.79
22	113.53	111.42	111.82	112.20	113.76	114.55
23	113.57	111.43	111.81	112.65	113.27	114.41
24	113.72	112.83	112.97	112.80	113.31	114.45
25	113.87	111.73	112.23	112.80	113.32	114.45
26	113.85	111.63	111.93	112.80	113.60	116.12
27	113.74	111.62	112.18	112.81	113.80	114.67
28	113.68	111.55	112.50	112.93	113.86	114.37
29	113.57	111.53	112.52	113.03	113.62	114.27
30	113.23	111.63	112.37	112.94	113.85	115.81
31	112.95	111.62	.....	112.83	.....	115.70

237-3 (*845,pp.377-378; 886,pp.578-579; 906,pp.200-201; 936,pp.226-227). Village of Wyoming. At municipal water plant,at Vine and Water Streets, Wyoming.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	128.15	128.80	129.04	129.67	129.89	131.57
2	128.25	129.07	128.81	130.66	131.24	131.62
3	128.35	129.16	128.65	129.42	131.22	129.86
4	128.31	128.87	128.78	129.73	131.42	130.00
5	128.50	128.50	128.65	129.70	131.60	129.84
6	128.58	128.38	128.71	129.67	130.04	129.76
7	128.73	128.64	128.70	129.59	131.36	129.54
8	128.70	120.05	128.66	129.93	130.05	130.00
9	128.50	129.13	128.58	129.46	130.16	131.79
10	130.43	128.86	130.72	129.38	131.50	131.43
11	128.57	128.86	130.57	129.63	130.81	131.55
12	128.52	128.91	129.50	130.65	131.09	131.60
13	128.72	120.07	129.37	130.65	129.57	130.36
14	128.60	128.92	129.44	129.40	129.40	130.50
15	128.61	128.64	129.51	129.35	129.65	130.70
16	128.77	128.02	129.22	129.37	129.75	130.16
17	128.50	128.68	129.33	129.31	129.63	130.66
18	128.05	128.95	129.00	129.31	129.83	130.23
19	128.09	128.99	129.70	129.44	129.62	130.14
20	128.23	128.99	130.29	129.49	130.00	130.15
21	128.33	129.00	129.13	129.68	131.33	130.14
22	128.41	130.70	129.40	129.76	131.18	130.46
23	128.42	128.73	.....	129.40	129.51	130.20
24	128.27	128.46	130.73	129.42	131.13	130.38
25	128.25	128.68	129.76	129.74	131.50	130.50
26	130.40	128.65	129.67	129.83	129.55	130.50

237-3. Village of Wyoming--Continued.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
27	130.28	128.64	129.56	131.18	129.55	130.50
28	128.73	128.93	130.73	131.21	129.58	129.93
29	130.60	.....	129.40	131.34	.....	129.68
30	130.35	.....	129.82	131.26	129.86	129.53
31	130.00	.....	129.66	.....	129.77	.....

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	130.07	132.09	132.69	133.37	.....	133.85
2	132.02	132.12	132.66	133.52	134.20	134.10
3	132.38	131.69	132.57	133.58	134.24	134.35
4	132.42	131.93	132.76	133.43	134.34	134.68
5	131.26	131.98	132.87	134.73	134.37	134.25
6	131.32	132.02	132.85	133.66	136.10	134.70
7	131.20	132.07	132.74	133.86	134.58	134.72
8	132.37	131.96	132.86	133.97	134.37	136.17
9	130.65	131.77	132.92	134.01	133.99	134.89
10	130.65	132.02	132.96	134.00	134.55	134.80
11	130.81	132.11	133.05	133.95	134.55	134.70
12	130.90	132.20	132.94	134.00	134.49	134.85
13	130.90	132.20	132.89	134.12	134.35	134.82
14	130.81	132.24	132.95	134.12	134.62	134.88
15	131.21	131.13	132.90	133.93	134.05	134.57
16	131.32	132.20	133.06	134.00	134.25	134.75
17	131.55	132.30	133.09	134.06	135.88	134.55
18	131.61	.....	133.04	134.00	134.53	135.18
19	131.50	132.38	133.09	133.92	134.49	134.90
20	131.62	132.45	133.37	135.20	134.46	135.20
21	131.69	132.50	133.30	133.73	134.25	135.15
22	131.65	132.40	133.15	133.70	134.26	134.51
23	131.74	132.46	133.26	135.63	134.00	134.65
24	131.83	132.71	133.41	135.63	134.12	134.66
25	131.94	132.83	133.56	134.11	134.10	134.72
26	132.02	132.80	133.15	134.10	134.10	134.46
27	132.02	132.78	133.45	134.22	134.51	134.21
28	132.00	132.68	133.82	134.33	134.52	134.30
29	131.95	132.69	133.80	134.39	134.10	134.30
30	131.96	132.76	133.61	134.30	134.10	134.65
31	132.09	132.83	.....	.....	.....	134.78

241-3 (*845,pp.378-379; 886,p.579-580; 906,pp.201-202; 936,pp.228-229). Gardner-Richardson Co., on South Cooper Avenue, in Lockland.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
1	126.28	126.55	126.37	125.28	127.22	128.60
2	126.26	126.43	125.67	125.00	127.36	128.83
3	126.28	126.48	126.08	124.80	127.40	128.98
4	126.36	126.05	125.97	124.83	127.23	129.07
5	126.50	126.65	125.93	124.74	127.26	129.20
6	126.35	126.62	126.02	125.10	127.40	129.23
7	126.65	127.25	125.88	125.57	127.62	128.55
8	.....	127.46	125.45	125.76	127.90	127.95
9	.....	127.05	126.34	125.43	128.09	127.55
10	.....	126.53	126.43	125.87	128.21	127.13
11	.....	126.30	126.22	126.12	127.92	.....
12	126.53	126.17	126.30	125.95	128.16	.....
13	126.52	126.29	125.68	125.63	128.31	.....
14	126.28	126.37	125.88	125.67	128.56	.....
15	126.32	125.79	125.99	125.90	128.73	126.27
16	126.39	125.90	125.50	126.07	129.02	127.05
17	126.30	126.70	126.11	126.10	129.11	127.68
18	126.13	126.87	126.34	126.28	.....	128.08

241-3. Gardner-Richardson Co.--Continued.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June
19	126.14	126.86	126.39	126.32	129.03	128.47
20	126.10	126.61	125.95	125.90	129.10	128.78
21	126.00	126.66	125.79	126.10	129.15	129.10
22	125.97	126.18	125.89	126.24	129.24	129.21
23	126.17	125.91	.....	126.35	129.28	129.42
24	126.15	126.21	125.15	126.43	128.85	129.57
25	125.85	126.42	125.32	126.18	128.85	129.64
26	126.13	126.22	125.14	126.26	128.90	129.66
27	126.00	126.26	124.10	126.14	129.04	129.45
28	126.03	126.29	125.38	126.60	129.10	129.00
29	126.03	.....	125.07	126.93	129.21	128.40
30	125.84	.....	125.13	127.09	129.31	128.74
31	126.60	.....	125.22	.....	128.45	.....

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	128.94	129.87	127.75	127.26	128.36	128.50
2	129.16	129.25	127.94	127.25	128.48	129.10
3	129.24	128.80	128.22	127.37	128.48	129.20
4	129.30	129.10	128.18	127.27	128.40	129.27
5	129.29	128.93	128.09	127.76	128.04	129.41
6	129.24	128.72	128.08	127.93	128.06	129.39
7	129.34	128.52	127.97	128.18	127.93	129.05
8	129.37	128.34	128.10	128.27	127.74	129.20
9	129.53	128.20	128.10	128.35	127.85	129.55
10	129.61	128.10	127.90	128.40	128.67	129.50
11	129.76	128.10	127.80	128.01	128.78	129.42
12	129.77	128.07	127.62	128.25	128.82	129.51
13	129.17	128.00	127.74	128.37	129.28	129.72
14	129.43	127.95	127.67	128.10	129.37	129.50
15	129.57	127.90	127.86	127.73	128.85	129.10
16	129.77	127.98	127.92	127.65	128.66	129.45
17	129.90	128.43	127.86	127.58	128.57	129.46
18	129.98	.....	127.55	127.50	128.86	130.15
19	129.36	128.74	127.44	127.80	129.01	130.22
20	129.12	128.60	127.87	127.92	129.16	130.15
21	129.40	128.45	127.87	127.85	129.50	129.75
22	129.62	128.32	127.45	128.43	129.55	129.04
23	129.81	128.16	127.40	128.85	129.00	129.43
24	129.98	128.29	127.82	128.97	129.34	129.60
25	130.06	128.20	127.88	128.75	129.40	129.29
26	130.17	128.25	127.63	128.93	129.36	128.32
27	130.23	128.00	127.56	128.85	129.06	129.80
28	130.24	127.95	127.93	128.68	128.65	129.86
29	130.30	128.00	127.68	128.37	128.06	129.10
30	130.46	128.00	127.33	128.10	128.15	129.61
31	130.49	127.85	.....	128.18	.....	129.67

242-T. Philip Carey Manufacturing Co. On South Wayne Avenue, in Lockland. Drilled test well, diameter 2 inches, depth 187 feet. Measuring point, top of 2-inch pipe, 4.5 feet above land surface and 573.8 feet above sea level (U. S. Geol. Survey datum).

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept.15	135.19	Oct. 19	135.80	Nov. 16	136.20	Dec. 7	136.29
26	135.30	26	135.95	23	136.01	14	136.45
Oct. 5	135.68	Nov. 3	135.88	30	136.16	28	135.40
12	135.96	9	136.07				

252 (*845,p.383; 886,p.575; 906,pp.204-205; 936,p.229). Flintkote Co. At Seventy-fifth Street and Longview Avenue, in Carthage, a suburb of Cincinnati.

Water level, in feet below measuring point, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	102.85	Apr. 13	105.06	July 13	106.13	Oct. 12	107.19
12	103.00	20	105.09	20	106.22	19	107.26
19	103.35	27	105.18	27	106.39	26	107.35
26	103.59	May 4	105.41	Aug. 3	106.49	Nov. 2	107.55
Feb. 2	103.96	11	105.37	10	106.50	9	107.49
9	104.10	18	105.49	17	106.67	16	107.61
23	104.28	25	105.60	24	106.79	23	107.55
Mar. 2	104.39	June 1	105.68	31	106.79	30	107.70
9	104.67	8	105.82	Sept. 7	106.75	Dec. 7	107.82
16	104.66	15	105.86	14	106.82	14	107.78
23	104.95	22	105.89	21	106.92	21	107.73
30	104.94	29	105.98	28	107.19	28	107.60
Apr. 6	105.01	July 6	105.99	Oct. 5	106.98		

265 (*886,pp.575-576; 906,p.205; 936,p.229). Cities Service Oil Co. On Laidlaw at crossing of Norfolk & Western Railway, in Cincinnati.

Water level, in feet below measuring point, 1942

Jan. 12	126.58	Apr. 13	127.88	July 6	128.55	Oct. 12	129.57
19	126.62	20	127.94	13	128.60	19	129.50
26	126.85	27	127.90	20	128.38	26	129.71
Feb. 2	127.29	May 4	128.24	27	128.75	Nov. 2	129.77
9	127.27	11	128.11	Aug. 3	128.79	9	129.55
16	126.45	18	128.27	24	129.26	16	129.76
23	126.78	25	128.28	31	129.20	23	129.56
Mar. 2	126.82	June 1	128.34	Sept. 7	129.10	30	129.76
9	127.05	8	128.50	14	129.17	Dec. 7	130.05
16	126.09	15	128.64	21	129.37	14	130.20
23	127.54	22	128.60	28	129.86	21	130.47
30	127.46	29	128.62	Oct. 5	129.31	28	129.73
Apr. 6	127.60						

270-A-4 (*886,p.574; 906,p.206; 936,p.230). Proctor & Gamble Co. Abandoned well, at south end of Ross Run well field, on Vine Street near Big Four Route tracks.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	95.70	95.55	95.52	94.68	95.23	94.78	95.06	95.05	94.57	94.26	92.93	94.29
2	95.91	95.55	95.56	94.46	95.27	94.99	95.27	94.36	94.64	94.32	93.15	94.72
3	96.15	95.70	96.00	94.52	94.45	95.10	95.39	94.20	94.71	94.32	93.65	94.77
4	96.41	95.70	96.05	94.78	94.95	95.20	95.48	94.55	94.80	94.28	93.36	94.91
5	95.87	95.92	95.94	94.45	95.03	95.30	95.15	94.81	94.86	94.12	93.85	94.95
6	95.91	95.90	95.94	94.01	95.01	95.31	94.75	94.93	94.53	94.16	94.23	95.04
7	96.05	96.35	95.92	94.70	95.12	94.80	94.50	95.05	94.58	94.19	94.27	95.04
8	96.05	96.35	95.75	94.92	95.17	95.16	95.09	95.09	94.36	94.23	94.33	95.03
9	96.05	96.05	96.05	94.89	95.21	95.28	94.04	94.75	94.56	94.22	94.06	95.13
10	96.18	95.98	96.05	95.27	94.40	95.32	94.15	95.63	94.67	94.19	94.72	95.07
11	96.15	96.38	95.90	95.49	94.28	95.45	94.46	95.00	94.75	94.16	94.73	95.01
12	95.44	96.25	96.02	95.06	94.63	95.52	93.97	95.15	94.71	93.97	94.70	95.12
13	95.63	96.33	96.03	95.00	94.80	95.58	94.00	95.27	94.70	94.08	94.50	95.38
14	95.85	96.30	95.60	95.25	94.98	95.25	94.05	95.34	93.83	94.06	94.70	95.20
15	95.87	95.87	94.82	95.45	95.94	94.70	93.98	95.35	94.20	94.05	94.18	95.00
16	96.08	95.77	94.46	95.59	95.33	95.15	94.14	95.15	94.38	94.10	94.06	95.20
17	95.91	96.33	95.15	95.58	94.49	95.30	93.87	.....	94.45	94.10	94.35	95.19
18	95.90	96.42	95.53	95.61	94.50	95.36	93.51	.....	94.43	93.83	94.70	95.45
19	95.77	96.41	95.74	95.00	94.90	95.44	93.34	95.51	94.00	93.64	94.78	95.42
20	95.86	96.36	95.76	94.85	95.12	95.32	93.55	95.53	93.94	93.73	94.90	95.36
21	95.95	96.34	95.60	95.06	95.18	94.57	94.09	95.61	94.67	93.69	95.08	95.31
22	96.09	96.30	94.95	95.18	94.90	94.53	94.36	95.65	94.65	93.87	94.85	95.03
23	96.09	96.20	95.06	95.30	94.78	94.95	94.58	95.46	94.65	94.05	94.20	95.23
24	96.04	96.27	95.25	95.38	93.76	95.17	94.76	95.50	94.75	94.10	94.76	95.23
25	95.98	96.34	94.35	95.33	94.15	95.25	94.82	95.63	94.76	93.82	94.85	94.91

270-A-4. Proctor & Gamble Co.--Continued.

Lowest daily water level, in feet below measuring point, 1942
(From recorder charts)

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	96.01	96.30	94.36	94.80	94.35	95.30	94.21	95.67	94.50	93.73	95.00	94.40
27	96.08	96.30	94.59	94.82	93.80	94.68	94.23	95.69	94.33	93.83	94.19	94.17
28	96.33	96.37	94.78	95.00	93.78	94.65	94.50	95.71	94.51	93.87	93.50	94.30
29	96.37	.....	94.85	95.11	94.28	94.65	94.71	95.74	94.46	93.24	93.58	94.50
30	96.22	.....	93.83	95.16	94.60	94.90	94.90	95.43	94.31	93.03	93.91	94.92
31	96.25	.....	94.35	.....	94.50	.....	95.00	94.49	.....	93.01	.....	94.94

270-T-7 (*886,p.574; 906,pp.205-206; 936,p.230). Proctor & Gamble Co. Test well in bed of abandoned Miami & Erie Canal, 500 feet south from Murray Road in Ross Run well field, at Ivorydale, a suburb of Cincinnati.

Water level, in feet below measuring point, 1942

Date		Water level	Date		Water level	Date		Water level	Date		Water level
Jan.	5	120.17	Apr.	6	122.40	July	6	122.83	Oct.	6	124.09
	12	119.86		13	122.79		13	122.50		12	124.40
	19	119.99		20	122.87		20	122.75		19	124.34
	26	120.28		27	122.68		27	123.57		26	124.55
Feb.	2	120.72	May	4	123.17	Aug.	3	123.71	Nov.	2	124.26
	9	120.79		11	123.11		10	123.71		9	123.97
	16	119.97		18	123.11		17	124.11		16	124.43
	23	120.23		25	123.22		24	124.18		23	124.31
Mar.	2	120.27	June	1	123.19		31	124.15		30	124.10
	9	120.45		8	123.74	Sept.	7	123.36	Dec.	7	124.67
	16	121.30		15	123.74		14	124.02		14	124.87
	23	122.38		22	123.66		21	124.17		21	124.85
	30	122.09		29	123.62		28	124.62		28	123.90

315-3 (*845,p.379; 886,p.573; 906,p.207; 936,p.231). Globe-Wernicke Co. At Norwood and Carthage Avenues, in Norwood.

Water level, in feet below measuring point, 1942

Jan.	5	185.10	Mar.	2	185.12	Apr.	27	185.55	June	22	185.89
	12	184.85		9	185.35	May	4	185.72		29	186.03
	19	184.68		16	185.48		11	185.71	July	6	185.81
	26	184.83		23	185.72		18	185.68		13	186.07
Feb.	2	185.35		30	185.77		25	185.25		20	186.12
	9	185.46	Apr.	6	185.42	June	1	185.32		24	186.55
	16	184.75		13	185.69		8	185.86	Sept.	7	186.36
	23	185.03		20	185.73		15	185.97			

326 (*906,p.232). Cincinnati Milling Machine Co. At Madison and Marburg Roads, in Oakley, a suburb of Cincinnati.

Water level, in feet below measuring point, 1942

Jan.	12	164.35	Apr.	13	165.59	June	15	165.64	Sept.	14	166.65
Mar.	16	164.79	May	11	165.56	July	20	166.05			

PENNSYLVANIA

By G. D. DeBuchananne

PROGRAM OF WORK

The observation-well program in Pennsylvania, begun in 1931 by the Geological Survey, United States Department of the Interior, in cooperation with the Topographic and Geologic Survey of the Pennsylvania Department of Internal Affairs, was continued in 1942. The program is carried on as part of a systematic survey of the ground-water resources of the State, begun under the same cooperation some years earlier. During the year about 1,400 measurements of water level were made, and at the end of the year 26 wells were under observation. An automatic water-stage recorder was maintained on one well--well 100, at Montrose, Susquehanna County--and at the same well a rain gage was maintained.

FLUCTUATIONS OF WATER LEVEL

Pumping affects the observation wells in Pennsylvania but little. During 1942 water was withdrawn from only one of them--well 76, near Wapwallopen, Luzerne County, which is pumped occasionally during dry periods. Well 57, at Sunbury, Northumberland County, and well 61, at Newport, Perry County, may be affected by the pumping of nearby wells.

Figure 3 shows the weekly average of water levels in 1942, the highest and lowest weekly averages prior to 1942, and the 10-year weekly average, which is a composite of the weekly averages from the beginning of record in the period 1932 to 1941. Graphs of the monthly precipitation during 1942 and of the 55-year normal monthly precipitation are also included in the figure.

Precipitation was above normal during most of 1942. As a consequence the weekly average water level at the end of the year was about 1.7 feet higher than the weekly average at the beginning of the year. During the first week in January the 1942 weekly average was slightly below the 10-year weekly average. At the end of December the 1942 weekly average was 1.58 feet above the 10-year weekly average.

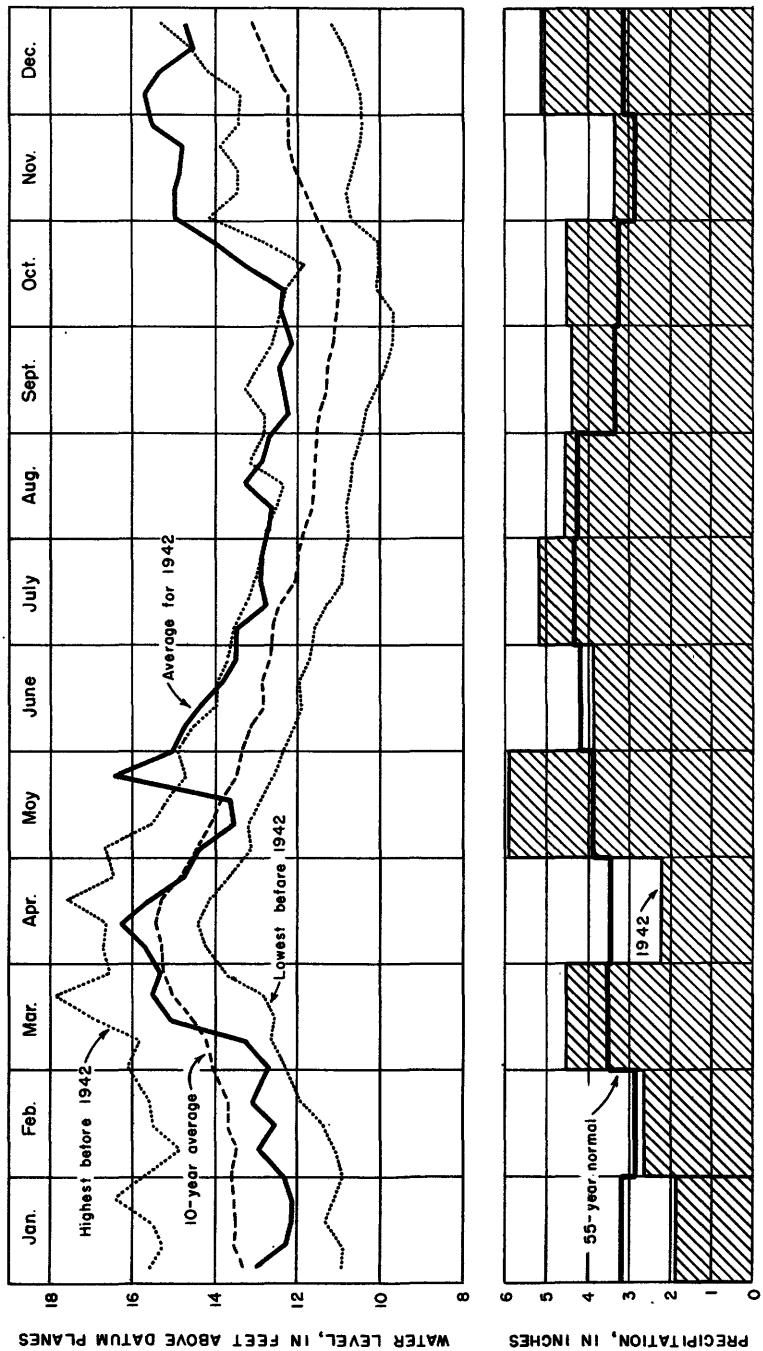

Figure 3.--Graphs showing average ground-water levels and precipitation in Pennsylvania in 1942, in comparison with previous years of record.

During 1942 the weekly average water level followed the trend of the 10-year weekly average, rising and falling in response to precipitation and to the demands of vegetation for water. The 1942 weekly average was above the 10-year weekly average during most of the year. Precipitation was above normal during the months of May, July, August, and September, but because of the demands of vegetation the weekly average water level declined throughout these months. The demands of vegetation were responsible, also, for a decrease in recharge, which, in turn, caused a loss of ground water from storage and thereby lowered the level of the water table. After the growth of vegetation had ceased, the precipitation continued above normal, and, as a result, during the months of October, November, and December ground-water levels rose.

The weekly average in 1942 was below the 10-year weekly average only twice during the year. Record new highs were established for periods in each of the months of May, June, August, October, November, and December. No new record lows occurred.

In 10 wells in 1942 the water levels reached new highs for the period of record (1 in January, 1 in March, 3 in April, 3 in May, 1 in August, and 1 in December), and in 5 wells they reached new lows (1 in January, 1 in February, 2 in October, and 1 in December).

Weekly average of water levels in observation wells in Pennsylvania, in feet above assumed datum planes, 1942

Date	Number of wells	Water level	Date	Number of wells	Water level
Jan. 4	26	13.08	July 5	25	13.44
11	29	12.33	12	28	12.75
18	29	12.15	19	27	12.90
25	28	12.14	26	26	12.87
Feb. 1	28	12.35	Aug. 2	25	12.70
8	29	12.95	9	26	12.62
15	28	12.51	16	25	13.31
22	29	13.11	23	25	12.85
Mar. 1	28	12.69	30	26	12.67
8	28	13.25	Sept. 6	26	12.20
15	29	15.11	13	26	12.34
22	28	15.49	20	25	12.46
29	28	15.29	27	26	12.15
Apr. 5	28	15.70	Oct. 4	25	12.41
12	28	16.27	11	25	12.34
19	27	15.60	18	23	13.24
26	26	14.74	25	22	14.00
May 3	28	14.35	Nov. 1	25	14.99
10	28	13.56	8	25	15.00
17	27	13.60	15	25	14.92
24	27	16.46	22	25	14.82
31	27	15.00	29	25	15.59
June 7	26	14.71	Dec. 6	26	15.76
14	27	14.32	13	26	15.40
21	26	13.79	20	27	14.58
27	26	13.44	27	25	14.76

The records of water-table fluctuations in the Susquehanna River Valley are used regularly by the Pennsylvania Water & Power Co. in predicting minimum stream flow. The method of arriving at the predictions was developed by C. F. Merriam,[1/] and, by means of it, the flow of the river at any given time in the future can be predicted. The method assumes, however, that no rainfall and no freeze will occur. Although the worst possible conditions are thus assumed, the predictions are nevertheless considered valuable in planning the operations of the company's power stations. Records of the water levels in wells in the Susquehanna Valley are furnished to the company each week as soon as they are received in order that the predictions may be kept up to date.

WATER-LEVEL MEASUREMENTS

Observation wells in Pennsylvania are listed alphabetically by counties and numerically within each county. Complete descriptions of the wells are not given because they have already been published. The numbers in parentheses immediately following a well number indicate the water-supply papers in which earlier records of that well are given and the pages on which they appear. An asterisk preceding the number of a water-supply paper indicates that a description of the well is given in the paper so marked. The water level in each well is expressed in feet above an assumed datum plane. For the following wells datum planes were determined in 1942 and are used for the first time in this report: Well 116, in Bedford County; well 117, in Mifflin County; well 118, in Elk County; well 119, in Lancaster County; and well 120, in Butler County. These five wells were established during the fall of 1941, and their water-level records, as published in Water-Supply Paper 936, were expressed in feet below measuring point. Conversion factors are given in the present report in order that all the measurements made in these wells may be based on a common datum.

1/ Merriam, C. F., Analysis of natural fluctuations in ground-water elevation: Am. Geophys. Union Trans. 1942, pt. 2, pp. 598-602, National Research Council, 1942.

Bedford County

116 (*936, p. 241). At West Saxton. Assumed datum plane is 65.58 feet below measuring point. Extremes of observed water level, in feet above assumed datum: Highest, 18.74 Apr. 11, 1942; lowest, 12.34 Oct. 2 and 9, 1942.

Water level, in feet above an assumed datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	13.71	Apr. 11	18.74	July 10	13.79	Oct. 9	12.34
10	12.57	18	15.72	17	13.63	16	12.69
17	12.41	25	14.59	24	13.45	23	14.30
24	12.42	May 2	14.41	31	13.31	30	13.84
Feb. 7	12.45	9	14.29	Aug. 7	13.14	Nov. 6	13.52
14	12.67	16	13.81	14	12.96	13	13.36
21	13.13	23	15.87	21	12.85	20	13.16
28	12.89	30	15.09	28	12.43	27	13.13
Mar. 7	13.36	June 6	14.70	Sept. 4	12.40	Dec. 4	14.38
14	15.00	13	15.40	12	12.49	11	14.22
21	15.59	20	14.24	18	12.44	18	13.83
28	15.38	27	14.08	25	12.35	25	14.13
Apr. 4	16.60	July 3	14.02	Oct. 2	12.34		

Berks County

114 (*817, p. 268; 845, p. 417; 886, p. 628; 906, p. 217; 936, p. 241). At Bally. Extremes of observed water level, in feet above assumed datum: Highest, 24.50 Aug. 14, 1942; lowest 8.95 Feb. 9, 1940.

Water level, in feet above assumed datum, 1942

Jan. 2	9.50	Mar. 27	12.09	June 18	10.58	Sept. 4	12.52
9	9.50	Apr. 3	12.11	26	10.78	11	12.00
16	9.50	10	12.03	July 3	10.56	18	11.63
23	9.51	17	11.81	10	10.46	25	11.46
30	9.63	24	11.59	17	10.43	Oct. 2	11.68
Feb. 6	9.84	May 1	11.25	24	10.39	9	11.59
13	10.06	8	11.03	31	10.25	Nov. 12	17.79
20	10.36	15	10.72	Aug. 7	10.48	Dec. 5	14.97
27	10.36	22	10.69	14	24.50	12	13.17
Mar. 6	10.35	29	10.85	21	18.96	19	12.37
13	10.76	June 5	10.96	28	14.23	26	12.07
20	11.44	11	10.63				

Bradford County

81 (*817, p. 268; 845, p. 417; 886, p. 628; 906, p. 217; 936, p. 242). At Monroeton. Extremes of observed water level, in feet above assumed datum: Highest, 13.70 Apr. 6, 1941; well dry Sept. 24 to Oct. 8, 1932, Oct. 3-17, 1936, Aug. 20 to Oct. 29, 1939, Oct. 5-19 and Oct. 26 to Nov. 29, 1941, Sept. 21, 1942.

Water level, in feet above assumed datum, 1942

Jan. 4	11.72	Mar. 26	12.53	June 29	10.62	Sept. 27	9.73
9	11.63	30	12.03	July 5	10.61	Oct. 4	10.61
11	11.60	Apr. 5	12.01	11	10.59	12	10.66
19	11.58	12	12.37	19	11.20	19	12.28
25	11.43	19	12.02	25	10.68	24	12.11
Feb. 1	11.61	28	11.95	27	10.67	27	12.47
8	11.79	May 4	11.80	Aug. 2	10.59	Nov. 2	12.18
12	11.78	11	11.31	9	10.48	9	11.92
15	11.79	17	11.54	16	10.36	16	11.83
23	12.12	25	12.31	23	10.24	23	12.04
Mar. 1	11.70	June 1	12.03	31	9.96	29	12.03
8	12.61	8	11.94	Sept. 6	9.82	Dec. 6	11.91
11	12.43	14	11.84	13	9.78	15	12.63
15	12.59	21	11.10	14	9.71	21	11.56
23	12.25	22	11.03	21	(a)	27	11.69

a Dry.

82 (*817, p. 269; 845, p. 418; 886, p. 629; 906, p. 219; *936, p. 242). At East Towanda. Extremes of observed water level in feet above assumed datum: Highest, 37.82 Mar. 21, 1942; lowest, 2.62 Feb. 15, 1942.

Water level, in feet above assumed datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	4.82	Apr. 5	31.83	July 5	17.28	Oct. 4	9.02
11	4.63	12	33.44	12	16.44	11	8.77
17	3.98	19	31.42	19	15.56	19	8.55
24	3.65	26	26.62	24	14.98	24	14.38
Feb. 1	3.26	May 3	27.84	26	14.85	25	14.98
8	2.77	10	21.44	Aug. 2	14.05	Nov. 1	24.99
15	2.62	17	19.72	8	13.37	8	27.68
21	3.16	24	20.57	16	12.61	15	26.12
28	3.82	31	22.82	23	11.92	22	24.74
Mar. 8	5.32	June 7	21.55	30	11.10	29	24.37
11	14.06	14	20.55	Sept. 6	10.44	Dec. 6	32.79
15	20.52	21	19.43	13	9.83	13	29.34
22	30.42	22	19.21	20	9.24	20	27.12
27	31.89	28	18.22	27	8.76	27	25.45
29	30.93						

Butler County

120 (*936, p. 242). At West Sudbury. Assumed datum plane is 22.85 feet below measuring point. Extremes of observed water level, in feet above assumed datum: Highest, 16.01 Mar. 14, 1942; lowest, 12.63, Oct. 10, 1942.

Water level, in feet above an assumed datum, 1942

Jan. 3	13.71	Apr. 4	14.19	July 4	13.25	Oct. 3	12.71
10	13.78	11	15.67	11	13.26	10	12.63
17	13.63	18	14.24	18	13.15	17	12.75
24	13.58	25	13.85	25	13.08	24	13.04
31	13.62	May 2	13.58	Aug. 1	13.00	31	13.36
Feb. 7	15.01	9	13.35	8	12.90	Nov. 7	13.75
14	14.39	16	13.58	15	13.05	14	13.83
21	14.81	23	14.99	22	13.16	21	13.85
28	14.06	30	14.29	29	13.21	28	14.45
Mar. 7	13.85	June 6	13.95	Sept. 5	13.08	Dec. 5	14.59
14	16.01	13	13.67	12	12.89	12	13.95
21	14.91	20	13.45	19	12.82	19	13.78
28	14.44	27	13.45	26	12.75	26	15.77

Centre County

38 (*817, p. 271; 845, p. 418; 886, p. 629; 906, p. 219; 936, p. 243). At Central City. Extremes of observed water level, in feet above assumed datum: Well flooded Mar. 21, 1936; lowest, 9.34 Sept. 23, 1939.

Water level, in feet above assumed datum, 1942

Jan. 3	11.62	Mar. 28	11.42	June 27	11.02	Sept. 26	10.70
7	11.30	Apr. 4	13.08	July 4	11.00	Oct. 3	11.02
10	11.30	11	12.56	11	11.07	10	10.98
17	11.24	18	11.88	18	10.98	24	11.17
24	11.32	25	11.50	25	11.10	31	11.22
31	11.34	May 2	11.14	Aug. 2	11.00	Nov. 7	11.26
Feb. 7	11.40	9	11.22	8	11.06	14	11.22
14	11.26	16	11.50	15	11.04	21	11.16
21	11.32	23	13.05	22	11.00	28	11.56
28	11.24	30	11.52	29	10.92	Dec. 5	11.44
Mar. 7	11.76	June 6	11.26	Sept. 5	10.88	12	11.30
14	11.95	13	11.18	11	10.90	19	11.22
21	11.90	20	10.96	19	10.74	26	11.40

Clarion County

103 (*817, p. 272; 845, p. 419; 886, p. 629; 906, p. 219; 936, p. 243). At Clarion. Extremes of observed water level, in feet above assumed datum: Highest, 14.48 Apr. 9, 1938; lowest, 5.60 Oct. 26, 1940.

Water level, in feet above assumed datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	9.82	Apr. 4	13.23	July 11	9.93	Oct. 3	10.26
10	9.66	11	14.12	18	9.56	10	9.07
17	8.77	18	13.08	25	9.29	17	14.05
24	9.40	25	10.99	Aug. 1	9.56	31	11.76
31	9.20	May 2	10.90	8	9.72	Nov. 7	12.16
Feb. 7	10.30	9	9.33	15	10.37	14	11.34
14	11.88	16	8.66	22	9.64	21	11.39
21	12.38	23	9.69	29	9.44	28	12.06
28	10.85	30	9.94	Sept. 5	8.77	Dec. 5	12.86
Mar. 7	10.14	June 6	9.00	12	12.77	12	10.77
14	13.86	13	8.66	19	11.20	19	10.26
21	13.20	20	9.54	26	10.26	26	10.74
28	12.60	27	8.60				

Clearfield County

111 (*817, p. 274; 845, p. 419; 886, p. 630; 906, p. 220; 936, p. 243) Near Bower. Extremes of observed water level, in feet above assumed datum: Highest, 16.68 Apr. 20, 1940 and Apr. 12, 1942; lowest 9.31 Dec. 15, 1939.

Water level, in feet above assumed datum, 1942

Jan. 3	14.45	Mar. 21	16.43	June 7	15.01	Aug. 7	12.28
10	14.06	30	16.62	8	15.43	14	12.23
16	13.40	Apr. 6	16.33	14	14.43	24	12.23
23	14.49	12	16.68	20	13.38	28	12.15
Feb. 1	14.74	18	16.45	28	13.25	29	12.06
8	14.86	27	15.15	July 2	13.47	Sept. 5	12.19
14	14.05	28	15.07	10	13.06	11	11.87
21	14.63	May 3	14.53	17	12.65	18	11.89
27	14.99	9	14.45	21	12.61	26	11.66
Mar. 2	14.47	17	13.94	24	12.39	Oct. 2	12.16
10	15.93	24	15.30	31	12.51	10	11.76
14	16.03	30	15.43				

Columbia County

75 (*817, p. 274; 845, p. 420; 886, p. 630; 906, p. 220; *936, p. 244). At Fernville. Extremes of observed water level, in feet above assumed datum: Highest, 19.63 Sept. 2, 1933; lowest, 10.00 Dec. 15, 1931.

Water level, in feet above assumed datum, 1942

Jan. 3	13.05	Apr. 11	13.31	July 11	12.64	Oct. 3	11.11
10	12.24	18	13.21	18	13.03	10	12.27
17	11.80	25	13.71	25	13.84	17	12.81
24	11.85	May 2	13.26	Aug. 1	13.73	24	12.60
31	11.39	9	12.86	8	12.59	31	12.34
Feb. 7	11.47	16	13.02	15	12.60	Nov. 7	12.54
14	11.21	23	14.86	22	12.53	14	13.47
21	11.51	30	14.61	29	12.37	21	13.61
28	12.96	June 6	14.76	Sept. 3	11.60	28	14.81
Mar. 7	13.54	13	13.82	12	11.70	Dec. 5	14.51
13	13.83	20	13.40	18	11.47	12	14.11
21	13.95	27	13.27	26	11.28	19	14.49
28	13.79	July 4	13.86	31	11.21	26	13.15
Apr. 4	13.57						

Elk County

118 (*936, p. 244). At Kersey. Assumed datum plane is 24.15 feet below measuring point. Extremes of observed water level, in feet above assumed datum: Highest, 14.65 Apr. 4, 1942; lowest, 12.25 Nov. 29 and Dec. 20, 1941.

Water level, in feet above an assumed datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	12.67	Apr. 4	14.65	July 3	13.30	Oct. 2	13.44
10	12.90	11	14.50	10	13.26	9	13.43
17	12.67	18	14.55	17	13.00	16	13.69
24	12.99	25	14.50	24	13.41	23	13.86
31	13.34	May 2	14.35	31	13.48	30	14.10
Feb. 7	13.38	9	14.26	Aug. 7	13.26	Nov. 6	14.55
14	13.11	16	14.00	14	13.38	13	14.47
21	13.38	23	14.30	21	13.39	20	14.53
28	13.35	30	14.14	28	13.69	27	14.47
Mar. 7	13.95	June 6	14.04	Sept. 4	13.46	Dec. 4	14.25
14	13.90	13	14.00	11	13.58	11	14.39
21	14.65	20	13.80	18	13.49	18	13.90
28	14.10	27	13.40	25	13.36	25	13.99

Erie County

1 (*817, p. 276; 845, p. 420; 886, p. 630; 906, p. 220; 936, p. 244). Near Carters Corners. Extremes of observed water level, in feet above assumed datum: Highest, 16.65 Apr. 4, 1940; well dry Sept. 8 to Dec. 1, 1934.

Water level, in feet above assumed datum, 1942

Jan. 3	11.67	Apr. 4	12.72	July 20	7.02	Oct. 10	5.97
10	11.29	12	13.84	25	7.77	17	6.07
17	9.97	19	13.19	Aug. 1	5.94	24	6.90
24	10.07	May 11	8.04	8	6.62	Nov. 1	9.12
31	10.87	17	13.39	15	6.47	8	10.17
Feb. 7	11.02	24	14.87	22	6.42	15	11.92
14	11.87	31	13.02	29	6.27	21	11.92
21	12.77	June 5	12.53	Sept. 5	6.17	22	13.57
28	11.82	13	8.22	12	6.02	29	13.97
Mar. 7	10.17	20	8.07	19	5.97	Dec. 6	11.97
15	14.40	27	7.57	26	6.02	13	11.97
24	13.72	July 13	6.42	Oct. 6	5.99	19	10.72
28	13.38						

Huntingdon County

47 (*817, p. 279; 845, p. 421; 886, p. 631; 906, p. 221; 936, p. 245) Near Trexler Bridge. Extremes of observed water level, in feet above assumed datum: Highest, full, Mar. 15, 1941; lowest, 9.91 Oct. 1, 1932.

Water level, in feet above assumed datum, 1942

Jan. 3	16.76	Apr. 4	18.79	July 3	17.42	Oct. 3	13.46
10	15.89	11	20.15	11	14.98	10	13.82
17	15.78	18	19.26	18	14.48	17	15.89
24	15.13	25	15.97	25	14.22	24	15.97
Feb. 1	14.68	May 2	14.80	Aug. 1	13.94	31	15.03
7	18.23	9	14.57	8	13.76	Nov. 7	14.03
14	15.52	16	14.31	15	13.77	14	13.97
21	15.94	23	18.83	22	14.56	21	13.81
28	15.47	30	17.61	29	14.18	28	13.90
Mar. 7	16.72	June 6	17.56	Sept. 5	13.84	Dec. 5	14.99
14	17.01	13	17.66	12	13.65	12	15.35
21	17.89	20	15.33	19	13.47	19	14.55
28	17.05	27	15.18	26	13.16	26	14.06

50 (*817, p. 281; 845, p. 422; 886, p. 631; 906, p. 221; 936, p. 245) Near Petersburg. Extremes of observed water level, in feet above assumed datum: Highest, 14.86 Jan. 3, 1942; lowest, 7.95 Sept. 28, 1940.

Water level, in feet above assumed datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	14.86	Apr. 4	13.89	July 3	13.21	Oct. 3	11.17
10	13.11	11	13.89	12	12.60	10	11.01
17	13.13	18	13.52	18	12.16	17	13.07
24	13.21	25	13.07	25	11.86	24	12.57
31	12.96	May 2	12.73	Aug. 1	11.86	31	12.37
Feb. 7	13.60	9	12.81	8	12.05	Nov. 7	12.13
14	13.37	16	13.30	15	11.80	14	11.87
21	13.32	23	14.73	22	11.54	21	11.79
28	12.72	30	13.12	29	11.52	28	12.63
Mar. 7	13.75	June 6	13.12	Sept. 5	11.13	Dec. 5	13.16
14	13.61	13	13.77	12	11.07	12	13.06
21	13.67	20	13.94	19	10.99	19	12.58
28	13.32	27	13.51	26	10.76	26	13.03

Lackawanna County

101 (*817, p. 283; 845, p. 422; 886, p. 631; 906, p. 221; 936, p. 245) At Waverly. Extremes of observed water level, in feet above assumed datum: Well flooded, Mar. 17, 18, and 19, 1936, and Mar. 30, 1940; lowest, 8.29 Sept. 30, 1939.

Water level, in feet above assumed datum, 1942

Jan. 10	11.83	Apr. 11	14.92	July 11	13.64	Oct. 10	12.52
17	12.05	18	14.89	18	13.62	17	13.26
24	12.26	25	14.25	25	13.42	24	13.58
31	13.04	May 2	14.02	Aug. 1	13.21	31	14.11
Feb. 7	12.68	9	13.71	8	13.14	Nov. 8	14.16
14	12.26	16	14.38	15	12.18	14	14.26
21	12.35	23	15.06	22	11.42	19	14.18
28	12.41	29	14.96	29	11.20	21	14.42
Mar. 7	13.11	June 6	14.85	Sept. 5	10.80	28	14.92
14	13.96	13	14.64	12	11.20	Dec. 5	14.78
21	14.98	20	14.26	19	11.42	12	14.30
28	15.01	27	13.80	26	11.48	19	13.46
Apr. 4	14.76	July 4	13.37	Oct. 3	12.13	26	14.38

102 (*817, p. 284; 845, p. 423; 886, p. 632; 906, p. 222; 936, p. 246) Near Carbondale. Extremes of observed water level, in feet above assumed datum: Highest, 19.06, Mar. 21, 1936; lowest, 8.46 Dec. 1, 1932.

Water level, in feet above assumed datum, 1942

Jan. 4	13.73	Apr. 5	15.53	July 4	12.48	Oct. 3	14.47
11	13.07	12	16.13	11	12.29	10	14.53
18	12.73	19	15.61	18	12.71	17	13.98
25	13.16	26	14.73	25	13.75	24	14.96
Feb. 1	13.13	May 3	13.23	Aug. 1	14.87	31	15.95
8	12.73	10	12.68	8	14.68	Nov. 7	15.13
15	12.03	17	12.27	15	14.74	14	14.71
22	11.39	24	17.31	22	13.58	21	14.69
Mar. 1	12.43	31	14.88	29	12.61	28	16.82
8	13.63	June 7	14.17	Sept. 5	11.65	Dec. 5	16.25
15	14.57	14	13.59	12	12.29	12	15.25
21	16.46	21	14.33	19	12.02	19	13.75
29	15.91	29	13.23	26	11.73	26	12.70

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Lancaster County

119 (*936, p. 246). At West Quarryville. Assumed datum plane is 32.56 feet below measuring point. Extremes of observed water level, in feet above assumed datum: Highest, 22.37 May 23, 1942; lowest 7.46 Jan. 31, 1942.

Water level, in feet above an assumed datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 10	8.26	Apr. 4	12.37	July 4	13.96	Oct. 17	14.66
17	8.16	11	12.78	11	13.59	25	15.41
24	7.76	18	12.48	18	13.28	31	19.81
31	7.46	25	12.49	25	12.90	Nov. 7	17.69
Feb. 7	7.74	May 2	12.55	Aug. 1	12.67	14	17.08
14	7.93	9	12.58	29	18.09	21	16.72
21	8.05	16	12.75	Sept. 8	16.69	28	18.29
28	8.21	23	22.37	12	15.92	Dec. 5	22.29
Mar. 7	8.55	30	17.30	19	15.30	12	20.04
14	9.60	June 6	15.29	26	14.82	19	18.12
21	10.40	13	14.76	Oct. 3	14.48	26	17.86
28	10.54	20	14.58	10	14.15		

Luzerne County

76 (*817, p. 287; 845, p. 424; 386, p. 632; 906, p. 222; *936, p. 247) Near Wapwallopen. Extremes of observed water level, in feet above assumed datum: Highest, 20.68 Aug. 5, 1933; lowest, 8.96 Sept. 3, 1941.

Water level, in feet above assumed datum, 1942

Jan. 4	14.50	Mar. 30	15.86	June 28	13.80	Oct. 4	11.10
11	14.07	Apr. 6	14.65	July 5	13.55	12	11.40
16	14.47	12	16.15	12	13.60	18	11.70
18	13.70	19	15.15	19	14.00	25	12.60
25	14.80	26	13.95	22	14.76	27	17.87
Feb. 1	14.23	May 3	12.95	26	14.00	Nov. 1	15.00
8	15.05	7	13.17	Aug. 9	13.40	8	14.60
15	14.00	11	13.43	16	13.65	15	14.00
21	14.73	19	13.70	23	13.30	22	14.00
22	14.00	24	17.15	30	13.00	29	15.65
Mar. 1	13.65	31	14.75	Sept. 7	12.15	Dec. 6	15.40
8	14.15	June 7	14.55	10	12.39	9	14.86
15	14.10	14	14.10	13	12.15	14	13.85
22	15.55	18	14.11	20	11.33	20	13.90
29	15.15	21	14.00	29	10.75	27	13.65

Mifflin County

117 (*936, p. 247). At Naginey. Assumed datum plane is 32.54 feet below measuring point. Extremes of observed water level, in feet above assumed datum: Highest, 24.08 May 23, 1942; lowest, 9.94 Nov. 29, 1941.

Water level, in feet above an assumed datum, 1942

Jan. 3	14.44	Mar. 7	15.44	May 23	24.08	Nov. 7	13.98
10	13.41	14	16.64	June 13	14.53	14	13.15
17	13.34	21	16.44	27	11.84	21	12.01
24	14.34	28	15.74	July 5	10.94	28	13.04
31	13.84	Apr. 4	19.44	11	10.29	Dec. 5	12.97
Feb. 7	14.52	11	19.64	18	13.10	12	13.27
14	14.04	May 2	13.64	Oct. 24	13.97	19	13.14
21	14.26	9	13.06	31	15.46	26	13.93
28	13.64	16	13.78				

Northumberland County

57 (*817, p. 291; 845, p. 425; 886, p. 633; 906, p. 223; 936, p. 247) At West Sunbury. Extremes of observed water level, in feet above assumed datum: Highest, 23.80 Mar. 28, 1936; lowest, 9.40 Dec. 21, 1941.

Water level, in feet above assumed datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	10.26	Apr. 5	12.55	June 28	12.90	Sept. 27	13.24
6	10.40	12	12.23	July 5	12.68	Oct. 4	13.21
11	10.25	19	12.42	12	12.61	11	12.99
17	10.21	26	12.36	19	12.99	18	13.12
24	10.19	27	12.84	20	12.67	25	13.06
31	10.27	May 3	12.09	26	12.97	Nov. 1	13.08
Feb. 7	10.43	10	11.84	Aug. 2	13.19	8	13.16
14	10.31	17	11.91	9	13.26	15	13.30
21	10.24	24	13.76	16	13.42	22	13.32
28	10.32	31	14.08	23	13.37	29	13.34
Mar. 2	10.39	June 7	13.61	30	12.94	Dec. 6	13.10
8	11.41	11	13.09	Sept. 6	12.39	13	12.86
15	12.79	14	13.19	13	12.40	20	12.79
22	13.12	21	13.02	20	12.52	27	12.70
29	12.82						

Perry County

61 (*817, p. 292; 845, p. 425; 886, p. 633; 906, p. 223; 936, p. 248). At Newport. Extremes of observed water level, in feet above assumed datum: Highest, 19.11 June 7, 1940; lowest, 9.69 Dec. 12, 1941.

Water level, in feet above assumed datum, 1942

Jan. 2	10.40	Apr. 3	13.36	July 3	13.48	Sept. 26	12.81
9	10.53	10	14.25	10	13.09	Oct. 3	13.09
17	10.58	18	15.18	15	12.99	10	12.90
24	10.62	24	14.68	17	12.89	17	13.23
27	10.63	May 1	14.25	24	12.96	24	14.52
30	10.63	8	13.87	Aug. 1	13.08	31	15.07
Feb. 6	10.83	15	13.44	7	13.05	Nov. 7	15.16
14	11.02	23	14.75	8	12.75	14	14.55
21	11.15	29	15.48	15	13.19	21	14.04
24	11.22	June 2	15.24	21	14.45	28	13.91
27	11.29	5	15.12	29	14.41	Dec. 5	14.30
Mar. 6	11.54	13	14.74	Sept. 4	14.08	12	14.39
13	11.91	20	14.34	11	13.54	19	13.84
20	12.54	27	13.72	18	13.17	26	13.49
27	12.89						

110(*840, p. 359; 845, p. 426; 886,p. 634; 906, p. 223; *936, p. 248) Near Millerstown. Extremes of observed water level, in feet above assumed datum: Highest 12.75 Dec. 4, 1942; lowest, 5.39 Dec. 11, 1939.

Water level, in feet above assumed datum, 1942

Jan. 2	11.48	Feb. 13	11.47	Mar. 27	11.99	May 7	11.67
9	11.43	20	11.75	Apr. 3	11.98	June 2	7.90
16	11.53	27	11.79	10	11.96	July 15	11.85
17	11.11	Mar. 6	11.68	17	11.87	Aug. 8	12.50
23	11.63	13	11.80	24	11.83	Dec. 4	12.75
30	11.70	20	12.02	May 1	11.67	22	12.42
Feb. 6	11.47						

Schuylkill County

72 (*817, p. 204; 845, p. 427; 886, p. 634; 906, p. 224; *936, p. 248) Near Pine Grove. Extremes of observed water level, in feet above assumed datum: Highest, 31.13 Aug. 31, 1940; lowest, 9.72 Dec. 19, 1931.

Water level, in feet above assumed datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	21.34	Feb. 9	21.67	Oct. 31	20.42	Dec. 11	19.16
12	19.52	23	20.11	Nov. 12	18.72	20	17.83
20	18.68	Mar. 17	22.16	21	17.66	26	16.97
Feb. 3	19.99	May 4	17.30	28	21.53		

Somerset County

16 (*817, p. 296; 845, p. 427; 886, p. 635; 906, p. 224; 936, p. 249) At Markelton. Extremes of observed water level, in feet above assumed datum: Highest, 13.82 Mar. 28, 1936; lowest, 8.70 Nov. 12, 1938.

Water level, in feet above assumed datum, 1942

Jan. 5	10.50	Apr. 6	12.05	July 6	11.03	Oct. 5	10.65
10	10.54	13	12.47	12	10.97	12	10.25
17	10.60	20	11.90	19	10.50	19	11.18
24	10.85	27	11.47	26	10.18	27	11.37
Feb. 2	10.70	May 3	11.17	Aug. 3	10.15	Nov. 3	11.65
8	11.24	10	11.65	10	10.20	8	11.40
14	10.96	17	11.97	16	10.64	16	11.35
22	11.24	24	12.45	25	11.00	22	11.40
Mar. 3	10.80	31	11.78	30	10.95	29	11.85
9	12.35	June 7	12.30	Sept. 7	10.48	Dec. 6	11.95
16	11.78	14	11.85	13	10.83	13	12.06
21	11.68	21	11.41	21	10.74	20	11.90
30	11.97	28	11.27	27	10.89	27	12.19

115 (*840, p. 360; 845, p. 428; 886, p. 635; 906, p. 224; 936, p. 249) Near Trent. Extremes of observed water level, in feet above assumed datum: Highest, 17.58 Dec. 19, 1942; lowest, 9.35 Apr. 17, 1937.

Water level, in feet above assumed datum, 1942

Jan. 3	14.88	Apr. 4	16.25	July 4	16.95	Oct. 3	16.53
10	14.97	11	16.56	11	16.91	10	16.47
17	15.12	18	16.52	18	16.70	17	16.67
24	15.29	25	16.52	25	16.62	24	16.70
31	15.40	May 2	16.58	Aug. 1	16.70	31	16.76
Feb. 7	15.75	9	16.87	8	16.61	Nov. 7	16.96
14	16.59	16	17.11	15	16.66	14	16.97
21	15.71	23	17.06	22	16.56	21	17.03
28	15.75	27	17.06	29	16.74	28	17.16
Mar. 7	15.80	June 6	17.14	Sept. 5	16.60	Dec. 5	17.30
14	15.92	13	17.15	12	16.62	12	17.49
21	15.96	20	17.07	19	16.65	19	17.58
28	16.07	27	17.00	26	16.56	26	17.41

Sullivan County

105 (*817, p. 298; 845, p. 428; 886, p. 635; 906, p. 225; 936, p. 249). Near Millview. Extremes of observed water level, in feet above assumed datum: Highest, 16.39 Mar. 16, 1936; well dry, Aug. 31, to Oct. 9, 1935, June 13 to Oct. 31, 1936, June 12-26, 1937, July 31, 1937, Sept. 18 to Oct. 16, 1937, Aug. 6 to Sept. 10, 1938, July 23, 1939, Sept. 2 to Oct. 28, 1939, Oct. 25, to Nov. 1, 1941.

Water level, in feet above assumed datum, 1942

Jan. 3	12.24	Feb. 7	11.31	Mar. 14	12.47	Apr. 18	11.76
10	10.80	14	11.25	21	12.31	25	10.64
17	10.66	21	11.40	28	11.55	May 2	10.35
24	10.99	28	11.21	Apr. 4	11.35	9	9.80
31	10.75	Mar. 7	11.50	11	12.32	16	9.65

105. Near Millview--Continued.

Water level, in feet above assumed datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 23	13.99	July 18	8.74	Sept. 12	8.72	Nov. 7	11.03
30	11.95	25	8.69	19	8.64	14	10.74
June 6	11.03	Aug. 1	8.80	26	8.62	21	10.65
13	10.39	8	8.71	Oct. 3	11.46	28	11.85
20	9.81	15	8.67	10	10.49	Dec. 5	13.45
27	9.33	22	8.64	17	12.33	12	12.33
July 3	9.00	29	8.66	24	11.79	19	11.22
11	8.85	Sept. 5	8.65	31	11.44	26	10.70

Susquehanna County

100 (*777, pp. 167-169; *817, p. 298; 845, p. 429; 886, p. 636; 906, p. 225; 936, p. 250). At Montrose. Extremes of observed water level, in feet above assumed datum: Highest, 18.39 Mar. 18, 1936; lowest, 9.13 Oct. 6 and 13, 1939.

Water level, in feet above assumed datum, 1942

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	10.77	12.20	12.52	15.44	.....	14.12	11.88	11.19	11.27	12.14	15.10	15.25
2	10.94	12.20	12.47	15.75	13.80	14.09	11.78	11.20	11.23	12.29	15.15	16.45
3	11.04	12.20	12.43	15.85	13.67	14.05	11.75	11.21	11.19	12.43	15.17	16.38
4	11.07	12.19	12.36	15.83	13.55	14.05	11.61	11.23	11.16	12.53	15.17	16.38
5	11.13	12.19	12.29	15.76	13.44	14.03	.....	11.25	11.14	12.63	15.16	16.05
6	11.18	12.18	12.25	15.68	13.27	14.02	.....	11.26	11.11	12.70	15.14	15.92
7	11.20	12.38	12.30	15.61	13.13	14.01	.....	11.26	11.08	12.76	15.11	15.75
8	11.21	12.39	13.80	15.58	13.00	13.96	.....	11.25	11.05	12.82	15.08	15.60
9	11.22	12.38	16.54	15.54	12.79	13.90	.....	11.25	11.04	12.88	15.04	15.47
10	11.23	12.34	16.00	15.54	12.65	13.86	.....	11.26	11.04	13.01	15.03	15.34
11	11.24	12.31	15.82	15.59	12.55	13.81	11.26	11.26	11.06	13.07	15.03	15.21
12	11.25	12.28	15.62	15.69	12.43	13.76	.....	11.27	11.08	13.08	15.02	15.07
13	11.25	12.25	15.43	15.94	12.31	13.70	.....	11.28	11.14	13.07	15.02	15.00
14	11.29	12.19	15.35	16.15	12.19	13.62	.....	11.29	11.20	13.06	14.97	14.85
15	11.29	12.13	15.24	16.08	.....	13.53	.....	11.31	11.25	13.05	14.91	14.71
16	11.32	12.09	15.67	15.89	11.97	13.44	.....	11.31	11.29	13.05	14.84	14.59
17	11.32	12.92	16.07	15.76	11.96	13.35	.....	11.33	11.33	13.13	14.77	14.42
18	11.32	13.03	16.08	15.60	11.96	13.25	11.19	11.35	11.37	13.22	14.99	14.22
19	11.35	12.99	15.95	15.46	11.94	13.15	11.18	11.39	11.42	13.34	15.28	14.04
20	11.45	12.93	15.73	15.37	11.94	13.04	11.18	11.43	11.42	13.45	15.39	.....
21	11.53	12.92	15.66	15.30	11.94	12.88	11.19	11.45	11.43	13.58	15.50	.....
22	11.61	12.89	16.01	15.20	12.17	12.74	11.21	11.46	11.44	13.77	15.51	.....
23	11.67	12.85	16.05	15.06	13.25	12.62	11.22	11.49	11.44	13.89	15.51	.....
24	11.70	12.78	15.95	14.93	13.54	12.52	11.23	11.49	11.44	13.97	15.69	.....
25	11.70	12.73	15.79	14.85	13.71	12.41	11.23	11.49	11.43	14.04	17.02	.....
26	11.70	12.70	15.76	14.74	13.86	12.31	11.23	11.47	11.41	14.27	16.56	13.26
27	11.71	12.67	15.74	14.61	13.96	12.17	11.22	11.45	11.51	14.68	16.24	13.16
28	11.72	12.57	15.64	14.48	14.10	12.07	11.21	11.43	11.61	14.84	16.01	13.39
29	11.73	.....	15.53	14.38	14.04	11.07	11.20	11.38	11.76	14.94	15.93	14.22
30	11.73	.....	15.45	.....	14.19	11.90	11.19	11.35	11.95	15.02	15.84	17.75
31	12.07	.....	15.42	.....	14.16	.....	11.18	11.31	.....	15.03	.....	17.03

Tioga County

106 (*817, p. 299; 845, p. 431; 886, p. 636; 906, p. 226; 936, p. 251). At Gaines. Extremes of observed water level, in feet above assumed datum: Highest, 21.74 Mar. 21, 1936; lowest, 5.21 Sept. 16, 1939.

106. At Gaines--Continued.

Water level, in feet above assumed datum, 1942

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	16.68	Apr. 4	19.58	July 4	11.77	Oct. 3	17.84
10	14.75	11	19.14	11	11.27	10	15.71
17	12.53	18	19.08	18	13.80	17	16.29
24	13.44	25	16.73	25	17.34	24	16.61
31	12.31	May 2	14.67	Aug. 1	17.37	31	17.61
Feb. 7	11.67	9	14.41	8	15.86	Nov. 7	18.11
14	13.20	16	13.07	15	17.31	14	16.76
21	15.49	23	21.06	22	16.79	21	16.49
28	15.36	30	18.92	29	14.89	28	18.88
Mar. 7	15.33	June 6	17.44	Sept. 5	13.69	Dec. 5	18.32
14	20.11	13	15.49	12	15.04	12	16.05
21	19.79	20	14.26	19	20.03	19	14.31
28	18.74	27	12.99	26	18.67	26	12.33

Washington County

112 (*817, p. 299; 845, p. 432; 886, p. 637; 906, p. 226; *936, p. 251). At Amity. Extremes of observed water level, in feet above assumed datum: Highest, 35.07 Mar. 19, 1938; lowest, 9.69 Oct. 1, 1938.

Water level, in feet above assumed datum, 1942

Jan. 3	20.95	Apr. 4	30.95	July 4	20.93	Oct. 3	19.00
10	19.93	11	34.00	11	21.93	10	19.93
17	22.93	18	31.02	18	21.94	17	22.02
24	22.94	25	28.93	25	18.98	24	22.95
31	23.00	May 2	26.95	Aug. 1	17.95	30	23.02
Feb. 7	29.01	9	26.93	7	18.93	Nov. 7	26.90
14	28.98	16	24.94	15	19.94	14	28.96
21	30.03	23	27.95	22	18.03	21	28.99
28	28.78	30	24.94	29	18.95	28	29.00
Mar. 7	30.94	June 6	23.01	Sept. 5	18.97	Dec. 5	29.02
14	33.02	13	25.98	12	19.00	12	29.95
21	32.28	20	23.02	19	18.97	20	28.90
28	31.03	27	27.02	26	18.98	26	31.94

Wayne County

83 (*817, p. 300; 845, p. 432; 886, p. 637; 906, p. 226; *936, p. 251). Near Hawley. Extremes of observed water level, in feet above assumed datum: Highest, 24.24 May 23, 1942; well dry, Oct. 25, 1941; Nov. 15 to Dec. 20, 1941.

Water level, in feet above assumed datum, 1942

Jan. 3	10.38	Mar. 14	12.30	May 23	24.24	Aug. 1	14.98
10	10.27	21	14.59	30	22.36	8	14.88
17	10.21	28	15.79	June 6	19.17	15	14.85
24	10.78	Apr. 4	15.90	13	18.69	22	14.27
31	10.58	11	16.26	20	18.04	29	14.10
Feb. 7	10.64	18	16.34	27	17.37	Sept. 5	13.59
14	10.90	25	16.29	July 4	16.64	12	13.58
21	11.11	May 2	15.86	11	16.44	19	13.86
28	11.25	9	15.37	18	15.96	26	13.79
Mar. 7	11.95	16	14.84	25	15.22		