

Water Levels and Artesian Pressures in Observation Wells in the United States 1954

Part 1. Northeastern States

Prepared under the direction of A. N. SAYRE, Chief, Ground Water Branch

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



UNITED STATES DEPARTMENT OF THE INTERIOR

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PREFACE

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CONTENTS

	Page
Introduction, by A. N. Sayre	1
Connecticut, by R. V. Cushman	3
Scope of water-level program	3
Precipitation	3
Pumpage	3
Interpretation of water-level fluctuations	3
Well-numbering system	7
Well descriptions and water-level measurements	7
Delaware, by O. J. Coskery and D. H. Boggess	13
Scope of water-level program	13
Precipitation	13
Pumpage	13
Interpretation of water-level fluctuations	13
Acknowledgments	16
Well-numbering system	16
Well descriptions and water-level measurements	16
Indiana, by Porter E. Ward	23
Scope of water-level program	23
Precipitation and temperature	23
Interpretation of water-level fluctuations	23
Well-numbering system	27
Well descriptions and water-level measurements	27
Maine, by John A. Baker	40
Scope of water-level program	40
Precipitation	40
Interpretation of water-level fluctuations	40
Well-numbering system	40
Well descriptions and water-level measurements	40
Massachusetts, by John A. Baker	44
Scope of water-level program	44
Precipitation	44
Interpretation of water-level fluctuations	44
Well-numbering system	44
Well descriptions and water-level measurements	44
Michigan, by P. R. Giroux, W. T. Stuart, and J. G. Rulison	54
Scope of water-level program	54
Precipitation	54
Pumpage	54
Interpretation of water-level fluctuations	54
Well-numbering system	60
Well descriptions and water-level measurements	61
New Hampshire, by Edward Bradley	93
Scope of water-level program	93
Precipitation	93
Pumpage	93
Interpretation of water-level fluctuations	93
Acknowledgments	95
Well-numbering system	95
Well descriptions and water-level measurements	95
New Jersey, by Charles R. Austin	98
Scope of water-level program	98
Precipitation	98
Interpretation of water-level fluctuations	98
Well-numbering system	106
Well descriptions and water-level measurements	106

	Page
New York	132
Long Island, by J. J. Geraghty	132
Scope of water-level program	132
Precipitation	132
Pumpage	132
Interpretation of water-level fluctuations	138
Acknowledgments	140
Well-numbering system	140
Well descriptions and water-level measurements	144
Upstate New York, by E. S. Asselstine, F. K. Mack, and J. A. Ziarno	183
Scope of water-level program	183
Precipitation	183
Pumpage	183
Interpretation of water-level fluctuations	186
Well-numbering system	186
Well descriptions and water-level measurements	186
Ohio, by W. C. Walton and R. K. Cash	201
Scope of water-level program	201
Precipitation	201
Interpretation of water-level fluctuations	201
Well-numbering system	224
Well descriptions and water-level measurements	224
Pennsylvania, by Maurice O. Holtzer	280
Scope of water-level program	280
Precipitation	280
Interpretation of water-level fluctuations	280
Well-numbering system	280
Well descriptions and water-level measurements	285
Rhode Island, by W. B. Allen	321
Scope of water-level program	321
Precipitation	321
Pumpage	321
Interpretation of water-level fluctuations	321
Well-numbering system	324
Well descriptions and water-level measurements	324
Vermont, by John A. Baker	338
Scope of water-level program	338
Precipitation	338
Interpretation of water-level fluctuations	338
Well-numbering system	338
Well descriptions and water-level measurements	338

ILLUSTRATIONS

Figure 1. Outline map of the United States showing areas included in each of the six water-supply papers on water levels and artesian pressures in observation wells in 1954	2
2. Location of observation wells in Connecticut, 1954	4
3. Location of observation wells in New Haven area, Connecticut, 1954	5
4. Water levels in wells WB 176, NHn 183, and Pl 1, Connecticut	6
5. Location of observation wells in Delaware, 1954	14
6. Average monthly water levels in 13 water-table wells in Delaware and average monthly precipitation, September 1950 to December 1954	15
7. Location of observation wells in Indiana, 1954	24
8. Water levels in wells Steuben 1, Montgomery 1, and Clark 1, Indiana	25
9. Water levels in wells Marion 2 and 10 in downtown area, Indianapolis, Ind.	26
10. Location of observation wells in Maine, 1954	41
11. Location of observation wells in Massachusetts, 1954	45
12. Location of observation wells in Middlesex County, Mass., 1954	46
13. Location of observation wells in Michigan, 1954	56
14. Water level in well RoHg 1 and daily precipitation and daily maximum and minimum temperature at Grayling Military Reservation, Mich., 1954	58
15. Location of observation wells in New Hampshire, 1954	94
16. Location of observation wells in New Jersey, 1954	99
17. Location of observation wells in Middlesex County, N. J., 1954	100
18. Location of observation wells in Salem County, N. J., 1954	101
19. Hydrograph of well 32. 23. 6. 6. 8 in Burlington County, N. J., showing water level at end of each day in 1954 and high, low, and average end-of-day levels for the period 1936-53.	102

	Page
Figure 20. Hydrograph of well 29.11.1.2.3 in Middlesex County, N. J., showing water level at end of each day in 1954 and high, low, and average end-of-day levels for the period 1923-53	103
21. Hydrograph of well 29.11.1.2.9 in Monmouth County, N. J., showing water level at end of each day in 1954 and high, low, and average end-of-day levels for the period 1936-53	104
22. Hydrograph of well 26.21.5.4.6 in Union County, N. J., showing water level at end of each day in 1954 and high, low, and average end-of-day levels for the period 1943-53	105
23. Location of observation wells in Kings and Queens Counties, Long Island, N. Y., 1954	133
24. Location of observation wells in Nassau County, Long Island, N. Y., 1954	134
25. Location of observation wells in western Suffolk County, Long Island, N. Y., 1954	135
26. Location of observation wells in central Suffolk County, Long Island, N. Y., 1954	136
27. Location of observation wells in eastern Suffolk County, Long Island, N. Y., 1954	137
28. Composite average water level of 14 selected wells in Nassau and Suffolk Counties and hydrographs of wells K30, N9, and N7, Kings and Nassau Counties, N. Y.	139
29. Location of observation wells in Upstate New York, 1954	184
30. Month-end water levels and average water levels for 11 years of record in wells Mt 1, Wo 1 and St 1, Upstate New York	185
31. Location of observation wells in northwestern Ohio, 1954	202
32. Location of observation wells in north-central Ohio, 1954	203
33. Location of observation wells in northeastern Ohio, 1954	204
34. Location of observation wells in southwestern Ohio, 1954	205
35. Location of observation wells in south-central Ohio, 1954	206
36. Location of observation wells in southeastern Ohio, 1954	207
37. Water levels in selected wells in northern Ohio	208
38. Water levels in selected wells in central Ohio	209
39. Water levels in selected wells in southern Ohio	210
40. Water levels in selected wells in the Mill Creek valley, Ohio	212
41. Water levels in selected wells in the Miami River valley, Ohio	214
42. Location of observation wells in the Upper Little Miami River basin and water levels in wells Cl-5 and Cl-3, Clark County, Ohio, in 1953	216
43. Water levels in selected wells in the upper Little Miami River basin, Ohio	218
44. Water levels in selected wells in the Canton area, Stark County, Ohio	220
45. Water levels in wells Lu-1, Su-3, Ro-3, St-1, and Fr-11 in heavily pumped areas in Ohio	221
46. Effect of barometric fluctuations on the water levels in wells Ab-1 and Fr-10 in Ohio, in 1953	223
47. Location of observation wells in Pennsylvania, 1954	281
48. Location of observation wells in Beaver, Allegheny, Washington, Bucks, Montgomery, Chester, Delaware, and Philadelphia Counties, 1954	282
49. Location of observation wells in southern part of Philadelphia County, Pa., 1954	283
50. Location of observation wells in Triangle area of Pittsburgh, Allegheny County, Pa., 1954	284
51. Location of observation wells in Providence County, R. I., 1954	322
52. Location of observation wells in Bristol, Kent, Newport, and Washington Counties, R. I., 1954	323
53. Location of observation wells in Vermont, 1954	339

WATER LEVELS AND ARTESIAN PRESSURES
IN OBSERVATION WELLS IN THE UNITED STATES
IN 1954

Part 1. NORTHEASTERN STATES

INTRODUCTION

By A. N. Sayre

The publication of records of water levels and artesian pressures annually in the United States was begun by the Geological Survey in 1935. Prior to 1940 the records for each year were published in a single volume--1935, 777; 1936, 817; 1937, 840; 1938, 845; 1939, 886. Since 1940, records have been published in six annual volumes, covering the northeastern, south-eastern, north-central, south-central, northwestern, and southwestern sections of the country. Hawaii is included in the southwestern section. The following table gives the numbers of Water-Supply Papers from 1940 through 1954.

Year	North-eastern (1)	South-eastern (2)	North-central (3)	South-central (4)	North-western (5)	South-western (6)
1940	906	907	908	909	910	911
1941	936	937	938	939	940	941
1942	944	945	946	947	948	949
1943	986	987	988	989	990	991
1944	1016	1017	1018	1019	1020	1021
1945	1023	1024	1025	1026	1027	1028
1946	1071	1072	1073	1074	1075	1076
1947	1096	1097	1098	1099	1100	1101
1948	1126	1127	1128	1129	1130	1131
1949	1156	1157	1158	1159	1160	1161
1950	1165	1166	1167	1168	1169	1170
1951	1191	1192	1193	1194	1195	1196
1952	1221	1222	1223	1224	1225	1226
1953	1265	1266	1267	1268	1269	1270
1954	1321	1322	1323	1324	1325	1326

The objectives of the observation-well program are to provide a day-to-day evaluation of available ground-water supplies, to facilitate the prediction of trends in ground-water levels that will indicate the probable status of important ground-water supplies in the future, to delineate present or potential areas of detrimentally high or low ground-water levels, to aid in the prediction of the base flow of streams, to determine the several forces that act on a ground-water body, and to demonstrate the interplay of those forces in the ground-water regimen, to furnish information for use in basic research, and to provide long-term continuous records of fluctuations of water levels in representative wells. These selected records serve as a framework to which many short-term records collected during an intensive investigation may be related.

Water levels in wells are seldom stationary but move up or down a fraction of an inch or many feet within a short time. Water-table wells may be influenced by direct recharge from precipitation, withdrawals from wells or springs, transpiration by vegetation, evaporation from the soil, and changes in atmospheric pressure. Artesian wells are influenced over large areas by changes in the rate of pumping from other wells, changes in atmospheric pressure, earthquakes, ocean tides, earth tides, and recharge from precipitation, although the recharge may not be noticeable immediately. When accurate comparisons of water levels are made it is desirable to apply corrections for these influences, several of which may be compensating or additive according to the conditions at those particular times.

Water-level measurements are given in feet with reference to land-surface datum or sea-level datum. Land-surface datum is a precise datum plane that is approximately at land surface at each well. Mean sea level (msl) is the datum plane on which the national network of precise levels is based. When some measurements in a table are above and others are below the plane of reference, a plus (+) or minus (-) sign is placed immediately before the first entry in each column. Readings between minus signs are below the plane of reference and those between plus signs are above the plane of reference.

For the most part, discussions of precipitation in this report are based on data furnished by the United States Weather Bureau.

Measurements of water levels and artesian pressures in wells were made under the direction of the district supervisors of the Ground Water Branch in the several States.

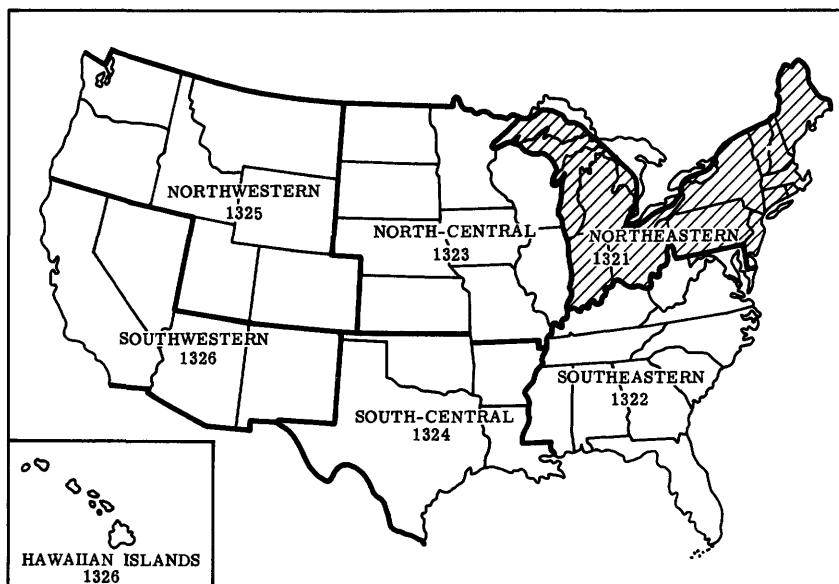


Figure 1. --Outline map of the United States showing areas included in each of the six water-supply papers on water levels and artesian pressures in observation wells in 1954. The shaded area indicates the States included in this volume.

Verda M. Dougherty was responsible for the compilation of the report and Rodney Hart edited the illustrations.

CONNECTICUT

By R. V. Cushman

Scope of Water-Level Program

The observation-well program in Connecticut was continued in 1954 in cooperation with the State Water Commission. The program consists of water-level measurements in heavily pumped areas at Waterbury and New Haven in connection with areal investigations of ground-water resources and in a statewide network of observation wells which provide data on changes in storage in principal ground-water reservoirs. In 1954, water-level measurements were made in 33 wells: 7 in the Waterbury-Naugatuck area, 11 in New Haven, and 15 in the statewide network. Figure 2 shows the location of the statewide observation wells and also wells in the Waterbury-Naugatuck area. Figure 3 shows the location of the observation wells in New Haven.

Precipitation

Precipitation in Connecticut averaged 49.45 inches in 1954, 4.59 inches less than that in 1953, but 3.78 inches above normal. During August, September, November, and December, precipitation was above normal by an inch or more.

Pumpage

The total ground-water pumpage in Connecticut in 1954, as estimated on the basis of figures obtained from the State Department of Health, U. S. Public Health Service, industrial concerns, municipalities, and private well owners, is about 80 mgd (million gallons per day). The average use for various purposes during the year is estimated as follows: industrial (excluding water from municipal supplies) 40 mgd; municipal 12 mgd; rural (domestic and stock but excluding irrigation) 26 mgd; irrigation 2 mgd.

Interpretation of Water-Level Fluctuations

Water levels in shallow aquifers in Connecticut respond to variations in precipitation and evapotranspiration and, in some areas, to heavy pumping. In general, the yearly fluctuations are more or less cyclical: water levels rise principally during the nongrowing season, when losses by evaporation and transpiration are low, and decline during the growing season, when such losses are high. The yearly peak levels are reached usually in April or May but occasionally as late as June or July; the yearly low levels occur typically in November. In wells in stratified sand and gravel of glacial origin, water levels show a smaller range in fluctuation than that observed in wells in unstratified glacial drift, or till, as indicated by hydrographs in figure 4. Wells Pl 1 at Plainfield and NHn 183 at New Haven are open to stratified sand and gravel; the range in water-level fluctuations is usually less than 4 feet in a year. Well Wb 176 at Waterbury is open to till; it shows an average yearly range in water-level fluctuation of about 10 feet. Fluctuations of ground-water levels in Connecticut during 1954 varied from the normal water-level trend because of a somewhat unusual precipitation pattern. Because of below-normal precipitation in January and February, water levels receded from normal stages to stages considerably below those of February 1953. Subsequent normal precipitation caused a rise in water levels through early May when, in general, the yearly high stages were reached. However, the rises were insufficient to offset the earlier deficiency, for month-end stages in May were below normal. A marked deficiency in rainfall in June and July and the usual increased water demands by growing vegetation reduced replenishment to underground reservoirs appreciably, so that by the end of July water levels were second or third lowest on record for the month. However, the passage of two tropical hurricanes across sections of Connecticut in late August and early September altered the water-level trend. Heavy rains accompanying the two hurricanes and frequent showers during the first 3 weeks in September reversed the recession in water levels in all observation wells. By the end of September, levels were above normal in most wells and record high for the month in many wells. The year ended with water levels generally above normal and, in many cases, record high for December. There was, on the whole, a gain in ground-water storage in Connecticut in 1954.

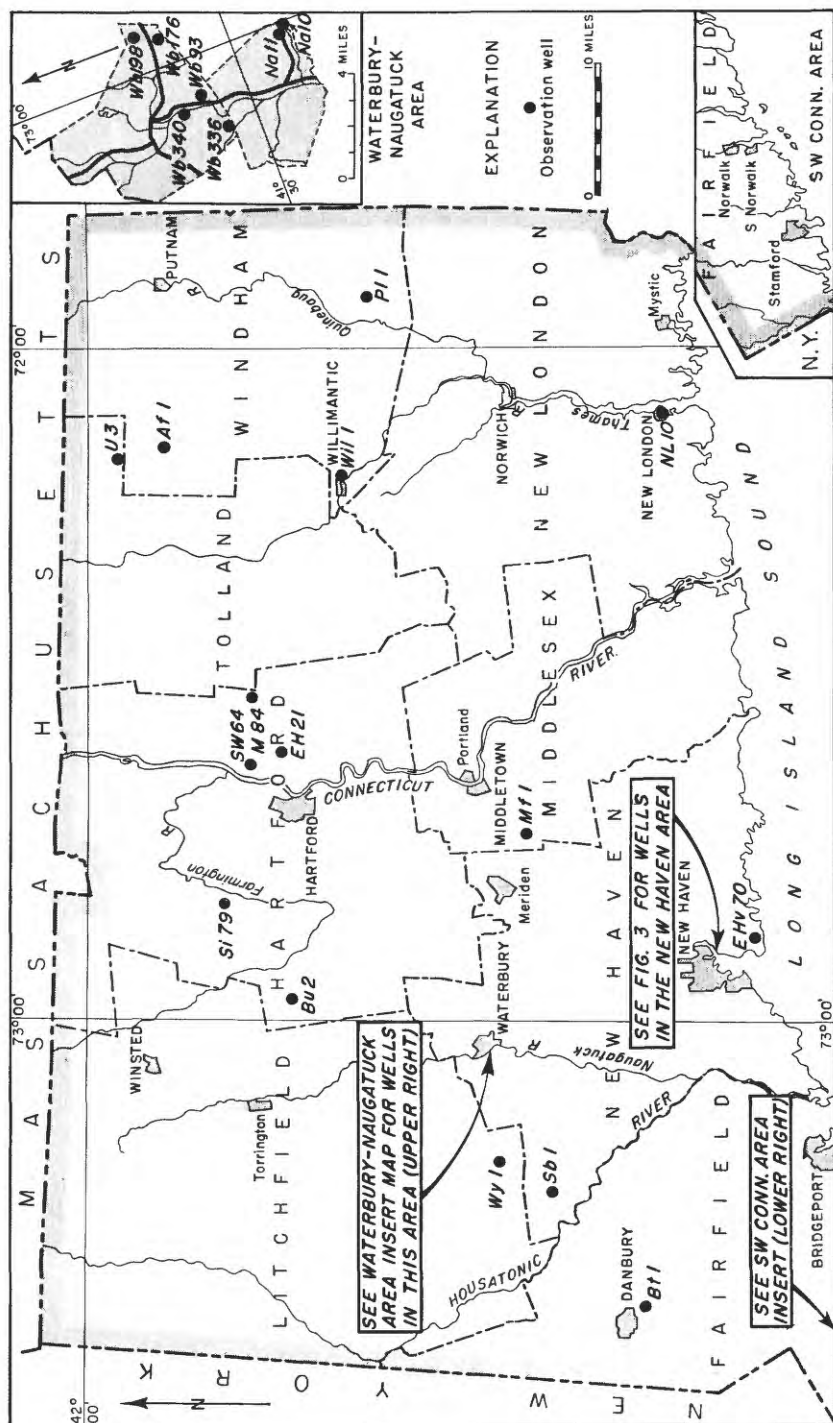


Figure 2.--Location of observation cells in Connecticut, 19F

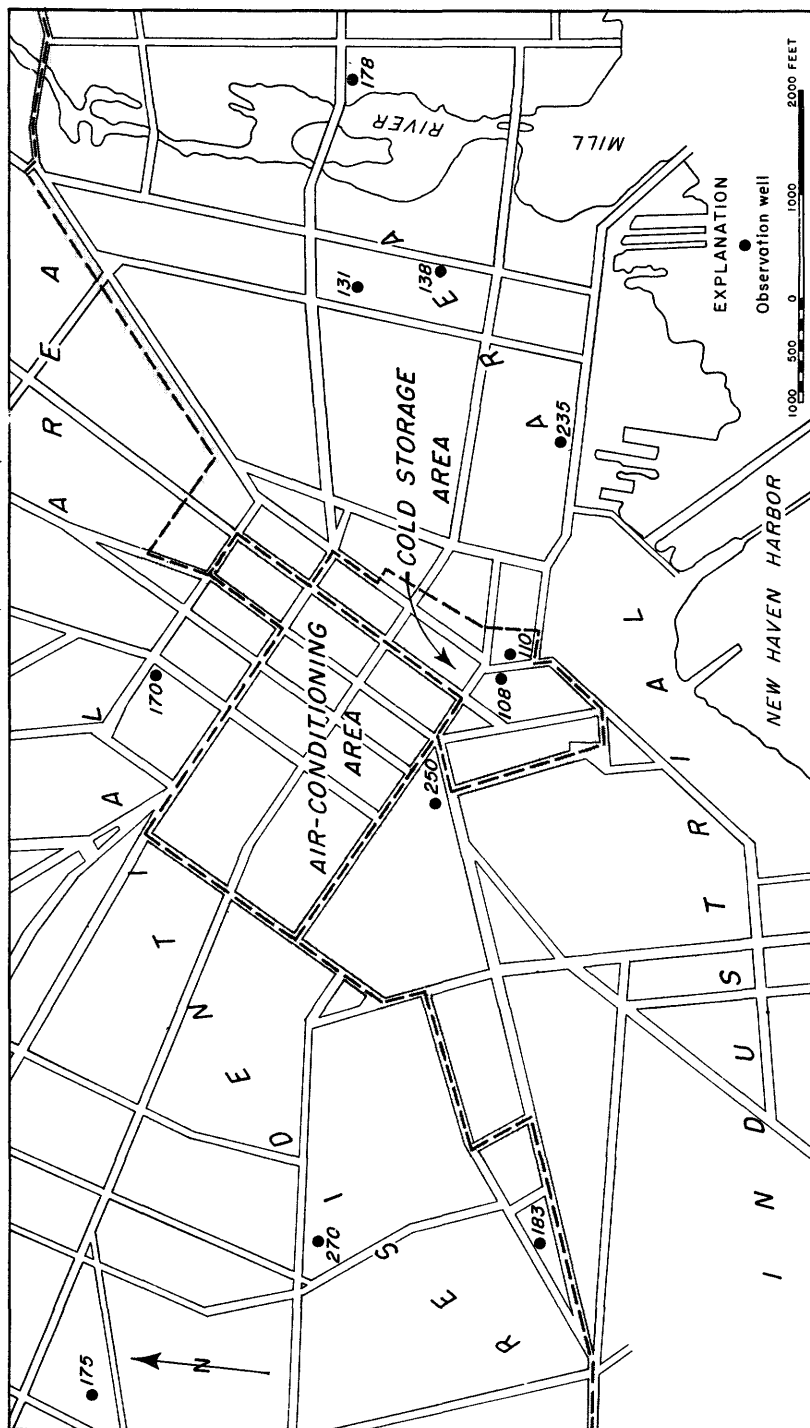


Figure 3.--Location of observation wells in New Haven area, Connecticut, 1954.

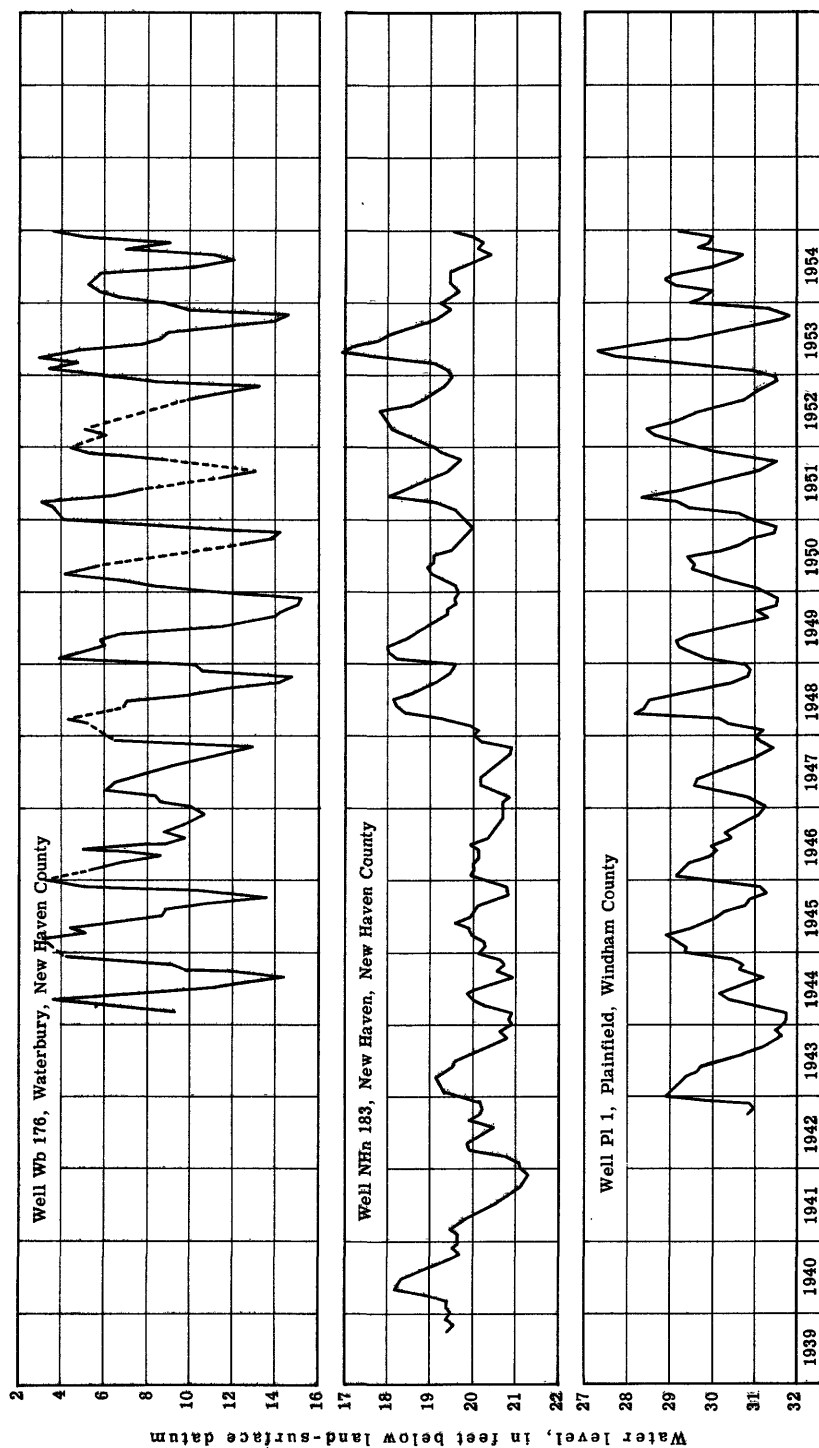


Figure 4. --Water levels in wells Wb 176, NHn 183, and Pl 1, Connecticut.

In the pumped areas of New Haven and Waterbury, the seasonal trend of the water table results from variations in the rate and distribution of pumping and from variations in the amount and rate of precipitation and evapotranspiration. In the downtown area of New Haven, where pumping is for air-conditioning and cold-storage purposes, the decline in the water table in wells NHn 108 and NHn 110 during the summer of 1954 was more noticeable than in the statewide observation wells; it reflected the seasonal increase in withdrawals. Correspondingly, the rise in level after the end of the pumping season was rapid. The water table in the industrial area of New Haven (wells NHn 131, NHn 138, NHn 178, and NHn 235) reached a high stage in May as in other shallow observation wells in Connecticut; but a second and higher stage was observed in July during the vacation period at several large industrial plants, when the total ground-water withdrawal was reduced appreciably.

Well-Numbering System

Wells are numbered consecutively within each township in Connecticut. The townships are designated by abbreviations derived from the town names. For example, well Bt 1 is in the town of Bethel and was the first well inventoried in that township.

Well Descriptions and Water-Level Measurements

Water levels are in feet below land-surface datum unless otherwise indicated. When some measurements in a table are above and others below the plane of reference, a plus (+) or minus (-) sign is placed immediately before the first entry in each column of each mixed table. Readings between minus signs are below the plane of reference, and those between plus signs are above the plane of reference. Water levels in the city of New Haven are referred to mean sea level.

City of New Haven

NHn 108. Leonard Marena. 14 Whiting St. Lat. 41°18'10", long. 72°55'30". Driven unused water-table well in glacial sand, diameter 2 inches, depth 38 feet, screen setting 36-38. Land-surface datum is 15.86 feet above msl. Highest water level 1.38 above msl, Jan. 29, 1954; lowest 3.40 below msl, Aug. 26, 1946. Records available: 1939-54. Nearby well being pumped.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	+1.38	Apr. 29	+1.26	July 26	+0.03	Oct. 29	+0.46
Feb. 25	+1.18	May 28	+1.23	Sept. 1	-.23	Nov. 26	+.88
Mar. 29	+1.13	June 25	+.49	27	+.38	Dec. 27	+1.34

NHn 110. Federal Packing Co. 149 State St. Lat. 41°18'10", long. 72°55'30". Driven unused water-table well in glacial sand, diameter 2 inches, depth 20 feet, screen setting 18-20. Land-surface datum is 11.44 feet above msl. Highest water level 1.31 above msl, Jan. 29, 1954; lowest 2.20 below msl, Oct. 27, 1944. Records available: 1939-54. Nearby well being pumped.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	+1.31	Apr. 29	+1.13	July 26	+0.02	Oct. 29	+0.35
Feb. 25	+1.14	May 28	+1.17	Sept. 1	-.31	Nov. 26	+.76
Mar. 29	+1.05	June 25	+.49	27	+.31	Dec. 27	+1.24

NHn 131. New Haven Clock Co. 133 Hamilton St. Lat. 41°18'30", long. 72°54'45". Driven unused water-table well in glacial sand, diameter 2½ inches, depth 40 feet. Land-surface datum is 17.23 feet above msl. Highest water level 0.38 below msl, May 26, 1949; lowest 5.65 below msl, May 26, 1944. Records available: 1939-54. Nearby well being pumped.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	-2.04	Apr. 29	-1.77	July 26	-1.33	Oct. 29	-1.26
Feb. 25	-2.01	May 28	-1.51	Sept. 1	-1.40	Nov. 26	-1.26
Mar. 29	-1.96	June 25	-1.49	27	-1.01	Dec. 27	-1.04

NHn 138. Associated Realty Co. Green and East Sts. Lat. 41°18'20", long. 72°54'40". Driven unused water-table well in glacial sand, diameter 2 inches, depth 31 feet. Land-surface datum is 17.75 feet above msl. Highest water level 0.13 above msl, May 26, 1949; lowest 5.70 below msl, June 23, 1944. Records available: 1940-54. Nearby well being pumped.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	-1.13	Apr. 29	-0.92	July 26	-0.53	Oct. 29	-0.29
Feb. 25	-1.09	May 28	-.65	Sept. 1	-.49	Nov. 26	-.36
Mar. 29	-1.05	June 25	-.60	27	-.15	Dec. 27	-.15

NHn 170. Yale University. Grove and College Sts. Lat. 41°18'40", long. 72°55'37". Driven unused water-table well in glacial sand, diameter 2 inches, depth 14 feet. Land-surface datum is 41.09 feet above msl. Highest water level 18.89 above msl, May 28, 1953; lowest 15.64 above msl, Jan. 14, 1942. Records available: 1939-54.

NHn 170--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	+16.77	Apr. 29	+16.99	July 26	+16.99	Oct. 29	+16.99
Feb. 25	+16.68	May 28	+17.20	Sept. 1	+16.73	Nov. 26	+17.05
Mar. 29	+16.71	June 25	+17.23	27	+16.95	Dec. 27	+17.29

NHn 175. Monarch Laundry. Derby Ave. and Ellsworth St. Lat. $41^{\circ}18'40''$, long. $72^{\circ}57'10''$. Drilled unused water-table well in glacial sand, diameter 6 inches, depth 54 feet. Land-surface datum is 32.84 feet above msl. Highest water level 5.42 above msl, May 28, 1953; lowest 2.27 above msl, Dec. 17, 1941. Records available: 1939-54.

Jan. 29	+3.69	Apr. 29	+3.57	July 26	+3.62	Oct. 29	+3.29
Feb. 25	+3.61	May 28	+3.64	Sept. 1	+3.34	Nov. 26	+3.31
Mar. 29	+3.55	June 25	+3.67	27	+3.31	Dec. 27	+3.48

NHn 178. Porto Construction Co. Formerly Atlantic Tire and Steel Co. Grand Ave. and Haven St. Lat. $41^{\circ}18'30''$, long. $72^{\circ}54'20''$. Driven unused water-table well in glacial sand, diameter 3 inches, depth 74 feet. Land-surface datum is 13.76 feet above msl. Highest water level 0.04 above msl, June 12, 1940; lowest 7.16 below msl, Feb. 25, 1954. Records available: 1939-54. Nearby well being pumped.

Feb. 25	-7.16	May 28	-6.58	Sept. 1	-6.49	Nov. 26	-6.14
Mar. 29	-6.80	June 25	-6.83	27	-5.71	Dec. 27	-5.69
Apr. 29	-6.52	July 26	-6.01	Oct. 29	-6.21		

NHn 183. Frank X. Hald Storage Co. 370-376 Davenport Ave. Lat. $41^{\circ}18'00''$, long. $72^{\circ}56'45''$. Driven unused water-table well in glacial sand, diameter 2 inches, depth 24 feet. Land-surface datum is 23.94 feet above msl. Highest water level 7.06 above msl, Apr. 27, 1953; lowest 2.67 above msl, Dec. 3, 1941. Records available: 1939-54.

Jan. 29	+4.45	Apr. 29	+4.51	July 26	+3.93	Oct. 29	+3.72
Feb. 25	+4.32	May 28	+4.49	Sept. 1	+3.55	Nov. 26	+3.98
Mar. 29	+4.44	June 25	+4.22	27	+3.84	Dec. 27	+4.47

NHn 235. C. Cowles & Co. Chestnut and Water Sts. Lat. $41^{\circ}18'05''$, long. $72^{\circ}54'55''$. Drilled unused water-table well in glacial sand, diameter 8 inches, depth 39 feet, screen setting 28-38. Land-surface datum is 14.80 feet above msl. Highest water level 1.25 above msl, Apr. 27, 1953; lowest 3.59 below msl, Feb. 1, 1945. Records available: 1940-54. Nearby well being pumped.

Jan. 29	-0.47	Apr. 29	-0.49	July 26	-0.15	Oct. 29	-0.07
Feb. 25	-.38	May 28	-.05	Sept. 1	-.20	Nov. 26	.00
Mar. 29	-.32	June 25	-.06	27	+.38	Dec. 27	+.02

NHn 250. I. Newman & Sons. 43 Oak St. Lat. $41^{\circ}18'10''$, long. $72^{\circ}55'50''$. Dug unused water-table well in glacial sand, diameter 10 feet, depth 13 feet, lined with brick. Land-surface datum is 14.93 feet above msl. Highest water level 5.56 above msl, June 2, 1952; lowest 0.67 above msl, Sept. 25, 1947. Records available: 1940-54. Nearby well being pumped.

Jan. 29	+3.96	Apr. 29	+4.22	July 26	+3.67	Oct. 29	+4.14
Feb. 25	+3.97	May 28	+4.47	Sept. 1	+3.31	Nov. 26	+4.40
Mar. 29	+3.97	June 25	+4.06	27	+3.70	Dec. 27	+4.49

NHn 270. Carl E. Altmann. 53 Auburn St. Lat. $41^{\circ}18'20''$, long. $72^{\circ}56'45''$. Dug unused water-table well in glacial sand, diameter 33 inches, depth 37 feet, lined with stone. Land-surface datum is 38.18 feet above msl. Highest water level 8.20 above msl, May 28, 1953; lowest 3.78 above msl, Dec. 17, 1941. Records available: 1941-54.

Jan. 29	+5.79	Apr. 29	+5.60	July 26	+5.50	Oct. 29	+5.12
Feb. 25	+5.64	May 28	+5.85	Sept. 1	+5.21	Nov. 26	+5.12
Mar. 29	+5.58	June 25	+5.49	27	+5.29	Dec. 27	+5.54

Fairfield County

Bt 1. Frederick J. Andrews. 248 Greenwood Ave., Bethel. Lat. $41^{\circ}22'20''$, long. $73^{\circ}25'10''$. Dug unused water-table well in glacial sand and gravel, diameter 36 inches, depth 26 feet, lined with stone. Land-surface datum is about 380 feet above msl. Highest water level 17.20 below lsd, Mar. 30, 1948; lowest 24.40 below lsd, Dec. 15, 1949. Records available: 1946-54.

Jan. 28	20.83	Apr. 28	18.63	July 26	21.70	Oct. 29	21.78
Feb. 27	20.63	May 28	19.25	Sept. 1	22.55	Nov. 26	19.24
Mar. 29	18.78	June 2	19.44	30	21.67		

Hartford County

Bu 2. E. E. Edman. Burlington. Lat. $41^{\circ}46'15''$, long. $72^{\circ}58'20''$. Dug unused water-table well in glacial till, diameter 36 inches, depth 38 feet, lined with stone. Land-surface datum is about 880 feet above msl. Highest water level 13.71 below lsd, Mar. 30, 1953; lowest 37.41 below lsd, Dec. 22, 1948. Records available: 1948-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 23	22.98	Apr. 11	16.76	Aug. 8	22.02	Oct. 26	22.29
Feb. 15	20.30	24	16.38	22	24.48	Nov. 13	21.09
23	19.70	May 9	15.81	Sept. 5	25.75	27	19.22
Mar. 4	19.00	30	15.71	Oct. 9	21.60	Dec. 4	18.50
13	18.07	June 25	18.08	17	21.84	26	16.90
24	17.30	July 20	19.79				

EH 21. Burnside Ice Co. 790 Tolland St., East Hartford. Lat. $41^{\circ}47'$, long. $72^{\circ}36'$. Dug unused water-table well in glacial sand, diameter 30 inches, depth 20 feet, lined with brick. Land-surface datum is about 90 feet above msl. Highest water level 11.14 below lsd, Dec. 12, 1938; lowest 19.60 below lsd, Sept. 22, 1949. Records available: 1934-39, 1946-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	17.10	Apr. 30	16.68	July 27	18.50	Oct. 25	17.92
Feb. 26	17.16	May 29	16.41	Sept. 2	18.62	Nov. 27	17.53
Mar. 27	16.85	June 30	17.56	28	17.43	Dec. 28	16.98

M 84. George Bryan. 179 Tolland Turnpike, Manchester. Lat. $41^{\circ}48'45''$, long. $72^{\circ}30'45''$. Dug unused water-table well in glacial sand and gravel, diameter 32 inches, depth 16 feet, lined with brick. Land-surface datum is about 180 feet above msl. Highest water level 9.68 below lsd, Mar. 31, 1953; lowest 15.20 below lsd, Oct. 27, 1949. Records available: 1948-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 3, 1948	15.07	July 27, 1950	14.35	Nov. 26, 1952	14.82	Dec. 28, 1953	12.77
Dec. 23	14.36	Aug. 25	13.91	Dec. 29	13.64	Jan. 30, 1954	14.00
Feb. 26, 1949	12.24	Sept. 26	14.45	Jan. 26, 1953	10.21	Feb. 26	14.22
Mar. 28	12.96	Oct. 27	14.82	Feb. 26	12.43	Mar. 27	13.36
June 30	14.52	Nov. 29	14.25	Mar. 31	9.68	Apr. 30	13.16
Aug. 30	14.98	Jan. 26, 1951	12.95	Apr. 28	11.06	May 29	13.71
Sept. 22	15.08	Feb. 28	11.50	May 30	13.47	June 30	14.50
Oct. 27	15.20	Apr. 24	12.73	June 30	14.31	Sept. 2	14.38
Dec. 31	14.84	July 27	14.74	July 28	14.22	28	12.39
Jan. 27, 1950	14.23	Nov. 28	13.21	Sept. 29	14.98	Oct. 25	14.16
Feb. 27	13.30	Dec. 27	11.98	Oct. 27	15.04	Nov. 26	13.72
Apr. 26	13.32	Mar. 27, 1952	12.06	Nov. 28	14.50	Dec. 28	12.40
June 27	13.92	Oct. 29	14.86				

SW 64. H. F. Church. Station 37, South Windsor. Lat. $41^{\circ}49'$, long. $72^{\circ}37'30''$. Dug unused water-table well in glacial sand, diameter 24 inches, depth 18 feet, lined with brick. Land-surface datum is about 40 feet above msl. Highest water level 7.15 below lsd, Mar. 30, 1936; lowest 13.84 below lsd, Dec. 31, 1949. Records available: 1934-39, 1948-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	11.48	Apr. 30	11.23	July 27	12.62	Oct. 25	12.23
Feb. 26	11.74	May 29	11.20	Sept. 2	12.85	Nov. 26	12.27
Mar. 27	11.40	June 30	12.09	28	11.90	Dec. 28	11.65

Si 79. American Sumatra Tobacco Co. College Highway, Weatogue. Lat. $41^{\circ}50'00''$, long. $72^{\circ}49'00''$. Drilled unused artesian well in sandstone and shale of Newark group of Triassic system, diameter 8 inches, depth 460 feet, reported cased to 145. Land-surface datum is about 170 feet above msl. Highest water level 9.22 below lsd, Dec. 20, 1954; lowest 12.47 below lsd, Oct. 15, 1953. Records available: 1953-54. Recording gage installed Sept. 2, 1953. Nearby well being pumped.

Highest water level from recorder graph

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 5, 1953	11.50	Nov. 10, 1953	11.30	Jan. 15, 1954	13.30	Apr. 1, 1954	9.88
10	11.33	15	11.24	20	10.64	5	10.02
15	11.34	20	11.25	25	10.41	10	10.14
20	11.37	25	11.00	30	10.38	15	10.21
25	11.23	30	10.98	Feb. 1	10.61	20	9.63
30	11.27	Dec. 1	10.92	5	10.24	25	9.68
Oct. 1	11.26	5	10.78	10	10.35	30	9.75
5	11.29	10	10.30	15	10.58	May 1	11.20
15	12.47	15	10.50	20	10.48	10	9.71
20	12.29	25	10.31	25	10.12	15	9.90
25	12.07	30	10.17	Mar. 5	9.75	20	9.95
30	11.67	Jan. 1, 1954	10.16	15	9.82	25	9.55
Nov. 1	11.64	5	10.23	25	9.84	30	9.82
5	11.59	10	10.28	30	9.91	June 1	9.86

Si 79--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 5, 1954	10.00	July 30, 1954	11.66	Sept. 20, 1954	10.11	Nov. 10, 1954	10.24
10	10.37	Aug. 1	11.70	25	10.23	15	11.05
15	10.53	5	11.51	30	10.44	20	10.19
20	10.58	10	11.50	Oct. 1	10.39	25	9.86
25	10.75	15	11.52	5	10.53	30	9.80
30	10.98	20	11.69	10	10.61	Dec. 1	9.82
July 1	11.01	25	11.76	15	10.91	5	9.80
5	10.99	30	11.85	20	10.79	10	9.85
10	11.25	Sept. 1	11.57	25	10.80	15	9.76
15	11.40	5	11.51	30	10.69	20	9.22
20	11.59	10	11.45	Nov. 1	10.80	25	9.34
25	11.88	15	10.37	5	9.72	30	9.31

Litchfield County

Wy 1. George H. Wadsworth. Main St., Woodbury. Lat. 41°32', long. 73°12'30". Dug unused water-table well in glacial sand and gravel, diameter 30 inches, depth 34 feet, lined with stone. Land-surface datum is about 270 feet above msl. Highest water level 19.44 below lsd, Apr. 1, 1953; lowest 31.00 below lsd, Oct. 10, 1914. Records available: 1913-16, 1944-54.

Jan. 28	25.41	Apr. 28	21.78	July 26	25.96	Oct. 29	28.93
Feb. 27	24.88	May 28	21.87	Sept. 1	29.30	Nov. 26	25.67
Mar. 29	22.18	July 1	23.28	30	28.36	Dec. 30	21.34

Middlesex County

Mf 1. Lyman Gun Sight Corp. Near Baileyville. Lat. 41°30'30", long. 72°43'20". Dug unused water-table well in glacial till, diameter 24 inches, depth 22 feet, lined with stone. Land-surface datum is about 260 feet above msl. Highest water level 3.12 below lsd, Apr. 3, 1951; lowest 14.83 below lsd, Oct. 28, 1953. Records available: 1946-54.

Jan. 29	7.19	Apr. 29	5.36	July 26	11.52	Oct. 30	9.07
Feb. 25	4.60	May 28	6.26	Sept. 1	11.77	Nov. 29	5.00
Mar. 29	5.25	June 25	8.70	27	6.80	Dec. 30	5.21

New Haven County

EHv 70. H. A. Doolittle. Silver Sands Rd., East Haven. Lat. 41°15'00", long. 72°52'45". Dug unused water-table well in glacial sand and gravel, diameter 36 inches, depth 16 feet, lined with stone. Land-surface datum is about 30 feet above msl. Highest water level 7.27 below lsd, Mar. 30, 1953; lowest 16.03 below lsd, Nov. 22, 1935. Records available: 1935-39, 1951-54.

Jan. 29	10.90	Apr. 29	9.42	July 26	13.14	Nov. 26	11.03
Feb. 25	10.93	May 28	9.53	Sept. 27	10.63	Dec. 27	9.16
Mar. 29	9.83	June 25	11.48	Oct. 29	12.17		

Na 10. Naugatuck Water Co. Beacon Valley Rd., Naugatuck. Lat. 41°28', long. 73°00'40". Driven unused water-table well in glacial sand and gravel, diameter 2 inches, depth 94 feet. Land-surface datum is about 340 feet above msl. Highest water level 3.90 below lsd, Mar. 30, 1948; lowest 16.45 below lsd, Oct. 24, 1947. Records available: 1946-50, 1952-54. July 1, 13.20; Dec. 30, 4.43.

Na 11. Naugatuck Water Co. Beacon Valley Rd., Naugatuck. Lat. 41°28', long. 73°00'40". Driven unused water-table well in glacial sand and gravel, diameter 2 inches, depth 36 feet. Land-surface datum is about 340 feet above msl. Highest water level 3.00 below lsd, Apr. 1, 1953; lowest 16.64 below lsd, Oct. 24, 1947. Records available: 1946-54.

Jan. 28	15.96	Apr. 28	6.58	July 26	15.53	Oct. 29	6.50
Feb. 27	15.70	May 28	4.91	Sept. 1	15.30	Nov. 26	5.49
Mar. 29	6.08	July 1	13.63	30	6.92	Dec. 30	4.39

Sb 1. Francis Bower. Near South Britain. Lat. 41°28'50", long. 73°15'30". Dug unused water-table well in glacial sand and gravel, diameter 24 inches, depth 23 feet, lined with stone. Land-surface datum is about 190 feet above msl. Highest water level 11.12 below lsd, Apr. 29, 1953; lowest 18.40 below lsd, Oct. 14, 1916. Records available: 1913-16, 1944-54.

Jan. 28	14.44	Apr. 28	13.85	July 26	15.25	Oct. 29	15.16
Feb. 27	14.30	May 28	13.88	Sept. 1	15.45	Nov. 26	14.03
Mar. 29	13.94	July 1	14.52	30	14.78	Dec. 30	13.56

Wb 93. Mrs. William Nichols, Sr. 118 Pearl Lake Rd., Waterbury. Lat. 41°31'30", long. 73°02'30". Dug unused water-table well in glacial gravel, diameter 4 feet, depth 33 feet, lined with stone. Land-surface datum is about 320 feet above msl. Highest water level 23.99 below lsd, Apr. 1, 1953; lowest 28.39 below lsd, Aug. 29, 1944. Records available: 1944-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	27.49	Apr. 28	26.40	July 26	27.87	Oct. 29	27.60
Feb. 27	27.22	May 28	26.65	Sept. 1	27.77	Nov. 26	26.87
Mar. 29	26.42	July 1	27.53	30	26.97	Dec. 30	25.82

Wb 176. Mrs. Frank Bergin. 535 Scott Rd., Waterbury. Lat. 41°32', long. 72°59'. Dug unused water-table well in glacial till, diameter 30 inches, depth 16 feet, lined with stone. Land-surface datum is about 650 feet above msl. Highest water level 2.80 below lsd, Apr. 4, 1951; lowest 15.20 below lsd, Nov. 26, 1949. Records available: 1944-54.

Jan. 28	6.60	Apr. 28	5.47	July 26	12.02	Oct. 29	9.10
Feb. 27	5.70	May 28	5.80	Sept. 1	11.12	Nov. 26	5.04
Mar. 29	5.17	July 1	9.90	30	7.00	Dec. 30	3.51

Wb 198. A. Baker. 185 Pierpont Rd., Waterbury. Lat. 41°32'45", long. 72°58'45". Dug domestic water-table well in glacial till, diameter 30 inches, depth 31 feet, lined with stone. Land-surface datum is about 540 feet above msl. Highest water level 5.49 below lsd, Jan. 10, 1946; lowest 21.00 below lsd, Nov. 26, 1949. Records available: 1944-54.

Jan. 28	14.26	Apr. 28	11.79	July 26	14.18	Oct. 29	13.69
Feb. 27	14.46	May 28	11.26	Sept. 1	14.33	Nov. 26	12.54
Mar. 29	12.35	July 1	13.31	30	12.30	Dec. 30	10.29

Wb 336. The Bristol Co. Platts Mills Rd., Waterbury. Lat. 41°31', long. 73°03'30". Drilled unused water-table well in glacial sand and gravel, diameter 8 inches, depth 57 feet, screen setting 37-57. Land-surface datum is about 215 feet above msl. Highest water level 9.08 below lsd, Apr. 1, 1953; lowest 20.40 below lsd, Aug. 29, 1944. Records available: 1944-54. Nearby well being pumped.

Jan. 28	14.59	Apr. 28	11.59	July 26	17.66	Oct. 29	15.75
Feb. 27	13.58	May 28	11.38	Sept. 1	16.35	Nov. 26	12.60
Mar. 29	12.06	July 1	15.50	30	14.69	Dec. 30	10.29

Wb 340. Connecticut Light and Power Co. Eagle St., Waterbury. Lat. 41°32'10", long. 73°03'30". Driven unused water-table well in glacial sand and gravel, diameter 2 inches, depth 40 feet. Land-surface datum is about 250 feet above msl. Highest water level 15.83 below lsd, May 19, 1945; lowest 24.87 below lsd, Sept. 27, 1945. Records available: 1944-54. Nearby well being pumped.

Jan. 28	19.69	Apr. 28	18.44	July 26	19.97	Oct. 29	19.69
Feb. 27	18.74	May 28	18.89	Sept. 1	19.50	Nov. 26	17.58
Mar. 29	18.81	July 1	19.80	30	19.77	Dec. 30	18.36

New London County

NL 10. New London Historical Society. 11 Blinman St., New London. Lat. 41°21', long. 72°06'. Dug unused water-table well in glacial sand and gravel, diameter 36 inches, depth 22 feet, lined with stone. Land-surface datum is about 10 feet above msl. Highest water level 11.76 below lsd, Mar. 31, 1953; lowest 17.99 below lsd, Aug. 16, 1937. Records available: 1937-39, 1946-54.

Jan. 30	15.03	May 1	14.05	June 30	16.59	Sept. 28	14.27
Feb. 26	13.35	29	15.21	Sept. 3	14.27	Nov. 27	14.49
Mar. 27	14.15						

Tolland County

U 3. Yale University Forest. Union. Lat. 41°57'40", long. 72°09'45". Dug unused water-table well in glacial till, diameter 36 inches, depth 25 feet, lined with stone. Land-surface datum is about 780 feet above msl. Highest water level 9.34 below lsd, Mar. 31, 1953; lowest dry, Dec. 1, 1949. Records available: 1946-54.

Jan. 30	19.36	Apr. 30	14.67	July 27	19.37	Oct. 25	19.15
Feb. 26	18.40	May 28	15.02	Sept. 3	20.88	Nov. 27	17.97
Mar. 27	15.67	June 30	17.74	27	17.90	Dec. 28	14.65

Windham County

Af 1. Yale University Forest. Near Westford, in Ashford township. Lat. $41^{\circ}55'00''$, long. $72^{\circ}09'00''$. Dug unused water-table well in glacial till, diameter 30 inches, depth 15 feet, lined with stone. Land-surface datum is about 650 feet above msl. Highest water level 2.63 below lsd, Jan. 25, 1953; lowest dry, Oct. 27, 1949. Records available: 1946-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	5.46	Apr. 30	4.50	July 27	11.50	Oct. 25	8.07
Feb. 26	4.58	May 29	5.33	Sept. 3	12.48	Nov. 27	5.39
Mar. 27	4.46	June 30	9.13	28	6.42	Dec. 28	5.08

Pl 1. W. P. Lewis. Pleasant St., Plainfield. Lat. $41^{\circ}40'50''$, long. $71^{\circ}55'20''$. Dug unused water-table well in glacial sand and gravel, diameter 36 inches, depth 34 feet, lined with stone. Land-surface datum is about 180 feet above msl. Highest water level 27.24 below lsd, Apr. 28, 1953; lowest 31.82 below lsd, Oct. 27, 1953. Records available: 1942-54.

Jan. 30	29.77	Apr. 30	28.85	July 27	30.45	Oct. 25	29.92
Feb. 26	29.91	May 29	29.11	Sept. 3	30.69	Nov. 27	29.98
Mar. 27	29.19	June 30	29.90	28	29.58	Dec. 28	29.15

Wil 1. American Thread Co. 322 Main St., Willimantic. Lat. $41^{\circ}42'30''$, long. $72^{\circ}12'15''$. Drilled unused water-table well, diameter 6 inches, depth 83 feet. Land-surface datum is about 190 feet above msl. Highest water level 4.52 below lsd, Mar. 31, 1953; lowest 8.90 below lsd, Oct. 27, 1947. Records available: 1946-54.

Jan. 30	7.09	Apr. 30	6.38	July 27	7.78	Oct. 25	7.33
Feb. 26	7.03	May 29	6.82	Sept. 3	7.28	Nov. 27	6.83
Mar. 27	6.63	June 30	7.48	27	6.69	Dec. 28	6.02

DELAWARE

By O. J. Coskery and D. H. Boggess

Scope of Water-Level Program

In 1943 the U. S. Geological Survey, cooperating with the towns of Lewes and Rehoboth, began a study of salt-water encroachment into the fresh-water aquifers of that area. After the development of a new well field inland by the city of Lewes in 1945, the program was limited to determining fluctuations in the water surface until 1950, in which year the cooperation was concluded. Observation of well Ni 3 was continued on the statewide program begun in December 1949. The State of Delaware, through the Agricultural Extension Service of the University of Delaware and the Highway Department, cooperated with the U. S. Geological Survey for the purpose of making a preliminary study of ground-water resources within the State through June 30, 1951. Beginning July 1, 1951, the Delaware Geological Survey became the cooperating State agency and cooperation between that agency and the U. S. Geological Survey has continued through 1954.

During 1954, 444 individual water-level measurements were made in the 21 wells listed in this report. Recording gages were maintained on 5 wells in municipal well fields at New Castle, Newark, and Lewes. A recording gage was also maintained at the Governor Bacon Health Center at Delaware City. Figure 5 shows the location of observation wells in Delaware.

A report entitled "Geology and ground-water resources of the Newark area, Delaware," by Johan J. Groot and William C. Rasmussen, was published by the Delaware Geological Survey in April 1954 as Bulletin No. 2. This report describes the geological conditions and the occurrence, quantity, and quality of the available ground-water supply in the Newark area. In August 1954, a report entitled "Water levels and artesian pressures in Delaware, 1952," by I. W. Marine, was released by the Delaware Geological Survey as Water-Level Report No. 1.

Precipitation

The year was one of below-normal precipitation in Delaware, having a total of 37.59 inches, 6.39 inches below the average, for 14 stations in the State. From the beginning of 1954, drought conditions persisted through October with only two periods of slight relief. Less than 1 inch of rainfall in June, nearly 3 inches below normal for that month, and a continued deviation below normal of 1.5 inches in July marked the peak of the dry season. Precipitation, slightly above normal during the months of August and September, effected little change in the declining water levels. The November precipitation, more than an inch above normal, reversed the downward trend of water levels and started a sharp rise upward, which continued through the remainder of 1954.

Pumpage

The average pumpage from the municipal well field at New Castle was 474,450 gpd (gallons per day) during 1954. From the Newark well field the average daily pumpage was 664,700 gallons. This was augmented by an average of 163,875 gpd from a private water company using a surface-water source. The decline in pumpage from the ground-water reservoir and the subsequent increase in surface-water use was due to pump failure on one of the production wells in June. An additional 7,272,900 gallons was withdrawn from the aquifer at Newark during August and September when a canning company was in operation. Pumpage from the new well field at Lewes averaged 390,700 gpd during 1954. At the Governor Bacon Health Center the average daily pumpage during 1954 was 92,100 gpd.

Interpretation of Water-Level Fluctuations

During 1954 the average water level of 13 water-table wells (fig. 6) fluctuated in response to recharge by ground-soaking precipitation and to drought through the withdrawal of water by plants. As indicated in figure 6, the ground-water reservoirs showed an excess of discharge over recharge from the end of January to the end of October, at which time record-low water levels were observed in a number of observation wells throughout the State. Although January was a month of below-normal precipitation, the ground-water reservoirs were still registering recharge from precipitation occurring at the end of 1953. The downward trend of water levels was

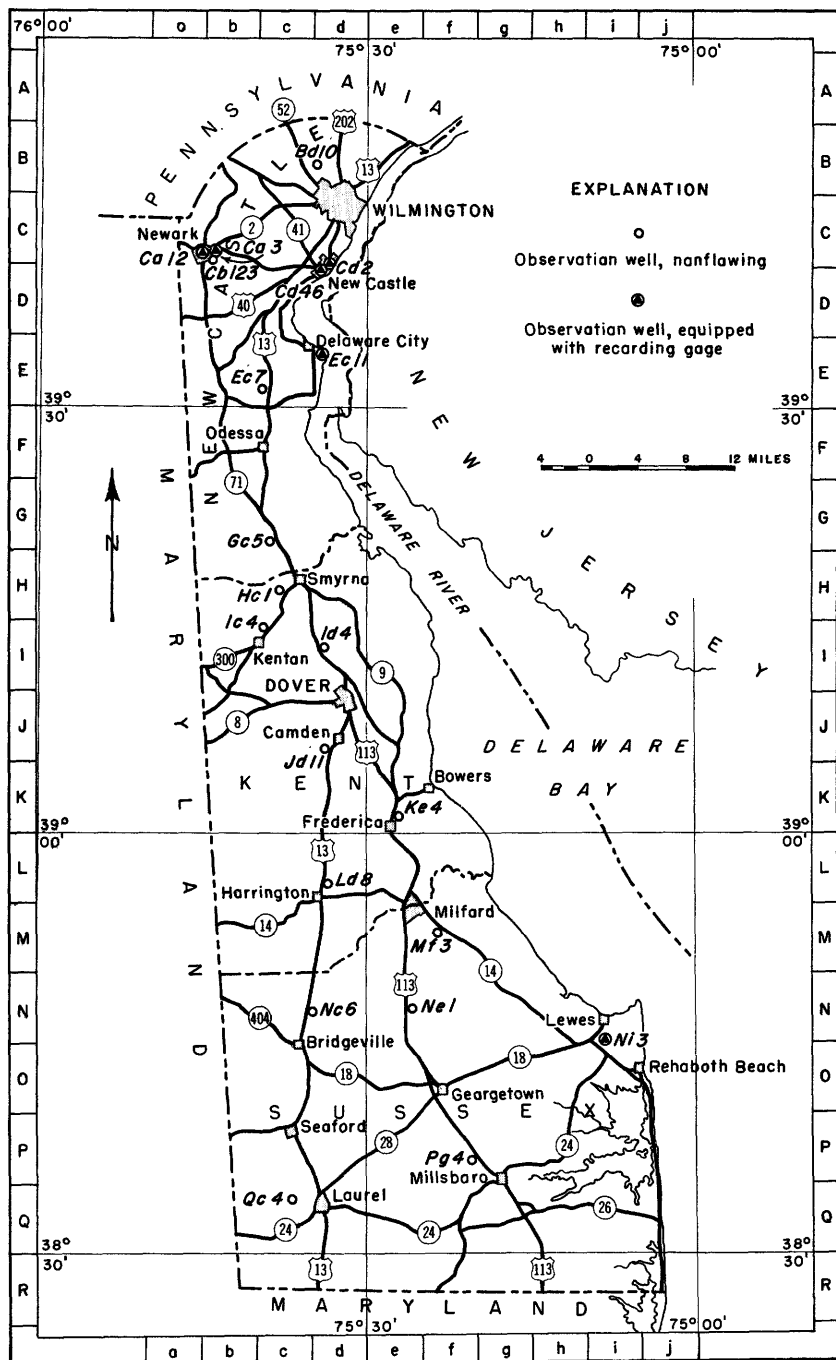


Figure 5. -- Location of observation wells in Delaware, 1954.

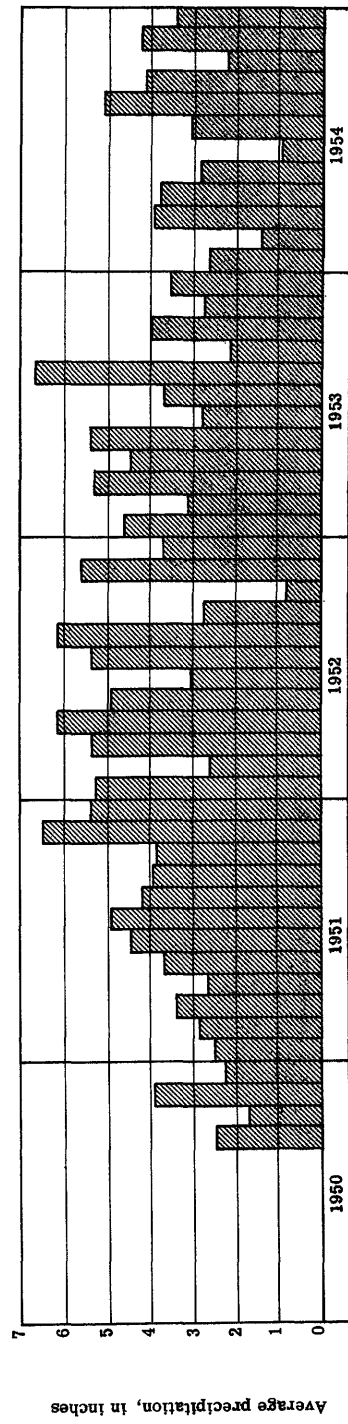
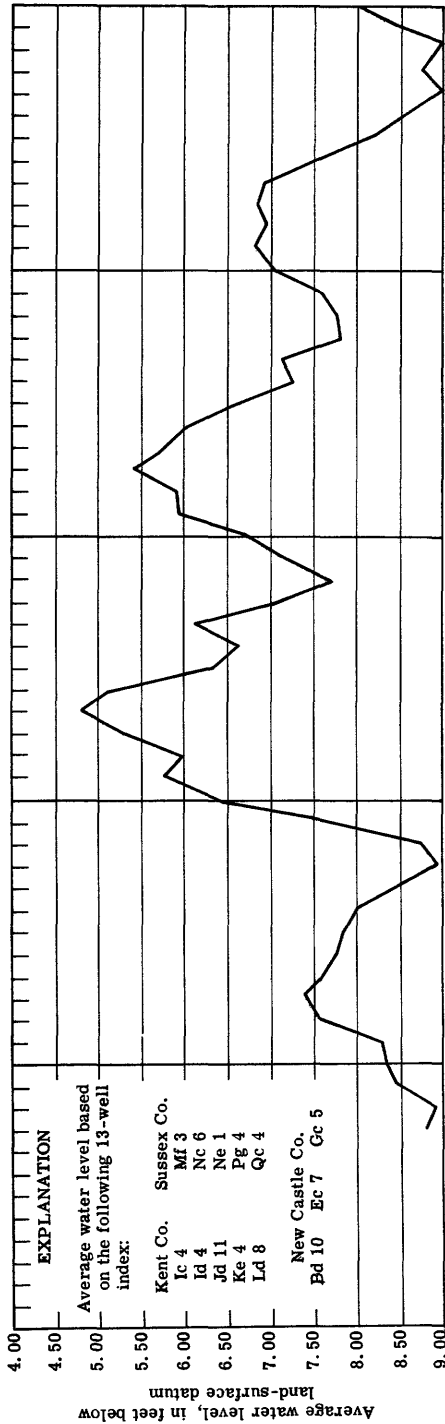


Figure 6. --Average monthly water levels in 13 water-table wells in Delaware and average monthly precipitation, September 1950 to December 1954.

interrupted once at the end of March by a small rise of 0.09 foot after a short period of normal precipitation. It was interrupted a second time during September after 2 months of slightly above-normal rainfall brought about an average residual rise of 0.27 foot in the water table at month end. At the end of August, the average water level reached its lowest point, 9.00 feet below land surface. This low was repeated at the end of October. This long decline in the water level resulted from the normal transpiration of plants, augmented by base runoff to streams and evaporation from marshy areas during a prolonged period of below-normal precipitation. The depletion cycle ended in November, when above-normal precipitation enabled the water level to begin recovery. The average water level for 1954 was 7.90 feet below land surface, 1.17 feet lower than the average for 1953. No annual trend of the average water level has yet been observed.

Water levels in the vicinity of well fields at Delaware City, Newark, New Castle, and Lewes responded to pumping from municipal wells. At Newark, increasing requirements of a growing population and prolonged drought conditions united to bring water levels in observation well Ca 3 in the city well field to a record low. Cb 123 at the University Farm, on the outer rim of this cone of depression, was similarly affected. At New Castle, pumping was confined to the shallow water-table aquifer, which reflected a slight downward trend in water levels in observation well Cd 2. Cd 46, an observation well in New Castle in the artesian aquifer, reflects seasonal recharge in the winter and spring, owing to nearness to the intake area, approximately 2 to 3 miles away. The downward trend during the 2 years of record may be attributed to industrial and municipal pumping of the 3 large well fields within a radius of 2.5 miles. The nearby production well of the city of New Castle, drilled to the same depth, was used very little during this period. At Delaware City, water levels in Ec 11 at the Bacon Health Center showed a declining trend of 3.2 feet in 1952, 1953, and 1954 for an average of more than a foot a year. Water levels in well Ni 3 at Lewes continued their gentle downward trend of 1.7 feet during a period of 5 years of record. Well-field tests at Lewes in December indicated high coefficients of transmissibility and storage, which, in view of the generally sustained water levels during a period of increased pumping, suggest a high potential yield for this field.

Acknowledgments

Recording-gage charts were voluntarily changed weekly by Oliver Henderson at New Castle; Mrs. Thalia Fisher and Mr. Bayard Coulter at Lewes; and Carl Jorgenson at the Governor Bacon Health Center.

Well-Numbering System

The State of Delaware is divided into 5-minute quadrangles of latitude and longitude as shown in figure 5. The quadrangles are lettered north to south with uppercase letters and west to east with lowercase letters. A quadrangle is indicated by two letters with the capital letter being given first. Within the quadrangles the wells are numbered in the order they were scheduled. Each well number consists of a two-letter symbol and a number assigned to the well.

Well Descriptions and Water-Level Measurements

(Water-level measurements are in feet below land-surface datum unless otherwise indicated.)

Kent County

Hc 1. Town of Clayton. Lat. $39^{\circ}17'$, long. $75^{\circ}38'$. Jetted unused artesian well in sand of Eocene age, diameter 4 inches, depth 204 feet. Land-surface datum is about 45 feet above msl. Highest water level 18.33 below lsd, Apr. 30, 1953; lowest 39.30 below lsd, Dec. 1, 1953. Records available: 1950, 1952-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	21.48	Apr. 30	21.78	July 29	27.13	Nov. 3	23.68
25	19.78	June 1	25.14	Aug. 30	22.86	Dec. 3	20.99
Mar. 31	18.45	July 2	27.14	Sept. 29	23.49		

c Nearby well being pumped.

d Nearby well pumped recently.

Ic 4. State Highway Department. Lat. $39^{\circ}14'$, long. $75^{\circ}39'$. Driven observation water-table well in sand of Pleistocene age, diameter 1 inch, depth 12 feet. Land-surface datum is about 60 feet above msl. Highest water level 2.44 below lsd, May 1, 1952; lowest 6.08 below lsd, Aug. 30, 1954. Records available: 1950-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	4.22	Apr. 30	4.87	July 29	5.87	Nov. 3	5.90
25	4.56	June 1	5.10	Aug. 30	6.08	Dec. 3	5.64
Mar. 31	4.57	July 2	5.40	Sept. 29	6.03		

Id 4. State Highway Department. Lat. $39^{\circ}13'$, long. $75^{\circ}34'$. Near Cheswold. Driven observation water-table well in sand of Pleistocene age, diameter 1 inch, depth 14 feet. Land-surface datum is about 40 feet above msl. Highest water level 2.48 below lsd, May 1, 1952; lowest 9.52 below lsd, Nov. 3, 1954. Records available: 1950-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	4.46	Apr. 30	4.90	July 29	7.95	Nov. 3	9.52
25	4.49	June 1	5.60	Aug. 30	9.02	Dec. 3	8.12
Mar. 31	4.30	July 2	7.04	Sept. 29	9.25		

Jd 11. State Highway Department. Lat. $39^{\circ}06'$, long. $75^{\circ}33'$. Near Camden. Driven observation water-table well in sand of Pleistocene age, diameter 1 inch, depth 17 feet. Land-surface datum is about 50 feet above msl. Highest water level 3.08 below lsd, June 2, 1952; lowest 9.16 below lsd, Oct. 30, 1951. Records available: 1950-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	5.48	Apr. 30	5.84	July 30	7.04	Nov. 3	8.30
26	5.60	June 1	6.08	Aug. 31	7.58	30	8.09
Mar. 31	5.50	July 2	6.62	Sept. 29	7.80		

Ke 4. State Highway Department. Lat. $39^{\circ}01'$, long. $75^{\circ}27'$. Near Frederica. Driven observation water-table well in sand of Pleistocene age, diameter 1 inch, depth 15 feet. Land-surface datum is about 22 feet above msl. Highest water level 4.13 below lsd, June 2, 1952; lowest 12.89 below lsd, Dec. 1, 1950. Records available: 1950-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	9.91	Apr. 30	10.03	July 29	11.51	Nov. 1	12.49
25	9.84	June 1	10.50	Aug. 30	12.02	30	12.40
Mar. 31	9.55	July 2	11.10	Sept. 29	12.04		

Ld 8. State Highway Department. Lat. $38^{\circ}56'$, long. $75^{\circ}34'$. Driven observation water-table well in sand of Pleistocene age, diameter 1 inch, depth 13 feet. Land-surface datum is about 52 feet above msl. Highest water level 1.28 below lsd, June 2, 1952; lowest 7.26 below lsd, Oct. 1, 1951. Records available: 1950-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	3.72	Apr. 30	3.10	July 30	6.24	Nov. 1	6.85
26	3.89	June 1	4.52	Aug. 31	6.67	30	5.69
Apr. 1	3.70	July 2	5.87	Sept. 29	5.77		

New Castle County

Bd 10. F. B. Crowninshield. Lat. $39^{\circ}47'$, long. $75^{\circ}34'$. Dug unused water-table well in weathered gabbro, diameter 42 inches, depth 23 feet, curbed with stone. Land-surface datum is about 250 feet above msl. Highest water level 10.30 below lsd, May 2, 1952; lowest 16.58 below lsd, Nov. 2, 1954. Records available: 1950-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	13.83	May 3	13.70	Aug. 3	15.90	Nov. 2	16.58
Feb. 25	14.16	June 2	14.18	30	16.10	Dec. 4	16.01
Mar. 31	13.71	July 3	15.15	Sept. 29	16.35	30	15.58

Ca 3. City of Newark. Lat. $39^{\circ}40'$, long. $75^{\circ}45'$. Academy St. and Waterworks Lane. Drilled unused artesian well in Patuxent formation, diameter 8 inches, depth 67 feet. Land-surface datum is about 100 feet above msl. Highest water level 20.60 below lsd, Apr. 28, 1952; lowest 35.52 below lsd, Dec. 18, 1954. Records available: 1950-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	33.98	34.48	33.26	34.40	34.79	34.32	.....	.....	34.31	34.76	35.06
2	32.72	34.07	34.52	33.18	34.37	34.79	34.37	.....	33.32	34.41	34.80	35.09
3	32.66	34.02	34.52	33.10	34.34	34.77	34.57	34.60	33.33	34.45	34.74	35.15
4	32.90	33.98	34.58	32.94	34.38	34.83	34.60	34.54	33.35	34.41	e34.79	35.19
5	32.97	34.06	34.64	32.70	34.36	34.71	34.29	34.46	33.34	34.50	34.90	35.11
6	33.05	e34.08	34.64	32.58	34.36	34.68	34.13	34.28	33.29	34.67	34.94	35.02
7	33.12	33.67	34.52	32.62	34.44	34.62	33.80	34.15	33.48	.....	34.90	.....
8	33.32	33.83	34.50	32.95	34.49	34.63	33.85	33.97	.....	.....	34.89	.....
9	33.45	33.91	34.56	33.09	34.40	34.71	33.90	33.82	.....	.....	34.98	.....
10	33.41	34.15	34.52	33.16	34.15	34.78	33.93	33.77	.....	.....	35.05	.....
11	33.37	34.25	34.49	33.20	34.19	34.84	33.84	33.79	.....	.....	e35.08	.....
12	33.42	34.36	34.65	33.30	34.15	34.74	33.68	33.76	.....	.....	35.20	.....
13	33.66	34.32	.....	33.37	34.15	34.78	33.83	33.83	.....	34.77	35.22	.....
14	33.73	34.23	34.55	33.54	34.32	34.70	34.05	33.82	.....	34.89	35.05	35.34
15	33.77	34.22	34.46	33.65	34.38	34.71	34.12	33.78	.....	34.92	34.99	35.31

Ca 3--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	33.82	34.23	34.50	33.81	34.32	34.75	.....	33.64	33.83	34.78	35.02	35.44
17	33.68	34.16	34.48	33.78	34.26	34.79	34.20	33.68	33.85	34.77	34.98	35.51
18	33.71	34.26	34.45	33.62	34.33	34.69	34.09	33.66	33.90	34.70	35.14	35.52
19	33.75	34.39	34.54	33.82	34.31	.....	33.82	33.66	33.91	34.74	35.17	35.33
20	34.06	.....	34.60	33.87	34.24	.....	33.96	33.68	33.84	34.74	.....	35.21
21	34.13	.....	34.56	34.18	34.33	.....	34.06	33.66	33.86	34.83	.....	35.19
22	34.18	34.31	34.52	34.41	34.40	.....	34.29	33.60	33.80	35.00	.....	35.10
23	34.20	34.31	34.75	34.50	34.33	.....	34.46	33.49	33.89	35.04	35.09	35.02
24	34.01	34.44	34.75	34.65	34.32	34.91	34.50	33.48	34.00	34.93	35.11	35.01
25	33.99	.....	34.42	34.69	34.39	34.78	34.49	33.50	34.06	34.83	35.02	35.00
26	34.05	.....	33.89	34.61	34.82	34.78	34.32	33.53	34.05	34.95	34.97	34.88
27	34.14	34.65	33.62	34.63	34.83	34.79	34.34	33.57	33.90	34.98	34.89	34.78
28	34.23	34.59	33.45	34.54	34.84	34.40	34.54	33.52	33.97	35.00	34.83	34.78
29	34.30	.....	33.24	34.41	34.89	34.32	34.75	33.34	34.09	34.98	34.85	34.76
30	34.25	.....	33.19	34.35	34.85	34.31	34.89	33.24	34.24	34.97	34.97	34.82
31	34.15	.....	33.25	.....	34.74	.....	.....	.....	.....	34.84	.....	34.84

e Estimated.

Ca 12. Phillips Packing Co. Lat. 39°40', long. 75°46'. Drilled unused artesian well in Patuxent formation, diameter 8 inches, depth 42 feet. Land-surface datum is about 110 feet above msl. Highest water level 22.58 below lsd, July 12, 1953; lowest 33.74 below lsd, Aug. 26, 1954. Records available: 1951, 1953-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	25.85	26.16	26.44	26.16	26.14	26.46	26.98	.....	c32.10	28.42	28.77	.....
2	25.84	26.16	26.43	26.16	26.13	26.49	26.99	.....	c32.10	28.43	.....	.....
3	25.88	26.17	26.40	26.16	26.13	26.50	27.01	27.58	c32.30	28.43	.....	.....
4	25.89	26.19	26.34	26.17	26.11	26.51	27.01	.....	.....	28.46	.....	.....
5	25.89	26.21	26.33	26.16	26.09	26.54	27.03	.....	28.92	28.47	.....	.....
6	25.92	26.21	26.33	26.14	26.09	26.54	27.03	.....	c32.40	28.49	.....	.....
7	25.95	26.21	26.33	26.12	26.10	26.56	27.03	27.78	c32.80	28.49	.....	.....
8	.....	26.21	26.34	26.15	26.09	26.57	27.08	27.67	c32.28	28.50	.....	.....
9	25.97	26.24	26.34	26.18	26.11	26.59	27.09	c31.75	c32.60	28.50	.....	.....
10	26.00	26.26	26.34	26.18	26.11	26.60	27.11	c32.30	c32.40	28.51	.....	.....
11	26.00	26.30	26.36	26.16	26.11	26.64	27.10	c32.35	d29.40	28.53	.....	.....
12	26.05	26.32	26.38	26.18	26.14	26.66	27.11	.....	28.63	28.56	.....	.....
13	26.07	26.31	.....	26.18	26.16	26.66	27.14	.....	c32.45	28.57	.....	.....
14	26.07	26.31	.....	26.18	26.17	26.68	27.17	.....	.....	28.58	.....	.....
15	26.09	26.34	.....	26.21	26.18	26.69	27.19	.....	c32.56	28.62	.....	.....
16	26.09	26.34	.....	26.20	26.18	26.72	27.19	.....	c31.80	28.61	.....	.....
17	26.11	26.37	.....	26.16	26.21	26.72	27.18	c32.36	c31.65	28.62	.....	.....
18	26.11	26.41	.....	26.16	26.22	26.72	27.18	c32.50	28.55	28.62	.....	.....
19	26.11	26.41	.....	26.16	26.23	.....	27.20	c32.49	28.49	28.64	.....	.....
20	26.11	26.40	26.26	26.19	26.25	.....	27.23	c32.50	28.45	28.64	.....	.....
21	26.11	26.41	26.25	26.19	26.26	.....	27.27	.....	28.43	28.65	.....	.....
22	26.07	26.39	26.26	26.19	26.28	.....	27.28	28.07	28.41	28.67	.....	.....
23	26.07	26.40	26.28	26.22	26.29	.....	27.31	c33.60	28.41	28.69	.....	.....
24	26.05	26.39	26.28	26.17	26.30	26.87	27.32	c33.65	28.40	28.69	.....	.....
25	26.08	26.40	26.27	26.15	26.33	26.87	27.34	c33.58	28.39	28.70	.....	.....
26	26.07	26.45	26.20	26.15	26.36	26.89	27.36	c33.74	28.38	28.70	.....	.....
27	26.05	26.46	26.22	26.15	26.38	26.91	27.37	d30.15	28.39	28.73	.....	.....
28	26.11	26.46	26.18	26.13	26.40	26.93	27.39	29.25	28.40	28.77	.....	.....
29	26.13	.....	26.16	26.13	26.42	26.95	27.41	29.16	28.41	28.77	.....	.....
30	26.15	.....	26.17	26.14	26.44	26.98	27.43	c32.81	28.42	28.77	.....	.....
31	26.17	.....	26.17	.....	26.46	.....	.....	.....	.....	28.77	.....	.....

c Nearby well being pumped.

d Nearby well pumped recently.

e Estimated.

Cb 123. University of Delaware. Agricultural Experiment Station. Lat. 39°40', long. 75°44'. Driven observation water-table well in sand of Patuxent formation, diameter 1½ inches, depth 26 feet. Land-surface datum is about 90 feet above msl. Highest water level 6.50 below lsd, May 1, 1952; lowest 12.80 below lsd, Nov. 1, Dec. 3, 1954. Records available: 1951-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 2	10.30	Apr. 30	10.35	Aug. 2	10.42	Nov. 1	12.80
25	10.53	June 1	10.90	30	12.39	Dec. 3	12.80
Mar. 31	10.15	July 2	11.64	Sept. 29	12.59	30	12.67

Cd 2. City of New Castle. Lat. 39°40', long. 75°34'. Dug unused water-table well in sand of Pleistocene age, size 12 by 13 feet, depth 23 feet. Land-surface datum is 9.21 feet above msl. Highest water level 3.37 above msl, Apr. 19, 1953; lowest 13.09 below msl, Aug. 1, 1950. Records available: 1950-54.

Daily lowest water level below msl from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.49	7.81	7.88	7.86	7.95	7.79	8.27	8.51	8.60	....	8.18	9.41
2	7.25	7.91	8.00	7.99	7.16	7.86	8.21	8.06	8.56	....	8.60	9.44
3	7.28	8.05	8.13	7.99	7.30	7.99	8.15	8.01	8.63	....	8.49	9.66
4	7.19	8.14	8.25	7.94	7.79	8.08	8.18	8.04	8.62	7.67	8.56	9.59
5	7.63	8.17	8.32	7.65	7.86	7.64	7.62	7.95	8.40	7.98	8.70	9.41
6	7.64	8.18	8.30	7.72	7.81	7.05	7.49	7.87	8.01	8.11	8.77	9.31
7	7.66	8.09	8.08	7.96	7.89	7.54	7.71	7.73	8.13	8.20	8.69	9.68
8	7.99	7.69	7.89	8.04	7.69	7.97	7.64	7.39	8.48	8.22	8.49	9.74
9	8.02	7.89	7.95	8.10	7.03	7.97	7.64	7.58	8.65	8.24	8.89	9.69
10	7.85	8.04	8.03	8.23	7.17	8.04	7.55	7.73	8.74	8.09	8.99	9.74
11	....	8.12	8.10	8.17	7.29	8.07	7.35	7.95	8.68	7.82	8.90	9.60
12	....	8.44	8.26	7.80	7.56	8.00	7.36	8.07	7.74	8.26	9.28	9.49
13	....	8.46	....	7.90	7.61	8.05	7.79	8.13	8.01	8.29	9.31	9.29
14	....	8.42	....	8.04	7.72	7.69	7.92	8.04	8.45	8.29	9.22	9.52
15	8.05	8.04	....	8.10	7.65	8.14	8.17	8.09	8.51	8.25	9.12	9.45
16	8.07	8.25	....	8.16	6.85	8.14	8.23	7.75	8.59	8.34	9.27	9.57
17	....	8.34	....	8.19	7.04	8.02	8.22	8.21	8.73	8.35	9.23	9.63
18	....	8.41	....	8.24	7.15	7.99	7.83	8.18	8.79	7.89	9.40	9.41
19	....	8.44	....	8.29	7.49	7.91	7.64	8.25	7.76	8.15	9.44	8.89
20	....	8.41	8.20	8.29	7.81	7.78	8.08	8.30	7.91	8.26	9.45	9.15
21	....	8.26	8.12	8.21	7.82	7.57	8.30	8.35	8.16	8.37	8.75	9.37
22	....	8.04	7.84	8.22	7.67	7.97	8.35	7.80	8.49	8.50	9.04	9.55
23	8.09	8.33	8.23	8.11	7.54	8.03	8.37	8.08	8.60	8.50	9.27	9.69
24	7.54	8.61	8.25	8.08	7.19	8.03	8.43	8.30	8.56	8.45	9.34	9.70
25	7.70	8.72	8.13	7.39	7.36	....	8.19	8.60	8.31	8.20	9.38	9.62
26	7.94	8.72	8.44	7.59	7.45	....	7.89	8.84	7.82	....	8.86	9.31
27	8.21	8.56	8.05	7.72	7.55	....	8.04	8.93	....	....	8.75	9.29
28	8.25	7.82	7.51	7.83	8.02	....	8.08	8.49	....	8.33	8.38	9.37
29	8.31	....	7.71	7.89	8.03	....	8.20	8.29	....	8.50	8.82	9.46
30	8.33	....	7.77	8.03	8.01	8.29	8.44	8.23	....	8.42	9.04	9.56
31	8.16	....	7.89	....	7.59	....	8.50	8.53	....	7.90	....	9.56

Cd 46. City of New Castle. Lat. 39°40', long. 75°34'. Jetted unused artesian well in sand of Cretaceous age, diameter 6 inches, depth 121 feet. Land-surface datum is 11.01 feet above msl. Highest water level 7.09 above msl, June 1, 1953; lowest 2.54 above msl, Nov. 26, 1952. Records available: 1952-54.

Daily lowest water level above msl from recorder graph, 1952

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Nov. 25	2.55	Nov. 29	2.89	Dec. 9	3.62	Dec. 12	3.65
26	2.54	30	3.06	10	3.68	13	3.64
27	2.58	Dec. 1	3.20	11	3.76	14	3.62
28	2.71	2	3.26				

Daily lowest water level above msl from recorder graph, 1953*

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.30	7.09	5.96	5.62	5.39	5.35	....	....
2	6.46	....	6.28	5.70	5.50	5.26	....	....
3	6.52	....	6.30	5.70	5.48	5.29	....	e6.13
4	6.41	....	6.20	5.77	5.52	5.32	....	6.25
5	6.40	6.77	....	5.71	5.60	5.33	....	e6.15
6	6.47	6.72	6.29	5.67	5.50	5.44	....	e6.06
7	6.60	6.71	5.58	5.74	5.46	5.22	....	....
8	6.61	6.75	6.15	5.84	5.29	5.16	....	....
9	6.63	6.79	6.04	5.88	5.24	5.23	....	....
10	6.64	6.62	5.99	5.74	5.32	5.31	6.04	5.98
11	6.66	6.58	5.93	5.60	5.35	5.41	6.12	5.85
12	6.69	6.64	5.98	5.59	5.40	5.41	6.25	5.89
13	6.71	6.68	6.03	5.59	5.48	5.26	6.18	e6.11
14	6.68	6.03	6.04	....	5.32	5.21	6.10	6.29
15	6.70	6.95	6.04	5.57	5.32	5.20	e6.06	e6.16

Cd 46--Continued.

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	....	6.71	6.79	5.88	5.46	5.31	5.17	e6.03	....
17	....	6.74	6.79	5.82	5.52	5.34	5.22	6.13	....
18	....	6.81	6.77	5.82	5.41	5.33	5.23	6.12	....
19	....	6.77	6.70	5.88	5.40	5.55	....	6.09	6.04
20	....	6.76	....	5.88	5.33	5.61	....	6.08	6.13
21	....	6.83	e4.97	5.84	....	5.57	....	6.09	6.16
22	....	6.99	5.81	5.91	....	5.35	....	6.13	6.36
23	....	....	5.73	6.16	....	5.32	....	6.30	6.38
24	....	6.66	6.43	5.79	....	5.33	....	6.22	6.30
25	4.76	6.64	....	5.69	....	5.39	....	6.30	6.37
26	5.28	6.81	6.41	5.70	....	5.48	5.54	6.12	6.37
27	5.50	6.83	6.16	5.69	....	5.48	5.44	6.08	6.32
28	5.61	6.55	6.17	5.63	....	5.45	5.46	e6.05	6.34
29	5.72	6.68	6.30	5.63	....	5.37	....	....	6.49
30	5.91	6.71	6.30	5.64	5.41	5.41	....	e6.03	6.55
31	....	7.01	....	5.61	5.45	....	....	....	6.28

e Estimated.

* No record for January, February, and March.

Daily lowest water level above msl from recorder graph, 1954

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.19	5.88	5.43	5.32	5.12	5.02	4.77	4.27	4.43	4.30	4.07	3.67
2	6.18	6.17	5.23	5.25	5.15	5.00	4.53	4.27	4.39	4.29	4.10	3.96
3	6.37	....	5.16	5.07	5.26	5.05	4.53	4.39	4.35	4.26	4.27	4.13
4	6.26	....	4.94	5.03	5.11	5.09	4.56	4.39	4.15	4.34	3.89	4.17
5	6.30	....	4.81	5.01	5.11	4.95	4.59	4.31	4.15	4.27	3.87	4.25
6	6.47	....	4.91	5.14	5.15	4.87	4.61	....	4.10	4.29	3.98	4.00
7	6.16	....	4.98	5.18	5.15	4.84	4.66	4.28	4.25	4.08	4.12	3.96
8	6.06	....	5.05	4.86	5.40	4.85	4.58	4.29	4.16	4.26	4.19	3.97
9	6.13	....	5.09	4.87	5.29	5.01	4.59	4.44	4.49	4.39	4.11	3.94
10	6.33	....	5.26	4.99	5.09	5.05	4.59	4.33	4.31	4.34	4.03	3.98
11	6.39	....	5.26	5.15	4.95	5.01	4.57	4.25	4.27	4.35	4.08	3.81
12	6.40	....	5.25	5.28	4.85	5.01	4.61	4.15	4.15	4.37	3.98	3.81
13	6.07	....	5.17	5.26	4.88	4.96	4.64	4.16	4.15	4.31	3.94	3.94
14	5.99	....	5.25	5.15	5.14	4.93	4.56	4.24	4.27	4.29	4.09	4.06
15	6.30	....	....	5.25	5.23	4.92	4.49	4.31	4.29	....	4.01	4.35
16	6.54	....	....	....	5.21	4.99	4.43	4.35	4.46	....	4.07	3.97
17	6.38	....	....	....	5.08	5.07	4.49	4.24	4.52	....	4.16	3.86
18	6.28	....	....	....	4.67	5.06	4.57	4.24	4.47	....	4.18	4.08
19	6.31	....	....	....	5.10	4.95	4.57	4.31	4.56	....	4.19	4.25
20	6.33	5.16	....	....	5.13	4.94	4.55	4.17	4.55	....	4.26	4.05
21	6.39	5.23	....	....	5.04	4.92	4.58	4.21	4.52	....	4.23	3.94
22	6.37	5.17	....	....	4.99	4.91	4.54	4.23	4.32	....	4.02	3.77
23	6.49	....	....	....	4.98	4.95	4.47	4.20	4.12	4.24	3.98	3.82
24	6.66	5.19	....	5.07	4.99	4.77	4.42	4.23	4.14	4.10	4.10	3.92
25	6.47	5.33	....	5.15	5.10	4.75	4.43	4.16	4.29	4.10	4.22	3.85
26	6.45	5.24	4.99	5.13	4.99	4.81	4.48	4.17	4.32	4.21	4.17	3.94
27	6.48	5.09	4.94	5.20	4.96	4.79	4.49	4.26	4.37	4.29	4.21	4.03
28	....	5.21	4.97	....	....	4.63	4.43	4.37	4.39	4.17	4.27	4.09
29	....	....	5.19	....	....	4.70	4.40	4.36	4.36	4.31	4.10	4.18
30	....	....	5.20	5.23	....	4.74	4.35	4.41	4.38	4.24	3.70	4.28
31	5.98	....	5.26	....	4.94	....	4.35	4.57	....	4.17	....	4.23

Ec 7. State Highway Department. Lat. 39°31', long. 75°39'. Driven observation water-table well in sand of Pleistocene age, diameter 1 inch, depth 11 feet. Land-surface datum is about 35 feet above msl. Highest water level 0.60 below lsd, May 1, 1952; lowest 3.59 below lsd, Dec. 3, 1954. Records available: 1950-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	1.75	Apr. 30	2.06	July 29	3.21	Nov. 2	3.35
25	1.79	June 1	2.45	Aug. 30	3.35	Dec. 3	3.59
Mar. 31	1.80	July 2	3.02	Sept. 29	3.50		

Ec 11. Governor Bacon Health Center. Lat. 39°34', long. 75°35'. In well field compound of Governor Bacon Health Center, 125 feet south of pumphouse. Drilled unused artesian well in sand of Magothy formation, diameter 6 inches, depth 157 feet, cased to 157. Land-surface datum is about 15 feet above msl. Highest water level 25.2 below lsd, May 27, 1952; lowest 64.2 below lsd, July 2, 1952. Records available: 1952-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	52.5	50.4	56.4	51.5	....	56.6	59.0	54.1	58.6	43.2	60.0
2	....	44.4	....	54.1	41.1	....	59.9	51.6	54.7	49.8	43.1	60.0
3	52.9	54.4	52.0	53.0	51.7	....	60.1	....	59.8	56.6	43.2	....
4	....	55.3	54.4	54.3	52.1	....	59.2	52.8	60.9	54.7	46.4	....
5	52.8	42.6	54.3	55.6	51.8	....	59.5	59.4	55.3	57.3	46.8	57.7
6	47.3	47.6	45.8	52.9	51.6	50.9	52.8	57.2	59.1	60.2	46.4	62.6
7	53.2	53.3	58.8	53.9	42.3	51.9	60.8	58.1	61.6	63.1	55.5	64.4
8	53.7	....	61.7	55.5	51.5	52.1	61.0	37.8	55.8	31.9	58.0	56.0
9	49.9	51.2	36.1	e53.5	41.8	48.8	57.7	60.3	58.3	55.3	57.0	56.0
10	45.8	55.3	53.3	48.3	53.3	....	51.3	55.8	56.7	39.6	54.9	42.4
11	52.5	51.3	51.5	52.1	32.7	48.3	58.2	61.1	58.8	51.6	57.3	54.7
12	52.7	54.9	55.7	40.8	53.3	54.4	52.2	47.0	54.2	41.5	55.0	58.5
13	48.8	53.2	43.4	55.9	51.5	48.5	56.2	61.4	52.6	56.4	56.2	59.5
14	....	53.6	49.9	49.4	53.1	50.9	54.3	61.2	58.5	58.5	55.6	54.0
15	....	49.8	52.0	55.1	42.8	57.5	55.6	60.7	58.2	56.8	57.5	60.4
16	....	55.1	50.9	52.3	50.8	....	57.0	57.4	59.6	58.6	57.3	55.1
17	53.3	52.6	53.4	57.6	55.2	....	55.0	57.8	60.0	54.5	55.4	60.2
18	46.8	55.4	53.5	36.6	....	....	57.7	60.6	56.5	57.3	41.7	59.0
19	52.7	....	57.8	53.8	37.8	....	e57.0	59.0	58.0	39.8	51.4	57.4
20	54.2	....	52.9	52.6	49.8	53.9	36.4	59.6	51.4	57.2	58.1	59.9
21	53.3	54.5	55.8	51.8	55.0	57.3	57.0	37.7	59.9	53.6	55.6	....
22	52.9	53.8	56.5	40.1	e51.0	59.2	59.3	56.9	56.5	57.5	58.0	....
23	55.1	53.6	57.8	52.6	53.7	59.3	35.1	57.6	59.4	54.9	59.1	....
24	36.6	....	34.7	50.2	e49.4	60.0	51.8	49.9	59.5	56.3	57.3	60.6
25	56.1	e54.0	53.3	50.5	51.8	52.4	55.7	51.2	58.7	56.0	55.0	57.5
26	52.2	52.1	53.5	43.4	52.8	59.2	45.3	38.8	44.3	57.0	....	50.5
27	55.6	50.6	55.5	52.5	54.9	57.3	59.7	60.7	59.6	41.3	52.5	....
28	45.3	37.6	54.5	51.8	50.0	59.1	56.0	57.2	58.1	46.4	52.6	56.6
29	56.2	....	56.2	51.6	49.5	57.0	....	49.6	59.3	46.4	58.8	57.8
30	51.4	....	56.8	31.4	52.0	60.0	....	60.2	59.5	46.0	59.8	57.0
31	52.3	....	54.1	....	....	....	....	35.5	....	42.5	....	57.0

e Estimated.

Gc 5. State Highway Department. Lat. 39°21', long. 75°38'. Near Blackbird. Driven observation water-table well in sand of Pleistocene age, diameter 1 inch, depth 10 feet. Land-surface datum is about 40 feet above msl. Highest water level 0.12 below lsd, May 1, 1952; lowest 3.91 below lsd, July 29, 1954. Records available: 1950-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	1.30	Apr. 30	1.62	July 29	3.91	Nov. 2	2.77
25	1.58	June 1	2.24	Aug. 30	3.66	Dec. 3	1.79
Mar. 31	1.51	July 2	3.38	Sept. 29	3.06		

Sussex County

Mf 3. State Highway Department. Lat. 38°53', long. 75°23'. Driven observation water-table well in sand of Pleistocene age, diameter 1 inch, depth 27 feet. Land-surface datum is about 40 feet above msl. Highest water level 13.45 below lsd, June 2, 1952; lowest 20.87 below lsd, Dec. 1, 1950. Records available: 1950-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	17.26	Apr. 30	17.57	July 29	18.71	Oct. 29	18.70
25	17.13	June 1	17.95	Aug. 30	19.33	Nov. 30	19.15
Mar. 31	17.19	July 2	18.48	Sept. 29	18.35		

Nc 6. P. H. Cannon. Lat. 38°46', long. 75°35'. Near Greenwood. Driven observation water-table well in sand of Pleistocene age, diameter 1 inch, depth 15 feet. Land-surface datum is about 43 feet above msl. Highest water level 6.67 below lsd, Jan. 30, 1952; lowest 9.76 below lsd, Aug. 31, 1954. Records available: 1950-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	8.09	Apr. 30	8.54	July 30	9.53	Oct. 29	9.67
26	8.70	June 1	8.99	Aug. 31	9.76	Nov. 30	9.09
Apr. 1	8.55	July 2	9.60	Sept. 29	9.46		

Ne 1. State Highway Department. Lat. 38°47', long. 75°26'. Driven observation water-table well in sand of Pleistocene age, diameter 1 inch, depth 14 feet. Land-surface datum is about 50 feet above msl. Highest water level 1.13 below lsd, Apr. 29, 1952; lowest 6.23 below lsd, Oct. 31, 1950. Records available: 1950-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	1.70	Apr. 30	1.64	July 29	4.84	Oct. 29	5.24
25	1.75	June 1	3.05	Aug. 30	6.22	Nov. 30	2.90
Mar. 31	1.91	July 2	4.30	Sept. 29	4.52		

Ni 3. City of Lewes. Lat. 38°45', long. 75°09'. Drilled observation artesian well in sand of Pleistocene age, diameter 6 inches, depth 84 feet. Land-surface datum is about 20 feet above msl. Highest water level 13.94 below lsd, May 1, 1953; lowest 21.74 below lsd, Sept. 25, 1947. Records available: 1947-48, 1950-54.

Daily lowest water level from recorder graph*

Day	Jan.	Feb.	Mar.	Apr.	Sept.	Oct.	Nov.	Dec.
1	17.00	.....	17.00	16.95	.....	19.46	19.35	16.68
2	16.80	.....	16.61	17.07	.....	19.39	19.50	16.93
3	16.97	.....	16.74	.....	.....	18.35	18.98	16.68
4	16.81	.....	16.72	.....	.....	19.58	19.17	16.49
5	16.92	.....	16.73	.....	.....	19.43	19.22	16.47
6	16.73	.....	16.72	.....	.....	19.40	18.71	.....
7	17.01	.....	16.70	.....	.....	19.62	18.55	.....
8	17.05	.....	16.46	.....	.....	19.35	18.75	18.14
9	16.86	.....	16.74	.....	.....	19.64	19.15	18.30
10	16.88	.....	16.76	.....	.....	19.67	18.93	18.37
11	16.80	e16.74	16.48	.....	.....	19.19	18.82	17.95
12	16.95	14.89	18.82	.....	.....	19.31	18.93	18.36
13	17.12	16.84	16.52	.....	.....	18.96	19.31	17.69
14	16.74	16.75	16.71	.....	.....	.....	16.47	18.41
15	17.05	16.78	16.75	14.98	.....	.....	19.12	18.42
16	16.57	16.39	16.73	.....	.....	.....	18.10	18.17
17	17.00	16.82	15.98	.....	.....	.....	18.63	18.01
18	17.05	15.65	16.74	.....	.....	18.57	19.06	16.33
19	17.02	16.74	16.71	.....	.....	19.13	17.98	15.38
20	17.01	16.72	16.75	.....	.....	19.40	18.30	16.98
21	17.21	14.79	.....	.....	.....	18.73	17.91	17.12
22	17.49	16.05	.....	.....	.....	18.97	17.43	17.19
23	.....	14.77	.....	.....	.....	17.63	18.41	17.88
24	.....	16.38	.....	.....	.....	18.12	19.02	.....
25	16.97	16.90	.....	.....	.....	18.72	.....	.....
26	17.12	16.72	.....	.....	.....	19.49	.....	.....
27	16.62	15.31	.....	.....	.....	19.59	.....	.....
28	16.85	15.47	17.12	.....	.....	19.30	.....	.....
29	16.89	.....	16.88	.....	.....	19.40	18.70	.....
30	.....	.....	16.98	.....	19.70	.....	17.01	.....
31	.....	.....	17.00	.....	.....	.....	.....	.....

e Estimated.

* No record for May, June, July, and August.

Pg 4. State Highway Department. Lat. 38°36', long. 75°19'. Near Millsboro. Driven observation water-table well in sand of Pleistocene age, diameter 1 inch, depth 22 feet. Land-surface datum is about 30 feet above msl. Highest water level 13.44 below lsd, May 1, 1953; lowest 16.65 below lsd, Nov. 30, 1950. Records available: 1950-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	14.63	Apr. 30	14.43	July 29	14.50	Oct. 29	14.90
25	14.64	June 1	14.45	Aug. 30	14.65	Dec. 30	15.04
Mar. 31	14.54	July 2	14.47	Sept. 29	14.73		

Qc 4. State Highway Department. Lat. 38°33', long. 75°36'. Driven observation water-table well in sand of Pleistocene age, diameter 1 inch, depth 8 feet. Land-surface datum is about 15 feet above msl. Highest water level 0.19 below lsd, Apr. 1, 1952; lowest 3.04 below lsd, Oct. 2, 1951. Records available: 1950-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	1.99	Apr. 30	1.54	July 29	2.34	Oct. 29	2.78
26	1.80	June 1	1.62	Aug. 31	2.53	Nov. 30	2.99
Mar. 31	1.90	July 2	1.98	Sept. 29	2.69	Dec. 31	2.71

INDIANA

By Porter E. Ward

Scope of Water-Level Program

The observation-well program was continued in 1954 in cooperation with the Indiana Department of Conservation, Division of Water Resources. The water-level program, which was begun in 1935 as a part of the statewide study of the ground-water resources of Indiana, is used primarily to evaluate and establish water-level trends and changes of storage in Indiana's ground-water reservoirs. In 1954, water-level measurements were received from a statewide network of 146 observation wells. Of these, 32 were equipped with continuous recording gages; 2 were measured daily; 3 bimonthly; 2 monthly; and the remaining 107 were measured weekly. Although conclusions are based upon records from all of the observation wells, only the measurements from 32 selected wells appear in this report. The locations of the wells are shown in figure 7.

A report entitled "Water resources of the Indianapolis area, Indiana" was completed in 1954. Ground-water investigations were in progress in Adams and Tippecanoe Counties and in nine county areas in southeast and northwest Indiana.

Precipitation and Temperature

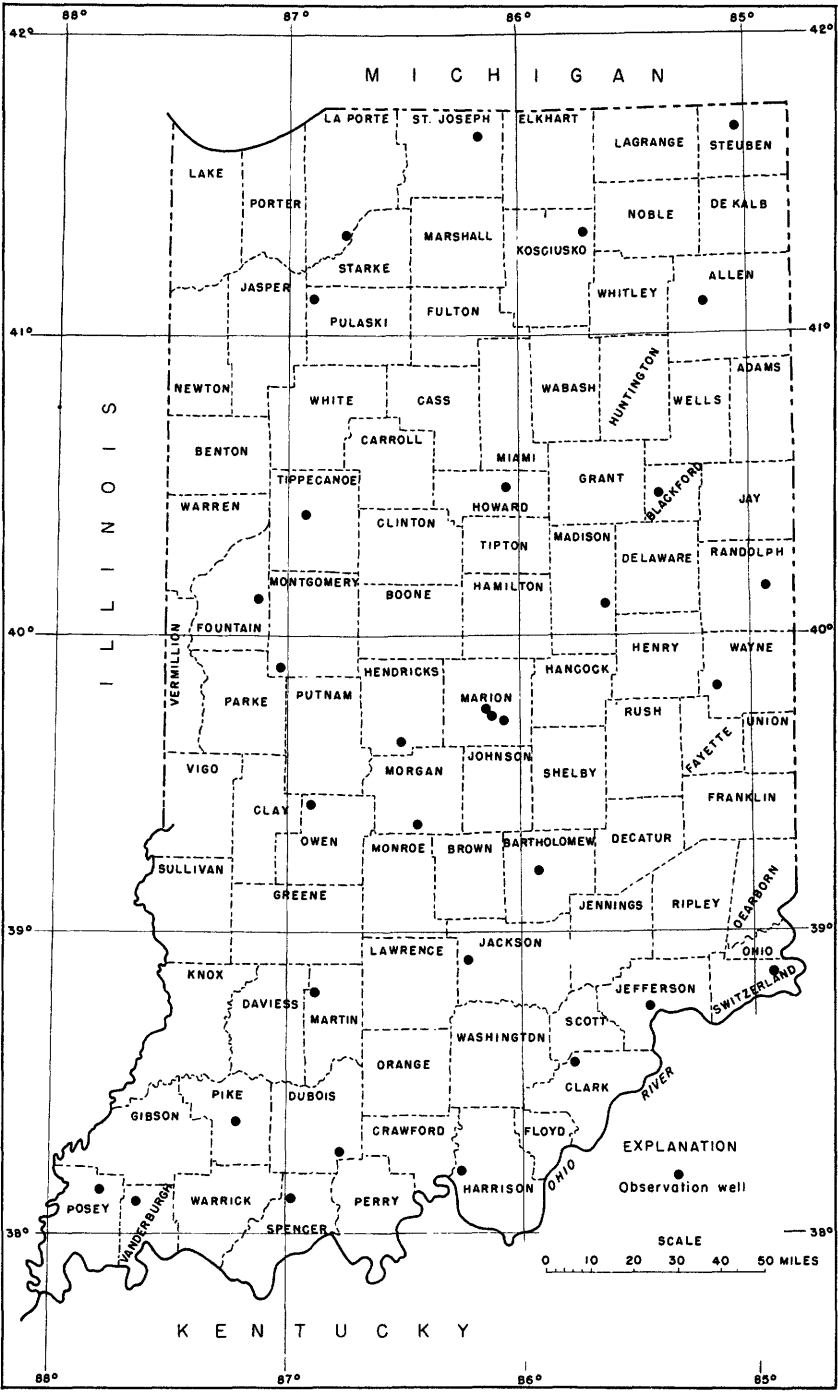
Statewide climatic conditions were characteristically mild and dry during most of 1954. Temperatures were 7.4 degrees below normal for March and 4.5 degrees below normal for May. Temperatures in the remaining months ranged from 9.2 degrees above normal for February to normal for August. Precipitation for the State as reported by the United States Weather Bureau totaled 37.82 inches in 1954, a deficiency of 1.39 inches. The southern division received below-normal precipitation for 9 months. The accumulated departure from average totaled 8.43 inches below normal for the year in this division. In the central division, precipitation was deficient for 8 months. The accumulated departure from average was 5.03 inches below normal. Precipitation was below normal for 5 months in the northern division, but excessive rainfall in October resulted in an accumulated departure from average of 7.64 inches above normal.

Interpretation of Water-Level Fluctuations

A general downward trend of water levels that began about 1950 throughout most of Indiana continued during 1954. This trend is a reflection of the below-normal precipitation during 1952, 1953, and 1954. At the beginning of 1954, water levels were below average over most of the State. Near-normal precipitation in the early part of the year started slight upward trends in some wells. As late as March, seasonal recoveries lagged appreciably in both magnitude and time. Scattered precipitation was insufficient and water levels remained low during the spring and summer months. At the end of September and continuing into October, unusually heavy rains fell over much of the northern part of the State, and scattered precipitation occurred in other parts, especially in the central and north-central parts. By the end of 1954 many wells in the northern division recovered to near average. Water levels in the central division remained below average. Water levels in the southern division were below average, several wells recording no recovery. During 1954 new low water levels were recorded in 43 percent or 63 out of 146 observation wells in the State network, as follows: in the northern division, 38 percent or 18 of 47 wells; in the central division, 40 percent or 24 of 60 wells; and in the southern division, 54 percent or 21 of 39 wells.

Figure 8 graphically shows the fluctuation of water levels in three representative shallow wells in the State. The water levels are affected only by natural conditions. Well Steuben 1 is in the northern division, Montgomery 1 is in the central division, and Clark 1 is in the southern division.

Figure 9 shows the fluctuation of water levels in two wells in the downtown Indianapolis area. Although a general downward trend continued, the levels are higher than they were prior to 1950. The continued downward trend is probably due to a deficiency of precipitation, whereas the low levels recorded before 1950 were greatly influenced by excessive pumping.



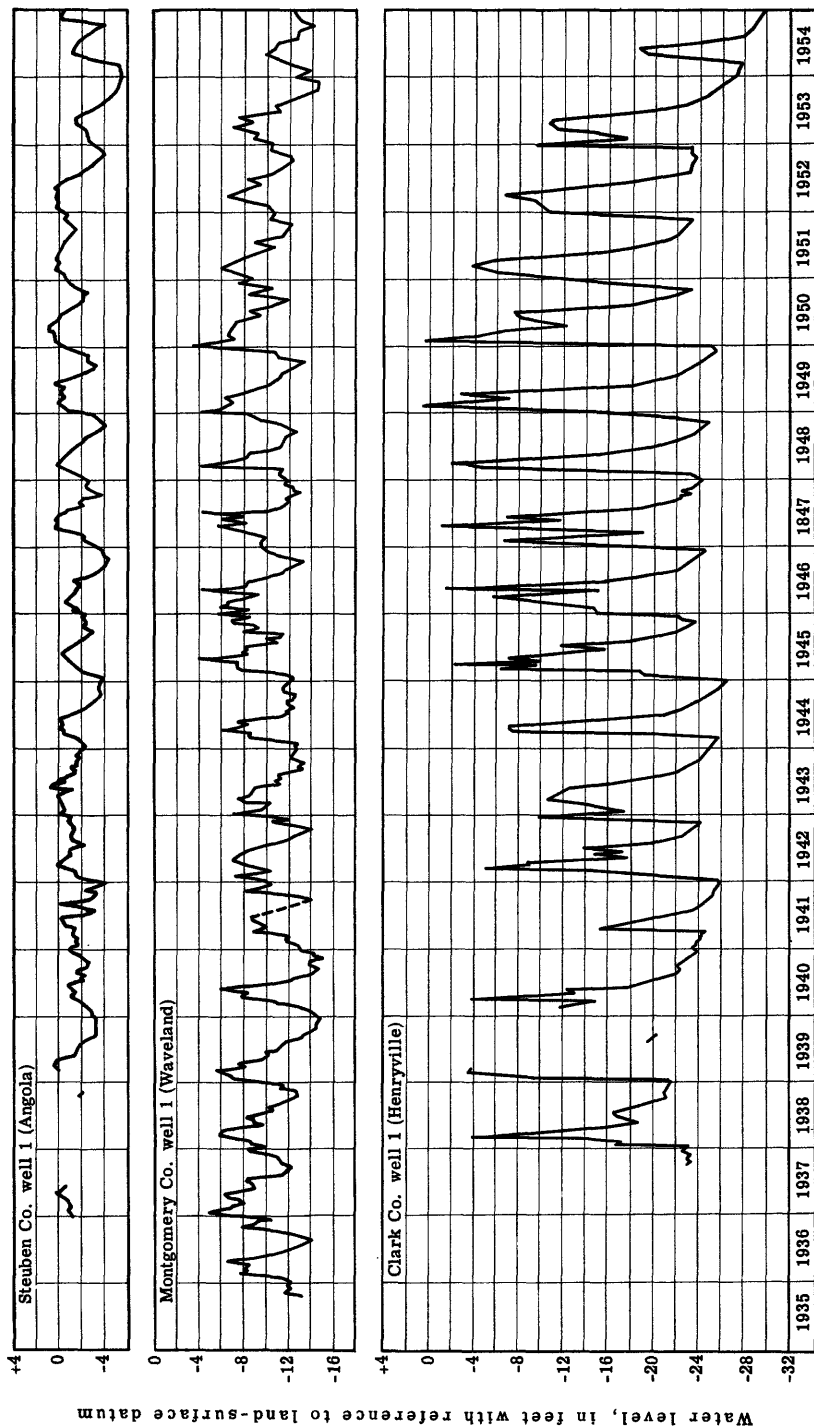


Figure 8. --Water levels in wells Steuben 1, Montgomery 1, and Clark 1, Indiana.

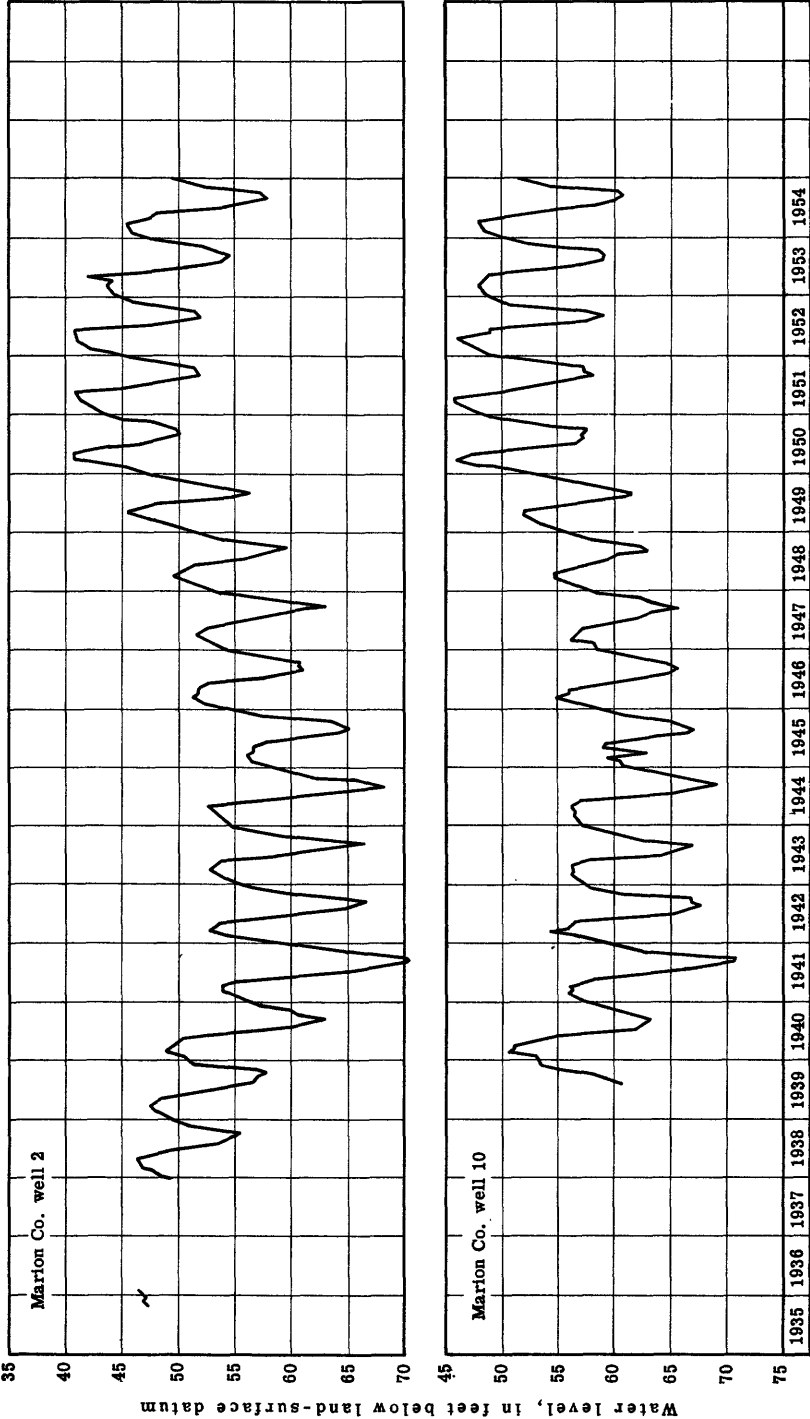


Figure 9. ---Water levels in wells Marion 2 and 10 in downtown area, Indianapolis, Ind.

Well-Numbering System

Observation wells are designated by a letter symbol corresponding to the county name in which the well is situated, followed by a number for successive wells. For example, Ma 10 is observation well 10 in Marion County.

Well Descriptions and Water-Level Measurements

Water levels are in feet below land-surface datum unless otherwise indicated. When some measurements in a table are above and others below the plane of reference, a plus (+) or minus (-) sign is placed immediately before the first entry in each column of each mixed table. Readings between minus signs are below the plane of reference, and those between plus signs are above the plane of reference.

Allen County

A1 3. City of Fort Wayne. Lawton Park, Clinton and East Fourth Sts. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 36, T. 13 N., R. 12 E. Drilled unused artesian well in limestone, diameter 8 inches, reported depth 400 feet. Highest water level 4.62 below lsd, Apr. 8, 1950; lowest 12.72 below lsd, Sept. 6, 1946. Records available: 1944-54.

Daily 2 a. m. water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	11.62	11.41	10.83	10.17	9.92	10.53	10.88	11.06	9.87	10.84	9.01	9.37
2	11.62	11.39	10.82	10.10	9.96	10.46	10.91	11.04	9.91	10.86	9.05	9.35
3	11.62	11.38	10.77	10.08	9.91	10.46	10.93	10.98	9.94	10.82	9.10	9.32
4	11.65	11.36	10.80	10.04	9.95	10.39	10.91	10.97	10.00	10.61	9.11	9.29
5	11.61	11.37	10.79	9.99	9.97	10.42	10.90	10.92	10.03	10.63	9.19	9.32
6	11.61	11.36	10.79	9.94	9.98	10.42	10.93	10.80	10.07	10.51	9.23	9.40
7	11.63	11.39	10.76	9.90	9.99	10.40	10.90	10.80	10.10	10.50	9.27	9.42
8	11.64	11.34	10.77	9.88	10.04	10.41	10.78	10.78	10.14	10.44	9.31	9.37
9	11.59	11.34	10.73	9.88	10.04	10.45	10.79	10.75	10.19	10.40	9.33	9.31
10	11.62	11.33	10.72	9.83	10.04	10.48	10.79	10.74	10.20	10.34	9.36	9.40
11	11.60	11.35	10.72	9.78	10.03	10.51	10.78	10.78	10.25	9.92	9.38	9.45
12	11.60	11.41	10.73	9.68	10.07	10.53	10.77	10.78	10.30	9.82	9.41	9.45
13	.....	11.39	10.69	9.63	10.10	10.56	10.78	10.78	10.33	9.53	9.44	9.47
14	.....	11.33	10.71	9.58	10.13	10.57	10.82	10.78	10.35	C.42	9.41	9.45
15	.....	11.31	10.74	9.56	10.16	10.60	10.86	10.77	10.38	9.08	9.47	9.43
16	.....	11.30	10.78	9.63	10.17	10.63	.....	10.78	10.42	8.90	9.46	9.52
17	.....	11.22	10.80	9.71	10.18	10.66	10.93	10.81	10.45	8.82	9.50	9.54
18	11.63	11.21	10.78	9.72	10.20	10.70	10.92	10.81	10.46	8.75	9.52	9.50
19	11.61	11.19	10.73	9.78	10.25	10.72	10.92	10.50	10.47	8.71	9.51	9.54
20	11.60	11.16	10.70	9.83	10.29	10.63	10.95	10.30	10.50	8.66	9.46	9.58
21	11.56	11.12	10.73	9.83	10.33	10.59	10.96	10.31	10.52	8.62	9.49	9.60
22	11.58	11.13	10.75	9.82	10.36	10.61	10.96	10.32	10.57	8.63	9.48	9.60
23	11.58	11.11	10.71	9.86	10.37	10.66	10.98	10.31	10.61	8.68	9.49	9.56
24	11.56	11.08	10.75	9.88	10.41	10.70	10.99	10.33	10.64	8.72	9.42	9.63
25	11.55	11.06	10.65	9.89	10.44	10.71	11.00	10.33	10.65	8.74	9.45	9.67
26	11.53	11.05	10.47	9.85	10.51	10.72	11.01	9.71	10.67	8.76	9.49	9.65
27	11.46	11.04	10.43	9.81	10.55	10.76	11.02	9.78	10.71	8.78	9.46	9.67
28	11.45	10.95	10.35	9.82	10.57	10.80	11.03	9.80	10.74	8.87	9.41	9.55
29	11.44	.....	10.32	9.87	10.57	10.83	11.04	9.81	10.78	8.85	9.37	9.46
30	11.42	.....	10.27	9.89	10.62	10.85	11.05	9.80	10.82	8.91	9.43	9.34
31	11.44	.....	10.22	.....	10.65	.....	11.06	9.83	.....	8.98	.....	9.32

Bartholomew County

Ba 2. V. E. Sprouse Co., Inc. 1804 East 22d St., Columbus. NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 18, T. 9 N., R. 6 E. Drilled unused well in gravel, diameter 6 inches, depth 52 feet. Highest water level 9.49 below lsd, Feb. 18, 1950; lowest 21.45 below lsd, Dec. 26, 1954. Records available: 1948-54.

Daily 2 a. m. water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	19.80	19.86	19.92	19.50	.....	19.16	19.30	20.19	20.58	20.95	21.16	.....
2	19.81	19.83	19.89	19.50	.....	19.14	19.33	20.22	20.60	20.96	21.15	21.28
3	19.82	19.80	19.86	19.49	.....	19.12	19.36	20.24	20.61	20.98	21.16	21.30
4	19.83	.....	19.84	19.50	.....	19.11	19.39	20.26	20.63	20.99	21.16	21.31
5	19.83	.....	19.82	19.49	.....	19.11	19.42	20.28	20.65	20.99	21.16	21.32

Ba 2--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	19.84	.....	19.80	19.48	.....	19.10	19.43	20.30	20.66	21.00	21.17	21.32
7	.....	.....	19.78	19.47	.....	19.09	19.45	.....	20.67	21.01	21.18	21.33
8	19.86	.....	19.78	19.47	.....	19.08	19.47	.....	20.67	21.02	21.18	21.33
9	19.87	.....	19.77	19.47	.....	19.08	19.49	.....	20.68	21.04	21.18	21.33
10	19.88	.....	19.76	19.47	.....	19.09	19.52	20.35	20.69	21.05	21.18	21.34
11	19.89	.....	19.75	19.46	.....	19.11	19.54	20.36	20.70	21.06	.....	21.35
12	19.90	.....	19.73	19.45	.....	19.12	19.57	20.37	20.71	21.06	21.20	21.36
13	19.91	.....	19.71	19.43	19.14	19.14	19.59	20.37	20.72	.....	21.21	21.37
14	19.92	19.78	19.69	19.42	19.13	19.15	19.62	20.38	20.73	21.08	21.22	21.37
15	19.94	19.78	19.67	19.42	19.14	19.15	19.66	20.40	20.74	21.09	21.23	21.38
16	19.95	19.78	19.65	19.42	19.14	19.17	19.69	20.41	20.76	21.10	21.23	21.38
17	19.97	19.79	19.63	19.42	19.13	19.20	19.73	.....	20.77	21.10	21.23	21.39
18	19.97	19.81	19.62	19.41	19.13	19.22	19.77	20.41	20.79	21.09	21.24	21.39
19	19.98	19.83	19.60	19.39	19.13	19.22	19.81	20.43	20.81	21.08	21.25	21.40
20	19.99	19.85	19.60	19.38	19.14	19.22	19.84	20.45	20.83	21.10	21.26	21.41
21	20.00	19.86	19.59	19.37	19.16	19.21	19.87	20.45	20.84	21.10	21.26	21.42
22	20.00	19.87	19.58	19.35	19.17	19.20	19.91	20.46	20.85	21.11	21.26	21.42
23	20.00	19.87	19.57	19.35	19.18	19.20	19.94	20.47	20.86	21.12	21.27	21.43
24	19.98	19.88	19.56	19.36	19.18	.....	19.97	20.48	20.87	21.12	21.27	21.44
25	19.98	19.90	19.55	19.35	19.19	19.20	20.00	20.48	20.87	21.13	.....	21.44
26	19.98	19.91	19.54	19.34	19.20	19.21	20.03	20.50	20.89	21.12	.....	21.45
27	.....	19.93	19.54	19.32	.....	19.23	20.05	20.51	20.90	21.13	.....	21.43
28	19.96	19.94	19.54	19.31	19.22	19.24	20.07	20.52	20.91	21.14	.....	21.42
29	19.93	.....	19.53	.....	19.24	19.25	.....	20.54	20.92	21.15	.....	21.39
30	19.91	.....	19.52	.....	19.24	19.28	.....	20.56	20.93	21.15	.....	21.37
31	19.89	.....	19.52	.....	19.21	.....	20.15	20.57	.....	21.16	.....	21.37

Blackford County

Bf 1. John L. and Katherine Wise. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 2, T. 24 N., R. 10 E. Dug unused well, diameter 42 inches, depth 18 feet, cribbed with brick. Land-surface datum is 921 feet above msl. Highest water level 0.69 below lsd, Feb. 9, 1952; lowest 9.37 below lsd, Jan. 16, 1954. Records available: 1945-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	8.94	Apr. 10	8.14	July 9	5.33	Oct. 1	6.62
9	9.12	17	7.21	10	5.35	9	6.47
16	9.37	24	6.92	17	5.42	16	6.15
23	9.17	May 1	6.69	24	5.43	23	6.33
30	8.88	8	6.37	31	5.48	30	6.47
Feb. 6	8.94	15	6.18	Aug. 7	5.54	Nov. 6	6.63
13	9.10	22	6.09	14	5.68	13	6.80
20	9.06	29	6.00	21	5.78	20	6.76
27	9.06	June 5	5.67	28	5.73	27	7.08
Mar. 6	8.99	12	5.53	Sept. 4	5.97	Dec. 4	6.96
13	8.96	19	5.41	11	6.11	11	7.07
20	8.93	26	5.38	18	6.28	18	7.01
27	8.89	July 3	5.46	25	6.47	25	7.04
Apr. 3	8.45						

Clark County

Cl 1. State of Indiana. Clark County State Forest. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 36, T. 2 N., R. 6 E. Dug unused well, diameter 4 feet, depth 35 feet, cribbed with stone. Measurements made by George B. Heilman. Highest water level 0.65 below lsd, Jan. 24, 1949, Jan. 14, 1951; lowest 30.00 below lsd, Dec. 26-27, 1954. Records available: 1936-54.

Daily 2 a.m. water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	27.25	27.70	25.15	21.00	14.55	20.90	26.10	28.20	28.80	29.10	29.50	29.75
2	27.25	27.70	24.85	21.00	14.65	21.10	26.20	28.25	28.80	29.15	29.50	29.75
3	27.25	27.70	24.80	21.05	14.10	21.25	26.35	28.25	28.85	29.15	29.55	29.80
4	27.25	27.65	24.75	21.15	12.85	21.10	26.45	28.25	28.85	29.15	29.55	29.80
5	.....	27.60	24.80	21.30	12.60	21.10	26.60	28.25	28.85	29.15	29.55	29.80
6	.....	27.60	24.85	21.50	12.90	21.25	26.70	28.30	28.90	29.20	29.55	29.80
7	27.20	27.65	24.95	21.55	13.25	21.45	26.80	28.30	28.90	29.20	29.55	29.85
8	27.25	27.65	25.05	21.30	13.35	21.65	26.95	28.35	28.90	29.25	29.60	29.85
9	27.25	27.65	25.15	21.20	13.35	21.90	27.05	28.35	28.90	29.25	29.60	29.85
10	27.25	27.65	25.25	21.25	13.55	22.15	27.15	28.40	28.95	29.25	29.60	29.85

Cl 1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	27.30	27.65	.....	21.35	13.80	22.35	.....	28.40	28.95	29.25	29.65	29.85
12	27.30	27.65	.....	21.45	.....	22.55	.....	28.45	28.95	29.25	29.65	29.90
13	27.35	27.70	.....	21.55	14.35	22.75	.....	28.45	28.95	29.25	29.65	29.90
14	27.45	27.75	.....	21.70	14.70	23.00	.....	28.50	29.00	29.25	29.70	29.90
15	27.45	27.75	.....	.....	15.00	23.20	27.50	28.50	29.00	29.20	29.70	29.90
16	27.45	27.75	.....	22.10	15.35	23.40	27.60	28.55	29.00	29.20	29.70	29.90
17	27.45	27.75	.....	21.50	15.75	23.55	27.65	28.55	29.00	29.25	29.70	29.90
18	27.50	27.80	25.45	20.80	16.10	23.75	27.75	28.55	29.00	29.25	29.70	29.90
19	27.50	27.80	.....	20.60	.....	24.00	.....	28.60	29.00	29.30	29.70	29.90
20	27.50	27.80	.....	20.60	16.90	.....	.....	28.60	29.00	29.35	29.70	29.90
21	.....	27.80	.....	20.70	17.30	.....	.....	28.60	29.00	29.35	29.70	29.95
22	.....	27.80	.....	20.80	17.65	.....	27.90	28.65	29.00	29.35	29.70	29.95
23	.....	27.85	.....	20.65	18.05	.....	27.95	28.65	29.05	29.40	29.70	29.95
24	.....	27.85	.....	19.75	18.40	.....	27.95	28.70	29.05	29.45	29.70	29.95
25	.....	27.85	22.95	19.50	18.75	25.20	28.00	28.70	29.10	29.45	29.70	29.95
26	.....	27.80	22.30	19.45	19.10	25.40	28.05	28.75	29.10	29.50	29.70	30.00
27	.....	27.80	21.70	19.50	19.25	25.50	28.10	28.75	29.10	29.50	29.70	30.00
28	27.55	26.65	21.45	16.00	19.60	25.70	28.15	28.75	29.10	29.50	29.70	24.50
29	27.60	.....	21.40	14.75	19.90	25.80	28.15	28.75	29.10	29.50	29.70	20.25
30	27.65	.....	21.40	14.55	20.25	25.95	28.15	28.80	29.10	29.50	29.75	20.00
31	27.65	.....	21.20	.....	20.60	.....	28.20	28.80	.....	29.50	.....	20.00

Dubois County

Du 2. State of Indiana. Ferdinand State Forest. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 18, T. 3 S., R. 3 W. Drilled unused well in limestone, diameter 6 inches, depth 33 feet. Measurements made by Henry Huff. Highest water level 4.51 below lsd, Feb. 22, 1950; lowest 18.45 below lsd, Nov. 13, 1944. Records available: 1936-1937, 1942-1954.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	17.56	Apr. 12	15.51	July 20	16.17	Oct. 11	15.74
11	17.55	19	15.60	28	16.32	18	15.95
19	17.55	26	15.80	Aug. 2	14.58	25	16.04
26	16.50	May 3	15.59	9	15.76	Nov. 3	16.20
Feb. 1	16.80	12	15.60	23	15.84	8	16.28
8	16.47	17	15.59	30	15.58	15	16.38
16	16.45	June 7	15.52	Sept. 7	15.66	23	16.42
Mar. 2	16.02	14	15.60	13	15.91	Dec. 1	16.69
8	16.05	22	15.60	21	16.12	14	16.46
16	16.55	28	15.94	27	16.12	21	16.46
29	15.95	July 5	15.66	Oct. 4	16.17	28	15.67
Apr. 6	10.36	13	15.76	8	16.02	.....	.....

Fountain County

Fo 1. Merchants and Farmers Telephone Co. Hillsboro. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 12, T. 19 N., R. 7 W. Drilled unused well in rock, diameter 4 inches, depth 59 feet. Land-surface datum is 708 feet above msl. Highest water level 33.28 below lsd, Mar. 7, 1950; lowest 44.50 below lsd, Dec. 17, 1954. Records available: 1944-54.

Jan.	1	42.61	Apr.	2	42.64	July	2	42.65	Oct.	8	42.80
	8	40.90		9	42.65		16	42.50		14	42.70
	15	41.70		16	41.70		23	42.67		22	42.70
	22	41.90		23	42.61		30	42.69		29	42.50
	29	40.80		30	41.70		Aug. 6	42.69	Nov.	5	42.50
Feb.	5	41.70	May	7	41.70		13	43.60		12	42.60
	12	41.70		14	41.70		20	41.70		19	41.70
	19	42.62		21	42.61		27	42.70		26	42.50
	26	41.70		28	42.63		Sept. 3	42.80	Dec.	3	42.40
Mar.	5	41.70	June	4	42.64		10	42.80		10	42.40
	12	42.63		11	42.65		17	42.90		17	44.50
	19	42.64		18	42.66		24	42.90		24	42.30
	26	42.63		25	42.62		Oct. 1	42.80		31	42.20

Harrison County

Hr 3. State of Indiana. Harrison County State Forest. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2, T. 4 S., R. 2 E. Dug unused well, diameter 5 feet, depth 25 feet, cribbed with stone. Measurements made by Max Parker. Highest water level 2.00 below lsd, Mar. 21, 1939; lowest 8.70 below lsd, Jan 9, 1954. Records available: 1938-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	8.56	Apr. 10	3.33	July 10	7.00	Oct. 6	8.04
9	8.70	17	3.07	17	7.27	9	8.05
16	8.32	24	3.29	24	7.35	16	8.05
23	8.30	May 1	3.43	31	7.46	23	8.10
30	8.17	8	3.55	Aug. 7	7.54	30	8.17
Feb. 6	8.20	15	4.00	14	7.62	Nov. 6	8.22
13	8.27	22	4.61	21	7.71	13	8.27
20	7.28	29	5.26	28	7.82	20	8.31
27	3.03	June 5	5.30	Sept. 4	7.87	27	8.39
Mar. 6	3.45	12	5.88	11	7.98	Dec. 4	8.42
13	3.84	19	6.20	18	8.07	11	8.46
20	3.75	26	6.55	25	7.97	18	8.50
27	3.68	July 3	6.70	Oct. 2	8.02	25	8.39
Apr. 3	3.72						

Hendricks County

Hd 1. Brocia A. and M. Smith. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 14, T. 14 N., R. 1 W. Drilled unused well, diameter 4 inches, depth 46 feet. Land-surface datum is 842 feet above msl. Highest water level flowing at 0.30, Apr. 17-24, 1944; lowest 9.86 below lsd, Dec. 27, 1954. Records available: 1944-54.

Jan. 4	8.34	Apr. 12	3.69	July 12	6.49	Oct. 4	8.73
11	8.40	19	3.43	19	6.72	11	8.85
18	8.50	26	3.66	26	6.78	18	8.83
25	8.20	May 3	4.10	Aug. 2	6.97	25	8.98
Feb. 1	7.52	10	4.52	10	7.16	Nov. 1	9.08
8	7.58	17	4.80	16	7.19	8	9.11
15	7.70	24	5.06	23	7.44	15	9.26
22	7.26	31	5.30	30	7.55	22	9.35
Mar. 1	7.06	June 7	5.46	Sept. 6	7.78	29	9.50
8	6.58	14	5.67	13	8.49	Dec. 6	9.44
15	6.06	21	5.86	20	8.20	13	9.55
22	5.70	28	6.23	23	8.26	20	9.74
29	5.36	July 5	6.44	26	8.40	27	9.86
Apr. 5	4.58						

Howard County

Ho 4. Howard L. and Earl M. Shenk. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 24, T. 24 N., R. 4 E. Dug unused well, diameter 42 inches, depth 19 feet. Land-surface datum is 835 feet above msl. Highest water level 0.96 below lsd, Apr. 10, 1948; lowest dry, Jan. 30, July 3, July 17, Sept. 4, Dec. 24, 1954. Records available: 1945-54.

Jan. 2	17.00	Apr. 3	(f)	July 3	(f)	Oct. 2	(f)
9	17.21	10	(f)	10	18.72	9	(f)
16	17.52	17	(f)	17	(f)	16	(f)
23	17.72	24	(f)	24	18.34	23	(f)
30	(f)	May 1	(f)	31	18.14	30	(f)
Feb. 6	(f)	8	(f)	Aug. 7	18.50	Nov. 6	(f)
13	(f)	15	(f)	14	18.67	13	(f)
20	(f)	22	(f)	21	18.69	20	(f)
27	(f)	29	(f)	28	18.71	27	(f)
Mar. 6	(f)	June 5	(f)	Sept. 4	(f)	Dec. 4	(f)
13	(f)	12	(f)	11	(f)	11	(f)
20	(f)	19	(f)	18	(f)	18	(f)
27	(f)	26	(f)	25	(f)	24	(f)

f Dry.

Jackson County

Jk 2. Ralph Fish. SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 24, T. 6 N., R. 2 E. Drilled unused well in rock, diameter 6 inches, depth 93 feet. Land-surface datum is 884 feet above msl. Highest water level 10.18 below lsd, Apr. 23, 1951; lowest 22.21 below lsd, Jan. 25, 1954. Records available: 1944-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	21.59	Apr. 5	20.72	July 5	17.95	Oct. 4	20.11
11	21.78	12	20.25	12	17.69	11	20.39
18	22.00	19	19.30	19	18.08	18	20.40
25	22.21	26	19.85	26	18.42	24	20.80
Feb. 1	22.14	May 3	18.39	Aug. 2	18.81	Nov. 1	20.61
8	21.90	11	18.28	9	18.22	8	21.00
15	21.80	17	18.10	16	19.10	15	21.08
22	22.04	24	18.22	23	19.14	22	21.19
Mar. 1	21.70	31	18.10	30	19.00	29	21.10
8	21.85	June 7	18.05	Sept. 6	19.30	Dec. 6	21.80
15	21.70	14	18.14	13	19.58	13	21.77
22	21.64	21	18.06	20	19.51	20	21.83
28	20.70	28	17.96	27	19.67	27	22.10

Jefferson County

Jf 2. State of Indiana. Clifty Falls State Park. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 20, T. 4 N., R. 10 E. Drilled unused well in limestone, diameter 6 inches, depth 69 feet. Land-surface datum is 810 feet above msl. Measurements made by Louis French. Highest water level 15.33 below lsd, Apr. 1, 1946; lowest 32.5 below lsd, Aug. 16, 1943. Records available: 1937-54.

Jan. 6	29.32	Feb. 15	29.03	Mar. 31	28.78	July 27	28.49
13	29.41	24	28.81	Apr. 20	28.40	Aug. 4	28.78
19	29.17	Mar. 2	28.73	June 16	28.12	24	28.93
26	29.20	11	28.75	July 8	28.46	Sept. 7	e29.12
Feb. 2	28.99	17	29.06	14	28.44	Nov. 29	29.09
10	28.65						

e Estimated.

Kosciusko County

Ko 2. State of Indiana. Wawasee State Fish Hatchery. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 25, T. 34 N., R. 7 E. Driven unused artesian well in glacial drift, diameter 1 $\frac{1}{2}$ inches, reported depth 87 feet. Land-surface datum is 865 feet above msl. Measurements made by C. R. Silvens. Highest water level 3.25 above lsd, May 1, 1944; lowest 1.05 above lsd, Jan. 2, 1954. Records available: 1938-39, 1941-54.

Jan. 2	+1.05	Apr. 3	+1.44	July 3	+1.54	Oct. 2	+1.50
9	1.21	10	1.50	10	1.60	9	1.79
16	1.17	17	1.71	17	1.48	16	2.29
23	1.10	24	1.66	24	1.50	23	2.21
30	1.12	May 1	1.92	31	1.42	30	2.29
Feb. 6	1.15	8	1.90	Aug. 7	1.52	Nov. 6	2.13
13	1.08	15	1.83	14	1.52	13	2.16
20	1.25	22	1.79	21	1.52	20	2.17
27	1.23	29	1.88	28	1.69	27	2.18
Mar. 6	1.17	June 5	1.75	Sept. 4	1.60	Dec. 4	2.08
13	1.29	12	1.77	11	1.56	11	2.08
20	1.29	19	1.62	18	1.58	18	2.17
27	+1.29	26	+1.65	25	+1.52	25	+2.00

La Porte County

Lp 2. State of Indiana. Kankakee State Game Preserve. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 10, T. 33 N., R. 3 W. Drilled unused well in sand and gravel, diameter 6 inches, reported depth 115 feet. Land-surface datum is 671 feet above msl. Measurements made by Herbert Busse. Highest water level 0.34 below lsd, Apr. 8, 1950; lowest 7.25 below lsd, Oct. 21-22, 1953. Records available: 1942-54.

Lp 2--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	6.3	Apr. 5	4.22	June 14	5.0	Aug. 30	5.9
Feb. 2	6.30	13	4.13	24	5.09	Sept. 6	6.0
9	6.31	19	4.04	July 2	5.54	13	6.2
15	6.35	May 3	3.6	12	4.8	20	6.3
Mar. 2	5.15	10	3.7	19	5.1	27	6.4
9	5.05	17	4.9	24	5.5	Oct. 13	3.85
16	5.15	24	4.7	Aug. 2	5.6	Dec. 1	3.15
23	5.18	31	4.9	9	5.9	13	3.97
30	4.26	June 7	4.7	16	6.0	20	3.98
Apr. 1	4.22	10	4.85	24	5.94	27	4.05

Madison County

Md 7. State of Indiana. Mounds State Park. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 16, T. 19 N., R. 8 E. Driven unused well, diameter 1 $\frac{1}{2}$ inches, depth 19 feet. Measurements made by Harry N. Stephens. Highest water level flowing 0.50, Apr. 19, 1948, Jan. 30-Mar. 12, 1950, Apr. 3-10, Apr. 16-21, 1951, Apr. 14-21, 1952; lowest 13.9 below lsd, Aug. 7, 1946. Records available: 1935-36, 1938-54.

Jan. 4	7.07	May 3	6.85	July 20	6.94	Oct. 11	7.70
11	7.19	10	6.76	26	7.06	18	7.57
18	7.29	17	6.73	31	7.25	25	7.60
25	7.31	24	6.73	Aug. 2	7.27	Nov. 1	7.70
Feb. 1	7.48	31	6.74	9	7.44	8	7.78
8	7.61	June 7	6.80	16	7.44	15	7.75
15	7.69	14	6.80	23	7.59	22	7.74
22	7.65	21	6.90	Sept. 6	7.46	29	7.75
Mar. 8	7.66	28	6.94	13	7.48	Dec. 6	8.14
15	7.76	30	7.30	20	7.58	13	8.15
Apr. 12	7.39	July 5	6.92	27	7.69	20	8.14
19	7.02	12	6.95	Oct. 4	7.70	27	8.16
26	6.96						

Marion County

Ma 2. Indiana National Bank. 130 East Washington St., Indianapolis. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 1, T.15 N., R. 3 E. Drilled unused well in gravel, diameter 8 inches, depth 90 feet. Land-surface datum is 712.27 feet above msl. Highest water level 40.43 below lsd, Apr. 18, 1950; lowest 70.55 below lsd, Sept. 21, 1941. Records available: 1935-54. Nearby well being pumped.

Daily 2 a. m. water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	46.72	45.87	45.65	45.23	47.50	47.89	53.21	.....	57.65	57.22	53.77	51.04
2	46.67	45.74	45.57	45.23	47.85	47.80	53.43	.....	57.65	57.45	53.57	50.96
3	46.60	45.67	45.45	45.25	47.72	47.89	53.68	56.30	57.79	57.61	53.38	50.87
4	46.67	45.70	45.58	45.30	47.38	47.97	53.90	56.27	57.98	57.76	53.18	50.78
5	46.51	45.70	45.55	45.18	.....	47.98	.....	56.29	58.14	57.83	.....	50.73
6	46.50	45.70	45.47	45.07	47.79	47.72	53.81	56.43	58.18	57.84	.....	50.70
7	46.54	45.76	45.38	45.22	47.62	.....	53.69	56.59	58.06	57.66	.....	50.65
8	46.50	45.68	45.29	45.50	47.52	.....	53.75	56.69	57.95	57.31	.....	50.54
9	46.39	45.48	45.20	.....	47.36	47.98	53.98	56.66	57.94	56.79	52.45	50.43
10	46.41	45.48	45.11	45.66	47.19	48.55	54.18	56.65	58.02	56.70	52.36	50.40
11	46.33	45.52	45.10	45.78	45.96	.....	54.32	56.59	58.09	56.55	52.31	50.37
12	46.26	45.66	45.11	45.84	45.84	49.44	54.33	56.51	58.06	56.43	52.28	50.30
13	46.34	45.65	45.06	45.75	45.80	49.76	54.27	56.43	57.93	56.40	52.31	50.22
14	46.24	45.48	45.15	45.68	45.82	49.90	54.30	56.43	57.72	56.50	52.26	50.14
15	46.16	45.42	45.24	45.86	46.02	50.03	54.46	56.54	57.59	56.64	52.19	50.05
16	46.08	45.43	45.23	46.15	46.19	50.23	54.69	56.58	57.62	56.59	52.07	50.02
17	46.14	45.58	45.19	46.29	46.16	50.56	54.96	56.56	57.68	56.39	51.99	49.97
18	46.11	45.73	45.08	46.22	46.26	50.92	55.10	56.47	57.78	56.13	51.98	49.89
19	46.00	45.66	45.02	46.04	46.42	51.25	55.12	56.49	57.98	55.85	52.00	49.84
20	45.96	.....	45.15	46.05	46.38	51.48	55.12	56.69	58.07	55.58	52.02	49.81
21	46.01	45.63	45.40	46.27	46.30	51.59	55.15	56.89	58.11	55.31	52.06	49.75
22	46.15	45.87	45.34	46.63	46.24	51.68	55.29	57.03	57.94	55.09	52.04	49.70
23	46.15	.....	45.17	47.15	46.32	51.82	55.45	57.09	57.63	54.94	51.90	49.62
24	46.06	45.99	45.13	47.15	46.28	52.06	55.64	57.16	.....	54.80	51.75	49.59
25	45.99	45.85	45.01	47.06	46.20	52.24	55.81	57.19	.....	54.66	51.64	49.59

Ma 2--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	45.90	45.73	45.20	47.12	46.41	52.59	55.77	57.28	.....	54.51	51.54	49.53
27	45.87	45.74	45.52	47.42	.....	.....	55.69	57.44	.....	54.39	51.41	49.46
28	46.05	.....	45.43	47.56	.....	.....	55.65	57.60	56.89	54.35	51.28	49.37
29	46.02	.....	45.34	47.44	47.28	53.03	55.71	57.78	56.97	54.24	51.18	49.37
30	45.94	.....	45.23	47.23	47.75	53.07	55.87	57.81	57.09	54.11	51.14	49.33
31	45.98	.....	45.22	.....	47.90	.....	56.07	57.80	.....	53.97	.....	49.37

Ma 10. Federal Building. Meridian and Ohio Sts., Indianapolis. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 1, T. 15N., R. 3 E. Drilled unused artesian well in limestone, diameter 8 inches, reported depth 304 feet. Land-surface datum is 717.51 feet above msl. Highest water level 45.46 below lsd, Apr. 16, 1951; lowest 70.78 below lsd, Aug. 29, 1941. Records available: 1939-54. Nearby well being pumped.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	49.18	Apr. 12	48.45	July 12	58.13	Oct. 4	60.80
11	48.89	19	48.50	19	59.38	11	58.72
18	48.78	26	51.77	26	59.72	18	56.76
25	48.80	May 4	49.50	Aug. 2	60.05	25	55.80
Feb. 1	48.66	10	48.48	9	60.15	Nov. 1	55.06
8	48.35	17	48.61	16	59.98	8	54.19
15	48.32	24	48.63	23	60.54	15	53.81
23	48.68	28	54.04	30	60.71	22	53.76
Mar. 1	48.36	June 4	51.24	Sept. 3	60.88	29	53.22
8	48.11	11	54.26	7	60.95	Dec. 6	52.79
15	48.16	18	56.01	13	60.82	13	52.30
22	48.05	25	57.22	20	60.99	20	52.00
29	48.00	July 2	58.03	27	60.29	27	51.68
Apr. 5	47.96	6	57.83	.....	.....	.....	.....

Ma 28. Manuel W. Rabourn. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 17, T. 14 N., R. 5 E. Dug unused well in glacial drift, diameter 42 inches, depth 24 feet, cribbed with brick. Land-surface datum is 819 feet above msl. Highest water level 1.29 below lsd, Jan. 27, 1950; lowest 17.06 below lsd, Oct. 11, 1954. Records available: 1947-54.

Daily 2 a.m. water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	15.33	.....	9.29	.....	10.58	12.59	14.45	15.48	16.68	16.78	16.33
2	.....	15.10	12.14	9.20	.....	10.70	12.67	14.49	.....	16.72	16.76	16.33
3	.....	14.88	12.01	9.13	.....	10.71	12.75	14.52	15.57	16.77	16.74	16.32
4	.....	14.64	11.92	9.13	.....	10.74	12.81	14.57	15.61	16.81	.....	16.30
5	.....	14.46	11.84	9.12	.....	10.80	12.87	.....	.....	16.85	16.69	16.28
6	16.39	14.33	11.77	9.12	.....	10.86	12.92	14.62	.....	16.89	16.67	16.26
7	16.40	14.24	11.69	9.07	8.90	10.92	12.99	14.67	.....	.....	16.65	16.26
8	16.42	.....	11.63	8.99	8.92	10.98	13.04	14.71	.....	16.98	16.63	16.25
9	16.43	.....	11.58	8.95	8.97	11.03	13.09	14.74	.....	17.01	16.61	.....
10	16.45	.....	11.53	8.91	9.03	11.09	13.14	14.77	15.82	17.04	16.60	16.20
11	16.47	13.92	11.48	8.90	9.09	11.15	13.20	14.79	15.87	17.06	.....	16.20
12	16.47	13.88	11.41	8.87	9.16	11.21	13.26	14.83	15.91	17.02	16.57	16.19
13	.....	13.86	11.31	8.84	.....	11.27	13.31	14.86	15.96	17.03	16.55	16.18
14	.....	13.82	11.22	8.81	.....	11.34	13.37	14.91	16.00	17.05	16.53	16.17
15	.....	13.78	11.16	8.80	.....	11.40	13.44	14.92	16.04	17.01	16.51	16.15
16	16.53	13.74	11.12	8.80	.....	11.47	13.50	14.95	16.08	17.02	16.50	16.14
17	16.54	.....	11.09	8.68	.....	11.58	13.58	14.98	.....	17.01	16.48	16.13
18	16.56	.....	11.05	8.56	.....	11.65	13.64	15.01	.....	17.01	16.46	16.11
19	16.58	13.47	11.01	8.50	.....	11.72	13.71	15.04	.....	17.01	16.44	16.09
20	16.59	13.31	10.91	8.49	h9.75	11.79	13.77	15.09	.....	17.01	16.42	16.09
21	16.48	13.14	10.80	8.53	.....	11.85	13.83	15.13	.....	17.01	16.41	16.08
22	16.49	13.01	10.72	8.59	.....	11.91	13.85	15.17	.....	17.00	16.40	16.08
23	.....	12.90	10.64	8.68	.....	11.98	13.90	.....	16.36	16.98	16.40	16.06
24	16.46	12.80	10.58	8.75	.....	12.05	13.96	.....	16.40	16.97	16.38	16.03
25	16.42	.....	10.47	8.79	.....	12.12	14.02	.....	16.44	16.96	16.37	16.03
26	16.38	.....	10.34	8.84	.....	12.20	14.09	15.33	16.48	16.95	16.36	16.02
27	16.27	.....	10.23	8.88	10.32	12.27	14.16	15.35	16.52	16.91	16.36	16.01
28	16.18	.....	10.13	8.93	10.38	12.35	.....	15.37	16.55	16.90	16.34	15.96
29	16.00	.....	10.04	.....	10.43	12.43	14.28	15.40	16.59	16.87	16.33	15.92
30	15.76	.....	9.67	.....	10.46	12.51	14.34	15.43	16.63	16.83	16.33	15.79
31	15.54	.....	9.38	.....	10.51	.....	14.40	15.46	.....	16.80	.....	15.65

h Tape measurement.

Martin County

Mt 3. John Ketcham. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 12, T. 4 N., R. 5 W. Dug unused well in rock, diameter 42 inches, depth 32 feet, cribbed with stone. Land-surface datum is 621 feet above msl. Highest water level 18.02 below lsd, June 2, 1947; lowest 24.27 below lsd, Dec. 26, 1954. Records available: 1944-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	23.32	Apr. 11	23.71	July 11	23.38	Oct. 3	23.84
10	23.36	18	23.71	18	23.43	10	23.91
17	23.39	25	23.68	25	23.44	17	23.89
24	22.38	May 2	23.62	Aug. 1	23.46	24	23.93
31	23.43	9	23.61	8	23.45	31	23.96
Feb. 7	23.44	16	23.39	15	23.49	Nov. 7	23.99
14	23.49	23	23.36	22	23.52	14	23.97
21	23.54	30	23.34	29	23.58	21	23.97
28	23.51	June 6	23.36	Sept. 5	23.67	28	24.16
Mar. 7	23.69	13	23.32	12	23.86	Dec. 4	24.25
14	23.72	20	23.33	19	23.79	12	24.26
21	23.69	29	23.34	24	23.88	19	24.25
28	22.72	July 4	23.36	26	23.89	26	24.27
Apr. 4	23.85						

Montgomery County

My 1. Byron Banta. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 36, T. 17 N., R. 6 W. Dug unused well in glacial drift, diameter 36 inches, depth 18 feet, cribbed with brick. Land-surface datum is 770 feet above msl. Highest water level 3.37 below lsd, Jan. 4, 1950; lowest 15.45 below lsd, Nov. 16, 1940. Records available: 1935-54.

Daily 2 a.m. water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	13.38	.....	11.57	10.81	9.95	10.05	11.62	12.77	13.02	14.57	12.17	12.37
2	13.46	.....	11.48	10.75	10.01	9.50	11.74	12.74	13.11	14.55	12.23	12.32
3	13.50	.....	11.31	10.82	8.69	9.02	11.81	12.70	13.09	14.52	12.40	12.19
4	13.74	.....	11.60	10.96	7.91	8.30	11.86	12.73	13.20	14.49	12.31	12.08
5	13.62	12.83	11.60	10.91	7.82	8.41	11.91	12.59	13.27	14.55	12.38	12.14
6	13.66	12.90	11.53	10.83	7.98	8.49	11.95	12.59	13.20	14.55	12.30	12.40
7	13.81	13.11	11.47	10.17	8.14	8.59	11.90	12.58	13.29	14.71	12.23	12.52
8	13.83	.....	11.55	.....	8.45	8.76	11.94	12.62	13.34	14.73	12.31	12.37
9	13.72	12.86	11.50	10.60	8.63	8.92	.....	12.62	13.50	14.64	12.40	12.14
10	13.91	12.90	11.46	10.42	8.83	9.10	.....	12.67	13.51	14.60	12.46	12.34
11	13.92	13.06	11.51	10.45	8.97	.....	.....	12.70	13.56	14.51	12.47	12.50
12	13.96	13.31	11.50	9.48	9.07	9.45	.....	12.74	13.64	13.06	12.45	12.50
13	.....	13.31	11.34	9.30	9.26	9.70	.....	12.79	13.69	12.05	12.49	12.49
14	.....	13.10	11.43	9.13	9.39	9.94	.....	12.74	13.69	11.75	12.38	12.41
15	13.99	13.07	11.59	9.23	9.56	10.11	.....	12.70	13.76	12.45	12.48	12.28
16	.....	13.12	11.73	9.08	9.53	10.20	.....	12.66	13.84	12.13	12.43	12.46
17	.....	13.11	11.74	8.54	8.63	10.23	.....	12.65	13.92	12.25	12.44	12.51
18	.....	12.99	11.60	8.55	8.77	10.41	.....	12.66	13.95	12.42	12.50	12.38
19	.....	12.72	11.42	8.72	8.84	10.53	.....	12.65	13.96	12.63	12.47	12.44
20	14.09	12.50	11.32	9.06	8.95	10.62	.....	12.63	14.01	12.62	12.51	12.58
21	14.03	12.31	11.55	9.22	10.11	10.64	.....	12.62	14.03	12.57	12.64	12.57
22	13.96	12.43	11.55	9.32	10.16	10.77	.....	12.67	14.17	12.60	.....	12.56
23	.....	12.39	11.39	9.49	10.28	10.97	.....	12.62	14.27	12.70	.....	12.39
24	.....	12.24	11.46	9.51	10.39	11.15	.....	12.71	14.33	12.84	.....	12.44
25	.....	12.14	11.30	9.54	10.47	11.22	.....	12.73	14.29	12.89	.....	12.63
26	.....	12.08	11.38	9.58	10.57	11.28	.....	12.74	14.33	12.86	12.64	12.57
27	.....	12.05	11.52	9.51	10.60	11.40	12.68	12.81	14.36	12.58	12.49	12.55
28	13.20	11.77	11.29	9.67	10.46	11.59	12.67	12.80	14.39	12.15	12.23	12.14
29	.....	.....	11.24	9.75	10.41	11.53	12.67	12.86	14.43	11.82	12.17	10.84
30	.....	.....	10.94	9.86	10.28	11.56	12.72	12.85	14.51	11.88	12.47	9.76
31	.....	.....	10.82	.....	10.18	.....	12.77	12.91	12.05	.....	.....	9.63

h Tape measurement.

Morgan County

Mg 3. State of Indiana. Morgan-Monroe State Forest. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 27, T. 11 N., R. 1 E. Drilled unused artesian well in rock, diameter 8 inches, depth 45 feet. Land-surface datum is 670 feet above msl. Measurements made by John Wright. Highest water level 1.75 below lsd, Dec. 18, 1950; lowest 10.68 below lsd, Dec. 2, 1953. Records available: 1945-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	8.47	June 16	6.96	Aug. 20	8.87	Nov. 5	7.41
23	7.05	25	6.98	27	8.90	12	7.61
Feb. 15	7.10	July 16	8.09	Sept. 3	8.96	Dec. 3	6.22
May 4	6.13	23	8.13	10	9.34	10	6.11
8	6.90	30	8.38	18	9.61	24	6.62
18	7.10	Aug. 6	8.54	22	9.98	31	6.05
28	e6.44						

e Estimated.

Owen County

Ow 5. David R. Bronson. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 30, T. 12 N., R. 4 W. Dug unused well, diameter 26 inches, depth 19 feet, cribbed with stone. Measurements made by Stanley Heilliger. Highest water level 1.06 below lsd, Jan. 14, 1950; lowest 13.72 below lsd, Feb. 23, 1954. Records available: 1946-54.

Jan. 6	12.78	Mar. 23	11.32	June 8	5.01	Sept. 29	11.16
12	13.00	30	9.24	15	5.46	Oct. 5	11.34
19	13.17	Apr. 6	7.61	23	6.46	13	11.36
26	13.28	13	2.08	29	7.16	20	11.56
Feb. 2	13.37	20	1.90	July 6	7.81	Nov. 3	11.96
9	13.51	May 4	1.89	14	8.41	10	12.56
17	13.65	5	2.06	20	8.81	17	12.40
23	13.72	11	2.70	28	9.21	Dec. 1	12.86
Mar. 2	13.58	18	3.60	Aug. 4	9.41	7	12.54
9	13.03	25	4.71	11	9.71	14	13.12
16	12.18	June 2	5.16				

Pike County

Pi 1. A. J. Heuring. Lafayette and Main Sts., Winslow. NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 32, T. 1 S., R. 7 W. Dug and drilled unused well, diameter 36 to 6 inches, depth 25 feet. Land-surface datum is 468 feet above msl. Highest water level 3.25 below lsd, Mar. 20, 1951; lowest 13.55 below lsd, Dec. 15, 1954. Records available: 1936-54.

Jan. 6	12.15	Apr. 7	11.44	July 7	11.52	Oct. 6	13.05
13	12.27	14	11.40	14	11.65	13	13.10
20	12.38	21	11.17	21	11.73	20	13.18
27	12.25	28	11.02	28	11.90	27	13.25
Feb. 3	12.10	May 5	10.99	Aug. 4	12.04	Nov. 3	13.33
10	11.95	12	10.78	11	12.15	10	13.32
17	11.90	19	10.83	18	12.29	17	13.39
24	11.77	26	10.95	25	12.42	24	13.45
Mar. 3	11.56	June 2	11.00	Sept. 1	12.53	Dec. 1	13.45
10	11.50	9	11.10	8	12.64	8	13.53
17	11.48	16	11.20	15	12.76	15	13.55
24	11.45	23	11.30	22	12.87	22	13.49
31	11.40	30	11.35	29	12.90	29	13.45

Posey County

Py 2. Mary M. Wade. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 5, T. 5 S., R. 12 W. Drilled unused well, diameter 6 inches, depth 236 feet. Highest water level 3.03 below lsd, June 4, 1952; lowest 14.95 below lsd, Nov. 30, 1954. Records available: 1947-54. Recording gage installed Oct. 28, 1954.

Jan. 6	13.56	Mar. 10	12.60	May 12	11.63	July 14	11.57
13	13.79	17	12.47	19	11.51	21	11.77
20	13.85	24	12.37	26	11.43	28	11.83
27	13.83	31	12.29	June 2	11.11	Aug. 11	12.17
Feb. 3	13.31	Apr. 7	12.07	9	10.94	18	12.57
10	13.29	14	12.01	16	10.11	25	12.73
17	13.18	21	11.87	23	10.91	Sept. 1	12.81
24	12.81	28	11.66	30	11.33	8	12.93
Mar. 3	12.63	May 5	11.72	July 7	11.44	15	13.13

Py 2--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 22	13.27	Nov. 7	14.25	Nov. 23	14.40	Dec. 9	14.35
29	13.33	8	14.40	24	14.10	10	14.65
Oct. 2	13.83	9	14.50	25	14.25	11	14.75
13	14.02	10	14.55	26	14.50	12	14.70
20	13.57	11	14.55	27	14.15	13	14.55
27	13.47	12	14.50	28	14.41	14	14.45
28	14.01	13	14.45	29	14.45	15	14.25
29	13.85	14	14.35	30	14.95	18	14.65
30	14.00	15	14.35	Dec. 1	14.70	19	14.55
31	14.15	16	14.20	2	14.75	23	14.30
Nov. 1	14.15	17	14.20	3	14.55	24	14.55
2	14.25	18	14.25	4	14.45	25	14.70
3	14.40	19	14.10	5	14.35	26	14.60
4	14.20	20	14.15	6	14.80	27	14.60
5	14.35	21	14.30	7	14.90	28	14.35
6	14.25	22	14.35	8	14.60	29	14.30

Pulaski County

Pu 1. State of Indiana. Jasper-Pulaski State Game Preserve. SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 18, T. 31 N., R. 4 W. Drilled unused artesian well in rock, diameter 4 inches, reported depth 149 feet, cased to 60. Land-surface datum is 706 feet above msl. Measurements made by George McCormick. Highest water level 4.23 below lsd, Oct. 20, 1954; lowest 12.14 below lsd, Dec. 1, 1935. Records available: 1935-42, 1944-54.

Feb. 2	10.14	Apr. 28	6.61	July 14	5.63	Oct. 12	8.99
9	10.14	May 12	6.97	21	7.36	20	4.23
16	10.05	19	6.79	28	7.90	27	8.37
24	9.33	12	6.93	Aug. 4	8.22	Nov. 3	8.46
Mar. 3	9.27	25	5.89	11	4.51	10	8.56
10	8.97	June 2	5.08	18	8.54	17	8.58
17	9.10	9	7.21	25	8.99	24	8.56
24	8.99	10	7.24	26	8.72	Dec. 1	8.84
31	8.05	16	7.35	Sept. 1	8.59	15	4.59
Apr. 7	7.65	23	7.32	8	8.83	22	8.63
14	7.05	30	7.31	22	9.22	29	8.62
21	6.97	July 7	7.58	29	9.34		

Randolph County

Ra 1. Artie V. Keys. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 26, T. 20 N., R. 14 E. Drilled domestic artesian well in limestone, diameter 4 inches, depth 157 feet, cased to 148. Measurements made by Artie V. Keys. Highest water level 12.08 below lsd, Jan. 31, 1949; lowest 18.43 below lsd, Jan. 31, 1945. Records available: 1942-54.

Jan. 15	17.98	Apr. 30	14.04	July 15	15.40	Oct. 15	16.91
31	17.15	May 15	14.15	31	15.90	31	16.11
Feb. 15	17.04	31	14.74	Aug. 15	16.13	Nov. 15	16.06
28	16.55	June 15	14.17	31	16.42	30	15.35
Mar. 15	15.90	30	14.90	Sept. 15	16.86	Dec. 15	15.12
31	15.06	July 8	15.15	30	17.32	31	14.29
Apr. 15	14.05						

St. Joseph County

Sj 1. City of Mishawaka. Mishawaka Water and Light Dept. Virgil and Linden Sts. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 11, T. 37 N., R. 3 E. Driven unused well in sand, diameter 1 $\frac{1}{2}$ inches, depth 40 feet. Measurements made by personnel of Mishawaka Water and Light Dept. Highest water level 4.46 below lsd, May 25, 1943; lowest 15.34 below lsd, Sept. 1, 1953. Records available: 1935-54. Nearby well being pumped.

Jan. 1	10.67	Apr. 1	8.84	July 1	13.85	Oct. 1	13.70
15	11.17	15	8.17	Aug. 1	12.68	15	9.42
Feb. 1	11.00	May 1	9.50	15	12.33	Nov. 1	9.00
15	11.75	15	10.75	25	13.00	15	10.65
Mar. 1	9.50	31	11.25	Sept. 1	12.50	Dec. 1	11.50
15	10.42	June 15	12.00	15	12.90	15	11.08

Spencer County

Sp 6. State of Indiana. Lincoln State Park. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 5, T. 5 S., R. 5 W. Drilled unused artesian well in rock, diameter 4 inches, reported depth 83 feet. Measurements made by personnel of Lincoln State Park. Highest water level 21.52 below lsd, Mar. 21, 1951; lowest 31.75 below lsd, Oct. 6, 1954. Records available: 1944-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	30.85	Apr. 14	26.70	July 14	27.60	Oct. 7	30.75
13	30.90	21	26.20	21	29.00	13	30.90
20	30.75	28	25.70	28	29.30	20	30.95
27	30.60	May 5	25.55	Aug. 3	29.40	27	31.00
Feb. 3	30.35	6	25.30	11	29.60	Nov. 3	31.10
10	30.20	12	25.10	18	29.90	10	31.15
17	30.10	19	25.25	24	30.00	17	31.15
24	29.70	25	25.65	Sept. 1	30.20	24	31.20
Mar. 3	29.15	June 1	26.10	8	30.30	Dec. 1	31.30
10	28.50	8	26.35	15	30.50	8	31.15
17	28.30	16	26.75	22	30.45	15	31.20
24	28.00	22	27.40	29	30.60	22	31.15
31	27.55	30	27.90	Oct. 6	31.75	29	31.00
Apr. 7	27.25	July 7	28.30				

Steuben County

Sb 1. State of Indiana. Pokagon State Park. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 33, T. 38 N., R. 13 E. Driven unused artesian well in gravel, diameter 1 $\frac{1}{2}$ inches, depth 14 feet. Land-surface datum is 1,004 feet above msl. Measurements made by personnel of Pokagon State Park. Highest water level 1.01 above lsd, Apr. 1, 1950; lowest 5.77 below lsd, Jan. 16, 1954. Records available: 1935-54.

Jan. 1	-5.74	Apr. 3	-2.66	July 17	-1.67	Oct. 2	-4.02
9	5.76	10	2.95	24	2.08	9	-2.60
16	5.77	17	.64	31	2.40	18	+.07
23	5.62	24	.73	Aug. 7	2.70	23	.15
30	5.46	May 1	.49	14	2.92	30	.18
Feb. 6	5.50	15	.96	18	2.95	Nov. 6	.32
13	5.54	22	1.19	21	3.08	13	.56
20	5.54	29	1.45	28	3.15	20	.30
27	4.18	June 5	.68	Sept. 4	3.42	27	.19
Mar. 6	3.48	12	1.12	11	-3.68	Dec. 4	.26
13	2.80	19	1.48	18	+.82	18	.47
20	2.64	28	1.46	25	+4.12	27	.40
28	2.70	July 10	1.18				

Switzerland County

Sw 1. Walker Estate. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 8, T. 2 N., R. 1 W. Dug domestic well, diameter 4 feet, depth 24 feet. Highest water level 2.45 below lsd, Mar. 2, 1945; lowest 21.90 below lsd, Dec. 2-15, 1944. Records available: 1944-54.

Jan. 2	19.30	Apr. 10	15.10	July 16	18.00	Oct. 9	18.90
8	19.30	16	15.50	23	18.30	16	16.70
15	19.40	22	15.30	31	18.60	25	16.50
22	18.20	May 1	15.60	Aug. 6	18.60	Nov. 1	16.20
Feb. 5	16.90	7	15.15	14	18.70	8	16.35
12	17.00	14	15.20	21	21.10	13	16.60
20	17.15	22	16.00	27	20.55	19	16.80
26	17.10	28	16.20	Sept. 4	20.20	27	16.90
Mar. 5	16.45	June 4	16.10	10	20.10	Dec. 3	16.90
12	16.20	12	16.50	17	19.90	10	17.00
19	15.90	25	17.20	24	19.20	24	15.90
26	15.50	July 2	17.50	Oct. 1	19.00	30	11.40
Apr. 3	14.90	9	17.70				

Tippecanoe County

Tc 7. State of Indiana. Purdue University. Purdue Research Housing Project. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 13, T. 23 N., R. 5 W. Drilled unused well, diameter 8 inches, depth 207 feet. Land-surface datum is 679 feet above msl. Highest water level 159.61 below lsd, May 15, 1950; lowest 167.67 below lsd, Oct. 19, 1954. Records available: 1945-54.

Tc 7--Continued.

Daily 2 a.m. water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	164.24	164.48	164.76	165.23	165.44	165.43	166.26	166.78	167.10	167.40	167.17	167.00
2	164.20	164.49	164.90	165.09	165.38	165.56	166.26	166.69	167.06	167.37	167.24	167.09
3	164.38	164.44	164.83	165.30	165.34	165.38	166.24	166.75	167.08	167.27	167.25	166.97
4	164.36	164.47	165.02	165.21	165.42	.....	166.25	166.79	167.14	167.31	167.10	166.96
5	164.23	164.68	164.99	165.06	165.39	.....	166.27	166.79	167.14	167.35	167.24	167.00
6	164.34	164.70	164.96	164.96	.....	.....	166.34	166.84	167.15	167.46	167.08	167.15
7	.....	164.79	164.81	165.10	165.34	.....	166.23	166.86	167.13	167.61	167.16	167.10
8	.....	164.52	164.91	.....	165.44	.....	166.39	166.80	167.16	.....	167.16	166.96
9	164.29	164.53	164.99	165.35	.....	.....	166.40	166.85	167.18	167.36	167.21	166.79
10	164.49	164.53	164.87	165.17	.....	.....	166.43	166.80	167.08	167.32	167.23	167.07
11	164.34	164.72	164.86	165.16	.....	165.72	166.43	166.92	167.19	167.31	167.16	167.14
12	164.54	164.96	164.93	165.34	165.45	165.74	166.41	166.95	167.24	167.32	167.18	167.03
13	164.62	164.77	164.84	165.25	165.49	165.75	166.40	166.94	167.16	167.51	167.12	167.00
14	164.42	164.61	164.96	165.10	165.46	165.70	166.41	166.90	167.15	167.38	167.01	166.93
15	164.49	164.60	165.85	165.13	165.47	165.74	166.54	166.91	167.16	167.46	167.05	166.81
16	164.45	164.60	165.15	165.20	165.38	165.73	166.59	166.90	167.23	167.40	166.96	167.08
17	164.65	164.90	165.10	165.26	165.36	165.82	166.56	166.99	167.20	167.52	167.00	166.94
18	164.42	164.90	164.99	165.23	165.45	165.87	166.47	166.93	167.17	167.64	167.01	166.92
19	164.49	164.82	164.81	165.22	165.45	165.87	166.54	166.90	167.09	167.67	166.94	167.00
20	164.40	164.57	164.98	165.35	165.53	165.81	.....	167.01	167.18	167.57	166.99	167.04
21	164.72	164.63	165.08	165.38	165.57	165.77	166.57	167.05	167.11	167.50	167.03	167.08
22	164.68	164.84	165.04	165.35	165.57	165.80	166.61	167.07	167.30	167.51	167.03	167.02
23	164.67	164.61	165.00	165.36	165.56	165.94	166.64	167.05	167.34	167.51	167.00	166.90
24	164.48	164.71	165.09	165.38	165.49	165.97	166.67	166.98	167.33	167.45	166.83	167.00
25	164.59	164.75	.....	165.36	165.54	165.96	166.71	166.92	167.21	167.31	166.96	167.03
26	164.53	164.80	165.17	165.27	165.58	165.98	166.72	166.96	167.26	167.23	167.04	166.98
27	164.52	164.73	165.20	165.17	165.56	166.08	166.72	167.03	167.28	167.20	166.76	166.98
28	164.78	164.73	164.93	165.36	165.47	166.16	166.68	167.04	167.27	167.23	166.84	166.89
29	164.64		165.03	165.36	165.56	166.14	166.72	167.07	167.26	167.08	166.97	166.92
30	164.65		165.11	165.39	165.66	166.17	166.77	167.04	167.35	167.21	167.22	.....
31	164.74		165.17		165.57		166.73	167.06		167.24		166.94

Vanderburgh County

Va 1. Flora Buente. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T. 5 S., R. 11 W. Dug unused well, diameter 42 inches, depth 20 feet, cribbed with brick. Highest water level 0.19 below lsd, Mar. 18, 1951; lowest 13.77 below lsd, Dec. 26, 1954. Records available: 1947-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	12.23	Apr. 11	13.39	July 11	13.20	Oct. 10	13.09
10	12.36	18	13.39	18	13.18	17	13.10
17	11.46	25	13.39	25	13.15	24	13.13
31	12.66	May 2	13.37	Aug. 1	13.10	31	13.14
Feb. 7	12.74	5	13.37	8	13.08	Nov. 7	13.28
14	12.87	9	13.35	15	13.05	14	13.35
21	12.90	16	13.42	22	12.98	21	13.43
28	12.93	23	13.45	29	12.99	28	13.52
Mar. 7	13.07	30	13.35	Sept. 6	13.09	Dec. 5	13.60
14	13.20	June 6	13.40	12	13.10	12	13.66
21	13.27	13	13.35	19	13.16	19	13.71
28	13.35	20	13.34	26	13.10	26	13.77
Apr. 4	13.42	July 4	13.32	Oct. 3	13.09		

Wayne County

We 1. C. E. Rodenberg. Pershing. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 25, T. 16 N., R. 12 E. Dug unused well in gravel, diameter 42 inches, depth 33 feet, cribbed with brick. Land-surface datum is 957 feet above msl. Highest water level 24.60 below lsd, Feb. 27, 1950; lowest 32.18 below lsd, Dec. 20, 1954. Records available: 1945-54.

We 1--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	31.80	Apr. 5	32.12	June 28	31.72	Oct. 11	32.02
11	31.89	12	31.95	July 6	31.70	18	32.00
18	31.90	19	31.86	8	31.64	25	32.02
25	31.94	26	31.80	Aug. 2	31.73	Nov. 2	32.06
Feb. 1	31.92	May 3	31.76	9	31.37	9	32.08
8	31.95	11	31.74	16	31.83	16	32.10
15	30.99	18	31.72	23	31.84	24	32.14
23	32.04	24	31.73	30	31.86	29	32.17
Mar. 1	32.05	June 2	31.73	Sept. 7	31.88	Dec. 7	32.16
9	32.09	7	31.73	14	31.90	13	32.15
16	32.10	14	31.71	20	31.93	20	32.18
23	32.12	22	31.68	Oct. 5	32.00	29	32.16
29	32.10						

MAINE

By John A. Baker

Scope of Water-Level Program

The observation-well program in Maine, begun in 1939, was continued in 1954. Water levels were measured weekly in five wells. Figure 10 shows the location of observation wells in Maine.

Precipitation

The average precipitation for Maine in 1954, according to records of the U. S. Weather Bureau, was 57.80 inches, 17.19 inches above normal and 9.48 inches more than in 1953. The wettest month, September, had 8.51 inches, more than half of which accompanied hurricane "Edna" on September 11. The driest month, January, had 3.06 inches, about 2.8 inches of which fell as snow. Precipitation was above normal in all months except January and March.

Interpretation of Water-Level Fluctuations

Water levels in January declined in all wells. In two wells, the lowest levels of the year were recorded, owing to below-normal precipitation, which fell largely as snow on frozen ground. Rising water levels from February through April resulted from melting snow and above-normal precipitation. Peak levels for the year in four wells were recorded in April. The highest water level of record (0.66) in well Ar 2 was equaled on April 18. From May through August water levels declined as evapotranspiration losses increased, although precipitation was above normal. Water levels rose sharply in mid-September, and the peak for the year was recorded in well Y 1 at Cornish as a result of the torrential rainfall accompanying hurricane "Edna" on September 11. Water levels remained high and nearly stationary from October through December, owing to above-normal precipitation and alternate freezing and thawing.

Well-Numbering System

Each well in Maine is designated by a letter or combination of letters indicating the county in which the well is located, followed by a numeral assigned within each county in the order the well was inventoried.

Well Descriptions and Water-Level Measurements

(Water-level measurements are in feet below land-surface datum.)

Aroostook County

Ar 1. H. L. Stevens. Portage Lake. Lat. 46°46'19", long. 68°28'04". Dug unused water-table well in sand, diameter 28 inches, depth 11 feet. Land-surface datum is about 930 feet above msl. Highest water level 0.60 below lsd, Apr. 21, 1952; lowest dry several times, 1947-48, 1950, 1952-53. Records available: 1942-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	3.80	Apr. 3	4.90	June 16	3.87	Oct. 8	2.83
16	4.83	10	1.66	July 1	1.00	16	2.25
Feb. 3	5.85	17	.89	10	1.70	27	3.22
10	6.15	23	1.59	19	2.86	Nov. 4	1.70
20	6.58	30	2.50	31	1.15	9	2.65
26	2.65	May 8	2.45	Aug. 12	1.25	17	3.77
Mar. 4	1.95	15	2.34	20	1.63	29	3.10
13	2.53	24	2.37	Sept. 4	6.82	Dec. 6	4.60
20	3.40	June 2	2.19	11	6.22	14	5.80
27	4.25	7	2.14	27	3.22	30	3.87

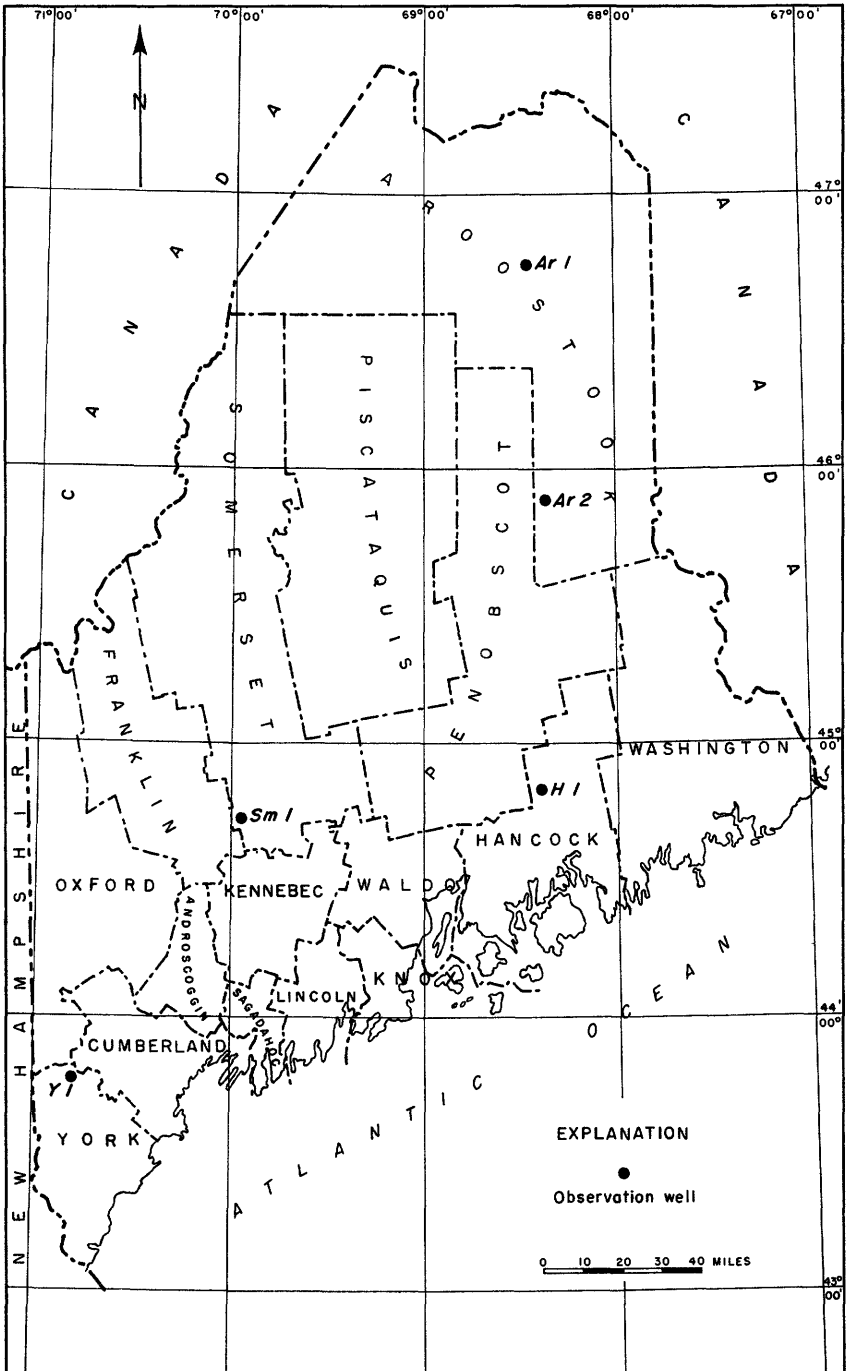


Figure 10. --Location of observation wells in Maine, 1954.

Ar 2. C. C. Young. Sherman. Lat. 45°55'01", long. 68°20'04". Dug and drilled unused water-table well 12 feet in sand, 19 feet in bedrock, diameter 28 to 8 inches, depth 31 feet. Land-surface datum is about 710 feet above msl. Highest water level 0.66 below lsd, Dec. 10, 1950, Mar. 29, 1953, Apr. 18, 1954; lowest 17.48 below lsd, Oct. 25, 1953. Records available: 1939-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 31	12.96	May 2	0.80	July 18	9.78	Oct. 24	2.12
Feb. 28	5.01	9	1.05	25	11.48	31	2.64
Mar. 7	1.70	16	1.88	Aug. 16	4.65	Nov. 7	2.72
14	3.08	25	2.60	22	4.37	14	3.07
21	4.28	June 6	.98	27	2.60	21	.90
28	6.20	13	3.78	Sept. 5	3.16	28	2.87
Apr. 5	8.18	20	7.43	12	.82	Dec. 5	8.06
11	.73	27	2.88	26	2.80	12	2.88
18	.66	July 4	5.58	Oct. 10	1.64	19	1.10
25	.98	11	9.18	17	1.82	26	1.72

Hancock County

H 1. George C. Orcutt. Amherst. Lat. 44°49'50", long. 68°22'06". Dug unused water-table well in glacial drift, diameter 18 inches, depth 14 feet. Land-surface datum is about 330 feet above msl. Highest water level 2.81 below lsd, Nov. 27, 1950; lowest dry several times, 1944, 1948-49, 1952. Records available: 1943-54.

Jan. 4	5.38	Apr. 4	5.84	July 4	7.75	Oct. 3	5.71
10	6.12	11	5.42	11	8.66	10	5.47
17	6.50	18	3.16	18	9.47	17	5.07
24	6.38	25	4.20	25	9.80	24	5.10
31	6.86	May 2	5.32	Aug. 1	10.10	31	5.20
Feb. 7	6.52	9	4.81	8	9.70	Nov. 8	4.30
14	7.16	16	4.98	15	9.70	14	5.05
21	7.09	23	5.66	22	10.29	21	5.16
28	5.88	30	5.98	29	10.70	29	5.02
Mar. 7	5.30	June 5	6.28	Sept. 5	11.02	Dec. 5	5.21
14	6.00	13	6.51	12	3.80	12	5.09
21	5.80	21	7.30	19	4.36	19	3.30
28	5.29	27	7.35	26	4.83	26	4.51

Somerset County

Sm 1. J. Harrison Farrand. Mercer. Lat. 44°42'10", long. 69°55'12". Dug unused water-table well in sand, diameter 5 feet, depth 14 feet. Land-surface datum is about 270 feet above msl. Highest water level 4.30 below lsd, Mar. 24, 1946; lowest dry several times, 1952-53. Records available: 1942-54.

Jan. 3	6.15	Apr. 5	5.26	July 6	6.40	Oct. 5	5.08
10	6.40	11	4.50	11	6.16	17	4.78
18	6.53	19	4.40	17	6.63	24	5.43
24	6.85	25	4.88	25	6.50	Nov. 2	4.98
31	7.13	May 2	5.00	Aug. 1	5.40	7	5.06
Feb. 9	6.30	7	4.66	8	5.87	14	5.48
16	6.15	15	4.95	16	5.52	21	5.03
21	6.39	22	5.28	22	6.10	28	5.37
Mar. 2	5.37	29	5.50	29	6.51	Dec. 4	5.42
9	5.32	June 6	5.32	Sept. 5	5.75	12	5.88
15	5.42	13	5.42	12	5.50	19	4.92
23	5.57	20	5.50	25	5.32	27	5.40
28	5.60	27	6.07				

York County

Y 1. J. P. Small. Cornish. Lat. 43°48'22", long. 70°48'25". Dug unused water-table well in sandy glacial drift, diameter 36 inches, depth 24 feet. Land-surface datum is about 370 feet above msl. Highest water level 7.90 below lsd, Apr. 6, 1952; lowest 18.40 below lsd, Nov. 14, 1948. Records available: 1943-54.

Y 1--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	11.40	Apr. 4	9.10	July 4	10.20	Oct. 3	10.30
10	11.90	11	9.80	11	10.55	10	10.90
17	12.10	18	9.90	18	11.20	17	11.10
24	12.80	25	9.10	25	11.70	24	10.40
30	13.10	May 2	9.60	Aug. 1	11.20	31	11.20
Feb. 7	13.30	9	9.20	8	10.50	Nov. 7	8.80
14	14.10	16	8.60	15	10.30	14	9.80
21	14.30	23	9.20	22	11.10	21	10.50
28	12.40	30	9.10	29	11.80	28	9.80
Mar. 7	8.90	June 6	9.30	Sept. 5	10.40	Dec. 5	9.10
14	9.20	13	9.60	12	8.10	12	10.80
21	10.70	20	10.30	19	8.80	19	9.50
28	9.10	27	10.90	26	9.25	28	9.80

MASSACHUSETTS

By John A. Baker

Scope of Water-Level Program

The observation-well program in Massachusetts was continued during 1954 in cooperation with the Massachusetts Department of Public Works. Measurements of water levels were made in 41 observation wells, 2 of which were equipped with recording gages. Figures 11 and 12 show location of observation wells in Massachusetts.

Precipitation

The average precipitation for Massachusetts in 1954, as determined by the U. S. Weather Bureau, was 53.08 inches. This was 9.87 inches above normal and 0.40 inch below the 1953 average. The average monthly precipitation was above normal in April, May, August, September, November, and December, and below normal in January, February, March, June, July, and October. The wettest month of the year, September, had 7.86 inches, 4.15 inches above normal. More than half of the total rainfall in September accompanied hurricane "Edna" on September 11. Hurricane "Carol," which had visited the area 11 days earlier on August 31, brought higher winds but much less rainfall than hurricane "Edna." July, the driest month of the year, had 2.57 inches, 0.92 inch below normal.

Interpretation of Water-Level Fluctuations

All the observation wells in Massachusetts draw water from glacial drift, except Wilmington 58 which draws water from bedrock. A comparison of water-level measurements shows that fluctuations of the water level in the bedrock well correlate with fluctuations of the water levels in the drift wells. Water levels in wells not influenced by pumping fluctuate seasonally in response to natural recharge and discharge. Water-level fluctuations also vary from well to well, according to the character of the drift, the topographic location, and location in relation to pumping wells.

Water levels were high at the beginning of 1954, owing to above-normal precipitation during October, November, and December, 1953. During January the ground was frozen, and precipitation was below normal; therefore, water levels declined slightly. Water levels rose gradually from February through May; melting snow in February and March and above-normal precipitation in April and May provided water for recharge. During this period, minor fluctuations resulted from alternate freezing and thawing and frequent spring rains. Peak water levels for the year were recorded in most wells in May. The water level in Sterling 1 rose to a record high (3.22, May 28).

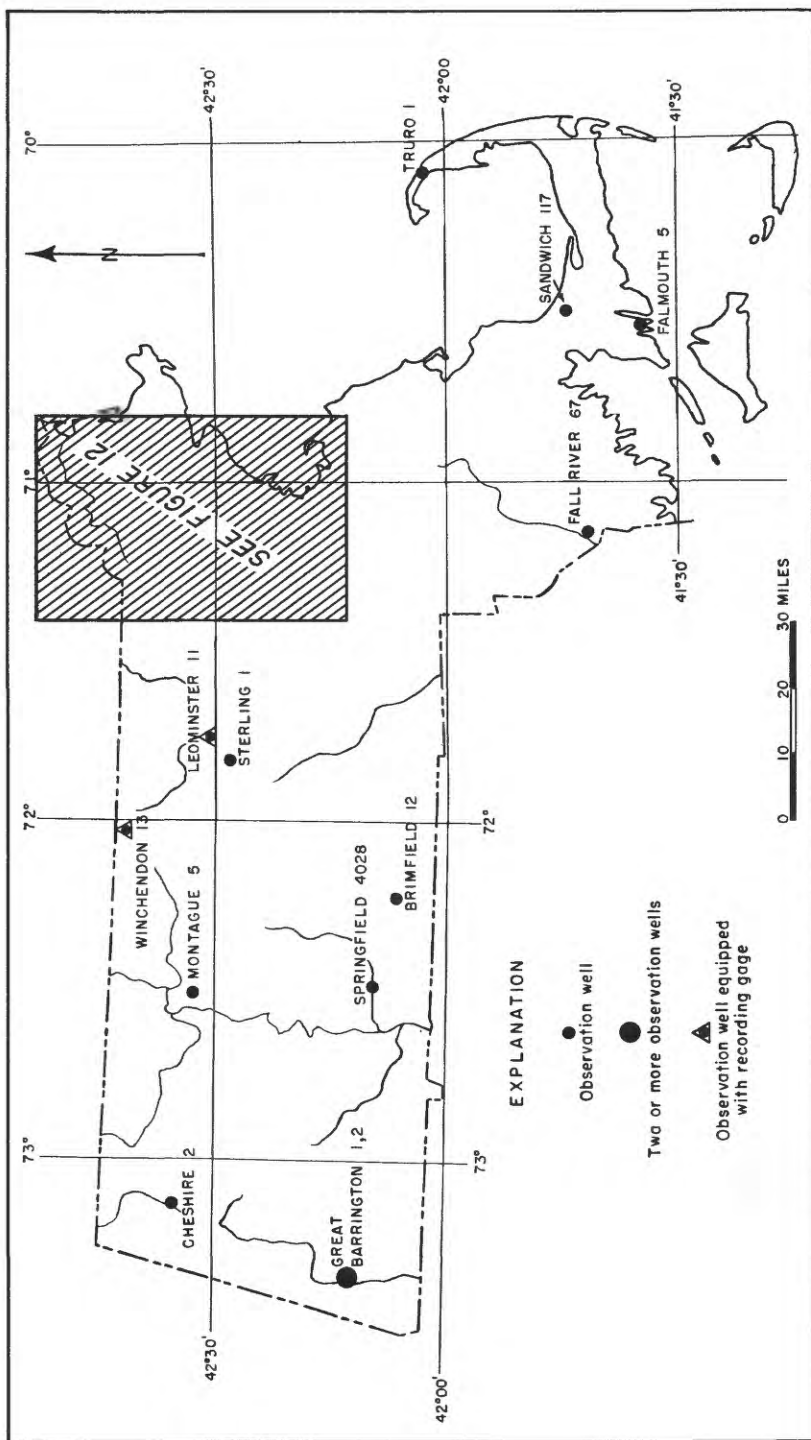
The normal seasonal decline of water levels began in May when evapotranspiration losses increased. The decline continued through June and July, owing to the combined effect of evapotranspiration losses and below-normal precipitation. The lows of the year in most wells were recorded in August. At the end of August, the downward trend was reversed in response to above-normal rainfall during the month and the heavy rainfall accompanying hurricane "Carol." Water levels in eastern and central Massachusetts rose sharply in September because of the torrential rainfall that accompanied "Edna" on September 11. Water levels continued to rise during the remainder of September, owing to smaller evapotranspiration losses, but declined in October as a result of deficient precipitation. Precipitation and temperatures were above normal in November and December. Water levels in Reading 3, Wilmington 56, and Woburn 4 in northeastern Massachusetts rose to record-high stages on December 30 as a result.

Well-Numbering System

Each well in Massachusetts is designated by the name of the town or city in which the well is located, followed by a numeral assigned within each town or city in the order in which the well was inventoried.

Well Descriptions and Water-Level Measurements

(Water levels are in feet below land-surface datum unless otherwise indicated.)



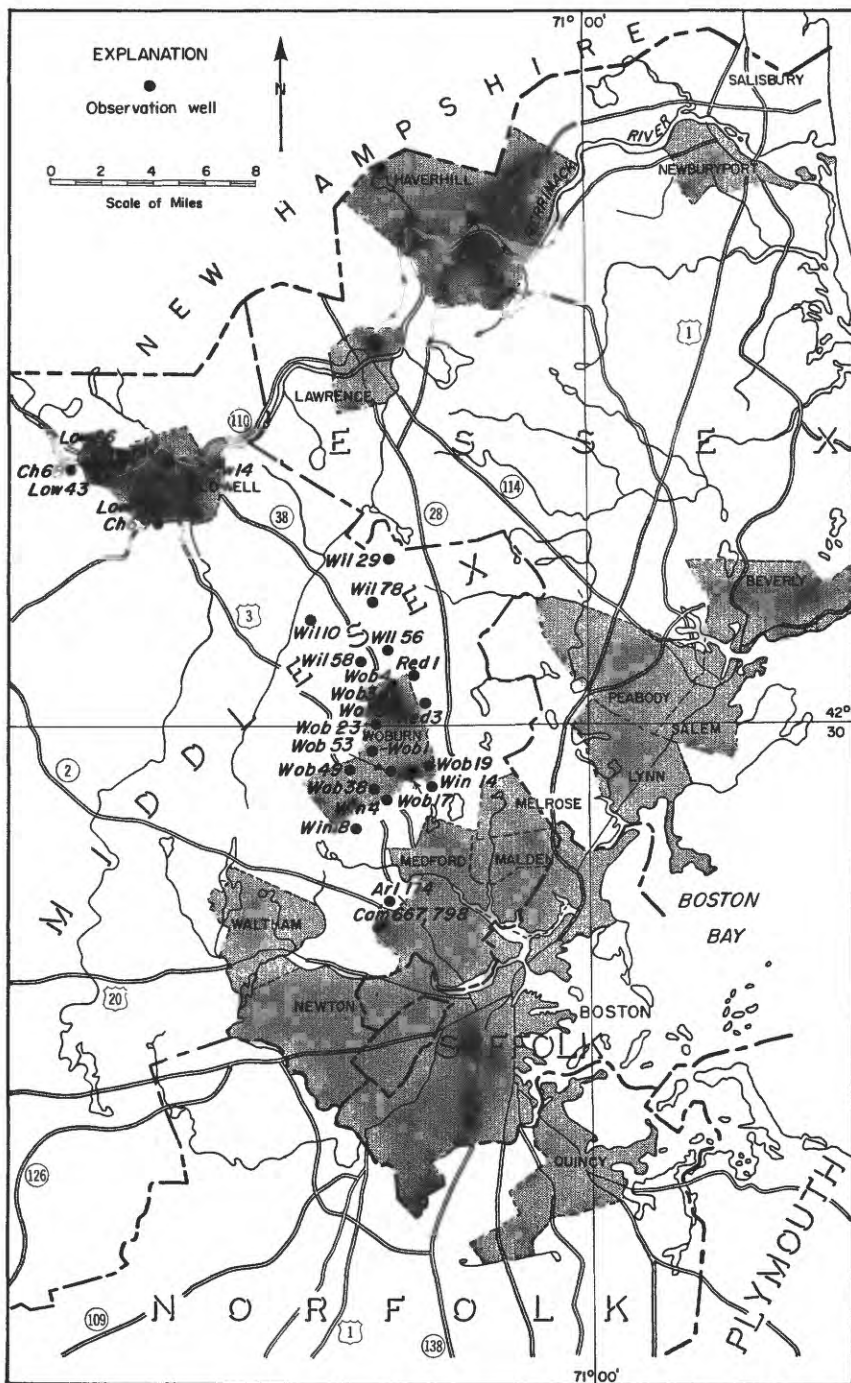


Figure 12. --Location of observation wells in Middlesex County, Mass., 1954.

Barnstable County

Falmouth 5. Town of Falmouth. Lat. $41^{\circ}34'49''$, long. $70^{\circ}32'24''$. Driven unused water-table well in glacial drift, diameter $2\frac{1}{2}$ inches, depth 50 feet. Land-surface datum is about 8 feet above msl. Highest water level 2.78 below lsd, Apr. 27, 1953; lowest 5.46 below lsd, Sept. 2, 1950. Records available: 1950-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	3.94	June 21	3.80	Aug. 9	4.78	Oct. 4	4.93
Mar. 1	3.98	28	4.00	16	4.72	26	5.08
Apr. 17	4.00	July 5	4.12	Sept. 6	4.94	Nov. 1	5.05
May 1	3.91	12	4.27	13	4.70	15	5.08
June 1	3.25	19	4.53	20	4.71	22	5.10
7	3.43	26	4.57	27	4.82	Dec. 1	4.96
14	3.72	Aug. 2	4.75				

Truro 1. Town of Provincetown. Lat. $42^{\circ}02'39''$, long. $70^{\circ}06'20''$. Driven unused water-table well in glacial drift, diameter $1\frac{1}{4}$ inches, depth 68 feet. Land-surface datum is about 25 feet above msl. Highest water level 10.3 below lsd, Apr. 15-May 20, 1953; lowest 12.1 below lsd, Sept. 11, 1954. Records available: 1950-54.

Jan. 6	10.7	Mar. 31	11.0	June 30	11.4	Sept. 25	11.8
13	10.6	Apr. 7	10.9	July 7	11.5	Oct. 2	11.9
20	10.8	14	11.1	14	11.7	9	11.9
27	10.9	21	11.0	24	11.8	17	11.9
Feb. 3	10.8	28	11.1	31	11.8	23	11.5
10	10.5	May 12	11.2	Aug. 7	11.9	30	11.6
17	10.7	19	11.2	14	11.9	Nov. 9	11.1
24	11.0	26	11.3	21	12.0	13	11.0
Mar. 3	11.0	June 2	11.2	28	11.5	20	11.17
10	10.8	10	11.1	Sept. 4	12.0	Dec. 11	10.80
17	10.9	17	11.3	11	12.1	25	11.10
24	10.9	23	11.4	18	11.8		

Berkshire County

Cheshire 2. John Jayko. Wells and Jenks Rds. Lat. $42^{\circ}35'03''$, long. $73^{\circ}07'54''$. Dug unused water-table well in glacial drift, depth 22 feet. Land-surface datum is about 1,210 feet above msl. Highest water level 0.09 below lsd, Jan. 19, 1952; lowest 13.46 below lsd, Oct. 26, 1953. Records available: 1951-54.

Jan. 2	5.59	Apr. 3	1.62	July 4	5.72	Oct. 3	3.46
9	5.61	10	.72	10	6.27	11	4.06
16	6.59	17	.75	17	6.86	18	4.15
24	5.63	24	1.46	25	7.59	25	5.64
31	5.25	May 1	1.51	31	7.66	Nov. 1	5.76
Feb. 6	5.49	8	.36	Aug. 7	7.77	8	1.96
13	5.91	15	1.35	14	7.68	15	2.86
20	2.51	22	.44	21	8.57	22	.59
27	1.29	29	1.57	30	7.68	29	.19
Mar. 6	1.29	June 5	2.88	Sept. 4	7.76	Dec. 6	1.44
13	1.27	12	4.18	12	5.31	13	2.46
20	.84	19	2.86	18	2.98	20	.94
27	.79	26	4.58	25	3.69	27	3.56

Great Barrington 1. Mrs. Dora A. Campbell. North Plains Rd. and Division St. Lat. $42^{\circ}13'38''$, long. $73^{\circ}21'52''$. Dug unused well in glacial drift, diameter 34 inches, depth 22 feet. Land-surface datum is 732.11 feet above msl. Highest water level 15.51 below lsd, Aug. 1, 1945; lowest 22.89 below lsd, Sept. 29, 1947. Records available: 1936-54.

Jan. 17	22.14	Apr. 25	20.47	July 12	21.45	Oct. 25	21.81
24	22.11	May 3	20.32	19	21.75	Nov. 2	21.70
Feb. 7	22.01	10	20.25	Aug. 2	21.68	8	21.66
14	21.61	17	20.15	9	21.37	15	21.56
22	21.41	24	20.16	16	21.88	21	21.47
28	21.35	June 1	20.13	22	22.20	28	20.93
Mar. 7	21.19	8	20.34	30	21.80	Dec. 10	20.71
15	21.20	14	20.50	Sept. 6	22.10	16	20.68
29	21.12	26	21.00	20	21.79	23	20.07
Apr. 5	21.00	July 4	21.15	26	21.97	30	19.96
19	20.56						

Great Barrington 2. Austin Hollian. Lat. $42^{\circ}13'15''$, long. $73^{\circ}21'28''$. Dug unused water-table well in glacial drift, diameter 36 inches, depth 15 feet. Land-surface datum is about 725 feet above msl. Highest water level 5.88 below lsd, Mar. 5, 1954; lowest 13.66 below lsd, Nov. 20, 1953. Records available: 1951-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	11.88	Apr. 9	7.61	July 9	12.89	Oct. 8	12.13
8	12.16	16	7.47	16	12.88	15	12.55
15	12.55	23	6.37	23	12.97	22	12.78
22	12.29	30	7.44	30	12.99	29	12.84
29	10.56	May 7	8.16	Aug. 6	13.03	Nov. 5	9.69
Feb. 5	11.53	14	7.66	13	13.06	12	10.29
12	12.18	21	9.49	20	13.09	19	10.71
19	9.75	28	9.33	27	13.14	26	7.06
26	6.82	June 4	10.52	Sept. 3	13.05	Dec. 3	6.56
Mar. 5	5.88	11	11.31	10	12.98	10	10.03
12	8.09	18	10.94	17	10.07	16	9.96
19	8.36	25	11.87	24	10.89	23	7.82
26	6.66	July 2	12.61	Oct. 1	11.64	30	8.49
Apr. 2	7.58						

Bristol County

Fall River 67. Bristol County Superior Courthouse. North Main and Walnut Sts. Lat. $41^{\circ}42'28''$, long. $71^{\circ}09'15''$. Dug unused well in glacial drift, diameter 30 inches, depth 12 feet. Land-surface datum is about 135 feet above msl. Highest water level 4.96 below lsd, Apr. 20, 1953; lowest dry, Oct. 30-Nov. 20, 1950. Records available: 1948-54.

Jan. 11	6.98	Apr. 12	7.99	July 12	8.66	Oct. 11	8.91
17	8.91	19	7.94	19	8.78	18	8.26
24	7.99	26	7.96	26	8.81	25	8.43
Feb. 1	7.99	May 3	7.82	Aug. 2	8.85	Nov. 1	8.50
8	7.82	10	6.74	9	7.18	8	8.40
15	7.99	17	5.94	16	8.01	15	8.38
22	8.03	26	6.60	23	8.13	22	8.37
Mar. 1	7.90	31	7.31	30	8.36	28	8.22
8	7.54	June 7	7.71	Sept. 7	8.46	Dec. 5	8.18
15	7.48	14	8.02	13	6.94	13	8.08
22	7.71	21	8.24	20	7.92	20	7.01
29	7.64	28	8.41	27	7.96	27	8.44
Apr. 5	7.74	July 5	8.51	Oct. 4	7.88		

Franklin County

Montague 5. C. A. Kurtyka. Near Montague. Lat. $42^{\circ}33'05''$, long. $72^{\circ}32'03''$. Dug unused well in glacial drift, diameter 38 inches, depth 7 feet. Land-surface datum is about 240 feet above msl. Highest water level 0.78 below lsd, Apr. 27, 1944; lowest 6.04 below lsd, Oct. 9, 1950. Records available: 1936-54.

Jan. 4	2.90	Apr. 5	3.00	July 5	4.00	Oct. 4	3.16
11	3.00	12	3.14	12	4.26	11	3.62
18	3.04	19	2.40	19	4.36	18	3.78
25	3.30	26	2.92	26	4.35	25	4.04
Feb. 1	3.08	May 3	2.43	Aug. 2	4.21	Nov. 1	3.72
8	3.18	10	2.12	9	4.14	8	3.00
15	3.45	17	2.98	16	4.48	15	3.40
22	2.20	24	2.72	23	4.54	22	2.45
Mar. 1	2.34	31	3.34	31	3.10	29	2.11
8	2.66	June 7	3.60	Sept. 6	3.94	Dec. 6	2.92
15	2.60	14	3.40	13	2.40	13	3.14
22	2.48	21	3.90	20	2.62	20	2.35
29	2.70	28	3.82	27	3.20	27	2.80

Hampden County

Brimfield 12. Norman Goodrich. Near Brimfield. Lat. $42^{\circ}07'06''$, long. $72^{\circ}14'24''$. Dug unused well in glacial drift, diameter 22 inches, depth 16 feet. Land-surface datum is about 740 feet above msl. Highest water level 1.12 below lsd, Apr. 19, 1953; lowest dry many times. Records available: 1936-54.

Brimfield 12--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	12.16	Apr. 5	12.62	July 4	12.59	Oct. 3	10.58
10	12.69	11	12.72	11	12.79	10	11.76
17	13.15	21	12.78	18	13.18	17	12.66
24	13.44	25	12.78	25	13.26	24	13.05
31	13.53	May 2	11.15	Aug. 1	13.26	31	13.14
Feb. 7	13.58	10	11.35	8	13.44	Nov. 7	13.08
14	13.69	16	11.15	15	13.68	14	13.18
22	14.04	23	11.17	22	13.68	21	13.15
Mar. 1	14.02	30	11.31	29	13.39	28	13.08
8	13.52	June 6	11.48	Sept. 5	13.36	Dec. 5	14.78
14	13.02	13	12.06	15	9.32	12	14.76
21	13.06	20	12.09	19	9.41	19	14.58
29	12.78	27	12.29	26	10.65	23	12.26

Middlesex County

Arlington 174. Massachusetts Department of Public Health. Margaret and Dorothy Rds. Lat. 42°24'09", long. 71°08'50". Driven observation well in coarse gravel and sand, diameter 2½ inches, depth 176 feet. Land-surface datum is 9.44 feet above msl. Highest water level 5.52 below lsd, May 2, 1953; lowest 14.51 below lsd, Dec. 29, 1950. Records available: 1944-54. Jan. 30, 7.58. Measurement discontinued.

Cambridge 667. Cambridge Water Department. Blanchard Rd. and Concord Ave. Lat. 42°23'16", long. 71°09'25". Drilled unused well in sand and gravel, diameter 8 inches, depth 129 feet. Land-surface datum is 11.63 feet above msl. Highest water level 5.71 below lsd, May 18, 1945; lowest 23.82 below lsd, Dec. 29, 1950. Records available: 1944-54.

Jan. 30	7.18	May 1	6.63	June 26	6.29	Aug. 28	8.66
Feb. 27	6.93	June 2	6.11	July 31	7.22	Nov. 27	11.52
Mar. 27	7.53						

Cambridge 798. Massachusetts Department of Public Health. Concord Ave. and Blanchard Rd. Lat. 42°23'20", long. 71°09'17". Driven observation water-table well, diameter 2½ inches, depth 31 feet. Land-surface datum is 6.61 feet above msl. Highest water level 0.35 below lsd, May 2, 1953; lowest 18.29 below lsd, Dec. 29, 1950. Records available: 1944-53. Measurement discontinued.

Chelmsford 68. Harold Blackie. Middlesex St., near Vinal Square. Lat. 42°38'45", long. 71°23'14". Drilled unused well in glacial drift, diameter 6 inches, depth 50 feet. Land-surface datum is 100.83 feet above msl. Highest water level 5.38 below lsd, May 2, 1953; lowest 11.07 below lsd, Sept. 2, 1950. Records available: 1939-54.

Jan. 30	8.62	May 1	6.97	July 31	8.99	Oct. 30	8.18
Feb. 27	7.78	June 2	6.19	Aug. 28	9.51	Nov. 27	6.91
Mar. 27	7.60	26	7.90	Sept. 26	7.08	Dec. 30	6.42

Chelmsford 69. City of Lowell (Washington test well 2). Chelmsford St. and Ecuador Rd. Lat. 42°36'34", long. 71°19'26". Driven unused water-table well in glacial drift, diameter 2½ inches, depth 45 feet. Land-surface datum is 103.62 feet above msl. Highest water level 0.04 above lsd, Feb. 2, 1952; lowest 6.05 below lsd, Aug. 23, 1941. Records available: 1939-54.

Jan. 30	1.22	May 1	1.22	July 31	2.51	Oct. 30	1.75
Feb. 29	.63	June 2	1.34	Aug. 28	2.60	Nov. 27	.92
Mar. 27	1.35	26	1.94	Sept. 26	1.06	Dec. 30	.74

Lowell 14. Rogers Hall School. Rogers St. and Fort Hill Ave. Lat. 42°38'12", long. 71°17'48". Dug unused well in glacial drift, diameter 24 inches, depth 30 feet. Land-surface datum is 157.78 feet above msl. Highest water level 8.43 below lsd, Mar. 29, 1952; lowest 22.46 below lsd, Nov. 7, 1939. Records available: 1939-54.

Jan. 30	13.27	May 1	9.88	July 31	12.92	Oct. 30	13.23
Feb. 27	13.15	June 2	9.27	Aug. 28	14.03	Nov. 27	12.19
Mar. 27	11.18	26	10.98	Sept. 26	12.67	Dec. 30	9.86

Lowell 26. Alfred Cimon (well 1). Pawtucket Blvd. Extension and East Ave. Lat. 42°38'39", long. 71°22'34". Driven unused water-table well in glacial drift, diameter 1½ inches, depth 15 feet. Land-surface datum is 102.26 feet above msl. Highest water level 1.97 below lsd, Apr. 2, 1940; lowest 13.01 below lsd, Sept. 30, 1950. Records available: 1939-54. Oct. 1, 7.84.

Lowell 33. Thomas Varnum. Varnum Ave. and West Meadow Rd. Lat. 42°38'35", long. 71°20'55". Dug unused well in glacial drift, diameter 27 inches, depth 13 feet. Land-surface datum is 101.83 feet above msl. Highest water level 6.29 below lsd, Mar. 1, 1945; lowest 11.33 below lsd, Oct. 4, 1941. Records available 1939-54. Oct. 1, 6.58.

Lowell 41. City of Lowell (Cook test well 3). Plain and Manufacturers Sts. Lat. 42°37'20", long. 71°19'12". Driven unused well in glacial drift, diameter 2 inches, depth 53 feet. Land-surface datum is 105.63 feet above msl. Highest water level 4.66 below lsd, Feb. 15, 1941; lowest 20.95 below lsd, Sept. 2, 1950. Records available: 1939-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	12.57	May 1	10.77	Aug. 10	13.25	Oct. 30	12.62
Feb. 27	11.88	June 2	9.84	Sept. 3	11.62	Nov. 27	10.48
Mar. 27	11.57	29	12.83	27	9.68	Dec. 30	10.91

Lowell 43. City of Lowell (test well 26). Pawtucket Blvd. and Boulevard Ave. Lat. 42°38'19", long. 71°22'02". Driven unused well in sand and gravel, diameter 2½ inches, depth 32 feet. Land-surface datum is 101.06 feet above msl. Highest water level 10.62 below lsd, June 4, 1940; lowest 25.76 below lsd, Dec. 30, 1948. Records available: 1940-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	19.47	May 1	16.94	July 31	17.17	Oct. 30	16.45
Feb. 27	19.86	June 2	14.13	Aug. 28	18.07	Nov. 27	15.55
Mar. 27	18.98	26	15.68	Sept. 26	15.33	Dec. 30	15.18

Reading 1. William Kelch. West and Willow Sts. Near Reading. Lat. 42°31'40", long. 71°07'43". Dug unused well in glacial drift, diameter 36 inches, depth 22 feet. Land-surface datum is 107.94 feet above msl. Highest water level 13.02 below lsd, Apr. 3, 1948; lowest dry, Dec. 26, 1941. Records available: 1939-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	17.90	May 1	15.64	July 31	19.25	Oct. 30	18.89
Feb. 27	17.34	June 2	13.38	Aug. 28	20.20	Nov. 27	17.64
Mar. 27	16.44	26	16.67	Sept. 26	16.49	Dec. 30	15.05

Reading 3. M. W. Farr. 1.2 miles southwest of Reading. Lat. 42°30'43", long. 71°07'16". Driven unused well in gravel, diameter 2½ inches, depth 10 feet. Land-surface datum is 159.28 feet above msl. Highest water level 1.04 below lsd, Dec. 30, 1954; lowest 5.63 below lsd, Nov. 1, 1941. Records available: 1940-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	1.42	May 1	1.84	July 31	3.41	Oct. 30	1.74
Feb. 27	1.44	June 2	1.79	Aug. 28	3.89	Nov. 27	1.56
Mar. 27	1.67	26	2.42	Sept. 26	1.53	Dec. 30	1.04

Wilmington 10. L. Chisholm. Hopkins St. and Shawsheen Ave. Lat. 42°33'29", long. 71°12'25". Dug unused water-table well in sand, diameter 36 inches, depth 9 feet. Land-surface datum is 113.63 feet above msl. Highest water level 0.73 below lsd, Nov. 30, 1944; lowest dry, Dec. 13, 1941. Records available: 1940-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	1.56	May 1	1.20	July 31	5.04	Oct. 30	1.97
Feb. 27	.95	June 2	1.48	Aug. 28	5.42	Nov. 27	1.15
Mar. 27	1.10	26	2.89	Sept. 26	1.56	Dec. 30	.79

Wilmington 29. O. R. Surette. Andover and Woburn Sts. Near Wilmington Center. Lat. 42°35'28", long. 71°08'50". Dug unused water-table well in coarse gravelly sand, diameter 36 inches, depth 13 feet. Land-surface datum is 99.99 feet above msl. Highest water level 8.40 below lsd, Mar. 28, 1942; lowest 11.77 below lsd, Oct. 3, 1953. Records available: 1940-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	9.99	May 1	9.67	July 31	10.90	Oct. 30	10.19
Feb. 27	9.86	June 2	9.33	Aug. 28	11.02	Nov. 27	9.88
Mar. 27	9.89	26	10.23	Sept. 26	9.65	Dec. 30	9.33

Wilmington 56. D. P. Falkner. Woburn and Lowell Sts. Near Wilmington Center. Lat. 42°32'30", long. 71°08'59". Dug unused water-table well in sand and gravel, diameter 36 inches, depth 11 feet. Land-surface datum is 89.75 feet above msl. Highest water level 1.60 below lsd, Dec. 30, 1954; lowest 8.11 below lsd, Aug. 30, 1949. Records available: 1940-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	3.91	May 1	3.84	July 31	6.16	Oct. 30	4.21
Feb. 27	2.02	June 2	3.89	Aug. 28	6.15	Nov. 27	3.18
Mar. 27	3.29	26	5.30	Sept. 26	3.84	Dec. 30	1.60

Wilmington 58. Mrs. R. Malatesta. Butters Row and Main St. Near Wilmington Center. Lat. 42°32'07", long. 71°10'12". Drilled unused well in bedrock, diameter 8 inches, depth 70 feet. Land-surface datum is 109.10 feet above msl. Highest water level 2.77 below lsd, Mar. 23, 1942; lowest 12.98 below lsd, Oct. 3, 1953. Records available: 1940-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	5.77	May 1	5.97	July 31	10.33	Oct. 30	7.80
Feb. 27	5.46	June 2	5.59	Aug. 28	10.38	Nov. 27	5.66
Mar. 27	5.94	26	8.14	Sept. 26	5.92	Dec. 30	4.95

Wilmington 78. Town of Wilmington. Whitefield School, Middlesex Ave. Lat. 42°34'01", long. 71°09'38". Dug observation well in sand, diameter 42 inches, depth 12 feet. Land-surface datum is about 80 feet above msl. Highest water level 4.90 below lsd, May 2, 1953; lowest 10.38 below lsd, Oct. 31, 1953. Records available: 1951-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 27	7.30	June 26	6.98	Sept. 26	6.29	Nov. 27	7.02
May 1	6.62	July 31	8.69	Oct. 30	7.73	Dec. 30	6.14
June 2	5.50	Aug. 28	8.98				

Winchester 4. Town of Winchester (test well AA). Royal and Pond Sts. Lat. 42°27'37", long. 71°09'05". Driven unused well in glacial drift, diameter 2½ inches, depth 22 feet. Land-surface datum is 43.97 feet above msl. Highest water level 6.67 below lsd, Apr. 3, 1948; lowest dry several times. Records available: 1939-54.

Jan. 30	9.90	May 1	8.40	July 31	(j)	Oct. 30	(j)
Feb. 27	9.47	June 2	7.03	Aug. 28	(j)	Nov. 27	(j)
Mar. 27	8.89	26	(j)	Sept. 26	8.50	Dec. 30	9.14

j Well obstructed at 11 feet.

Winchester 14. K. W. B. Cox. 224 Forest St. Lat. 42°28'18", long. 71°07'00". Dug unused water-table well in glacial drift, diameter 36 inches, depth 17 feet. Land-surface datum is 116.29 feet above msl. Highest water level 5.62 below lsd, Mar. 23, 1942; lowest 14.99 below lsd, Dec. 14, 1941. Records available: 1940-54.

Jan. 30	9.48	May 1	8.53	July 31	12.69	Oct. 30	11.10
Feb. 27	7.69	June 2	8.78	Aug. 28	12.25	Nov. 27	7.68
Mar. 27	8.21	26	11.24	Sept. 26	8.27	Dec. 30	8.08

Winchester 18. T. N. Vinson. Ridge and High Sts. Near Winchester. Lat. 42°26'36", long. 71°10'26". Dug unused well in gravel, diameter 24 inches, depth 14 feet. Land-surface datum is 253.30 feet above msl. Highest water level 1.15 below lsd, Mar. 23, 1942; lowest dry several times, 1941-54. Records available: 1940-54.

Jan. 30	8.24	May 1	6.35	July 31	12.4	Oct. 30	8.89
Feb. 27	7.07	June 2	7.92	Aug. 28	(f)	Nov. 27	5.51
Mar. 27	6.63	26	10.79	Sept. 26	6.00	Dec. 30	4.68

f Dry.

Woburn 1. E. P. Fox. Green and Highland Sts. Near Woburn. Lat. 42°28'27", long. 71°08'54". Driven unused well in glacial drift, diameter 2½ inches, depth 26 feet. Land-surface datum is 91.45 feet above msl. Highest water level 4.47 below lsd, Nov. 30, 1944; lowest 9.73 below lsd, Sept. 29, 1943. Records available: 1939-54. Jan. 30, 6.76; Feb. 27, 5.68. Measurement discontinued.

Woburn 3. New England Dressed Poultry Co. Ashburton Ave. and Boston & Maine RR. tracks. Near Woburn. Lat. 42°31'01", long. 71°09'18". Driven unused well in glacial drift, diameter 2½ inches, depth 20 feet. Land-surface datum is 72.58 feet above msl. Highest water level 0.71 above lsd, Mar. 23, 1942; lowest 2.41 below lsd, Aug. 16, 1941. Records available: 1939-53. No measurement made in 1954.

Woburn 4. Consolidated Chemical Industries, Inc. (well 10). Merrimac and New Boston Sts. Near Woburn. Lat. 42°31'11", long. 71°08'54". Driven unused well in glacial drift, diameter 2 inches, depth 25 feet. Land-surface datum is 68.15 feet above msl. Highest water level 1.21 above lsd, Dec. 30, 1954; lowest 2.57 below lsd, Sept. 26, 1939. Records available: 1939-54.

Jan. 30	-1.22	May 1	-1.12	July 31	-1.62	Oct. 30	-0.87
Feb. 27	-.40	June 3	-.82	Aug. 28	-1.71	Nov. 27	-.19
Mar. 27	-.81	26	-1.37	Sept. 26	-.28	Dec. 30	+1.21

Woburn 5. Consolidated Chemical Industries, Inc. Merrimac and New Boston Sts. Near Woburn. Lat. 42°30'52", long. 71°08'42". Driven unused well in glacial drift, diameter 2½ inches, depth 32 feet. Land-surface datum is 59.55 feet above msl. Highest water level 0.32 above lsd, Oct. 1, 1954; lowest 1.00 below lsd, Sept. 19, 1939. Records available: 1939-54. Oct. 1, +0.32.

Woburn 17. J. D. Coakley. Montvale Ave. and Ingalls St. Near Woburn. Lat. 42°29'01", long. 71°08'12". Dug unused well in gravelly sand, diameter 6 feet, depth 11 feet. Land-surface datum is 180.75 feet above msl. Highest water level 4.13 below lsd, Nov. 30, 1944; lowest dry, Dec. 26, 1941. Records available: 1940-54.

Jan. 30	5.02	May 1	5.03	July 31	7.71	Oct. 30	6.34
Feb. 27	4.64	June 2	5.17	Aug. 28	8.12	Nov. 27	4.74
Mar. 27	4.87	26	6.75	Sept. 26	4.82	Dec. 30	4.54

Woburn 19. Tanner's Degreasing Co., Inc. Montvale Ave. and Albany St., East Woburn. Lat. 42°28'43", long. 71°07'09". Driven unused well in glacial drift, diameter 2½ inches, depth 70 feet. Land-surface datum is 38.65 feet above msl. Highest water level 4.69 below lsd, Dec. 31, 1951; lowest 15.10 below lsd, Oct. 3, 1953. Records available: 1940-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	9.29	May 1	9.94	July 31	12.42	Nov. 27	7.88
Feb. 27	9.78	June 2	7.97	Aug. 28	13.26	Dec. 30	6.71
Mar. 27	9.60	26	10.76	Oct. 30	8.92		

Woburn 23. F. H. Bowser. Main and Elm Sts. North Woburn. Lat. 42°30'03", long. 71°09'35". Driven unused well in sand and gravel, diameter 2½ inches, depth 25 feet. Land-surface datum is 95.77 feet above msl. Highest water level 0.53 below lsd, Mar. 1, 1945; lowest 3.10 below lsd, Sept. 27, 1941. Records available: 1940-54. Oct. 1, 0.68.

Woburn 38. City of Woburn. Woburn Parkway. Near Woburn. Lat. 42°27'57", long. 71°09'38". Driven unused well in glacial drift, diameter 2½ inches, depth 21 feet. Land-surface datum is 51.66 feet above msl. Highest water level 7.62 below lsd, Mar. 2, 1945; lowest 18.15 below lsd, Dec. 14, 1941. Records available: 1940-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	9.18	May 1	8.21	July 31	11.38	Oct. 30	10.72
Feb. 27	9.34	June 2	8.10	Aug. 28	11.48	Nov. 27	9.88
Mar. 27	8.98	26	10.23	Sept. 26	8.84	Dec. 30	8.96

Woburn 49. Leo Plas. Locust St. and Cambridge Rd. Near Woburn. Lat. 42°28'28", long. 71°10'45". Driven unused well in gravel, diameter 6 inches, depth 12 feet. Land-surface datum is 63.25 feet above msl. Highest water level 2.00 above lsd, June 29, 1952, Mar. 28, May 2, 1953; lowest 4.25 below lsd, Dec. 5, 1941. Records available: 1940-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	+1.26	May 1	+1.74	July 31	+0.50	Oct. 30	+1.06
Feb. 27	+1.58	June 2	+2.0	Aug. 28	+1.7	Nov. 27	+1.47
Mar. 27	+1.59	26	+1.40	Sept. 26	+1.71	Dec. 30	+2.0

j Water overflowing top of casing which is 2.00 feet above lsd.

Woburn 53. P. Flowers. Kilby and Hart Sts. Near Woburn. Lat. 42°29'11", long. 71°09'30". Dug unused well in glacial drift, diameter 4 feet, depth 12 feet. Land-surface datum is 105.96 feet above msl. Highest water level 7.93 below lsd, Mar. 23, 1942; lowest dry, Sept. 27, 1952. Records available: 1940-54. Oct. 1, 8.19.

Worcester County

Leominster 11. C. S. Pierce. Nashua St. and Boston & Maine RR. tracks. Near North Leominster. Lat. 42°31'55", long. 71°44'06". Dug unused water-table well in glacial drift, diameter 4 feet, depth 11 feet. Land-surface datum is 363.18 feet above msl. Highest water level 0.54 below lsd, Sept. 11, 1954; lowest 9.74 below lsd, Oct. 27, 1953. Records available: 1939-54.

Daily noon water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3.88	3.55	1.92	2.77	2.80	3.43	4.30	6.85	5.31	3.24	2.51	1.63
2	4.03	3.61	1.48	2.85	3.00	3.62	4.37	6.86	4.41	3.33	2.72	1.89
3	4.06	3.68	1.75	2.94	3.03	3.73	4.56	6.87	4.28	2.83	.63	2.14
4	3.92	3.61	1.42	3.11	1.73	3.85	4.73	6.85	4.03	2.87	1.45	2.34
5	3.83	3.34	1.76	3.18	1.89	3.89	4.85	6.82	4.01	2.99	1.71	2.43
6	3.84	3.31	2.02	3.19	2.15	3.93	4.67	6.79	4.09	3.13	1.92	2.58
7	3.75	3.39	2.19	2.54	2.41	4.03	4.71	6.85	4.18	3.28	2.11	2.68
8	3.91	3.44	2.32	2.58	2.61	4.14	4.81	6.93	3.81	3.38	2.24	2.83
9	4.10	3.50	2.43	2.83	1.13	4.24	4.95	6.97	3.81	3.42	2.37	2.88
10	4.19	3.59	2.40	2.98	1.23	4.31	5.07	6.96	3.87	3.48	2.53	2.65
11	4.25	3.67	2.51	3.05	1.23	4.39	5.18	6.80	3.49	3.45	2.60	2.66
12	4.26	3.73	2.66	2.91	1.68	4.50	5.31	6.61	1.57	3.52	2.66	2.82
13	4.36	3.92	2.74	3.06	2.05	4.52	5.42	6.49	1.91	3.61	2.79	2.91
14	4.40	4.05	2.51	3.20	2.31	4.56	5.57	6.46	1.97	3.69	2.80	2.99
15	4.39	4.13	2.31	3.33	2.54	3.90	5.69	6.48	2.20	3.72	2.94	.84
16	4.38	4.14	2.44	3.40	.95	3.49	5.83	6.48	2.33	1.50	3.00	1.24
17	4.42	3.93	2.54	2.10	1.48	3.58	5.95	6.57	1.61	2.02	3.05	1.61
18	4.48	3.53	2.66	1.25	1.97	3.75	6.05	6.68	1.78	2.37	3.07	1.67
19	4.49	3.52	2.79	1.68	2.31	3.92	6.15	6.78	2.00	2.60	2.87	.96
20	4.50	3.49	1.38	1.91	2.55	4.11	6.26	6.86	1.51	2.75	1.37	1.38
21	3.89	3.41	1.64	2.15	1.00	4.28	6.35	6.96	1.91	2.87	.88	1.62
22	3.42	2.49	1.98	2.37	.97	4.45	6.43	7.05	1.87	3.01	1.41	1.86
23	3.47	2.16	2.22	2.55	1.46	4.60	6.50	7.12	2.24	3.13	1.74	2.03
24	3.52	2.22	2.42	2.54	1.80	4.36	6.58	7.19	2.47	3.25	1.94	2.11
25	3.61	1.74	2.57	2.67	2.08	4.52	6.64	7.23	2.62	3.35	1.06	2.22

Leominster 11--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	3.67	1.82	1.58	2.84	2.36	4.66	6.68	7.28	2.68	3.41	1.32	2.38
27	3.50	1.76	1.95	2.96	2.65	4.72	6.72	7.35	2.79	3.40	1.65	2.43
28	3.24	1.87	2.22	2.27	2.85	4.84	6.75	7.40	2.93	3.44	1.80	2.38
29	3.28		2.36	2.27	3.06	4.70	6.76	7.47	3.12	3.48	.68	1.67
30	3.32		2.53	2.56	2.86	4.33	6.79	7.52	3.21	2.50	1.32	1.20
31	3.47		2.69		3.20		6.84	7.24		2.31		1.21

Sterling 1. Nunzio Lanciani. Justice Hill and South Nelson Rds. Near Sterling. Lat. 42°28'05", long. 71°48'08". Dug unused well in glacial drift, diameter 24 inches, depth 15 feet. Land-surface datum is about 710 feet above msl. Highest water level 2.01 below lsd, May 21, 1954; lowest 13.51 below lsd, Oct. 23, 1953. Records available: 1947-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	3.29	Apr. 12	3.28	July 9	4.56	Oct. 8	3.64
8	3.31	16	3.26	16	5.88	15	3.79
15	3.37	23	3.22	23	6.73	22	3.43
22	3.24	30	3.25	30	6.58	29	3.44
27	3.23	May 7	3.06	Aug. 6	6.62	Nov. 5	3.01
Feb. 5	3.22	14	3.07	13	5.55	12	3.25
12	3.32	21	2.01	20	6.56	19	3.15
19	3.23	28	3.22	27	7.54	26	3.08
26	3.15	June 4	3.63	Sept. 3	3.67	Dec. 3	3.19
Mar. 5	3.16	11	4.12	10	3.44	10	3.14
12	3.26	18	3.86	17	3.06	17	3.03
19	3.26	25	4.72	24	3.27	24	3.10
26	3.01	July 2	4.14	Oct. 1	3.44	31	3.01
Apr. 2	3.24						

Winchendon 13. W. B. Hart. Forristall and Crosby Rds. Near Winchendon. Lat. 42°42'04", long. 72°01'52". Dug unused water-table well in glacial drift, diameter 24 inches, depth 12 feet. Land-surface datum is 1,209.36 feet above msl. Highest water level 1.86 below lsd, Mar. 20, 1948; lowest 12.95 below lsd, Nov. 22-24, 1953. Records available: 1939-54.

Daily noon water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.36	....	h3.15	3.44	3.64	4.30	4.43	8.17	9.51	6.06	6.21	3.40
2	4.20	....	....	3.45	3.76	4.40	4.57	8.17	9.44	6.14	6.15	3.53
3	4.19	4.48	....	3.47	3.51	4.05	4.84	8.20	9.22	6.22	4.77	3.71
4	4.12	4.52	....	e3.58	2.46	4.16	5.08	8.18	9.04	6.24	4.01	3.87
5	4.11	4.55	....	e3.71	2.71	4.06	5.28	8.14	8.90	6.34	3.88	4.01
6	4.11	4.65	....	3.81	2.96	3.91	5.38	8.10	8.78	6.40	3.98	4.15
7	4.08	4.74	....	3.74	3.19	4.11	5.52	8.14	8.72	6.53	4.17	4.22
8	3.98	4.75	....	3.59	3.35	4.34	5.68	8.23	8.66	6.58	4.27	4.39
9	3.91	4.78	....	3.78	2.73	4.53	5.87	8.30	8.59	6.58	4.42	4.47
10	3.85	4.89	3.46	3.87	2.78	4.66	6.03	8.34	8.51	6.60	4.57	4.47
11	3.79	4.99	3.56	3.89	2.74	4.74	6.19	8.34	8.39	6.63	4.62	4.48
12	3.78	5.06	3.63	3.46	2.96	4.91	6.34	8.34	6.49	6.67	4.69	4.52
13	....	5.07	3.72	3.52	3.23	5.03	6.47	8.35	5.62	6.75	4.82	4.58
14	....	5.08	3.65	3.67	3.39	5.17	6.63	8.41	5.47	6.84	4.81	4.62
15	....	5.28	3.80	3.84	3.52	4.71	6.78	8.45	5.47	6.86	4.95	3.67
16	....	5.15	....	3.93	2.49	4.20	6.98	8.49	5.51	6.81	5.00	3.32
17	....	4.84	....	3.42	2.73	4.30	7.14	8.55	5.29	6.57	5.04	3.47
18	....	4.72	....	2.35	3.08	4.54	7.26	8.64	4.88	6.43	5.09	3.51
19	....	4.60	....	2.71	3.31	4.74	7.37	8.71	4.81	6.34	4.95	2.58
20	h5.45	4.46	3.47	e2.89	3.49	4.96	7.51	8.79	4.88	6.26	4.68	2.87
21	....	4.30	3.04	3.00	3.51	5.18	7.63	8.88	4.92	6.22	3.74	3.03
22	....	....	3.06	3.10	2.58	5.36	7.76	8.97	4.95	6.25	3.53	3.28
23	....	....	3.06	3.22	2.80	5.50	7.86	9.04	5.09	6.30	3.65	3.49
24	....	....	3.51	3.25	3.17	5.18	7.97	9.11	5.27	6.37	3.79	3.68
25	....	....	3.59	3.31	3.30	5.16	8.07	9.17	5.37	6.45	3.90	3.90
26	....	....	3.90	3.47	3.55	5.25	8.10	9.22	5.46	6.46	4.00	4.04
27	....	....	3.99	3.56	3.74	5.15	8.10	9.31	5.59	6.48	4.00	4.16
28	....	....	3.16	3.35	3.85	5.32	8.10	9.37	5.72	6.52	4.00	4.24
29	....	....	3.19	3.30	3.97	5.24	8.11	9.45	5.90	6.56	3.70	3.81
30	4.00	....	3.16	3.50	4.03	4.51	8.13	9.51	5.99	6.46	3.43	3.44
31	....	....	3.36	....	4.16	....	8.16	9.50	....	6.35	....	3.47

e Estimated.

h Tape measurement.

MICHIGAN

By P. R. Giroux, W. T. Stuart, and J. G. Rulison

Scope of Water-Level Program

The observation-well program in Michigan was continued in 1954 in cooperation with the State Water Resources Commission and the Geological Survey Division of the State Department of Conservation. A network of observation wells was maintained to provide basic data on changes in storage of principal ground-water reservoirs. Measurements of ground-water levels were made in about 240 observation wells, 16 of which were equipped with recording gages. Records of 147 of the wells measured are published in this report. The data were selected for publication on the basis of best representation in terms of areal coverage, usefulness, and length of record. Water-level records omitted will be published in project or special reports from time to time. Figure 13 shows the location of wells for which records are published in this report.

Observations of ground-water temperature were continued in 1954. Sampling of ground and surface water for chemical analysis, to determine the distribution and trends in water quality and to study correlation between ground and surface waters, was continued. Analyses were made by the State Department of Health and by the U. S. Geological Survey.

Precipitation

Statewide precipitation averaged 35.37 inches for 1954, or 4.68 inches above normal. The total precipitation was above normal in each of the 10 climatological divisions designated by the U. S. Weather Bureau. The departures by divisions ranged from 1.7 to about 9.4 inches. Statewide, however, departures for individual stations ranged from a few inches below normal to about 15 inches above normal. The greatest departures above average were recorded in the southwestern part of the Southern Peninsula.

Pumpage

Trends of ground-water withdrawals by individual municipalities are discussed under appropriate area headings. The withdrawal of ground waters by municipalities was slightly less than that reported in 1953, when most communities reported new record highs of pumping. The city of Alma, which reported a 6-percent increase in pumping over 1953, was an exception to the general trend. Much of the decrease in pumping for municipal water supply occurred when temperatures were below average during July, August, and September. The temperature in June was 2.6° above normal; but the frequent intense rains which fell during the month, the second wettest June of record, reduced the overall demands on public water supplies. A few communities curtailed use of ground water during the summer months because of inadequate pumping facilities, limited storage capacity, or a combination of these factors.

Interpretation of Water-Level Fluctuations

Summary. --In the southern half of the Southern Peninsula, ground-water levels during the first quarter of 1954 were generally low because of adverse conditions of temperature and precipitation during 1952 and 1953. Although precipitation was above normal in February, March, and April, much of the benefit derived was offset by an extremely dry spell in May. A storm on the last day of May and frequent heavy rains in June provided appreciable recharge but failed to prevent ground-water levels from reaching new lows of record during July and August when precipitation was deficient. Most of the precipitation in June fell in the form of intense rains of short duration with the result that a large part of the water was discharged as surface runoff and, accordingly, recharge to the ground-water reservoirs was limited. Cool weather in September combined with frequent rains over most of the State halted the decline in ground-water levels. In addition, a general frost on September 23 stopped growth of much vegetation, thus reducing losses of ground water by evapotranspiration. In October, precipitation was well above normal and water levels rose rapidly. By the end of 1954, ground-water levels were at or near the average levels for the period of record.

In the northern half of the Southern Peninsula, abundant recharge in February, April, June, and July caused water levels to climb to new highs of record during the summer. Another monthly

high of record was recorded in the observation well at Roscommon in October after 2 months of above-average precipitation. Above-average stages prevailed during November and December.

In the Menominee River basin of the Northern Peninsula, considerable recharge occurred in both April and October; consequently, levels remained above average during most of the year and several record highs were observed. In the eastern half of the Northern Peninsula, abundant recharge occurred during the same months and also in September. At the end of 1954, water levels were at average to above-average stages.

Southern Peninsula (Northern Half)

Roscommon County. --Well RoHg 1, near Roscommon, is now being used as an index of trends of ground-water levels in the shallow drift aquifers of the northern half of the Southern Peninsula. The use of well CrGr 6 as the index well for the area has been discontinued, because the removal of a dam on the Au Sable River at Grayling caused uncertainty in the interpretation of past versus present trends of water level. Figure 14 shows the fluctuations of water level in well RoHg 1. Daily precipitation and the range of temperature are also shown. Record-high February temperatures and melting of about half of the snow cover caused water levels to rise sharply. Another rise of water level in early April was caused by rainfall and by the spring thaw. During most of May little recharge occurred because of cold, dry weather. Rainfall at the end of May and intense rains in June resulted in marked rises of water level and the highest June and July stages in 20 years of record. The subsequent decline continued into September when above-average precipitation occurred. A new high of record followed additional precipitation early in October. End-of-the-year levels were higher than those at the end of 1953 and about half a foot above the average for the period of record.

Southern Peninsula (Southern Half)

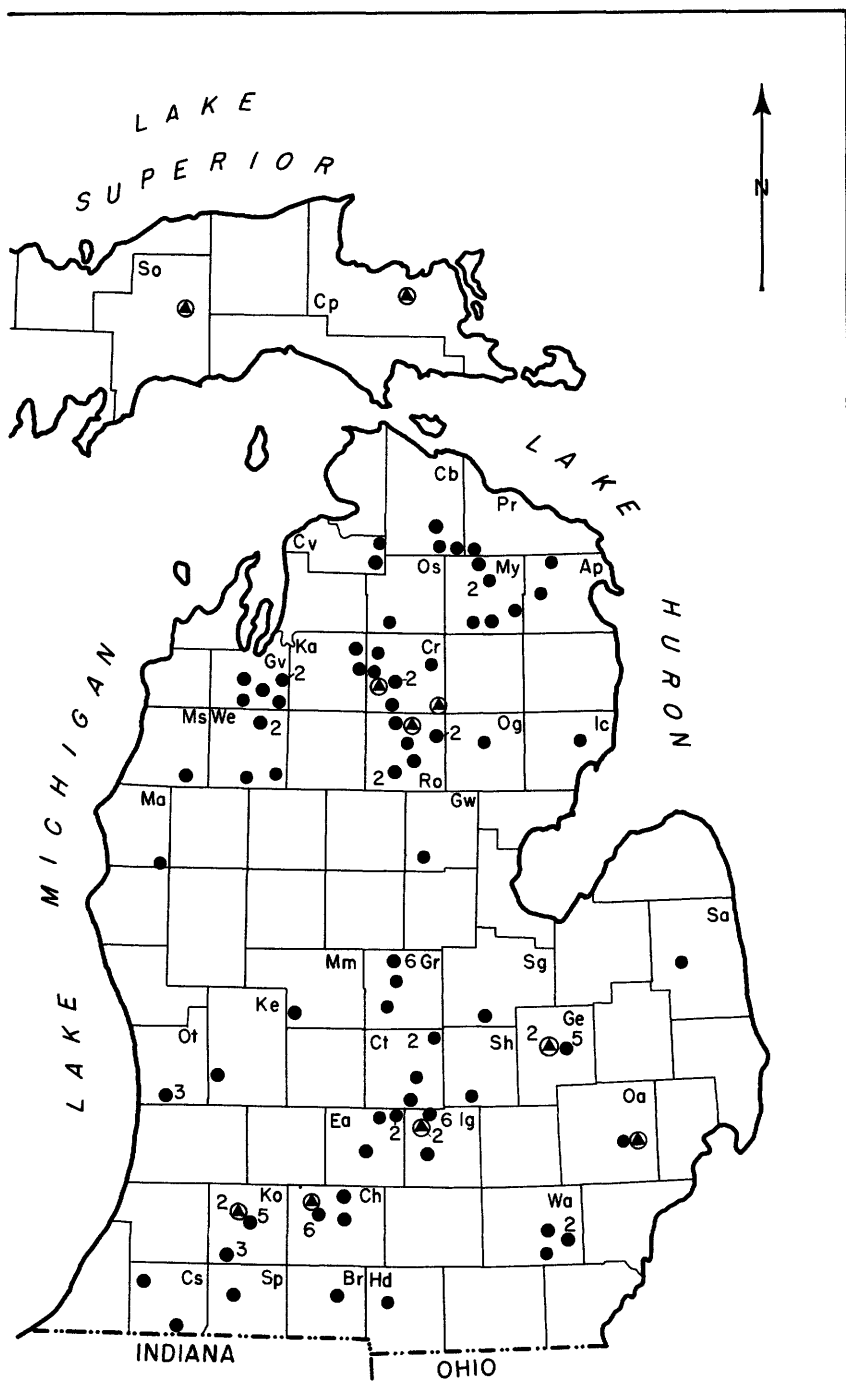
Branch County, City of Coldwater. --The observation well in Coldwater, finished in the glacial drift, reflects the withdrawals of ground water by municipal wells tapping the drift deposits. Total precipitation for the year was about 7 inches above normal as compared to 11 inches below normal in 1953. Water levels trended upward until May when increased pumping induced a decline that continued through September (July 1, 14.20; Aug. 9, 14.66; Sept. 27, 15.10). In October, a sharp rise due to recharge from intense rains and recovery from a decrease in municipal withdrawals occurred. Year-end levels were more than 2 feet higher than those at the end of 1953 but slightly below the average stage of the past 5 years. Monthly pumpage records indicate that withdrawals of ground water for municipal supply ranged from 0.9 mgd (million gallons per day) in January and December to 1.9 mgd in July and averaged 1.2 mgd for the year, or about 5.4 percent less than in 1953.

Calhoun County, City of Battle Creek. --Most observation wells in Battle Creek and vicinity are finished in the Marshall formation but a few tap the overlying glacial drift. Most of the municipal and industrial wells tap the Marshall formation. Total precipitation for the year at Battle Creek was more than 7 inches above normal as compared to a deficiency of 6 inches in 1953. Considerable recharge during the winter and spring months caused water levels to rise until about midyear. Then, seasonal ground-water withdrawals and dry weather caused declines that continued until early October. More than 8 inches of rain fell in October, inducing a marked rise in stage. Water levels in wells tapping the Marshall formation rose an average of 1.1 feet and those in the drift aquifer about 1.6 feet in 1954. Daily averages based on monthly totals indicate that withdrawals of ground water for municipal supply ranged from 4.9 mgd in December to 9.0 in July and averaged 6.1 mgd for 1954. Total municipal pumpage was about 11 percent less than in 1953.

Cass County, City of Dowagiac. --The observation well in Dowagiac, finished in the glacial drift, is affected by municipal pumping from the drift. The level in the observation well rose about 2 feet during 1954 because of decreased municipal pumping and increased precipitation. Total precipitation in 1954 exceeded 52 inches, or about 15 inches above normal. Precipitation in October was about 8 inches above average. In addition, more-than-average precipitation fell during the periods February through April and June through August. Temperatures were below normal in July and August but above average in February. Average daily withdrawal of ground water for municipal use was about 750,000 gallons during 1954, or a 40-percent decline from the 1,300,000 gpd, reported in 1953. This decline was principally the result of the discontinuance of use of large quantities of city water by a local industry.

Clinton County, Village of Elsie. --In Elsie, water levels in observation wells CtES 1 and CtES 3 are influenced by municipal pumping from the sandstone of the Saginaw formation and the glacial drift, respectively. Annual precipitation was about average; but water levels were considerably higher at the end of 1954, owing to favorable conditions for ground-water recharge during the winter and fall months when above-normal precipitation occurred.

Eaton County, City of Charlotte. --The observation well in Charlotte at the Waterworks Park and the nearby municipal wells are finished in the glacial drift. February and October recharge resulted in slightly higher water levels during the spring and fall than during the same periods of 1953. The water level at the end of 1954 was about average for the 7-year period of



wells in Michigan, 1954.

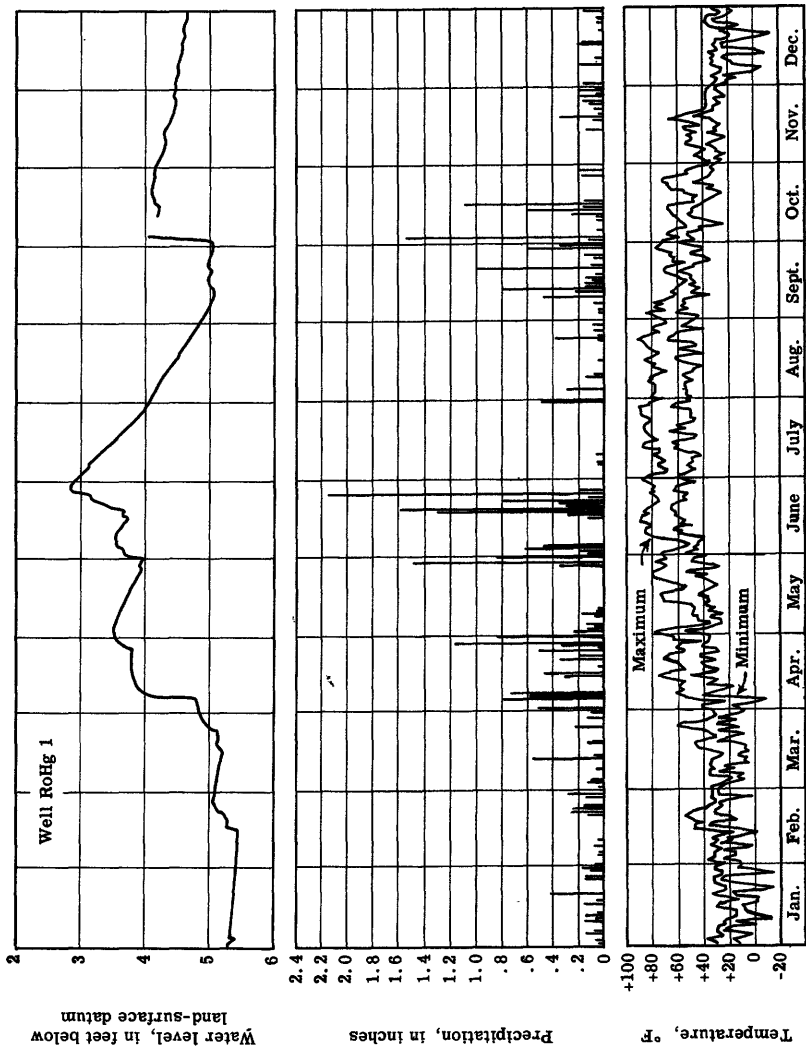


Figure 14. --Water level in well RoHg 1 and daily precipitation and daily maximum and minimum temperature at Grayling Military Reservation, Mich., 1954.

record. Average municipal withdrawal of ground water during 1954 was about 620,000 gpd, or about 11 percent less than the 1953 average daily pumping.

City of Grand Ledge. --The observation well in Grand Ledge is finished in the Saginaw formation, the aquifer tapped for the municipal supply. The decline of water level that started in June 1952 was reversed early in 1954 by 4 inches of precipitation in the warmest February since 1888. The rising trend of water stage continued until late summer, when relatively dry weather occurred and municipal pumping increased. A net gain in water level of about a foot was observed for 1954. Average municipal withdrawal of ground water was about 200,000 gpd for 1954.

Genesee County, Flint metropolitan area. --Water for many industries in the Flint area and for the supplies of Burton Township and the Beecher metropolitan district is obtained from wells in the Saginaw formation. The city of Flint, however, obtains its municipal water supply from the Flint River. The observation wells in the Flint area are finished in the glacial drift or in the Saginaw formation. Precipitation for 1954 was about an inch above normal. However, more than 12 inches of precipitation fell during the period January through April, which, combined with unusually high temperatures in February, caused water levels to rise through early May. May was extremely dry, except for the last few days of the month. However, precipitation late in May and during June was not sufficient to reverse the decline in water levels that began early in May and continued until late summer when record and near lows for the period of record were observed. Increased withdrawals of ground water and a deficiency of about 4 inches of precipitation in the period July through September were the contributing factors in producing these low stages. From October through the end of 1954, above-normal precipitation, favorable conditions for recharge, and decreased pumping allowed levels to recover approximately to those observed at the end of 1953.

Gratiot County, City of Alma. --Observation wells in this area are finished in surficial or in buried outwash aquifers. Municipal and industrial supplies are obtained from wells tapping the buried outwash aquifer. One infrequently used municipal well taps the Saginaw formation. Total precipitation for 1954 was almost 2 inches above normal. Year-end levels indicated a net average gain of about 1 foot in the shallow aquifer as compared to a 1-foot average loss in the deeper drift aquifer. Reported monthly totals indicate that withdrawals of ground water for municipal supply ranged from 1.1 mgd in March to 1.7 mgd in August and averaged 1.4 mgd for 1954. Compared to 1953, this was an increase of about 6 percent, or approximately 30 million gallons.

Ingham County, Lansing metropolitan area. --Most observation, municipal, industrial, and domestic wells in the Lansing area are finished in the Saginaw formation, but a few tap the drift aquifer. This area is one of the larger users of ground water in the State. Precipitation for 1954 was about an inch above normal. Above-average precipitation was recorded during the late winter and early spring and again in the fall, when conditions were favorable to ground-water recharge. The average temperature in February was the highest of record. In the southern part of the area, year-end water levels in observation wells finished in the Saginaw formation were more than a foot above those recorded at the end of 1953. In the northwestern part, however, water levels were as much as 7 feet below those in 1953. These differences in water-level trends reflected changing patterns of pumping throughout the area. In the northwest area, increased withdrawals resulted from expansion of industry and residential suburbs. Elsewhere, many residential units equipped with wells have been constructed beyond the areas furnished by municipal water supplies. Averages based on monthly totals indicated that withdrawals of ground water by Lansing, East Lansing, Lander metropolitan district, and Michigan State College ranged from 19.8 mgd in November to 24.0 mgd in June and July and averaged 21.5 mgd for 1954. Total public-supply pumpage of 7,843 million gallons was 2.5 percent, or 200 million gallons less than in 1953.

City of Mason. --The observation well in Mason, finished in the Saginaw formation underlying the glacial drift, reflects withdrawals of ground water from the Saginaw formation by industrial wells in the area. The municipal supply is derived from the glacial drift. Ground-water levels in the observation well were highest for 1954 during the spring months after which a decline continued until late September. A net gain of about a foot was recorded at the end of 1954. Averages based on monthly totals indicate that daily municipal withdrawal of ground water from the glacial drift was about 340,000 gallons. Total municipal pumpage was about 25 percent less than that reported in 1953. This decline was the result of the discontinuance of use of city water by a local industry.

Kalamazoo County, City of Kalamazoo. --Observation wells in this area are finished in the glacial drift as are municipal and industrial wells. Total precipitation for 1954 was about 37 inches, or about 2 inches above normal. Below-normal precipitation in 1952 and 1953 resulted in unseasonably low ground-water levels during the early part of 1954. In May city officials considered the advisability of curtailing the use of water, but the measure proved to be unnecessary as the summer months were comparatively cool and the seasonal demand for water was not as high as in previous years. In addition, water levels rose significantly in October, when nearly 8.5 inches of rain fell. Year-end stages were about 1.4 feet above those recorded at the end of 1953. Averages, based on monthly totals, indicate that withdrawals of ground water for municipal supply ranged from 7.4 mgd in January to 14.3 mgd in July and averaged 9.4 mgd for 1954. Total pumpage for 1954 by the city of Kalamazoo was about 5 percent, or 180 million gallons less

than in 1953. Industrial pumpage records are not available, but the aggregate withdrawal probably greatly exceeds the municipal withdrawals.

Oakland County, City of Pontiac. --The observation well in Pontiac is finished in the glacial drift, as are the municipal wells and most industrial wells in the area. Total precipitation for 1954 was almost 3 inches above the average because of abundant rainfall in February, March, and June and exceptionally heavy rains in October. Conditions favorable to ground-water recharge occurred during the winter and early spring months. The observation well OaPT 1, at the Walnut Street municipal pumping station, reflects changes in water level caused by withdrawals of ground water by nearby municipal wells. Water levels were at the highest stages for 1954 during the winter months but declined steadily from April through July, when a new low of record was observed. After July, levels recovered somewhat, but a net decline in stage of about 3 feet was recorded for 1954. Averages based on monthly totals indicate that withdrawals of ground water for municipal use ranged from 10.9 mgd in January to 14.8 mgd in July and averaged 12.6 mgd for 1954. Total municipal pumpage of about 4,574 million gallons for 1954 was 2.7 percent, or about 124 million gallons less than in 1953.

Ottawa County, City of Holland. --Observation wells in this area are finished in the glacial drift, as are all municipal and most industrial wells. Precipitation was about 43.5 inches, nearly 11 inches above the average for the period of record. Total monthly precipitation of about 6.7 inches in June and 9.6 inches in October greatly exceeded the averages for those months. Above-normal precipitation fell during the period January through April, and a slight recovery of ground-water levels was recorded. Very little rain fell in May until the last few days of the month, and August and September were drier than usual. As a result, water levels in the heavily pumped area declined, and new lows for the period of record were observed by late summer. The net loss at the end of 1954 ranged from 4 to 5 feet despite cool summer temperatures and decreased use of water. Observation wells beyond the influence of heavy pumping showed a net gain for 1954, ranging from 0.5 foot to as much as 2.4 feet. Averages based on monthly totals indicate that withdrawals of ground water for municipal use ranged from 2.0 mgd in March to 3.4 mgd in August and averaged 2.6 mgd for 1954. Total municipal pumpage for 1954 was about 56 million gallons less than in 1953, a drop of about 5.6 percent.

Northern Peninsula

Menominee River Basin. --Precipitation for the stations in the basin averaged 32.71 inches, or about 2.47 inches above the 46-year average. Precipitation was about normal for the period January through March, 137 percent of normal for April through June, 71 percent of normal for July and August, and 126 percent for the remainder of 1954. Measurements of water levels in the basin are made in water-table wells by the Wisconsin-Michigan Power Co. and in a few wells by the U. S. Geological Survey. These levels reflect changes in storage in the basin and are not affected by any municipal or industrial pumpage. The decline in stage which began in July 1953 continued into March 1954, but levels remained above the average of the past 9 years. Ground-water levels rose about 3 feet during April when new monthly high stages were reached in some wells as a result of the melting of snow cover. Levels remained high through June but were followed by an average decline of about 2 feet during July and August. Intense rains in September resulted in recharge sufficient to cause an average rise of 1.6 feet by the end of October. The usual seasonal decline occurred during November and December. Year-end levels averaged 1.1 feet higher than those of 1953.

Chippewa County. --Well CpSp 59 near Raco is finished in glacial drift. The decline in water level which started in mid-1953 continued until late March 1954. Levels recovered till the end of June, owing to above-average precipitation in April and melting of the snow cover. Heavy precipitation in September and October caused a marked rise in water levels until mid-November as compared to the same period during 1952 and 1953 when declines were observed. A net gain of about 2 feet was recorded in the well by the end of 1954 despite a drop in water level starting in mid-November. Climatological data were obtained from records maintained at the nearest U. S. Weather Bureau station in Sault Ste. Marie.

Schoolcraft County. --Well SoGe 112 near Germfask is finished in the Richmond group, which is composed of shales and limestones of Ordovician age. Water levels in the observation well reflect changes in artesian pressure in the upper portion of the Richmond group. Precipitation at Germfask was slightly above normal for 1954. Rainfall was 2 to 3 inches above normal in April and September but was below normal during the period May through August. The observed level rose from November 1953 through February 1954. The lowest water levels for 1954 were recorded in August. By the end of 1954, the water level rose to approximately the level recorded at the end of 1953.

Well-Numbering System

Wells in Michigan are numbered according to the county and city or township in which they are situated. The first segment of the well number consists of an upper and lowercase letter indicating the county in which the well is situated. The second segment indicates the city or civil township. Uppercase letters are used for cities, villages, or towns. An uppercase letter followed by a lowercase letter is used for the township designation. The abbreviation W. M. P. refers to Wisconsin-Michigan Power Co.

Well Descriptions and Water-Level Measurements

Water levels are in feet below land-surface datum unless otherwise indicated. When some measurements in a table are above and others are below the plane of reference, a plus (+) or minus (-) sign is placed immediately before the first entry in each column of each mixed table. Readings between minus signs are below the plane of reference and those between plus signs are above the plane of reference.

Alpena County

Green Township

ApGn 1. Robert E. James. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 6, T. 30 N., R. 6 E. Dug unused water-table well in deposits of Pleistocene age, diameter 18 inches, depth 19 feet, cribbed with rock to open bottom. Highest water level 0.90 below lsd, Apr. 13, 1952; lowest 9.52 below lsd, Dec. 11-15, 1949. Records available: 1948-54. April 21, 2.55; Sept. 2, 5.81.

Long Rapids Township

ApLr 1. Harlo Mellon. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 16, T. 32 N., R. 6 E. Drilled stock artesian well in Thunder Bay limestone, diameter 6 inches, depth 53 feet. Highest water level 5.69 below lsd, Apr. 19, 1951; lowest 16.67 below lsd, Nov. 12, 1948. Records available: 1948-54. Apr. 21, 5.79; Sept. 1, 9.57.

Baraga County

Covington Township

BpCv 1. W. M. P. No. 14. State Highway Dept. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 12, T. 48 N., R. 32 W. U. S. Highway 41. Near Nestoria. Driven observation water-table well in sand and gravel, diameter 1 $\frac{1}{2}$ inches, depth 10 feet, screen 7-10. Highest water level 4.19 below lsd, May 3, 1951; lowest 6.72 below lsd, Mar. 15, 1949. Records available: 1948-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	5.90	Apr. 29	4.28	July 30	4.83	Nov. 1	4.95
Mar. 1	5.86	June 2	4.41	Aug. 30	5.03	30	5.02
30	5.83	July 1	4.71	Sept. 29	4.85		

Branch County

City of Coldwater

BrCW 3. City of Coldwater. Park Ave. and Bennett St., Coldwater. Drilled unused artesian well in sand and gravel of Pleistocene age, diameter 8 to 6 inches, depth 130 feet, screen 80 to 130. Highest water level 10.08 below lsd, Apr. 8, 1950; lowest 16.67 below lsd, Jan. 15, 1954. Records available: 1949-54. Measurements made by Board of Public Works.

Jan. 15	16.67	July 18	14.30	Sept. 3	13.46	Nov. 13	13.94
29	16.29	26	14.50	13	13.72	20	12.96
Feb. 12	16.40	Aug. 2	14.10	20	14.23	27	13.05
Mar. 8	14.47	9	14.66	27	15.10	Dec. 3	14.18
22	13.97	13	14.38	Oct. 9	14.00	10	13.98
May 7	13.50	23	14.83	23	12.54	17	13.10
July 1	14.20	28	14.59	Nov. 6	13.84	24	14.07

Calhoun County

City of Battle Creek

ChBC 160. Post Products Corp. Angell and Lafayette Sts. Drilled unused artesian well in Marshall formation, diameter 10 inches, depth 92 feet, cased to 45. Land-surface datum is 818.99 feet above msl. Highest water level 4.75 below lsd, Apr. 9, 1947; lowest 9.53 below lsd, Sept. 4, 1953. Records available: 1946-54.

ChBC 160--Continued.

Daily 2 a. m. water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	7.33	6.78	7.14	7.72	7.47	8.13	8.39	8.49	7.00	e7.12
2	....	....	7.44	6.77	7.07	7.90	7.54	8.07	8.41	8.42	7.14	7.06
3	....	....	7.44	6.81	7.01	7.83	7.55	8.24	8.46	8.27	7.17	7.05
4	....	8.72	7.52	6.73	7.14	7.60	7.37	8.29	8.42	7.95	7.20	7.07
5	....	8.78	7.48	6.72	e7.20	7.46	7.35	8.33	8.32	8.09	7.26	6.99
6	....	8.77	7.48	6.85	....	7.38	7.36	8.32	8.32	7.25	7.27	7.02
7	....	8.65	7.37	6.95	7.04	....	7.41	8.38	8.29	7.21	7.19	7.14
8	....	8.57	7.32	7.00	6.96	....	7.42	8.25	8.48	7.22	7.19	7.19
9	....	8.66	7.36	7.06	6.91	7.60	7.49	8.14	8.54	7.21	7.33	7.19
10	....	8.70	7.41	7.00	6.91	7.58	7.53	8.35	8.52	7.01	7.39	7.28
11	....	8.72	7.46	6.85	7.07	7.64	7.45	8.38	8.54	6.74	7.37	7.33
12	....	....	7.50	....	7.14	7.71	7.43	8.42	8.42	....	7.43	7.22
13	....	....	7.44	6.91	7.20	7.66	7.59	8.44	8.37	6.98	7.42	7.21
14	....	....	7.36	6.97	7.24	7.66	7.65	8.43	8.46	6.89	7.30	7.27
15	....	....	7.38	7.05	e7.32	7.82	7.74	8.21	8.51	6.79	7.34	7.31
16	....	....	7.54	6.98	....	7.88	7.61	8.18	8.59	6.77	7.44	7.42
17	....	7.68	7.57	7.01	....	7.86	7.79	8.38	8.59	6.67	7.48	7.42
18	....	7.59	7.61	7.12	....	6.67	7.70	8.41	8.53	6.67	7.53	7.37
19	....	7.57	7.64	7.09	7.80	6.90	7.73	8.41	8.32	6.80	....	7.36
20	9.00	7.50	7.58	7.12	7.74	6.66	7.84	8.45	8.28	6.83	....	7.34
21	8.94	7.38	7.55	7.10	7.83	6.70	7.91	8.45	8.39	6.74	....	7.45
22	8.93	7.34	7.41	7.08	7.84	6.86	7.96	8.35	8.40	6.83	....	7.47
23	8.92	7.43	7.52	7.13	7.78	6.97	8.00	e8.31	8.43	6.86	....	7.45
24	8.79	7.39	7.60	7.12	7.74	7.04	8.00	8.51	8.44	6.82	....	7.53
25	8.76	7.43	7.47	....	....	7.10	7.93	8.35	8.43	6.81	....	7.47
26	8.84	7.45	....	....	....	7.17	7.91	8.28	8.31	6.98	....	7.40
27	8.75	7.48	....	7.10	8.03	7.13	8.09	8.25	8.28	7.03	....	7.38
28	8.77	7.39	....	7.05	8.02	7.15	8.16	8.29	8.43	7.11	....	7.21
29	....	....	....	7.08	8.07	7.27	8.22	8.21	8.48	7.12	....	7.15
30	....	....	....	7.10	8.00	7.40	8.29	8.15	8.50	7.15	....	7.07
31	....	....	6.80	....	7.94	....	8.26	8.32	....	7.01	....	7.05

e Estimated.

ChBC 173. Kellogg Co. Porter and Stiles Sts. Drilled unused artesian well in Marshall formation, diameter 8 inches, depth 104 feet, cased to about 40. Land-surface datum is 847.33 feet above msl. Highest water level 33.04 below lsd, Apr. 16, 1950; lowest 47.01 below lsd, Aug. 21, 1953. Records available: 1950-53. Measurement discontinued.

City of Marshall

ChMA 2. City of Marshall. East Michigan Ave. and East Drive. Drilled unused artesian well in Marshall formation, diameter 6 inches, depth 59 feet. Land-surface datum is about 904.85 feet above msl. Highest water level 5.46 below lsd, May 9, 1950; lowest 8.89 below lsd, Dec. 23, 1954. Records available: 1950-54. Measurements made by the City Waterworks. Apr. 21, 7.10; Dec. 23, 8.89.

Battle Creek Township

ChBc 137. City of Battle Creek. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 14, T. 2 S., R. 8 W. Drilled unused artesian well in sand of Pleistocene age, diameter 26 inches, depth 89 feet, screen 49-89. Land-surface datum is 914.97 feet above msl. Highest water level 6.22 below lsd, May 29, 1950; lowest 12.86 below lsd, Oct. 18, 1946. Records available: 1945-54. Mar. 17, 9.10; June 25, 7.36; Sept. 27, 8.82; Dec. 23, 7.88.

Emmett Township

ChEm 10. C. W. Cronkhite. 1302 E. Michigan Ave. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 10, T. 2 S., R. 7 W. Drilled unused artesian well in Marshall formation, diameter 6 inches, depth 84 feet. Land-surface datum is 884.94 feet above msl. Highest water level 11.42 below lsd, May 29, 1950; lowest 15.54 below lsd, Mar. 7, 1947. Records available: 1946-53. No measurement made in 1954.

ChEm 60. City of Battle Creek. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 1, T. 2 S., R. 7 W. Drilled unused artesian well in Marshall formation, diameter 2 inches, depth 87 feet, cased to 56. Land-surface datum is 832.49 feet above msl. Highest water level 0.22 above lsd, May 22, 1947; lowest 3.24 below lsd, Sept. 21, 1949. Records available: 1945-54. Mar. 17, 1.18; June 25, 0.92; Sept. 27, 2.38; Dec. 23, 1.22.

Pennfield Township

ChPf 1. City of Battle Creek. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 32, T. 1 S., R. 7 W. Drilled unused artesian well in Marshall formation, diameter 8 inches, depth 127 feet, cased to 103. Land-surface datum is 830.79 feet above msl. Highest water level 0.7 below lsd, Apr. 26-27, 1950; lowest 11.39 below lsd, Aug. 21, 1953. Records available: 1939-54. Measurements made by Water Dept.

Tape measurements

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	...	7.36	6.00	5.80	5.70	6.42	6.52	8.22	7.98	9.22	5.86	5.32
2	6.00	7.20	6.41	5.32	5.42	6.17	7.42	9.18	7.30	7.85	6.85	5.90
3	6.48	6.83	6.81	5.35	4.51	5.80	6.92	9.06	9.27	6.85	8.19	4.88
4	7.77	6.97	6.42	5.00	4.51	5.49	6.63	8.34	7.46	6.84	6.30	5.95
5	7.15	7.95	6.50	5.20	5.50	6.54	6.03	9.31	7.20	7.10	6.18	5.25
6	8.41	7.20	6.21	5.63	5.54	6.26	7.25	9.55	7.65	7.64	7.10	5.30
7	6.86	6.90	5.80	5.70	5.23	6.85	6.57	7.89	8.82	7.48	5.88	6.05
8	7.27	6.97	6.82	5.67	5.37	7.10	7.11	9.27	8.64	7.30	6.06	6.20
9	7.95	6.91	5.93	4.74	4.16	6.14	7.11	9.60	8.52	6.98	6.15	5.93
10	6.97	6.53	6.25	5.55	5.70	6.22	6.98	8.30	8.24	6.40	6.50	5.93
11	7.44	6.85	6.38	4.60	5.33	6.85	6.60	8.26	8.67	6.66	6.75	4.98
12	8.06	6.97	6.13	5.80	6.01	7.95	6.64	7.38	7.29	7.60	6.25	5.60
13	7.56	6.94	7.00	5.81	5.15	6.70	6.61	8.94	7.78	6.85	6.20	6.00
14	7.82	6.13	5.29	5.55	5.73	8.50	6.70	8.32	7.82	6.69	5.40	5.60
15	7.54	6.56	5.18	4.99	5.68	9.30	6.82	7.70	7.51	7.36	6.35	5.30
16	7.01	7.15	6.13	5.05	5.20	7.04	6.92	8.42	9.46	6.09	7.35	6.45
17	6.69	7.48	6.28	5.45	5.08	6.46	7.39	9.02	8.67	6.03	6.25	5.59
18	8.15	6.25	5.87	4.75	5.85	8.00	6.64	8.00	8.48	6.65	6.33	5.32
19	7.41	5.86	6.00	5.57	5.76	6.35	8.35	8.36	7.97	6.76	6.53	5.10
20	6.98	7.25	5.35	5.04	6.16	6.10	7.95	8.42	8.49	6.25	6.00	5.85
21	6.92	7.25	4.96	5.74	5.68	7.53	7.08	8.43	9.25	6.40	5.42	6.10
22	7.75	5.88	5.60	5.57	6.04	6.60	7.34	6.88	9.22	6.98	5.78	5.83
23	7.20	6.15	5.42	5.12	6.40	6.86	8.62	8.87	7.42	6.77	7.54	6.12
24	6.58	6.48	5.58	5.80	5.98	7.35	9.38	10.29	7.92	5.83	5.90	5.60
25	7.52	5.90	5.12	4.51	7.63	7.56	10.36	7.83	7.85	6.60	6.13	5.85
26	7.09	6.43	5.50	5.48	6.88	6.40	8.48	9.20	7.10	6.24	5.55	4.70
27	6.09	6.55	6.62	5.74	5.97	6.36	10.23	8.55	8.24	7.08	5.28	5.45
28	6.73	5.31	4.74	4.95	5.91	6.26	10.02	7.70	8.20	6.20	5.21	5.63
29	6.46		5.25	5.24	6.82	7.56	8.67	7.73	9.71	6.93	6.30	5.37
30	7.00		5.80	5.81	6.96	7.58	8.50	8.64	8.86	6.69	5.75	4.82
31	6.49		6.30		5.65		9.15	8.62		5.68		6.08

ChPf 58. City of Battle Creek. NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 31, T. 1 S., R. 7 W. Drilled unused artesian well in Marshall formation, diameter 2 inches, depth 140 feet, cased to 83. Land-surface datum is 838.92 feet above msl. Highest water level 0.08 above lsd, May 23, 1950; lowest 4.06 below lsd, Nov. 15, 1946. Records available: 1945-54. Mar. 17, 3.47; June 25, 2.93; Sept. 27, 3.96; Dec. 23, 3.00.

ChPf 102. Kenneth N. Sabin. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 10, T. 1 S., R. 7 W. Dug stock water-table well in deposits of Pleistocene age, diameter 15 inches, depth 8 feet. Land-surface datum is 907.99 feet above msl. Highest water level 0.89 below lsd, Mar. 28, 1950; lowest 5.90 below lsd, Jan. 27, 1954. Records available: 1946-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	5.81	Apr. 7	4.50	July 7	4.40	Oct. 6	5.50
13	5.83	14	4.48	14	4.76	13	4.87
20	5.87	21	4.42	21	4.87	20	4.75
27	5.90	28	4.40	28	4.99	27	4.92
Feb. 3	5.89	May 4	4.41	Aug. 4	5.07	Nov. 3	4.91
10	5.88	12	4.50	11	5.18	10	5.07
17	5.85	19	4.50	18	5.18	17	5.07
24	4.65	27	4.48	25	5.19	23	5.05
Mar. 3	4.79	June 2	4.49	Sept. 1	5.25	Dec. 1	4.98
10	4.88	9	4.33	8	5.38	8	4.97
17	4.94	16	4.49	15	5.41	15	4.96
24	4.95	23	4.54	22	5.70	22	4.98
31	4.94	30	4.62	29	5.49	29	5.01

Cass County

City of Dowagiac

CsDW 1. City of Dowagiac. Chestnut St. and Pennsylvania Ave., Dowagiac. Drilled unused artesian well in sand and gravel of Pleistocene age, diameter 10 inches, depth 159 feet, screen at 147. Land-surface datum is 750.18 feet above msl. Highest water level 4.20 above lsd, Nov. 30, 1951; lowest 5.97 below lsd, July 24, 1953. Records available: 1949-54. Measurements made by Board of Public Works.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	+0.54	Apr. 2	+0.05	July 9	+0.86	Oct. 8	+1.28
8	-1.14	9	.28	16	-1.39	15	1.95
15	1.47	16	.03	23	+ .61	22	1.48
22	.72	23	.53	30	-.47	29	2.20
29	1.39	30	1.24	Aug. 6	+ .20	Nov. 5	1.45
Feb. 5	1.30	May 7	1.28	13	.28	12	1.86
12	1.22	14	+ .53	20	.82	19	1.95
19	1.14	21	-.39	27	.95	26	2.11
26	-.75	28	+ .78	Sept. 3	.28	Dec. 3	1.99
Mar. 5	+ .45	June 4	.86	10	.86	10	.20
12	.20	18	+1.45	17	1.20	17	1.78
19	.28	25	-1.72	24	.45	24	1.95
26	.61	July 2	2.47	Oct. 1	1.28	31	2.11

Mason Township

CsMa 1. Ted Little. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 17, T. 8 S., R. 14 W. Dug unused water-table well in deposits of Pleistocene age, diameter 28 inches, depth 55 feet, cribbed with brick to open bottom. Highest water level 46.20 below lsd, July 16, 1950; lowest 55.03 below lsd, Mar. 10, 1947. Records available: 1945-54.

Jan. 3	51.76	Apr. 4	52.26	July 4	50.74	Oct. 3	50.46
10	51.56	11	52.10	11	50.67	10	50.46
17	51.62	18	52.11	18	50.58	17	50.60
24	51.59	25	52.02	25	50.55	24	50.43
31	51.73	May 2	51.94	Aug. 1	50.46	31	50.30
Feb. 7	51.75	9	51.65	8	50.45	Nov. 7	50.10
14	51.73	16	51.39	15	50.44	13	50.02
21	51.88	23	51.34	22	50.40	21	49.90
28	51.95	30	51.30	29	50.35	28	49.78
Mar. 6	51.96	June 6	51.04	Sept. 5	50.43	Dec. 5	49.85
14	51.96	13	51.00	12	50.43	12	49.70
21	52.30	20	50.87	19	50.40	19	49.69
28	52.11	27	50.86	26	50.44	26	49.60

Charlevoix County

Chandler Township

CvCh 1. State Dept. of Conservation. SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 2, T. 33 N., R. 4 W. Drilled unused artesian well in deposits of Pleistocene(?) age, diameter 6 inches, depth 94 feet. Highest water level 70.85 below lsd, July 19, 1952; lowest 75.10 below lsd, Apr. 26, 1954. Records available: 1948-54. Apr. 26, 75.10; Sept. 8, 73.83.

Hudson Township

CvHu 33. State Dept. of Conservation. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 10, T. 32 N., R. 4 W. Jetted water-table well in deposits of Pleistocene age, diameter 2 inches, depth 19 feet, open bottom. Highest water level 1.19 below lsd, Mar. 30, 1938; lowest 5.20 below lsd, Oct. 17, 1949. Records available: 1934-41, 1948-54. Apr. 26, 3.08; Sept. 8, 4.28.

Cheboygan County

Forest Township

CbFr 5. State Dept. of Conservation. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 27, T. 33 N., R. 1 E. Jetted observation water-table well in deposits of Pleistocene age, diameter 2 inches, depth 15 feet, open bottom. Highest water level 1.72 below lsd, Apr. 28, 1954; lowest 5.21 below lsd, Oct. 18, 1949. Records available: 1939-44, 1948-54. Apr. 28, 1.72; Sept. 8, 3.25.

Nunda Township

CbNd 2. State Dept. of Conservation. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, T. 33 N., R. 1 W. Jetted observation water-table well in deposits of Pleistocene age, diameter 2 inches, depth 16 feet, open bottom. Highest water level 3.99 below lsd, Aug. 12, 1942; lowest 7.44 below lsd, Oct. 18, 1948. Records available: 1935-44, 1948-54. Apr. 28, 5.11; Sept. 8, 5.48.

Walker Township

CbWk 33. State Dept. of Conservation. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 26, T. 34 N., R. 1 W. Jetted observation water-table well in deposits of Pleistocene age, diameter 2 inches, depth 17 feet, open bottom. Highest water level 3.90 below lsd, Mar. 28, 1938; lowest 7.37 below lsd, Oct. 18, 1949. Records available: 1935-44, 1948-54. Apr. 28, 5.34; Sept. 8, 6.29.

Chippewa County

Superior Township

CpSp 59. U. S. Forest Service. SE $\frac{1}{4}$ sec. 24, T. 46 N., R. 4 W. Drilled unused artesian well in deposits of Pleistocene age, diameter 6 inches, depth 54 feet. Highest water level 22.67 below lsd, May 21, 1953; lowest 26.96 below lsd, Apr. 13-15, 1954. Records available: 1952-54.

Daily 2 a.m. water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	25.73	26.12	26.49	26.84	25.28	23.16	22.92	23.22	23.78	24.27	23.12	23.09
2	25.77	26.13	26.50	26.86	25.18	23.15	22.92	23.22	23.79	24.27	23.10	23.08
3	25.78	26.15	26.52	26.87	25.02	23.14	22.91	23.23	23.82	24.26	23.06	23.05
4	25.79	26.16	26.53	26.88	24.91	23.13	22.90	23.26	23.86	24.27	23.04	23.04
5	.....	26.18	26.54	26.89	24.78	23.13	22.89	23.28	23.86	24.29	23.01	23.10
6	25.81	26.20	26.55	26.89	24.67	23.12	22.89	23.32	23.90	24.29	22.96	23.16
7	25.82	26.21	26.57	26.90	24.55	23.11	.....	23.33	23.87	24.32	22.97	23.16
8	25.83	26.22	26.58	26.92	24.45	23.10	.....	23.33	23.92	24.26	22.95	23.10
9	25.83	26.23	26.59	26.93	24.36	23.09	22.91	23.34	23.94	24.22	22.97	23.08
10	25.86	26.24	26.60	26.93	24.26	23.08	22.91	23.35	23.93	24.24	22.95	23.14
11	25.87	26.26	26.61	26.94	24.17	23.10	22.92	23.40	23.97	24.18	22.90	23.19
12	25.88	26.26	26.63	26.95	24.09	23.07	22.90	23.42	23.99	24.20	22.94	23.20
13	25.89	26.29	26.64	26.96	24.01	23.09	22.90	23.44	24.00	24.22	22.91	23.22
14	25.90	26.30	26.65	26.96	23.94	23.08	22.90	23.45	24.03	24.25	22.88	23.20
15	25.91	26.31	26.66	26.96	23.86	23.09	22.95	23.46	24.05	24.20	22.94	23.17
16	25.92	26.33	26.68	26.91	23.78	23.09	22.98	23.46	24.06	24.16	22.89	23.23
17	25.94	26.34	26.69	26.85	23.73	23.08	22.99	23.52	24.08	24.21	22.92	23.26
18	25.95	26.35	26.70	26.75	23.67	23.10	22.96	23.54	24.08	24.22	22.91	e23.19
19	25.96	26.37	26.70	26.62	23.62	23.08	23.00	23.53	24.04	24.17	22.92	23.26
20	25.98	26.38	26.72	26.48	23.56	23.05	23.00	23.59	24.11	24.04	22.90	23.30
21	26.00	26.38	26.73	26.34	23.51	23.04	23.05	23.62	24.11	23.91	22.93	23.33
22	26.01	26.41	26.74	26.22	23.47	23.00	23.06	23.64	24.16	23.80	22.93	23.30
23	26.02	26.41	26.75	26.10	23.44	23.03	23.07	23.63	24.19	23.69	22.94	23.25
24	26.02	26.42	26.76	25.98	23.38	23.00	23.10	23.65	24.20	23.62	22.90	23.36
25	26.05	26.43	26.77	25.88	23.35	22.98	23.12	23.66	24.19	23.52	22.96	23.41
26	26.07	26.44	26.78	25.78	23.33	22.96	23.13	23.70	24.20	23.45	23.00	23.39
27	26.07	26.46	26.80	25.65	23.30	22.95	23.15	23.71	24.23	23.37	22.96	23.46
28	26.08	26.47	26.80	25.57	23.25	22.95	23.15	23.73	24.24	23.31	22.94	23.44
29	26.09		26.82	25.48	23.22	22.93	23.17	23.75	24.24	23.23	22.98	23.47
30	26.10		26.82	25.39	23.22	22.92	23.18	23.77	24.25	23.20	23.08	23.41
31	26.12		26.84		23.19		23.19	23.79		23.16		23.48

e Estimated.

Clinton County

Village of Elsie

CtES 1. Village of Elsie. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 13, T. 8 N., R. 1 W. Drilled unused artesian well in Saginaw formation, diameter 12 inches, depth 298 feet. Highest water level 3.78 above lsd, June 3, 1950; lowest 35.97 below lsd, Sept. 16, 1947. Records available: 1947-54. Feb. 10, 30.98; June 21, 35.13; Oct. 12, 23.07; Dec. 22, 26.56.

CtES 3. Village of Elsie. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 13, T. 8 N., R. 1 W. Drilled unused artesian well in gravel of Pleistocene age, diameter 12 inches, depth 45 feet. Highest water level 8.3 below lsd, Apr. 5, 1950; lowest 26.4 below lsd, Oct. 11, 1949. Records available: 1947-54. Feb. 10, 16.10; June 21, 17.94; Oct. 12, 19.19; Dec. 22, 11.61.

De Witt Township

CtDw 159. State Dept. of Health. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 32, T. 5 N., R. 2 W. Drilled unused artesian well in Saginaw formation, diameter 6 to 4 inches, depth 135 feet. Land-surface datum is 849.21 feet above msl. Highest water level 42.02 below lsd, Sept. 14, 1944; lowest 72.03 below lsd, Dec. 21, 1954. Records available: 1944-54. Feb. 23, 66.98; May 24, 70.15; Aug. 31, 71.50; Dec. 21, 72.03.

Olive Township

CtOe 1. State Highway Dept. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 16, T. 6 N., R. 2 W. Drilled unused water-table well in gravel of Pleistocene age, diameter 14 inches, depth 23 feet, open bottom. Highest water level 14.59 below lsd, Apr. 19, 1952; lowest 18.53 below lsd, Dec. 29, 1953. Records available: 1948-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 23	18.45	May 24	17.19	Aug. 31	17.74	Nov. 30	17.73
Mar. 16	18.33	June 18	17.20	Oct. 12	17.84	Dec. 22	17.48
Apr. 26	17.50	July 30	17.44				

Crawford County

City of Grayling

CrGR 3. State Fish Hatchery. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 8, T. 26 N., R. 3 W. Grayling. Driven observation water-table well in sand of Pleistocene age, diameter 1 $\frac{1}{2}$ inches, depth 8 feet, screen 5-8. Highest water level 2.62 below lsd, Apr. 18, 1952; lowest 3.44 below lsd, Oct. 13, 1949. Records available: 1949-54. May 3, 2.65, Sept. 22, 3.14.

Beaver Creek Township

CrBc 1. State Dept. of Conservation. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 28, T. 25 N., R. 3 W. Jetted observation water-table well in deposits of Pleistocene age, diameter 1 $\frac{1}{4}$ inches, depth 13 feet, screen 11-13. Land-surface datum is 1,175.14 feet above msl. Highest water level 8.70 below lsd, June 15, 1943; lowest 10.85 below lsd, Nov. 11, 1949, Feb. 15, 1951. Records available: 1934-37, 1939-54.

Feb. 5	g10.63	Apr. 20	9.73	July 7	g8.93	Sept. 7	9.62
Mar. 10	g10.55	May 3	g9.67	Aug. 16	g9.46	20	g9.64
Apr. 1	g10.36	June 7	g9.54				

g By State Geological Survey.

Frederic Township

CrFr 1. State Dept. of Conservation. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2, T. 27 N., R. 4 W. Jetted observation water-table well in deposits of Pleistocene age, diameter 2 inches, depth 13 feet, screen 10-13. Land-surface datum is 1,194.18 feet above msl. Highest water level 3.84 below lsd, Apr. 17, 1947; lowest 7.08 below lsd, Mar. 14, 1951. Records available: 1934-54.

Jan. 9	g5.32	Apr. 21	4.63	May 27	g4.94	Aug. 7	g5.47
Feb. 25	g5.20	28	g4.55	July 1	g4.75	Sept. 3	5.75
Mar. 15	g5.36						

g By State Geological Survey.

Grayling Township

CrGr 3. State Dept. of Conservation. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 12, T. 26 N., R. 3 W. Jetted observation water-table well in deposits of Pleistocene age, diameter 1 $\frac{1}{4}$ inches, depth 16 feet, screen 14-16. Highest water level 4.04 below lsd, Mar. 21, 1938; lowest 9.39 below lsd, Feb. 15, 1951. Records available: 1935-54.

Jan. 9	g8.54	Apr. 21	7.28	May 27	g7.55	Aug. 7	g7.08
Feb. 25	g8.62	28	g7.37	July 1	g6.12	Sept. 3	7.40
Mar. 15	g8.63						

g By State Geological Survey.

CrGr 6. State Dept. of Conservation. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 10, T. 26 N., R. 4 W. Dug unused water-table well in deposits of Pleistocene age, diameter 15 inches, depth 10 feet, open bottom. Land-surface datum is 1,144.09 feet above msl. Highest water level 4.03 below lsd, June 1, 1943; lowest 8.71 below lsd, Sept. 10, 1954. Records available: 1942-54.

Daily 2 a. m. water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	8.04	8.47	7.49	7.00	5.79	6.16	5.62	7.45	e8.59	8.23	7.42	7.69
2	8.05	8.48	7.50	7.00	5.86	6.10	5.71	7.47	e8.62	8.19	7.44	7.67
3	8.06	8.49	7.52	7.00	5.89	6.09	5.78	7.50	e8.64	8.14	7.47	7.65
4	8.08	8.50	7.53	7.02	5.91	6.00	5.84	7.53	8.67	7.78	7.47	7.65
5	8.10	8.51	7.55	7.03	5.95	5.88	5.89	7.57	....	7.62	7.51	7.67
6	8.12	8.53	7.57	7.01	5.97	5.89	5.94	7.61	....	7.58	7.53	7.70
7	8.13	8.53	7.59	6.64	5.98	5.94	5.99	7.65	....	7.57	7.55	7.72
8	8.15	8.54	7.61	5.96	6.02	6.01	6.04	7.69	....	7.57	7.57	7.72
9	8.18	8.54	7.63	5.81	6.06	6.09	6.10	7.73	....	7.57	7.59	7.74
10	8.20	8.55	7.65	5.82	6.09	6.16	6.16	7.76	h8.71	7.60	7.61	7.78
11	8.22	8.55	7.67	5.84	6.11	6.23	6.22	7.80	....	7.61	7.62	7.80
12	8.23	8.55	7.70	5.90	6.14	6.30	6.26	7.84	....	7.62	7.64	7.81
13	8.25	8.56	7.72	5.95	6.17	6.35	6.31	7.93	....	7.64	7.65	7.82
14	8.27	8.56	7.74	5.98	6.22	6.40	6.37	7.96	8.69	7.65	7.66	7.82
15	8.29	8.55	7.76	6.03	6.25	6.46	6.44	8.00	8.63	7.60	7.68	7.83
16	8.31	8.23	7.79	6.02	6.28	6.51	6.52	8.04	8.60	7.53	7.69	7.85
17	8.32	8.11	7.81	6.01	6.31	6.45	6.59	8.08	8.58	7.39	7.70	7.87
18	8.34	8.07	7.82	6.03	6.34	6.36	6.66	8.12	8.56	7.24	7.72	7.88
19	8.35	8.04	7.75	6.08	6.38	6.40	6.73	8.16	8.55	7.18	7.74	7.89
20	8.37	7.99	7.68	6.14	6.42	6.36	6.79	8.20	8.55	7.16	7.75	7.90
21	8.38	7.93	7.68	6.18	6.45	6.25	6.85	8.25	8.56	7.15	7.75	7.90
22	8.38	7.76	7.68	6.15	6.49	6.20	6.92	8.29	8.49	7.17	7.75	7.91
23	8.38	7.61	7.68	6.17	6.52	5.90	6.98	8.33	8.37	7.20	7.76	7.92
24	8.39	7.53	7.69	6.20	6.56	5.92	7.05	8.37	8.32	7.24	7.76	7.95
25	8.40	7.50	7.66	6.11	6.58	6.01	7.10	8.41	8.29	7.26	7.77	7.97
26	8.41	7.48	7.42	6.09	6.62	4.96	7.16	8.45	8.28	7.29	7.77	7.97
27	8.42	7.48	7.18	6.05	6.66	5.04	7.22	e8.48	8.29	7.31	7.77	7.98
28	8.43	7.48	7.10	5.69	6.69	5.24	7.28	....	8.30	7.33	7.76	7.98
29	8.44	....	7.05	5.69	6.45	5.39	7.34	....	....	7.34	7.74	7.99
30	8.45	....	7.00	5.73	6.28	5.50	7.38	....	8.25	7.36	7.74	7.98
31	8.46	....	6.99	....	6.29	....	7.43	8.58	....	7.40	....	8.00

e Estimated.

h Tape measurement.

CrGr 11. State of Michigan, National Guard Camp. NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 28, T. 26 N., R. 4 W. Drilled unused water-table well in deposits of Pleistocene age, diameter 3 inches, depth 31 feet. Highest water level 19.42 below lsd, July 1, 1954; lowest 22.39 below lsd, July 23, 1949. Records available: 1949-54. Feb. 25, *21.00; Apr. 21, 20.23; Apr. 30, *20.07; May 27, *20.05; July 1, *19.42; Sept. 3, 20.05. * By State Geological Survey.

Lovells Township

CrLv 2. State Dept. of Conservation. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 22, T. 27 N., R. 1 W. Jetted observation water-table well in deposits of Pleistocene age, diameter 2 inches, depth 13 feet, screen 10-13. Highest water level 3.51 below lsd, Apr. 18, 1952; lowest 6.19 below lsd, Mar. 12, 1947. Records available: 1934-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	g5.59	Apr. 21	4.30	May 27	g4.47	Aug. 7	g5.01
Feb. 25	g5.47	28	g4.09	July 1	g4.59	Sept. 3	5.28
Mar. 15	g5.52						

g By State Geological Survey.

South Branch Township

CrSb 1. State Dept. of Conservation. Huron National Forest. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 15, T. 25 N., R. 1 W. Drilled unused artesian well in deposits of Pleistocene age, diameter 6 inches, depth 56 feet. Highest water level 29.44 below lsd, Aug. 4, 1953; lowest 35.97 below lsd, Apr. 4-6, 1951. Records available: 1948-54.

CrSb 1--Continued.

Daily 2 a. m. water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	30.93	31.35	31.67	31.95	31.23	30.48	.....	29.60	29.65	30.07	e30.36	30.58
2	31.04	31.32	31.66	31.93	31.22	30.49	.....	29.57	29.65	30.05	e30.35	30.55
3	31.07	31.38	31.71	31.99	31.13	30.46	.....	29.55	29.66	29.99	30.36	30.53
4	31.11	31.39	31.71	32.00	31.13	30.45	.....	29.56	29.73	30.06	30.30	30.51
5	31.05	31.42	31.73	31.96	31.10	30.45	.....	29.55	.....	30.11	30.38	30.60
6	31.08	31.44	31.73	31.92	31.09	30.45	.....	29.56	.....	30.11	30.34	30.65
7	31.10	31.48	31.70	31.97	31.05	30.43	.....	29.55	29.72	30.13	e30.41	30.61
8	31.15	31.37	31.76	31.94	31.04	30.41	h30.10	29.54	29.77	30.06	30.40	30.53
9	31.06	31.43	31.74	32.00	31.02	30.40	.....	29.52	29.80	30.09	e30.44	30.47
10	31.17	31.42	31.76	31.91	31.00	30.39	.....	29.50	29.74	.....	e30.46	30.58
11	31.13	31.49	31.78	31.87	30.96	30.38	.....	29.53	29.80	.....	e30.39	30.65
12	31.12	31.55	31.80	31.89	30.95	30.35	h29.99	29.54	29.84	.....	30.44	30.65
13	31.21	31.53	31.73	31.82	30.94	30.36	.....	29.55	29.83	.....	30.44	30.65
14	31.18	31.46	31.77	31.74	30.91	30.34	.....	29.53	29.86	.....	30.33	30.56
15	31.19	31.50	31.83	31.75	30.88	e30.33	.....	29.51	29.86	30.17	30.47	30.55
16	31.16	31.58	31.87	31.65	30.84	e30.33	29.94	29.50	29.86	30.09	30.40	30.62
17	31.24	31.59	31.87	31.67	30.83	e30.33	29.92	29.56	29.88	30.20	30.44	30.67
18	31.24	31.60	31.85	31.62	30.81	30.33	29.87	29.54	29.86	e30.26	30.46	30.56
19	31.23	31.60	31.83	31.63	30.79	30.31	29.85	29.50	29.78	30.27	30.45	30.62
20	31.24	31.59	31.80	31.62	30.78	30.28	29.82	29.55	29.86	30.25	30.44	30.69
21	31.30	31.50	31.88	31.57	30.75	30.27	29.81	29.59	29.87	e30.21	30.48	30.70
22	31.31	31.62	31.90	31.52	30.73	30.23	29.79	29.60	29.93	30.25	30.48	30.67
23	31.30	31.64	31.87	31.51	30.72	30.28	29.76	29.58	29.99	30.27	30.49	30.59
24	31.25	31.55	31.92	31.46	30.69	30.28	29.74	29.57	29.99	30.29	30.40	30.67
25	31.31	31.60	31.88	31.42	30.65	30.23	29.73	29.56	29.90	e30.28	30.47	30.75
26	31.28	31.63	31.86	31.40	30.66	30.21	29.71	29.57	29.94	e30.25	30.53	30.70
27	31.32	31.66	31.97	31.32	30.63	30.23	29.69	29.62	29.96	e30.23	30.50	30.75
28	31.36	31.64	31.90	31.31	30.56	30.25	29.66	29.61	30.00	30.29	30.45	30.72
29	31.35		31.94	31.30	30.54	.....	29.64	29.62	30.00	30.22	30.49	30.74
30	31.30		31.94	31.27	30.58	.....	29.63	29.63	30.03	30.26	30.60	30.62
31	31.40		31.96		30.54		29.59	29.64		30.33		30.74

e Estimated.

h Tape measurement.

Dickinson County

Breen Township

DkBe 1. W. M. P. No. 10. E. W. LaFreniere. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 33, T. 42 N., R. 27 W. Near Foster City. Dug domestic water-table well in sand and gravel, diameter 36 inches, depth 12 feet. Highest water level 3.08 below lsd, Apr. 29, 1954; lowest 10.00 below lsd, Mar. 15, 1948. Records available: 1945-46, 1948-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	8.64	Apr. 29	3.08	July 30	7.93	Nov. 1	5.60
Mar. 1	8.55	June 2	5.62	Aug. 30	8.88	30	7.44
30	7.51	July 1	4.60	Sept. 29	7.71		

Breitung Township

DkBg 1. W. M. P. No. 1. Dickinson County Road Commission. NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 25, T. 41 N., R. 30 W. Merriman. Driven observation water-table well in glacial till, diameter 1 $\frac{1}{4}$ inches, depth 20 feet, screen 17-20. Highest water level 3.51 below lsd, Oct. 30, 1951; lowest 16.05 below lsd, Mar. 15, 1949. Records available: 1948-54.

Apr. 29	5.48	July 1	4.26	Aug. 30	10.49	Nov. 1	8.20
June 2	7.96	30	9.02	Sept. 29	10.01	30	9.22

DkBg 2. W. M. P. No. 2. William Carrolo. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 25, T. 41 N., R. 30 W. Merriman. Dug domestic and stock water-table well in glacial till, diameter 36 inches, depth 16 feet, cribbed with wood. Highest water level 2.61 below lsd, Oct. 30, 1951; lowest 13.95 below lsd, Feb. 15, Mar. 15, 1949. Records available: 1945-56, 1948-54.

Jan. 29	11.42	Apr. 29	4.83	July 30	7.16	Nov. 1	4.73
Mar. 1	11.91	June 2	5.28	Aug. 30	8.55	30	5.60
30	12.33	July 1	2.77	Sept. 29	6.69		

DkBg 3. W. M. P. No. 3. Oscar Martinson. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 25, T. 41 N., R. 30 W. Merriman. Dug domestic and stock water-table well in glacial till, size 4 by 4 feet, depth 13 feet, lined with concrete. Highest water level 1.73 below lsd, July 6, 1953; lowest dry, Nov. 1948-Apr. 1949. Records available: 1945-46, 1948-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	10.02	Apr. 29	2.81	July 30	6.09	Nov. 1	3.72
Mar. 1	9.89	June 2	3.81	Aug. 30	7.27	30	4.69
30	8.93	July 1	2.76	Sept. 29	4.15		

Felch Township

DkFe 1. W. M. P. No. 11. Dickinson County Road Commission. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 32, T. 43 N., R. 29 E. Near Sagola. Driven observation water-table well in glacial till, diameter 1 $\frac{1}{2}$ inches, depth 13 feet, screen 10-13. Highest water level 5.12 below lsd, Apr. 18, 1951; lowest dry, Oct. 12, 1948. Records available: 1948-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	10.01	Apr. 29	6.03	July 30	9.56	Nov. 1	8.17
Mar. 1	10.16	June 2	8.31	Aug. 30	10.32	30	8.92
30	9.30	July 1	7.45	Sept. 29	8.64		

Eaton County

City of Charlotte

EaCh 1. City of Charlotte. U. S. Highway 27 and Territorial Rd., Charlotte. Dug unused water-table well in deposits of Pleistocene age, diameter 20 feet, depth 25 feet, cribbed with brick to open bottom. Land-surface datum is 889.44 feet above msl. Highest water level 8.04 below lsd, Apr. 7, 1947; lowest 15.77 below lsd, Jan 2, 1948. Records available: 1947-54. Mar. 17, 11.82; June 25, 11.99; Sept. 21, 14.75; Dec. 23, 13.80.

City of Grand Ledge

EaGL 1. Layne-Northern Co., Inc. Perry and Jefferson Sts. Drilled unused artesian well in Saginaw formation, diameter 12 inches, depth 376 feet, cased to 22. Land-surface datum is 846.59 feet above msl. Highest water level 21.34 below lsd, May 5, 14, 1950; lowest 28.79 below lsd, Dec. 3, 1949. Records available: 1948-54. Measurements made by city of Grand Ledge Water Dept.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	28.35	Apr. 12	27.93	July 19	26.76	Oct. 18	27.23
11	28.33	19	27.71	27	26.81	25	27.10
18	28.35	May 3	27.53	Aug. 2	26.75	Nov. 1	27.07
25	28.42	10	27.59	9	26.83	9	27.32
Feb. 1	28.34	18	27.51	16	26.74	15	27.29
8	28.55	24	27.53	23	26.70	22	27.19
15	28.48	June 1	27.28	30	27.03	29	27.18
22	28.38	7	27.41	Sept. 7	27.39	Dec. 6	27.56
Mar. 1	28.18	14	27.56	14	27.36	13	27.42
8	28.33	21	27.33	20	27.24	20	27.41
15	28.29	28	27.24	27	27.25	21	27.49
22	28.22	July 6	26.93	Oct. 4	27.26	27	27.40
29	28.02	12	26.71	11	26.98		

Delta Township

EaDt 214. John Schneeberger. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 10, T. 4 N., R. 3 W. Drilled unused artesian well in Saginaw formation, diameter 3 inches, depth 121 feet. Land-surface datum is about 855.99 feet above msl. Highest water level 31.28 below lsd, May 27, 1948; lowest 37.39 below lsd, Nov. 30, 1954. Records available: 1944-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 2	36.23	Apr. 26	35.94	July 30	36.59	Oct. 28	36.69
23	36.40	May 24	36.02	Aug. 31	36.73	Nov. 30	37.39
Mar. 29	36.32	June 28	36.37	Sept. 30	36.99	Dec. 21	37.09

EaDt 215. Bernard B. Bosworth. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 9, T. 4 N., R. 3 W. Dug unused water-table well in deposits of Pleistocene age, diameter 4 feet, depth 18 feet, cribbed with brick to open bottom. Land-surface datum is 851.71 feet above msl. Highest water level 5.55 below lsd, Apr. 26, 1952; lowest dry, Feb. 23, 1954. Records available: 1944-54. Feb. 23, dry; May 24, 11.00; Aug. 31, 13.85; Dec. 21, 14.18.

Genesee County

City of Flint

GeFL 353. City of Flint. Brandon St. and Barney Ave. Drilled unused artesian well in deposits of Pleistocene age, diameter 3 inches, depth 74 feet. Highest water level 52.95 below lsd, June 9, 1947; lowest 58.08 below lsd, Sept. 16, 1954. Records available: 1946-54. Mar. 10, 55.53; June 21, 56.68; Sept. 16, 58.08; Dec. 20, 57.04.

GeFL 354. City of Flint. Atherton Rd. and Day St. Drilled unused artesian well in deposits of Pleistocene age, diameter 12 inches, depth 169 feet. Land-surface datum is 751.43 feet above msl. Highest water level 1.09 below lsd, Apr. 26, 1950; lowest 8.29 below lsd, Sept. 16, 1954. Records available: 1947-54. Mar. 10, 4.69; June 21, 6.85; Sept. 16, 8.29; Dec. 20, 5.62.

GeFL 491. Consumers Power Co. Franklin and Sunnyside Aves. Drilled unused artesian well in Saginaw formation, diameter 12 inches, depth 222 feet. Highest water level 24.23 below lsd, Feb. 12, 1950; lowest 36.88 below lsd, Aug. 7, 1954. Records available: 1946-54.

Daily 2 a. m. water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	29.95	29.61	.....	29.37	28.99	30.73	34.29	36.57	35.63	33.01	31.97	31.02
2	29.84	29.40	.....	29.31	29.02	30.80	34.61	36.33	35.66	32.98	31.80	30.91
3	e29.84	29.43	.....	29.44	28.83	30.92	34.73	36.06	35.72	32.92	31.78	30.80
4	29.76	29.38	.....	29.56	28.88	30.89	34.66	36.39	35.90	32.65	31.63	30.74
5	.....	e29.49	.....	29.48	28.88	30.94	34.54	36.43	35.86	32.90	31.77	e30.82
6	29.79	.....	.....	29.30	29.00	30.96	34.49	36.61	35.87	32.91	31.72	30.90
7	29.84	.....	.....	29.35	29.05	30.96	34.22	36.74	35.46	33.06	31.76	30.84
8	29.94	.....	.....	29.26	29.17	30.80	34.46	36.87	35.42	e32.94	31.73	30.59
9	29.76	.....	.....	29.17	29.43	29.17	31.19	34.58	36.72	35.47	32.80	31.76
10	29.94	.....	29.19	29.34	29.17	31.45	34.72	36.67	35.50	32.80	31.76	30.44
11	29.84	.....	29.21	29.31	29.07	31.86	34.69	36.78	e35.57	32.65	31.65	30.57
12	29.70	.....	29.28	29.44	29.07	31.98	34.42	36.73	.....	32.64	31.65	30.53
13	29.91	.....	29.20	29.34	29.13	32.24	34.36	36.72	35.36	32.65	e31.60	30.50
14	29.70	.....	29.22	29.19	29.14	32.55	34.63	36.65	35.31	32.71	31.34	30.34
15	29.77	.....	29.36	e29.26	29.12	32.50	35.05	36.45	35.20	32.65	31.45	30.16
16	29.68	.....	29.44	.....	29.02	32.68	35.32	36.35	35.36	32.55	31.25	30.26
17	29.83	.....	29.41	.....	29.05	32.97	35.36	36.21	35.09	32.65	31.20	30.35
18	29.84	h29.39	29.31	.....	29.03	33.29	35.32	36.22	34.89	32.69	31.23	30.13
19	29.73	.....	29.20	29.67	29.05	33.45	35.24	e36.13	34.67	32.65	31.17	30.19
20	29.67	.....	29.07	29.63	29.14	33.42	35.21	36.20	34.45	32.49	31.07	30.31
21	.....	.....	29.29	29.51	29.18	33.50	35.48	36.27	34.16	32.36	31.18	30.30
22	.....	.....	29.32	29.59	29.17	33.45	35.79	36.36	34.04	32.37	31.19	30.21
23	.....	.....	29.16	29.59	29.22	33.52	35.92	36.20	33.99	32.42	31.15	30.02
24	.....	.....	29.29	29.47	29.25	33.59	36.02	35.89	33.80	32.42	30.95	30.11
25	.....	29.39	29.18	29.36	29.35	e33.54	36.09	35.98	33.45	32.30	31.04	30.33
26	.....	29.34	29.11	29.00	29.80	.....	36.04	36.03	33.35	32.13	31.16	30.21
27	.....	.....	29.40	e28.98	30.26	34.02	35.94	e36.21	33.26	31.97	e31.05	30.18
28	.....	.....	29.30	.....	30.29	33.99	36.11	36.18	e33.06	32.08	30.92	29.87
29	.....	.....	29.32	29.03	30.45	33.92	36.25	36.15	.....	31.93	30.87	30.00
30	29.62	.....	29.26	29.03	30.89	34.03	36.44	36.02	32.96	31.94	31.10	29.73
31	e29.72	.....	29.36	.....	31.01	.....	36.56	35.65	.....	32.05	.....	29.93

e Estimated.

h Tape measurement.

GeFL 500. Consumers Power Co. East Court St. and Dort Highway. Drilled unused artesian well in Saginaw formation, diameter 12 inches, depth 288 feet. Highest water level 17.50 below lsd, Apr. 11, 1948; lowest 33.06 below lsd, Sept. 16, 1954. Records available: 1946-54. Mar. 10, 27.01; June 21, 29.84; Sept. 16, 33.06; Dec. 20, 28.41.

Burton Township

GeBu 301. City of Flint. Hemphill Rd. and Saginaw St. Drilled unused artesian well in sand and gravel of Pleistocene age, diameter 2 inches, depth 153 feet. Land-surface datum is 781.45 feet above msl. Highest water level 20.63 below lsd, June 2, 1947; lowest 29.40 below lsd, June 21, 1954. Records available: 1947-54. Measurement discontinued. Mar. 10, 26.18; June 21, 29.40.

GeBu 303. Fred Kreft. 2287 East Bristol Rd. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 29, T. 7 N., R. 7 E. Dug unused water-table well in deposits of Pleistocene age, diameter 18 inches, depth 8 feet, open bottom. Land-surface datum is about 785 feet above msl. Highest water level 0.20 above lsd, June 29, 1948; lowest 5.37 below lsd, Oct. 17, 1946. Records available: 1946-54. Mar. 10, 0.56; June 21, 1.20; Sept. 16, 4.52; Nov. 27, 1.58; Dec. 20, 2.05; Dec. 27, 0.56.

Grand Blanc Township

GeGb 25. Grand Blanc Tank Plant, Fisher Body Division, General Motors Corp. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 9, T. 6 N., R. 7 E. Drilled unused artesian well in Saginaw formation, diameter 6 inches, depth 375 feet, cased to about 150. Land-surface datum is 841.71 above msl. Highest water level 37.79 below lsd, Nov. 24, 1952; lowest 49.2 below lsd, July 27, 1954. Records available: 1952-54. Measurements made by Tank Plant Water Dept. personnel.

Daily 2 a. m. water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	42.8	43.6	42.0	43.2	43.2	42.9	45.1	47.1	46.9	46.6	44.5	43.8
2	42.1	44.0	42.7	43.5	41.9	43.1	46.0	46.7	47.1	46.0	45.6	44.5
3	41.7	44.8	43.4	43.2	40.6	43.4	46.0	46.9	47.3	45.1	46.3	44.6
4	42.0	44.3	42.4	42.7	41.7	43.8	44.4	47.1	47.9	44.8	45.7	44.0
5	42.4	45.2	42.6	42.4	42.5	43.5	44.2	47.2	46.4	45.6	45.8	43.3
6	43.7	44.9	43.1	42.0	42.3	42.7	43.4	47.0	46.5	45.4	46.1	43.1
7	43.5	44.3	42.1	42.6	42.8	42.1	44.7	47.9	46.4	46.3	44.5	43.5
8	44.2	44.6	41.9	43.1	43.8	42.8	44.6	46.8	48.1	45.9	44.2	44.2
9	43.5	44.0	42.9	42.8	41.9	44.2	44.9	46.0	47.5	45.6	45.9	44.7
10	43.2	44.9	42.6	43.1	42.7	44.5	45.6	46.6	47.8	45.0	46.1	44.4
11	43.3	44.7	43.0	42.4	43.3	44.3	44.4	46.5	47.4	44.1	46.1	45.1
12	43.7	45.7	43.8	41.8	43.1	44.9	43.9	46.6	47.0	45.6	46.2	43.7
13	43.6	44.8	43.5	42.2	43.7	43.5	45.1	46.9	46.3	47.0	45.8	42.9
14	44.0	44.3	42.9	42.6	44.4	42.9	46.9	47.7	47.1	47.0	44.8	43.7
15	43.7	43.6	42.2	42.5	44.0	44.0	46.1	46.6	47.2	47.6	43.9	44.2
16	44.3	44.5	42.7	42.8	43.3	44.3	46.3	46.6	47.4	47.3	44.7	43.7
17	43.2	44.3	43.3	43.1	44.2	43.8	46.9	46.8	47.5	45.3	44.9	44.2
18	42.8	44.7	43.6	41.6	44.0	44.4	45.9	46.9	46.9	44.8	45.1	44.6
19	43.3	44.9	42.9	41.2	44.2	44.6	46.2	46.6	46.0	45.9	44.6	42.8
20	44.4	44.4	42.9	42.2	44.6	43.1	46.8	47.0	45.0	45.7	44.9	42.4
21	43.9	44.1	42.8	41.9	44.3	42.2	47.3	47.8	46.2	45.4	43.8	44.0
22	44.7	43.5	41.9	42.2	45.2	43.7	47.3	46.5	46.6	45.8	43.1	43.6
23	44.4	43.6	42.7	42.3	44.4	44.2	47.4	46.6	46.3	45.8	44.2	44.1
24	44.1	43.9	43.5	e42.2	43.9	44.0	48.1	47.3	46.8	45.2	44.4	44.1
25	43.5	44.1	42.9	41.5	44.8	44.6	47.2	47.9	46.6	45.4	44.5	43.3
26	44.6	43.7	43.3	41.3	46.7	45.3	47.8	48.0	45.1	45.0	43.4	42.6
27	44.3	43.9	44.6	41.3	45.5	44.2	47.7	47.6	44.6	45.7	42.8	42.5
28	45.2	43.3	43.8	42.0	45.3	43.8	48.4	47.7	46.0	46.0	42.4	43.5
29	44.4		43.1	42.3	45.0	44.6	48.1	46.9	46.0	47.2	42.2	44.0
30	45.0		43.7	42.5	44.0	44.5	48.5	47.0	46.4	47.1	43.8	44.0
31	44.0		43.0		43.2		48.3	46.9		45.5		43.9

e Estimated.

Gladwin County

City of Beaverton

GwBV 1. City of Beaverton. Third and Main Sts. Drilled unused artesian well in deposits of Pleistocene age, diameter 12 inches, depth 93 feet. Highest water level 29.13 below lsd, Dec. 18, 1952; lowest 49.35 below lsd, June 26, 1950. Records available: 1950-54. Measurements made by City Engineer.

Tape measurements

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	32.64	32.88	43.68	43.08	30.92	32.13	31.99	.....	33.96	32.75	32.71	42.25
2	32.90	32.83	43.88	31.82	.....	31.95	32.98	42.96	33.41	32.57	32.92	42.38
3	.....	32.85	43.84	31.89	30.87	43.77	33.05	32.63	32.54	.....	42.56	42.33
4	32.80	33.26	44.09	.....	31.91	42.68	.....	43.02	32.68	40.85	42.43	32.16
5	32.76	32.73	32.22	43.43	31.28	32.02	32.32	33.33	.....	31.45	32.17	.....
6	32.72	32.66	44.16	43.55	31.26	31.93	43.15	32.60	47.69	41.05	42.47	32.33
7	32.78	.....	.....	34.77	31.94	32.19	32.04	32.62	32.60	31.70	.....	32.03
8	36.77	44.84	44.03	31.14	31.45	32.52	32.11	.....	32.81	31.61	32.66	32.27
9	32.75	32.90	33.36	31.94	.....	32.60	32.22	42.86	32.97	32.71	32.36	42.44
10	.....	33.15	33.33	31.74	31.60	32.15	43.11	42.74	43.00	.....	32.42	32.36

GwBV 1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	32.68	32.77	33.68	.....	31.64	32.32	.....	42.91	43.05	31.96	42.61	32.19
12	32.53	32.72	43.99	31.65	31.83	32.54	32.30	32.63	.....	32.66	32.47	.....
13	45.42	44.63	44.00	41.32	32.87	.....	32.47	42.78	32.57	32.15	32.57	32.27
14	45.79	.....	.....	32.51	31.88	32.76	32.28	32.83	32.61	31.91	.....	32.57
15	32.93	32.30	43.90	32.43	32.94	43.65	32.32	.....	32.57	42.23	32.25	32.46
16	45.26	32.65	43.99	31.42	.....	32.53	43.27	33.11	32.55	32.11	32.36	32.64
17	.....	44.40	33.51	31.64	31.63	32.32	32.24	43.03	42.98	.....	37.72	32.25
18	32.88	32.37	33.22	.....	32.43	32.59	.....	32.73	32.58	32.18	32.55	42.65
19	32.82	32.44	31.92	31.74	33.05	32.50	32.17	38.63	32.52	32.61	32.53	.....
20	45.08	32.38	43.40	31.93	43.70	.....	42.26	32.78	43.01	41.57	32.24	42.57
21	32.70	.....	.....	31.36	43.89	43.08	43.31	32.54	32.56	40.64	.....	39.43
22	45.12	44.39	31.65	31.27	43.98	33.65	32.42	.....	33.96	42.75	32.20	42.61
23	32.68	32.58	32.01	31.43	32.68	32.02	42.76	42.10	32.52	.....	42.60	32.52
24	.....	31.67	31.78	42.74	32.54	31.20	42.99	32.66	32.61	.....	42.58	32.61
25	33.40	43.37	43.32	.....	44.05	31.80	.....	32.52	32.67	32.38	.....	32.32
26	32.72	31.73	31.01	31.63	32.60	32.36	42.98	43.28	.....	32.02	32.23	.....
27	32.69	32.63	42.89	30.83	32.69	.....	32.51	32.40	42.85	42.39	32.33	42.37
28	32.59	.....	.....	30.46	32.44	32.55	32.80	32.54	32.51	32.09	.....	32.15
29	32.54	.....	31.26	30.95	43.92	32.27	32.70	.....	42.75	32.11	32.23	32.97
30	33.41	.....	43.89	32.45	.....	31.65	32.57	32.71	32.62	32.33	42.49	32.40
31	.....	.....	31.30	.....	32.10	.....	42.97	.....	.....	.....	.....	32.38

Grand Traverse County

Blair Township

GvBr 2. State Dept. of Conservation. NW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 27, T. 26 N., R. 11 W. Jetted observation water-table well in deposits of Pleistocene age, diameter 2 inches, depth 15 feet, open bottom. Land-surface datum is 914.25 feet above msl. Highest water level 1.32 below lsd, Oct. 30, 1951; lowest 4.02 below lsd, Aug. 18, 1936. Records available: 1935-37, 1941-44, 1948-54. Apr. 22, 1.47; Sept. 10, 2.91.

Fife Lake Township

GvFf 27. State Dept. of Conservation. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 34, T. 25 N., R. 9 W. Jetted observation water-table well in deposits of Pleistocene age, diameter 2 inches, depth 18 feet, open bottom. Land-surface datum is 1,025.34 feet above msl. Highest water level 10.86 below lsd, Aug. 6, 1943; lowest 14.38 below lsd, Feb. 22, 1949. Records available: 1934-37, 1941-44, 1948-54. Mar. 24, 13.68; Apr. 29, 12.72; Sept. 9, 12.25.

Mayfield Township

GvMy 19. State Dept. of Conservation. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2, T. 25 N., R. 11 W. Jetted observation water-table well in sand and gravel of Pleistocene age, diameter 2 inches, depth 14 feet, cased to open bottom. Land-surface datum is 1,058.81 feet above msl. Highest water level 1.51 below lsd, Apr. 22, 1954; lowest 6.40 below lsd, Nov. 14, 1935. Records available: 1935-37, 1943-44, 1948-54. Apr. 22, 1.51; Sept. 10, 5.01.

Paradise Township

GvPr 25. State Dept. of Conservation. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 2, T. 25 N., R. 10 W. Jetted observation water-table well in sand of Pleistocene age, diameter 2 inches, depth 20 feet, cased to open bottom. Land-surface datum is 945.27 feet above msl. Highest water level 0.29 below lsd, Sept. 3, 1942; lowest 1.68 below lsd, July 1, 1937. Records available: 1936-37, 1941-44, 1948-54. Apr. 22, 0.89; Sept. 10, 1.51.

Union Township

GvUn 2. State Dept. of Conservation. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 13, T. 26 N., R. 9 W. Jetted observation water-table well in sand of Pleistocene age, diameter 2 inches, depth 14 feet, cased to open bottom. Land-surface datum is 961.78 feet above msl. Highest water level 4.88 below lsd, Apr. 22, 1954; lowest 7.87 below lsd, Oct. 11, 1949. Records available: 1934-37, 1941-44, 1948-54. Apr. 22, 4.88; Sept. 10, 6.67.

Whitewater Township

GvWw 1. State Dept. of Conservation. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 35, T. 27 N., R. 9 W. Jetted observation water-table well in sand and gravel of Pleistocene age, diameter 2 inches, depth 17 feet, cased to open bottom. Land-surface datum is 906.11 feet above msl. Highest water level 11.76 below lsd, Oct. 7, 1953; lowest 15.62 below lsd, Sept. 10, 1937. Records available: 1934-37, 1941-44, 1948-54. Apr. 22, 12.01; Sept. 10, 12.35.

Gratiot County

City of Alma

GrAL 45. Layne-Northern Co., Inc. On Leonard Refineries property. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 2, T. 11 N., R. 3 W. Drilled unused artesian well in sand and gravel of Pleistocene age, diameter 1 $\frac{1}{2}$ inches, depth 84 feet. Land-surface datum is 742.62 feet above msl. Highest water level 25.62 below lsd, Apr. 26, 1948; lowest 69.34 below lsd, Jan. 26, 1950. Records available: 1947-54. Mar. 16, 67.49; June 16, 64.30; Sept. 13, 68.10.

GrAL 135. Thomas Thompson. 118 Wheeler Ave. Drilled unused artesian well in gravel of Pleistocene age, diameter 2 inches, depth 59 feet. Land-surface datum is 743.27 feet above msl. Highest water level 24.35 below lsd, Apr. 26, 1948; lowest 47.13 below lsd, July 26, 1951. Records available: 1947-54. Mar. 16, 41.53; June 16, 45.72; Sept. 13, 44.30; Dec. 22, 44.87.

GrAL 240. C. V. Peet. 335 Pleasant Ave. Driven unused water-table well in lake sand of Pleistocene age, diameter 1 $\frac{1}{2}$ inches, depth 15 feet. Land-surface datum is 750.24 feet above msl. Highest water level 7.69 below lsd, June 10, 1947; lowest 11.37 below lsd, Nov. 28, 1949. Records available: 1947-54. Mar. 16, 10.70; June 16, 9.84; Sept. 13, 10.88; Dec. 22, 10.49.

GrAL 258. E. H. Waber. 219 Prospect Ave. Drilled unused artesian well in deposits of Pleistocene age, diameter 2 inches, depth 49 feet. Land-surface datum is 733.20 feet above msl. Highest water level 7.64 below lsd, Feb. 27, 1951; lowest 32.72 below lsd, July 26, 1951. Records available: 1946-54. Mar. 16, 23.05; June 16, 28.82; Sept. 13, 28.06; Dec. 22, 27.85.

GrAL 360. Reed Excavating Co. Bridge Ave. and Washington St. Dug unused water-table well in deposits of Pleistocene age, diameter 36 inches, depth 20 feet, open bottom. Land-surface datum is 738.78 feet above msl. Highest water level 13.74 below lsd, Apr. 7, 1950; lowest 17.91 below lsd, Nov. 12, 1953. Records available: 1950-54. Measurements made by Alma Water Dept. Mar. 16, 16.93; June 16, 16.44; Sept. 13, 17.50; Dec. 22, 17.25.

Village of Ithaca

GRIH 1. Village of Ithaca. Center and Maple Sts. Drilled unused artesian well in Saginaw formation, Parma sandstone, and Bayport limestone, diameter 10 to 8 inches, reported depth 785 feet, cased to 379. Land-surface datum is about 803 feet above msl. Highest water level 78.25 below lsd, Jan. 22, 1952; lowest 83.96 below lsd, Sept. 4, 1949. Records available: 1947-54. Mar. 16, 81.50; June 16, 80.41; Sept. 13, 80.89; Dec. 22, 80.05.

Village of Perrinton

GrPE 1. Glenn Corson. South and Robinson Sts. Dug unused water-table well in deposits of Pleistocene age, diameter 30 inches, depth 31 feet, open bottom. Highest water level 1.82 below lsd, Jan. 17, 1952; lowest 21.23 below lsd, Dec. 16-17, 1949. Records available: 1947-54. Mar. 16, 8.11; June 18, 14.06; Sept. 13, 19.30; Dec. 22, 14.50.

City of St. Louis

GrST 1. City of St. Louis. North and Mill Sts. Drilled unused artesian well in deposits of Pleistocene age, diameter 8 inches, depth 196 feet. Highest water level 21.2 below lsd, Dec. 20, 1948, Jan. 24, 1949; lowest 58.81 below lsd, Aug. 14, 1953. Records available: 1947-53. No measurement made in 1954.

Hillsdale County

City of Hillsdale

HdHD 1. City of Hillsdale. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 23, T. 6 S., R. 3 W. Drilled unused artesian well in sand and gravel of Pleistocene age, diameter 5 inches, depth 70 feet. Highest water level 3.25 below lsd, Apr. 21, 1952; lowest 22.85 below lsd, Sept. 21, 1953. Records available: 1952-54. Measurements made by Hillsdale Board of Public Works.

HdHD 1--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Mar. 8	4.90	May 10	4.85	July 26	6.47	Oct. 18	4.88
15	5.00	17	5.12	Aug. 2	6.69	25	5.19
22	5.45	24	5.39	9	6.92	Nov. 1	5.28
24	5.14	31	5.17	16	7.12	8	6.06
30	4.70	June 1	4.95	23	7.21	15	6.37
Apr. 5	4.17	7	4.82	30	7.07	22	6.32
6	4.76	14	5.07	Sept. 7	7.44	29	6.11
12	4.69	21	4.97	13	7.70	Dec. 6	5.86
19	4.72	28	5.10	20	7.78	20	5.15
26	4.67	July 12	5.68	27	7.95	27	5.11
May 3	4.76	19	5.02	Oct. 11	6.45		

Ingham County

City of Lansing

IgLS 6. City of Lansing. Lapeer and Logan Sts. Drilled unused artesian well in Saginaw formation, diameter 20 inches, depth 424 feet. Land-surface datum is 858.72 feet above msl. Highest water level 34.34 below lsd, Dec. 1929; lowest 145.24 below lsd, Sept. 1, 1954. Records available: 1929, 1931, 1933-54. Feb. 23, 141.89; May 24, 142.79; Sept. 1, 145.24; Dec. 21, 141.10.

IgLS 7. City of Lansing. North Grand River and Josephine St., Lansing. Drilled unused artesian well in Saginaw formation, diameter 14 inches, depth 395 feet, cased to 49. Land-surface datum is 828.81 feet above msl. Highest water level 15.63 below lsd, Mar. 26, 1931; lowest 150.49 below lsd, Aug. 31, 1954. Records available: 1919, 1929-54. Feb. 23, 146.60; May 24, 147.78; Aug. 31, 150.49; Dec. 21, 148.94.

IgLS 8. City of Lansing. Townsend St. and Olds Ave. Drilled unused artesian well in Saginaw formation, diameter 14 inches, depth 423 feet, cased to 37. Land-surface datum is 834.10 feet above msl. Highest water level 12.12 below lsd, Jan. 1919; lowest 51.39 below lsd, Aug. 10, 1953. Records available: 1919, 1929-54. May. 24, 49.40; Sept. 1, 51.24; Dec. 21, 48.87.

IgLS 9. City of Lansing. South Cedar and Jay Sts. Drilled unused artesian well in Saginaw formation, diameter 12 inches, depth 417 feet. Land-surface datum is 829.11 feet above msl. Highest water level 42.01 below lsd, Mar. 11, 1946; lowest 67.0 below lsd, Aug. 22, 1949. Records available: 1945-54. Feb. 23, 53.50; May 24, 52.19; Sept. 1, 52.78; Dec. 21, 53.29.

IgLS 33. Chesapeake & Ohio RR. Filley and Taylor Sts. Drilled unused artesian well in sand and gravel of Pleistocene age, diameter 12 inches, depth 38 feet, screen about 33. Land-surface datum is 842.11 feet above msl. Highest water level 25.98 below lsd, Mar. 3, 1953; lowest 30.14 below lsd, Dec. 24, 1954. Records available: 1953-54.

Daily 2 a.m. water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	28.47	28.76	.....	e29.25	.....	29.30	29.59	29.66	29.75	29.81	29.63	29.54
2	.....	28.82	29.26	29.22	.....	29.41	29.67	29.52	29.69	29.68	29.58	29.49
3	e28.50	.....	29.11	e29.32	29.12	29.40	29.61	29.50	29.76	29.56	29.69	29.47
4	.....	.....	.....	.....	29.45	29.37	29.49	.....	29.90	29.53	29.50	29.44
5	28.57	.....	.....	29.09	29.43	29.64	29.43	.....	29.66	29.76	29.85	29.65
6	28.59	.....	29.26	29.00	29.50	29.52	29.42	29.71	29.74	29.70	29.59	29.73
7	.....	.....	29.05	e29.19	29.41	29.33	29.30	e29.72	29.58	29.92	29.70	29.57
8	.....	28.71	29.33	e29.25	29.60	29.32	29.53	29.67	29.73	29.66	29.61	29.38
9	28.55	28.96	29.10	.....	29.46	29.40	29.51	29.58	29.78	29.52	29.72	29.36
10	.....	28.95	29.31	.....	29.43	29.41	29.56	29.59	29.56	29.56	29.71	29.79
11	28.59	e29.30	29.35	.....	29.34	29.46	29.49	e29.71	29.84	29.43	29.55	29.84
12	29.02	29.47	29.43	29.47	29.46	29.43	29.34	.....	29.78	29.59	29.77	29.64
13	28.98	29.15	29.14	29.30	29.54	29.58	29.39	29.72	29.61	29.79	29.63	29.63
14	28.71	28.85	29.29	29.18	29.51	29.58	29.42	29.63	29.66	29.66	29.37	29.47
15	28.90	28.96	29.50	e29.30	29.49	29.54	e29.52	29.57	29.62	29.70	29.69	29.36
16	28.77	29.17	29.56	29.26	29.30	29.58	29.62	29.54	29.70	29.55	29.44	29.80
17	e28.98	29.26	29.44	.....	29.37	29.69	29.59	e29.73	29.75	29.72	29.62	29.73
18	28.75	29.25	29.33	.....	29.44	29.75	29.38	29.59	29.63	29.79	29.64	29.53
19	28.63	29.18	29.27	29.51	29.40	29.68	29.45	29.55	29.43	29.75	29.61	29.78
20	28.78	29.06	29.29	29.54	29.50	29.48	29.44	29.73	29.59	29.58	29.66	e29.81

IgLS 265--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	51.46	52.80	55.60	55.00	55.40	.....	.....	.....	.....	.....	53.12	.....
17	51.73	.....	55.85	55.32	55.08	.....	.....	.....	.....	.....	53.07	.....
18	51.36	.....	56.22	55.13	54.78	.....	.....	.....	.....	.....	53.02	.....
19	51.37	.....	56.30	54.73	55.02	.....	.....	.....	.....	.....	52.88	.....
20	51.60	.....	55.94	54.51	54.58	.....	.....	.....	.....	.....	52.79	.....
21	52.04	.....	54.73	54.23	53.88	.....	.....	.....	.....	.....	52.82	51.55
22	52.45	.....	54.68	55.47	53.64	.....	.....	.....	.....	.....	52.72	51.67
23	52.60	54.55	54.85	55.52	53.53	.....	h56.77	.....	.....	.....	52.65	51.55
24	52.29	54.91	55.25	55.83	53.00	.....	.....	.....	.....	.....	52.45	51.54
25	52.03	55.51	55.55	55.59	52.67	.....	.....	.....	.....	.....	52.75	51.32
26	51.74	55.87	55.80	55.27	53.40	.....	.....	.....	.....	.....	52.88	50.81
27	51.95	56.07	56.83	54.77	55.26	.....	.....	.....	.....	.....	52.52	49.58
28	52.52	55.93	56.75	55.03	56.28	.....	.....	.....	.....	h52.48	51.85	47.75
29	52.87	.....	56.16	55.36	56.72	.....	.....	.....	.....	.....	51.15	46.90
30	52.98	.....	55.47	.....	56.96	.....	.....	.....	.....	.....	51.44	46.37
31	52.93	.....	55.13	.....	.....	.....	.....	.....	.....	.....	.....	46.45

h Tape measurement.

IgLS 271. Harry DeLaere. SW $\frac{1}{2}$ SW $\frac{1}{4}$ sec. 31, T. 4 N., R. 2 W. Drilled unused artesian well in Saginaw formation, diameter 3 inches, depth 204 feet. Land-surface datum is 880.15 feet above msl. Highest water level 18.92 below lsd, Apr. 26, 1952; lowest 24.77 below lsd, Feb. 2, 1954. Records available: 1944-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 2	24.77	Apr. 26	23.23	July 30	23.80	Oct. 28	24.12
23	24.69	May 24	23.55	Aug. 31	24.11	Nov. 30	24.44
Mar. 29	23.87	June 28	23.47	Sept. 30	24.39	Dec. 21	24.16

Iosco County

Wilbur Township

IcWr 1. U. S. Forest Service. NE $\frac{1}{2}$ SE $\frac{1}{4}$ sec. 7, T. 23 N., R. 7 E. Drilled unused artesian well, diameter 6 inches, depth 341 feet. Highest water level 25.13 below lsd, Aug. 3, 1952; lowest 27.94 below lsd, Jan. 3, 10, 1950. Records available: 1948-54. Apr. 20, 26.16; May 25, 25.99; Sept. 20, 25.71.

Iron County

Hematite Township

IrHm 1. W. M. P. No. 20. Basilio Prandi. SW $\frac{1}{2}$ SW $\frac{1}{4}$ sec. 8, T. 45 N., R. 33 W. Near Amasa. Dug domestic and stock water-table well in glacial till, diameter 36 inches, depth 33 feet, cribbed with wood. Highest water level 23.39 below lsd, Oct. 30, 1951; lowest 32.16 below lsd, Mar. 15, 1949. Records available: 1945-54.

Jan. 29	27.35	Apr. 29	25.20	July 30	24.53	Nov. 1	25.32
Mar. 1	27.74	June 2	24.83	Aug. 30	25.16	30	25.63
30	27.91	July 1	24.34	Sept. 29	25.42		

IrHm 2. W. M. P. No. 19. William Bonifas Lumber Co. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 10, T. 45 N., R. 33 W. Driven observation water-table well in sand and gravel, diameter 1 $\frac{1}{2}$ inches, depth 7 feet, screen 4-7. Highest water level 2.01 below lsd, Sept. 28, 1951; lowest 4.23 below lsd, Mar. 12, 1949. Records available: 1948-54. Apr. 29, 2.22; June 2, 2.59; July 1, 2.46; July 30, 2.92; Aug. 30, 3.22; Sept. 29, 3.16; Nov. 1, 2.92.

IrHm 3. W. M. P. No. 21. Iron County Road Commission. SW $\frac{1}{2}$ SW $\frac{1}{4}$ sec. 10, T. 44 N., R. 33 W. Near Amasa. Driven observation water-table well in glacial till, diameter 1 $\frac{1}{2}$ inches, depth 8 feet, screen 3-8. Highest water level 1.95 below lsd, Apr. 29, 1954; lowest 7.94 below lsd, Jan 12, 1951, Dec. 29, 1952. Records available: 1948-54.

Jan. 29	6.76	Apr. 29	1.95	July 30	5.18	Nov. 1	3.94
Mar. 1	6.49	June 2	3.16	Aug. 30	6.23	30	4.21
30	5.03	July 1	2.75	Sept. 29	4.93		

IrHm 4. W.M.P. No. 17. Michigan State Highway Dept. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 18, T. 46 N., R. 33 W. Park Siding Rd. and U. S. Highway 141. Driven observation water-table well in glacial till, diameter 1 $\frac{1}{2}$ inches, depth 12 feet, screen 9-12. Highest water level 2.80 below lsd, Apr. 18, 1949; lowest 8.90 below lsd, Feb. 15, 1949. Records available: 1948-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	7.78	Apr. 29	5.25	July 30	6.62	Nov. 1	5.77
Mar. 1	7.18	June 2	5.49	Aug. 30	7.28	30	6.09
30	6.77	July 1	5.01	Sept. 29	6.65		

IrHm 5. W.M.P. No. 18. Luke and Carlson Logging Co. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 14, T. 46 N., R. 34 W. Driven observation water-table well in glacial till, diameter 1 $\frac{1}{2}$ inches, depth 12 feet, screen 9-12. (Formerly dug unused water-table well in glacial till, size 4 by 4 feet, depth 10 feet, cribbed with wood.) Highest water level 3.65 below lsd, June 2, 1954; lowest 8.60 below lsd, Mar. 15, 1949. Records available: 1945-54.

Jan. 29	6.89	Mar. 30	6.74	June 2	3.65	July 30	5.80
Mar. 1	6.87	Apr. 29	3.67	July 1	4.49	Aug. 30	6.48

Iron River Township

IrIr 1. W.M.P. No. 23. Joseph J. Javoroski. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 11, T. 43 N., R. 35 W. Near Mineral Hills. Dug domestic and stock water-table well in glacial till, diameter 36 inches, depth 47 feet. Highest water level 39.33 below lsd, Jan 14, 1952; lowest 47.08 below lsd, Aug. 15, 1949. Records available: 1945-54.

Jan. 18	g40.96	Apr. 29	42.01	July 30	41.69	Oct. 13	g40.90
29	41.12	May 12	g42.13	Aug. 13	g41.30	Nov. 1	40.77
Feb. 12	g41.35	June 2	42.05	30	41.14	26	g40.82
Mar. 1	41.29	12	g42.00	Sept. 11	g41.11	30	41.17
18	g41.85	July 1	41.89	29	40.83	Dec. 16	g40.92
30	41.79	13	g39.98				

g By State Geological Survey.

IrIr 2. W.M.P. No. 25. Mrs. Bernard Henriksen. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 20, T. 43 N., R. 35 W. Dug unused water-table well in glacial till, diameter 36 inches, depth 48 feet. Highest water level 41.66 below lsd, June 20, 1953; lowest 48.29 below lsd, Aug. 15, 1949. Records available: 1945-54.

Daily noon water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	44.07	44.35	44.59	44.81	.....	43.88	43.61	43.57	43.64	43.77	43.83	44.03
2	44.12	44.38	44.63	44.83	.....	43.91	43.62	43.57	43.65	43.77	43.85	43.99
3	44.11	44.43	44.62	44.85	.....	43.87	43.60	43.61	43.70	43.76	43.86	43.99
4	44.11	44.46	44.66	44.83	.....	43.90	43.59	43.64	43.67	43.78	43.87	44.05
5	44.13	44.50	44.64	44.78	.....	43.90	43.63	43.65	43.71	43.80	43.88	44.10
6	44.13	44.57	44.58	44.80	.....	43.88	43.57	43.65	43.67	43.82	43.87	44.10
7	44.14	44.43	44.66	44.74	.....	43.84	43.63	43.64	43.69	43.83	43.88	44.05
8	44.13	44.42	44.63	44.82	.....	43.89	43.62	43.60	43.72	43.78	44.00	43.99
9	44.20	44.38	44.60	44.70	.....	43.84	43.63	43.61	43.70	43.79	44.00	44.01
10	44.18	44.49	44.64	44.66	.....	43.90	43.61	43.65	43.70	43.78	43.96	44.07
11	44.22	44.62	44.68	44.77	.....	43.85	43.60	43.65	43.71	43.78	43.95	44.05
12	44.22	44.59	44.69	44.61	43.43	43.85	43.59	43.64	43.70	43.76	43.99	44.10
13	44.19	44.58	44.61	44.43	43.50	43.86	43.60	43.60	43.70	43.87	43.93	44.04
14	44.23	44.57	44.69	44.44	43.59	43.82	43.63	43.59	43.71	43.80	43.97	44.00
15	44.25	44.58	44.74	44.29	43.59	43.79	43.64	43.61	43.70	42.87	43.93	44.04
16	44.29	44.62	44.71	44.35	43.72	43.77	43.62	43.64	43.71	43.11	43.93	44.10
17	44.30	44.61	44.71	44.27	43.88	43.87	43.58	43.63	43.68	43.35	43.93	44.07
18	44.30	44.58	44.71	44.38	43.86	43.83	43.61	43.59	43.67	43.51	43.95	44.09
19	44.37	44.59	44.73	44.46	43.91	43.81	43.59	43.64	43.65	43.55	43.94	44.13
20	44.40	44.59	44.78	44.48	43.90	43.72	43.63	43.66	43.68	43.51	43.94	44.10
21	44.55	44.59	44.76	44.35	43.87	43.70	43.64	43.66	43.67	43.64	43.95	44.16
22	44.47	44.61	44.74	44.43	43.93	43.63	43.63	43.65	43.72	43.70	43.95	44.05
23	44.33	44.59	44.80	44.35	43.92	43.60	43.62	43.64	43.72	43.76	43.92	44.09
24	44.36	44.59	44.80	44.20	43.84	43.52	43.64	43.66	43.69	43.78	43.93	44.15
25	44.46	44.59	44.73	44.04	43.95	43.56	43.65	43.65	43.71	43.72	43.96	44.13
26	44.49	44.60	44.81	43.87	43.97	43.10	43.64	43.68	43.71	43.76	43.98	44.19
27	44.48	44.61	44.79	43.79	43.87	.....	43.62	43.66	43.69	43.78	43.88	44.23
28	44.47	44.63	44.80	43.64	43.81	.....	43.62	43.67	43.73	43.68	43.95	44.16
29	44.41		44.78	43.50	43.90	.....	43.62	43.67	43.72	43.78	44.04	44.13
30	44.52		44.74	43.34	43.97	.....	43.63	43.68	43.74	43.86	44.10	44.12
31	44.51		44.78		43.85		43.61	43.66		43.83		44.11

Irir 3. W. M. P. No 24. Iron County Road Commission. SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 1, T. 43 N., R. 36 W. Driven observation water-table well in sand and gravel, diameter 1 $\frac{1}{4}$ inches, depth 9 feet, screen 6-9. Highest water level 6.67 below lsd, Apr. 29, 1954; lowest 9.02 below lsd, June 30, 1952. Records available: 1948-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	8.51	Apr. 29	6.67	July 30	7.92	Nov. 1	8.02
Mar. 1	8.30	June 2	7.89	Aug. 30	8.19	30	8.08
30	8.29	July 1	7.59	Sept. 29	8.07		

Irir 4. W. M. P. No. 29. U. S. Forest Service, Ottawa National Forest. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 23, T. 45 N., R. 36 W. Near Gibbs City. Dug unused water-table well in glacial till, size 4 by 4 feet, depth 22 feet, cribbed with wood. Highest water level 11.57 below lsd, Apr. 29, 1954; lowest 23.21 below lsd, May 16, 1949. Records available: 1945-46, 1948-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	18.11	Apr. 29	11.57	July 30	14.75	Nov. 1	11.70
Mar. 1	18.41	June 2	11.65	Aug. 30	15.56	30	14.53
30	16.07	July 1	13.24	Sept. 29	15.92		

Irir 5. W. M. P. Paint River Profile well 1. U. S. Forest Service, Ottawa National Forest. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 6, T. 44 N., R. 35 W. Near Gibbs City. Driven observation water-table well in sand, diameter 1 $\frac{1}{4}$ inches, depth 6 feet; screen 3-6. Land-surface datum is 1,468.15 feet above msl. Highest water level 0.10 above lsd, May 2, 1951; lowest 2.26 below lsd, Nov. 15, 1948. Records available: 1948-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	-1.89	Apr. 30	+0.07	July 30	-1.58	Nov. 1	-1.68
Mar. 1	1.97	June 2	-1.22	Aug. 30	1.88	30	1.77
30	2.13	July 1	1.06	Sept. 29	1.80		

Irir 6. W. M. P. Paint River Profile well 2. U. S. Forest Service, Ottawa National Forest. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 6, T. 44 N., R. 35 W. Near Gibbs City. Driven observation water-table well in sand, diameter 1 $\frac{1}{4}$ inches, depth 13 feet, screen 10-13. Land-surface datum is 1,475.14 feet above msl. Highest water level 5.08 below lsd, July 6, 1953; lowest 8.92 below lsd, Nov. 15, 1948. Records available: 1948-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	8.67	Apr. 30	5.34	July 30	7.89	Nov. 1	7.74
Mar. 1	8.50	June 2	7.35	Aug. 30	8.35	30	8.37
30	8.56	July 1	6.82	Sept. 29	8.36		

Irir 7. W. M. P. Paint River Profile well 3. U. S. Forest Service, Ottawa National Forest. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 6, T. 44 N., R. 35 W. Near Gibbs City. Driven observation water-table well in sand, diameter 1 $\frac{1}{4}$ inches, depth 12 feet, screen 9-12. Land-surface datum is 1,468.15 feet above msl. Highest water level 4.03 below lsd, July 6, 1953; lowest 9.20 below lsd, Nov. 15, 1948. Records available: 1948-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	8.70	Apr. 30	4.87	July 30	7.71	Nov. 1	7.91
Mar. 1	8.98	June 2	6.96	Aug. 30	8.37	30	8.43
30	8.68	July 1	6.14	Sept. 29	8.51		

Irir 8. W. M. P. Paint River Profile well 4. U. S. Forest Service, Ottawa National Forest. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 7, T. 44 N., R. 35 W. Near Gibbs City. Driven observation water-table well in sand, diameter 1 $\frac{1}{4}$ inches, depth 4 feet; screen 1-4. Land-surface datum is 1,468.28 feet above msl. Highest water level 1.12 below lsd, May 2, 1951; lowest 3.51 below lsd, Sept. 14, 1949. Records available: 1948-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	3.04	Apr. 30	1.16	July 30	2.90	Nov. 1	2.72
Mar. 1	3.07	June 2	2.35	Aug. 30	3.23	30	3.27
30	3.31	July 1	2.47	Sept. 29	3.06		

Irir 9. W. M. P. Paint River Profile well 5. U. S. Forest Service, Ottawa National Forest. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 7, T. 44 N., R. 35 W. Near Gibbs City. Driven observation water-table well in sand, diameter 1 $\frac{1}{4}$ inches, depth 13 feet, screen 10-13. Land-surface datum is 1,471.25 feet above msl. Highest water level 2.50 below lsd, July 6, 1953; lowest 9.44 below lsd, Oct. 26, 1948. Records available: 1948-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	4.99	Apr. 30	2.66	July 30	4.59	Nov. 1	4.40
Mar. 1	5.22	June 2	3.96	Aug. 30	4.98	30	4.83
30	5.12	July 1	4.02	Sept. 29	4.91		

IrIr 10. W.M.P. Paint River Profile well 6. U. S. Forest Service, Ottawa National Forest. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 7, T. 44 N., R. 35 W. Near Gibbs City. Driven observation water-table well in sand, diameter 1 $\frac{1}{2}$ inches, depth 17 feet, screen 14-17. Land-surface datum is 1,479.30 feet above msl. Highest water level 8.48 below lsd, May 2, 1951; lowest 13.40 below lsd, Oct. 26, 1948. Records available: 1948-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	11.56	Apr. 30	9.69	July 30	11.77	Nov. 1	12.00
Mar. 1	11.58	June 2	11.07	Aug. 30	12.25	30	12.49
30	12.51	July 1	10.75	Sept. 29	12.26		

Mastodon Township

IrMt 1. W.M.P. No. 7. Iron County Road Commission. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 33, T. 42 N., R. 31 W. Driven observation water-table well in glacial till, diameter 1 $\frac{1}{2}$ inches, depth 10 feet, screen 6-10. (Replaces former well at same site.) Highest water level 0.45 below lsd, Nov. 1, 1954; lowest 6.28 below lsd, Oct. 13, 1948. Records available: 1948-54. July 19, 4.03; July 30, 2.73; Aug. 30, 1.93; Sept. 29, 0.70; Nov. 1, 0.45; Nov. 30, 1.26.

IrMt 2. W.M.P. No. 8. Joseph Giachino. NW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 33, T. 42 N., R. 31 W. Dug domestic water-table well in glacial till, diameter 15 inches, depth 12 feet, cased with tile. Highest water level 1.89 below lsd, Oct. 30, 1951; lowest 12.22 below lsd, Feb. 25, 1953. Records available: 1945-54.

Jan. 29	10.86	Apr. 29	2.20	July 30	6.99	Nov. 1	6.09
Mar. 1	10.91	June 2	4.27	Aug. 30	8.78	30	6.80
30	10.33	July 1	4.01	Sept. 29	8.24		

IrMt 3. W.M.P. No. 5. Iron County Road Commission. SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 10, T. 41 N., R. 31 W. Driven observation water-table well in sand and gravel, diameter 1 $\frac{1}{2}$ inches, depth 17 feet, screen 14-17. Highest water level 8.47 below lsd, Jan. 3, 1952; lowest dry several times, 1949-52. Records available: 1948-54.

Jan. 29	14.05	Apr. 29	14.02	July 30	11.10	Nov. 1	11.06
Mar. 1	14.55	June 2	10.58	Aug. 29	12.04	30	11.16
30	14.96	July 1	10.29	Sept. 29	12.21		

Stambaugh Township

IrSt 1. W.M.P. No. 28. U. S. Forest Service, Ottawa National Forest. SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 23, T. 45 N., R. 37 W. Driven observation water-table well in sand and gravel, diameter 1 $\frac{1}{2}$ inches, depth 8 feet, screen 5-8. Highest water level 0.75 below lsd, Aug. 31, 1951; lowest 4.72 below lsd, Sept. 11, 1948. Records available: 1948-54.

Jan. 29	2.46	Apr. 29	1.11	July 30	2.69	Nov. 1	1.58
Mar. 1	2.13	June 2	1.26	Aug. 30	2.87	30	1.70
30	1.95	July 1	1.50	Sept. 29	1.36		

IrSt 2. W.M.P. Brule River Profile well 1. State Highway Dept. NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 15, T. 42 N., R. 36 W. Driven observation water-table well in sand and gravel, diameter 1 $\frac{1}{2}$ inches, depth 6 feet, screen 3-6. Land-surface datum is 1,543.92 feet above msl. Highest water level 0.81 below lsd, Apr. 29, 1954; lowest 3.17 below lsd, Oct. 26, 1948. Records available: 1948-54.

Jan. 29	2.07	Apr. 29	0.81	July 30	2.59	Nov. 1	1.97
Mar. 1	2.12	June 2	1.78	Aug. 30	2.79	30	2.08
30	2.07	July 1	2.04	Sept. 29	2.16		

IrSt 3. W.M.P. Brule River Profile well 2. State Highway Dept. NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 15, T. 42 N., R. 36 W. Driven observation water-table well in sand and gravel, diameter 1 $\frac{1}{2}$ inches, depth 7 feet, screen 4-7. Land-surface datum is 1,545.60 feet above msl. Highest water level 0.46 below lsd, July 6, 1953; lowest 3.10 below lsd, Oct. 26, 1948. Records available: 1948-54.

Jan. 29	1.94	Apr. 29	0.52	July 30	2.11	Nov. 1	1.40
Mar. 1	1.70	June 2	1.11	Aug. 30	2.43	30	1.73
30	1.71	July 1	1.49	Sept. 29	1.59		

IrSt 4. W.M.P. Brule River Profile well 3. William Young Estate. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 15, T. 42 N., R. 36 W. Driven observation water-table well in sand and gravel, diameter 1 $\frac{1}{2}$ inches, depth 14 feet, screen 11-14. Land-surface datum is 1,554.36 feet above msl. Highest water level 3.67 below lsd, Apr. 29, 1954; lowest 8.29 below lsd, Oct. 26, 1948. Records available: 1948-54.

Jan. 29	6.76	Apr. 29	3.67	July 30	6.51	Nov. 1	5.86
Mar. 1	6.54	June 2	5.23	Aug. 30	6.94	30	6.41
30	6.39	July 1	5.41	Sept. 29	6.36		

IrSt 5. W. M. P. No. 34. State Highway Dept. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 33, T. 45 N., R. 35 W. Near Iron River. Driven observation water-table well in sand and gravel, diameter 1 $\frac{1}{4}$ inches, depth 12 feet, screen 9-12. Highest water level 1.93 below lsd, July 6, 1953; lowest 8.44 below lsd, Mar. 15, 1949. Records available: 1948-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	4.90	Apr. 29	3.49	July 30	3.25	Nov. 1	3.93
Mar. 1	5.18	June 2	2.85	Aug. 30	3.81	30	4.22
30	5.34	July 1	2.60	Sept. 29	3.99		

Kalamazoo County

City of Kalamazoo

KoKO 114. City of Kalamazoo. Burdick and Wall Sts. Drilled unused artesian well in deposits of Pleistocene age, diameter 6 inches, depth 115 feet. Land-surface datum is 777.45 feet above msl. Highest water level 11.22 below lsd, Mar. 11, 1952; lowest 29.36 below lsd, Aug. 9, 1946. Records available: 1946-54. Measurements made by City Light and Water Utilities.

Daily 2 a. m. water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18.40	18.24	18.29	19.49	19.26	19.59	.....	22.01	20.87	21.48	19.15	.....
2	18.37	18.24	18.24	19.51	19.26	19.50	.....	21.70	20.82	21.28	19.09	.....
3	18.29	18.26	18.22	19.55	e19.16	19.44	h21.06	21.87	21.29	21.45	19.04	.....
4	18.26	18.27	18.23	19.54	19.10	19.38	.....	21.57	21.12	21.15	18.97	18.31
5	18.21	18.33	18.22	19.42	19.09	19.34	21.12	21.39	21.07	20.88	18.94	18.34
6	18.19	18.35	18.21	19.40	19.08	19.27	.....	21.25	21.05	20.77	18.90	18.37
7	18.21	18.36	18.16	19.88	19.07	19.17	.....	21.41	21.35	20.73	18.87	18.34
8	18.30	18.26	18.14	19.93	19.11	19.10	.....	21.20	21.65	20.67	18.81	18.31
9	18.28	18.25	18.09	19.93	19.18	19.08	.....	21.05	21.58	20.62	18.80	18.30
10	18.34	18.25	18.08	19.93	.....	19.36	19.68	20.94	21.40	20.55	18.76	18.38
11	18.29	18.29	18.07	19.84	.....	19.74	19.61	20.87	21.33	20.47	19.04	18.44
12	18.23	18.35	18.07	.....	.....	20.58	19.48	20.80	21.30	20.27	18.88	18.45
13	18.29	18.34	18.04	.....	.....	20.46	19.41	20.75	21.23	20.22	18.82	18.42
14	18.26	18.31	18.05	.....	.....	20.04	19.89	20.73	21.16	e20.15	18.80	18.39
15	18.26	18.24	18.00	.....	19.19	20.67	19.95	e20.70	21.11	e20.08	18.73	18.32
16	18.30	.....	17.98	.....	19.18	20.78	19.75	e20.63	21.08	h20.00	18.68	18.42
17	18.37	.....	17.97	19.74	19.15	20.87	19.63	e20.58	21.06	.....	18.66	18.47
18	18.30	.....	17.97	19.71	19.19	20.52	19.63	e20.54	21.03	.....	18.66	18.44
19	18.27	.....	17.90	19.65	19.22	20.29	e20.11	e20.51	20.98	.....	18.66	.....
20	18.32	.....	17.86	19.60	19.26	20.15	e20.94	e20.46	20.93	.....	18.64	.....
21	18.40	18.44	17.87	19.55	19.29	20.00	e21.46	h20.41	21.22	.....	18.63	.....
22	18.43	18.39	17.80	19.51	19.33	20.24	e21.24	.....	21.35	.....	18.55	.....
23	18.42	18.37	18.80	19.50	19.40	19.96	e21.72	.....	21.15	19.56	18.57	.....
24	18.40	18.34	19.27	19.47	19.67	20.30	h21.43	.....	21.03	19.53	18.55	.....
25	18.37	18.33	.....	19.43	19.59	20.02	21.86	.....	20.95	19.45	18.58	.....
26	18.33	18.33	.....	19.38	.....	20.16	21.55	.....	20.93	19.37	18.53	.....
27	18.35	18.35	19.46	19.31	.....	20.26	22.24	.....	20.88	19.33	18.50	.....
28	18.37	18.32	19.47	19.30	.....	20.03	22.64	20.86	20.83	19.31	.....	.....
29	18.33	.....	19.48	19.29	19.88	19.89	22.89	20.83	21.17	19.26	.....	.....
30	18.33	.....	19.47	19.27	19.83	.....	22.39	20.77	21.21	19.23	.....	.....
31	18.32	.....	19.48	.....	19.73	.....	22.31	21.05	.....	19.23	.....	.....

e Estimated.

h Tape measurement.

KoKO 227. Hanselman Bldg. Corp. N. Burdick St. and W. Michigan Ave. Drilled unused artesian well in deposits of Pleistocene age, diameter 4 inches, depth 80 feet. Land-surface datum is 781.27 feet above msl. Highest water level 20.15 below lsd, June 4, 1948; lowest 27.04 below lsd, Oct. 17, 1946. Records available: 1946-54. Feb. 24, 26.76; May 20, 26.25.

KoKO 240. Reed Land Co. Factory St. and Lane Blvd. Drilled unused artesian well in deposits of Pleistocene age, diameter 6 inches, depth 41 feet. Land-surface datum is 773.71 feet above msl. Highest water level 3.63 below lsd, Apr. 26, 1950; lowest 11.14 below lsd, Nov. 6, 1953. Records available: 1947-54. Feb. 24, 7.89; May 20, 7.52; Sept. 21, 10.90; Dec. 15, 7.96.

KoKO 242. Kalamazoo Creamery. Portage and Lake Sts. Drilled unused artesian well in deposits of Pleistocene age, diameter 12 inches, depth 61 feet. Land-surface datum is 773.19 feet above msl. Highest water level 13.98 below lsd, May 3-4, 1950; lowest 27.42 below lsd, Dec. 5-6, 1946. Records available: 1946-54. Feb. 24, 24.44; May 20, 20.77; Sept. 21, 23.23; Dec. 15, 20.98.

KoKO 284. Bryant Paper Co. Alcott and Portage Sts. Drilled unused artesian well in sand and gravel of Pleistocene age, diameter 12 inches, depth 113 feet, screen 83-113. Land-surface datum is 802.59 feet above msl. Highest water level 34.46 below lsd, May 5, 1950; lowest 64.37 below lsd, Sept. 1, 1946. Records available: 1946-54. Measurements made by City Light and Water Utilities.

Daily 2 a.m. water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	41.32	41.04	40.78	40.20	39.83	40.31	40.57	41.13	41.46	40.21	39.98
2	41.36	41.44	41.21	40.75	40.02	40.16	40.35	40.44	41.12	41.46	40.44	40.02
3	41.47	.....	41.22	40.70	39.90	40.14	40.46	40.76	41.15	41.38	40.41	39.88
4	41.43	.....	41.26	40.55	40.15	40.24	40.40	40.99	41.25	41.25	40.36	39.71
5	41.55	.....	41.28	40.39	40.12	40.18	40.37	40.96	41.07	41.43	40.40	39.61
6	41.54	h41.90	41.20	40.56	40.08	40.10	40.36	41.08	41.03	41.43	40.27	39.57
7	41.58	41.41	41.02	.....	40.10	39.85	40.31	41.07	40.99	41.42	40.11	39.82
8	41.59	41.22	40.96	.....	39.90	40.10	40.33	40.84	41.35	41.36	40.02	39.87
9	41.48	41.39	.....	.....	39.84	40.12	40.29	40.76	41.38	41.24	40.26	39.78
10	41.64	41.40	.....	40.63	39.80	40.13	40.30	40.95	41.36	41.02	40.28	39.81
11	41.39	41.42	.....	40.48	39.96	40.15	40.05	41.02	41.27	40.85	40.25	39.71
12	41.52	41.50	.....	40.32	40.06	40.10	39.98	41.10	41.24	41.12	40.25	39.52
13	41.56	41.42	h41.33	40.46	40.11	40.06	40.83	41.10	41.07	41.18	40.11	39.46
14	41.50	41.36	40.95	40.48	40.10	40.01	40.35	40.97	41.34	41.23	39.93	39.78
15	41.54	41.32	40.87	40.55	40.08	40.21	40.36	40.82	41.47	41.29	39.88	39.82
16	41.48	41.41	41.14	40.54	39.80	40.23	40.46	40.77	41.51	41.01	40.04	39.83
17	41.57	41.47	41.12	40.60	39.77	40.33	40.32	40.88	41.51	e40.90	40.07	39.73
18	41.35	41.48	41.11	40.44	40.00	40.35	40.17	40.90	41.51	40.81	40.07	39.48
19	41.46	41.33	40.99	40.23	40.06	40.30	40.04	40.92	41.23	41.04	40.02	39.44
20	41.43	41.30	40.96	40.46	40.10	40.09	40.35	40.94	41.15	40.98	39.99	39.42
21	41.50	41.18	40.89	40.45	40.07	39.98	40.35	40.95	41.35	40.86	39.80	39.61
22	41.53	41.14	40.78	40.44	40.03	40.20	40.49	40.70	41.50	40.89	39.84	39.75
23	41.49	41.27	40.89	40.46	39.88	40.34	40.57	40.70	41.47	40.81	39.97	39.78
24	e41.41	41.24	40.93	40.33	39.80	40.32	40.61	40.93	41.49	e40.70	39.85	39.79
25	41.32	41.24	40.89	40.17	40.05	40.28	40.43	41.08	41.43	40.53	39.92	39.52
26	41.40	41.27	41.07	40.13	40.11	40.29	40.25	41.10	41.32	40.72	39.97	39.39
27	41.47	41.25	40.84	40.34	40.24	40.33	40.55	41.07	41.17	40.69	39.75	.....
28	41.56	41.11	40.70	40.38	40.13	40.17	40.77	40.88	41.33	40.75	39.95	.....
29	41.53	.....	40.60	40.38	40.15	40.28	40.75	40.82	41.43	.....	39.75	.....
30	41.47	.....	40.79	40.31	40.03	40.30	40.74	40.78	41.53	e40.83	39.93	.....
31	41.48	.....	40.88	.....	39.93	.....	h41.22	40.99	.....	40.32	.....	.....

e Estimated.

h Tape measurement.

City of Parchment

KoPT 50. Kalamazoo Vegetable Parchment Co. Riverview Ave. and Robert Lane. Drilled unused artesian well in sand and gravel of Pleistocene age, diameter 12 inches, depth 36 feet. Land-surface datum is 774.05 feet above msl. Highest water level 19.05 below lsd, Oct. 18, 1954; lowest 24.60 below lsd, July 27, 1953. Records available: 1951-54. Measurements made by Maintenance Dept.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	20.75	Apr. 12	19.28	July 12	19.75	Oct. 11	19.55
11	20.72	19	19.30	19	20.02	18	19.05
18	20.80	26	19.20	26	21.04	25	19.23
Feb. 1	20.57	May 3	19.20	Aug. 2	20.30	Nov. 1	19.40
8	20.45	10	19.48	9	20.10	8	19.50
15	20.36	17	19.66	16	20.36	15	19.65
22	19.55	20	19.78	23	20.45	22	19.54
24	19.56	24	19.82	30	20.40	29	19.50
Mar. 1	19.55	June 1	19.88	Sept. 7	20.54	Dec. 6	19.52
8	19.80	7	19.45	13	20.60	13	19.65
15	19.63	14	19.78	20	20.55	15	19.67
22	19.64	21	19.50	27	20.53	20	19.73
29	19.12	28	19.55	Oct. 4	20.25	27	19.75
Apr. 5	19.08	July 6	19.78				

Village of Vicksburg

KoVB 6. Lee Paper Co. Washington St. and Mill Pond. Drilled unused artesian well in deposits of Pleistocene age, diameter 12 inches, depth 144 feet. Highest water level 2.08 above lsd, Apr. 7, 1947; lowest 10.15 below lsd, Sept. 9, 1946. Records available: 1946-54. Measurements made by Lee Paper Co.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	-1.48	Apr. 7	+0.05	June 25	-0.97	Oct. 4	-1.89
20	1.92	15	- .29	July 2	.09	12	1.40
27	1.59	23	.48	9	.36	25	.67
Feb. 3	1.69	30	.28	16	.44	30	.87
10	1.23	May 7	.37	30	1.09	Nov. 5	.63
17	1.41	14	.37	Aug. 6	2.05	17	1.09
25	-1.08	21	.76	14	2.26	26	1.12
Mar. 17	+.28	June 4	.48	27	1.98	Dec. 8	1.51
24	.11	11	.73	Sept. 7	1.91	30	1.05
31	.20	18	.79	27	1.48		

KoVB 7. Lee Paper Co. Washington St. and Mill Pond. Drilled unused artesian well in deposits of Pleistocene age, diameter 12 inches, depth 48 feet. Highest water level 0.55 above lsd, July 8, 1950; lowest 9.72 below lsd, Sept. 14, 1946. Records available: 1946-54. Measurements made by Lee Paper Co.

Jan. 6	-5.71	Mar. 31	-5.21	June 18	-5.72	Sept. 27	-5.67
13	5.71	Apr. 7	5.29	25	6.42	Oct. 7	5.84
20	6.55	15	4.51	July 2	2.31	12	5.66
27	6.28	23	4.39	9	5.13	25	-2.45
Feb. 8	6.11	30	4.56	16	6.16	30	+ .05
10	5.67	May 7	4.88	30	5.47	Nov. 5	-1.91
17	5.03	14	5.06	Aug. 6	6.19	17	4.76
25	5.41	21	5.23	14	6.11	26	5.15
Mar. 17	5.11	June 4	5.28	27	5.95	Dec. 8	7.00
24	5.14	11	5.80	Sept. 7	5.93	30	4.60

Kalamazoo Township

KoKo 42. Western Michigan College of Education. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 20, T. 2 S., R. 11 W. Drilled unused artesian well in deposits of Pleistocene age, diameter 8 inches, depth 78 feet. Land-surface datum is 868.68 feet above msl. Highest water level 33.44 below lsd, June 19, 1950; lowest 36.43 below lsd, Dec. 5, 1946. Records available: 1946-54. Feb. 24, 35.77; May 20, 35.83; Sept. 23, 36.14; Dec. 15, 35.92.

Schoolcraft Township

KoSc 5. H. H. Chamberlain. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 27, T. 4 S., R. 11 W. Driven unused water-table well in deposits of Pleistocene age, diameter 1 $\frac{1}{2}$ inches, depth 19 feet. Highest water level 13.48 below lsd, May 4, 1954; lowest 15.22 below lsd, Jan. 20, 1954. Records available: 1953-54.

Jan. 6	15.17	Apr. 7	13.81	July 7	13.92	Oct. 6	14.56
13	15.20	13	13.80	15	13.91	13	14.42
20	15.22	21	13.77	20	13.99	20	14.28
27	15.16	27	13.68	28	14.10	27	14.25
Feb. 3	15.09	May 4	13.48	Aug. 3	14.17	Nov. 3	14.25
10	15.14	11	13.60	11	14.26	10	14.32
17	14.95	19	13.79	18	14.42	17	14.35
24	14.54	26	13.93	25	14.37	26	14.35
Mar. 4	14.45	June 1	13.98	Sept. 2	14.40	Dec. 2	14.36
9	14.41	8	13.91	8	14.48	9	14.36
17	14.34	16	14.05	14	14.52	16	14.35
24	14.36	23	13.80	22	14.52	23	14.44
31	13.85	30	13.89	29	14.59	29	14.23

Kalkaska County

Blue Lake Township

KaBk 22. State Dept. of Conservation. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 35, T. 28 N., R. 5 W. Driven observation water-table well in sand of Pleistocene age, diameter 2 inches, depth 14 feet, open bottom. Highest water level 8.62 below lsd, Apr. 16, 1953; lowest 11.77 below lsd, Dec. 14, 1949. Records available: 1949-54. Feb. 25, *10.84; Apr. 21, 9.24; Apr. 28, *9.12; May 27, *9.24; July 1, *8.84; Aug. 7, *9.39; Sept. 3, 9.94. * By State Geological Survey.

Clearwater Township

KaCw 100. State Dept. of Conservation. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 36, T. 27 N., R. 5 W. Jetted observation water-table well in deposits of Pleistocene age, diameter 1 $\frac{1}{2}$ inches, depth 16 feet; screen 14-16. Highest water level 11.12 below lsd, July 11, 1943; lowest 14.69 below lsd, Mar. 12, 1940. Records available: 1939-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 25	g13.76	Apr. 21	12.57	May 27	g12.55	Aug. 7	g12.69
Mar. 15	g13.70	30	g12.56	July 1	g11.58	Sept. 3	12.39
24	13.75						

g By State Geological Survey.

Kent County

City of Grandville

KeGV 13. Jervis Corp. Wallace and 30th Sts. Drilled observation water-table well in gravel of Pleistocene age, diameter 1 $\frac{1}{2}$ inches, depth 20 feet, screen 17-20. Land-surface datum is 608.26 feet above msl. Highest water level 9.09 below lsd, May 5, 1950; lowest 16.81 below lsd, Feb. 12, 1954. Records available: 1950-54. Measurements made by Jervis Corp.

Jan. 8	16.44	Apr. 2	14.00	June 24	12.63	Oct. 1	14.32
15	16.55	9	13.42	July 1	12.80	15	13.58
22	16.60	16	12.62	15	12.59	29	12.67
29	16.68	23	12.73	22	12.87	Nov. 5	12.43
Feb. 5	16.77	30	12.42	28	13.06	12	12.35
12	16.81	May 7	12.25	Aug. 5	13.30	19	12.35
19	16.47	14	12.20	12	13.53	26	12.23
26	16.20	21	12.30	19	13.70	Dec. 3	12.31
Mar. 5	15.89	28	12.48	26	13.50	10	12.34
12	15.58	June 4	12.47	Sept. 10	13.96	17	12.49
19	15.19	11	12.53	17	13.99	24	15.59
26	14.83	17	12.66	24	14.18	31	12.39

Manistee County

Norman Township

MsNr 1. State of Michigan. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 13, T. 21 N., R. 14 W. Drilled unused artesian well in deposits of Pleistocene age, diameter 6 inches, depth 62 feet. Highest water level 12.54 below lsd, May 8, 1951; lowest 16.12 below lsd, Dec. 19, 1949. Records available: 1949-54. Apr. 19, 15.32; Sept. 9, 15.38.

Marquette County

Michigamme Township

MqMc 1. W.M.P. No. 13. Marquette County Road Commission. SW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 22, T. 49 N., R. 30 W. Near Champion. Driven observation water-table well in sand and gravel; diameter 1 $\frac{1}{2}$ inches, depth 17 feet, screen 14-17. Highest water level 0.64 below lsd, May 3, 1951; lowest 13.32 below lsd, Sept. 2, 1948. Records available: 1948-54.

Jan. 29	10.38	Apr. 29	5.46	July 30	10.80	Nov. 1	9.92
Mar. 1	10.33	June 2	9.65	Aug. 30	11.05	30	10.22
30	9.94	July 1	10.07	Sept. 29	10.40		

Republic Township

MqRe 1. W.M.P. No. 4. Arnold Janofski. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 1, T. 45 N., R. 30 W. Near Republic. Dug unused water-table well in glacial till, diameter 36 inches, depth 30 feet, cased with corrugated metal pipe. Highest water level 24.38 below lsd, Dec. 13, 1951; lowest 29.28 below lsd, Mar. 15, 1949. Records available: 1945-54.

Jan. 18	g26.04	Apr. 29	25.70	July 30	25.12	Oct. 13	g25.48
29	26.18	May 12	g25.80	Aug. 13	g25.20	Nov. 1	25.40
Feb. 12	g26.29	June 2	25.63	30	25.29	26	g25.39
Mar. 1	26.37	12	g25.35	Sept. 11	g25.38	30	25.45
18	g26.51	July 1	25.27	29	25.30	Dec. 16	g25.56
30	26.17	13	g25.15				

g By State Geological Survey.

Mason County

Logan Township

MaLo 1. State Dept. of Conservation. U. S. Forest Service, Manistee National Forest. SE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 3, T. 17 N., R. 15 W. Drilled unused water-table well in deposits of Pleistocene age, diameter 6 inches, depth 32 feet. Land-surface datum is 737.37 feet above msl. Highest water level 14.44 below lsd, May 15, 1952; lowest 18.50 below lsd, Mar. 1, 1951. Records available: 1948-54. Mar. 11, 18.19; Mar. 19, 18.15; Apr. 19, 17.86; Sept. 9, 17.44.

Montcalm County

City of Greenville

MmGV 9. City of Greenville. Fairplain St. and Pere Marquette RR. Drilled unused artesian well in gravel of Pleistocene age, diameter 12 inches, depth 65 feet, screen 45-65. Highest water level 11.40 below lsd, Apr. 1, 1950; lowest 16.33 below lsd, July 29, 1953. Records available: 1950-54. Measurements made by City Waterworks.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	15.32	Apr. 7	14.51	July 7	13.77	Oct. 6	14.88
13	15.34	14	14.47	14	15.81	13	15.19
20	15.48	21	14.57	21	16.84	20	14.96
27	15.47	28	13.67	28	16.21	27	15.21
Feb. 3	15.56	May 5	13.67	Aug. 4	16.02	Nov. 3	15.22
10	15.53	12	14.53	11	15.06	10	15.42
17	15.02	19	15.52	18	15.92	17	15.32
24	14.22	26	15.93	25	16.45	24	15.54
Mar. 3	14.54	June 2	14.91	Sept. 1	15.71	Dec. 1	15.36
10	14.93	9	14.86	8	16.24	8	15.68
17	15.01	16	16.17	15	15.83	15	16.03
24	14.61	23	15.19	22	15.90	22	15.64
31	14.17	30	15.24	29	15.86	29	14.85

Montmorency County

Albert Township

MyAb 1. State Dept. of Conservation. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 22, T. 29 N., R. 2 E. Drilled unused artesian well in deposits of Pleistocene age, diameter 6 inches, depth 64 feet. Highest water level 10.29 above lsd, May 13, 1953; lowest 4.95 below lsd, Jan. 29, 1949. Records available: 1948-53. No measurement made in 1954.

Briley Township

MyBr 6. State Dept. of Conservation. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 11, T. 31 N., R. 2 E. Jetted observation water-table well in sand and gravel of Pleistocene age, diameter 2 inches, depth 13 feet, open bottom. Highest water level 7.40 below lsd, Mar. 29, 1938, Apr. 21, 1952; lowest dry, Oct. 27, 1939. Records available: 1934-54. Apr. 28, 9.69; Sept. 8, 10.85.

Hillman Township

MyHm 22. State Dept. of Conservation. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 9, T. 31 N., R. 3 E. Jetted observation water-table well in deposits of Pleistocene age, diameter 2 inches, depth 14 feet, open bottom. Highest water level 2.85 below lsd, Apr. 21, 1952; lowest 7.76 below lsd, Dec. 15, 1949. Records available: 1936-44, 1948-54. Apr. 28, 5.68; Sept. 8, 6.30.

Loud Township

MyLd 6. State Dept. of Conservation. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 21, T. 29 N., R. 3 E. Jetted observation water-table well in sand of Pleistocene age, diameter 2 inches, depth 14 feet, open bottom. Highest water level 2.63 below lsd, May 15, 1952; lowest 5.86 below lsd, Dec. 15, 1949. Records available: 1945-54. Apr. 21, 4.36; Sept. 13, 4.93.

Montmorency Township

MyMy 1. State Dept. of Conservation. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 34, T. 32 N., R. 2 E. Drilled unused water-table well in deposits of Pleistocene age, diameter 2 inches, depth 24 feet. Highest water level 17.41 below lsd, May 15, 1952; lowest 20.97 below lsd, Aug. 17, 1949. Records available: 1948-54. Apr. 28, 19.36; Sept. 8, 19.73.

Rust Township

MyRs 18. State Dept. of Conservation. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 26, T. 30 N., R. 4 E. Jetted observation water-table well in sand of Pleistocene age, diameter 2 inches, depth 10 feet, open bottom. Highest water level 0.78 above lsd, July 2, 1945; lowest 2.33 below lsd, Sept. 23, 1948. Records available: 1935-37, 1945-54. Apr. 21, +0.18; Sept. 13, -0.09.

Oakland County

City of Bloomfield Hills

OaBH 2. Cranbrook School. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 22, T. 2 N., R. 10 E. Drilled unused artesian well in sand and gravel, diameter 6 inches, depth 65 feet, screen 58-65. Highest water level 11.67 below lsd, Apr. 17, 1952; lowest 16.97 below lsd, Sept. 20, 1954. Records available: 1950-54. Measurements made by Water Dept.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	16.57	Feb. 15	16.87	July 31	15.66	Oct. 11	16.63
11	16.73	Mar. 2	14.85	Aug. 14	15.92	25	15.48
18	16.87	15	14.68	23	16.18	Nov. 22	15.33
25	16.85	Apr. 12	12.10	30	16.40	Dec. 13	15.55
Feb. 1	16.83	July 12	14.27	Sept. 13	16.96	20	15.56
8	16.87	19	14.78	20	16.97	27	15.25

City of Pontiac

OaPT 1. City of Pontiac. Walnut and Wessen Sts. Drilled unused artesian well in sand and gravel of Pleistocene age, diameter 8 inches, depth 160 feet. Land-surface datum is 919.15 feet above msl. Highest water level 59.55 below lsd, Apr. 22, 1940; lowest 126.4 below lsd, July 28, 1954. Records available: 1939-54. Measurements made by Dept. of Water Supply.

Daily 2 a. m. water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	115.7	.....	115.3	116.9	118.4	118.9	123.8	122.5	122.6	121.6	120.2	120.0
2	115.6	.....	115.8	116.9	118.7	120.08	125.2	121.1	122.8	121.7	120.5	120.3
3	115.0	118.41	116.2	117.5	117.2	119.3	124.7	122.3	123.7	121.6	121.42	120.1
4	115.1	117.5	116.9	116.7	118.4	119.1	e122.5	122.9	124.2	119.6	121.0	120.0
5	115.7	117.9	117.6	116.0	118.4	120.3	e121.1	123.2	124.3	120.7	121.0	119.4
6	116.3	117.6	117.3	116.2	118.1	118.8	e121.7	124.1	123.3	120.6	121.1	119.5
7	116.1	116.9	116.8	117.0	118.9	118.0	e120.4	124.1	123.7	122.0	120.5	120.2
8	117.0	115.9	115.7	117.0	118.2	120.5	121.6	124.1	124.1	121.2	120.0	120.39
9	116.6	116.4	116.7	117.6	117.3	121.66	122.1	121.2	123.7	121.6	122.0	120.9
10	116.0	117.1	116.7	117.3	116.8	121.7	122.9	121.3	122.9	121.2	122.1	120.0
11	115.3	117.1	116.5	115.8	118.2	.....	121.6	121.9	123.2	120.2	121.6	120.8
12	116.0	117.6	117.0	115.8	118.4	.....	120.7	122.4	e122.2	e121.0	122.1	120.9
13	116.7	118.1	117.4	117.6	118.1	121.0	123.3	123.6	121.2	e121.1	122.1	119.5
14	117.5	116.6	115.8	117.8	118.8	121.3	123.6	124.2	122.0	121.3	120.3	120.2
15	117.4	115.9	115.5	117.7	119.4	122.6	122.8	122.2	121.0	121.3	119.4	119.9
16	117.8	117.0	117.7	117.6	118.3	123.83	123.0	121.0	121.1	121.2	121.0	120.0
17	116.4	117.6	117.0	117.9	117.7	122.6	123.8	122.3	121.1	120.5	121.2	120.8
18	116.0	118.0	117.6	116.3	119.4	.....	122.7	122.1	121.0	120.0	120.7	120.3
19	117.0	117.5	117.2	115.1	118.9	.....	121.8	122.1	120.1	121.3	121.0	118.9
20	116.9	117.2	116.9	117.3	e119.7	122.6	123.4	123.0	119.4	121.4	120.5	118.7
21	117.8	115.5	117.0	117.5	e119.5	121.3	124.1	123.4	119.3	120.7	.....	120.3
22	118.2	115.5	116.3	118.0	e120.3	121.9	124.0	123.6	119.8	121.4	.....	120.1
23	117.8	.....	116.8	118.0	e120.6	123.4	123.6	122.5	120.7	121.8	.....	119.6
24	117.0	e117.0	117.6	118.2	e120.9	123.4	e124.5	124.6	121.7	121.1	119.57	120.2
25	116.5	117.3	117.7	117.4	e120.3	123.5	124.1	123.8	120.9	119.7	119.4	120.0
26	116.7	117.1	117.5	116.8	e120.1	124.0	124.0	123.7	120.1	120.8	119.3	118.1
27	116.9	117.7	118.2	117.3	121.1	122.5	125.4	124.0	119.5	120.7	119.7	118.0
28	117.7	115.4	116.5	118.0	120.9	122.0	125.2	124.0	120.2	120.9	118.5	119.2
29	.....	.....	114.7	118.0	122.2	122.7	125.0	122.6	120.1	120.8	117.6	119.8
30	.....	.....	116.3	118.8	120.9	123.4	125.1	122.1	121.1	120.5	119.3	118.8
31	.....	.....	116.6	.....	120.2	.....	124.8	122.4	.....	120.9	.....	119.9

e Estimated.

Ogemaw County

Klacking Township

OgKa 1. Charles Hudson. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 2, T. 23 N., R. 2 E. Dug unused water-table well in deposits of Pleistocene age, size 36 by 48 inches, depth 6 feet, planked to open bottom. Highest water level 0.37 below lsd, May 5, 1952; lowest 3.29 below lsd, Nov. 13, 1952. Records available: 1951-54. Apr. 1, 1.97; Apr. 20, 1.75; May 25, 1.48; Sept. 20, 2.06.

Otsego County

Otsego Lake Township

OsOk 106. State Dept. of Conservation. SW $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 29, T. 29 N., R. 3 W. Jetted observation water-table well in gravel of Pleistocene age, diameter 2 inches, depth 14 feet, screen 12-14. Highest water level 5.56 below lsd, May 14, 1947; lowest 9.68 below lsd, Sept. 16, 1941. Records available: 1933-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	g8.28	Apr. 21	6.83	May 27	g7.00	Aug. 7	g7.63
Feb. 25	g7.23	28	g6.65	July 1	g7.27	Sept. 3	7.98
Mar. 15	g8.08						

g By State Geological Survey.

Ottawa County

City of Holland

OtHO 12. City of Holland. Cleveland Ave. and 26th St. Drilled unused artesian well in gravel of Pleistocene age, diameter 18 inches, depth 29 feet. Highest water level 2.20 below lsd, Apr. 25, 1950; lowest 5.35 below lsd, Nov. 17-18, 1949. Records available: 1949-54. Measurements made by Board of Public Works.

Jan. 6	4.64	Apr. 6	3.39	July 6	3.96	Oct. 5	3.74
12	4.68	13	3.50	13	3.96	12	3.68
19	4.77	20	3.66	20	4.15	19	3.53
26	4.74	27	2.94	28	4.36	26	3.83
Feb. 2	4.53	May 4	3.45	Aug. 4	4.37	Nov. 3	3.53
9	4.53	11	3.72	10	4.43	10	3.81
16	4.03	19	3.93	17	4.52	16	3.94
23	3.67	25	4.06	25	4.58	23	4.02
Mar. 2	3.72	June 1	4.06	31	4.61	30	3.87
9	3.83	8	4.00	Sept. 7	4.69	Dec. 7	3.92
16	3.99	15	4.14	14	4.72	14	4.06
23	3.99	22	3.33	22	4.73	21	4.16
30	3.25	29	3.82	28	4.77	28	3.62

Holland Township

OtHo 9. City of Holland. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 28, T. 5 N., R. 15 W. Drilled unused artesian well in deposits of Pleistocene age, diameter 1 $\frac{1}{2}$ inches, depth 108 feet. Highest water level 56.44 below lsd, Aug. 8, 1946; lowest dry, Sept. 14-Oct. 5, 1954. Records available: 1946-54. Measurements made by Board of Public Works.

Jan. 6	92.29	Apr. 6	93.76	July 6	100.23	Oct. 5	(f)
12	94.86	13	93.17	13	100.72	12	103.66
19	94.84	20	92.28	20	102.19	19	102.85
26	92.41	27	91.00	28	103.81	26	102.04
Feb. 2	91.29	May 4	91.08	Aug. 4	103.69	Nov. 3	102.02
9	90.69	11	92.31	10	103.92	10	100.86
16	92.76	19	95.49	17	103.86	16	99.50
23	92.45	25	97.56	25	103.95	23	99.39
Mar. 2	91.34	June 1	97.52	31	104.71	30	99.40
9	90.39	8	98.70	Sept. 7	106.71	Dec. 7	99.76
16	93.75	15	101.67	14	(f)	14	98.90
23	94.87	22	102.00	22	(f)	21	100.20
30	93.06	29	101.18	28	(f)	28	99.00

f Dry.

OtHo 22. City of Holland. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 34, T. 5 N., R. 15 W. Drilled unused artesian well in sand and gravel of Pleistocene age, diameter 1 inch, depth 70 feet. Land-surface datum is 640.58 feet above msl. Highest water level 5.72 above lsd, May 11, 1948; lowest 1.25 below lsd, Oct. 4, 1949. Records available: 1946-54. Measurements made by Board of Public Works.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	-0.47	Apr. 13	+0.26	July 6	+2.05	Sept. 22	+1.51
19	.66	20	.49	13	2.19	28	1.35
26	.70	27	.90	20	2.14	Oct. 5	1.80
Feb. 2	.70	May 4	1.05	28	2.02	12	1.84
9	.67	11	1.13	Aug. 4	2.09	19	2.04
16	.56	19	1.16	10	2.07	26	1.97
23	.40	25	1.16	17	1.96	Nov. 3	2.13
Mar. 2	.24	June 1	1.38	25	1.88	10	2.09
9	.25	8	1.50	31	1.79	16	1.95
16	.22	15	1.47	Sept. 7	1.65	23	1.92
23	-.25	22	1.91	14	1.54	30	2.09
Apr. 6	+.07	29	1.90				

Presque Isle County

Allis Township

PrAs 18. State Dept. of Conservation. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 30, T. 33 N., R. 2 E. Jetted observation water-table well in deposits of Pleistocene age, diameter 2 inches, depth 14 feet, open bottom. Highest water level 1.80 below lsd, May 23, 1938; lowest 5.62 below lsd, Oct. 18, 1949. Records available: 1934-44, 1948-54. Apr. 28, 4.58; Sept. 8, 3.75.

Roscommon County

Au Sable Township

RoAs 30. State Dept. of Conservation. NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 34, T. 24 N., R. 1 W. Jetted observation water-table well in sand and gravel of Pleistocene age, diameter 2 inches, depth 19 feet, screen 16-19. Highest water level 14.40 below lsd, June 15, 1943; lowest dry, Nov. 6, 1939-May 2, 1940. Records available: 1934-54. Apr. 20, 16.33; July 7, *14.50; July 27, 14.79; Aug. 16, *15.05; Sept. 7, 15.45; Sept. 20, *15.59. * By State Geological Survey.

Backus Township

RoBk 15. State Dept. of Conservation. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 17, T. 22 N., R. 2 W. Jetted observation water-table well in sand of Pleistocene age, diameter 2 inches, depth 12 feet, screen 9-12. Land-surface datum is 1,165.46 feet above msl. Highest water level 1.34 below lsd, Apr. 1, 1938; lowest 5.38 below lsd, Nov. 9, 1949. Records available: 1934-54.

Jan. 7	g3.69	Apr. 1	g2.69	June 7	g1.75	Sept. 7	4.62
Feb. 5	g3.86	20	2.00	July 7	g2.46	20	g4.50
Mar. 10	g3.24	May 3	g1.91	Aug. 16	g4.01		

g By State Geological Survey.

Denton Township

RoDt 7. State Dept. of Conservation. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 22, T. 22 N., R. 3 W. Jetted observation water-table well in sand of Pleistocene age, diameter 2 inches, depth 13 feet, screen 11-13. Land-surface datum is 1,170.58 feet above msl. Highest water level 3.25 below lsd, Apr. 17, 1952; lowest 8.25 below lsd, Dec. 13, 1949. Records available: 1934-54.

Jan. 7	g6.20	Apr. 1	g5.49	June 7	g3.40	Sept. 7	5.90
Feb. 5	g6.42	22	4.48	July 1	g3.66	20	g6.02
Mar. 10	g5.96	May 3	g4.17	Aug. 16	g5.23		

Gerrish Township

RoGr 1. State Dept. of Conservation. NW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 24, T. 24 N., R. 3 W. Jetted observation water-table well in sand of Pleistocene age, diameter 2 inches, depth 15 feet, screen 12-15. Land-surface datum is 1,162.42 feet above msl. Highest water level 5.95 below lsd, July 9, 1943; lowest 11.62 below lsd, Dec. 13, 1949. Records available: 1934-54.

Feb. 5	g9.95	Apr. 22	8.25	June 7	g7.50	Sept. 7	8.07
Mar. 10	g9.59	May 3	g7.77	July 7	g6.05	20	g8.32
Apr. 1	g9.30						

g By State Geological Survey.

Higgins Township

RoHg 1. State Dept. of Conservation. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 20, T. 24 N., R. 2 W. Jetted observation water-table well in sand of Pleistocene age, diameter 8 inches, depth 14 feet, open bottom. Land-surface datum is 1,145.30 feet above msl. Highest water level 2.78 below lsd, May 3, 1951; lowest 6.23 below lsd, Dec. 6-11, 1949. Records available: 1934-54.

Daily 2 a. m. water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5.32	5.44	5.09	4.84	3.52	3.71	2.96	4.07	4.86	5.04	4.19	4.48
2	5.34	5.43	5.09	4.83	3.53	3.69	3.00	4.09	4.89	5.04	4.19	4.48
3	5.43	5.44	5.10	4.82	3.51	3.68	3.02	4.10	4.92	4.80	4.21	4.47
4	5.35	5.44	5.10	4.82	3.52	3.65	3.05	4.12	4.93	4.06	4.20	4.47
5	5.34	5.44	5.11	4.82	3.53	3.58	3.07	4.14	e4.95	....	4.23	4.49
6	5.35	5.45	5.12	4.80	3.55	3.57	3.12	4.17	4.97	....	4.23	4.51
7	5.35	5.45	5.13	4.49	3.56	3.55	3.13	4.19	4.99	....	4.25	4.52
8	5.36	5.45	5.14	4.06	3.58	3.55	3.18	4.21	5.02	....	4.27	4.50
9	5.36	5.45	5.15	3.95	3.59	3.56	3.23	4.24	5.03	....	4.29	4.49
10	5.37	5.45	5.16	3.90	3.61	3.58	3.28	4.27	5.04	....	4.31	4.52
11	5.37	5.46	5.17	3.88	3.62	3.61	3.31	4.29	5.04	....	4.31	4.54
12	5.37	5.47	5.18	3.87	3.63	3.63	3.34	4.32	5.06	4.20	4.33	4.55
13	5.38	5.47	5.18	3.85	3.66	3.66	3.37	4.35	5.06	4.22	4.33	4.56
14	5.38	5.47	5.18	3.83	3.68	3.70	3.41	4.39	5.03	4.23	4.31	4.56
15	5.38	5.46	5.20	3.83	3.69	3.73	3.46	4.41	5.01	4.22	4.35	4.55
16	5.38	5.28	5.21	3.81	3.70	3.72	3.51	4.44	5.00	4.22	4.35	4.57
17	5.39	5.29	5.21	3.79	3.73	3.67	3.56	4.48	5.00	4.14	4.37	4.58
18	5.39	5.30	5.17	3.78	3.75	3.67	3.59	4.50	4.99	4.13	4.38	4.57
19	5.39	5.29	5.14	3.78	3.77	3.69	3.63	4.51	4.98	4.13	4.39	4.58
20	5.39	5.28	5.12	3.78	3.80	3.46	3.66	4.55	5.02	4.11	4.39	4.61
21	5.40	5.22	5.14	3.78	3.82	3.41	3.70	4.59	5.04	4.09	4.41	4.62
22	5.41	5.15	5.14	3.76	3.84	3.32	3.74	4.62	4.97	4.09	4.42	4.62
23	5.41	5.13	5.14	3.77	3.87	3.19	3.78	4.65	4.97	4.09	4.43	4.61
24	5.41	5.10	5.13	3.78	3.89	3.16	3.82	4.68	4.98	4.11	4.42	4.62
25	5.42	5.09	5.11	3.76	3.90	3.16	3.86	4.70	4.97	4.12	4.44	e4.63
26	5.41	5.08	5.02	3.77	3.93	2.88	3.89	4.72	5.00	4.12	4.46	4.65
27	5.42	5.09	4.95	3.75	3.95	2.84	3.93	4.75	5.02	4.12	4.45	4.66
28	5.42	5.09	4.93	3.62	3.95	2.86	3.97	4.77	5.04	4.14	4.44	4.66
29	5.43		4.91	3.57	3.90	2.88	4.01	4.79	5.05	4.13	4.46	4.67
30	5.43		4.88	3.54	3.96	2.91	4.02	4.82	5.05	4.15	4.48	4.65
31	5.43		4.86		3.98		4.04	4.83		4.18		4.67

e Estimated.

Markey Township

RoMk 5. State Dept. of Conservation. NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 25, T. 23 N., R. 3 W. Jetted observation water-table well in sand of Pleistocene age, diameter 2 inches, depth 14 feet, open bottom. Land-surface datum is 1,154.29 feet above msl. Highest water level 3.44 below lsd, Apr. 17, 1952; lowest 6.76 below lsd, Aug. 14, 1936. Records available: 1934-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	g5.36	Apr. 1	g4.51	June 7	g3.83	Sept. 7	6.21
Feb. 5	g5.37	22	4.13	July 7	g4.33	20	g5.85
Mar. 10	g4.94	May 3	g3.99	Aug. 16	g5.74		

g By State Geological Survey.

Richfield Township

RoRf 50. State Dept. of Conservation. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 3, T. 23 N., R. 1 W. Jetted observation water-table well in sand of Pleistocene age, diameter 2 inches, depth 12 feet, screen 10-12. Highest water level 0.93 below lsd, Jan. 12, 1942; lowest 7.31 below lsd, Dec. 14, 1949. Records available: 1939-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 5	g5.74	Apr. 20	3.77	July 7	g2.50	Sept. 7	4.62
Mar. 10	g5.10	May 3	g3.37	Aug. 16	g3.95	20	g4.79
Apr. 1	g4.64	June 7	g2.59				

g By State Geological Survey.

Roscommon Township

RoRo 15. State Dept. of Conservation. NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 5, T. 21 N., R. 3 W. Jetted observation water-table well in sand and gravel of Pleistocene age, diameter 2 inches, depth 15 feet, open bottom. Land-surface datum is 1,147.86 feet above msl. Highest water level 9.61 below lsd, June 15, 1943; lowest 11.81 below lsd, Nov. 11, 1949. Records available: 1934-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	g10.91	Apr. 1	g10.70	June 7	g10.22	Sept. 7	11.08
Feb. 5	g10.97	22	10.42	July 7	g10.31	20	g10.99
Mar. 10	g10.91	May 3	g10.44	Aug. 16	g10.94		

g By State Geological Survey.

Saginaw County

City of Chesaning

SgCH 9. August Bauer. Clark and W. Broad Sts. Drilled unused artesian well in Saginaw formation, diameter 2 inches, depth 72 feet. Highest water level 39.66 below lsd, Nov. 23, 1951; lowest dry several times, 1953-54. Records available: 1950-54.

Jan. 5	(f)	Apr. 13	69.73	July 12	66.09	Oct. 10	62.83
12	(f)	21	71.22	20	66.90	20	68.36
18	(f)	26	62.89	26	68.93	26	(f)
Feb. 1	(f)	May 5	57.33	Aug. 2	68.67	Nov. 2	(f)
7	(f)	11	57.75	8	66.67	9	71.23
14	(f)	18	54.18	17	69.76	15	66.10
23	70.40	24	60.29	23	66.82	21	58.12
Mar. 2	62.77	31	62.16	30	64.23	27	52.78
9	53.86	June 7	62.54	Sept. 5	61.48	Dec. 5	53.79
16	51.18	15	59.61	11	63.90	12	61.56
22	55.61	19	67.01	21	62.14	19	56.56
28	49.36	29	67.49	27	62.07	28	51.26
Apr. 7	62.43	July 5	65.79	Oct. 3	62.77		

f Dry.

St. Joseph County

City of Three Rivers

SpTR 1. City of Three Rivers. Spring and W. Michigan Sts. Driven unused artesian well in sand and gravel of Pleistocene age, diameter 6 inches, depth 59 feet, screen 39-59. Land-surface datum is 790.92 feet above msl. Highest water level 2.90 above lsd, May 22, 29, June 12, 1953; lowest 5.50 below lsd, Sept. 27, 1947. Records available: 1939-54. Measurements made by city of Three Rivers.

Jan. 29	-0.66	May 14	+0.81	July 30	-0.60	Oct. 15	+0.20
Feb. 19	+.37	21	.14	Aug. 6	.33	22	+.54
26	-.14	28	.07	13	2.68	29	-1.11
Mar. 12	.62	June 4	+.46	20	.20	Nov. 5	+.19
19	-.18	11	-.30	27	.24	12	.81
26	+.69	18	+.54	Sept. 3	.21	19	.53
Apr. 2	.57	25	-2.24	10	.54	26	+.29
16	-.04	July 2	+.62	17	.26	Dec. 3	-1.76
23	+.76	9	+.53	24	1.27	10	-.17
30	-.02	16	-2.07	Oct. 1	-.49	17	+.28
May 7	+.27	23	1.28	8	+.06	24	-.70

Sanilac County

Moore Township

SAmr 1. State Highway Dept. SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec. 33, T. 12 N., R. 13 E. Driven unused artesian well in lower Marshall formation, diameter 3 inches, depth 150 feet, cased to 53. Highest water level 15.45 below lsd, Apr. 25, 1951; lowest 23.00 below lsd, Jan. 10, 1949. Records available: 1948-54.

SaMr 1--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	19.20	Apr. 7	16.21	July 7	18.02	Oct. 6	21.10
13	19.24	14	16.40	14	18.48	13	20.71
20	19.24	21	16.75	21	18.59	20	20.08
27	19.33	28	16.62	28	19.03	27	18.51
Feb. 3	19.14	May 5	16.33	Aug. 4	19.09	Nov. 3	18.30
10	19.05	12	16.37	11	19.40	10	18.28
17	18.80	19	16.65	18	19.75	17	18.05
24	17.60	26	16.84	25	20.10	24	17.40
Mar. 3	17.15	June 2	17.43	Sept. 1	20.51	Dec. 1	17.18
10	16.85	9	17.79	8	20.63	8	17.00
17	16.78	16	17.98	15	20.96	15	16.95
24	16.47	23	17.80	22	21.27	22	17.02
31	16.25	30	17.99	29	21.38	29	16.98

Schoolcraft CountyGermfask Township

SoGe 112. U. S. Fish and Wildlife Service. SW $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 16, T. 45 N., R. 13 W. Drilled unused artesian well in Richmond group, diameter 4 inches, depth 151 feet, cased to about 65. Highest water level 5.09 below lsd, Apr. 12, 1954; lowest 6.07 below lsd, Sept. 4, 9, 1954. Records available: 1952-54. Measurements made by Fish and Wildlife Service.

Daily 2 a. m. water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5.49	5.48	5.36	5.35	5.36	5.45	5.58	5.78	6.01	5.78	5.76	5.71
2	5.55	5.45	5.35	5.37	5.44	5.48	5.61	5.75	5.99	5.78	5.76	5.67
3	5.54	5.47	5.39	5.43	5.34	5.49	5.62	5.74	6.01	5.77	5.76	5.64
4	5.58	5.46	5.38	5.46	5.33	5.50	5.62	5.73	6.06	5.76	5.72	5.63
5	5.55	5.47	5.37	5.44	5.37	5.52	5.62	5.75	6.03	5.81	5.75	5.68
6	5.55	5.48	5.37	5.40	5.41	5.54	5.63	5.78	6.06	5.81	5.72	5.73
7	5.55	5.51	5.35	5.41	5.45	5.55	....	5.82	5.99	5.90	5.75	5.74
8	5.58	5.44	5.39	5.33	5.42	5.55	....	5.84	6.03	5.87	5.76	5.67
9	5.51	5.44	5.36	5.35	5.44	5.56	....	5.83	6.06	5.85	5.83	5.65
10	5.54	5.42	5.36	5.27	5.45	5.56	....	5.78	6.00	5.87	5.85	5.69
11	5.51	5.45	5.37	5.19	5.46	5.60	....	5.81	5.94	5.77	5.81	5.71
12	5.50	5.49	5.40	5.15	5.48	5.56	....	5.84	5.96	5.76	5.82	5.71
13	5.54	5.47	5.40	e5.12	5.52	5.57	5.68	5.86	5.95	5.72	5.80	5.71
14	5.50	5.41	5.36	5.21	5.54	5.55	5.68	5.87	5.97	5.76	5.73	5.68
15	5.50	5.41	5.39	5.29	5.55	5.50	5.73	5.87	5.96	5.72	5.78	5.64
16	5.48	5.47	5.42	5.27	5.53	5.51	5.74	5.88	5.96	5.72	5.73	5.67
17	5.50	5.47	5.42	5.32	5.54	5.53	5.74	5.94	5.96	5.73	5.74	5.69
18	5.51	5.47	5.40	5.38	5.56	5.57	5.71	5.93	5.92	5.78	5.73	5.63
19	5.49	5.46	5.37	5.50	5.56	5.57	5.76	5.90	5.83	5.80	5.74	5.65
20	5.49	5.44	5.35	5.56	5.57	5.56	5.75	5.94	5.86	5.79	5.73	5.68
21	5.52	5.32	5.33	5.59	5.57	5.54	5.79	5.96	5.81	5.78	5.74	5.69
22	5.54	5.38	5.39	5.54	5.57	5.53	5.80	5.98	5.83	5.79	5.74	5.67
23	5.52	5.40	5.36	....	5.61	5.56	5.79	5.96	5.87	5.79	5.74	5.62
24	5.47	5.31	5.40	....	5.61	5.57	5.81	5.96	5.88	5.82	5.67	5.66
25	5.50	5.32	5.37	....	5.61	5.52	5.82	5.96	5.84	5.82	5.69	5.70
26	5.48	5.32	5.29	....	5.63	5.48	5.83	5.98	5.83	5.81	5.71	5.66
27	5.51	5.33	5.36	5.31	5.64	5.52	5.83	5.99	5.85	5.76	5.68	5.70
28	5.52	5.34	5.32	5.23	5.55	5.55	5.76	6.00	5.86	5.76	5.61	5.69
29	5.50		5.34	5.24	5.48	5.55	5.77	5.99	5.86	5.72	5.64	5.68
30	5.46		5.33	5.36	5.50	5.55	5.80	6.00	5.84	5.74	5.71	5.64
31	5.51		5.35		5.52		5.77	6.01		5.77		5.66

e Estimated.

Shiawassee CountyVillage of Perry

ShPR 8. Arthur B. Cobb. 115 West Second St. Driven unused water-table well in deposits of Pleistocene age, diameter 1 $\frac{1}{2}$ inches, depth 26 feet. Highest water level 17.28 below lsd, May 3 1950; lowest 21.10 below lsd, Oct. 30, 1953. Records available: 1948-54. Mar. 10, 20, 11; June 21, 20.45; July 1, 1945; July 22, 19.80; Sept. 15, 20.72; Dec. 20, 20.33.

Washtenaw CountyCity of Ypsilanti

WaYp 44. City of Ypsilanti. Park St. and Michigan Ave. Drilled unused water-table well in gravel of Pleistocene age, diameter 6 inches, depth 97 feet, screen 90-95. Highest water level 29.12 below lsd, Nov. 5, 1945; lowest 42.17 below lsd, Sept. 13, 1952. Records available: 1944-46, 1948-53. Measurements made by Department of Public Utilities. No measurement made in 1954.

Pittsfield Township

WaPf 2. City of Ann Arbor. SE $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 16, T. 3 S., R. 6 E. Dug unused artesian well in gravel of Pleistocene age, diameter 16 feet, depth 23 feet, open bottom. Highest water level 2.00 above lsd, June 30, 1951; lowest 15.31 below lsd, Aug. 30, 1953. Records available: 1948-54. Measurements made by Board of Water.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	5.91	Apr. 2	2.66	July 8	1.98	Oct. 6	9.54
15	6.38	15	2.18	20	14.30	16	10.66
30	5.96	30	7.58	30	11.66	30	8.82
Feb. 2	5.95	May 10	1.75	Aug. 8	7.14	Nov. 5	9.07
14	6.18	17	1.86	18	9.52	16	8.61
28	4.70	28	1.04	28	10.07	28	9.27
Mar. 10	4.54	June 10	5.82	Sept. 10	9.05	Dec. 8	9.56
20	4.55	20	5.03	20	10.57	16	9.50
28	2.84	28	9.50	30	9.40	30	9.53

York Township

WaYk 22. Ypsilanti State Hospital. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 10, T. 4 S., R. 6 E. Drilled unused artesian well in gravel of Pleistocene age, diameter 6 inches, depth 173 feet. Highest water level 61.48 below lsd, June 12, 1953; lowest 85.65 below lsd, Dec. 24, 1953. Records available: 1946-54. Measurements made by Ypsilanti State Hospital.

Jan. 8	66.17	Mar. 26	72.59	June 25	68.57	Sept. 17	69.25
15	67.07	Apr. 2	83.18	July 2	83.80	24	73.44
22	83.90	9	84.07	9	81.08	Oct. 8	66.74
29	68.06	16	82.25	16	69.70	15	75.61
Feb. 5	75.08	23	66.40	22	78.14	Nov. 5	80.40
12	82.27	May 7	82.86	30	73.26	19	77.20
19	81.59	14	67.32	Aug. 6	78.48	26	68.15
26	82.06	28	76.93	20	82.61	Dec. 3	81.86
Mar. 5	68.54	June 4	67.81	27	68.60	10	68.02
12	69.70	11	81.68	Sept. 3	80.98	17	74.25
19	76.06	18	82.32	10	76.20	31	68.07

Ypsilanti Township

WaYp 8. Ford Motor Co. NE $\frac{1}{4}$ SW $\frac{1}{4}$ sec. 24, T. 3 S., R. 7 E. Drilled unused water-table well in sand of Pleistocene age, diameter 4 inches, depth 87 feet, screen 77-80. Land-surface datum is 665.56 feet above msl. Highest water level 5.79 below lsd, Jan. 5, 1950; lowest 14.80 below lsd, Nov. 13, 1952. Records available: 1949-54. Measurements made by Water Filtration Plant.

Jan. 19	12.96	Apr. 14	12.74	June 16	12.75	Oct. 6	12.62
27	12.90	21	12.80	July 9	12.47	14	13.46
Feb. 3	13.06	28	12.72	14	12.60	21	12.98
10	12.99	May 5	12.40	Aug. 1	12.99	29	13.17
17	12.72	12	12.66	Sept. 1	13.03	Nov. 16	12.79
24	12.68	19	12.71	10	12.90	23	12.79
Mar. 10	12.90	26	12.95	16	12.93	30	12.90
17	13.00	June 4	12.74	23	12.99	Dec. 9	12.74
24	12.92	9	12.66	29	12.90	14	12.78
Apr. 7	12.78						

Wexford County

City of Cadillac

WeCD 1. City of Cadillac. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 4, T. 21 N., R. 9 W. Drilled unused artesian well in deposits of Pleistocene age, diameter 8 to 6 inches, reported depth 277 feet. Highest water level 19.99 below lsd, July 6, 1953; lowest 23.24 below lsd, Feb. 14, 1951. Records available: 1949-54. Sept. 9, 20.80.

Greenwood Township

WeGw 3. State Dept. of Conservation. SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 28, T. 24 N., R. 10 W. Jetted observation water-table well in sand of Pleistocene age, diameter 2 inches, depth 18 feet, open bottom. Land-surface datum is 1,005.49 feet above msl. Highest water level 5.20 below lsd, Aug. 6, 1943; lowest 8.89 below lsd, Jan. 15, 1936. Records available: 1935-37, 1941-44, 1948-54. Apr. 22, 7.05; Sept. 10, 8.11.

Henderson Township

WeHn 1. State Dept. of Conservation. NW $\frac{1}{4}$ NE $\frac{1}{4}$ sec. 13, T. 21 N., R. 11 W. Drilled unused water-table well in deposits of Pleistocene age, diameter 6 inches, depth 62 feet. Highest water level 46.28 below lsd, June 5, 1952; lowest 49.65 below lsd, Mar. 25, 1951. Records available: 1948-54. Apr. 19, 48.83; Sept. 9, 47.77.

Liberty Township

WeLb 38. State Dept. of Conservation. SW $\frac{1}{4}$ NW $\frac{1}{4}$ sec. 19, T. 24 N., R. 9 W. Jetted observation water-table well in sand of Pleistocene age, diameter 2 inches, depth 11 feet, open bottom. Land-surface datum is 994.16 feet above msl. Highest water level 0.94 below lsd, Apr. 10, 1951; lowest 3.74 below lsd, Aug. 19, 1936. Records available: 1935-37, 1941-44, 1949-54. Mar. 24, 1.16; Apr. 22, 1.22; Sept. 9, 3.12.

NEW HAMPSHIRE

By Edward Bradley

Scope of Water-Level Program

The observation-well program in New Hampshire was continued and expanded in 1954. In September 1953 an investigation of the ground-water resources of the seacoast region of New Hampshire was begun in cooperation with the New Hampshire State Planning and Development Commission. As a part of this project about 40 wells in the coastal part of the State and adjacent areas were measured periodically. Figure 15 shows the location of observation wells in New Hampshire. Weekly measurements were continued in the observation wells in Hill and New London. A continuous record of water-level fluctuations during 1954 in the Auburn observation well was obtained by means of a recording gage. Four wells were selected from the ground-water project in the seacoast region as cooperative observation wells and records of water-level fluctuations in them are included in this report. Three of these wells, Farmington 3, Lee 1, and Hampton 1, were measured monthly during 1954. Dover 23 was equipped with a recording gage in April 1954. A preliminary report on the investigation of ground-water resources in the seacoast region of New Hampshire was prepared during 1954.

Precipitation

During 1954 precipitation for New Hampshire as a whole was 54.35 inches, or 14.55 inches above normal, according to U. S. Weather Bureau records. At Durham, in the seacoast region, the total precipitation was 60.12 inches, or 20.75 inches above normal. During all months except January, July, and October, precipitation was above normal, and it was particularly heavy during May, August, September, November, and December. The precipitation at Durham in May was 12.00 inches; the normal for May at this station is 2.87. Two severe hurricanes swept across New England or parts of it during the summer. On August 31, hurricane "Carol", passing west of Concord in a northerly direction, brought more than 3 inches of rain to Durham. Hurricane "Edna" passed over Cape Cod across the Gulf of Maine about 50 miles east of the coast of New Hampshire on September 11. During and immediately following "Edna" more than 6 inches of rain fell at Durham.

Pumpage

The largest withdrawals of ground water in New Hampshire are in the seacoast region. Large communities in other parts of the State are supplied by surface water. Records of pumpage were obtained for towns and cities using ground water in the seacoast region during the investigation of ground-water resources in that area. The 1954 average daily consumption in gallons as reported by municipal water departments is as follows:

Dover	1,246,340
Exeter	336,121
Farmington	161,470
Hampton	518,658
Hampton (July and August only)	1,286,630
Hampton (except July and August)	361,515
Portsmouth	2,208,557
Salmon Falls	58,000
Somersworth	245,650

The large increase in average daily consumption of water in Hampton during July and August reflects the relatively large increase in population in coastal New Hampshire during the summer months.

Interpretation of Water-Level Fluctuations

Except in areas affected by pumping, water levels in New Hampshire fluctuate in response to natural recharge and discharge. Recharge from rain and melting snow is normally greatest in the spring of the year, and water levels usually reach their peak in March, April, or May. Water levels decline when recharge is reduced in the spring and early fall, and natural discharge

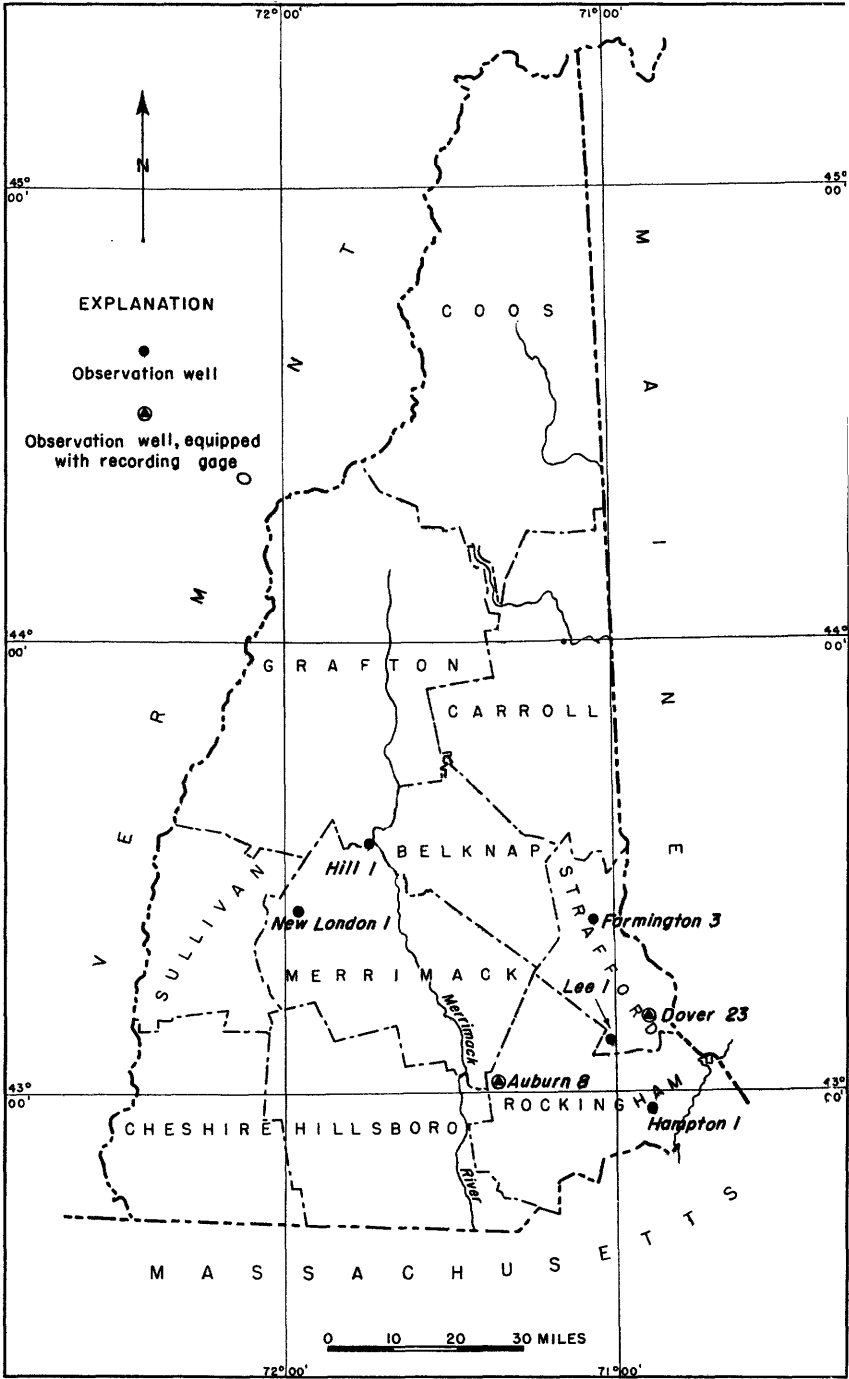


Figure 15. --Location of observation wells in New Hampshire, 1954.

to surface-water bodies continues by springs and seepage. Minimum water levels usually occur in October or November. In New Hampshire water levels in wells in glacial till usually fluctuate through a range from about 5 to about 15 feet. Water levels in wells in stratified sand and gravel, on the other hand, rarely fluctuate more than 2 or 3 feet under natural conditions. This difference is primarily due to the relatively low specific yield of glacial till as compared with that of stratified sand and gravel.

During the first part of 1954 water-level fluctuations in New Hampshire followed the normal trend; they rose during the spring and reached a maximum during May as a result of recharge from abnormally high rainfall during that month. The subsequent summer decline was halted by recharge from above-average precipitation during August and September. The rainfall accompanying hurricanes "Carol" and "Edna" brought water levels to record highs for September. Above-normal precipitation in November and December left water levels higher and ground-water storage appreciably greater than normal for the end of the year.

Acknowledgments

The Manchester Waterworks maintained the recording gage installed on Auburn 8 and continued periodic measurements of water level in this well.

Well-Numbering System

Wells in New Hampshire are numbered serially within each town or city roughly in the order that the wells were inventoried. Each well is designated by the name of the town or city in which the well is located.

Well Descriptions and Water-Level Measurements

(Water levels are in feet below land-surface datum unless otherwise indicated.)

Merrimack County

Hill 1. J. E. Norcross. Lat. 43°33'54", long. 71°44'50". Dug unused water-table well in sandy glacial till, diameter 18 inches, depth 11 feet. Land-surface datum is about 500 feet above msl. Highest water level 2.43 below lsd, Apr. 13, 1952; lowest dry several times, 1947-50. Records available: 1942-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	8.45	Apr. 6	6.41	June 27	8.36	Sept. 12	8.40
24	8.45	18	5.37	July 6	8.40	19	7.40
Feb. 7	8.41	25	4.40	18	9.42	26	7.37
14	8.43	May 9	3.40	Aug. 1	8.36	Oct. 10	8.37
Mar. 10	4.44	23	6.39	12	8.36	17	8.46
14	5.45	June 1	6.45	19	8.44	31	7.44
21	4.42	6	7.40	26	8.42	Dec. 26	7.46
29	3.41	14	7.42	Sept. 5	8.42		

New London 1. W. S. Mariner. Lat. 43°23'46", long. 71°57'09". Dug unused water-table well in sandy glacial till, diameter 36 inches, depth 21 feet. Land-surface datum is about 1,020 feet above msl. Highest water level 0.87 below lsd, Apr. 6, 1952; lowest 16.43 below lsd, Feb. 1948. Records available: 1947-54.

Jan. 3	8.24	Mar. 28	5.97	June 20	6.23	Sept. 12	10.23
10	8.63	Apr. 4	5.79	27	7.35	19	6.26
17	9.12	11	5.98	July 4	7.91	26	5.86
24	9.43	18	4.87	11	8.39	Oct. 3	6.96
31	9.76	25	4.22	18	8.96	10	7.79
Feb. 7	10.66	May 2	4.48	25	9.05	17	8.13
14	11.05	9	2.73	Aug. 1	10.07	23	8.21
21	11.02	16	3.40	8	10.42	31	8.50
28	8.38	23	3.39	15	10.82	Nov. 7	4.78
Mar. 7	6.55	30	4.58	22	11.21	Dec. 19	4.13
14	7.71	June 6	4.83	29	11.58	26	5.36
21	6.55	13	5.48	Sept. 5	11.42		

Rockingham County

Auburn 8. Manchester Waterworks. Lat. 43°00'21", long. 71°18'46". Dug unused water-table well, diameter 32 inches, depth 8 feet. Land-surface datum is about 300 feet above msl. Highest water level 0.50 below lsd, Mar. 22, 1948; lowest 7.48 below lsd, Oct. 26, 1953. Records available: 1942-54.

Daily noon water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1.74	1.87	1.63	1.62	1.78	1.78	2.00	2.80	2.63	1.80	1.89	1.60
2	1.74	1.86	1.50	1.63	1.73	1.74	2.08	2.92	2.87	1.83	1.92	1.61
3	1.72	1.88	1.56	1.65	1.62	1.70	2.21	3.08	3.05	1.86	1.33	1.62
4	1.65	1.75	1.42	1.67	1.26	1.65	2.30	2.78	2.60	1.79	1.67	1.63
5	1.70	1.78	1.51	1.67	1.54	1.71	2.37	2.96	2.79	1.86	1.74	1.64
6	1.66	1.81	1.55	1.68	1.59	1.75	2.26	3.19	2.96	1.83	1.76	1.68
7	1.67	1.83	1.57	1.69	1.64	1.79	2.38	3.39	3.12	1.87	1.78	1.69
8	1.69	1.83	1.58	1.70	1.87	1.83	2.45	3.62	2.85	1.87	1.78	1.70
9	1.70	1.84	1.59	1.73	.81	1.86	2.57	3.79	2.94	1.87	1.81	1.69
10	1.71	1.85	1.59	1.73	1.23	1.89	2.68	2.96	2.96	1.87	1.81	1.67
11	1.77	1.87	1.61	1.72	1.23	1.92	2.75	2.75	1.73	1.83	1.80	1.70
12	1.78	1.90	1.63	1.71	1.40	1.97	2.83	2.97	1.74	1.86	1.82	1.71
13	1.79	1.93	1.64	1.73	1.50	1.89	2.91	3.19	1.83	1.91	1.84	1.73
14	1.80	1.94	1.63	1.76	1.56	1.93	3.04	3.42	1.69	1.95	1.85	1.73
15	1.81	1.94	1.65	1.78	1.62	1.76	2.99	3.62	1.82	1.92	1.87	1.46
16	1.80	1.92	1.67	1.74	.92	1.88	3.18	3.70	1.77	1.64	1.85	1.53
17	1.81	1.68	1.67	1.51	1.41	1.96	3.29	3.89	1.63	1.83	1.86	1.59
18	1.82	1.85	1.67	1.34	1.50	1.99	3.39	4.08	1.68	1.88	1.86	1.53
19	1.82	1.86	1.69	1.58	1.56	2.01	3.46	4.20	1.68	1.92	1.82	1.44
20	1.80	1.85	1.30	1.62	1.59	2.05	3.30	4.26	1.64	1.93	1.52	1.52
21	1.68	1.84	1.55	1.69	1.43	2.10	3.43	4.37	1.68	1.94	1.51	1.53
22	1.75	1.58	1.62	1.70	1.36	2.22	3.48	4.46	1.64	1.97	1.67	1.54
23	1.77	1.73	1.64	1.69	1.49	1.98	3.63	4.61	1.72	1.96	1.70	1.56
24	1.79	1.76	1.66	1.69	1.49	2.00	3.71	4.54	1.77	2.02	1.71	1.57
25	1.83	1.44	1.66	1.71	1.56	2.13	3.79	4.74	1.71	2.01	1.69	1.60
26	1.77	1.66	1.49	1.65	1.63	2.14	3.84	4.85	1.73	2.01	1.68	1.60
27	1.54	1.60	1.59	1.75	1.66	2.12	3.87	4.93	1.77	1.93	1.69	1.61
28	1.73	1.65	1.60	1.58	1.66	....	3.86	4.99	1.77	1.98	1.69	1.67
29	1.79		1.59	1.71	1.70	1.83	3.86	5.08	1.82	1.99	1.38	1.58
30	1.81		1.60	1.75	1.64	1.88	3.96	5.17	1.77	1.85	1.57	1.52
31	1.83		1.62		1.74		4.03	4.93		1.84		1.63

Hampton 1. Charles Mathews. Top of Bride Hill on State Highway 101-C. Lat. 42°57'58", long. 70°53'25". Dug unused water-table well in till of Pleistocene age, diameter 42 inches, depth 28 feet, lined with stone. Land-surface datum is about 142 feet above msl. Highest water level 6.88 below lsd, May 28, 1954; lowest 18.82 below lsd, Dec. 8, 1953. Records available: 1953-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Dec. 8, 1953	18.82	Mar. 31, 1954	11.14	July 1, 1954	13.48	Sept. 30, 1954	10.69
Jan. 29, 1954	14.78	Apr. 30	9.78	29	16.40	Nov. 1	14.43
Feb. 26	13.99	May 28	6.88	Sept. 2	17.09	30	12.31

Stafford County

Dover 23. Keith H. Torr. State Highway 108 and Mast Road intersection. Lat. 43°10'05", long. 70°53'32". Dug unused water-table well in sand and gravel of Pleistocene age, diameter 36 inches, depth 28 feet, lined with stone. Land-surface datum is about 120 feet above msl. Highest water level 20.39 below lsd, May 11, 1954; lowest 22.88 below lsd, Aug. 29, 1954. Records available: 1954.

Daily lowest water level from recorder graph*

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	22.17	21.57	22.02	22.45	22.70	21.77	22.24	21.77
2	22.17	21.60	22.03	22.49	22.55	21.78	22.26	21.68
3	22.20	21.64	22.05	22.50	22.34	21.82	22.21	21.65
4	22.19	21.67	22.06	22.50	22.35	21.77	21.96	21.66
5	22.15	21.68	22.05	22.50	22.35	21.83	21.83	21.71

Dover 23--Continued.

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	.....	22.05	21.70	22.08	22.55	22.40	21.83	21.74	21.72
7	.....	22.02	21.72	22.08	22.58	22.41	21.90	21.76	21.72
8	.....	22.00	21.75	22.12	22.61	22.46	21.89	21.78	21.74
9	.....	21.98	21.76	22.14	22.62	22.52	21.84	21.82	21.74
10	.....	21.18	21.77	22.16	22.61	22.52	21.87	21.85	21.78
11	.....	20.54	21.79	22.15	22.57	22.52	21.87	21.82	21.84
12	.....	20.93	21.81	22.17	22.58	21.79	21.91	21.90	21.85
13	.....	21.13	21.83	22.15	22.57	21.12	21.95	21.92	21.87
14	.....	21.22	21.83	22.19	22.58	21.29	21.96	21.88	21.86
15	.....	21.37	21.86	22.24	22.57	21.39	21.93	21.97	21.65
16	.....	21.37	21.87	22.28	22.55	21.46	21.94	21.95	21.40
17	.....	21.04	21.88	.....	22.58	21.47	21.98	21.99	21.41
18	.....	21.17	21.88	.....	22.63	21.52	21.99	22.00	21.35
19	.....	21.28	21.86	22.22	22.63	21.53	21.98	21.96	21.34
20	21.92	21.34	21.87	22.25	22.67	21.55	21.97	21.93	21.33
21	21.90	21.38	21.88	22.26	22.72	21.58	21.99	21.91	21.33
22	21.92	21.36	21.90	22.29	22.74	21.62	22.03	21.93	21.42
23	21.98	21.33	21.91	22.31	22.79	21.65	22.03	21.87	21.43
24	.....	21.29	21.93	22.36	22.78	21.65	22.07	21.81	21.53
25	.....	21.33	21.93	22.37	22.73	21.65	22.08	21.82	21.57
26	22.07	21.40	21.95	22.37	22.80	21.64	22.08	21.83	21.57
27	22.08	21.42	21.99	22.38	22.85	21.69	22.07	21.81	21.54
28	22.11	21.43	22.00	22.40	22.86	21.73	22.15	21.78	21.54
29	22.12	21.50	22.00	22.42	22.88	21.76	22.14	21.78	21.61
30	22.14	21.54	22.02	22.43	22.87	21.74	22.13	21.81	21.58
31	.....	21.55	.....	22.44	22.87	.....	22.22	.....	21.50

* No record for January, February, and March.

Farmington 3. Lefavour Estate. South Main and Paulson Road. Lat. 43°23'03", long. 71°03'16". Dug unused water-table well in sand and gravel of Pleistocene age, diameter 42 inches depth 14 feet, lined with stone. Land-surface datum is about 313 feet above msl. Highest water level 1.76 below lsd, May 10, 1954; lowest 6.07 below lsd, July 28, 1954. Records available: 1954.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Apr. 5	4.05	June 1	3.76	Sept. 1	5.10	Nov. 1	4.85
29	3.48	30	4.31	29	4.42	30	3.39
May 10	1.76						

Lee 1. Mrs. Mildred Carlson. About 200 feet west of center of town of Lee. Lat. 43°07'15", long. 71°00'47". Dug unused water-table well in sand and gravel of Pleistocene age, diameter 42 inches, depth 33 feet, lined with stone. Land-surface datum is about 190 feet above msl. Highest water level 30.10 below lsd, June 1, 1954; lowest 31.45 below lsd, Nov. 12, 1953. Records available: 1953-54.

Nov. 12, 1953	31.45	Mar. 30, 1954	30.83	June 30, 1954	30.82	Sept. 30, 1954	30.69
Jan. 28, 1954	31.10	Apr. 29	30.67	July 29	31.22	Nov. 2	31.19
Feb. 26	31.16	June 1	30.10	Sept. 1	31.38	29	30.73

NEW JERSEY

By Charles R. Austin

Scope of Water-Level Program

The observation-well program in New Jersey was continued in 1954 in cooperation with the State Department of Conservation and Economic Development, Division of Water Policy and Supply. Measurements were made in 200 wells. Measurements were made monthly or less frequently in some wells, weekly in others, and several times a day in those which were being observed during pumping tests. At the end of 1954, continuous records from recording gages were being obtained from 87 wells. Figure 16 shows the location of the wells, the records of which are given in this report, except for those in Middlesex County and western Salem County. Figures 17 and 18 show the wells reported in these areas.

Precipitation

Precipitation for 1954 averaged 91 percent of normal for the State as a whole. Statewide precipitation was near normal in March, April, and May but below normal during the rest of 1954. The June average of 1.12 inches was the second lowest of record; the July total of 1.70 inches has been noted only 4 times since 1885. The month of September, in a great many instances, showed a greater amount of rainfall than normal; this was a result of hurricane "Carol." Because of the deficient rainfall during the summer months, many wells showed record lows.

Interpretation of Water-Level Fluctuations

Atlantic County. --In the Atlantic City area, the artesian pressure in the Atlantic City Waterworks well (36.13.2.9.1) at Pleasantville, which taps the Atlantic City 800-foot sand unit of the Kirkwood formation, showed a seasonal trend similar to previous years. Owing to increased pumping from these sands, the level throughout the year was about 1 foot below that of 1953 and about 2 feet below the 1952 level. In the Longport well (36.23.1.9.6), which also taps the Atlantic City 800-foot sand unit of the Kirkwood formation, the water levels followed the same general pattern as in previous years--seasonal decline during the months of June, July, and August and recovery starting immediately after Labor Day, when most of the hotels in this area close for the season. The levels in this well were below those of 1952 and 1953; a record low of 72.4 feet below msl was observed on August 1. Other wells in the Atlantic City area also showed record lows during 1954. In general, water levels in the Atlantic City area have been declining during the past few years, owing to increase in the rate of pumping.

Bergen County. --The level in the Wanke well (26.3.1.4.3) at East Paterson showed a rising trend from 1950 until 1953, when it started to decline. During most of 1954, the levels were about 10 feet below those of 1953. Immediately after hurricane "Carol" in September, the levels began rising and in the months of November and December 1954 were the same as those in 1953. The Garfield well (26.3.1.7.3) showed generally lower water levels throughout 1954 until September; then the water levels began rising and, for the balance of 1954, were about the same as in 1953. Increased industrial usage in this area is probably the reason for the decline in water levels.

Burlington County. --The Penn State Forest well (32.23.6.6.8) is a drilled observation water-table well in the Cohansey sand. This well is not near any pumping and is a reliable index of trends in this area. Figure 19 is a composite hydrograph showing end-of-day water levels observed in this well from 1936 to 1953. The water levels for 1954 have been plotted on this composite hydrograph to show their relation to the highest, lowest, and average water levels that have been noted since this well has been maintained.

Camden County. --In this area, water levels have been declining since 1951. A record low of 38.6 feet below msl was observed in the New Jersey Water Co. well 10 (31.2.4.5.1) in Camden on July 10, 1954. A record low of 12.77 feet below msl was observed in the Esterbrook Pen Co. well (31.1.6.4.8) on October 2, 1954, the previous record low having been 10.93 feet below msl on September 4, 1953. These lows may be attributed mainly to increase in the rate of pumping in this area.

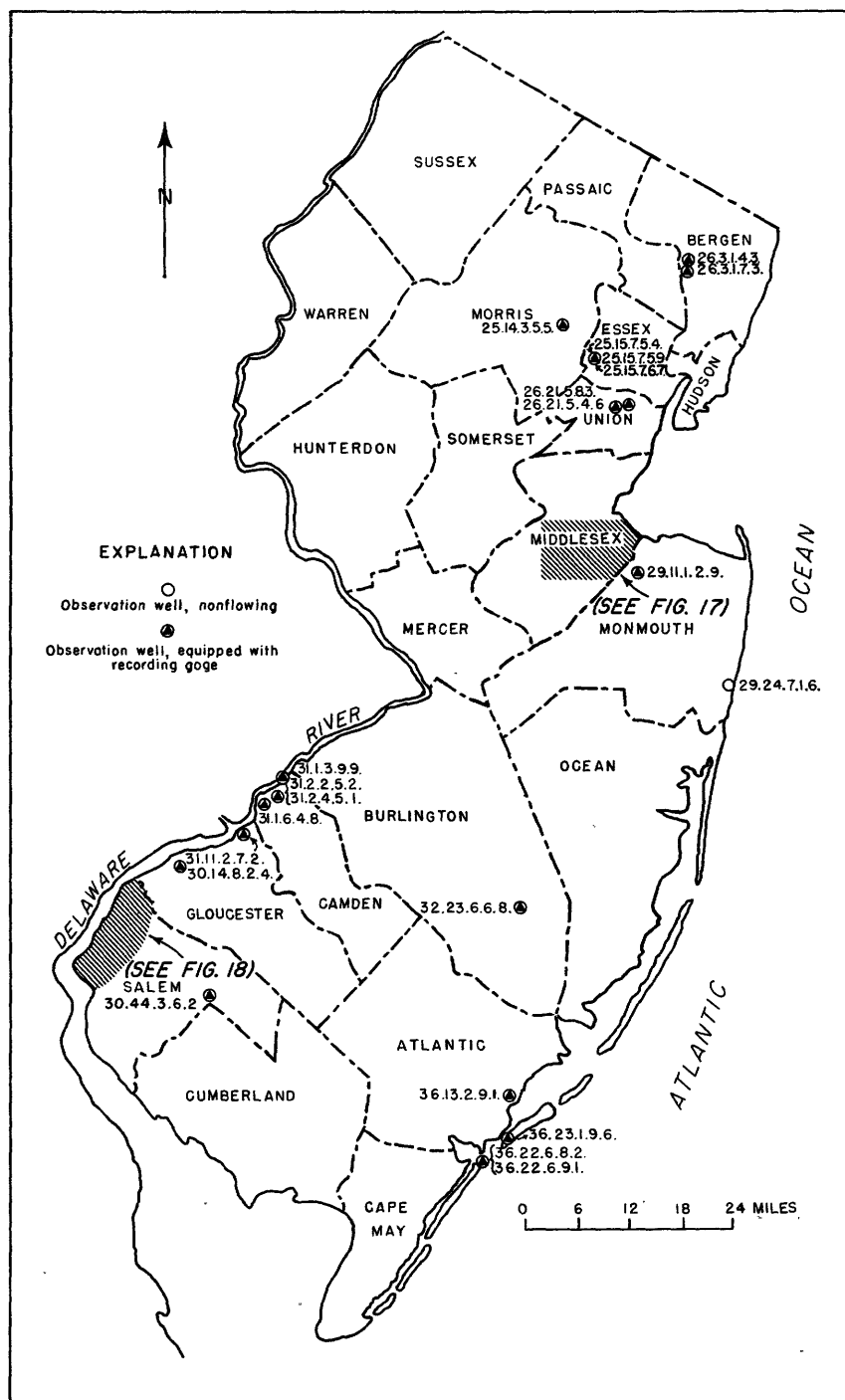


Figure 16. --Location of observation wells in New Jersey, 1954.

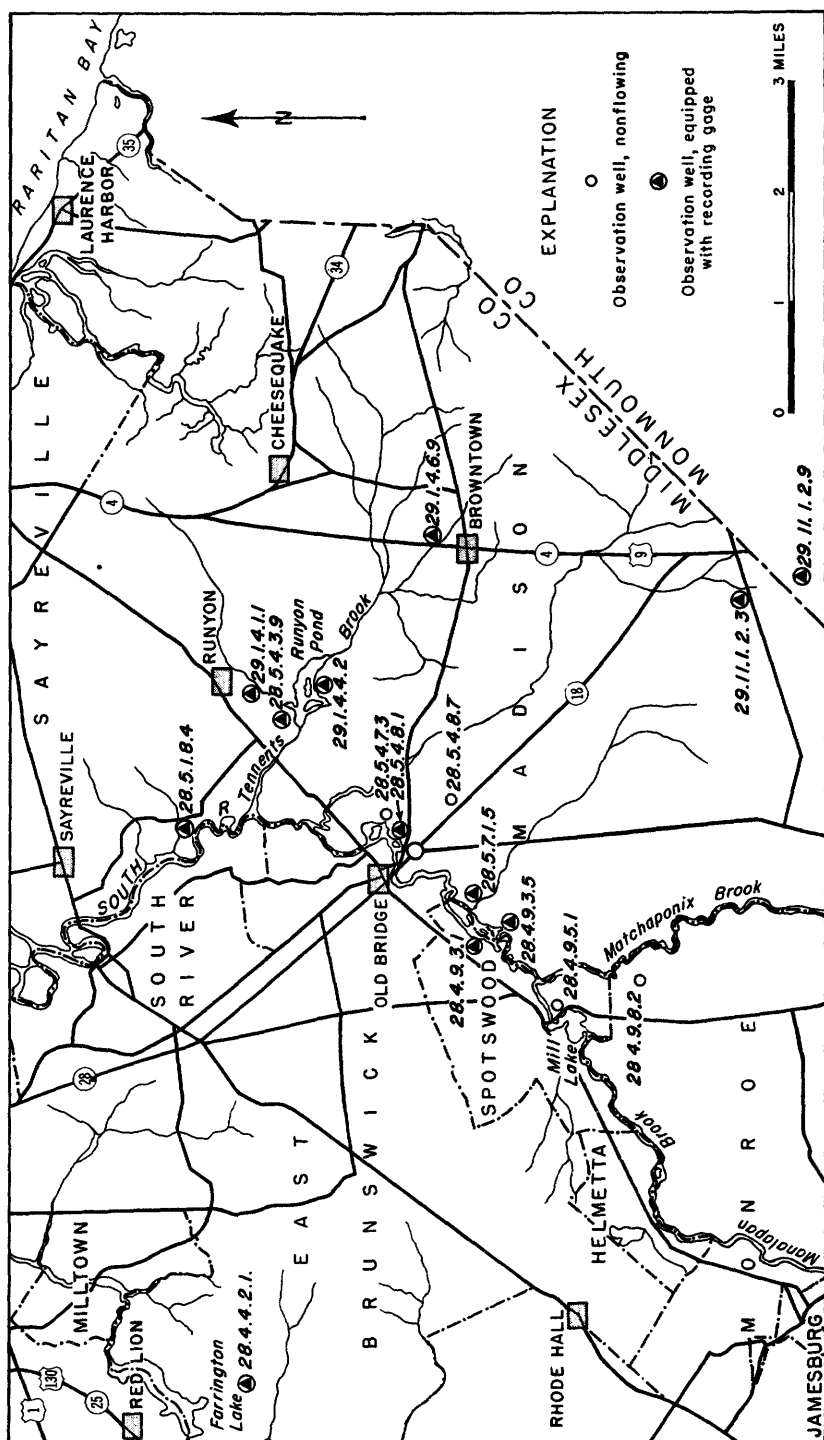


Figure 17. --Location of observation wells in Middlesex County, N. J., 1954.

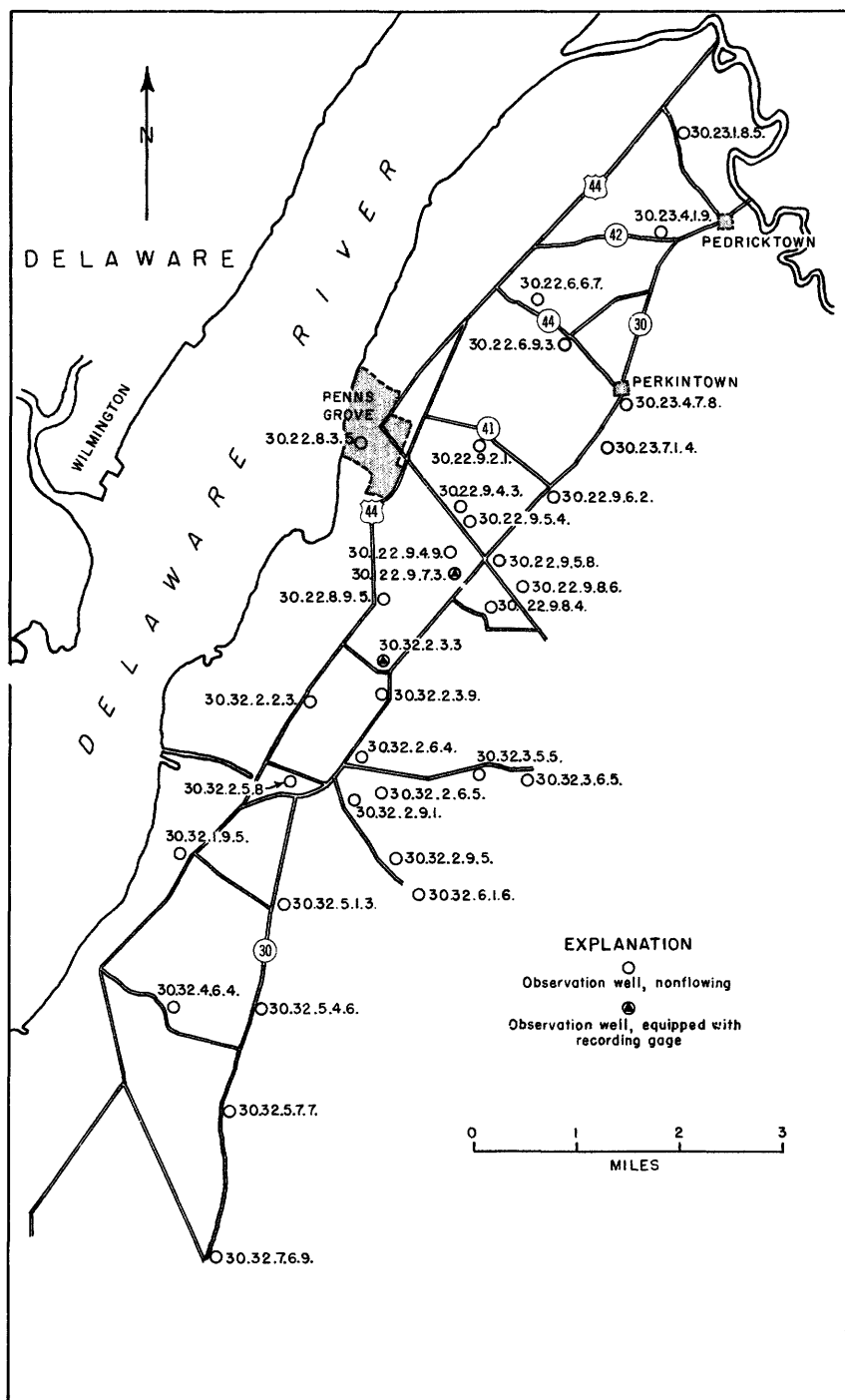


Figure 18. --Location of observation wells in Salem County, N. J., 1954.

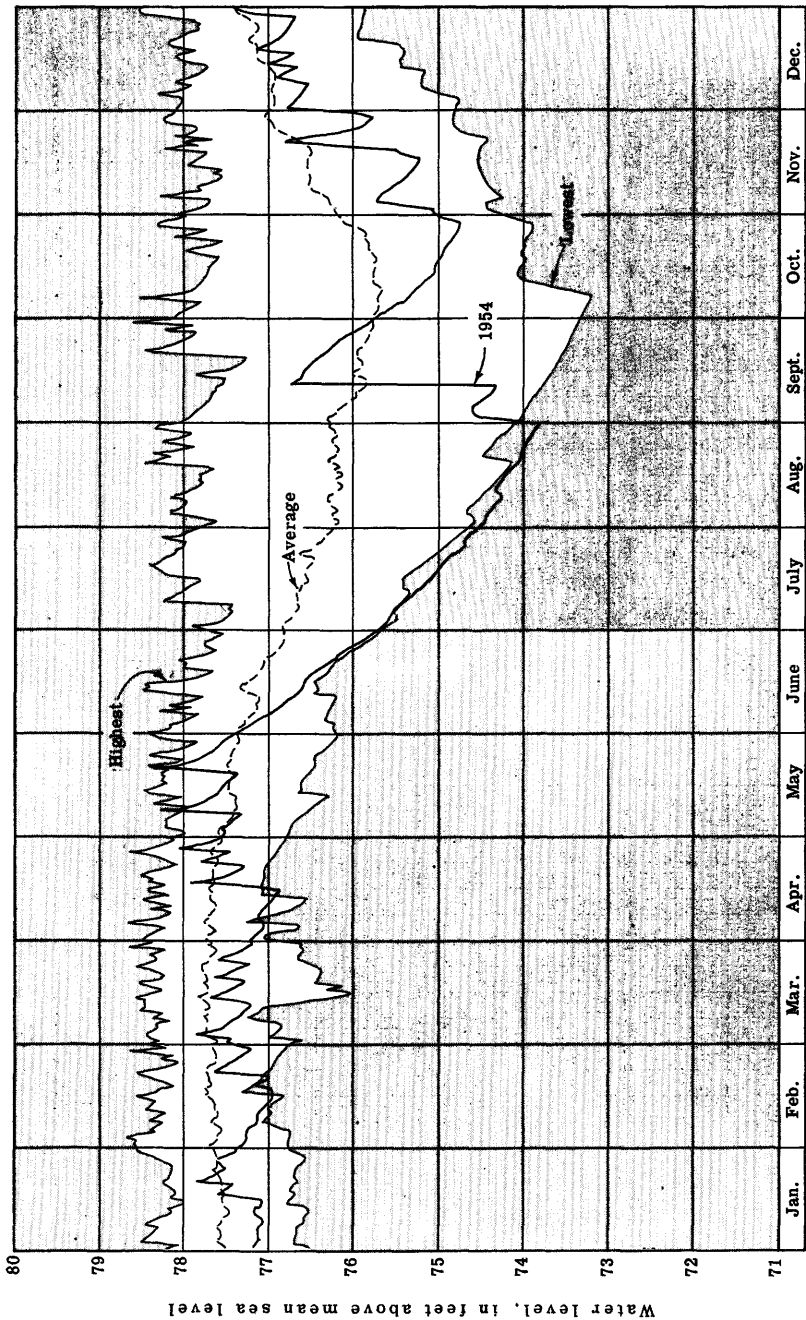


Figure 19. --Hydrograph of well 32.23.6.8 in Burlington County, N. J., showing water level at end of each day in 1954 and high, low, and average end-of-day levels for the period 1936-53.

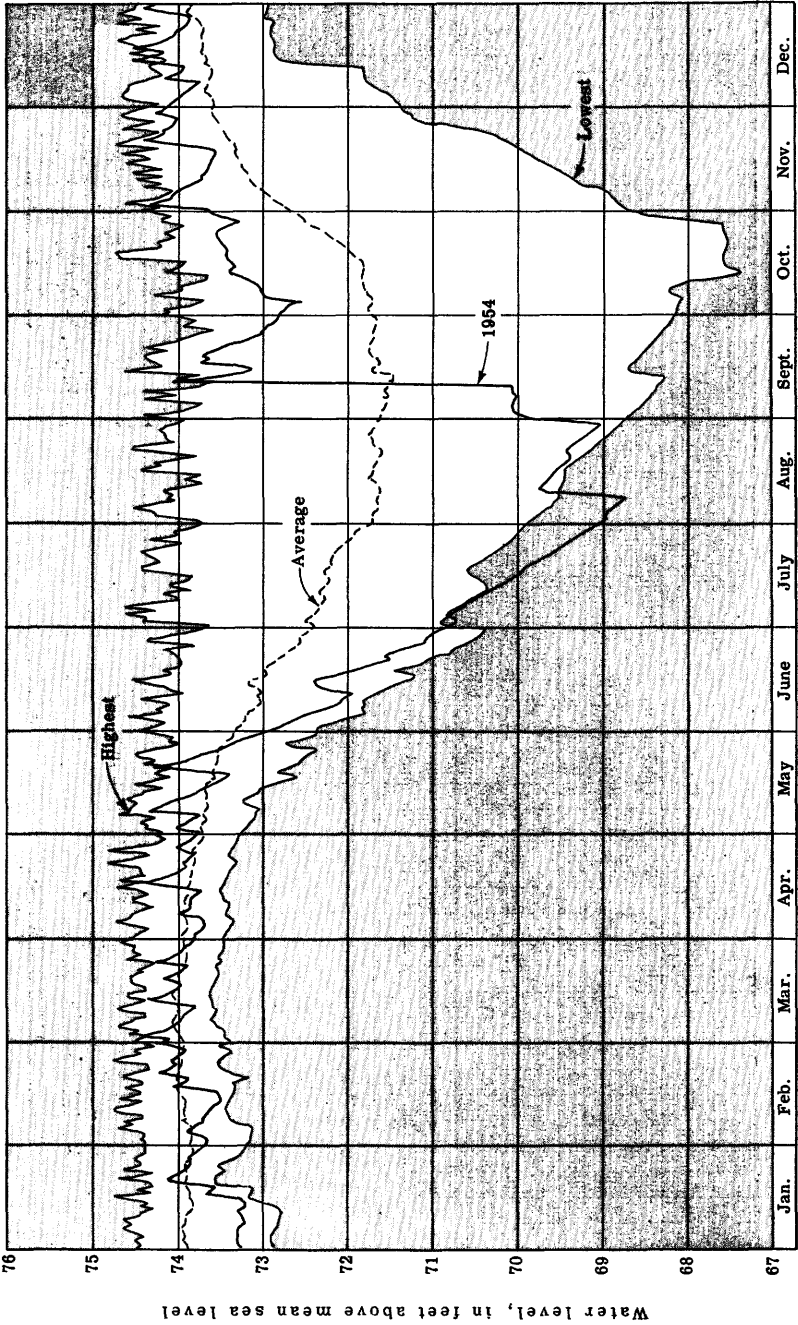


Figure 20. --Hydrograph of well 29.11.1.2.3 in Middlesex County, N. J., showing water level at end of each day in 1954 and high, low, and average end-of-day levels for the period 1923-53.

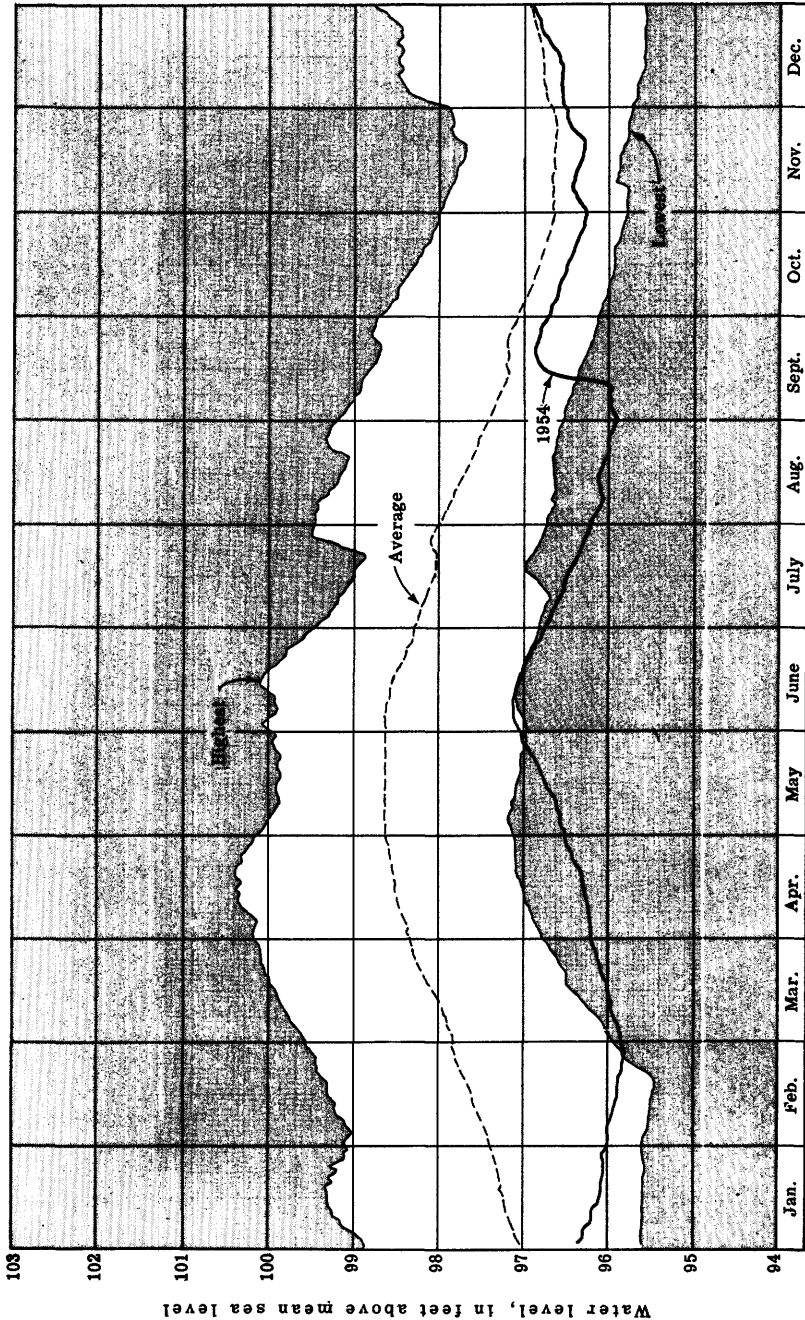


Figure 21. --Hydrograph of well 29.11.1.2.9 in Monmouth County, N. J., showing water level at end of each day in 1954 and high, low, and average end-of-day levels for the period 1936-53.

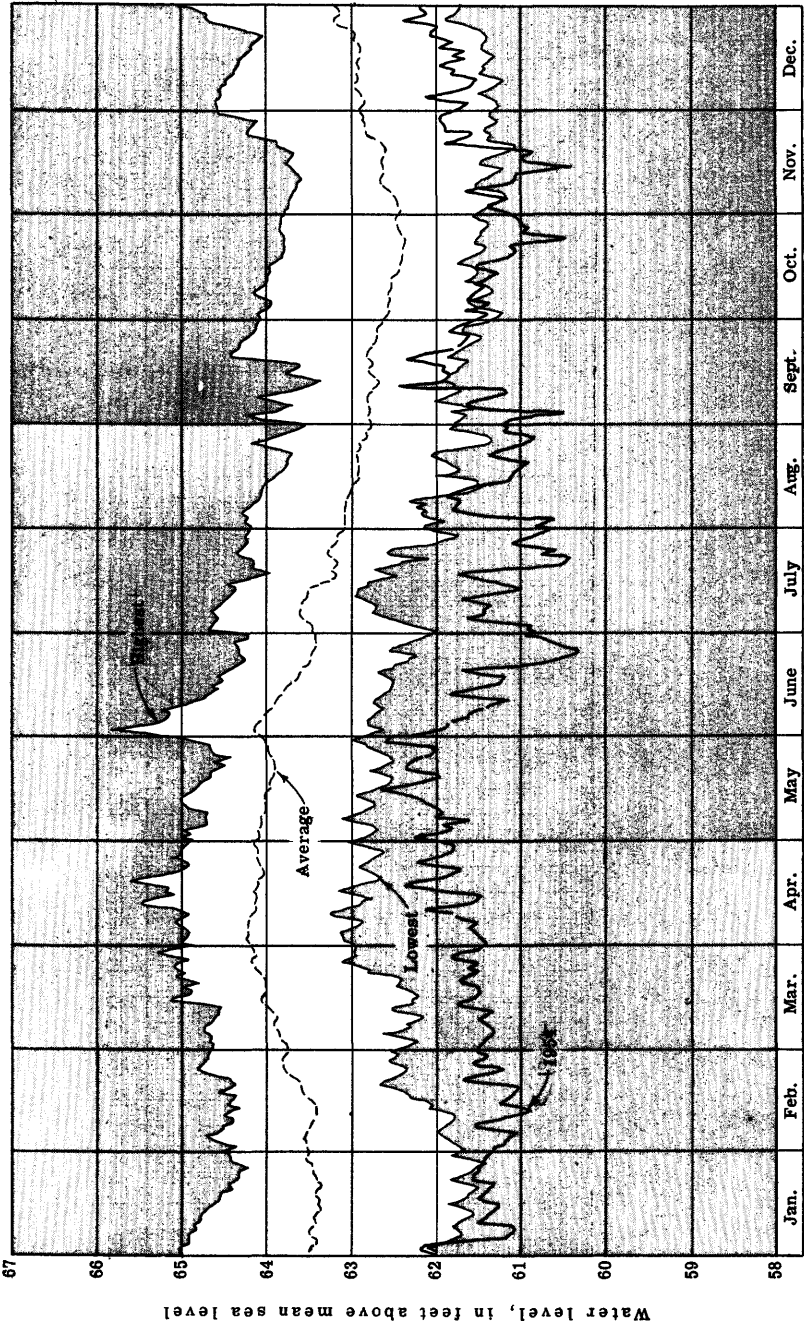


Figure 22. --Hydrograph of well 26.21.5.4.6 in Union County, N. J., showing water level at end of each day in 1954 and high, low, and average end-of-day levels for the period 1943-53.

Cape May County. --Water levels in the American Ice Co. well (36.22.6.8.2) during the first 6 months of 1954 were about 5 feet lower than during the same period in 1953, a record low having been observed during the month of July 1953. During the last 6 months of 1954, the levels were nearly the same as those of 1953. A record low of 70.5 feet below msl was recorded in the Schwartz well (36.22.6.9.1) on August 3, 1954, the previous record low having been 66.2 feet below msl on September 6, 1953. Water levels in this area were slightly lower throughout 1954 than during 1952 and 1953.

Essex County. --A record low of 101.4 feet above msl was observed in the Commonwealth Water Co. well 30 (25.15.7.5.4) on August 29, 1954, the previous record low having been 104.2 feet above msl on November 29, 1953. A record low of 134.90 feet above msl was observed in the East Orange Water Department well (25.15.7.5.9) on September 2, 1954. The previous record low in this well was 136.30 feet above msl on October 26, 1953. Water levels in these wells were nearly 4 feet lower throughout 1954 than in 1953. The lows in this area may be attributed to increase in the rate of pumping and a deficiency in rainfall during 1954.

Gloucester County. --A record low of 3.70 feet below msl was observed in the E. I. du Pont de Nemours Co. well (30.14.8.2.4) on August 26, 1954. A record low of 46.8 feet below msl was observed in the Texas Co. well 3 (31.11.2.7.2) on July 29, 1954. Water levels throughout 1954 were generally lower in this area, owing to increased industrial usage.

Middlesex County. --The Joseph Morrell well (29.11.1.2.3) in Middlesex County is considered to be a reliable index of the amount of water stored in the ground, particularly during the growing season. This well responds quickly to precipitation and is so situated that it is not affected by pumping. Figure 20 is a composite hydrograph of the Joseph Morrell well, showing the highest, lowest, and average water levels at the end of each day from 1923 to 1954. The 1954 record has been plotted as a separate line to show its relation to the average and record highs and lows. Several record lows were noted in the Duhernal wells in this area, but after the September hurricane the water levels for the balance of the year were slightly higher than average.

Monmouth County. --The Rulif Hulsart well (29.11.1.2.9) is a reliable index to ground-water levels in this area. Figure 21, a composite hydrograph showing the highest, lowest, and average end-of-day water levels for the years 1936 to 1954, indicates the seasonal trends. During most of 1954, water levels were much lower than in 1953, and record lows were noted for the months of March, April, May, July, and August. Shortly after the heavy rainfalls at the end of August and during the first part of September, water levels in this well started to rise and, although they were below average for the balance of 1954, by December 31 they had almost reached the average point.

Union County. --A record low of 60.26 feet above msl was observed in the Union County Park Commission well (26.21.5.4.6) on June 25, 1954, the previous record low of 61.03 feet above msl having been observed on November 20, 1953. Figure 22 is a composite hydrograph showing the highest, lowest, and average end-of-day water levels from 1943 to 1954. The 1954 record has been plotted as a separate line to show its relation to the average and to the record highs and lows. Record lows were observed throughout 1954 until the early part of September and again during October and November. Although water levels rose slightly during the month of December so that no record lows were noted, the levels were below average. The lowering of water levels in this area may be attributed to deficiencies in rainfall and to increased industrial usage.

Well-Numbering System

The well-numbering system is based upon the State topographic atlas sheets. The first segment of the number is that of the atlas sheet on which the well location may be found. The second refers to the 6-minute rectangle in which the well is situated. The third refers to the 2-minute rectangle into which the 6-minute rectangle is subdivided. Each of the 2-minute rectangles is divided into nine equal rectangles which are numbered from 1 to 9, beginning in the upper left corner and numbering to the right. These divisions are again divided into nine equal rectangles and numbered in the same way.

Well Descriptions and Water-Level Measurements

Water levels are in feet below mean sea level unless otherwise indicated. When some measurements in a table are above and others are below the plane of reference, a plus (+) or minus (-) sign is placed immediately before the first entry in each column of each mixed table. Readings that are between minus signs are below the plane of reference and those between plus signs are above the plane of reference.

Atlantic County

36.13.2.9.1. (A. C. 600-foot) Atlantic City Water Dept. Pumping station between Absecon and Pleasantville. Drilled unused artesian well in Atlantic City 800-foot sand unit of Kirkwood formation, diameter 10 inches, depth 692 feet. Land-surface datum is 12.58 feet above msl. Highest water level 3.05 below msl, Mar. 28, 1925; lowest 30.0 below msl, Oct. 11, 1954. Records available: 1925-54.

Water level at end of day from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	26.4	....	25.0	24.6	24.1	24.1	25.0	27.1	29.2	30.0	e29.6	28.5
2	26.4	....	25.0	24.5	24.1	24.1	25.1	27.2	29.3	30.0	e29.6	28.5
3	26.4	....	25.0	24.5	24.1	24.1	25.1	27.2	29.3	30.0	e29.6	28.5
4	26.3	25.5	25.0	24.5	24.1	24.1	25.2	27.3	29.4	30.0	e29.6	28.4
5	26.3	....	25.0	24.5	24.1	24.2	25.2	27.4	29.4	30.0	29.6	28.4
6	26.3	....	25.0	24.5	24.1	24.2	25.3	27.5	29.4	30.0	29.6	28.3
7	26.2	....	25.0	24.5	24.1	24.2	25.3	27.6	29.5	30.0	29.6	28.3
8	26.2	....	25.0	24.4	24.1	24.2	25.3	27.6	29.5	30.0	29.6	28.2
9	26.2	....	25.0	24.4	24.1	24.2	25.4	27.7	29.6	30.0	29.6	28.2
10	....	....	25.0	24.4	24.1	24.2	25.5	27.8	29.6	30.0	29.5	28.1
11	....	....	24.9	24.4	24.1	24.3	25.6	27.9	29.6	30.0	29.5	28.1
12	....	....	24.9	24.4	24.1	24.3	25.6	28.0	29.6	30.0	29.5	28.1
13	....	....	24.9	24.4	24.1	24.3	25.7	28.0	29.7	30.0	29.5	28.1
14	....	....	24.9	24.4	24.1	24.3	25.8	28.1	29.7	e30.0	29.4	27.9
15	....	....	24.8	24.4	24.1	24.4	25.8	28.2	29.7	e30.0	29.4	27.8
16	....	....	24.8	24.3	24.1	24.4	25.9	28.3	29.8	e30.0	29.3	27.7
17	....	....	24.8	24.2	24.1	24.5	26.0	28.4	29.8	e29.9	29.3	27.7
18	....	....	24.8	24.2	24.1	24.5	26.1	28.4	29.8	e29.9	29.2	27.7
19	....	e25.3	24.8	24.2	24.1	24.5	26.1	28.5	29.8	e29.9	29.1	27.6
20	....	e25.3	24.7	24.2	24.1	24.6	26.2	28.6	29.8	e29.9	29.0	27.6
21	....	e25.3	24.7	24.2	24.1	24.6	26.2	28.7	29.8	e29.8	28.9	27.6
22	....	e25.3	24.7	24.2	24.1	24.6	26.3	28.7	29.8	e29.8	28.8	27.6
23	....	25.2	24.7	24.2	24.1	24.7	26.4	28.8	29.9	e29.8	28.8	27.5
24	....	25.2	24.7	24.2	24.1	24.7	26.5	28.9	29.9	e29.8	28.7	27.5
25	....	25.1	24.7	24.2	24.1	24.7	26.5	28.9	29.9	e29.7	28.7	27.5
26	....	25.1	24.7	24.2	24.1	24.8	26.6	29.0	29.9	e29.7	28.7	27.5
27	....	25.1	24.7	24.2	24.1	24.8	26.7	29.0	29.9	e29.7	28.6	27.5
28	....	25.1	24.7	24.1	24.1	24.9	26.8	29.1	29.9	e29.7	28.6	27.5
29	....	....	24.6	24.1	24.1	24.9	26.8	29.1	29.9	e29.6	28.5	27.4
30	....	....	24.6	24.1	24.1	24.9	26.9	29.2	29.9	e29.6	28.5	27.3
31	....	....	24.6	....	24.1	....	27.0	29.2	....	e29.6	....	27.3

e Estimated.

36.23.1.9.6. Borough of Longport. Northwest end of 14th Ave. Drilled unused artesian well in Atlantic City 800-foot sand unit of Kirkwood formation, diameter 6 inches, depth 803 feet, length of screen 50 feet. Land-surface datum is 5 feet above msl. This well is affected by tidal fluctuations. Highest water level 19.0 above msl, when drilled 1895; lowest 72.4 below msl, Aug. 1, 1954. Records available: 1924-54.

Daily average water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	47.4	45.8	44.1	43.1	45.0	53.1	62.5	71.6	69.4	61.7	....	51.4
2	47.3	45.4	44.8	43.5	45.3	52.8	63.1	71.5	e69.2	e61.5	....	50.8
3	46.7	45.0	44.5	43.8	45.4	53.4	64.0	70.7	....	60.7	....	50.6
4	46.9	44.9	45.0	44.0	45.2	53.9	64.0	70.7	....	....	....	50.2
5	46.6	45.0	45.2	43.9	45.2	54.8	63.3	71.1	70.1	....	54.7	50.3
6	46.9	45.4	44.7	43.8	45.5	55.9	....	70.1	70.4	....	54.2	50.0
7	46.9	45.6	44.7	43.9	45.7	56.5	63.0	70.4	70.8	....	54.2	49.9
8	47.0	45.6	44.5	43.7	45.6	56.7	62.8	....	70.1	....	54.4	50.8
9	46.7	45.1	44.2	43.9	45.2	57.2	62.8	71.3	69.4	....	54.5	50.8
10	46.5	44.9	44.0	44.0	45.2	57.6	63.5	69.7	66.6	....	54.3	50.7
11	45.5	44.9	44.0	44.1	45.4	56.6	64.5	69.7	e66.1	....	54.2	51.0
12	45.9	45.4	44.1	44.3	45.1	56.4	64.9	70.3	66.8	....	54.4	50.5
13	46.9	45.7	44.1	44.3	45.3	56.3	65.2	70.7	66.2	....	....	50.3
14	46.4	45.4	43.4	44.2	45.5	55.8	66.0	....	65.7	....	....	49.1
15	46.4	45.2	44.0	44.0	45.2	56.1	66.3	....	64.9	....	....	49.5
16	45.6	45.1	43.8	43.6	45.8	55.5	65.1	....	64.1	....	....	50.5
17	46.8	44.7	44.0	43.6	47.2	55.2	65.3	....	....	58.0	....	50.2
18	46.9	44.8	43.9	44.3	47.4	55.8	65.9	....	63.8	58.2	52.3	49.5
19	46.4	44.9	43.6	44.3	46.8	56.7	65.8	....	....	....	52.0	49.9
20	46.4	44.8	43.2	44.6	46.2	57.3	66.2	....	....	....	52.0	49.6

36.23.1.9.6--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	45.5	44.5	43.7	44.8	45.5	57.8	67.0	e70.5	....	....	51.9	49.8
22	....	44.6	44.0	44.9	46.1	58.5	67.5	69.6	....	....	52.4	50.0
23	45.2	44.7	43.7	45.1	46.3	58.7	67.9	69.7	....	....	52.1	49.5
24	45.6	44.4	43.7	44.9	47.1	58.6	68.6	69.9	....	58.1	51.3	49.6
25	46.1	44.3	43.5	44.8	47.4	59.0	69.2	70.4	....	58.2	51.2	49.5
26	46.0	44.2	43.5	45.0	e47.4	59.5	69.5	70.6	....	57.7	51.4	49.4
27	45.7	44.5	43.9	44.7	e47.6	60.3	69.6	70.7	....	57.1	51.4	49.4
28	45.8	44.6	43.8	44.0	e48.2	61.1	70.1	....	....	....	51.4	49.2
29	45.4	....	43.7	44.0	49.1	61.2	70.4	70.6	....	....	51.8	48.9
30	45.8	....	43.5	44.6	50.3	61.9	70.8	69.8	62.3	....	52.5	48.6
31	46.0	....	43.2	....	52.0	....	71.2	....	....	e55.4	....	48.8

e Estimated.

Bergen County

26.3.1.4.3. William Wanke. 77 Rosemont Ave., East Paterson. Drilled unused artesian well in Brunswick shale, diameter 6 inches, depth 110 feet, cased to rock. Land-surface datum is 70 feet above msl. Highest water level 58.81 above msl, Oct. 26, 1927; lowest 21.8 above msl, Jan. 5, 1950. Records available: 1926-54.

Daily lowest water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	36.8	35.6	34.7	....	....	39.4	31.0	26.7	27.0	....	33.8	32.6
2	36.8	35.9	34.7	32.4	....	39.0	30.9	....	26.3	....	33.5	32.9
3	37.4	36.0	34.6	32.1	37.9	38.8	....	....	25.7	....	32.8	33.2
4	37.7	35.9	34.7	32.1	37.9	38.4	....	....	25.3	....	32.3	33.6
5	37.8	35.6	34.6	31.9	37.9	38.8	32.4	....	25.2	34.8	31.9	34.0
6	37.6	35.5	34.6	33.2	38.0	38.8	32.7	....	25.1	35.8	31.4	34.2
7	37.5	35.3	34.6	33.7	38.0	38.3	32.3	....	26.0	....	31.2	....
8	37.3	35.5	34.3	34.0	38.2	37.4	32.4	....	....	....	31.3	....
9	37.1	35.3	34.1	34.6	38.4	37.1	31.1	26.9	....	37.0	32.4	....
10	37.4	35.2	34.1	34.7	38.6	37.1	30.8	27.2	....	37.0	32.6	....
11	37.4	35.0	....	34.8	38.8	36.5	30.3	....	....	34.2	32.6	....
12	37.1	34.6	....	34.7	39.0	....	30.3	....	....	32.8	32.7	....
13	37.1	34.6	....	35.3	39.1	....	30.1	....	30.5	31.9	32.6	....
14	36.9	34.6	....	35.9	39.3	36.2	29.1	....	29.4	31.1	32.7	....
15	37.1	....	....	36.2	39.4	36.1	28.8	....	29.4	31.0	32.6	....
16	36.9	35.1	32.2	36.3	39.4	36.3	28.8	27.6	29.7	31.2	32.5	....
17	36.6	35.1	31.9	36.5	39.2	....	29.4	27.3	29.5	32.3	32.6	....
18	36.9	35.0	32.0	36.6	39.2	....	29.4	....	29.5	32.1	32.6	....
19	36.8	34.8	31.7	36.8	39.4	....	29.2	27.2	29.8	....	32.4	....
20	36.8	34.8	31.8	36.9	39.7	....	28.8	26.9	30.0	....	32.4	....
21	36.6	....	31.6	37.0	40.2	32.4	28.5	26.9	32.8	....	32.3	....
22	36.4	34.7	31.6	....	40.1	32.0	28.0	....	34.8	....	32.4	....
23	36.3	34.6	32.7	....	40.1	32.0	27.8	27.6	....	....	....	....
24	36.2	34.6	33.2	....	40.3	32.2	27.4	27.6	....	....	....	....
25	36.2	34.6	33.5	....	40.1	31.6	27.4	27.4	....	....	....	....
26	36.0	....	33.9	....	39.9	31.5	27.5	....	36.7	35.5	....	....
27	35.9	....	33.8	....	39.9	31.8	27.8	27.2	37.0	35.5	....	....
28	35.6	....	33.9	....	40.0	31.8	28.1	27.1	36.1	35.3	....	....
29	35.5	....	34.1	....	39.7	31.8	27.4	27.1	36.1	35.3	31.9	37.6
30	35.4	....	....	....	39.5	31.6	27.3	27.4	34.5	35.2	31.9	37.6
31	35.3	....	....	....	39.7	....	27.0	27.5	....	35.2	....	37.5

26.3.1.7.3. City of Garfield. East Paterson. Drilled unused artesian well in Brunswick shale, casing 0-30 extends 3 feet into sandstone of Triassic system, 30-353 open rock hole, diameter 12 inches, depth 353 feet. Land-surface datum is 65 feet above msl. Highest water level 56.2 above msl, Mar. 8, 1926; lowest 8.9 below msl, Sept. 26, 1949. Records available: 1926-54.

Daily lowest water level, above and below msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+12.7	+1.7	-0.8	-4.2	....	+12.2	+3.1	-5.1	-0.1	....	....	-0.6
2	9.9	.0	2.0	4.2	....	9.3	1.1	3.8	.5	....	....	-.1
3	15.7	-1.5	3.4	4.3	+8.3	7.8	2.2	4.8	.8	....	+1.8	....
4	7.6	1.9	4.0	3.1	5.7	6.9	2.7	5.1	-.5	....	.0	....
5	6.0	-2.9	5.0	3.1	6.5	13.8	11.2	4.9	+1.5	....	-2.4	....

26. 3. 1. 7. 3--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	+5.8	+0.4	-5.4	-2.8	+6.8	+16.7	+6.4	-5.5	+0.7	+4.5	-2.5	....
7	2.6	.6	1.0	-3.0	7.3	10.7	4.7	5.8	.0	3.8	+1	....
8	1.0	1.8	3.1	+4	13.3	8.7	5.4	5.9	-6	2.7	-6	....
9	.9	1.8	4.7	.0	11.0	6.4	3.0	5.9	.5	1.6	3.2	....
10	....	9.8	5.5	-1.4	10.9	5.5	3.3	6.1	-3	....	4.7	....
11	....	+1.9	5.6	1.8	8.7	4.9	5.6	4.9	+2.1	5.5	5.5	....
12	2.0	-1.4	5.5	1.1	6.7	3.7	4.0	3.0	1.4	3.9	6.1	....
13	+7	2.2	-5.5	1.9	8.0	3.6	+1.3	3.1	1.1	1.1	6.4	....
14	.0	-1.0	+2	2.3	8.7	5.5	-1	4.9	.8	.9	6.4	....
15	-8	+9	-2.5	2.6	14.5	4.0	.0	5.0	.7	.5	4.9	....
16	-9	+5	4.2	2.8	21.8	5.8	+1	2.3	1.1	3.3	4.9	....
17	....	-1.7	5.0	3.1	12.2	5.7	1.5	3.9	2.0	7.0	5.7	....
18	....	1.2	5.4	3.1	10.5	4.5	3.8	1.3	....	6.2	6.0	+3.9
19	+8	-1.6	5.4	1.7	9.0	2.8	+2.8	1.4	....	4.3	4.5	6.5
20	-7	+1.3	5.6	2.2	7.9	1.7	.0	-1.6	5.5	4.2	5.8	5.0
21	1.6	1.4	5.6	2.4	10.5	+8	-1.4	+1.7	5.8	11.2	6.0	2.6
22	2.2	2.3	2.1	2.6	17.0	.0	2.5	6.5	5.2	11.6	2.9	1.2
23	-2.4	+1.2	3.4	2.9	....	.0	3.4	9.0	5.0	4.1	3.3	.7
24	....	-1.6	4.0	-2.9	14.3	+2.4	4.2	9.0	5.4	3.0	3.5	.1
25	....	2.0	4.2	+4.9	13.0	2.2	4.3	8.3	....	3.0	4.4	3.8
26	+9	1.8	4.6	5.2	11.5	.7	2.3	7.8	....	2.7	2.4	12.0
27	+2	-1.9	4.6	5.3	10.2	.5	1.6	2.3	....	....	1.9	16.2
28	-1.1	+1	3.0	4.3	9.1	3.2	3.3	+3	....	....	.3	15.9
29	-2.4		2.4	4.2	16.1	3.3	4.0	-1.0	....	....	.7	15.8
30	.0		3.5	4.7	20.9	3.8	3.6	.1	....	....	2.0	15.6
31	....		4.0		18.4		4.8	.1		....		15.5

Burlington County

32. 23. 6. 6. 8. U. S. Geol. Survey. Penn State Forest. Drilled observation water-table well in Cohansey sand, diameter 6 inches, depth 10 feet. Land-surface datum is 79 feet above msl. Highest water level 78.67 above msl, Feb. 3, 1939; lowest 73.18 above msl, Oct. 7, 1951. Records available: 1936-54.

Water level at end of day, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	77.17	77.27	77.50	77.20	77.54	77.30	75.70	74.45	74.52	e75.70	75.07	e76.79
2	77.14	77.27	77.44	77.17	77.51	77.23	75.63	74.45	74.59	e75.60	75.37	e76.74
3	77.13	77.27	77.86	77.10	77.59	77.18	75.58	74.46	74.61	e75.55	75.72	e76.70
4	77.12	77.26	77.70	77.06	77.50	77.11	75.57	74.39	74.60	e75.50	75.70	e76.65
5	77.12	77.21	77.56	77.06	77.44	77.05	75.54	74.39	74.55	75.40	e75.68	e76.60
6	77.13	77.16	77.50	77.12	77.38	76.99	75.51	74.35	74.49	75.38	e75.60	e76.58
7	77.10	77.13	77.44	77.12	77.32	76.92	75.48	74.30	74.44	75.32	e75.55	e76.56
8	77.08	77.13	77.37	77.12	78.29	76.85	75.45	74.25	74.38	75.29	e75.50	e76.53
9	77.10	77.11	77.35	77.08	77.98	76.81	75.40	74.26	74.33	75.26	e75.43	e76.80
10	77.15	77.08	77.30	77.04	77.87	76.79	75.35	74.31	74.33	75.22	e75.40	e76.90
11	77.17	77.04	77.24	77.03	77.75	76.70	75.29	74.33	76.75	75.16	e75.36	e76.86
12	77.16	76.99	77.20	76.98	77.69	76.66	75.24	74.30	76.64	75.11	e75.32	e76.76
13	77.09	76.97	77.27	76.95	77.61	76.62	75.18	74.26	e76.62	75.05	e75.29	e76.68
14	77.08	76.97	77.72	76.90	77.58	76.59	75.12	74.23	e76.60	75.03	e75.25	e76.99
15	77.10	76.97	77.55	76.86	77.55	76.58	75.11	74.22	e76.58	75.05	e75.23	e76.89
16	77.61	76.97	77.44	77.09	77.49	76.56	75.06	74.18	e76.53	75.02	e75.21	e76.80
17	77.53	77.16	77.37	77.92	77.47	76.51	75.03	74.13	e76.50	74.99	e75.38	e76.71
18	77.45	77.10	77.31	77.69	77.42	76.46	75.00	74.09	e76.45	74.97	e75.49	e77.15
19	77.40	77.02	77.29	77.51	77.37	76.40	74.98	74.06	e76.40	74.95	e75.85	e77.05
20	77.85	76.99	77.66	77.41	77.88	76.33	74.92	74.03	e76.35	74.94	e76.35	e76.97
21	77.70	77.64	77.51	77.34	78.34	76.27	74.88	74.03	e76.30	74.91	e76.81	e76.80
22	77.60	77.60	77.41	77.28	78.05	76.21	74.84	74.01	e76.25	74.86	e76.60	e76.85
23	77.54	77.50	77.34	77.81	77.89	76.19	74.78	73.98	e76.20	74.84	e76.37	e76.81
24	77.51	77.44	77.23	77.70	77.80	76.13	74.73	73.96	e76.15	74.81	e76.11	e76.77
25	77.58	77.37	77.61	77.56	77.75	76.07	74.68	73.93	e76.10	74.79	e75.95	e76.74
26	77.60	77.31	77.51	77.46	77.66	76.01	74.72	73.90	e76.00	74.78	e75.89	e76.73
27	77.58	77.23	77.38	78.08	77.60	75.93	74.69	73.89	e75.95	74.77	e75.83	e76.70
28	77.44	77.20	77.31	77.95	77.58	75.87	74.64	73.86	e75.85	74.76	e75.75	e76.69
29	77.39		77.27	77.71	77.52	75.81	74.60	73.83	e75.80	74.87	e75.87	e77.20
30	77.38		77.19	77.60	77.45	75.76	74.55	73.81	e75.75	74.98	e76.27	e77.37
31	77.30		77.23		77.35		74.50	74.25		75.05		e77.41

e Estimated.

Camden County

31.1.3.9.9. Cities Service Oil Co. Pettys Island. Drilled unused artesian well in sand of Raritan formation, diameter 8 inches, depth 143 feet. Land-surface datum is 12 feet above msl. This well reflects tidal fluctuations. Highest water level 5.6 above msl, Dec. 8, 1950, Mar. 11, 1952; lowest 4.8 below msl, Feb. 12, 1951. Records available: 1949-54.

Daily lowest water level, above and below msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	-0.1	0.0	+1.2	+0.7	+0.9	+0.8	+0.5	-0.1	+0.2	-0.1	-0.1	-0.6
2	-1	+7	.8	+7	.9	.9	.3	.0	.2	-1	.0	+2
3	+6	.8	.7	....	1.2	1.0	.4	+5	+3	+1	+4	.3
4	.0	1.0	+2	....	.8	.9	.6	.3	-2	+2	-4	.3
5	+3	.7	-5	....	.9	.7	.8	+2	.0	-1	.5	+5
6	+7	.6	-1	....	1.1	.8	.7	-1	-2	.1	-2	-2
7	.0	.1	+2	....	1.0	.5	.8	+1	+2	.6	+1	.4
8	-4	.4	.2	....	1.6	1.0	.5	.2	-2	-1	+2	.3
9	+1	.4	.2	-1	1.4	.9	.5	.4	-3	.0	-1	.5
10	.3	+3	.8	+1	1.2	.8	.5	+3	+2	-1	.4	.5
11	+9	.0	.5	+6	1.0	.9	.6	-1	+1	.0	.1	1.1
12	-4	-5	.5	-1	.7	.8	.7	.5	-5	.0	.6	.8
13	.3	-5	.3	+1	.9	.8	.7	.5	.2	-1	-5	.5
14	-5	+2	+7	.3	1.2	....	+5	.4	.1	-1	+1	-1
15	+4	.2	-2	.5	....	.7	.0	-2	-1	+3	-3	+5
16	+6	.1	.4	1.1	....	.9	-1	.0	+4	.5	+1	-6
17	-1	.4	-1	.7	1.1	1.0	+2	-4	.3	+4	.3	-8
18	.0	.1	+1	.9	1.0	.9	.5	.3	.4	-1	.3	+2
19	+1	.6	.2	.9	1.1	.8	.5	.1	.7	+2	.6	+6
20	.2	.6	1.0	1.0	1.1	.8	.3	.2	.8	.1	.8	.0
21	.3	1.0	+1	.8	.9	.8	.5	.2	.6	.5	.9	-3
22	.2	.6	.0	.8	.8	.7	.3	.1	+1	.2	.4	.9
23	.7	.8	+4	.7	.8	.7	.2	-1	-5	+1	.4	.5
24	....	1.0	.5	.6	.9	.3	.2	+1	.5	-3	.8	.5
25	....	1.1	.9	1.1	....	.3	.2	-2	.1	-3	.9	.7
26	....	.5	.4	.9	....	.6	.3	-2	-1	+1	.6	.3
27	+1.2	.2	.2	1.2	....	+6	.2	.0	.0	+3	.5	1.9
28	-6	.9	.4	1.3	....	.0	.1	.0	+1	-3	+6	.3
29	+3		1.0	1.3	....	+3	+1	.0	-1	+4	-4	-2
30	+1.0		.6	1.0	....	+4	.0	+3	+2	+1	-1.1	.0
31	.0		.8		1.0		.0	+7		-1		.0

31.1.6.4.8. Esterbrook Pen Co. Cooper St. and Delaware Ave., Camden. Drilled unused artesian well in sand of Raritan formation, diameter 6 inches, depth 300 feet. Land-surface datum is 8 feet above msl. Highest water level 3.48 above msl, Nov. 25, 1950; lowest 12.77 below msl, Oct. 2, 1954. Records available: 1950-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	9.99	10.05	9.10	11.03	10.20	9.67	9.43	11.27	12.29	12.75	10.80	11.22
2	9.72	10.47	9.81	11.02	9.65	10.16	9.29	11.23	12.42	12.77	10.99	11.28
3	9.06	10.58	10.08	10.89	9.50	10.32	9.29	11.58	12.52	12.24	....	11.37
4	9.08	10.62	10.54	10.42	10.09	10.44	9.25	11.89	12.59	11.52	....	11.49
5	9.50	10.93	11.01	10.16	10.36	10.44	9.09	....	12.03	11.82	....	10.75
6	10.17	11.06	11.01	10.47	10.52	9.77	8.89	....	11.50	....	....	10.50
7	10.59	10.68	10.27	10.78	10.57	9.77	8.72	....	11.52	....	....	10.92
8	10.82	9.98	9.67	11.15	9.85	10.47	8.87	....	12.09	....	10.42	11.33
9	10.87	10.82	....	11.22	9.17	10.75	8.95	....	12.43	....	10.97	....
10	10.29	11.18	10.31	10.73	....	10.93	8.97	....	12.42	....	11.32	....
11	9.71	11.36	10.57	9.97	9.87	11.08	8.95	11.92	12.39	....	11.35	....
12	....	11.88	10.78	9.99	10.40	11.17	9.31	12.20	12.06	....	11.62	....
13	....	11.95	10.82	10.58	10.58	10.33	9.93	12.48	11.74	....	11.64	10.83
14	....	11.56	10.01	10.75	10.78	10.23	10.49	12.48	12.06	11.74	10.95	10.86
15	....	11.23	9.84	10.86	10.78	10.73	10.96	11.95	12.16	11.75	10.57	11.27
16	....	11.36	10.55	10.39	10.10	10.95	11.35	11.01	12.16	11.25	10.96	11.97
17	....	11.33	10.84	9.52	10.01	11.04	11.32	12.03	12.06	10.61	11.16	12.03
18	9.68	11.50	11.04	9.23	10.53	11.14	10.74	12.27	12.09	10.32	11.29	12.00
19	10.47	11.50	11.04	9.52	10.81	11.14	10.46	....	11.59	10.76	11.32	10.93
20	10.78	11.34	10.90	10.12	11.00	10.47	11.27	....	10.94	10.95	11.23	10.58

31.1.6.4.8--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	11.17	10.37	9.92	10.51	11.20	10.42	11.74	.....	11.19	11.05	10.01	11.08
22	11.45	9.31	9.90	10.77	11.22	10.97	.....	.....	11.62	11.28	10.33	11.66
23	11.49	9.49	10.42	11.03	10.68	11.42	.....	.....	.....	11.45	10.74	11.65
24	11.33	9.96	10.75	11.06	10.34	11.70	.....	12.07	.....	10.97	10.84	11.63
25	10.98	10.22	10.77	10.39	10.76	11.76	.....	12.22	.....	10.80	10.83	11.37
26	11.18	10.41	10.95	9.95	11.12	11.65	.....	12.48	.....	11.91	10.49	10.87
27	11.35	10.48	10.99	10.23	11.33	10.65	.....	12.62	.....	11.42	10.49	10.65
28	.....	9.86	10.32	10.58	11.44	10.00	11.34	12.60	11.76	11.82	9.90	11.02
29	.....	.....	9.61	10.79	11.42	9.80	11.55	11.92	12.21	11.86	9.99	11.36
30	.....	.....	10.28	10.78	10.56	9.63	11.72	11.77	12.47	11.86	11.17	11.67
31	.....	.....	10.88	.....	9.79	.....	11.72	12.01	.....	11.45	.....	11.68

31.2.2.5.2. City of Camden. Morris Station. Drilled unused artesian well in sand of Raritan formation, diameter 6 inches, depth 103 feet. Land-surface datum is 6 feet above msl. Highest water level 0.3 below msl, Mar. 19, 1936; lowest 35.84 below msl, June 14, 1926. Records available: 1924-42, 1945-54. This well is affected by pumping in a nearby well field.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5.6	9.9	9.1	9.6	8.8	8.2	8.1	5.8	8.4	7.9	6.6	6.4
2	7.5	10.0	9.9	9.0	7.8	8.4	8.1	5.9	8.5	7.9	6.3	8.0
3	7.6	10.0	9.4	7.0	8.3	8.2	8.0	6.0	8.6	7.3	7.1	8.2
4	9.2	10.3	10.0	6.6	8.5	8.0	7.7	6.0	8.6	7.5	7.5	5.4
5	9.0	10.5	10.4	8.7	8.6	8.2	7.5	6.2	8.5	7.7	7.5	4.9
6	9.0	9.7	10.4	9.4	8.6	7.5	8.0	6.3	8.7	7.6	7.1	...
7	9.4	9.3	9.3	9.6	8.5	8.2	7.7	6.3	8.8	7.8	6.7	9.2
8	9.5	10.2	9.7	9.8	8.3	8.2	8.1	6.1	9.0	7.6	7.1	9.2
9	9.5	10.1	9.7	10.0	7.6	8.2	8.5	6.1	8.9	7.4	7.0	9.2
10	8.4	10.0	9.8	10.0	8.2	8.5	7.8	6.3	8.4	6.7	7.5	9.4
11	9.1	10.0	9.8	8.7	8.7	8.3	7.7	6.3	8.2	7.3	7.0	9.4
12	9.2	10.4	9.9	9.8	8.8	8.1	8.6	6.5	7.2	7.4	7.4	9.0
13	9.9	10.3	9.9	9.2	8.8	7.6	8.7	7.9	7.7	7.5	6.9	9.3
14	9.4	9.1	8.7	8.9	8.9	8.4	9.0	8.4	7.9	7.3	6.3	9.3
15	9.6	10.5	9.9	9.6	8.3	8.6	8.8	8.4	7.7	6.9	7.1	9.1
16	9.3	10.6	10.2	9.1	7.6	8.5	8.3	8.5	7.5	6.8	7.1	9.5
17	...	10.6	10.2	8.7	8.4	8.3	8.3	8.5	7.6	6.2	7.1	9.6
18	...	10.7	10.2	8.3	8.6	6.0	7.4	8.5	7.6	6.5	7.4	9.4
19	7.1	10.2	10.2	9.4	8.6	6.1	8.0	8.5	7.4	6.5	7.4	8.9
20	6.9	10.2	9.9	9.4	8.6	5.4	8.1	8.7	7.4	6.5	7.0	9.6
21	8.2	8.9	9.1	9.4	8.6	7.2	8.1	8.6	7.7	6.5	6.8	9.4
22	9.7	9.9	10.0	9.5	8.5	7.9	8.2	8.2	7.9	6.9	6.7	9.6
23	9.8	10.1	10.0	9.6	7.7	8.1	8.3	8.4	8.1	6.6	5.9	9.4
24	9.5	10.1	10.0	9.6	8.4	8.3	8.2	8.6	8.1	6.0	5.6	9.3
25	9.6	9.9	9.9	8.1	8.3	8.4	7.5	8.8	7.5	7.0	5.0	9.3
26	9.7	9.7	10.0	9.1	8.5	7.8	8.3	8.8	6.8	6.9	4.8	9.0
27	9.8	9.6	10.0	9.1	8.4	7.0	8.3	8.8	7.4	6.8	4.9	9.3
28	10.5	8.5	8.9	9.0	8.5	7.7	8.3	8.8	7.8	7.1	5.0	9.2
29	10.2	.....	9.5	9.0	8.2	8.1	8.3	8.9	7.8	6.9	5.6	9.3
30	9.7	.....	9.8	8.9	7.5	8.3	6.7	8.3	7.7	6.7	6.4	9.1
31	9.1	.....	9.5	.....	7.6	.....	6.2	8.4	.....	6.6	.....	9.1

31.2.4.5.1. New Jersey Water Co. well 10. Near pumping station on Cleveland Ave., Camden. Drilled unused artesian well in sand of Raritan formation, diameter 12 inches, depth about 185 feet. Land-surface datum is 11 feet above msl, measuring point is top of casing 11.90 feet above msl. Highest water level 1.26 above msl, Mar. 19, 1933; lowest 38.6 below msl, July 10, 1954. Records available: 1932-54.

Daily lowest water level from recorder graph*

Day	Jan.	Feb.	May	June	July	Sept.	Oct.	Nov.	Dec.
1	28.8	30.8	....	33.4	34.9	....	36.6	....	32.8
2	29.3	30.7	....	33.3	35.8	....	34.7	....	33.7
3	28.8	30.9	....	33.7	35.6	....	35.8	....	32.8
4	29.9	30.8	....	33.7	....	....	36.7	....	32.4
5	30.1	30.9	....	32.8	....	....	36.8	....	31.9
6	30.0	30.2	....	32.3	37.1	....	33.7	....	32.8
7	30.2	29.8	....	35.1	....	....	35.1	....	33.5
8	30.4	30.7	....	35.7	34.8	....	36.5	....	33.3
9	29.7	30.8	....	35.6	36.4	....	31.9	....	33.0
10	28.8	31.3	....	35.0	38.6	34.0	31.9	....	32.9

31. 2. 4. 5. 1--Continued.

Day	Jan.	Feb.	May	June	July	Sept.	Oct.	Nov.	Dec.
11	30.1	31.2	....	35.2	....	....	36.3	....	32.7
12	30.4	31.4	....	34.2	36.4	....	35.9	....	32.1
13	30.6	30.5	....	36.2	36.8	....	38.0	....	32.7
14	30.5	29.8	....	35.4	....	....	34.3	....	32.6
15	30.7	31.1	....	34.8	....	....	33.2	....	33.5
16	29.8	31.3	....	....	....	....	....	....	33.4
17	29.3	31.2	....	....	....	....	....	32.9	33.3
18	30.3	31.2	....	34.2	....	....	....	33.4	32.1
19	30.5	31.3	32.9	....	....	....	....	32.9	32.6
20	30.4	30.9	29.6	....	....	....	....	32.2	....
21	30.8	29.7	29.8	....	....	....	....	31.6	....
22	30.8	30.8	29.7	....	....	....	....	32.8	....
23	29.9	31.4	28.6	....	....	....	....	32.9	33.6
24	29.4	30.7	29.7	....	....	....	....	32.5	32.1
25	30.7	30.5	29.6	....	....	....	....	31.9	32.4
26	30.9	....	32.8	....	....	....	....	32.3	31.7
27	30.7	....	31.1	....	....	36.0	....	31.6	33.3
28	30.9	....	30.1	....	....	34.1	....	31.3	....
29	30.9	....	31.8	....	....	33.5	....	32.6	33.9
30	30.0	....	....	....	....	33.9	....	32.6	....
31	29.9	....	31.8	....	....	....	....	....	33.3

* No record for March, April, and August.

Cape May County

36. 22. 6. 8. 2. American Ice Co. Ocean City. Drilled unused artesian well in Atlantic City 800-foot sand unit of Kirkwood formation, diameter 6 inches, depth about 860 feet. Land-surface datum is 4.74 feet above msl. Highest water level 1.3 below msl, Dec. 29, 1945; lowest 73.5 below msl, July 24, 1953. Records available: 1936-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	38.7	....	34.2	....	35.9	43.8	....	....	61.4	47.9	....	40.5
2	38.3	....	....	....	35.8	42.7	....	....	60.1	47.6	....	40.2
3	37.9	....	....	35.4	35.7	42.8	....	67.9	64.0	47.0	....	40.0
4	38.1	36.5	....	35.6	35.7	42.9	....	69.4	....	46.9	43.9	40.0
5	37.7	36.9	....	35.4	35.5	46.1	....	....	67.3	....	43.7	40.2
6	38.0	37.3	....	35.2	35.7	48.3	....	....	67.3	....	43.4	40.1
7	....	37.3	36.2	35.3	35.5	47.3	....	....	64.2	....	43.3	40.5
8	....	37.1	35.9	35.2	35.6	48.2	57.5	....	....	....	43.2	41.0
9	....	36.0	35.6	35.6	35.3	....	59.2	....	....	46.8	43.7	41.0
10	....	36.7	35.4	35.3	35.4	....	64.1	....	60.0	46.8	43.5	40.7
11	....	36.9	35.4	35.5	35.6	....	65.1	....	58.3	46.5	43.3	40.9
12	....	37.4	35.7	35.5	35.5	....	65.6	....	58.0	46.5	43.5	40.4
13	....	37.1	35.4	35.5	35.5	....	64.8	....	57.9	46.5	43.1	39.8
14	....	36.9	34.6	35.5	35.5	....	66.5	....	56.4	....	42.8	38.9
15	....	36.5	35.1	35.1	35.5	....	65.5	....	55.5	45.3	42.4	39.5
16	....	36.4	35.0	34.9	38.6	....	60.1	....	54.2	....	42.1	40.0
17	....	36.1	35.3	34.8	39.6	....	66.8	....	53.8	....	41.9	39.3
18	37.7	36.3	35.3	35.3	39.0	....	....	....	56.4	....	41.5	38.9
19	....	36.4	34.0	35.5	38.7	....	67.3	....	54.0	44.5	41.4	39.3
20	....	36.4	34.7	35.8	38.3	....	68.0	....	54.3	....	41.4	39.0
21	....	35.9	35.2	35.9	37.0	....	66.8	....	54.1	....	41.6	39.5
22	....	36.0	35.4	35.7	38.7	....	68.9	....	55.0	44.5	41.6	39.3
23	....	36.0	35.1	35.8	39.2	....	66.9	....	55.0	....	41.6	39.1
24	....	35.8	35.1	35.6	39.4	....	....	....	....	....	41.2	39.3
25	....	35.7	34.6	35.7	40.2	....	....	....	53.3	....	40.8	39.3
26	....	35.9	35.1	35.7	40.1	....	70.2	....	54.2	....	41.0	39.3
27	....	35.9	35.3	35.4	40.0	....	69.5	....	50.5	....	40.9	38.9
28	....	35.7	34.9	35.1	40.6	....	70.4	68.4	49.2	....	40.9	38.7
29	....	....	35.0	35.6	42.0	....	71.6	62.7	48.9	....	41.5	38.4
30	....	....	....	35.7	43.3	....	71.9	64.0	48.5	....	41.3	38.4
31	....	....	34.3	....	44.3	....	73.2	61.4	....	....	....	38.4

36.22.6.9.1. Mr. Schwartz. Ocean City. Drilled unused artesian well in Atlantic City 800-foot sand unit of Kirkwood formation, diameter 4 inches, depth 800+ feet. Land-surface datum is 9 feet above msl. This well is affected by tides and nearby pumping up to $7\frac{1}{2}$ feet and by fluctuations due to pumping up to 30 feet. Highest water level 19.0 below msl, Mar. 5, 1941; lowest 70.5 below msl, Aug. 3, 1954. Records available: 1928-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	37.6	36.3	34.6	33.7	35.3	43.2	60.5	70.0	59.5	49.0	44.6	40.9
2	37.1	35.7	35.1	34.2	35.2	42.8	61.1	69.8	59.1	48.5	44.2	40.5
3	36.8	35.4	34.6	34.7	35.1	42.8	....	70.5	62.2	47.9	44.6	39.5
4	36.8	35.4	35.6	34.8	35.1	43.1	57.9	70.4	63.9	47.8	44.6	40.3
5	36.5	35.9	35.5	34.7	35.0	46.3	61.1	67.0	64.5	47.6	44.2	40.5
6	36.7	36.3	35.5	34.5	35.1	48.3	58.3	63.6	64.4	47.5	43.8	40.3
7	37.2	36.3	35.4	34.6	34.9	47.7	57.8	69.3	62.6	47.4	43.8	41.0
8	37.2	36.1	35.1	34.4	34.9	48.3	55.4	68.7	61.8	47.5	43.9	41.5
9	....	34.9	34.7	34.8	34.6	49.8	57.4	66.8	62.1	47.6	44.2	41.6
10	36.7	35.6	34.5	34.5	34.7	48.6	61.3	62.8	58.3	47.6	44.0	41.2
11	35.7	35.8	34.5	34.7	34.9	48.9	61.8	63.3	57.0	47.3	43.8	41.4
12	37.1	36.4	....	34.7	34.9	49.6	62.1	65.3	59.0	47.3	44.1	40.9
13	37.5	36.2	....	34.7	34.8	50.1	63.0	67.7	58.8	47.4	43.7	40.4
14	36.8	35.5	33.9	34.7	34.7	50.5	64.5	69.5	56.5	46.8	43.3	39.4
15	36.7	35.6	34.3	34.3	34.9	49.3	64.4	65.0	55.8	46.1	43.0	40.0
16	36.7	35.4	34.2	34.1	36.7	48.1	58.5	67.1	54.1	....	42.6	40.5
17	37.0	35.0	34.4	34.0	38.6	50.3	63.4	65.0	53.6	45.9	42.3	39.7
18	37.1	35.3	34.5	34.6	37.9	51.1	64.0	68.3	56.3	45.1	41.9	39.3
19	36.8	35.4	34.1	34.8	37.4	....	64.0	68.8	53.9	45.5	41.9	39.7
20	37.0	35.4	33.8	35.0	37.1	53.2	64.8	64.8	54.4	45.1	41.6	39.4
21	36.7	34.9	34.4	35.1	35.8	53.1	65.3	61.5	54.1	44.9	42.1	40.0
22	35.9	35.0	34.6	35.0	37.5	53.7	65.7	63.8	55.5	45.2	42.1	39.8
23	35.6	34.9	34.2	35.1	38.1	50.8	65.7	63.8	55.2	45.6	42.1	39.6
24	35.9	34.8	34.2	34.9	38.3	52.9	68.0	63.1	53.1	45.7	41.6	39.9
25	36.3	34.7	33.7	34.9	39.3	54.2	67.5	66.2	....	45.6	41.3	39.7
26	36.1	34.9	34.2	35.0	39.4	55.5	66.9	64.5	54.5	45.4	41.5	39.7
27	35.9	34.9	34.4	34.7	39.4	56.4	66.6	64.0	51.4	44.5	41.4	39.3
28	35.9	34.8	34.1	34.4	39.5	57.3	67.4	65.4	50.4	44.5	41.0	39.2
29	....	....	34.2	34.7	41.7	57.5	68.2	62.4	50.0	44.5	42.0	38.9
30	....	....	34.0	35.0	43.4	58.2	68.8	62.3	49.7	44.5	41.8	38.8
31	36.4	....	33.9	....	44.5	....	70.4	59.5	....	44.9	....	38.8

Essex County

25.15.7.5.4. Commonwealth Water Co. Well 30 on Canoe Brook. About 0.3 mile north of Canoe Brook pumping station, 0.8 mile west of White Oak Ridge pumping station of East Orange Water Dept. Drilled unused artesian well in Wisconsin terminal moraine, diameter 10 inches, depth about 130 feet. Land-surface datum is 170.0 feet above msl. Daily water-level fluctuations from less than 1 foot to as much as 17 feet are caused by pumping of nearby wells. Highest water level 162.8 above msl, Aug. 25, 1931; lowest 101.4 above msl, Aug. 29, 1954. Records available: 1925-54.

Daily lowest water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	108.7	109.6	111.4	115.6	114.9	116.5	110.1	103.3	....	....	....	e105.9
2	108.6	110.2	111.7	115.6	115.5	115.7	110.0	103.0	....	....	....	e105.8
3	109.3	110.4	111.9	116.0	116.0	115.4	110.0	103.0	....	....	....	e105.6
4	109.3	110.3	112.0	116.7	115.9	115.0	110.0	104.8	....	....	....	....
5	109.5	110.3	111.9	117.9	115.9	114.8	112.1	104.7	....	104.0	....	....
6	109.5	110.0	111.6	117.9	116.0	114.9	112.3	103.6	....	103.8	....	....
7	109.2	109.9	111.6	117.3	116.2	115.3	111.8	102.8	....	103.4	....	....
8	108.9	110.2	111.6	115.9	116.3	115.3	112.2	102.7	....	103.5	....	....
9	108.9	110.4	111.6	114.6	116.4	117.0	111.0	103.0	....	104.0	....	....
10	109.1	110.3	111.1	114.4	116.5	119.7	110.7	104.5	....	....	....	....
11	109.2	110.1	110.7	114.5	116.6	118.0	110.8	102.7	....	....	....	e105.8
12	109.6	109.9	110.6	114.8	116.1	115.8	110.8	102.7	....	....	....	e105.9
13	109.7	110.0	110.7	114.8	116.1	115.4	110.8	103.0	....	....	....	e106.0
14	109.6	110.3	110.6	114.7	116.1	115.3	107.9	103.0	....	....	....	....
15	109.6	110.4	110.6	114.4	116.3	115.1	107.7	103.1	108.1	....	104.4	....

25.15.7.5.4--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	.....	110.9	110.5	114.4	116.6	114.1	108.6	103.2	107.6	107.4	104.4	106.5
17	.....	110.9	110.4	115.0	116.8	114.1	109.2	102.3	106.0	108.1	104.5	106.5
18	.....	110.7	110.4	114.9	117.1	114.4	109.5	101.9	105.2	107.3	104.5	.....
19	.....	110.7	110.6	115.5	116.0	114.5	110.0	102.0	105.2	e105.7	104.7	.....
20	.....	110.8	111.0	115.4	115.9	114.2	110.1	102.1	105.5	104.9	104.9	e106.8
21	109.2	111.1	111.1	114.1	116.1	113.7	109.5	101.8	104.9	104.4	105.6	e106.9
22	109.2	111.9	112.4	113.4	116.9	111.2	106.3	102.1	104.3	103.7	.....	e106.8
23	109.1	112.0	111.7	114.0	116.3	111.7	103.9	102.9	103.8	103.7	105.4	e106.8
24	109.2	112.0	111.4	114.3	116.2	113.8	103.3	103.1	103.8	105.0	105.6	106.4
25	109.5	111.7	111.3	114.9	116.1	111.3	103.3	102.2	.....	106.4	105.4	e106.3
26	109.8	111.4	111.6	115.4	115.9	111.7	103.6	102.0	.....	105.9	105.4	e106.4
27	110.0	111.2	111.3	115.5	115.8	114.6	103.5	101.6	.....	105.2	105.4	e106.9
28	109.7	111.3	111.3	115.0	115.9	113.7	103.2	101.5	.....	104.7	e105.9	e106.9
29	109.7		111.8	114.7	116.3	110.6	103.1	101.4	.....	104.7	.....	e106.6
30	109.8		112.3	114.7	116.2	110.6	102.8	.....	.....	.....	e105.9	e107.1
31	109.6		113.9		116.3		102.8	.....	.....	.....	.....	106.5

e Estimated.

25.15.7.5.9. East Orange Water Dept. Canoe Brook and Parsonage Hill Rd. Drilled unused artesian well in Wisconsin terminal moraine, diameter 6 inches, depth about 64 feet. Land-surface datum is 182 feet above msl. Highest water level 174.80 above msl, Oct. 25, 1927; lowest 134.90 above msl, Sept. 2, 1954. Records available: 1925-54.

Daily lowest water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	142.45	142.40	142.80	148.10	148.55	149.80	.....	138.40	137.10	137.60	138.25	138.05
2	143.10	142.70	143.40	148.15	148.85	149.70	.....	138.25	134.90	137.60	138.05	137.70
3	142.80	142.75	143.25	148.50	149.15	149.45	.....	138.15	136.70	137.55	138.65	137.60
4	142.80	142.50	143.75	150.10	149.05	149.30	.....	139.75	137.15	137.70	138.10	137.65
5	142.85	142.50	143.30	149.50	148.90	149.30	.....	139.40	137.15	137.75	138.40	138.00
6	142.85	142.35	143.00	149.45	148.90	149.40	.....	138.75	137.40	137.60	138.95	138.90
7	142.40	142.35	143.05	149.00	148.95	149.05	143.40	138.15	137.35	137.40	139.05	.....
8	142.15	142.50	143.15	148.50	148.95	148.55	143.70	138.25	137.60	137.40	139.50	.....
9	142.10	142.50	143.00	147.75	149.45	148.55	142.70	139.20	137.25	137.65	138.95	.....
10	142.40	142.35	142.45	147.60	149.45	149.00	142.55	139.10	137.25	137.70	138.00	.....
11	142.40	142.25	142.10	147.60	149.80	149.30	142.40	138.00	137.40	138.15	137.95	.....
12	143.00	142.70	142.10	148.30	147.40	148.55	142.70	139.25	137.50	137.85	138.05	.....
13	142.75	142.10	142.20	148.30	148.90	148.40	142.65	138.55	137.95	137.85	138.05	.....
14	142.55	142.15	142.40	148.35	149.00	148.40	140.90	138.10	138.35	137.65	138.35	.....
15	142.30	142.35	142.70	148.05	149.00	148.20	140.75	138.10	138.35	137.60	138.10	.....
16	142.40	142.75	142.40	148.05	149.30	146.20	141.50	139.30	138.50	138.50	137.90	.....
17	142.05	142.80	142.15	148.45	149.50	.....	141.70	138.00	138.50	138.40	137.85	.....
18	.....	142.85	142.15	148.75	149.65	.....	141.75	137.80	138.20	138.60	138.15	.....
19	.....	142.65	142.35	148.75	149.35	.....	141.75	137.55	139.40	138.35	138.15	.....
20	142.25	142.70	142.55	148.55	149.30	.....	141.85	137.55	138.75	138.15	138.15	.....
21	142.20	142.90	143.00	145.95	149.30	.....	141.85	137.40	138.20	138.10	139.45	.....
22	142.20	143.75	.....	.....	150.25	.....	140.35	140.05	137.90	137.65	138.40	.....
23	142.20	143.95	142.75	147.75	149.85	142.15	139.10	140.05	137.65	137.60	138.30	.....
24	142.20	143.55	142.65	147.95	149.65	140.65	138.60	139.30	137.55	140.85	138.30	.....
25	142.30	143.05	142.65	148.15	149.35	140.55	138.55	137.95	137.60	139.90	138.20	.....
26	142.60	143.00	143.25	148.55	149.20	139.65	138.55	137.85	137.75	138.70	138.15	.....
27	142.65	143.05	142.40	148.90	149.05	.....	138.50	136.85	137.80	138.50	138.15	.....
28	142.60	142.80	142.40	148.85	149.05	.....	138.50	136.85	137.90	138.10	138.95	.....
29	142.35		144.70	148.65	149.20	.....	138.35	137.00	137.70	138.00	139.00	.....
30	142.35		143.50	148.55	149.25	.....	138.30	136.95	137.65	138.50	138.45	139.30
31	142.40		147.30		149.35	.....	138.30	136.95		138.50		139.05

25.15.7.6.7. East Orange Water Dept. (downstream test well). Canoe Brook below Parsonage Hill Rd. Drilled unused water-table well in Wisconsin terminal moraine, diameter 8 inches, depth 62 feet. Land-surface datum is 180 feet above msl. Highest water level 179.59 above msl, May 12, 1947; lowest 169.45 above msl, Apr. 26, 1944. Records available: 1931-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	+176.93	Mar. 27	+177.24	July 16	+175.09	Oct. 8	+174.74
Feb. 5	+176.90	May 1	+177.40	Aug. 19	+173.73	Nov. 23	+174.64
Mar. 4	+177.12	June 9	+177.18	Sept. 14	+174.30	Dec. 30	+175.27

Gloucester County

30.14.8.2.4. (Repauno 2) E. I. du Pont de Nemours Co. Gibbstown. Drilled unused artesian well in Magothy and Raritan formations, diameter 6 inches, depth 98 feet. Land-surface datum is 4.0 feet above msl. Highest water level 2.23 above msl, Apr. 10, 13, 1953; lowest 3.70 below msl, Aug. 26, 1954. Records available: 1949-54.

Daily lowest water level, above and below msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	-0.60	0.00	-0.39	-1.11	-2.52	-3.23	-3.16	-2.42	-2.72	-1.96
2	....	....	.66	-.13	.29	1.32	2.59	2.91	3.05	2.41	2.67	1.83
3	....	....	.67	+.07	.80	1.41	2.20	....	3.04	2.25	2.64	1.78
4	-0.79	....	....	-.01	.62	1.40	2.01	2.74	2.50	2.29	2.75	1.70
5	.91	....	....	.22	.55	1.08	2.00	2.61	2.43	2.34	2.73	1.62
6	.94	....	....	.27	.72	1.12	2.28	2.48	2.40	2.33	2.66	1.65
7	1.07	....	....	.17	.59	1.71	2.33	2.13	....	2.37	2.63	1.63
8	1.16	-0.75	.79	.39	.20	1.40	2.60	2.54	3.29	2.37	2.80	1.69
9	.92	.40	.28	.55	.20	1.49	2.49	2.12	3.17	2.34	2.85	1.69
10	.96	.43	.55	.06	.81	1.43	2.49	2.36	3.20	2.25	2.99	1.68
11	....	.51	.89	.09	.78	1.54	2.31	2.94	2.46	2.32	3.00	1.61
12	1.03	.84	.99	.45	.69	1.30	2.65	3.07	2.31	2.93	3.00	1.54
13	1.13	....	.85	.25	.79	1.17	2.76	2.56	3.05	2.67	2.88	1.55
14	1.27	....	.68	.18	.61	1.99	3.02	3.29	2.77	2.37	2.38	1.48
15	1.19	.49	.87	.88	.33	1.81	2.79	2.78	2.62	2.54	2.38	1.41
16	1.01	.58	1.14	.26	.23	1.45	3.00	3.46	2.87	2.63	2.45	1.45
17	.98	.91	e.96	.19	.69	1.47	2.73	3.27	2.81	2.12	2.64	1.49
18	....	.70	....	.26	.75	1.56	2.74	3.36	2.31	2.23	2.52	1.38
19	.76	....	....	1.38	.35	1.51	3.07	3.30	2.28	2.26	2.39	1.29
20	.97	....	....	.98	.20	1.52	2.99	....	2.30	2.28	2.30	1.38
21	1.56	....	....	.98	.59	1.74	3.01	....	2.27	2.27	2.12	1.56
22	.82	....	.83	.87	-.13	2.20	3.00	....	2.22	2.30	2.06	1.64
23	....	.59	.59	1.28	+.15	1.89	3.35	3.44	2.27	2.28	2.09	1.43
24	....	.49	.68	.56	-.06	2.11	3.05	3.48	2.27	2.20	2.05	1.44
25	.30	.43	1.20	.41	.16	2.04	3.07	3.55	2.61	2.29	1.92	1.41
26	.35	.48	1.02	.62	.20	1.89	3.34	3.70	2.59	2.31	2.00	1.77
27	.29	.37	....	.64	.16	1.82	3.35	3.69	2.74	2.32	1.92	1.90
28	.32	....	....	.51	.32	2.04	3.46	3.21	2.78	2.70	1.86	2.20
29	....	....	.74	.56	.11	2.12	3.51	2.75	2.84	2.76	2.21	2.26
30	....	....	.89	.69	.07	2.16	3.70	3.38	2.82	2.66	1.97	2.69
31	....	....	.27	....	.57	....	3.42	3.24	....	2.56	....	2.84

e Estimated.

31.11.2.7.2. The Texas Co. well 3. Eagle Point, Westville. Drilled observation artesian well in Magothy and Raritan formations, diameter 8 inches 0-86, 6 inches 86-245, depth 298 feet, 6-inch screen 225-245, well cased to rock. Land-surface datum is 22 feet above msl. Highest water level 15.7 below msl, Nov. 25, 1950; lowest 46.8 below msl, July 29, 1954. Records available: 1949-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	35.0	37.7	37.0	35.3	39.4	38.5	41.6	44.1	43.6	38.4	41.6	36.3
2	34.2	37.9	40.3	35.1	37.9	40.9	41.6	43.8	44.3	38.4	42.2	36.2
3	33.0	38.0	39.7	35.3	38.2	41.3	41.6	44.0	44.2	34.3	42.3	36.4
4	35.1	38.6	38.1	32.9	38.9	41.5	38.7	44.0	43.5	34.4	42.8	36.5
5	35.7	39.2	36.5	32.9	38.7	39.8	36.8	44.1	41.6	35.6	43.1	34.4
6	35.7	39.3	35.6	33.7	38.8	37.3	37.8	44.5	....	36.3	43.1	34.6
7	37.3	38.5	34.5	36.7	39.5	39.0	38.6	43.1	40.8	36.9	....	36.7
8	37.3	37.0	36.6	37.8	39.2	40.3	40.0	41.3	43.7	37.0	38.8	39.3
9	37.1	37.6	38.7	38.6	37.2	40.5	40.5	39.7	44.7	36.3	39.2	....
10	36.2	37.8	39.4	38.9	37.4	40.9	40.3	41.8	43.5	33.2	39.1	....
11	34.6	37.4	39.5	36.5	38.5	41.1	37.8	43.3	41.2	34.5	....	....
12	36.5	38.2	39.3	39.0	39.8	40.5	39.1	43.7	39.3	36.8	....	....
13	37.1	38.9	39.1	39.5	39.7	39.4	40.2	43.2	40.3	37.9	....	40.8
14	37.6	....	37.3	40.5	39.2	39.2	41.4	42.7	43.6	37.3	....	41.7
15	37.4	37.4	37.6	39.1	37.9	39.9	43.4	40.4	43.5	37.2	35.3	43.4
16	36.8	38.6	38.9	38.2	35.8	39.5	43.0	41.8	42.9	39.5	36.1	43.7
17	36.2	38.8	39.2	....	36.9	41.2	42.2	43.6	42.9	40.0	36.9	44.1
18	36.0	39.4	39.4	....	37.0	41.3	40.5	44.0	42.0	41.1	36.7	....
19	39.1	39.5	39.2	37.7	36.7	41.0	40.7	44.0	38.8	42.2	36.6	....
20	37.3	38.5	38.2	39.6	36.5	40.4	42.7	44.4	38.8	42.8	e36.3	41.9

31. 11. 2. 7. 2--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	37.2	35.7	37.6	39.7	36.4	39.0	42.7	44.3	40.9	43.0	....	....
22	37.0	....	36.6	39.9	36.4	40.5	41.9	41.4	42.8	43.7	34.6	....
23	37.5	37.4	36.4	39.7	36.8	40.7	42.6	41.6	43.5	43.1	35.3	....
24	37.2	37.5	36.0	39.6	37.9	40.7	42.2	43.9	42.5	41.3	36.0	....
25	36.8	38.0	35.9	36.4	43.8	41.2	40.1	44.5	40.9	42.7	36.5	....
26	39.0	38.2	....	37.8	44.9	41.0	40.6	44.4	39.4	43.1	....	....
27	39.5	38.5	....	39.0	42.5	39.0	42.4	43.5	36.2	43.1	....	43.5
28	40.4	36.8	....	39.3	41.7	40.5	44.7	42.1	37.8	44.1	....	44.0
29	41.7	....	34.5	39.7	40.9	42.2	46.8	40.6	37.8	43.7	34.3	44.2
30	38.8	....	35.1	40.1	38.3	42.5	45.9	41.4	38.3	43.5	36.2	44.0
31	38.2	....	35.1	....	37.4	....	43.9	42.4	....	42.2	....	43.6

e Estimated.

Middlesex County

28. 4. 4. 2. 1. Robert D. Fischer. Dug observation water-table well in Farrington sand member of Raritan formation, diameter $4\frac{1}{2}$ feet, depth 17 feet, cased with concrete well blocks. Land-surface datum is 73 feet above msl. Highest water level 64.12 above msl, Apr. 26-27, 1939; lowest 56.55 above msl, Jan. 28, 1950. Records available: 1936-54.

Water level at end of day, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	57.01	56.83	56.71	57.05	57.42	57.99	57.89	57.33	56.85	56.88	56.66	57.12
2	57.01	56.83	56.70	57.06	57.43	58.01	57.87	57.29	56.82	56.87	56.66	57.15
3	57.01	56.83	56.70	57.08	57.46	58.03	57.85	57.27	56.80	56.87	56.68	57.18
4	57.02	56.83	56.70	57.08	57.46	58.04	57.84	57.25	56.78	56.86	56.68	57.21
5	57.02	56.82	56.70	57.10	57.47	58.04	57.83	57.24	56.76	56.86	56.67	57.23
6	57.02	56.81	56.70	57.12	57.48	58.05	57.81	57.21	56.74	56.86	56.66	57.25
7	57.01	56.80	56.70	57.13	57.48	58.06	57.80	57.19	56.73	56.84	56.66	57.28
8	57.00	56.80	56.70	57.15	57.49	58.07	57.77	57.17	56.71	56.83	56.66	57.30
9	57.00	56.80	56.72	57.15	57.50	58.08	57.75	57.19	56.70	56.83	56.66	57.32
10	56.99	56.80	56.74	57.16	57.59	58.09	57.73	57.18	56.68	56.82	56.66	57.34
11	56.99	56.79	56.75	57.18	57.60	58.09	57.71	57.16	56.95	56.82	56.67	57.36
12	56.98	56.78	56.76	57.19	57.62	58.09	57.70	57.14	56.93	56.81	56.68	57.38
13	56.96	56.77	56.78	57.20	57.63	58.10	57.68	57.12	56.92	56.80	56.68	57.40
14	56.96	56.77	56.81	57.22	57.65	58.09	57.67	57.09	56.91	56.79	56.69	57.43
15	56.95	56.77	56.82	57.22	57.67	58.09	57.66	57.08	56.90	56.78	56.70	57.45
16	56.95	56.76	56.83	57.24	57.69	58.08	57.63	57.06	56.89	56.77	56.70	57.46
17	56.93	56.76	56.84	57.25	57.71	58.07	57.61	57.04	56.90	56.76	56.70	57.46
18	56.93	56.75	56.86	57.27	57.73	58.07	57.60	57.02	56.90	56.75	56.71	57.49
19	56.92	56.74	56.87	57.27	57.74	58.07	57.58	57.00	56.90	56.74	56.72	57.51
20	56.92	56.74	56.89	57.27	57.77	58.06	57.56	56.98	56.90	56.73	56.73	57.51
21	56.91	56.74	56.90	57.27	57.80	58.05	57.54	56.96	56.90	56.72	56.80	57.52
22	56.90	56.74	56.91	57.29	57.82	58.04	57.52	56.95	56.90	56.71	56.83	57.54
23	56.89	56.72	56.92	57.30	57.83	58.02	57.50	56.93	56.90	56.71	56.82	57.56
24	56.89	56.72	56.93	57.32	57.85	58.00	57.48	56.92	56.89	56.70	56.84	57.56
25	56.88	56.72	56.95	57.34	57.86	57.99	57.46	56.90	56.89	56.69	56.88	57.56
26	56.88	56.72	56.96	57.35	57.87	57.99	57.44	56.88	56.89	56.68	56.93	57.58
27	56.88	56.71	56.97	57.37	57.89	57.96	57.42	56.87	56.89	56.68	56.97	57.60
28	56.87	56.71	56.99	57.39	57.92	57.94	57.40	56.85	56.89	56.67	57.02	57.62
29	56.86	....	57.01	57.40	57.94	57.92	57.39	56.83	56.89	56.68	57.06	57.64
30	56.86	....	57.02	57.40	57.95	57.90	57.37	56.82	56.88	56.69	57.09	57.66
31	56.85	....	57.03	....	57.97	....	57.35	56.84	....	56.68	....	57.68

28. 4. 9. 3. 1. Duhaneral Water System well 11. Drilled observation water-table well in Old Bridge sand member of Raritan formation, diameter 6 inches, depth 72 feet. Land-surface datum is 36.5 feet above msl. Highest water level 14.23 above msl, June 1, 1940; lowest 1.94 below msl, Aug. 10, Oct. 7, 1951. Records available: 1939-54.

Water level at end of day, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.9	5.2	4.4	5.1	5.5	6.0	5.4	5.2	5.1	6.0	5.5	5.9
2	4.9	2.9	4.5	5.1	5.5	5.9	5.4	5.0	5.2	5.7	5.6	5.9
3	4.8	2.6	4.6	5.1	5.4	5.8	5.5	5.0	5.2	5.6	5.7	5.9
4	4.7	2.5	4.6	....	5.5	5.7	5.6	5.0	5.2	5.7	5.8	5.9
5	4.7	2.9	4.6	....	5.5	5.8	5.8	5.0	5.2	5.7	5.8	6.0

28. 4. 9. 3. 1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	4.8	3.0	4.6	...	5.5	5.8	5.6	5.0	5.1	5.7	5.8	5.9
7	4.7	3.1	4.6	5.4	5.5	5.7	5.5	2.7	5.4	5.7	5.8	5.8
8	4.8	2.9	4.5	5.4	5.6	5.6	5.4	2.5	5.3	5.7	5.7	5.8
9	4.9	2.7	6.2	5.2	5.7	5.6	5.4	2.5	5.2	5.7	5.7	5.8
10	5.0	4.5	6.3	5.2	5.6	5.6	5.5	2.6	5.4	5.7	5.8	5.8
11	5.0	4.6	6.3	5.2	5.6	5.5	5.5	2.6	5.9	5.7	5.8	5.9
12	5.0	4.4	6.3	5.2	5.6	5.6	5.4	2.5	6.2	5.6	5.7	5.9
13	4.9	4.4	6.5	5.2	5.7	5.6	5.3	2.4	5.9	5.5	5.7	5.8
14	5.0	4.4	6.6	5.2	5.7	5.6	5.3	2.3	5.8	5.5	5.8	5.9
15	4.9	4.3	6.7	5.1	5.7	5.7	5.2	2.3	5.8	5.6	5.8	5.9
16	4.9	4.3	6.6	5.3	5.6	5.6	5.3	2.1	5.8	5.5	5.7	5.8
17	5.1	4.3	5.1	5.4	5.6	5.6	5.3	2.0	5.9	5.5	5.7	5.8
18	5.1	4.4	5.1	5.4	5.6	5.6	5.3	4.1	5.9	5.4	5.7	5.8
19	5.1	4.4	5.1	5.3	5.6	5.6	5.2	4.4	6.0	5.5	5.7	5.9
20	5.1	4.5	5.0	3.0	5.7	5.6	5.2	4.5	6.0	5.5	5.8	5.8
21	5.1	4.6	5.0	5.1	5.9	5.6	5.2	4.6	5.9	5.5	5.9	5.8
22	5.1	4.6	4.9	5.2	6.0	5.6	5.2	4.8	6.0	5.5	6.0	5.7
23	5.1	4.6	4.9	5.2	6.0	5.8	5.2	4.8	6.0	5.3	5.9	5.7
24	5.2	4.6	4.9	5.2	6.0	5.7	5.2	4.8	6.0	5.3	5.9	5.9
25	5.0	4.5	5.2	5.3	6.0	5.7	5.2	4.8	6.0	5.2	5.9	7.0
26	5.1	4.4	5.1	5.2	6.0	5.8	5.1	4.8	6.0	5.3	5.9	6.2
27	5.1	4.5	5.2	5.3	5.9	5.7	5.2	4.8	6.0	5.3	5.9	6.0
28	5.1	4.5	5.3	5.4	5.9	5.6	5.1	4.8	6.0	5.3	5.9	6.0
29	5.1	5.2	5.5	6.1	5.5	5.1	4.9	5.9	5.9	5.4	5.9	6.0
30	5.2	5.1	5.5	6.0	5.5	5.0	4.9	5.9	5.5	5.9	6.1	6.1
31	5.2	5.1	5.1	6.0	5.0	5.0	5.1	5.6	5.6	5.6	7.1	7.1

28. 4. 9. 3. 5. Duhernal Water System well 4. Drilled observation water-table well in Old Bridge sand member of Raritan formation, diameter 6 inches, depth 75 feet. Land-surface datum is 23.0 feet above msl. Highest water level 11.75 above msl, Apr. 20, 1949; lowest 5.56 below msl, Nov. 10, 1953. Records available: 1939-54.

Water level at end of day from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3.45	....	4.05	3.60	3.15	2.10	3.30	4.35	3.80	2.60	....	2.70
2	3.40	3.55	4.15	3.60	3.20	2.25	3.50	4.45	3.75	2.45	2.65	2.70
3	3.45	3.80	4.15	3.45	3.10	2.35	3.40	4.55	3.40	2.45	2.65	2.75
4	3.65	3.95	4.35	3.35	3.10	2.50	3.20	4.60	3.55	2.65	....	2.80
5	3.65	3.10	4.00	3.70	3.05	2.30	3.10	4.60	3.75	2.75	....	2.45
6	3.75	2.55	3.75	3.75	3.05	2.25	3.45	4.60	3.85	2.90	....	2.65
7	3.95	2.00	3.30	3.80	2.85	2.60	3.55	4.45	3.45	....	....	2.80
8	4.00	2.95	3.75	3.95	2.70	2.85	3.55	4.45	3.50	....	....	2.85
9	3.65	3.20	3.90	3.80	2.75	2.95	3.50	4.35	3.60	....	....	2.95
10	3.30	3.45	4.10	3.65	2.80	3.00	....	4.20	2.55	....	....	3.10
11	3.45	3.55	4.15	3.45	2.75	3.10	....	4.10	1.75	....	....	2.70
12	3.55	3.95	4.00	3.50	2.80	2.95	....	3.95	.70	3.10	....	2.60
13	e3.85	....	3.40	3.70	2.75	2.85	3.55	3.75	1.60	3.05	....	2.80
14	....	....	3.00	3.80	2.40	2.95	3.70	3.55	2.20	3.10	....	2.85
15	....	....	2.65	3.90	2.35	2.75	3.80	3.70	2.35	2.15	....	2.95
16	....	4.30	2.45	3.70	2.55	2.95	....	3.75	2.55	2.65	....	3.00
17	....	4.50	2.25	3.55	2.70	2.75	....	3.90	2.65	....	....	3.00
18	....	4.30	2.30	3.35	2.75	2.80	....	3.95	2.65	....	....	2.90
19	3.95	4.35	2.55	3.40	2.70	2.75	....	4.05	2.60	2.95	....	2.85
20	4.10	4.30	2.70	3.30	2.80	2.85	3.85	3.80	2.55	....	....	2.75
21	4.20	3.75	2.75	3.35	2.55	2.80	3.90	3.65	2.60	....	....	....
22	4.20	4.10	2.95	3.05	2.35	2.65	4.00	3.35	2.60	....	....	....
23	3.95	4.25	2.60	3.25	2.05	2.95	3.80	3.40	2.55	....	....	....
24	3.50	4.30	2.95	3.30	2.15	2.70	3.80	3.65	2.65	....	....	....
25	3.75	4.40	2.60	2.95	2.20	1.95	....	3.80	2.75	....	....	....
26	3.80	4.25	2.10	3.10	2.10	1.40	....	4.00	2.70	2.75	....	....
27	3.90	4.10	1.55	3.10	2.20	1.30	4.00	4.05	....	2.80	....	....
28	4.05	3.70	1.25	3.20	2.25	2.25	4.15	4.10	2.75	....	....	2.55
29	4.05	....	2.35	3.20	1.85	2.80	4.20	3.75	2.75	....	....	....
30	3.75	....	3.10	3.10	2.00	3.10	4.25	3.80	2.85	....	2.80	....
31	3.40	....	3.35	....	2.00	....	4.35	3.80	....	....	....	....

e Estimated.

28.4.9.5.1. Duhernal Water System well 9. Spotswood. Drilled observation water-table well in Old Bridge sand member of Raritan formation, diameter 6 inches, depth 80 feet. Land-surface datum is 15 feet above msl. Highest water level 14.85 above msl, June 1, 1940; lowest 8.45 above msl, Sept. 29, Oct. 13-14, 1943. Records available: 1939-44, 1950-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	+10.50	Apr. 20	+10.95	July 20	+9.20	Oct. 12	+10.32
12	10.22	27	10.80	27	9.21	19	10.20
19	10.08	May 4	10.86	Aug. 3	9.12	26	9.93
26	10.38	11	11.16	10	9.87	Nov. 2	10.46
Feb. 2	10.05	18	10.55	17	9.36	9	10.88
9	9.97	25	10.85	24	9.35	16	10.47
16	9.73	June 1	10.53	31	9.42	23	11.20
23	10.05	8	10.11	Sept. 7	9.50	30	11.25
Mar. 2	10.23	15	10.30	14	11.69	Dec. 7	10.80
9	10.29	22	9.75	21	11.30	14	10.86
16	10.82	29	9.74	28	10.83	21	11.00
Apr. 6	10.45	July 6	9.69	Oct. 5	10.55	28	10.90
13	10.45	13	9.38				

28.4.9.8.2. Duhernal Water System well 10. On upstream part of property acquired for water supply near Spotswood. Drilled observation water-table well in Old Bridge sand member of Raritan formation, diameter 6 inches, depth 93 feet. Land-surface datum is 20.0 feet above msl. Highest water level 21.98 above msl, Feb. 8, 1941; lowest 6.79 above msl, Nov. 16, 1954. Records available: 1938-46, 1954. Nov. 2, +7.36; Nov. 9, +7.53; Nov. 16, +6.79; Dec. 7, +7.63; Dec. 14, +10.00; Dec. 21, +8.06; Dec. 28, +7.90.

28.5.1.8.4. Borough of Sayreville. Drilled unused artesian well in Farrington sand member of Raritan formation, diameter 6 inches, depth 160 feet, screen 148-160. Land-surface datum is 11.0 feet above msl. Fluctuations caused mainly by regional pumping. Highest water level 11.55 above msl, Mar. 27, 1944; lowest 32.9 below msl, Oct. 25, 1935. Records available: 1931-54.

Daily lowest water level, above and below msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	-6.75	-12.51	-11.04	+2.50	-8.54	-7.13	-12.71	-16.48	-16.06	-13.92	-12.47	-1.01
2	7.77	12.87	11.74	.....	6.10	7.75	13.45	15.1	15.69	14.07	.....	1.95
3	7.33	12.56	11.56	.....	2.32	8.36	14.08	15.91	15.53	.....	12.30	3.43
4	5.52	12.74	11.75	.....	1.00	9.21	13.10	16.01	15.96	.....	12.33	3.20
5	4.59	12.21	11.82	.....	1.82	.....	12.49	15.67	14.98	13.68	12.17	2.62
6	5.30	10.45	11.40	.53	1.83	.....	13.20	16.17	15.10	13.20	12.27	2.62
7	7.12	8.30	9.70	+0.05	1.71	.....	12.10	16.22	15.40	13.03	11.82	3.58
8	8.21	7.87	9.16	-2.27	.66	11.99	12.45	15.58	14.80	13.00	11.62	5.20
9	.....	9.85	9.55	.75	1.00	11.90	13.47	15.57	13.21	12.83	12.35	5.83
10	.....	10.75	10.21	2.28	1.16	11.47	14.25	16.18	14.12	12.77	12.39	7.02
11	.....	11.54	11.32	3.45	1.00	.....	13.83	15.80	14.25	12.83	12.41	8.08
12	.....	12.31	11.53	5.04	.28	.....	14.54	15.37	14.04	12.93	12.72	7.51
13	.....	12.70	10.05	6.22	.19	.....	14.86	15.97	14.30	13.10	12.30	8.79
14	.....	12.45	7.80	6.53	2.90	.....	14.84	15.86	14.12	12.97	16.44	7.80
15	.....	12.41	6.76	6.95	5.74	11.42	14.33	15.38	13.67	17.05	14.33	8.08
16	.....	12.99	7.16	6.70	5.87	11.32	14.61	15.38	13.74	18.58	13.61	8.23
17	.....	12.94	6.37	7.07	6.63	11.60	14.23	15.84	13.77	15.70	12.70	8.22
18	.....	13.25	8.23	7.11	6.89	11.79	14.13	15.99	13.70	14.99	12.84	6.78
19	.....	13.07	8.22	6.34	6.80	12.58	14.41	15.96	12.97	14.12	11.86	3.80
20	.....	11.24	6.75	6.82	7.33	12.25	15.14	16.65	13.44	13.93	11.62	1.65
21	.....	8.13	4.03	7.21	7.29	.....	15.72	16.12	12.99	13.82	11.11	.....
22	.....	6.21	1.68	7.68	7.59	12.61	16.16	20.06	13.03	13.62	11.55	.....
23	.....	6.35	1.58	7.81	.....	12.40	16.71	.....	13.23	13.67	11.48	.....
24	.....	7.59	.91	8.39	.....	11.96	16.86	17.24	13.20	13.42	11.00	.....
25	.....	9.95	.40	7.68	.....	12.32	16.40	16.51	13.50	13.65	.....	.....
26	12.85	10.71	1.68	6.60	3.80	12.81	15.40	16.27	12.76	13.54	.....	.....
27	12.55	11.11	1.41	7.43	3.20	12.61	15.81	16.08	13.15	12.87	.....	.....
28	12.66	10.67	-.28	7.87	3.30	12.64	16.47	17.03	13.17	12.69	.....	2.05
29	11.95	.....	+.97	8.22	5.10	12.18	16.85	17.50	13.37	12.58	.....	3.43
30	11.89	.....	1.62	8.37	5.68	12.48	17.63	17.42	13.36	12.62	1.01	.....
31	12.10	.....	2.10	.....	6.72	.....	17.63	16.42	.....	12.60	.....	.....

28.5.4.3.9. Perth Amboy Water Dept. Old Deep 1. Runyon. Drilled unused artesian well in Farrington sand member of Raritan formation, diameter 8 inches, depth 290 feet. Land-surface datum is 19 feet above msl. Highest water level 12.8 above msl, Mar. 1, 1943, Mar. 26, 1944; lowest 54.9 below msl, Sept. 26-27, 1947. Records available: 1930-54. This well is affected by pumping in a nearby well field.

Daily lowest water level, above and below msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	-30.7	-36.2	-35.0	+2.9	-32.4	-30.8	-35.9	-39.4	-38.6	-36.2	-33.8	-0.9
2	31.6	....	35.3	-12.8	8.1	31.3	36.4	38.7	38.4	36.2	33.6	23.5
3	31.6	....	35.3	14.0	3.2	31.9	36.9	38.9	38.4	36.1	33.5	25.1
4	21.0	....	35.5	14.4	16.1	33.0	36.7	38.7	38.6	35.5	33.6	17.2
5	19.6	....	35.5	13.0	16.8	33.2	36.2	38.6	38.5	36.0	33.6	16.6
6	29.5	....	35.5	14.1	16.8	35.0	36.0	38.7	37.8	35.9	33.6	16.2
7	31.1	....	26.2	14.7	16.8	34.7	35.9	39.0	37.7	35.5	33.6	25.0
8	32.2	....	32.2	15.1	16.5	34.5	35.9	38.8	26.2	35.5	33.4	26.5
9	....	....	33.5	15.5	16.3	34.4	36.3	38.2	35.8	35.5	33.4	27.1
10	....	....	34.0	26.1	16.1	34.4	36.6	38.5	37.0	35.4	33.5	27.8
11	....	35.5	35.0	27.9	16.0	34.5	36.5	38.4	37.1	35.0	33.4	28.4
12	....	e36.2	35.1	29.2	15.9	34.5	36.7	38.3	37.1	35.0	33.7	28.6
13	....	e36.6	28.6	29.9	15.8	34.5	36.9	38.6	37.1	35.2	33.7	29.1
14	....	36.6	23.4	30.4	26.1	34.3	37.3	38.7	37.0	35.2	35.1	28.9
15	....	36.2	28.0	30.9	29.3	35.0	37.3	38.6	36.8	36.0	34.9	29.1
16	....	36.8	31.3	30.9	29.8	35.0	37.4	37.9	36.5	38.3	34.3	29.3
17	....	36.8	25.4	30.8	30.2	35.0	37.4	38.3	36.6	37.8	34.0	29.3
18	....	37.1	31.6	30.9	30.4	35.0	37.2	38.4	36.5	37.1	33.6	21.0
19	....	37.2	32.3	30.8	30.6	35.2	36.9	38.3	36.3	36.5	33.4	5.3
20	....	28.1	23.9	30.6	31.0	35.2	37.5	38.9	35.8	36.1	32.9	2.6
21	....	11.0	6.2	31.1	31.1	35.1	37.9	38.7	35.7	36.0	32.6	.9
22	....	20.7	1.8	31.5	31.3	35.2	38.2	41.0	35.7	35.9	32.5	-1
23	....	21.5	1.2	31.7	31.3	35.3	38.8	40.5	35.9	35.2	32.4	+4
24	....	31.9	.8	32.0	31.2	35.3	38.9	39.6	36.0	34.9	32.2	1.1
25	....	34.0	.0	32.0	21.1	35.5	38.9	39.0	36.0	34.9	24.0	1.8
26	....	34.5	16.6	30.4	19.1	35.7	38.4	38.7	35.8	34.9	21.6	+2.6
27	....	34.9	16.6	31.4	18.3	25.7	38.6	38.6	35.5	34.5	6.8	-20.3
28	....	34.9	-7	31.8	26.8	35.7	38.9	39.7	35.5	34.3	4.4	23.0
29	....		+1.1	32.2	29.2	35.6	39.3	40.0	35.6	34.3	2.8	24.2
30	....		+1.8	32.3	30.0	35.7	39.8	39.9	35.6	34.1	1.9	25.1
31	....		-10.1		30.4		39.4	39.2		34.1		25.9

e Estimated.

28.5.4.7.3. Perth Amboy Water Dept. Runyon 123. Drilled unused artesian well in Old Bridge sand member of Raritan formation, diameter 8 inches, depth about 60 feet. Land-surface datum is 3.5 feet above msl. Daily tidal fluctuation about 3 feet. Highest water level flooded at 6.14, Sept. 22, 1938; lowest 0.62 below msl, Nov. 1, 1954. Records available: 1938-47, 1949-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	+2.45	Apr. 1	+2.71	July 15	+2.03	Oct. 1	-0.37
Feb. 1	+1.81	May 3	+3.83	Aug. 2	+2.52	Nov. 1	-.62
Mar. 1	+2.04	June 1	+2.88	Sept. 1	+1.10	Dec. 1	+2.05

28.5.4.8.1. Duhernal Water System well 1. Drilled observation water-table well in Old Bridge sand member of Raritan formation, diameter 6 inches, depth 67 feet. Land-surface datum is 18.7 feet above msl. Highest water level 7.67 above msl, July 31, 1945; lowest 2.35 above msl, Sept. 11, 1954. Records available: 1938-54.

Water level at end of day, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.04	3.84	3.75	4.13	....	4.74	4.39	3.92	....	2.95	2.46	4.10
2	4.04	3.86	3.76	4.16	....	4.75	4.37	3.91	....	2.90	2.46	4.14
3	4.07	3.92	3.80	4.16	....	4.76	4.35	3.90	....	2.87	2.48	4.20
4	4.06	3.95	3.78	4.16	4.54	4.77	4.34	3.89	....	2.84	2.43	4.25
5	4.13	3.97	3.75	4.18	4.57	4.74	4.33	3.87	....	2.80	2.41	4.30
6	4.14	3.94	3.75	4.19	4.59	4.70	4.31	3.86	....	2.77	2.41	4.35
7	4.11	3.89	3.75	4.19	4.61	4.67	4.29	3.84	2.49	2.74	2.41	4.38
8	4.08	3.85	3.76	4.19	4.64	4.59	4.27	3.83	2.43	2.73	2.42	4.40
9	4.08	3.84	3.78	4.18	4.65	4.58	4.25	3.92	2.39	2.71	2.41	4.44
10	4.08	3.82	3.79	4.17	4.65	4.56	4.23	3.97	2.35	2.70	2.43	4.45

28. 5. 4. 8. 1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	4.14	3.81	3.80	4.17	4.62	4.54	4.22	3.94	2.81	2.71	2.42	4.46
12	4.12	3.78	3.79	4.15	4.60	4.53	4.19	3.90	2.91	2.71	2.41	4.48
13	4.05	3.75	3.78	4.13	4.60	4.52	4.18	3.86	2.96	2.71	2.61	4.51
14	4.03	3.73	3.83	4.16	4.63	4.52	4.17	3.81	3.00	2.71	2.78	4.56
15	4.01	3.72	3.83	4.19	4.65	4.52	4.16	3.74	3.03	2.77	2.90	4.57
16	4.05	3.70	3.80	4.22	4.65	4.55	4.15	3.69	3.06	2.72	2.99	4.54
17	4.00	3.73	3.81	4.24	4.65	4.55	4.14	3.64	3.09	2.72	3.09	4.55
18	3.97	3.73	3.82	4.25	4.66	4.54	4.13	3.58	3.11	2.68	3.20	4.60
19	3.94	3.73	3.87	4.27	4.66	4.51	4.12	3.52	3.14	2.65	3.30	4.61
20	3.96	3.72	3.91	4.27	4.68	4.48	4.09	3.45	3.15	2.65	3.39	4.62
21	3.95	3.72	3.92	4.27	4.70	4.44	4.08	3.40	3.20	2.65	3.49	4.64
22	3.99	3.71	3.92	4.27	4.70	4.45	4.07	3.35	3.17	2.62	3.56	4.63
23	4.04	3.70	3.98	4.27	4.69	4.44	4.06	3.30	3.13	2.59	3.64	4.65
24	4.03	3.71	3.99	4.29	4.69	4.42	4.05	3.23	3.10	2.56	3.73	4.62
25	3.99	3.71	4.01	4.29	4.70	4.40	4.04	3.15	3.10	2.54	3.80	4.61
26	3.96	3.71	4.01	4.30	4.68	4.41	4.03	3.09	3.09	2.53	3.87	4.64
27	3.94	3.70	4.00	....	4.67	4.40	3.98	3.01	3.06	2.52	3.93	4.65
28	3.91	3.70	4.01	....	4.68	4.40	3.98	2.96	3.05	2.50	4.00	4.67
29	3.90	....	4.03	....	4.70	4.40	3.98	2.94	3.06	2.53	4.02	4.70
30	3.88	....	4.07	....	4.71	4.40	3.96	....	3.02	2.52	4.04	4.70
31	3.85	....	4.10	....	4.73	....	3.94	....	....	2.48	....	4.70

28. 5. 4. 8. 7. Duhernal Water System well 2. Drilled observation water-table well in Old Bridge sand member of Raritan formation, diameter 6 inches, depth 95 feet. Land-surface datum is 29 feet above msl. Highest water level 15.65 above msl, Apr. 11, 1939; lowest 6.48 above msl, Dec. 29, 1953. Records available: 1938-42, 1944, 1950-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	+7.92	Apr. 20	+8.42	July 20	+8.20	Oct. 12	+8.76
12	7.84	27	8.69	27	7.99	19	8.63
19	7.71	May 4	8.74	Aug. 3	7.83	26	8.28
26	7.76	11	8.87	10	7.81	Nov. 2	8.23
Feb. 2	7.81	18	8.96	17	7.62	9	8.54
9	7.71	25	9.12	24	7.57	16	8.54
16	7.55	June 1	9.17	31	7.42	23	8.60
23	7.50	8	9.06	Sept. 7	7.38	30	8.84
Mar. 2	7.45	15	8.95	14	8.24	Dec. 7	9.15
9	7.73	22	8.91	21	8.75	14	9.34
16	7.77	29	8.64	28	8.84	21	9.70
Apr. 6	8.41	July 6	8.46	Oct. 5	8.79	28	9.49
13	8.39	13	8.40				

28. 5. 7. 1. 5. Duhernal Water System well 5. Drilled observation water-table well in Old Bridge sand member of Raritan formation, diameter 6 inches, depth 72 feet. Land-surface datum is 21 feet above msl. Highest water level 14.94 above msl, Apr. 7-8, 1939; lowest 0.04 above msl, Nov. 16, 1953. Records available: 1939-54.

Water level at end of day, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1.34	1.86	1.56	3.48	4.14	4.82	3.14	1.70	1.50	3.80	3.77	3.57
2	1.40	1.77	1.59	3.55	4.13	4.71	3.06	1.65	1.56	3.87	3.84	3.59
3	1.38	1.73	1.64	3.46	4.19	4.67	3.01	1.59	1.65	3.95	3.93	3.57
4	1.42	1.71	1.70	3.51	4.14	4.55	3.03	1.56	1.71	3.82	3.99	3.59
5	1.45	1.66	1.72	3.51	4.15	4.45	2.99	1.52	1.77	3.81	4.03	3.51
6	1.40	1.60	1.75	3.49	4.10	4.50	2.98	1.45	1.82	3.74	4.06	3.53
7	1.39	1.64	1.84	3.44	4.14	4.40	2.93	1.44	1.81	3.71	4.15	3.51
8	1.36	1.67	1.89	3.34	4.22	4.22	2.85	1.45	1.81	3.73	4.16	3.50
9	1.36	1.56	1.96	3.37	4.32	4.15	2.77	1.47	1.75	3.74	4.13	3.53
10	1.47	1.50	1.96	3.49	4.34	4.11	2.72	1.61	1.72	3.70	4.15	3.42
11	1.52	1.43	1.97	3.68	4.41	4.02	2.70	1.65	2.00	3.66	4.20	3.36
12	1.45	1.39	2.05	3.57	4.34	4.00	2.68	1.65	2.18	3.62	3.92	3.36
13	1.43	1.39	2.25	3.59	4.35	3.98	2.61	1.61	2.37	3.54	3.84	3.39
14	1.48	1.50	2.42	3.55	4.43	3.92	2.59	1.57	2.49	3.53	3.81	3.54
15	1.47	1.49	2.54	3.47	4.49	3.88	2.47	1.49	2.69	3.65	3.70	3.58
16	1.48	1.45	2.65	3.59	4.50	3.82	2.41	1.43	2.81	3.59	3.63	3.47
17	1.50	1.40	2.75	3.51	4.46	3.77	2.38	1.45	2.98	3.57	3.51	3.53
18	1.53	1.39	2.80	3.65	4.43	3.91	2.35	1.47	3.10	3.56	3.43	3.64
19	1.51	1.37	3.09	3.68	4.47	4.02	2.27	1.42	3.24	3.50	3.39	3.71
20	1.51	1.39	3.25	3.71	4.48	3.89	2.28	1.40	3.30	3.46	3.35	3.72

28. 5. 7. 1. 5--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	1.47	1.48	3.39	3.75	4.59	3.78	2.19	1.36	3.38	3.39	3.38	3.74
22	1.58	1.48	3.49	3.76	4.62	3.78	2.09	1.40	3.43	3.34	3.43	3.74
23	1.66	1.48	3.59	3.77	4.67	3.68	2.03	1.40	3.49	3.36	3.45	3.79
24	1.73	1.51	3.55	3.86	4.73	3.62	1.97	1.38	3.57	3.53	3.45	3.64
25	1.73	1.51	3.67	3.88	4.65	3.55	1.94	1.34	3.62	3.51	3.40	3.65
26	1.75	1.47	3.54	3.90	4.65	3.56	1.87	1.28	3.65	3.59	3.39	3.70
27	1.73	1.47	3.58	3.96	4.67	3.41	1.85	1.27	3.65	3.46	3.46	3.72
28	1.66	1.53	3.61	3.89	4.70	3.31	1.86	1.29	3.65	3.47	3.59	3.79
29	1.73		3.63	3.93	4.70	3.19	1.80	1.33	3.68	3.73	3.46	3.83
30	1.77		3.53	4.02	4.70	3.21	1.77	1.33	3.68	3.82	3.51	3.92
31	1.84		3.55		4.75		1.75	1.40		3.90		3.97

29. 1. 4. 1. 1. Perth Amboy Water Dept. Old Deep 8. Runyon. Drilled unused artesian well in Farrington sand member of Raritan formation, diameter 8 to 6 inches, depth 290 feet, screen 260-290. Land-surface datum is 18.5 feet above msl. This well is affected by pumping in nearby wells and by regional pumping from the Farrington sand member. Highest water level 12.2 above msl, Apr. 8, 1943; lowest 48.3 below msl, Sept. 15, 1947. Records available: 1929-54.

Daily lowest water level, above and below msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	-26.2	-24.7	....	....	....	-25.9	-29.2	-28.9	-25.8	-24.5	....
2	-20.6	26.2	25.0	....	-8.3	....	26.4	29.1	28.9	25.6	24.5	....
3	20.7	26.2	25.0	-3.0	3.9	-21.3	26.7	28.7	28.6	25.9	24.3	....
4	10.8	26.4	25.1	3.4	5.1	21.8	26.7	28.7	....	e26.1	24.4	....
5	9.5	26.3	25.2	2.0	5.7	22.8	26.3	28.7	....	....	24.4	....
6	18.5	....	25.2	3.0	5.7	23.0	25.9	....	....	....	....	....
7	20.2	....	15.3	3.5	5.6	26.0	25.9	28.7	....	....	24.5	....
8	21.2	....	21.5	4.0	5.5	25.4	25.8	28.7	....	....	24.5	....
9	21.9	....	22.6	....	5.0	24.9	26.2	28.3	....	27.3	24.5	....
10	25.6	....	23.3	14.5	4.9	....	26.4	28.2	....	27.3	24.6	....
11	25.2	....	24.1	16.4	4.7	....	26.4	28.2	....	27.0	24.6	....
12	24.2	....	24.1	17.7	4.6	24.5	26.5	28.2	....	26.9	24.8	....
13	24.2	....	16.6	18.5	4.4	24.5	26.5	28.4	....	27.0	24.8	....
14	....	....	12.5	19.1	14.8	24.3	26.9	28.4	....	27.1	27.0	....
15	....	....	18.7	19.6	18.6	25.5	27.1	28.4	....	29.0	26.7	....
16	....	....	19.8	19.6	19.1	25.5	27.2	28.0	....	29.4	25.7	....
17	....	....	18.7	....	19.3	25.1	27.2	28.1	....	28.4	25.6	....
18	....	....	21.0	....	19.6	25.1	27.1	28.2	....	27.7	24.9	....
19	....	....	21.1	18.4	20.2	25.0	26.8	28.2	....	26.8	24.5	....
20	....	....	....	19.5	20.3	....	....	28.6	....	26.4	24.1	....
21	....	11.9	5.7	19.9	....	....	....	28.6	....	26.2	24.0	....
22	....	11.2	3.1	20.3	....	25.1	....	32.3	....	26.1	23.8	....
23	25.5	11.9	1.9	20.5	....	25.2	....	31.8	....	....	23.7	....
24	25.5	21.6	1.8	20.7	....	25.2	....	30.5	....	....	23.5	....
25	25.3	23.6	4.3	20.6	....	25.2	....	29.2	....	....	15.5	....
26	26.3	24.3	....	19.2	9.3	25.4	28.4	28.9	....	....	13.2	....
27	26.3	24.6	....	20.0	8.5	25.5	28.6	28.7	....	....	....	....
28	25.9	24.6	-1.4	20.5	16.5	25.5	28.9	....	....	....	....	....
29	....	....	+3	20.8	18.7	25.4	29.2	....	....	....	....	....
30	25.8	....	1.2	20.9	19.5	25.5	29.5	....	....	....	....	....
31	25.9	....	+9	....	19.9	....	29.2	....	....	24.6	....	....

e Estimated.

29. 1. 4. 4. 2. Perth Amboy Water Dept. Runyon 50. Drilled observation water-table well in Old Bridge sand member of Raritan formation, diameter 6 inches, depth 55 feet. Land-surface datum is 15 feet above msl. Highest water level 12.4 above msl, July 26, 1938; lowest 1.3 below msl, Sept. 26-27, 1929. Records available: 1923-54.

Daily lowest water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.8	5.4	5.3	5.5	8.0	8.4	....	1.0	0.1	....	3.9	8.3
2	4.7	5.4	5.4	5.5	7.6	8.3	....	.9	.4	....	3.9	....
3	4.4	5.4	5.5	5.7	7.5	8.2	....	....	.5	....	4.0	8.7
4	4.2	5.4	5.8	5.4	7.3	8.0	....	....	.6	....	4.3	8.6
5	4.1	4.7	6.4	5.2	7.5	7.9	....	....	.6	....	4.6	8.4

29. 1. 4. 4. 2--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	4.0	4.5	6.5	5.4	7.4	7.7	...	...	.7	...	4.9	8.3
7	4.3	4.3	6.4	5.4	7.2	7.6	...	...	.7	...	5.2	8.4
8	4.3	4.3	6.4	5.3	7.2	7.5	...	...	.7	...	5.4	8.7
9	4.3	4.9	7.0	5.3	7.4	7.4	...	...	.7	...	5.6	8.7
10	4.3	4.9	7.2	5.3	8.0	e7.3	...	...	.6	...	5.7	8.7
11	4.3	4.9	7.2	6.0	8.3	7.1	...	...	.5	...	5.7	8.7
12	4.2	4.7	6.6	6.3	8.4	e7.0	...	...	.4	...	5.8	8.6
13	4.2	4.7	6.4	6.4	8.3	6.9	...	...	.4	...	5.6	8.5
14	4.2	4.7	6.4	6.5	8.2	e6.7	...	...	1.7	...	5.4	8.5
15	4.2	4.6	6.5	6.5	8.7	6.6	2.8	...	5.7	...	5.2	9.0
16	4.1	4.6	7.1	6.5	8.8	e6.4	2.7	...	6.1	...	5.4	9.8
17	4.0	4.6	7.1	6.7	8.7	6.3	2.5	1.1	6.3	...	5.5	9.6
18	4.0	4.6	7.9	6.9	8.6	e6.1	2.4	1.1	6.8	...	5.4	9.3
19	4.0	4.4	7.3	7.7	8.5	6.0	2.3	1.0	7.0	...	5.3	9.3
20	4.0	4.0	6.9	8.5	8.4	e5.9	2.2	1.0	7.3	...	5.3	9.3
21	4.0	3.7	6.8	8.7	8.5	5.8	2.1	1.0	7.3	...	5.3	9.2
22	4.1	3.7	6.7	8.9	9.0	e5.5	2.0	.9	7.5	...	6.1	8.9
23	4.5	4.0	6.4	9.0	9.3	5.2	1.8	.9	7.5	...	...	8.8
24	4.7	4.1	6.2	9.0	9.0	e4.9	1.7	.9	7.4	...	...	8.5
25	4.9	4.7	6.1	8.3	8.8	4.7	1.6	.9	7.3	...	...	8.4
26	5.0	5.0	6.6	8.2	8.5	e4.5	1.5	.6	7.2	...	...	8.2
27	5.0	5.1	6.2	8.7	8.2	4.3	1.4	.4	7.1	...	...	8.1
28	5.2	5.2	6.1	8.9	8.1	e4.1	1.3	.3	7.0	...	...	9.0
29	5.3		6.0	8.9	8.6	...	1.1	.2	6.9	...	...	9.1
30	5.3		5.8	9.0	8.5	...	1.1	.2	6.9	...	8.1	9.2
31	5.4		5.7		8.4		1.1	.1		...		9.8

e Estimated.

29. 1. 4. 6. 9. Clyde Bowne. Near Browntown. Drilled observation artesian well in Old Bridge sand member of Raritan formation, diameter 6 inches, depth 71 feet, gauze-covered perforated pipe 66-71. Land-surface datum is 31 feet above msl. Affected by pumping at Perth Amboy Waterworks. Highest water level 28.14 above msl, Apr. 9-10, 1939; lowest 21.83 above msl, Nov. 18, 1932. Records available: 1932-54.

Water level at end of day, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	22.58	22.52	22.90	23.27	e23.55	23.36	22.82	22.29	22.65	22.53	23.09
2	22.63	22.58	22.52	22.90	23.27	e23.55	23.35	22.81	22.28	22.65	22.53	23.15
3	22.63	22.58	22.52	22.90	23.29	23.55	23.33	22.79	22.26	22.65	22.53	23.15
4	22.63	22.58	22.52	22.90	23.30	23.55	23.32	22.77	22.25	22.65	22.53	23.17
5	22.63	22.58	22.52	22.90	23.31	23.55	23.31	22.75	...	22.64	22.53	23.18
6	22.63	22.58	22.52	22.90	23.31	23.55	23.29	22.74	...	22.64	22.53	23.18
7	22.63	22.58	22.55	22.90	23.31	23.55	23.28	22.72	...	22.63	22.52	23.18
8	22.62	22.58	22.57	22.90	23.31	23.54	23.27	22.70	22.20	22.62	22.53	23.18
9	22.62	22.58	22.61	22.90	23.32	23.54	23.26	22.68	22.19	22.62	22.53	23.20
10	22.62	22.58	22.64	22.90	23.35	e23.53	23.24	22.67	22.18	22.62	22.53	23.21
11	22.62	22.58	22.65	22.90	23.38	e23.52	23.23	22.65	22.17	22.62	22.55	23.20
12	22.62	22.57	22.65	22.91	23.41	23.51	23.21	22.64	22.17	22.62	22.55	23.20
13	22.60	22.57	22.65	22.91	23.41	23.51	23.18	22.62	22.21	22.62	22.54	23.20
14	22.60	22.57	22.71	22.91	23.41	23.51	23.15	22.60	22.28	22.62	22.55	23.27
15	22.60	22.57	22.73	22.91	23.41	23.50	23.13	22.58	22.32	22.61	22.55	23.38
16	22.60	22.56	22.73	22.92	23.42	23.49	23.11	22.57	22.38	22.59	22.55	23.41
17	22.58	22.56	22.73	e23.00	23.42	23.49	23.10	22.55	22.47	22.59	22.55	23.41
18	22.58	22.56	22.74	.....	23.42	23.48	23.08	22.53	22.52	22.59	22.55	23.51
19	22.58	22.56	22.76	23.04	23.42	23.47	23.06	22.51	22.59	22.58	22.55	23.56
20	22.58	22.56	22.84	23.07	23.42	e23.46	.....	22.50	22.62	22.58	22.56	e23.63
21	22.58	22.56	22.84	23.10	23.43	e23.45	.....	22.48	22.64	22.57	22.64	e23.63
22	22.58	22.56	22.85	23.14	23.45	e23.44	.....	22.46	22.65	22.57	22.72	e23.63
23	22.59	22.56	22.85	23.16	e23.47	23.43	.....	22.45	22.65	e22.56	22.82	e23.63
24	22.59	22.56	22.85	23.18	.....	23.42	.....	e22.43	22.65	e22.56	22.90	23.62
25	22.59	22.56	22.85	23.19	23.54	23.41	.....	22.41	22.65	22.55	22.94	e23.63
26	22.58	22.56	22.87	23.21	23.54	23.40	22.95	22.39	22.65	22.55	22.95	23.63
27	22.58	22.55	22.87	23.22	23.54	23.39	22.93	22.37	22.65	22.54	22.96	23.63
28	22.58	e22.53	22.87	23.25	23.54	23.38	22.91	22.36	22.65	22.54	22.99	23.62
29	22.58		22.88	23.26	23.55	23.38	22.90	22.34	22.65	22.54	23.07	23.62
30	22.58		22.89	23.26	23.55	23.37	22.86	22.31	22.65	22.53	23.08	23.67
31	22.58		22.89		23.55		22.84	22.30		22.53		23.71

e Estimated.

29.11.1.2.3. Joseph Morrell. Near Moerls Corner. Dug observation water-table well in Englishtown sand, diameter 17 inches, depth 9 feet, cased with precast concrete rings. Land-surface datum is 76 feet above msl. Highest water level 75.08 above msl, Mar. 28, 1932; lowest 67.25 above msl, Oct. 13, 1953. Records available: 1923-54.

Water level at end of day, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	73.27	73.67	74.27	73.81	73.78	72.92	70.91	69.02	69.94	72.79	73.67	74.14
2	e73.29	73.67	74.11	73.82	73.75	72.81	70.78	68.96	70.02	72.76	74.39	74.08
3	e73.29	73.85	74.46	73.73	74.03	72.71	70.71	68.98	70.06	72.74	74.22	74.02
4	73.28	73.90	74.25	73.69	74.01	72.62	70.74	68.94	70.06	72.64	74.11	73.97
5	73.30	73.82	74.13	73.69	73.90	72.53	70.86	68.90	70.06	72.55	74.11	73.92
6	73.30	73.75	74.07	73.73	73.79	72.44	70.77	68.85	70.03	72.98	74.02	73.88
7	73.25	73.70	74.02	73.73	73.73	72.30	70.77	68.80	70.00	73.02	73.93	73.84
8	73.21	73.72	73.97	74.02	74.39	72.18	70.65	68.75	70.05	73.02	73.87	73.76
9	73.24	73.67	73.97	73.89	74.27	72.09	70.54	69.07	70.06	73.04	73.79	74.15
10	73.25	73.64	73.90	73.86	74.19	72.09	70.48	69.69	70.07	73.09	73.73	74.08
11	73.30	73.59	73.85	73.86	74.07	72.02	70.42	69.74	74.08	73.20	73.73	73.99
12	73.24	73.52	73.80	73.87	73.93	71.95	70.35	e69.70	73.69	73.32	73.67	73.95
13	73.18	73.49	74.21	73.82	73.83	72.25	70.28	e69.66	73.43	73.39	73.66	73.92
14	73.22	73.52	74.38	73.78	73.75	72.38	70.17	e69.62	73.22	73.41	73.64	74.57
15	73.25	73.52	74.18	73.71	73.69	72.42	70.12	e69.60	73.13	73.32	73.60	74.37
16	73.67	73.55	74.08	74.05	73.59	72.40	70.04	e69.56	73.33	73.37	73.60	74.23
17	73.63	74.08	74.02	74.47	73.54	72.20	69.98	69.53	73.73	73.42	73.58	74.17
18	73.60	73.97	73.97	74.25	73.46	72.06	69.93	69.47	73.63	73.44	73.58	74.52
19	73.55	73.90	74.00	74.11	73.40	71.91	69.91	69.43	73.73	73.44	73.70	74.33
20	74.10	73.87	74.20	74.03	73.58	71.76	69.82	69.37	73.61	73.42	74.13	74.22
21	74.13	74.26	74.08	73.96	74.31	71.62	69.74	69.42	73.55	73.45	74.43	74.13
22	74.03	74.13	74.01	73.90	74.07	71.51	69.68	69.44	73.43	73.51	74.25	74.06
23	73.94	74.07	73.94	73.95	73.92	71.56	69.60	69.41	73.27	73.52	74.17	74.04
24	73.91	74.03	73.88	73.89	73.81	71.43	69.53	69.34	73.15	73.55	74.19	73.97
25	73.85	74.09	74.27	73.84	73.70	71.35	69.47	69.27	73.06	73.56	74.10	73.92
26	73.84	74.01	74.11	73.79	73.54	71.24	69.43	69.21	72.99	73.52	74.04	73.89
27	73.88	73.94	74.03	73.96	73.47	71.11	69.38	69.16	72.99	73.42	74.02	73.87
28	73.81	73.91	73.98	74.04	73.39	71.06	69.32	69.13	72.89	73.28	74.09	73.89
29	73.77		73.96	73.92	73.28	71.03	69.26	69.08	72.85	e73.35	74.30	74.25
30	73.73		73.87	73.84	73.15	70.97	69.18	69.05	72.83	e73.50	74.17	74.43
31	73.66		73.85		73.05		69.11	69.75		e73.65		74.29

e Estimated.

Monmouth County

29.11.1.2.9. Rulif Hulsart. Dug observation water-table well in Englishtown sand, diameter 4½ feet, depth 21 feet, cased with concrete well blocks. Land-surface datum is 113 feet above msl. Highest water level 100.40 above msl, Apr. 19, 1939; lowest 95.47 above msl, Feb. 18, 1940. Records available: 1936-54.

Water level at end of day, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	96.35	96.01	95.84	96.20	96.50	97.07	96.72	96.19	95.92	96.70	96.31	96.54
2	96.32	96.01	95.83	96.20	96.51	97.07	96.70	96.17	95.96	96.69	96.35	96.56
3	96.31	96.01	95.87	96.20	96.54	97.08	96.69	96.15	95.98	96.68	96.36	96.56
4	96.29	96.00	95.86	96.21	96.53	97.09	96.68	96.13	95.98	96.65	96.38	96.57
5	96.29	95.99	95.88	96.21	96.53	97.09	96.66	96.15	95.98	96.63	96.40	96.57
6	96.27	95.98	95.90	96.22	96.55	97.09	96.64	96.10	95.98	96.61	96.42	96.57
7	96.24	95.97	95.92	96.22	96.56	97.10	96.62	96.08	96.01	96.60	96.42	96.57
8	96.21	95.96	95.94	96.22	96.59	97.09	96.60	96.06	95.97	96.60	96.43	96.56
9	96.20	95.95	95.96	96.22	96.59	97.09	96.58	96.09	95.96	96.59	96.41	96.58
10	96.19	95.93	95.97	96.23	96.60	97.09	96.57	96.08	95.97	96.58	96.40	96.57
11	96.19	95.92	95.96	96.25	96.62	97.08	96.56	96.10	96.08	96.56	96.40	96.56
12	96.16	95.91	95.96	96.25	96.66	97.07	96.53	96.12	96.36	96.53	96.38	96.55
13	96.13	95.90	95.98	96.27	96.68	97.07	96.52	96.12	96.58	96.52	96.37	96.55
14	96.12	95.90	95.99	96.27	96.70	97.06	96.52	96.11	96.69	96.50	96.36	96.60
15	96.11	95.89	96.00	96.27	96.71	97.05	96.49	96.10	96.76	96.50	96.33	96.60
16	96.10	95.88	96.00	96.28	96.73	97.03	96.47	96.10	96.82	96.48	96.32	96.61
17	96.10	95.88	96.01	96.29	96.75	97.02	96.45	96.08	96.82	96.47	96.31	96.63
18	96.09	95.88	96.02	96.30	96.77	97.01	96.43	96.05	96.83	96.44	96.30	96.68
19	96.08	95.86	96.05	96.30	96.78	97.00	96.41	96.04	96.86	96.42	96.30	96.70
20	96.08	95.85	96.07	96.32	96.80	96.99	96.40	96.02	96.85	96.41	96.32	96.72

29. 11. 1. 2. 9--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	96.07	95.87	96.08	96.36	96.81	96.98	96.38	96.01	96.87	96.40	96.30	96.76
22	96.07	95.84	96.09	96.39	96.82	96.94	96.37	96.01	96.83	96.38	96.33	96.78
23	96.06	95.83	96.10	96.41	96.86	96.91	96.34	96.00	96.82	96.37	96.40	96.80
24	96.06	95.83	96.10	96.41	96.89	96.89	96.32	95.99	96.81	96.35	96.43	96.80
25	96.06	95.83	96.11	96.42	96.91	96.88	96.31	95.98	96.80	96.33	96.45	96.81
26	96.06	95.82	96.12	96.44	96.94	96.86	96.30	95.98	96.80	96.32	96.47	96.82
27	96.06	95.82	96.14	96.48	96.97	96.81	96.28	95.97	96.78	96.31	96.49	96.83
28	96.04	95.82	96.15	96.48	97.00	96.79	96.25	95.93	96.76	96.30	96.51	96.87
29	96.02		96.18	96.49	97.01	96.78	96.23	95.92	96.72	96.29	96.50	96.89
30	96.02		96.18	96.50	97.01	96.74	96.22	95.93	96.71	96.28	96.51	96.90
31	96.01		96.19		97.02		96.20	95.91		96.28		96.93

29. 24. 7. 1. 6. Borough of Avon by the Sea well 1. Drilled public-supply artesian well in Mount Laurel and Wenonah sands, diameter 18 inches, depth 506 feet. Land-surface datum is 28.0 feet above msl. Highest water level 4.46 below msl, Apr. 12, 1937; lowest 132.0, pumping, below msl, Aug. 4, 1925. Records available: 1924-54. Feb. 24, 44.97; Apr. 29, 31.11; Oct. 18, 51.90.

Morris County

25. 14. 3. 5. 5. Jersey Central Power & Light Co. Whippany well. About 3 miles east of Whippany at power plant. Drilled observation artesian well in Wisconsin glacial outwash, diameter 6 inches, depth 170 feet. Highest water level 177.94 above msl, June 3, 1952; lowest 175.25 above msl, July 14, 1951. Records available: 1951-54.

Daily lowest water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	176.30	176.12	176.20	176.41	176.41	176.62	176.32	176.11	176.06	176.09	176.04	.....
2	176.29	176.18	176.10	176.43	176.42	176.59	176.32	176.12	176.06	176.08	176.10	.....
3	176.33	176.02	176.21	176.32	176.40	176.59	176.32	176.14	176.03	176.08	.....	.....
4	176.22	176.02	176.20	176.32	176.42	176.58	176.33	176.12	176.02	176.06	.....	.....
5	176.25	176.00	176.18	176.28	176.49	176.56	176.33	176.14	176.02	176.03	176.00	.....
6	176.14	176.00	176.24	176.29	176.47	176.56	176.31	176.10	176.01	175.99	176.00	.....
7	176.13	176.09	176.32	176.18	176.48	176.55	176.28	176.10	176.01	175.99	175.98	.....
8	176.11	176.07	176.20	176.06	176.51	176.52	176.27	176.10	176.00	176.00	.....	175.94
9	176.29	176.02	176.25	176.09	176.59	176.52	176.25	176.11	175.99	176.03	.....	176.09
10	176.26	176.10	176.28	176.19	176.48	176.53	176.27	176.14	176.00	176.02	175.90	176.11
11	176.18	176.11	176.29	176.35	176.50	176.53	176.28	176.12	176.02	176.00	.....	176.09
12	.....	176.02	176.33	176.30	176.48	176.52	176.28	176.08	176.10	176.00	175.92	176.11
13	.....	176.09	176.39	176.31	176.44	176.51	176.28	176.07	176.11	176.00	175.93	176.08
14	.....	176.18	176.45	176.39	176.50	176.50	176.26	176.09	176.09	176.01	175.98	176.13
15	176.24	176.09	176.38	176.32	176.53	176.45	176.22	176.09	176.09	176.02	175.91	176.14
16	176.30	176.02	176.30	176.36	176.57	176.43	176.21	176.09	176.10	176.00	175.99	176.02
17	176.19	176.22	176.33	176.42	176.53	176.44	176.22	176.08	176.15	176.00	175.98	176.05
18	176.19	176.20	176.32	176.39	176.52	176.45	176.22	176.07	176.14	176.00	175.98	176.20
19	176.10	176.20	176.37	176.38	176.52	176.43	176.21	176.06	176.17	176.05	175.94	176.25
20	176.19	176.25	176.43	176.38	176.61	176.43	176.20	176.05	176.14	176.08	175.98	176.25
21	176.13	176.30	176.38	176.41	176.67	176.43	176.17	176.04	176.15	176.07	176.02	176.33
22	176.16	176.29	176.36	176.49	176.61	176.35	176.18	176.04	176.10	176.06	176.06	176.34
23	176.20	176.28	176.33	176.45	176.61	.....	176.17	176.05	176.10	176.05	176.10	176.43
24	176.27	176.31	176.31	176.42	176.67	176.36	176.18	176.05	176.10	176.03	176.15	176.25
25	176.19	176.32	176.34	176.48	176.61	176.39	176.18	176.03	176.17	176.05	176.01	176.28
26	176.10	176.28	176.37	176.45	176.57	176.40	176.17	176.01	176.14	176.08	176.01	.....
27	176.14	176.26	176.35	176.49	176.59	176.39	176.16	176.01	176.13	176.10	.....	.....
28	176.02	176.30	176.41	176.38	176.66	176.35	176.14	176.01	176.10	176.10	.....	176.32
29	176.10		176.47	176.37	176.61	176.30	176.15	176.01	176.09	176.12	.....	176.28
30	176.20		176.43	176.39	176.60	176.30	176.12	176.01	176.10	176.11	.....	176.32
31	176.20		176.43		176.60		176.12	176.08		176.10		176.32

e Estimated.

Salem County

(The following wells are owned by the State of New Jersey.)

30. 22. 6. 6. 7. Penns Grove well 9. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{2}$ inches, depth 11 feet. Land-surface datum is 26.5 feet above msl. Highest water level 24.18 above msl, Feb. 5, 1952; lowest 19.80 above msl, Sept. 25, 1943. Records available: 1940-54.

30.22.6.6.7--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	+22.85	Apr. 16	+22.21	July 30	+20.17	Nov. 9	+21.85
Feb. 25	+22.78	May 16	+22.75	Sept. 3	+21.35	Dec. 8	+22.18
Mar. 23	+22.81	June 30	+21.22	Oct. 4	+21.42		

30.22.6.9.3. Penns Grove well 10. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{4}$ inches, depth 12 feet. Land-surface datum is 25.5 feet above msl. Highest water level 24.30 above msl, Dec. 22, 1951; lowest 18.84 above msl, Oct. 24, 1943. Records available: 1940-54.

Jan. 29	+23.28	Apr. 16	+22.52	July 30	j+21.47	Nov. 9	j+21.47
Feb. 25	+23.03	May 16	+22.84	Sept. 3	j+21.47	Dec. 8	+21.52
Mar. 23	+23.10	June 30	+21.57	Oct. 4	j+21.47		

j Water level below 21.47 above msl.

30.22.8.3.5. Penns Grove well 12. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{4}$ inches, depth 20 feet. Land-surface datum is 3.5 feet above msl. Highest water level 4.59 above msl, Feb. 5, 1952; lowest 1.22 above msl, Oct. 11, 1941. Records available: 1940-54.

Jan. 29	+3.20	Apr. 16	+3.06	July 30	+1.72	Nov. 9	+2.51
Feb. 25	+3.19	May 16	+3.17	Sept. 3	+2.12	Dec. 8	+2.74
Mar. 23	+3.32	June 30	+2.15	Oct. 4	+2.06		

30.22.8.9.5. Penns Grove well 32. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{4}$ inches, depth 12 feet. Land-surface datum is 4 feet above msl. Highest water level 2.84 above msl, Feb. 5, 1952; lowest 1.06 below msl, Nov. 22, 1941. Records available: 1940-54.

Jan. 29	+0.73	Apr. 16	+0.27	July 30	-0.77	Nov. 9	-0.73
Feb. 25	+.38	May 16	+.27	Sept. 3	-.48	Dec. 8	-.44
Mar. 23	+.55	June 30	-.40	Oct. 4	-.81		

30.22.9.2.1. Penns Grove well 13. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{4}$ inches, depth 16 feet. Land-surface datum is 22 feet above msl. Highest water level 21.47 above msl, Mar. 26, 1953; lowest 15.01 above msl, Oct. 24, 1943. Records available: 1940-54.

Jan. 29	+19.98	Apr. 16	+18.83	July 30	+16.10	Nov. 9	+16.18
Feb. 25	+19.81	May 16	+19.28	Sept. 3	+16.78	Dec. 8	+17.35
Mar. 23	+19.79	June 30	+17.32	Oct. 4	+16.03		

30.22.9.4.3. Penns Grove well E-14. Logwood Inn. Driven unused water-table well in Cape May formation, diameter $1\frac{1}{4}$ inches, depth 20 feet. Land-surface datum is 21 feet above msl. Highest water level 16.69 above msl, May 24, 1940; lowest 8.90 above msl, Nov. 9, 1954. Records available: 1940-54. This well is affected by pumping of well 0.35 mile south.

Jan. 29	+12.89	Apr. 16	+12.55	Sept. 3	+9.49	Nov. 9	+8.90
Feb. 25	+12.60	June 30	+11.16	Oct. 4	+9.06	Dec. 8	+9.51
Mar. 23	+13.32	July 30	+10.20				

30.22.9.4.9. Penns Grove Water Co. well 22. Drilled observation water-table well in Cape May formation, diameter 4 inches, depth 20 feet. Land-surface datum is 20 feet above msl. Highest water level 14.42 above msl, Aug. 18, 1939; lowest below 19.90 several times, 1942-45, 1949-54. Records available: 1939-49, 1951-54. Nearby well being pumped.

Jan. 29	j+19.90	Apr. 16	j+19.90	July 30	j+19.90	Nov. 9	j+19.90
Feb. 25	j+19.90	May 16	+.46	Sept. 3	j+19.90	Dec. 8	j+19.90
Mar. 23	j+19.90	June 30	j+19.90	Oct. 4	j+19.90		

j Water level below 19.90.

30.22.9.5.4. Penns Grove well E-15. George Schmid. Driven unused water-table well in Cape May formation, diameter $1\frac{1}{4}$ inches, depth 18 feet. Land-surface datum is 20 feet above msl. Highest water level 15.12 above msl, Apr. 23, 1940; lowest 4.82 above msl, Dec. 22, 1949. Records available: 1940-54. This well is affected by pumping from well about 0.25 mile southwest.

Jan. 29	+7.90	Apr. 16	+7.92	July 30	+6.36	Nov. 9	+5.08
Feb. 25	+7.67	May 16	+8.22	Sept. 3	+5.52	Dec. 8	+5.31
Mar. 23	+8.15	June 30	+7.24	Oct. 4	+5.19		

30.22.9.5.8. Penns Grove well 15. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{4}$ inches, depth 27 feet. Land-surface datum is 23.5 feet above msl. Highest water level 12.00 above msl, June 10, 1947; lowest 1.33 above msl, Feb. 7, 1950. Records available: 1941-54. Nearby wells being pumped.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	+4.22	Apr. 16	+4.39	July 30	+3.43	Nov. 9	+1.89
Feb. 25	+4.13	May 16	+4.55	Sept. 3	+2.30	Dec. 8	+2.10
Mar. 23	+4.33	June 30	+4.22	Oct. 4	+2.01		

30.22.9.6.2. Penns Grove well 14. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{4}$ inches, depth 17 feet. Land-surface datum is 25.5 feet above msl. Highest water level 23.24 above msl, Feb. 5, 1952; lowest 16.55 above msl, Oct. 24, 1943. Records available: 1940-54. This well is possibly affected by pumping of two wells $1\frac{1}{2}$ miles distant.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	+20.98	Apr. 16	+20.11	July 30	+17.48	Nov. 9	+17.91
Feb. 25	+20.56	May 16	+20.53	Sept. 3	+18.05	Dec. 8	+19.16
Mar. 23	+20.87	June 30	+18.72	Oct. 4	+17.61		

30.22.9.7.3. Penns Grove well 24. Drilled observation water-table well in sands of Magothy and Raritan formations, diameter 6 inches, depth 51 feet, screen 46-51, $5\frac{1}{2}$ inches - 25/10,000 slot. Land-surface datum is 18 feet above msl. Highest water level 7.83 above msl, June 14, 1947; lowest 6.48 below msl, Feb. 18, 1950. Records available: 1941-54.

Water level at end of day from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2.55	2.75	3.02	2.82	2.96	2.49	3.16	3.84	4.72	5.00	5.17	5.35
2	2.52	2.74	3.05	2.76	2.92	2.49	3.19	3.87	4.74	5.01	5.16	5.35
3	2.47	2.75	3.02	2.82	2.87	2.48	3.22	3.91	4.77	....	5.18	5.36
4	2.47	2.77	3.04	2.83	2.89	2.50	3.25	3.93	4.79	5.03	5.19	5.37
5	2.43	2.80	3.03	2.80	2.88	2.53	3.26	3.95	4.80	5.03	5.19	....
6	2.42	2.83	3.01	2.75	2.87	2.53	3.29	....	4.82	5.05	5.19	....
7	2.47	2.84	2.99	2.75	2.85	2.52	3.30	....	4.84	5.06	5.21	....
8	2.53	2.73	3.00	2.80	2.83	2.56	3.32	....	4.86	5.05	5.21	5.42
9	2.46	2.79	2.93	2.83	2.83	2.58	3.34	....	4.87	5.04	5.22	5.43
10	2.49	2.81	2.97	2.78	2.81	2.57	3.36	....	4.88	5.05	5.23	5.44
11	2.46	2.86	2.99	2.76	2.79	2.59	3.38	....	4.91	5.05	5.23	5.46
12	2.56	2.90	3.01	2.80	2.79	2.62	3.38	4.22	4.92	5.06	5.25	5.47
13	2.61	2.89	2.93	2.77	2.79	2.64	3.39	4.24	4.93	5.07	5.26	5.48
14	2.54	2.84	2.95	2.77	2.76	2.68	3.42	4.26	4.94	5.07	5.25	5.47
15	2.53	2.87	3.01	2.83	2.74	2.72	3.45	....	4.95	5.07	5.26	5.47
16	2.55	2.84	3.03	2.75	2.72	2.76	3.48	....	4.96	5.09	5.26	5.48
17	2.66	2.92	2.99	2.81	2.73	2.80	3.50	....	4.96	5.09	5.27	5.47
18	2.63	2.94	2.97	2.85	2.72	2.82	3.50	4.37	4.96	5.10	5.28	5.46
19	2.66	2.96	2.85	2.88	2.71	2.82	3.51	4.40	4.95	5.10	5.29	5.45
20	2.62	2.95	2.88	2.90	2.69	2.82	3.53	4.43	4.96	5.10	5.30	5.45
21	2.69	2.90	2.90	2.89	2.68	2.83	3.55	4.46	4.96	5.10	5.31	5.45
22	2.71	2.97	2.89	2.89	2.68	2.85	3.57	4.48	4.97	5.12	5.31	5.45
23	2.73	2.97	2.88	2.91	2.67	2.89	3.60	4.50	4.98	5.13	5.31	5.44
24	2.71	2.93	2.88	2.94	2.64	2.93	3.64	4.51	4.98	5.14	5.30	5.47
25	2.74	2.96	2.80	2.94	2.61	2.95	3.67	4.54	4.97	5.14	5.31	5.48
26	2.70	3.00	2.85	2.95	2.62	2.98	3.69	4.57	4.97	5.15	5.32	5.49
27	2.68	3.02	2.85	2.93	2.59	3.01	3.71	4.60	4.98	5.15	5.31	5.48
28	2.77	3.00	2.81	2.99	2.56	3.06	3.73	4.62	4.98	5.16	e5.32	5.46
29	2.76		2.77	3.01	2.54	3.10	3.76	4.65	4.99	5.15	5.34	5.44
30	2.76		2.82	3.00	2.56	3.12	3.80	4.66	4.99	5.16	5.35	....
31	2.78		2.80		2.53		3.82	4.70		5.17		5.41

e Estimated.

30.22.9.8.4. Penns Grove well 36. Driven observation water-table well in Magothy and Raritan formations, diameter $1\frac{1}{4}$ inches, depth 43 feet. Land-surface datum is 26.5 feet above msl. Highest water level 5.58 above msl, June 10, 1947; lowest 9.39 below msl, Dec. 4, 1942. Records available: 1940-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	4.64	Apr. 16	5.03	July 30	5.74	Nov. 9	7.03
Feb. 25	4.92	May 16	5.05	Sept. 3	6.33	Dec. 8	7.56
Mar. 23	5.07	June 30	5.25	Oct. 4	6.76		

30.22.9.8.6. Penns Grove well 35. Driven observation water-table well in Magothy and Raritan formations, diameter $1\frac{1}{4}$ inches, depth 31 feet. Land-surface datum is 20.5 feet above msl. Highest water level 18.66 above msl, Nov. 29, 1940; lowest 0.35 above msl, Oct. 9, 1942. Records available: 1940-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	+3.76	Apr. 16	+3.50	July 30	+1.81	Nov. 9	+0.99
Feb. 25	+3.57	May 16	+3.43	Sept. 3	+2.13	Dec. 8	+1.55
Mar. 23	+3.68	June 30	+2.84	Oct. 4	+1.01		

30.23.1.8.5. Penns Grove well 6. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{4}$ inches, depth 32 feet. Land-surface datum is 6 feet above msl. Highest water level 2.93 above msl, Dec. 22, 1951; lowest 0.19 above msl, Sept. 27, 1941. Records available: 1940-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	+2.20	Apr. 16	+1.94	July 30	+1.22	Nov. 9	+1.82
Feb. 25	+2.30	May 16	+2.15	Sept. 3	+2.06	Dec. 8	+1.87
Mar. 23	+2.19	June 30	+1.17	Oct. 4	+1.75		

30.23.4.1.9. Penns Grove well 7. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{4}$ inches, depth 12 feet. Land-surface datum is 14 feet above msl. Highest water level 11.09 above msl, Aug. 14, 1942; lowest 6.84 above msl, Nov. 22, 1941. Records available: 1940-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	+9.90	Apr. 16	+9.73	July 30	+7.99	Nov. 9	+8.59
Feb. 25	+9.79	May 16	+9.89	Sept. 3	+8.42	Dec. 8	+9.60
Mar. 23	+9.92	June 30	+8.80	Oct. 4	+8.44		

30.23.4.7.8. Penns Grove well 11. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{4}$ inches, depth 20 feet. Land-surface datum is 29.5 feet above msl. Highest water level 25.10 above msl, Feb. 13, 1951; lowest 18.44 above msl, Feb. 7, 1950. Records available: 1940-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	+21.30	Apr. 16	+21.29	July 30	+21.12	Nov. 9	+20.12
Feb. 25	+21.27	May 16	+21.30	Sept. 3	+20.74	Dec. 8	+19.93
Mar. 23	+21.27	June 30	+21.29	Oct. 4	+20.66		

30.23.7.1.4. Penns Grove Water Supply Co. R-7. Drilled unused water-table well in Magothy and Raritan formations, diameter 2 inches, depth 50 feet. Highest water level 24.08 above msl, Feb. 5, 1952; lowest 18.82 above msl, Oct. 20, 1943. Records available: 1940-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	+22.95	Apr. 16	+22.26	July 30	+19.84	Nov. 9	+19.73
Feb. 25	+22.45	May 16	+22.73	Sept. 3	+19.68	Dec. 8	+21.02
Mar. 23	+22.87	June 30	+20.91	Oct. 4	+20.14		

30.32.1.9.5. Penns Grove well 71. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{4}$ inches, depth 16 feet. Land-surface datum is 12 feet above msl. Highest water level 8.94 above msl, Feb. 5, 1952; lowest 1.33 above msl, Dec. 6, 1941. Records available: 1940-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	+5.97	Apr. 16	+5.93	July 30	+3.39	Nov. 9	+2.61
Feb. 25	+5.67	May 16	+5.89	Sept. 3	+2.99	Dec. 8	+3.51
Mar. 23	+6.31	June 30	+4.48	Oct. 4	+2.71		

30.32.2.2.3. Penns Grove well 31. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{4}$ inches, depth 22 feet. Land-surface datum is 5.0 feet above msl. Highest water level 3.09 above msl, Feb. 8, 1949; lowest 4.23 below msl, Nov. 22, 1941, Oct. 24, 1943. Records available: 1940-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	+0.17	Apr. 16	-0.07	July 30	-2.55	Nov. 9	-2.34
Feb. 25	-.10	May 16	-.35	Sept. 3	-2.29	Dec. 8	-1.42
Mar. 23	-.61	June 30	-1.87	Oct. 4	-2.74		

30.32.2.3.3. Penns Grove well 41. Drilled observation water-table well in Cape May formation, diameter 6 inches, depth 25 feet, $5\frac{1}{2}$ -inch screen, 25/10,000 slot at 20-25. Land-surface datum is 10 feet above msl. Highest water level 11.89 above msl, Feb. 4, 1952; lowest 4.66 above msl, Oct. 15, 1943. Records available: 1941-54.

Water level at end of day, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	9.84	10.20	10.42	10.18	9.88	8.99	7.44	6.29	6.90	6.50	6.17	7.93
2	9.81	10.21	10.40	10.17	9.81	8.92	7.40	6.27	6.91	6.45	6.44	7.93
3	9.80	10.22	10.68	10.03	10.15	8.83	7.38	6.27	6.87	6.41	6.59	7.92
4	9.79	10.20	10.67	9.99	10.11	8.77	7.34	6.22	6.82	6.42	6.61	7.90
5	9.80	10.13	10.60	9.98	10.02	8.69	7.31	6.20	6.80	6.39	6.68	7.88

30. 32. 2. 3. 3--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	9.73	10.06	10.52	9.99	9.95	8.61	7.27	6.16	6.73	6.35	6.69	7.86
7	9.69	10.01	10.47	9.98	10.04	8.52	7.25	6.12	6.70	6.29	6.69	7.82
8	9.62	10.07	10.38	9.88	10.22	8.48	7.28	6.10	6.63	6.28	6.70	7.83
9	9.65	10.00	10.39	9.80	10.17	8.44	7.21	6.15	6.60	6.25	6.61	8.01
10	9.64	9.96	10.30	9.80	10.09	8.38	7.17	6.15	6.57	6.22	6.60	8.10
11	9.66	9.90	10.23	9.80	9.97	8.32	7.11	6.11	6.79	6.19	6.60	8.09
12	9.60	9.79	10.18	9.71	9.88	8.28	7.08	6.09	6.80	6.15	6.60	8.08
13	9.56	9.73	10.35	9.69	9.80	8.21	7.02	6.03	6.80	6.11	6.59	8.08
14	9.60	9.78	10.69	9.61	9.80	....	6.99	6.00	6.76	6.10	6.59	8.27
15	9.64	9.79	10.63	9.61	9.71	....	7.04	5.99	6.71	6.10	6.53	8.30
16	10.04	9.79	10.57	9.84	9.70	....	6.99	5.97	6.70	6.07	6.52	8.24
17	10.08	9.88	10.50	10.00	9.63	....	6.92	5.92	6.69	6.03	6.51	8.23
18	10.06	9.80	10.44	9.95	9.57	....	6.89	5.90	6.65	6.01	6.50	8.48
19	10.07	9.75	10.49	9.86	9.71	....	6.83	5.88	6.66	6.00	6.53	8.50
20	10.42	9.73	10.62	9.79	9.84	....	6.79	6.20	6.63	5.99	6.71	8.49
21	10.50	10.08	10.50	9.73	9.73	....	6.74	6.50	6.71	5.95	7.28	8.45
22	10.50	10.12	10.40	9.68	9.64	....	6.70	6.56	6.83	5.91	7.43	8.40
23	10.41	10.10	10.33	9.83	9.59	....	6.67	6.57	6.83	5.90	7.56	8.40
24	10.40	10.16	10.28	9.84	9.58	....	6.61	6.54	6.81	5.88	7.63	8.34
25	10.41	10.21	10.54	9.80	9.46	....	6.58	6.50	6.80	5.85	7.66	8.30
26	10.45	10.20	10.48	9.90	9.39	....	6.53	6.42	6.74	5.84	7.66	8.30
27	10.49	10.13	10.40	10.10	9.33	....	6.49	6.39	6.68	5.83	7.69	8.30
28	10.33	10.11	10.35	10.03	9.27	....	6.44	6.34	6.62	5.81	7.75	8.34
29	10.29		10.31	9.98	9.25	....	6.40	6.30	6.58	6.12	7.91	8.88
30	10.27		10.20	9.91	9.17	7.48	6.35	6.25	6.52	6.16	7.90	9.12
31	10.17		10.24		9.10		6.33	6.82		6.17		9.21

30. 32. 2. 3. 9. Penns Grove well 51. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{2}$ inches, depth 26 feet. Land-surface datum is 13.7 feet above msl. Highest water level 11.24 above msl, Feb. 5, 1952; lowest 3.94 above msl, Oct. 24, 1943. Records available: 1940-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	+9.96	Apr. 16	+9.12	July 30	+5.44	Nov. 9	+5.92
Feb. 25	+10.00	May 16	+9.35	Sept. 3	+5.97	Dec. 8	+7.72
Mar. 23	+9.98	June 30	+6.60	Oct. 4	+5.65		

30. 32. 2. 5. 8. Penns Grove well 62. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{2}$ inches, depth 30 feet. Land-surface datum is 10 feet above msl. Highest water level 3.56 above msl, Feb. 8, 1949; lowest 10.55 below msl, Feb. 13, 1942. Records available: 1940-54. Nearby well being pumped. June 30, -2.92; July 30, -3.92.

30. 32. 2. 6. 4. Penns Grove well E-16. Seven Bros. Dug unused water-table well in Cape May formation, diameter 2 feet, depth 6 feet, curbed with brick. Land-surface datum is 15 feet above msl. Highest water level 14.85 above msl, Mar. 14, 1943; lowest 10.21 above msl, Oct. 24, 1943. Records available: 1940-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	+14.14	Apr. 16	+13.29	July 30	+10.73	Nov. 9	+10.68
Feb. 25	+14.12	May 16	+13.01	Sept. 3	+10.92	Dec. 8	+11.98
Mar. 23	+14.38	June 30	+11.48	Oct. 4	+10.72		

30. 32. 2. 6. 5. Penns Grove well 54. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{2}$ inches, depth 12 feet. Land-surface datum is 12.5 feet above msl. Highest water level flowing at 13.69 above msl, Mar. 13, 1941; lowest 5.63 above msl, Oct. 24, 1943. Records available: 1940-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	+10.20	Apr. 16	+9.74	July 30	+6.95	Nov. 9	+7.14
Feb. 25	+9.82	May 16	+9.75	Sept. 3	+7.02	Dec. 8	+8.42
Mar. 23	+10.38	June 30	+7.97	Oct. 4	+7.04		

30. 32. 2. 9. 1. Penns Grove well 63. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{2}$ inches, depth 17 feet. Land-surface datum is 18 feet above msl. Highest water level 15.76 above msl, Feb. 5, 1952; lowest 8.09 above msl, Oct. 24, 1943. Records available: 1941-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	+13.01	Apr. 16	+12.96	July 30	+9.34	Nov. 9	+9.27
Feb. 25	+13.06	May 16	+13.09	Sept. 3	+9.19	Dec. 8	+10.62
Mar. 23	+13.74	June 30	+10.52	Oct. 4	+9.23		

30.32.2.9.5. Penns Grove well 64. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{4}$ inches, depth 17 feet. Land-surface datum is 5 feet above msl. Highest water level 2.89 above msl, Dec. 22, 1951; lowest 1.42 below msl, Sept. 25, 1943. Records available: 1940-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	+1.46	Apr. 16	+1.18	July 30	-0.45	Nov. 9	+0.32
Feb. 25	+1.30	May 16	+1.22	Sept. 3	-.03	Dec. 8	+1.36
Mar. 23	+1.35	June 30	+.27	Oct. 4	+.93		

30.32.3.5.5. Penns Grove well 55. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{4}$ inches, depth 12 feet. Land-surface datum is 8.0 feet above msl. Highest water level 7.28 above msl, Feb. 8, 1949, Feb. 5, 1952; lowest 1.93 above msl, Oct. 20, 24, 1943. Records available: 1940-54.

Jan. 29	+6.06	Apr. 16	+5.39	July 30	+2.51	Nov. 9	+4.21
Feb. 25	+5.94	May 16	+5.60	Sept. 3	+3.27	Dec. 8	+5.27
Mar. 23	+6.03	June 30	+3.52	Oct. 4	+3.46		

30.32.3.6.5. Penns Grove Water Supply Co. R-8. Drilled unused water-table well in Merchantville clay(?), diameter 5 inches, depth 55 feet. Land-surface datum is 8.5 feet above msl. Highest water level 8.97 above msl, Mar. 26, 1953; lowest 2.09 above msl, Oct. 10, 1943. Records available: 1940-54. Jan. 29, +8.72; Feb. 25, +8.80; Mar. 23, +8.78; Apr. 16, +8.24; May 16, +8.64; June 30, +7.99.

30.32.4.6.4. Penns Grove well 73. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{4}$ inches, depth 12 feet. Land-surface datum is 3.5 feet above msl. Highest water level 2.82 above msl, Dec. 22, 1951, Feb. 5, 1952; lowest 2.01 below msl, Sept. 25, 1943. Records available: 1940-54.

Jan. 29	+1.88	Apr. 16	+1.68	July 30	-1.54	Nov. 9	+0.43
Feb. 25	+1.91	May 16	+1.65	Sept. 3	-.57	Dec. 8	+1.21
Mar. 23	+1.89	June 30	-.33	Oct. 4	-.43		

30.32.5.1.3. Penns Grove well 72. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{4}$ inches, depth 17 feet. Land-surface datum is 8 feet above msl. Highest water level 6.53 above msl, Feb. 5, 1952; lowest 0.70 below msl, Oct. 24, 1943. Records available: 1940-54.

Jan. 29	+4.60	Apr. 16	+3.80	July 30	+1.00	Nov. 9	+1.44
Feb. 25	+4.32	May 16	+3.73	Sept. 3	+1.09	Dec. 8	+2.76
Mar. 23	+4.61	June 30	+1.95	Oct. 4	+1.14		

30.32.5.4.6. Penns Grove well 74. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{4}$ inches, depth 16 feet. Land-surface datum is 8 feet above msl. Highest water level 7.07 above msl, Dec. 3, 1940; lowest 0.37 above msl, Oct. 24, 1943. Records available: 1940-54.

Jan. 29	+2.72	Apr. 16	+2.33	July 30	+0.50	Nov. 9	+1.10
Feb. 25	+2.31	May 16	+2.35	Sept. 3	+.50	Dec. 8	+1.96
Mar. 23	+2.71	June 30	+1.29	Oct. 4	+.71		

30.32.5.7.7. Penns Grove well 84. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{4}$ inches, depth 12 feet. Land-surface datum is 11.5 feet above msl. Highest water level 11.62 above msl, Mar. 26, 1953; lowest 3.37 above msl, Oct. 4, 1954. Records available: 1940-54.

Jan. 29	+11.02	Apr. 16	+10.24	July 30	+6.04	Nov. 9	+3.44
Feb. 25	+11.34	May 16	+10.29	Sept. 3	+5.46	Dec. 8	+5.84
Mar. 23	+10.96	June 30	+7.20	Oct. 4	+3.37		

30.32.6.1.6. Penns Grove well 65. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{4}$ inches, depth 12 feet. Land-surface datum is 11 feet above msl. Highest water level 9.23 above msl, Feb. 8, 1949; lowest 1.88 above msl, Oct. 24, 1943. Records available: 1940-54.

Jan. 29	+6.60	Apr. 16	+7.34	July 30	+3.43	Nov. 9	+3.71
Feb. 25	+6.75	May 16	+7.26	Sept. 3	+3.27	Dec. 8	+4.34
Mar. 23	+7.26	June 30	+6.53	Oct. 4	+3.37		

30.32.7.6.9. Penns Grove well 92. Driven observation water-table well in Cape May formation, diameter $1\frac{1}{4}$ inches, depth 16 feet. Land-surface datum is 17.2 feet above msl. Highest water level 15.66 above msl, Feb. 5, 1952; lowest 5.11 above msl, Nov. 9, 1954. Records available: 1940-54.

30. 32. 7. 6. 9--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	+8.66	Apr. 16	+9.18	July 30	+6.38	Nov. 9	+5.11
Feb. 25	+8.74	May 16	+8.57	Sept. 3	+5.71	Dec. 8	+5.45
Mar. 23	+9.85	June 30	+7.18	Oct. 4	+5.41		

30. 44. 3. 6. 2. Seabrook Farms Thornthwaite well. Shirley. Dug unused water-table well in Cohansey sand, diameter 48 to 36 inches, depth about 24 feet. Land-surface datum is 144 feet above msl. Highest water level 135.62 above msl, May 26, 1953; lowest 127.35 above msl, Sept. 12, 1950. Records available: 1949-54. Measurement discontinued.

Water level at end of day, above msl, from recorder graph

Jan. 1	128.87	Jan. 31	128.96	Feb. 21	128.75	Mar. 14	129.00
2	128.86	Feb. 1	128.99	22	128.72	15	129.00
3	128.83	2	129.02	23	128.71	16	128.99
4	128.81	3	129.03	24	128.74	17	129.02
5	128.83	4	129.05	25	128.73	18	129.02
15	128.87	5	129.04	26	128.70	19	129.05
16	128.86	7	128.98	27	128.69	20	129.05
17	128.80	8	129.03	28	128.69	21	129.04
18	128.79	9	129.00	Mar. 1	128.68	22	129.03
19	128.77	10	128.97	2	128.64	23	129.03
20	128.78	11	128.93	3	128.71	24	129.01
21	128.74	12	128.86	4	128.71	25	129.06
23	128.76	13	128.84	5	128.75	26	129.02
24	128.82	14	128.86	6	128.80	27	129.03
25	128.83	15	128.84	7	128.84	28	129.05
26	128.89	16	128.84	8	128.86	29	129.08
27	128.93	17	128.81	9	128.92	30	129.04
28	128.90	18	128.77	11	128.95	31	129.03
29	128.93	19	128.74	12	128.95	Apr. 1	128.99
30	128.96	20	128.73	13	128.99		

Union County

26. 21. 5. 4. 6. Union County Park Commission. Drilled unused artesian well in Brunswick shale, diameter 6 inches, depth 290 feet. Land-surface datum is 69.0 feet above msl. Highest water level 65.94 above msl, June 2, 1952; lowest 60.26 above msl, June 25, 1954. Records available: 1943-54.

Water level at end of day, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	62.00	61.32	e61.50	61.39	62.01	62.22	e60.84	e60.84	e61.08	e61.46	61.20	61.74
2	62.18	61.20	e61.46	61.45	62.27	61.99	e60.93	e60.73	e60.75	e61.40	61.37	61.67
3	62.20	61.18	e61.44	61.48	62.07	61.89	60.87	e60.61	e60.50	e61.65	61.38	61.60
4	61.79	61.12	e61.40	e61.52	61.85	61.86	61.37	e61.41	61.26	e61.45	61.19	61.92
5	61.55	61.05	e61.35	e61.57	61.79	e61.80	61.64	e61.62	61.52	e61.38	61.16	62.13
6	61.15	61.22	e61.30	e61.60	61.94	e61.65	61.43	e61.81	61.64	e61.64	61.43	61.84
7	e61.10	61.54	e61.35	e61.50	61.60	e61.60	61.44	e61.76	61.49	e61.60	61.64	61.66
8	e61.08	61.54	e61.40	e61.70	e62.02	e61.55	61.45	e61.73	61.28	e61.55	61.38	61.61
9	e61.10	61.27	e61.45	e61.75	e61.90	61.40	61.35	e61.71	61.17	e61.51	61.14	61.58
10	e61.50	61.13	61.51	61.81	e62.00	61.34	61.51	e61.89	e61.17	e61.42	61.06	61.48
11	e61.45	60.98	61.42	62.13	e62.02	61.13	61.71	e61.77	e62.45	e61.55	61.05	61.78
12	e61.40	60.88	61.33	61.78	e62.10	61.43	61.43	e61.63	e61.96	e61.40	61.06	e61.83
13	e61.35	61.06	61.50	61.57	e62.20	61.84	61.11	e61.45	e61.90	e61.34	60.67	e61.77
14	e61.30	61.26	61.75	61.50	e62.25	61.64	60.98	e61.22	e61.86	e61.26	60.39	e61.95
15	e61.25	61.17	61.63	61.46	62.38	61.41	61.22	e61.13	61.85	e61.47	60.78	e61.88
16	e61.40	61.09	61.52	61.70	62.66	61.26	61.32	e61.10	61.91	e61.55	60.95	e61.67
17	e61.50	61.08	e61.50	61.97	62.38	61.23	61.50	61.08	61.89	e61.40	e61.00	e61.78
18	e61.45	61.03	e61.48	62.38	62.19	61.17	61.74	61.00	62.06	e61.20	60.87	e61.66
19	e61.40	61.03	61.47	62.25	62.01	61.47	61.42	60.96	62.35	61.12	60.87	e61.95
20	e61.35	61.40	61.61	61.92	61.96	61.71	60.80	60.91	62.22	61.05	61.42	e61.87

26. 21. 5. 4. 6--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	e61.30	61.69	61.73	61.82	62.02	61.09	60.48	61.16	62.07	61.05	61.90	e61.79
22	e61.50	61.44	61.69	61.76	62.34	60.73	60.45	61.38	61.80	61.15	61.72	e61.96
23	e61.60	e61.35	61.58	61.69	62.35	60.61	60.45	61.30	e61.74	60.78	61.61	e62.06
24	e61.55	e61.22	61.52	62.02	62.33	60.44	60.74	61.16	e61.70	60.48	61.53	e62.03
25	e61.50	e61.50	61.62	62.23	62.21	60.26	e60.60	61.01	e61.65	60.79	61.91	e62.00
26	e61.48	e61.56	61.49	61.98	e62.10	e60.38	e60.75	60.87	e61.58	60.99	61.89	e61.98
27	e61.45	e61.50	61.59	61.88	e62.05	e60.54	e61.10	60.82	e61.85	60.90	61.94	62.39
28	e61.43	e61.40	61.82	61.81	e62.00	e60.65	e60.98	60.99	e61.80	e60.98	61.95	62.22
29	e61.40		61.76	e61.80	62.13	e60.73	e60.84	61.22	e61.68	e61.00	61.95	62.09
30	e61.35		61.54	e61.79	62.60	e60.95	e60.73	61.16	e61.59	e61.05	61.79	62.13
31	e61.33		61.47		62.56		e60.62	61.21		e61.10		e62.20

e Estimated.

26. 21. 5. 8. 3. White Laboratories, Inc. well 3. Kenilworth. Drilled observation artesian well in Brunswick shale, diameter 6 inches, depth 40 feet, cased about 40 feet into rock. Highest water level 72.5 above msl, Apr. 20, 1953; lowest 39.1 above msl, Mar. 7, 1952. Records available: 1952-54.

Daily lowest water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	62.4	61.3	60.1	62.1	61.0	60.5	....	59.5	....	....	....	60.7
2	62.8	61.2	60.5	62.1	61.2	60.5	57.1	57.2	....	....	....	60.7
3	62.8	61.0	61.0	62.3	61.0	60.3	57.2	56.4	....	....	....	....
4	62.2	61.0	61.0	62.5	61.2	59.5	....	56.1	....	....	58.7	....
5	62.1	60.9	61.0	62.3	61.3	60.1	....	55.9	....	....	58.7	....
6	61.8	60.9	61.1	61.7	61.0	61.2	....	55.8	....	....	59.5	....
7	61.8	60.9	61.5	60.5	61.0	60.3	....	....	....	58.2	61.1	....
8	61.8	....	61.4	60.5	61.1	60.0	....	....	....	58.4	60.0	....
9	61.8	....	61.4	60.7	61.5	59.6	58.1	....	....	58.7	59.2	....
10	62.2	....	61.5	61.1	61.6	59.1	58.3	56.5	....	58.7	59.1	61.3
11	62.0	57.9	61.5	61.5	62.2	58.7	58.0	....	....	57.3	59.8	61.3
12	61.9	57.2	61.5	60.9	62.2	58.8	57.6	56.9	....	56.6	59.6	61.3
13	61.9	57.0	61.6	60.2	61.7	60.3	57.9	56.6	....	56.2	59.7	61.5
14	61.9	57.0	61.9	60.6	61.6	59.1	57.7	....	....	....	60.1	61.6
15	62.0	56.8	61.8	60.6	61.7	58.6	....	....	....	....	60.4	62.1
16	62.0	56.8	61.7	61.2	62.2	59.0	....	57.0	57.9	....	60.3	61.7
17	62.0	58.2	61.7	61.3	61.8	58.8	....	57.0	57.6	58.3	59.8	61.4
18	61.6	59.2	61.4	61.5	61.9	59.0	....	57.0	....	58.6	59.3	61.6
19	61.3	59.7	61.5	60.3	61.9	59.0	....	56.3	....	58.7	58.9	62.3
20	61.2	....	61.9	60.1	60.9	58.6	....	....	57.1	58.6	58.9	62.2
21	61.2	....	62.2	59.7	61.5	57.9	....	....	56.7	58.4	59.0	62.1
22	61.1	....	61.7	59.9	61.9	58.0	59.8	....	....	58.2	59.6	62.1
23	61.1	....	61.5	60.6	62.2	57.7	59.9	....	....	58.3	60.1	62.1
24	61.4	....	61.3	60.9	61.8	57.3	60.1	....	....	58.8	60.3	62.3
25	61.2	59.6	61.8	61.6	62.1	....	60.3	55.7	....	58.7	60.5	62.4
26	61.1	60.1	61.9	61.2	62.0	....	60.2	55.4	....	58.7	60.3	62.5
27	61.2	60.2	61.9	61.5	62.0	....	60.1	....	....	57.7	60.4	62.4
28	61.0	60.6	62.4	61.6	61.6	....	59.9	....	....	....	61.6	62.6
29	61.1	....	62.4	61.1	61.8	....	59.5	....	....	58.2	60.1	62.4
30	61.3	....	62.6	61.0	61.9	....	59.3	....	....	58.5	59.8	62.5
31	61.5	....	62.5	....	62.5	....	59.3	....	....	....	....	62.7

NEW YORK

Long Island

By J. J. Geraghty

Scope of Water-Level Program

The observation-well program in Long Island was continued during 1954 in cooperation with the New York State Water Power and Control Commission, the Nassau County Department of Public Works, the Suffolk County Board of Supervisors, and the Suffolk County Water Authority. Measurements were made in 450 wells, 50 of which are equipped with recording gages. The records of 180 wells, 23 of which are equipped with recording gages, are included in this report. Figures 23-27 show the location of observation wells on Long Island. The unpublished data have been placed in open file and are available for inspection at the office of the U. S. Geological Survey, 230 Old Country Road, Mineola, N. Y. With respect to the wells for which data are being published, the following changes were made in the water-level observation program during 1954: (1) readings in 6 wells were discontinued, (2) readings were resumed in 2 wells for which no data were shown in the 1953 report, (3) recording gages were removed from 7 wells, after which monthly measurements were made, and (4) the frequency of measurements in 18 wells was reduced to a semiannual basis. A typewritten report on supplementary data on water levels and chloride concentrations in outpost observation wells in southern Nassau County, Long Island, N. Y., by J. J. Geraghty, was released to open file.

Precipitation

Precipitation on Long Island in 1954 averaged about 3 inches less than in 1953; however, at 49 inches it was still about 5 inches above normal at 15 stations operated by the U. S. Weather Bureau and other agencies. Deficiency in precipitation from January through July was more than compensated for later in the year, principally by the heavy rains accompanying two severe hurricanes that passed over or near Long Island in August and September. The highest reported precipitation (61.05 inches) on Long Island in 1954 was at Lake Ronkonkoma in the central part of the island; this station reported 19 days with 1.00 inch or more of precipitation during 1954. The lowest reported precipitation on Long Island was 41.68 inches at Cutchogue on the North Fork of Suffolk County. Annual precipitation averaged about 8 inches above normal in Suffolk County and, in general, about 2 inches above normal in the rest of Long Island. At the Riverhead Research Farm in eastern Suffolk County, 56.24 inches (14.32 inches above normal) of precipitation was measured in 1954. At Setauket (longest continuous record in eastern Long Island) 50.35 inches (5.41 inches above normal) was recorded. At Mineola in central Nassau County, 47.25 inches (4.80 inches above normal) was measured, and at the Battery (longest continuous record near the western end of Long Island) 38.09 inches (3.94 inches below normal) was recorded.

Pumpage

According to data furnished by the New York State Water Power and Control Commission, the Nassau County Department of Public Works, and other sources, gross withdrawals of ground water on Long Island in 1954 for public supply, industrial, agricultural, and other uses averaged 315 mgd (million gallons per day), an alltime record high. Of this amount, 220 mgd (including 55 mgd pumped by New York City) was for public supply, 78 mgd for industrial uses, and 17 mgd for agricultural purposes. Withdrawals in 1954 averaged 54 mgd more than in 1953. Most of this, about 40 mgd, represented an increase in pumpage, from 15 mgd in 1953 to 55 mgd in 1954, by the city of New York from installations in Nassau and Queens Counties; these large withdrawals were necessary because of the shortage of supply in the city's upstate reservoirs. The city's emergency lasted from November 1953 to September 1954. The remaining increase of 14 mgd in 1954 is accounted for as follows: (1) public supply by water districts, municipalities, and private companies (about 7 mgd); (2) industrial uses (about 6 mgd); and (3) agricultural uses (about 1 mgd). Aside from the heavy withdrawals by the city of New York on occasions of shortages of surface-water supplies, the increase in pumpage year for year in Long Island during the past 10 years reflects chiefly the large growth in population, the expanding industrial development in Nassau and Suffolk Counties, and the somewhat greater per capita use of ground water for all purposes.

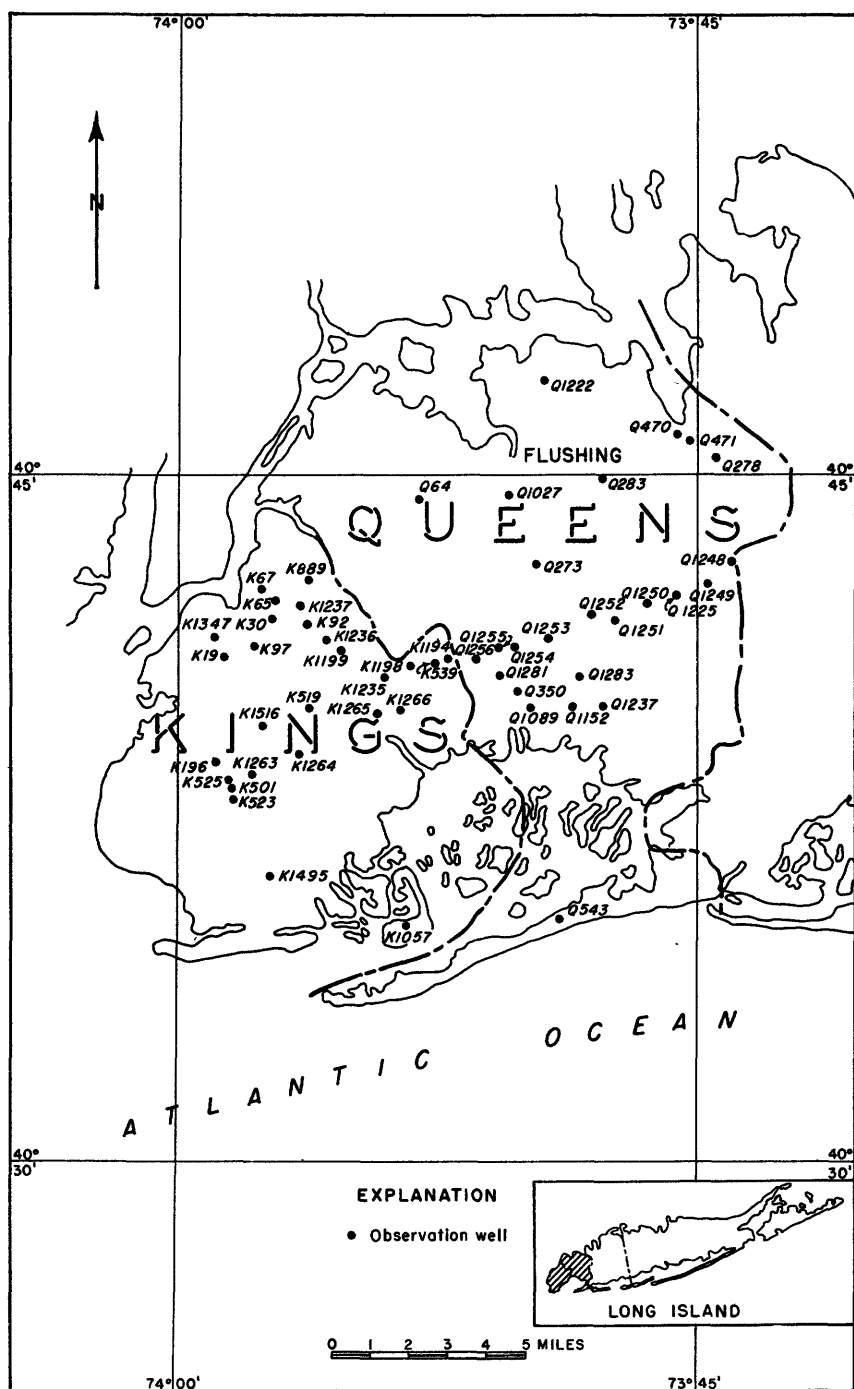


Figure 23. --Location of observation wells in Kings and Queens Counties, Long Island, N. Y., 1954.

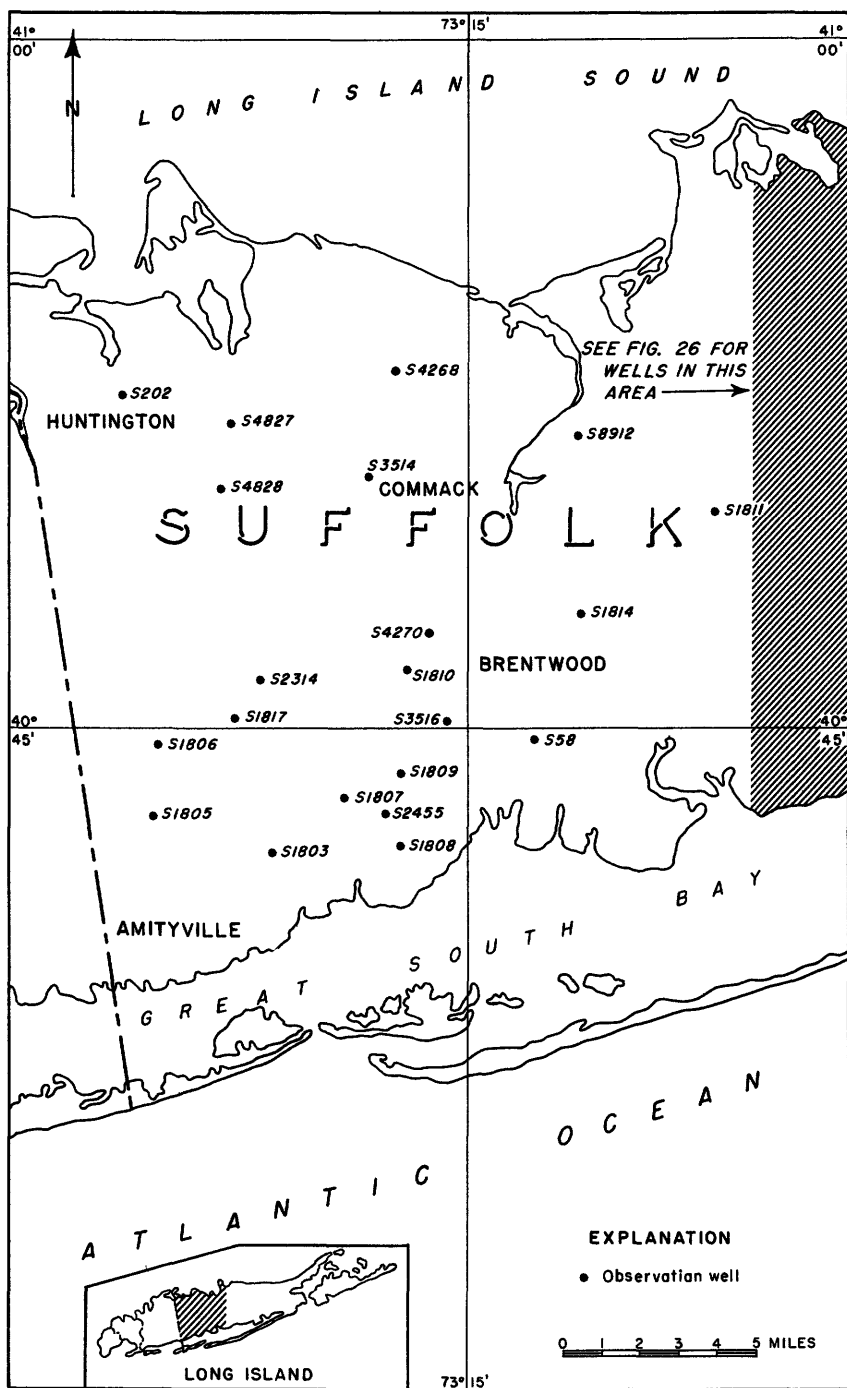


Figure 25. --Location of observation wells in western Suffolk County, Long Island, N. Y., 1954.

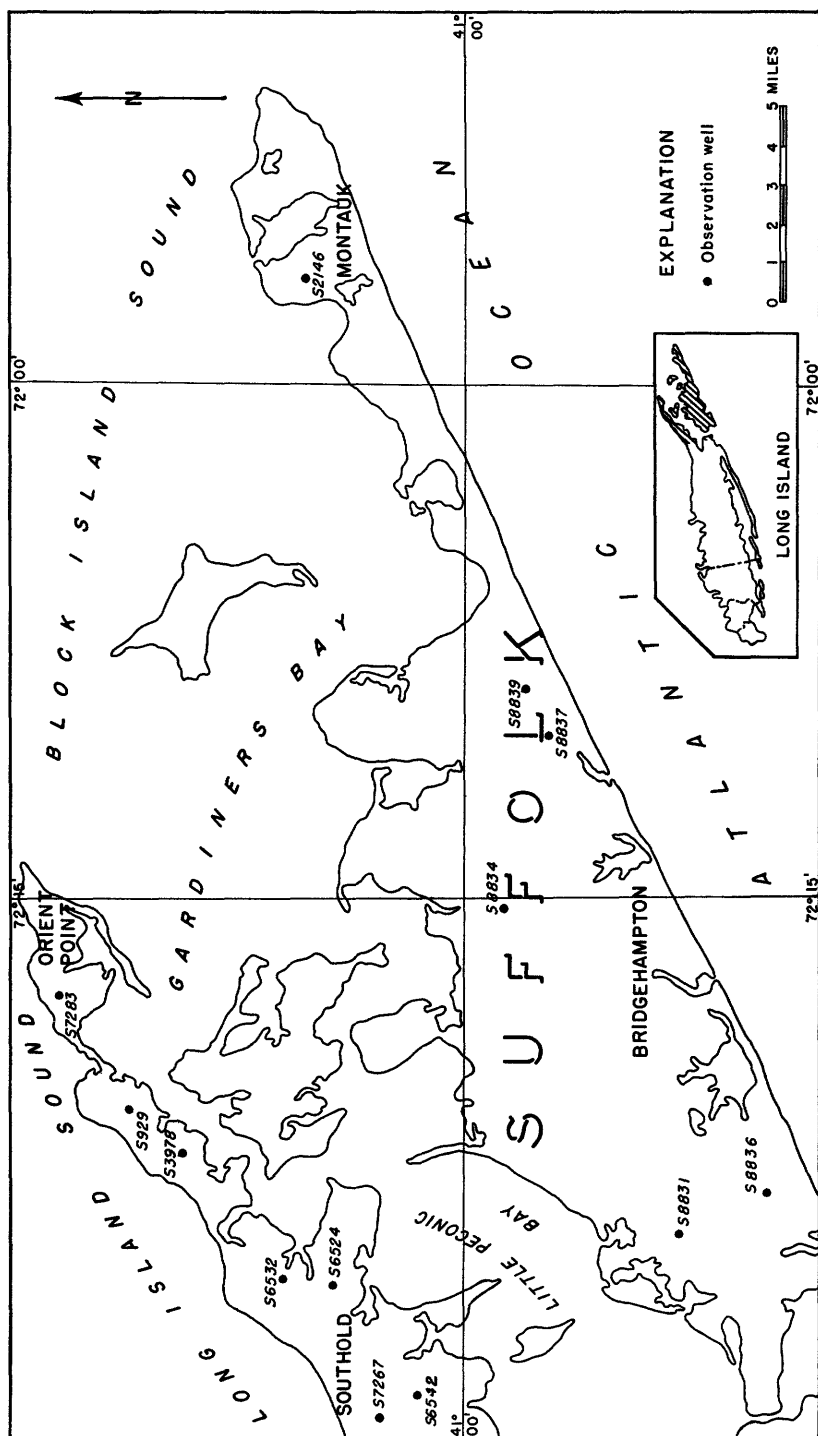


Figure 27. --Location of observation wells in eastern Suffolk County, Long Island, N. Y., 1954.

About 159 mgd, or 51 percent of the gross withdrawals from Long Island, was in Nassau County; this amount includes about 47 mgd of pumpage from installations owned by New York City. Withdrawals in Queens County were 66 mgd (including 8 mgd from installations owned by New York City), or 21 percent of the total; withdrawals in Suffolk County were 65 mgd, or 20 percent of the total; withdrawals in Kings County were 25 mgd, or 8 percent of the total. About 60 percent of the total pumpage on Long Island was from the deposits of late Pleistocene age, 30 percent from the Magothy formation(?), 7 percent from the Lloyd sand member of the Raritan formation, and 3 percent from the Jameco gravel. As recharge of used water to water-bearing formations in 1954 averaged 130 mgd, net pumpage was about 186 mgd, of which 90 mgd was in Nassau County, 60 mgd in Queens County, 24 mgd in Suffolk County, and 12 mgd in Kings County. About 84 mgd of the 220 mgd used for public supply in Long Island was returned to the ground by cesspools, septic tanks, treatment plants, and leaching basins; about 47 mgd of the 78 mgd pumped for industrial and other uses was returned through recharge wells.

Interpretation of Water-Level Fluctuations

Long Island is composed of beds of unconsolidated sand, gravel, and clay, deposited on a crystalline bedrock floor that slopes about 80 feet per mile to the southeast. The unconsolidated deposits, which are all hydraulically interconnected to a greater or lesser degree, have been differentiated into four principal water-bearing formations, also referred to as aquifers. The upper and most productive of these consists of extensive outwash deposits of late Pleistocene age, which, in some places, are overlain by till or shoreline deposits of Recent age. The second aquifer, the Jameco gravel, an earlier outwash deposit of Pleistocene age, occurs chiefly in the western part of the island; it is covered in most places by the Gardiners clay, an interglacial deposit. The third aquifer, the Magothy formation(?) of Late Cretaceous age, consists of lenticular beds of sand, gravel, and clay. In most of the central and eastern parts of the island, this formation is in direct contact with the surficial beds of outwash. However, in much of the western part, it is separated from the surficial deposits by the Gardiners clay and the Jameco gravel. Except for a persistent zone of coarse sand and gravel in the lower part of the Magothy formation(?), no other widespread or well-delineated water-bearing zones are recognized, and producing wells may be screened at various depths throughout the remainder of the formation. The fourth and lowermost aquifer, the Lloyd sand member of the Raritan formation, consists chiefly of beds of sand and gravel. This unit, also of Late Cretaceous age, lies just above the bedrock floor of the island, and is covered almost everywhere by the thick clay member of the Raritan formation.

It is estimated that about half the average annual precipitation of 43 inches on Long Island infiltrates downward from land surface to the water table; the remaining half is lost through evaporation, transpiration, and overland runoff to streams. In general, recharge rates are higher in years of above-normal precipitation, such as 1954, and lower in years of below-normal precipitation. After reaching the water table, ground water moves slowly through one or more of the water-bearing units until it is discharged eventually into streams or open bodies of salt water or is withdrawn artificially by wells. Fluctuations of water levels in observation wells indicate changes in storage of ground water, resulting from variations in recharge to and discharge from the various aquifers. When not affected by pumping, water levels in all aquifers show seasonal patterns that reflect rates of natural recharge and discharge. The most favorable conditions for natural recharge are during the nongrowing season, which extends from the first killing frost in the fall to the last killing frost in the spring. Water levels in most observation wells in Long Island rise during the nongrowing season. Inasmuch as varying lengths of time are required for recharge from precipitation to percolate to the water table, there is some lag in the period of rise, and peak water levels in some wells are reached as late as several months after the nongrowing season has ended. The growing season is marked by a noticeable decline in water levels in most wells. In some areas in western Long Island, pumpage from all wells, especially from artesian wells, causes noticeable modifications to the natural pattern of water-level fluctuations.

In 1954, there were only slight net changes in the position of the water table in central and eastern Nassau County and in most parts of Suffolk County. In Queens County and western Nassau County, however, where the net withdrawals are the greatest on the island, the water table in many observation wells declined more or less steadily during 1954. By the end of 1954, the water table was as much as 7 feet below sea level in parts of southwestern Queens County. The opposite trend was observed in Kings County. There, because of a permanent large reduction in pumpage in 1947 for public supply, water levels in most observation wells have been rising more or less continuously since that time. To some extent, this rise is aided by the gradual reduction in net withdrawals for industrial use in the county, as more and more recharge wells are installed and as industrial wells are abandoned. The recovery of water levels in Kings County since 1947 has been as much as 30 to 35 feet in 1 or 2 wells. By the end of 1954, the lowest measured water level in Kings County was only about 8 feet below sea level; in 1947, before the large curtailment of pumping, water levels in a few wells had been as much as 30 to 40 feet below sea level.

The configuration of the water table in Long Island is roughly similar to that of the land surface of the island itself, being highest in the center and at sea level along the shores. At its highest point in east-central Nassau County, it was about 90 feet above sea level in 1954; at its

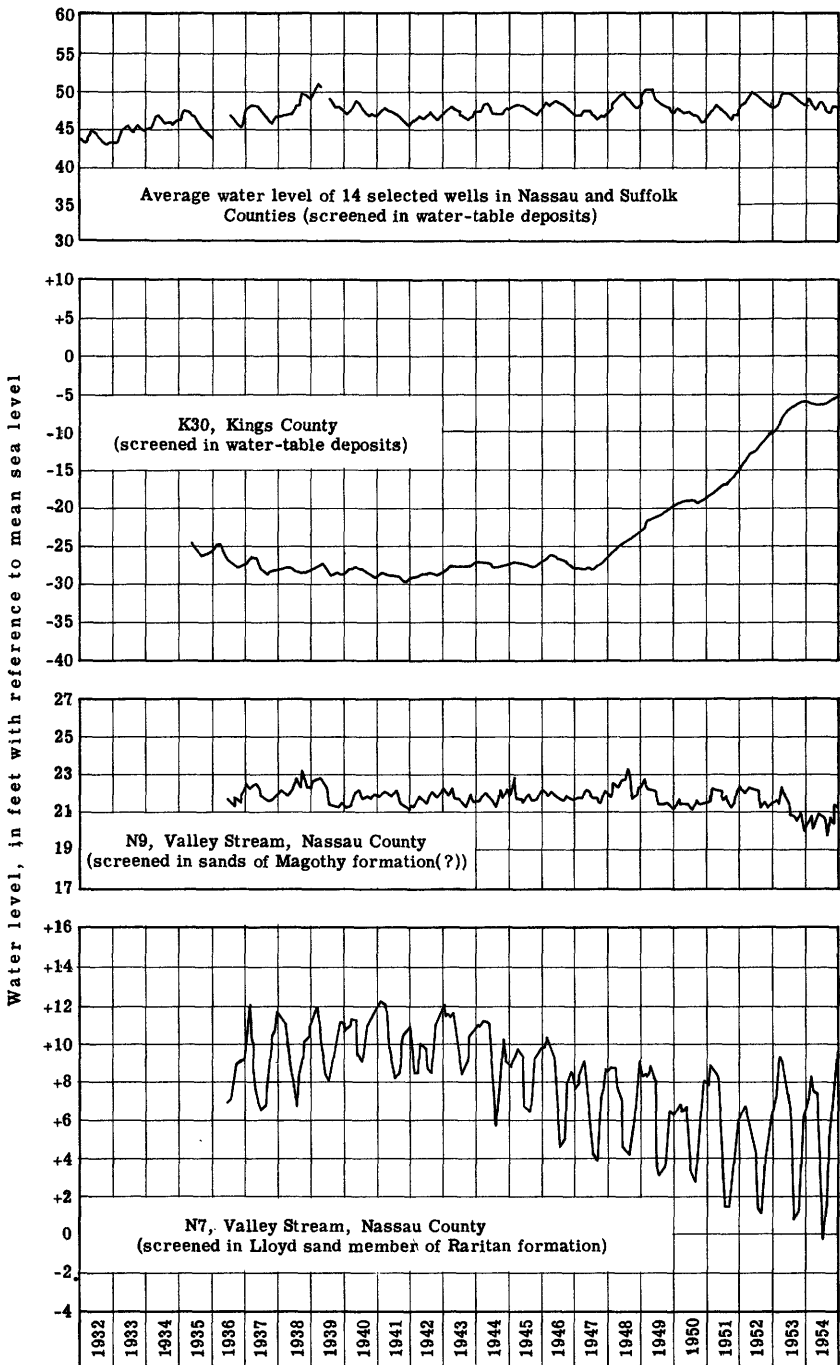


Figure 28. --Composite average water level of 14 selected wells in Nassau and Suffolk Counties and hydrographs of wells K30, N9, and N7 in Kings and Nassau Counties, N. Y.

lowest point, in north-central Kings County, it was about 8 feet below sea level. The natural fluctuation of the water table in central Long Island is represented graphically by the average water level of 14 selected wells in Nassau and Suffolk Counties (fig. 28). These wells are N1255, N1256, N1259, N1263, N1614, N1615, and N1616 in Nassau County, and S1803, S1805, S1806, S1807, S1808, S1809, and S1810 in Suffolk County. In December 1954, the average water level of the 14 selected wells was 47.70 feet above sea level, which represented a net decrease of 0.36 foot during the year; the change corresponds to the precipitation trend. The highest recorded average level in these wells was 50.99 feet in April 1939; the lowest recorded average level was 42.96 feet in October 1932.

Water levels in about 60 artesian wells were measured on a more or less periodic basis during 1954. This report includes water-level readings in the following 44 artesian wells:

Jameco gravel	Sands of Magothy formation(?)			Lloyd sand member of the Raritan formation	
*K19	N9	N1245	*N2790	*K1057	Q278
*K519	N157	N1461	Q471	*N7	*Q283
K523	*N180	N1613	*S58	N67	*Q470
K525	N575	N2052	S2314	N511	*Q543
Q350	N844	N2400	*S4134	*N657	Q1027
Q1152	*N1212	N2528	S4828	N2071	Q1222
*Q1237	N1244	*N2635		*N3355	S202
				*Q64	S6409
				*Q273	

*Equipped with recording gage.

In 1954 water levels changed as much as several feet in some artesian wells in western Long Island. Water levels in the artesian formations give expression much more readily to large variations in pumping in nearby and more distant wells. Thus, day for day, the pattern of fluctuations correlates with the various combinations and patterns of pumpage and also with the distance of the observation wells from the pumped wells. Therefore, without a detailed appraisal of these various influences, minor trends in water levels are not too easily detectable in most of the artesian observation wells, although water levels have varied appreciably month for month and season for season throughout the relatively short periods of record. In well N7 (screened in the Lloyd sand member) in southwestern Nassau County (fig. 28), an overall downward trend is evident since 1944; also, similar though smaller declines have become apparent in the past few years in two nearby artesian wells, N9 and N1613 (screened in the Magothy formation(?)). In Kings County, artesian levels in the Jameco gravel are rising more or less steadily in response to the large curtailment of pumpage in 1947.

Acknowledgments

Acknowledgment is hereby made to the Superintendent of the Riverhead Water Supply for maintaining a recording gage at well S4134 at Riverhead and for taking periodic water-level readings at well S4271 at Baiting Hollow; and to the Superintendent of the Village of Greenport Water Supply for water-level readings at several wells in the vicinity of Greenport.

Well-Numbering System

Observation wells on Long Island are numbered by the New York State Water Power and Control Commission. The letter before the well number is the first letter of the name of the county in which the well is situated; the numbers have no geographical significance and are assigned to wells more or less with respect to the order of drilling since about 1933.

The following tables include a summary of data pertaining to ground-water levels for Long Island and the net changes in water levels during 1954.

Summary of data on ground-water levels on Long Island, N. Y., 1954
(in feet with reference to mean sea level)

Well no.	Date of first measurement	Highest water level	Date	Lowest water level	Date	Water level in Dec. 1954
K19	Sept. 10, 1940	-2.03	Dec. 27, 1954	a-26.80	Sept. 26, 1941	-2.03
K30	June 14, 1935	-5.60	Dec. 27, 1954	a-29.75	Nov. 8, 1941	-5.60
K65	Nov. 8, 1937	-6.03	Dec. 27, 1954	-28.34	Aug. 25, 1939	-6.03
K67	Nov. 8, 1937	-4.60	Dec. 27, 1954	-20.91	Sept. 15, 1947	-4.60
K92	Dec. 11, 1937	-1.99	Dec. 27, 1954	-29.69	Dec. 11, 1937	-1.99
K97	Apr. 5, 1944	-2.97	Dec. 27, 1954	-26.58	Oct. 27, 1944	-2.97
K196	Sept. 12, 1942	+7.11	Dec. 28, 1954	-4.76	Mar. 5, 1944	+7.11
K501	June 30, 1947	+5.66	May 26, 1953	-4.80	June 30, 1947	+5.02
K519	June 24, 1947	+3.24	Dec. 28, 1954	-18.78	June 30, 1947	+3.24
K523	Mar. 6, 1944	+4.90	Aug. 26, 1952	-1.91	Feb. 6, 1945	+4.28

Summary of data on ground-water levels on Long Island, N. Y., 1954--Cont'd.

Well no.	Date of first measurement	Highest water level	Date	Lowest water level	Date	Water level in Dec. 1954
K525	Dec. 13, 1945	+6.50	May 26, 1953	+a0.46	Mar. 10-13, 1947	+c+5.41
K539	May 3, 1932	+1.88	Aug. 27, 1953	-8.28	Feb. 21, 1942	+1.29
K889	June 4, 1945	-5.61	Dec. 27, 1954	-39.01	Jan. 25, 1947	-5.61
K1057	Mar. 29, 1939	(b)		(b)		a, c+7.45
K1194	Nov. 2, 1940	+1.10	Dec. 1, 1953	-8.36	Feb. 28, Mar. 7, 1942	+5.59
K1198	Nov. 2, 1940	+2.26	Aug. 27, 1953	-8.45	May 14, 1942	+1.75
K1199	Nov. 16, 1940	+1.64	Mar. 27, Dec. 27, 1954	-17.17	Jan. 1, 1944	+1.64
K1235	Jan. 25, 1941	+1.72	Jan. 30, 1954	-10.65	June 27, 1942	+1.42
K1236	Jan. 25, 1941	+5.58	May 27, 1954	-19.42	Oct. 4, 1941	+3.37
K1263	Apr. 21, 1933	+5.41	July 31, 1953	-11.97	July 21, 1936	+4.94
K1264	Apr. 21, 1933	+4.89	Aug. 27, 1953	-15.56	Apr. 3, May 7, 1947	+4.41
K1265	Apr. 21, 1933	+3.52	May 26, Dec. 1, 1953	-11.55	Aug. 22, 1942	+3.33
K1266	Apr. 21, 1933	+3.07	Apr. 29, 1953	-7.49	June 27, 1942	+c+1.78
K1347	Oct. 15, 1942	-4.04	Mar. 30, 1954	-24.16	Sept. 10, 1945	-4.43
K1495	Nov. 5, 1936	+4.39	May 26, 1953	+1.80	Aug. 13, Dec. 17, 1947	+3.82
K1516	June 30, 1947	+4.04	Feb. 27, Mar. 27, May 27, June 30, 1954	-21.56	June 30, 1947	+c+4.04
N7	July 24, 1936	+a+12.75	Mar. 9, 1941	-a-5.56	Aug. 4, 1954	+a+9.66
N9	July 3, 1936	+23.57	Sept. 23, 1938	+19.58	July 30, 1954	+21.20
N53	Jan. 21, 1934	+16.49	Apr. 15, 1939	+12.05	Feb. 17, 1940	+14.12
N67	Mar. 16, 1932	+15.51	Dec. 5, 1946	+8.15	July 28, 1954	+c+12.63
N157	Sept. 22, 1932	+a+88.84	Oct. 31, 1939	+75.71	May 5, 1933	+83.74
N180	Oct. 30, 1945	+a+21.08	June 6, 1952	+a+16.93	July 31, 1954	+a+19.78
N511	Jan. 9, 1947	+21.52	Dec. 31, 1948	+18.23	Aug. 1, 1950	+20.64
N575	Nov. 30, 1946	+60.52	June 1, 1953	+52.44	Aug. 1, 1950	+55.80
N657	Feb. 12, 1945	+a+15.67	May 2, 1953	+a+12.78	Aug. 1, 1954	+a+14.84
N844	Oct. 3, 1939	+85.94	June 29, 1953	+a+78.87	Apr. 16, 1942	+83.38
N1102	Apr. 21, 1939	+59.12	May 25, 1953	+53.81	July 31, 1942	+54.45
N1104	Apr. 21, 1939	+62.17	May 25, 1953	+55.27	May 1, 1942	+58.33
N1108	Apr. 21, 1939	+43.62	Apr. 28, 1939	+36.94	Jan. 30, 1942	+38.77
N1109	Apr. 21, 1939	+30.04	Apr. 21, 1939	+23.42	July 29, 1954	+26.79
N1110	Apr. 21, 1939	+21.05	Apr. 21, 1939	+17.08	July 29, 1954	+19.76
N1111	Apr. 21, 1939	+14.79	June 6, 1946	+11.62	Oct. 25, 1947	+13.87
N1113	Apr. 21, 1939	+7.99	Jan. 6, 1949	+1.12	June 24, 1952	+4.77
N1115	Apr. 21, 1939	+13.05	July 14, 1948	+8.57	Dec. 1, 1941	+11.99
N1121	May 28, 1943	+65.42	Aug. 25, 1954	+59.13	Dec. 20, 1951	+59.23
N1132	Apr. 2, 1938	+9.77	Sept. 23, 1938	+6.06	Feb. 24, 1940	+8.10
N1147	Jan. 6, 1939	+19.72	Apr. 8, 1939	+16.27	July 29, 1954	+17.49
N1167	Mar. 12, 1938	+12.12	Mar. 25, 1948	+8.93	July 28, 1954	+10.27
N1185	Apr. 2, 1938	+15.39	Apr. 8, 1939	+10.01	Dec. 28, 1949	+14.19
N1204	Jan. 6, 1939	+12.56	Feb. 8, 1952	+5.07	Jan. 26, 1950	+11.95
N1212	Jan. 1, 1943	+a+89.74	Oct. 6, Dec. 7, 1953	+a+83.72	Jan. 20, 1943	+a+87.16
N1222	Jan. 6, 1939	+9.80	Mar. 30, 1953	+1.27	Jan. 31, 1942	+9.39
N1240	Jan. 6, 1939	+11.45	Mar. 30, 1953	-1.08	Jan. 24, 1942	+10.77
N1244	May 31, 1940	+76.50	May 31, 1940	+71.07	June 4, 1951	+74.32
N1245	Feb. 2, 1940	+82.88	Feb. 2, 1940	+75.63	June 4, 1951	+79.26
N1246	May 31, 1940	+82.71	Oct. 29, 1953	+76.85	Apr. 24, 1951	+79.79
N1247	Apr. 21, 1939	+76.98	July 28, 1939	+70.52	July 31, 1942	+73.06
N1249	Apr. 21, 1939	+58.18	Apr. 21, 1939	+50.34	Jan. 30, 1942	+54.54
N1250	Apr. 21, 1939	+49.79	Apr. 28, 1953	+43.20	Jan. 30, 1942	+47.33
N1251	Apr. 21, 1939	+40.95	Apr. 28, 1953	+35.57	Jan. 30, 1942	+39.33
N1252	Apr. 21, 1939	+26.51	Mar. 30, 1953	+22.48	Jan. 30, 1942	+25.55
N1253	Jan. 6, 1939	+16.93	Mar. 30, 1953	+11.31	Jan. 31, 1942	+15.88
N1254	Apr. 21, 1939	+4.70	Mar. 30, 1953	+2.35	Dec. 29, 1949	+3.93
N1255	May 12, 1913	+65.59	Apr. 15, 1939	+57.71	Aug. 25, 1954	+59.59

Summary of data on ground-water levels on Long Island, N. Y., 1954--Cont'd

Well no.	Date of first measurement	Highest water level	Date	Lowest water level	Date	Water level in Dec. 1954
N1253	May 12, 1913	+80.97	May 20, 1939	+70.30	Feb. 27, 1933	+76.94
N1259	Feb. 5, 1909	+56.99	June 23, 1952	+47.83	Jan. 24, 1933	+53.74
N1263	Nov. 3, 1911	+55.24	June 23, 1952	+46.22	Oct. 31, 1932	+52.15
N1264	Mar. 7, 1932	+9.41	Apr. 8, 1939	+2.70	Feb. 17, 1940	+8.20
N1461	Apr. 27, 1943	+81.06	May 2, 1953	+74.34	Oct. 10, 1943	+78.85
N1462	May 6, 1943	+67.78	May 18, 1953	+61.26	Nov. 1, 1947	+65.36
N1463	May 6, 1943	+42.91	June 7, 1952	+36.51	July 21, 1954	+38.93
N1464	May 13, 1943	+17.59	Apr. 29, 1944	+12.22	Jan. 26, 1950	+16.81
N1613	June 8, 1940	+24.56	July 28, 1948	+16.38	July 29, 1954	+21.59
N1614	Apr. 2, 1913	+72.48	May 31, 1949	+61.90	Feb. 27, 1933	+68.14
N1615	Mar. 17, 1913	+47.17	Mar. 28, 1939	+41.49	Oct. 27, 1932	+44.27
N1616	Mar. 17, 1913	+85.42	June 1, 1939	+74.05	Feb. 27, 1933	+82.31
N1828	Jan. 7, 1939	+64.52	Apr. 28, 1953	+57.80	Dec. 19, 1950	+61.03
N1829	Mar. 5, 1938	+69.43	Apr. 28, 1953	+66.00	Jan. 29, 1951	+68.24
N1830	Jan. 6, 1939	+54.23	May 31, 1949	+49.05	June 7, 1942	+49.64
N2052	Feb. 14, 1946	+34.95	Nov. 5, 1952	+29.71	Mar. 14, 1946	+32.96
N2071	Feb. 12, 1946	+14.62	Mar. 15, 1946	+5.37	June 28, 1949	+9.58
N2400	July 7, 1947	+74.10	Sept. 30, 1949	+70.04	Feb. 28, 1951	+72.91
N2528	Dec. 4, 1947	+72.32	June 26, 1953	+68.03	Jan. 22, 30, 1951	+69.75
N2635	July 16, 1948	+27.67	May 23, 27, 31, June 1, 1953	+23.77	Jan. 22, 23, 1951	+24.88
N2790	Feb. 11, 1950	+5.98	Mar. 26, Apr. 13, 1953	+2.70	Aug. 1, 1954	+5.04
N3355	Aug. 14, 1951	+35.07	Feb. 26, Mar. 14, 1954	+31.17	Sept. 30, 1951	+34.09
Q64	Mar. 26, 1947	+1.40	Dec. 30, 1954	-68.90	Nov. 2, 1947	+1.26
Q273	Mar. 15, 1935	+8.47	Apr. 20, 1939	+1.12	Mar. 21, 1942	+4.31
Q278	June 4, 1946	+5.88	Dec. 27, 1954	-8.10	July 27, 1954	+5.88
Q283	June 10, 1946	+1.31	Dec. 24, 1954	-10.26	Sept. 3, 1947	+1.34
Q350	Mar. 17, 1937	+3.51	Apr. 29, 1939	-74	Sept. 27, 1951	+99
Q470	Sept. 21, 1933	+6.78	Jan. 8, 1938	-12.75	Feb. 7, 10-11, 1948	+5.46
Q471	Mar. 31, 1939	+17.45	Sept. 30, 1946	+13.69	July 15, 1937	+15.74
Q543	May 17, 1932	(b)		(b)	Mar. 31, 1939	+9.93
Q1027	Jan. 1, 1942	+8.53	Apr. 28, 1953	+4.08	Mar. 20, 1942	+8.14
Q1089	Oct. 10, 1911	+4.04	Sept. 23, 1938	-42	Oct. 17, 1932	+2.13
Q1152	June 27, 1947	+2.30	Mar. 27, 1953	-6.12	Mar. 28, 1950	+3.41
Q1222	Apr. 1, 1940	+4.35	Dec. 1, 1945	-9.19	Feb. 28, 1942	+3.67
Q1225	Apr. 20, 1933	+32.19	Apr. 4, 1939	+22.50	Dec. 29, 1954	+22.50
Q1237	Feb. 10, 1939	+5.03	Apr. 30, May 4, 1939	+6.92	Mar. 26, 1950	+6.63
Q1248	Oct. 12, 1940	+38.16	May 31, 1949	+33.10	Oct. 30, 1951	+33.33
Q1249	Oct. 19, 1940	+33.41	Sept. 26, 1946	+25.51	June 28, 1954	+26.61
Q1250	Oct. 19, 1940	+22.52	Aug. 31, 1948	+15.87	Nov. 30, Dec. 29, 1954	+15.87
Q1251	Oct. 19, 1940	+14.25	Feb. 24, 1948	+7.10	June 28, 1954	+7.67
Q1252	Oct. 26, 1940	+13.92	Nov. 2, 1948	+7.26	Aug. 23, 1954	+7.58
Q1253	Nov. 2, 1940	+4.58	Apr. 26, 1941	-2.44	Dec. 30, 1954	-2.44
Q1254	Oct. 26, 1940	+2.29	Apr. 12, 1941	-6.81	Dec. 30, 1954	-6.81
Q1255	Oct. 12, 1911	+12.03	May 12, 1914	-6.30	Nov. 3, 1947	-4.31
Q1256	Oct. 26, 1940	-60	Dec. 19, 1953	-6.98	Mar. 14, 1942	-98
Q1281	Oct. 11, 1911	+8.59	June 4, 1913	-3.62	Mar. 7, 1942	-1.01
Q1283	Oct. 12, 1911	+13.33	Nov. 10, 1911	+1.35	June 28, 1954	+1.61
S58	Aug. 14, 1944	+25.50	Apr. 20, 1953	+22.32	Oct. 6, 1951	+24.18
S202	Nov. 25, 1936	+47.17	Apr. 10, 1937	+36.93	Feb. 1, 1939	+42.82
S929	Sept. 29, 1949	+4.05	May 4, 1953	+69	July 27, 1954	+2.33
S1803	Oct. 18, 1912	+18.19	Apr. 22, 1953	+14.93	Oct. 25, 1941	+17.17
S1805	Oct. 16, 1912	+47.17	Apr. 28, 1953	+37.90	Oct. 27, 1932	+43.04
S1806	Oct. 18, 1912	+61.69	Apr. 22, 1939	+50.61	Jan. 5, 1933	+55.68
S1807	Oct. 19, 1912	+23.48	Oct. 14, 1938	+20.45	Oct. 5, 1953	+21.64
S1808	Oct. 21, 1912	+12.94	Sept. 23, 1938	+9.45	Sept. 12, 1932	+11.70
S1809	Oct. 21, 1912	+32.56	Apr. 15, 1939	+25.00	Nov. 2, 1932	+29.48
S1810	Oct. 21, 1912	+56.19	Apr. 29, 1939	+45.24	Feb. 23, 1933	+51.52
S1811	Feb. 28, 1937	+55.66	May 5, 1953	+51.41	Aug. 28, 1941	+54.72
S1814	Nov. 4, 1939	+39.85	May 25, 1953	+34.50	Jan. 25, 1951	+37.17
S1817	Dec. 2, 1939	+54.34	Apr. 28, 1953	+49.66	Oct. 30, 1951	+52.60

Summary of data on ground-water levels on Long Island, N. Y., 1954--Cont'd

Well no.	Date of first measurement	Highest water level	Date	Lowest water level	Date	Water level in Dec. 1954
S2146	Aug. 31, 1950	+3.97	May 26, 1953	+2.50	Jan. 11, 1951	+3.44
S2314	Mar. 27, 1943	+62.48	May 26, 1953	+57.63	Dec. 17, 1951	+60.33
S2455	June 23, 1933	a+24.85	Sept. 23, 1938	a+19.98	Nov. 6, 1937	+23.07
S3496	Nov. 2, 1942	+51.77	Aug. 4, 1953	+45.79	Feb. 21, 1951	+49.71
S3513	Apr. 24, 1942	+65.82	June 23, 1953	a+59.86	Mar. 27, 1951 Feb. 15, 21, 23, 1948	+64.54
S3514	May 15, 1942	a+70.73	Sept. 6, 1953	a+64.23	Mar. 18, 26, 1951	a+68.09
S3516	Mar. 5, 1907	+41.38	Apr. 30, 1953	+35.29	Dec. 21, 1950	+38.25
S3517	Apr. 2, 1907	+14.57	Apr. 28, 1953	+11.60	Dec. 4, 1909	+13.75
S3526	Jan. 30, 1943	+30.52	Dec. 30, 1948	+25.73	Jan. 25, 1951	c+28.95
S3532	Apr. 21, 1907	+51.95	June 8, 1908	+45.23	Feb. 23, 1951	+50.05
S3535	Aug. 13, 1907	+22.81	May 26, 1953	+17.51	Feb. 23, 1951	+20.77
S3537	Jan. 11, 1908	+17.46	Apr. 30, 1953	+14.09	Jan. 23, 1951	+16.23
S3539	Apr. 12, 1907	+27.14	Aug. 5, 1953	+21.33	Mar. 28, 1951	+25.87
S3543	Mar. 18, 1907	+20.87	June 24, 1953	+15.18	Feb. 27, 1951	+19.15
S3545	Mar. 12, 1907	+39.23	May 25, 1953	+33.51	Jan. 25, 1951	+36.95
S3729	Sept. 10, 1943	+31.58	May 25, 1953	+27.34	Apr. 4, 1947	+29.38
S3730	Sept. 21, 1943	+38.01	June 23, 1953	+33.04	Feb. 26, 1951	+35.77
S3737	Aug. 17, 1943	+59.97	Oct. 6, 1953	+54.33	Feb. 20, 1951	+58.48
S3868	June 26, 1944	+41.30	Oct. 4, 1953	+36.21	Jan. 22, 1951	c+39.86
S3869	June 22, 1944	+58.57	Aug. 4, 1953	+52.97	Jan. 22, 1951	+57.38
S3870	June 16, 1944	+57.71	June 23, 1953	+52.84	Feb. 20, 1951	+56.67
S3871	June 15, 1944	+50.79	Aug. 27, 1953	+45.84	Feb. 26, 1951	+48.90
S3955	May 31, 1944	+57.73	Aug. 24, 1953	+51.40	Mar. 28, 1951	+55.95
S3956	May 31, 1944	+34.57	Aug. 27, 1953	+30.29	Mar. 28, 1951	+33.69
S3978	Sept. 29, 1949	+2.08	Apr. 2, 1953	-.30	Dec. 29, 1949	+1.09
S4134	Mar. 10, 1945	a+14.23	Apr. 27, 1953 May 8, 1953	a+11.33	Nov. 23, 1950	a+13.76
S4268	Aug. 2, 1945	+53.12	Oct. 6, 1953	+46.65	Mar. 27, 1951	+50.75
S4270	Aug. 1, 1945	+56.30	May 26, 1953	+49.86	Feb. 19, 1951	+53.19
S4271	Aug. 2, 1945	+11.58	Dec. 30, 1954	+9.12	Sept. 10-12, 1950	+11.58
S4524	Aug. 2, 1945	+9.44	May 1, 1953	+5.52	Nov. 2, 1950	+8.32
S4526	Aug. 2, 1945	+11.42	Aug. 26, 1953	+7.47	Dec. 28, 1950	+10.44
S4530	Aug. 2, 1945	+19.90	May 1, 1953	+13.91	Dec. 28, 1950	c+16.44
S4827	Dec. 4, 1946	+60.32	Nov. 23, 1953	+54.23	May 28, 1951	+58.12
S4828	Dec. 4, 1946	+71.07	Oct. 23, 1953	+65.17	Jan. 24, 1952	+69.30
S4829	Sept. 30, 1946	+41.31	Aug. 27, 1953	+36.74	Apr. 4, 1951	+40.61
S5517	Apr. 28, 1948	a+45.49	June 9, 13-19, 1953	a+39.60	Feb. 4-6, 8-9, 1951	+43.49
S6400	July 28, 1948	+47.36	May 28, 1953	+40.97	Jan. 26, 1951	+45.31
S6409	Feb. 2, 1949	a+35.02	July 2, 1953	a+31.46	Feb. 15, 1951	+34.50
S6410	Nov. 4, 1948	+48.36	Aug. 5, 1953	a+42.59	Feb. 25, 26, 28, 1951	+47.18
S6411	Nov. 5, 1948	+32.14	Oct. 28, 1953	+28.39	Apr. 4, 1951	+31.05
S6435	Jan. 24, 1949	+22.66	June 10, 1953	+19.05	Feb. 26, 1951	+21.15
S6441	Jan. 26, 1949	+38.88	Apr. 25, 1953	+34.42	Nov. 24, 1950	+38.60
S6524	July 13, 1949	+3.04	May 4, 1953	+.66	Feb. 1, 1950	+2.62
S6532	Aug. 15, 1949	+5.52	May 27, 1953	+1.95	Feb. 27, 1950	+3.88
S6542	July 14, 1949	+7.89	May 27, 1953	+3.22	Nov. 2, 1950	+6.41
S6558	July 14, 1949	+6.23	May 1, 1953	+2.78	June 27, 1950	+4.89
S6780	Sept. 6, 1949	+5.69	May 27, 1953	+2.77	June 26, 1950	+4.47
S7267	July 14, 1949	+7.78	May 27, 1953	+3.58	Aug. 30, 1950	c+5.47
S7283	Jan. 11, 1949	a+5.09	Apr. 26-27, 1953	a+1.28	Jan. 28-31, 1950 Feb. 1-2, 1950	a+3.69
S8831	Aug. 15, 1950	+8.41	Apr. 1, 1953	+6.23	Oct. 31, 1950	+8.13
S8834	Aug. 16, 1950	+14.36	Dec. 23, 1953	+9.58	Dec. 26, 1950	+13.65
S8835	Aug. 31, 1950	+11.09	May 26, 1953	+6.95	Jan. 23, 1951	+9.58
S8836	July 31, 1950	+8.88	Apr. 29, 1953	+5.61	Jan. 23, 1951	+7.52
S8837	Aug. 1, 1950	+9.71	May 26, 1953	+6.92	Dec. 26, 1950	+8.92
S8839	Aug. 16, 1950	+9.51	May 26, 1953	+6.29	Jan. 23, 1951	+8.15
S8912	Oct. 30, 1947	+36.95	Apr. 28, 1953	+32.90	Jan. 27, 1948	+34.83

a Based on recording-gage records.

b Water levels affected by tidal fluctuations; extremes not determined as water levels were computed on different bases for period of record.

c No measurement made in December; indicated water level is the last one made in 1954.

Net change in water levels in wells on Long Island, N. Y., 1954

Well no.		Net change (feet)	Well no.		Net change (feet)	Well no.		Net change (feet)	Well no.		Net change (feet)
K19	J	+0.81	N1132		+ .29	Q350	J	-.41	S3537		+ .19
K30		+.38	N1147		+ .30	Q470	L	+4.43	S3539		+ .26
K65		+.23	N1167		+ .25	Q471	M	+ .06	S3543		+ .43
K67		+.20	N1185		+1.19	Q543	L	+ .81	S3545		+ .75
K92		+1.31	N1204		+4.17	Q1027	L	+ .46	S3729		+ .66
K97		+1.12	N1212	M	-2.30	Q1089		-.14	S3730		+ .29
K196		.....	N1222		+2.22	Q1152	J	.....	S3737		-.40
K501		-.11	N1240		+4.01	Q1222	L	+1.87	S3868		.....
K519	J	+.26	N1244	M	-1.92	Q1225		-1.64	S3869		+ .68
K523	J	.....	N1245	M	-2.35	Q1237	J	+2.47	S3870		+ .15
K525	J	.....	N1246		-2.67	Q1248		-.89	S3871		-.57
K539		-.51	N1247		-1.97	Q1249		.00	S3955		-.84
K889		+1.54	N1249		-.01	Q1250		-2.11	S3956		-.31
K1057	L	.....	N1250		+ .37	Q1251		+ .14	S3976		-.38
K1194		-.12	N1251		+ .66	Q1252		-1.24	S4134	M	+ .43
K1198		-.41	N1252		+ .33	Q1253		-3.07	S4268		-2.21
K1199		+.95	N1253		+1.10	Q1254		-3.26	S4270		-1.27
K1235		-.03	N1254		+ .09	Q1255		.....	S4271		+ .55
K1236		+.91	N1255		-.77	Q1256		-.38	S4524		-.01
K1263		-.02	N1256		-1.88	Q1281		-.62	S4526		-.31
K1264		+ .13	N1259		+0.02	Q1283		-.24	S4530		.....
K1265		+.28	N1263		+ .12	S58	M	+ .02	S4827		-2.06
K1266		.....	N1264		+2.34	S202	L	-.48	S4828	M	-1.62
K1347		+ .40	N1461	M	-1.11	S929		+ .06	S4829		-.13
K1495		+.25	N1462		-.20	S1803		-.09	S5517		+1.02
K1516		.....	N1463		+ .41	S1805		+ .15	S6400		+1.56
N7	L	+2.22	N1464		+ .77	S1806		-.89	S6409	L	+ .54
N9	M	+.95	N1613	M	+ .77	S1807		+ .52	S6410		+ .63
N53		+.40	N1614		-.84	S1808		-.34	S6411		-.74
N67	L	.....	N1615		.....	S1809		+ .90	S6435		+ .52
N157	M	-2.17	N1616		-.84	S1810		-.89	S6441		+1.07
N180	M	+1.10	N1828		-.23	S1811		+ .13	S6524		-.32
N511	L	-.34	N1829		-.07	S1814		+ .07	S6532		+ .38
N575	M	-1.46	N1830		-2.17	S1817		-.25	S6542		+ .04
N657	L	+.49	N2052	M	+ .19	S2146		.....	S6558		-.37
N844	M	-1.50	N2071	L	.....	S2314	M	-.96	S6780		+ .08
N1102		-3.08	N2400	M	.....	S2455		+ .44	S7267		.....
N1104		-2.34	N2528	M	-1.58	S3496		-.22	S7283		-.01
N1108		-.11	N2635	M	-1.26	S3513		+ .76	S8831		-.14
N1109		+.29	N2790	M	+ .40	S3514		-1.84	S8834		-.71
N1110		+ .22	N3355	L	-.53	S3516		+ .68	S8835		+ .06
N1111		-.41	Q64	L	+ .30	S3517		+ .76	S8836		-.37
N1113		-.36	Q273	L	-.37	S3526		.....	S8837		-.57
N1115		+.88	Q278	L	+6.27	S3532		+1.44	S8839		-.90
N1121		-2.53	Q283	L	+4.29	S3535		+ .93	S8912		+ .49

J Jameco gravel.

L Lloyd sand member of Raritan formation.

M Sands of Magothy formation(?).

All other wells screened in deposits of late Pleistocene age.

Well Descriptions and Water-Level Measurements

All measurements in the following tables are referred to mean sea-level datum (Sandy Hook datum). Water levels below this datum are prefixed by a minus (-) sign. When some measurements in a table are above and others below the plane of reference, a plus (+) or minus (-) sign is placed before the first entry in each column of each mixed table. Readings between minus signs are below the plane of reference, and those between plus signs are above the plane of reference.

Kings County

K19. Comtone Co. 604 Pacific St. Lat. 40°41'00", long. 73°58'35". Drilled unused artesian well in Jameco gravel, diameter 8 to 6 inches, depth 186 feet, screen assumed at bottom. Land-surface datum is 45.3 feet above msl. Highest water level 2.03 below msl, Dec. 27, 1954; lowest 26.80 below msl, Sept. 26, 1941. Records available: 1940-54. Recording gage discontinued July 22, 1954.

K19--Continued.

Daily mean water level, below msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	-2.77	-2.74	-2.55	-2.73	-2.62	-2.32	-2.70	....	....	....	....	....
2	2.80	2.68	2.71	2.70	2.51	2.37	2.71	....	....	....	....	h-2.29
3	2.69	2.68	2.69	2.71	2.43	2.43	2.65	....	....	....	....	....
4	2.77	2.65	2.71	2.74	2.49	2.44	2.56	....	....	....	....	....
5	2.76	2.67	2.75	2.67	2.53	....	2.49	....	....	h-2.79	....	....
6	2.73	2.69	2.74	2.63	2.52	....	2.53	....	....	....	....	....
7	....	2.73	2.66	2.66	2.56	2.45	2.56	....	....	....	....	....
8	2.86	2.62	2.65	2.66	2.50	2.50	2.63	....	....	....	....	....
9	2.81	2.60	2.67	2.82	2.42	2.56	2.69	....	....	....	....	....
10	2.70	2.66	2.63	2.78	2.37	2.53	2.70	....	....	....	....	....
11	2.63	2.71	2.72	2.58	2.44	2.53	2.63	....	....	....	....	....
12	2.67	2.83	2.77	2.57	2.46	2.57	2.62	....	....	....	....	....
13	2.88	2.86	2.72	2.62	2.54	2.46	2.60	....	....	....	....	....
14	2.89	2.70	2.52	2.59	2.53	2.51	2.61	....	....	....	....	....
15	2.81	2.61	2.57	2.65	2.45	2.56	2.66	....	....	....	....	....
16	2.73	2.66	2.74	2.57	2.33	2.59	2.76	....	....	....	....	....
17	2.80	2.67	2.78	2.48	2.32	2.60	2.75	....	....	....	....	....
18	2.85	2.79	2.79	2.54	2.41	2.63	2.63	....	....	....	....	....
19	2.84	2.83	2.77	2.61	2.42	2.56	2.58	....	....	....	....	....
20	2.82	2.78	....	2.71	2.42	2.52	2.65	....	....	....	....	....
21	2.81	2.62	....	2.73	2.39	2.50	2.63	....	....	....	....	....
22	2.89	2.52	....	2.71	2.45	2.54	2.87	....	....	....	....	....
23	2.89	2.57	....	2.69	2.46	2.56	....	....	....	....	....	....
24	2.81	2.58	....	2.70	2.40	2.62	....	....	....	....	....	....
25	2.70	2.56	....	2.57	2.41	2.61	....	h-2.62	....	....	....	....
26	2.74	2.58	2.68	2.55	2.50	2.58	....	....	....	....	....	....
27	2.70	2.71	2.79	2.53	2.51	2.53	....	....	....	....	....	h2.03
28	2.79	2.68	2.69	2.55	2.44	2.59	....	....	....	h2.61	....	....
29	2.86	....	2.57	2.64	2.37	2.69	h2.74	....	....	....	....	....
30	2.76	....	2.63	2.67	2.35	2.70	....	....	....	....	....	....
31	2.77	....	2.70	....	2.35	....	....	....	....	....	....	....

h Tape measurement.

K30. Detecto Scales, Inc. Park and Nostrand Aves. Lat. 40°41'50", long. 73°57'15". Drilled unused water-table well in deposits of late Pleistocene age, diameter 8 inches, depth 56 feet, screen assumed at bottom. Land-surface datum is 17.8 feet above msl. Highest water level 5.60 below msl, Dec. 27, 1954; lowest 29.75 below msl, Nov. 8, 1941. Records available: 1935-54. Recording gage discontinued July 22, 1954.

Daily mean water level, below msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	-5.99	-6.06	-5.97	-6.06	-6.02	-6.03	-6.10	....	....	....	....	....
2	6.01	6.02	5.96	6.09	6.02	5.98	6.13	....	....	....	....	h-5.74
3	6.00	5.96	5.98	6.09	5.98	5.97	6.14	....	....	....	....	....
4	5.98	5.91	5.98	6.13	5.95	5.97	6.16	....	....	....	....	....
5	5.96	5.91	6.02	6.15	5.94	e5.98	6.15	....	....	h-5.85	....	....
6	5.93	5.96	6.04	6.11	5.95	e6.00	6.13	....	....	....	....	....
7	e5.96	6.01	6.05	6.07	5.97	e6.01	6.12	....	....	....	....	....
8	e6.03	6.00	6.04	6.05	5.99	6.01	6.12	....	....	....	....	....
9	6.08	5.96	6.04	6.08	5.99	6.03	6.13	....	....	....	....	....
10	6.06	5.96	6.00	6.13	5.98	6.04	6.15	....	....	....	....	....
11	6.02	5.97	6.01	6.11	5.96	6.05	6.16	....	....	....	....	....
12	5.99	6.01	6.05	6.06	5.97	6.05	6.16	....	....	....	....	....
13	6.03	6.10	6.08	6.05	5.99	6.06	6.13	....	....	....	....	....
14	e6.10	6.11	6.04	6.02	6.02	6.06	6.11	....	....	....	....	....
15	e6.09	6.06	6.00	6.02	6.03	6.07	6.10	....	....	....	....	....
16	6.04	6.04	6.03	6.02	6.02	6.08	6.14	....	....	....	....	....
17	6.01	6.01	6.06	5.97	5.98	6.10	6.17	....	....	....	....	....
18	6.05	6.01	6.09	5.96	5.97	6.13	6.17	....	....	....	....	....
19	6.06	6.06	6.11	5.98	5.98	6.13	6.14	....	....	....	....	....
20	6.07	6.10	6.02	6.02	5.99	6.12	6.12	....	....	....	....	....
21	6.03	6.09	5.99	6.04	5.99	6.08	6.11	....	....	....	....	....
22	6.07	6.04	6.01	6.05	6.00	6.06	6.11	....	....	....	....	....
23	6.11	6.04	6.03	6.04	6.02	6.04	....	....	....	....	....	....
24	6.13	6.01	6.06	6.05	6.03	6.05	....	....	....	....	....	....
25	6.11	5.96	6.08	6.04	6.02	6.05	....	h-6.16	....	....	....	....

K30--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	-6.10	-5.94	-6.03	-6.01	-6.03	-6.05	....	....	....	....	....	....
27	6.06	5.96	6.07	5.98	6.05	6.04	....	....	....	....	h-5.60	....
28	6.02	5.99	6.09	5.94	6.06	6.03	....	....	....	h-5.96	....	....
29	6.05	....	6.04	5.96	6.05	6.04	h-6.24	....	....	....	....	....
30	6.06	....	6.00	6.00	6.05	6.06	....	....	....	....	....	....
31	6.06	....	6.03	....	6.06	....	....	....	....	....	....	....

e Estimated.

h Tape measurement

K65. A. Ludwig Co. 123 Middleton St. Lat. 40°42'15", long. 73°57'15". Drilled unused water-table well in deposits of late Pleistocene age, diameter 6 to 8 inches, depth 63 feet, screen assumed at bottom. Land-surface datum is 17.3 feet above msl. Highest water level 6.03 below msl, Dec. 27, 1954; lowest 28.34 below msl, Aug. 25, 1939. Records available: 1937-54.

Water level below msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	-6.33	Apr. 28	-6.56	July 29	-6.99	Oct. 28	-6.53
Feb. 25	-6.36	May 27	-6.78	Aug. 25	-6.82	Dec. 2	-6.27
Mar. 30	-6.57	June 29	-6.85	Oct. 5	-6.63	27	-6.03

K67. Young Mens Christian Association. 179 Marcy Ave. Lat. 40°42'30", long. 73°57'30". Drilled unused water-table well in deposits of late Pleistocene age, diameter 4 to 3 inches (1½-inch access pipe at top), depth 70 feet, screen assumed at bottom. Land-surface datum is 47.0 feet above msl. Highest water level 4.60 below msl, Dec. 27, 1954; lowest 20.91 below msl, Sept. 15, 1947. Records available: 1937-54.

Water level below msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	-4.82	Apr. 28	-5.10	July 29	-5.70	Dec. 2	-4.73
Feb. 25	-4.83	May 27	-5.26	Aug. 25	-5.65	27	-4.60
Mar. 30	-5.00	June 29	-5.50				

K92. St. Johns University. 75 Lewis Ave. Lat. 40°41'45", long. 73°56'15". Drilled unused water-table well in deposits of late Pleistocene age, diameter about 60 to 6 inches, depth estimated at 110 feet, screen assumed at bottom. Land-surface datum is 69.1 feet above msl. Highest water level 1.99 below msl, Dec. 27, 1954; lowest 29.69 below msl, Dec. 11, 1937. Records available: 1937-54. Jan. 28, -2.78; Feb. 25, -2.51; Mar. 30, -2.38; Apr. 28, -2.24; June 29, -2.45; Dec. 27, -1.99.

K97. Formerly The Borden Co. 32 Lexington Ave. Lat. 40°41'15", long. 73°57'50". Drilled unused water-table well in deposits of late Pleistocene age, diameter 8 inches, depth 124 feet, screen assumed at bottom. Land-surface datum is 64.2 feet above msl. Highest water level 2.97 below msl, Dec. 27, 1954; lowest 26.58 below msl, Oct. 27, 1944. Records available: 1944-54. Jan. 28, -3.88; Feb. 25, -3.71; Mar. 30, -3.68; Apr. 28, -3.66; May 27, -3.55; June 29, -3.43; Dec. 27, -2.97.

K196. Formerly Knickerbocker Ice Co. 12th Ave. and 37th St. Lat. 40°38'40", long. 73°59'20". Drilled unused water-table well in deposits of late Pleistocene age, diameter 10 inches (1½-inch access pipe at top), depth 128 feet, screen assumed at bottom. Land-surface datum is 79.7 feet above msl. Highest water level 7.11 above msl, Dec. 28, 1954; lowest 4.76 below msl, Mar. 5, 1944. Records available: 1942-52, 1954. Dec. 28, +7.11

K501. Formerly New York Water Service Corp. 363 Dahill Rd. Lat. 40°38'20", long. 73°58'45". Drilled unused water-table well in deposits of late Pleistocene age, diameter 24 inches (1½-inch access pipe at top), depth 103 feet, screen 63-103. Land-surface datum is 46.0 feet above msl. Highest water level 5.66 above msl, May 26, 1953; lowest 4.80 below msl, June 30, 1947. Records available: 1947-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	+5.00	Aug. 2	+4.70	Oct. 6	+4.96	Dec. 2	+5.03
July 1	+4.65	31	+4.75	Nov. 2	+4.99	28	+5.02

K519. Formerly New York Water Service Corp. 543-45 Troy Ave. Lat. 40°39'40", long. 73°56'10". Drilled unused artesian well in Jameco gravel, diameter 28 to 18 inches, depth 239 feet, screen 196-239. Land-surface datum is 30.7 feet above msl. Highest water level 3.24 above msl, Dec. 28, 1954; lowest 18.78 below msl, June 30, 1947. Records available: 1947-54. Recording gage discontinued July 22, 1954.

K519--Continued.

Daily mean water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+3.01	+2.95	+3.07	+2.90	+2.83	+3.07	+2.82	....	....	....	....	....
2	2.95	3.03	2.91	e2.94	3.00	3.06	2.82	....	....	....	h+3.17	....
3	3.06	3.03	2.98	....	3.07	3.00	2.85	....	....	....	....	....
4	2.99	3.06	2.95	....	3.04	2.98	2.91	....	....	....	....	....
5	3.01	3.05	2.91	....	3.00	....	3.02	....	....	h+2.99	....	....
6	3.06	3.01	2.92	....	3.00	....	2.97	....	....	....	....	....
7	2.99	2.95	2.99	....	2.94	e3.02	2.97	....	....	....	....	....
8	2.88	3.07	2.97	....	3.00	2.94	2.87	....	....	....	....	....
9	2.96	3.10	2.98	h2.79	3.04	2.90	2.82	....	....	....	....	....
10	3.02	3.03	3.04	....	3.10	2.93	2.80	....	....	....	....	....
11	3.08	2.98	2.95	....	3.04	2.92	2.82	....	....	....	....	....
12	3.05	2.86	2.90	....	3.02	2.89	2.84	....	....	....	....	....
13	2.87	2.83	2.95	....	2.92	2.95	2.90	....	....	....	....	....
14	2.87	2.98	3.13	....	2.93	2.94	2.91	....	....	....	....	....
15	2.99	3.03	3.05	....	3.00	2.96	2.84	....	....	....	....	....
16	3.07	3.00	2.91	3.05	3.10	2.93	2.75	....	....	....	....	....
17	2.92	3.02	2.90	e3.09	3.11	2.91	2.77	....	....	....	....	....
18	2.92	2.88	2.90	3.00	3.05	2.90	2.85	....	....	....	....	....
19	2.92	2.84	2.94	2.92	3.04	2.89	2.94	....	....	....	....	....
20	2.97	2.87	3.09	2.86	3.04	2.91	2.91	....	....	....	....	....
21	2.96	3.02	3.02	2.86	3.08	2.91	2.94	....	....	....	....	....
22	2.86	3.06	2.97	2.89	3.01	2.89	2.92	....	....	....	....	....
23	2.84	3.01	2.95	2.92	2.99	2.89	....	....	....	....	....	....
24	2.92	3.04	2.87	2.88	3.02	2.88	....	....	....	....	....	....
25	2.97	3.07	2.93	2.99	3.05	2.88	....	....	....	....	....	....
26	2.96	3.06	3.00	2.98	2.96	2.91	....	....	....	....	....	....
27	3.04	e2.96	e2.88	3.03	2.95	2.95	....	....	....	....	....	....
28	2.94	e2.95	e2.92	3.01	3.03	2.91	....	....	....	....	h3.24	....
29	2.87	....	e3.03	2.91	3.09	2.85	h2.80	....	....	h3.17	....	....
30	2.97	....	3.01	2.88	3.07	2.87	....	....	....	....	....	....
31	2.93	....	2.93	....	3.05	....	h+3.11	....	....	....	....	....

e Estimated.

h Tape measurement.

K523. Formerly New York Water Service Corp. 267 Newkirk Ave. Lat. 40°38'00", long. 73°58'15". Drilled unused artesian well in Jameco gravel, diameter 28 to 18 inches, depth 268 feet, screen 202-268. Land-surface datum is 42.7 feet above msl. Highest water level 4.90 above msl, Aug. 26, 1952; lowest 1.91 below msl, Feb. 6, 1945. Records available: 1944-54. Apr. 29, +4.25; May 27, +4.32, June 30, +4.28.

K525. Formerly New York Water Service Corp. 363 Dahill Rd. Lat. 40°38'20", long. 73°38'45". Drilled unused artesian well in Jameco gravel, diameter 28 to 18 inches, depth 300 feet, screen 260-300. Land-surface datum is 46.0 feet above msl. Highest water level 6.50 above msl, May 26, 1953; lowest 0.46 above msl, Mar. 10-13, 1947. Records available: 1945-54. July 1, +5.37; Aug. 2, +5.39; Aug. 31, +5.41.

K539. City of New York, Department of Water Supply, Gas and Electricity. Atlantic Ave. and Logan St. Lat. 40°40'55", long. 73°52'30". Drilled unused water-table well in deposits of late Pleistocene age, diameter 4 inches, depth 43 feet, screen assumed at bottom. Land-surface datum is 32.9 feet above msl. Highest water level 1.68 above msl, Aug. 27, 1953; lowest 8.28 below msl, Feb. 21, 1942. Records available: 1932-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	+1.77	Apr. 29	+0.87	July 29	+0.79	Oct. 29	+1.08
Feb. 24	+1.63	May 26	+ .86	Aug. 23	+ .76	Dec. 1	+1.14
Mar. 27	+1.27	June 30	+ .89	Sept. 28	+1.03	27	+1.29

K889. Finest Steam Laundry. 199 Bogart St. Lat. 40°42'45", long. 73°56'15". Drilled unused water-table well in deposits of late Pleistocene age, diameter 8 to 6 inches, depth 72 feet, screen 62-72. Land-surface datum is 20.8 feet above msl. Highest water level 5.61 below msl, Dec. 27, 1954; lowest 39.01 below msl, Jan. 25, 1947. Records available: 1945-54. Jan. 28, -7.19; Feb. 25, -7.02; Mar. 30, -6.87; Apr. 28, -6.79; May 27, -6.72; June 29, -6.25; Dec. 27, -5.61.

K1057. U. S. Naval Air Station. Floyd Bennett Field. Lat. 40°35'05", long. 73°53'10". Drilled unused artesian well in Lloyd sand member of Raritan formation, diameter 6 inches, depth 720 feet, screen assumed at bottom. Land-surface datum is 8.1 feet above msl. Water levels affected by tidal fluctuation; extremes not determined as water levels were computed on different bases for period of record. Records available: 1939-42, 1944-54. Recording gage discontinued July 22, 1954.

Daily mean water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July
1	+8.63	+9.13	+9.91	+9.91	+9.68	+8.84	+8.41
2	8.64	9.56	9.70	9.73	9.85	9.96	8.33
3	9.12	9.85	9.72	9.40	....	9.90	8.22
4	8.89	9.92	9.37	9.20	....	9.97	8.33
5	9.20	....	9.14	9.34	....	....	8.39
6	9.29	9.43	9.24	9.52	....	....	8.35
7	....	9.18	9.38	9.41	....	....	8.21
8	....	9.29	9.41	9.58	10.10	9.50	8.08
9	8.96	9.70	9.53	9.13	10.05	9.40	7.92
10	9.09	9.64	9.80	9.18	10.06	9.34	7.82
11	....	9.55	9.69	9.36	9.84	9.49	7.75
12	....	9.06	9.42	9.36	9.80	9.38	7.76
13	....	8.82	9.36	9.39	9.79	9.29	7.88
14	....	9.18	9.95	9.68	9.85	9.22	7.87
15	....	9.35	9.62	9.81	....	9.18	7.74
16	9.51	9.43	9.52	9.95	....	9.21	7.52
17	9.09	9.75	9.41	10.10	....	9.09	7.41
18	8.82	9.46	9.37	9.71	9.99	8.96	7.43
19	8.88	9.32	9.68	9.63	10.03	8.94	7.52
20	9.24	9.26	10.10	9.49	10.05	8.98	7.50
21	9.16	9.53	9.75	9.40	10.20	8.94	7.58
22	9.23	9.49	9.44	9.50	9.99	8.89	7.45
23	9.44	9.39	9.60	9.50	9.82	8.98	....
24	9.41	9.64	9.47	9.52	9.82	8.88	....
25	9.13	9.79	9.62	9.65	9.92	8.80	....
26	9.19	9.89	9.70	9.59	9.69	8.96	....
27	9.44	9.60	9.20	9.78	9.67	9.03	....
28	9.25	9.60	9.40	10.09	9.79	8.89	....
29	9.29		9.71	10.04	9.95	8.77	....
30	9.31		9.80	9.79	9.91	8.60	....
31	9.03		9.85		9.79		....

* No record for August, September, October, November, and December.

e Estimated.

K1194. City of New York, Department of Water Supply, Gas and Electricity. Atlantic Ave. and Nichols St. Lat. 40°41'00", long. 73°52'05". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 48 feet, screen 46-48. Land-surface datum is 31.8 feet above msl. Highest water level 1.10 above msl, Dec. 1, 1953; lowest 8.36 below msl, Feb. 28, Mar. 7, 1942. Records available: 1940-43, 1945-54.

Water level above and below msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	+0.98	Apr. 29	+0.14	July 29	-0.40	Oct. 27	-0.14
Feb. 25	+0.62	May 26	-0.06	Aug. 24	-0.34	Dec. 1	+0.33
Mar. 27	+0.39	June 30	-0.26	Sept. 28	-0.10	Dec. 27	+0.59

K1198. City of New York, Department of Water Supply, Gas and Electricity. Cleveland and Fulton Sts. Lat. 40°40'50", long. 73°53'15". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 53 feet, screen 51-53. Land-surface datum is 36.8 feet above msl. Highest water level 2.26 above msl, Aug. 27, 1953; lowest 8.45 below msl, May 14, 1942. Records available: 1940-54. Jan. 30, +2.13; Feb. 25, +2.05; Mar. 27, +1.79; Apr. 29, +1.50; May 26, +1.42; June 30, +1.43; Dec. 27, +1.75.

K1199. City of New York, Department of Water Supply, Gas and Electricity. Jefferson and Howard Aves. Lat. 40°41'10", long. 73°55'15". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 76 feet, screen 74-76. Land-surface datum is 48.5 feet above msl. Highest water level 1.64 above msl, Mar. 27, Dec. 27, 1954; lowest 17.17 below msl, Jan. 1, 1944. Records available: 1940-54.

K1199--Continued.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 25	+1.39	May 27	+1.53	Aug. 25	+1.31	Dec. 2	+1.17
Mar. 27	+1.64	July 1	+1.22	Oct. 5	+1.25	27	+1.64
Apr. 28	+1.17	July 29	+1.18	28	+1.32		

K1235. City of New York, Department of Water Supply, Gas and Electricity. Fulton and Pennsylvania Aves. Lat. 40°40'40", long. 73°54'00". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 80 feet, screen 78-80. Land-surface datum is 60.5 feet above msl. Highest water level 1.72 above msl, Jan. 30, 1954; lowest 10.65 below msl, June 27, 1942. Records available: 1941-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 30	+1.72	Apr. 29	+1.39	July 29	+1.05	Oct. 29	+1.14
Feb. 25	+1.60	May 26	+1.23	Aug. 23	+ .99	Dec. 2	+1.26
Mar. 27	+1.48	June 30	+1.12	Sept. 28	+ .96	27	+1.42

K1236. City of New York, Department of Water Supply, Gas and Electricity. Patchen and Lexington Aves. Lat. 40°41'25", long. 73°55'40". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 82 feet, screen 80-82. Land-surface datum is 50.9 feet above msl. Highest water level 0.58 above msl, May 27, 1954; lowest 19.42 below msl, Oct. 4, 1941. Records available: 1941-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 25	+0.45	May 27	+0.58	Aug. 25	+0.04	Dec. 2	+0.28
Mar. 27	+ .01	July 1	+ .34	Oct. 5	- .08	27	+ .37
Apr. 28	+ .13	29	+ .04	28	- .10		

K1237. City of New York, Department of Water Supply, Gas and Electricity. Delmonico Place and Hopkins St. Lat. 40°42'00", long. 73°56'45". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 63 feet, screen 61-63. Land-surface datum is 18 feet above msl. Highest water level 10.35 below msl, Aug. 3, 1953; lowest 36.53 below msl, Jan. 24, 1947. Records available: 1941-53. Measurement discontinued.

K1263. City of New York, Department of Water Supply, Gas and Electricity. East 18th St. and Cortelyou Rd. Lat. 40°38'30", long. 73°57'50". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 50 feet, screen 48-50. Land-surface datum is 35.9 feet above msl. Highest water level 5.41 above msl, July 31, 1953; lowest 11.97 below msl, July 21, 1936. Records available: 1933-36, 1941-54. Jan. 30, +4.87; Feb. 27, +4.74; Mar. 27, +4.64; Apr. 29, +4.65; May 27, +4.64; June 30, +4.68; Dec. 28, +4.94.

K1264. City of New York, Department of Water Supply, Gas and Electricity. East 37th St. and Snyder Ave. Lat. 40°39'00", long. 73°56'35". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 67 feet, screen 65-67. Land-surface datum is 43.9 feet above msl. Highest water level 4.89 above msl, Aug. 27, 1953; lowest 15.56 below msl, Apr. 3, May 7, 1947. Records available: 1933-35, 1941-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 27	+4.16	May 26	+4.60	Aug. 23	+4.09	Dec. 2	+4.36
Mar. 27	+4.70	June 30	+4.21	Oct. 5	+4.37	28	+4.41
Apr. 29	+4.66	July 29	+4.22	Nov. 2	+4.27		

K1265. City of New York, Department of Water Supply, Gas and Electricity. Riverdale Ave. and Thalford St. Lat. 40°39'40", long. 73°54'30". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 44 feet, screen 42-44. Land-surface datum is 23.2 feet above msl. Highest water level 3.52 above msl, May 26, Dec. 1, 1953; lowest 11.55 below msl, Aug. 22, 1942. Records available: 1933-35, 1941-49, 1951-54. Jan. 30, +2.99; Feb. 27, +3.04; Mar. 27, +3.15; Apr. 29, +3.23; May 26, +3.25; June 30, +3.20, Dec. 28, +3.33.

K1266. City of New York, Department of Water Supply, Gas and Electricity. Vermont and Livonia Sts. Lat. 40°39'55", long. 73°53'35". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 41 feet, screen 39-41. Land-surface datum is 27.7 feet above msl. Highest water level 3.07 above msl, Apr. 29, 1953; lowest 7.49 below msl, June 27, 1942. Records available: 1933-37, 1941-54. Feb. 25, +1.83; Mar. 27, +1.87; Apr. 29, +1.85; May 26, +1.90; June 30, +1.90; July 29, +1.74; Aug. 24, +1.78.

K1347. Albee Theatre. DeKalb Ave. and Fulton St. Lat. 40°41'30", long. 73°58'55". Drilled unused water-table well in deposits of late Pleistocene age, diameter 36 inches (6-inch access pipe at top), depth 72 feet, screen assumed at bottom. Land-surface datum is 40.3 feet above msl. Highest water level 4.04 below msl, Mar. 30, 1954; lowest 24.16 below msl, Sept. 10, 1945. Records available: 1942-54. Jan. 28, -4.49; Feb. 25, -4.11; Mar. 30, -4.04; Apr. 28, -4.27; May 27, -4.97; June 29, -6.16; Dec. 27, -4.43.

K1495. City of New York, Department of Water Supply, Gas and Electricity. Avenue S and East 16th St. Lat. 40°36'20", long. 73°57'25". Driven observation water-table well in deposits of late Pleistocene age, diameter 2 inches, depth 28 feet, screen 26-28. Land-surface datum is 18.3 feet above msl. Highest water level 4.39 above msl, May 26, 1953; lowest 1.80 above msl, Aug. 13, Dec. 17, 1947. Records available: 1936-43 (as K535), 1945-54. Jan. 30, +3.65; Feb. 27, +3.52; Mar. 27, +3.52; Apr. 29, +3.53; May 27, +3.62; June 30, +3.53; Dec. 29, +3.82.

K1516. Formerly New York Water Service Corp. 311 Empire Blvd. Lat. 40°39'55", long. 73°57'15". Drilled unused water-table well in deposits of late Pleistocene age, diameter 12 inches (1½-inch access pipe at top), depth about 180 feet, screen assumed at bottom. Land-surface datum is 76.5 feet above msl. Highest water level 4.04 above msl, Feb. 27, Mar. 27, May 27, June 30, 1954; lowest 21.56 below msl, June 30, 1947. Records available: 1947-54. Jan. 30, +3.99; Feb. 27, +4.04; Mar. 27, +4.04; Apr. 29, +4.03; May 27, +4.04; June 30, +4.04.

Nassau County

N7. Long Island State Park Commission. Remsen St. and Corona Ave., Valley Stream. Lat. 40°40'45", long. 73°41'25". Drilled unused artesian well in Lloyd sand member of Raritan formation, diameter 10 to 6 inches, depth 911 feet, screen 851-911. Land-surface datum is 20.8 feet above msl. Highest water level 12.75 above msl, Mar. 9, 1941; lowest 0.56 below msl, Aug. 4, 1954. Records available: 1936-54.

Daily mean water level, above and below msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+7.41	+7.37	+8.13	+7.67	+7.48	+6.98	+2.87	-0.34	+2.05	+4.49	+6.29	....
2	7.30	7.48	8.17	7.71	7.50	6.94	2.78	.45	2.05	4.54	6.40	....
3	7.27	7.63	8.14	7.82	7.54	6.82	2.71	.53	2.14	4.59	6.84	....
4	7.30	7.79	8.20	7.76	7.63	6.69	2.62	.56	2.17	4.69	7.04	....
5	7.37	7.89	8.17	7.70	7.70	6.54	2.55	.55	2.15	4.73	7.05	....
6	7.53	7.91	8.12	7.74	7.78	6.33	2.50	.47	2.21	4.75	7.09	....
7	7.58	7.85	8.10	7.86	7.81	6.14	2.45	.41	2.28	4.70	7.11	....
8	7.50	7.84	8.07	7.93	7.87	5.97	2.38	.36	2.41	4.66	7.16	+8.71
9	7.37	8.01	8.04	7.88	7.98	5.75	2.25	.27	2.43	4.84	7.21	8.80
10	7.38	8.05	8.11	7.73	8.08	5.51	2.15	-.11	2.47	5.12	7.18	9.02
11	7.40	8.03	8.07	....	8.16	5.33	2.07	+0.02	2.87	5.31	7.19	9.10
12	7.53	7.94	7.93	e7.78	8.23	5.14	1.99	.13	2.91	5.42	7.35	8.94
13	7.47	7.72	7.81	7.76	8.19	4.97	1.94	.23	2.81	5.44	7.39	8.93
14	7.34	7.69	7.86	7.79	8.13	4.80	1.88	.30	2.86	5.39	7.52	9.07
15	7.41	7.78	7.91	7.83	8.10	4.64	1.77	.43	2.97	5.45	7.60	9.46
16	7.60	7.85	7.90	7.84	8.13	4.55	1.53	.57	3.17	5.58	7.63	9.48
17	....	7.96	7.69	8.03	8.12	4.47	1.28	.69	3.40	5.56	7.75	9.36
18	7.58	7.96	7.65	8.07	8.01	4.42	1.14	.72	3.57	5.46	7.84	9.40
19	7.58	7.85	7.61	7.94	7.88	4.42	1.10	.74	3.78	5.41	e7.98	9.51
20	7.59	7.79	7.76	7.79	7.74	4.40	1.09	.79	4.01	5.45	....	9.51
21	7.65	7.84	7.83	7.71	7.66	4.32	1.07	....	4.11	5.56	....	9.56
22	7.55	7.98	7.73	7.70	7.61	....	.98	....	4.21	5.66	....	9.61
23	7.42	8.02	7.64	7.75	7.52	....	.85	....	4.20	e5.72	....	9.63
24	7.34	8.08	7.54	7.71	7.46	....	.69	....	4.16	e5.74	....	9.69
25	7.37	8.21	7.50	7.66	7.50	....	.48	....	....	e5.78	....	9.56
26	7.41	8.27	7.62	7.65	7.48	....	.27	1.32	....	e5.82	h8.42	9.44
27	7.52	8.24	7.59	7.62	7.38	3.62	.12	1.35	4.42	5.89	....	9.43
28	7.60	8.12	7.52	7.64	7.30	3.46	+0.00	1.41	4.45	5.94	....	9.45
29	7.46	....	7.54	7.57	7.29	3.25	-.10	1.48	4.44	6.01	....	9.52
30	7.41	....	7.63	7.49	7.28	3.04	-.19	1.59	4.43	6.24	....	9.65
31	7.41	....	7.64	....	7.08	....	-.28	1.94	....	6.28	....	9.66

e Estimated.

h Tape measurement.

N9. Long Island State Park Commission. Remsen St., Valley Stream. Lat. 40°40'50", long. 73°41'35". Drilled unused artesian well in sands of Magothy formation(?), diameter 6 to 4 inches, depth 137 feet, screen assumed at bottom. Land-surface datum is 23.2 feet above msl. Highest water level 23.57 above msl, Sept. 23, 1938; lowest 19.58 above msl, July 30, 1954. Records available: 1936-54.

N9--Continued.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+20.61	Apr. 27	+20.87	July 30	+19.58	Oct. 26	+20.67
Feb. 26	+19.69	May 26	+20.64	Aug. 24	+20.41	Dec. 3	+21.26
Mar. 24	+20.57	June 30	+20.48	Oct. 4	+20.91	28	+21.20

N53. Village of Rockville Center. Morris and Maple Aves., Rockville Center. Lat. 40°39'35", long. 73°38'30". Drilled unused water-table well in deposits of late Pleistocene age, diameter 8 inches, depth 50 feet, screen assumed at bottom. Land-surface datum is 26.1 feet above msl. Highest water level 16.49 above msl, Apr. 15, 1939; lowest 12.05 above msl, Feb. 17, 1940. Records available: 1934-54.

Water level above msl

Jan. 28	+13.37	Apr. 27	+13.74	July 29	+12.44	Oct. 22	+13.11
Feb. 25	+13.24	May 26	+13.60	Aug. 24	+12.54	Dec. 3	+13.81
Mar. 24	+13.49	June 30	+12.99	Oct. 4	+13.41	31	+14.12

N67. Village of Freeport. Sunrise Highway and Long Beach Rd. Lat. 40°39'25", long. 73°35'20". Drilled industrial artesian well in Lloyd sand member of Raritan formation, diameter 12 inches, depth 1,051 feet, screen assumed at bottom. Land-surface datum is 20.3 feet above msl. Highest water level 15.51 above msl, Dec. 5, 1946; lowest 8.15 above msl, July 28, 1954. Records available: 1932-44, 1946-50, 1952-54. Feb. 2, +14.62; Mar. 31, +14.58; May 27, +14.15; July 28, +8.15; Aug. 24, +8.36; Oct. 22, +12.63.

N157. Big Tree Farm. Post Rd., Wheatley. Lat. 40°48'45", long. 73°34'45". Drilled unused artesian well in sands of Magothy formation(?), diameter 6 inches, depth 222 feet, screen assumed at bottom. Land-surface datum is 218.5 feet above msl.

Water level above msl

Jan. 27	+86.18	Apr. 29	+85.01	July 27	+82.84	Oct. 26	+83.36
Feb. 24	+85.55	May 26	+84.79	Aug. 25	+83.73	Dec. 1	+83.22
Mar. 23	+85.21	July 1	+83.65	Sept. 27	+83.57	27	+83.74

N180. City of New York, Department of Water Supply, Gas and Electricity. Sunrise Highway and Seamans Neck Rd., Seaford. Lat. 40°40'20", long. 73°29'45". Drilled unused artesian well in sands of Magothy formation(?), diameter 4 to 6 inches, depth 762 feet, screen assumed at bottom. Land-surface datum is 15.3 feet above msl. Highest water level 21.08 above msl, June 6, 1952; lowest 16.93 above msl, July 31, 1954. Records available: 1945-54.

Daily mean water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+18.60	+18.31	+18.30	+18.27	+18.30	.....	+17.74	+16.94	+18.68	+19.43	+19.17	+19.47
2	18.46	18.42	18.20	18.34	18.28	.....	17.67	16.95	18.68	19.41	19.24	19.56
3	18.56	18.46	18.29	18.30	18.43	.....	17.32	17.33	18.60	19.42	19.52	19.59
4	18.52	18.52	18.29	18.18	18.49	.....	17.32	17.60	18.51	19.45	19.39	19.62
5	18.56	18.47	18.20	18.21	18.45	+18.05	17.58	17.66	18.52	19.38	19.37	19.63
6	18.64	18.39	18.20	18.32	18.42	17.89	17.45	17.55	18.40	19.40	19.39	19.57
7	18.55	18.28	18.22	18.20	18.35	17.82	17.44	17.26	18.26	19.24	19.41	19.63
8	18.40	18.33	18.21	18.11	18.45	17.74	17.67	17.11	18.36	19.28	19.46	19.57
9	18.45	18.39	18.28	17.95	18.48	17.67	17.45	17.38	18.35	19.38	19.41	19.63
10	18.45	18.39	18.36	18.03	18.49	17.70	17.15	17.97	18.40	19.32	19.35	19.63
11	18.54	18.30	18.29	18.14	18.46	17.76	17.03	18.10	18.79	19.20	19.43	19.48
12	18.62	18.13	18.24	18.10	18.40	17.68	16.97	18.09	18.82	19.26	19.43	19.45
13	18.40	18.07	18.27	18.10	18.33	17.73	17.02	18.01	18.97	19.17	19.35	19.45
14	18.35	18.18	18.44	18.14	18.37	17.74	16.97	17.85	19.09	19.14	19.47	19.72
15	18.45	18.19	18.32	18.08	18.35	17.94	17.03	17.84	19.12	19.40	19.34	19.85
16	18.53	18.21	18.24	18.21	18.37	17.96	17.13	18.01	19.21	19.43	19.36	19.67
17	18.40	18.29	18.27	18.46	18.21	17.87	17.11	17.89	19.25	19.25	19.38	19.55
18	18.29	18.17	18.25	18.41	17.96	17.71	17.13	17.76	19.26	19.11	19.37	19.79
19	18.32	18.13	18.28	18.31	17.84	17.66	17.38	17.72	19.34	19.25	19.45	19.82
20	18.38	18.14	18.53	18.28	18.04	17.61	17.15	17.87	19.32	19.33	19.57	.....
21	18.44	18.26	18.42	18.30	18.32	17.56	17.10	18.07	19.26	19.35	19.63	.....
22	18.40	18.29	18.32	18.36	18.34	17.49	17.08	18.15	19.21	19.28	19.46	.....
23	18.43	.....	18.31	18.35	18.29	17.52	17.07	18.21	19.09	19.16	19.44	19.80
24	18.50	18.29	18.26	18.28	18.29	17.60	17.04	18.30	19.06	18.95	19.52	19.77
25	18.50	.....	18.37	18.36	18.31	17.53	17.08	18.39	19.18	18.81	19.55	19.61

N180--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	18.46	18.30	18.42	18.32	18.25	17.35	17.07	18.32	19.30	18.98	19.51	19.63
27	18.56	18.15	18.27	18.36	18.22	17.20	17.06	18.24	19.34	19.21	19.54	19.66
28	18.46	18.16	18.28	18.41	18.31	17.14	17.17	18.21	19.37	19.13	19.55	19.70
29	18.37		18.37	18.35	18.26	17.35	17.09	18.18	19.35	19.28	19.66	19.72
30	18.46		18.35	18.31	.....	17.69	17.00	18.13	19.42	19.33	19.43	19.88
31	18.34		18.30		.....		16.93	18.55		19.23		19.78

e Estimated.

N511. Irving Cox Estate. Clefts and Horseshoe Rds., Mill Neck. Lat. 40°53'35", long. 73°33'55". Drilled unused artesian well in Lloyd sand member of Raritan formation, diameter 3 inches, depth 330 feet, screen 300-330. Land-surface datum is 7.0 feet above msl. Highest water level 21.52 above msl, Dec. 31, 1948; lowest 18.23 above msl, Aug. 1, 1950. Records available: 1947-54. Readings taken at or near high tide during day.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+20.58	Apr. 26	+20.68	July 27	+19.98	Nov. 1	+20.45
Feb. 24	+20.78	May 24	+20.58	Aug. 25	+20.58	Dec. 8	+20.64
Mar. 22	+20.88	June 29	+20.08				

N575. Abraham & Strauss Store. 833 Franklin Ave., Garden City. Lat. 40°43'45", long. 73°37'55". Drilled unused artesian well in sands of Magotho formation(?), diameter 14 to 8 inches, depth 539 feet, screen 498-514 and 534-539. Land-surface datum is 91.2 feet above msl. Highest water level 60.52 above msl, June 1, 1953; lowest 52.44 above msl, Aug. 1, 1950. Records available: 1946-54. Water levels affected by nearby pumping.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+56.22	Apr. 29	+56.72	July 29	+52.73	Oct. 26	+54.14
Feb. 26	+54.15	May 25	+56.63	Aug. 24	+54.57	Dec. 2	+56.10
Mar. 25	+54.84	June 29	+54.57	Oct. 4	+54.69	27	+55.80

N657. Town of North Hempstead. West Shore Rd., Bar Beach. Lat. 40°49'35", long. 73°39'30". Drilled unused artesian well in Lloyd sand member of Raritan formation, diameter 8 inches, depth 327 feet, screen assumed at bottom. Land-surface datum is 9.0 feet above msl. Highest water level 15.67 above msl, May 2, 1953; lowest 12.78 above msl, Aug. 1, 1954. Records available: 1945-54. Water level affected by tidal fluctuations.

Daily mean water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+14.44	+14.05	+14.53	+14.37	+14.48	+14.34	+13.75	+12.78	+14.10	.....	+14.20	+14.34
2	14.46	14.25	13.99	14.17	14.65	14.45	13.78	12.92	14.02	.....	14.18	14.48
3	14.72	14.46	14.26	14.06	14.78	14.39	13.73	13.20	14.11	.....	14.52	14.50
4	14.43	14.45	13.66	14.00	14.79	14.43	13.80	13.22	13.99	.....	13.81	14.53
5	14.53	14.34	13.68	14.12	14.55	14.27	13.91	13.29	13.99	.....	14.18	14.47
6	14.74	14.13	13.75	14.22	14.60	14.03	13.98	13.42	13.98	.....	14.46	14.46
7	14.35	14.09	13.88	14.17	14.54	14.10	13.91	13.46	13.98	14.30	14.48	14.48
8	14.15	14.04	13.93	14.30	14.74	14.15	13.93	13.47	14.00	14.07	14.46	.....
9	e14.75	14.39	14.06	14.01	14.61	14.03	13.89	13.43	14.03	14.07	14.38	14.21
10	14.46	14.27	14.13	14.06	14.63	13.98	13.81	13.58	14.26	14.20	14.46	14.38
11	14.91	14.26	14.05	14.21	14.33	14.05	13.83	13.53	14.36	14.30	14.32	14.19
12	14.73	e13.98	13.83	14.19	14.46	13.91	13.75	13.33	14.12	14.25	14.20	14.35
13	e14.08	e13.80	14.13	14.15	14.46	13.87	13.69	13.45	14.26	14.25	14.45	14.42
14	e14.18	e14.08	14.30	14.34	14.45	13.94	13.55	13.50	14.27	14.25	14.38	14.90
15	14.28	14.06	14.12	14.34	14.55	13.98	13.43	13.62	14.37	14.63	14.32	14.62
16	14.62	14.28	13.94	14.50	14.58	14.06	13.37	13.66	14.48	14.42	14.50	14.30
17	14.14	14.48	13.97	14.55	14.51	13.94	13.34	13.50	14.50	14.24	14.50	14.44
18	14.10	14.23	13.94	14.28	14.50	13.53	13.37	13.47	14.45	14.14	14.56	14.84
19	e14.18	14.14	14.22	14.32	14.50	13.87	13.50	13.55	14.62	14.28	14.62	.....
20	14.27	14.14	14.45	14.24	14.52	13.81	13.50	13.50	14.53	14.49	14.66	.....
21	14.18	14.33	14.14	14.20	14.71	13.75	13.43	13.53	14.47	14.46	14.62	.....
22	14.21	14.28	.....	14.20	14.43	13.60	.....	13.54	14.20	14.30	14.30	.....
23	14.35	14.23	.....	14.33	14.39	13.57	.....	13.55	14.17	14.08	14.47	.....
24	14.22	14.29	14.13	14.38	14.41	13.61	.....	13.60	14.16	e14.15	14.75	.....
25	14.06	14.34	14.23	14.44	14.42	13.57	.....	13.72	14.36	14.21	14.77	.....
26	14.12	14.37	14.22	14.47	14.29	13.73	.....	13.88	.....	14.32	14.58	.....
27	14.22	14.20	14.13	14.58	14.31	13.82	12.90	13.87	.....	14.39	14.59	.....
28	14.17	14.24	14.26	14.31	14.42	13.77	12.98	13.80	.....	14.12	14.55	.....
29	.....	.....	14.39	14.48	14.52	13.76	13.02	13.90	.....	14.46	14.35	.....
30	14.16	.....	14.44	14.40	14.52	13.75	12.95	14.08	.....	14.39	13.98	.....
31	13.97	.....	14.43	.....	14.40	.....	12.82	14.85	.....	14.05	.....	.....

e Estimated.

N844. Long Island RR. Hicksville Station. Lat. 40°46'05", long. 73°31'30". Drilled unused artesian well in sands of Magothy formation(?), diameter 10 inches, depth 258 feet, screen assumed at bottom. Land-surface datum is 149.2 feet above msl. Highest water level 85.94 above msl, June 29, 1953; lowest 78.87 above msl, Apr. 16, 1942. Records available: 1939-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	+84.78	Apr. 28	+84.13	July 28	+83.37	Oct. 26	+83.28
Feb. 24	+84.51	May 24	+84.12	Aug. 23	+83.06	Nov. 29	+83.31
Mar. 24	+84.28	June 28	+83.82	Sept. 27	+83.36	Dec. 27	+83.38

N1102. Nassau County Department of Public Works. Willets Rd. near Valley Rd., Lake Success. Lat. 40°46'15", long. 73°42'15". Driven observation water-table well in deposits of late Pleistocene age, diameter 2½ inches, depth 140 feet, screen 138-140. Land-surface datum is 185.8 feet above msl. Highest water level 59.12 above msl, May 25, 1953; lowest 53.81 above msl, July 31, 1942. Records available: 1939-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	+57.51	Apr. 27	+56.60	July 26	+55.27	Oct. 27	+54.38
Feb. 26	+56.91	May 26	+56.35	Aug. 24	+54.79	Dec. 2	+54.47
Mar. 24	+56.72	June 30	+55.84	Sept. 27	+54.12	28	+54.45

N1104. Nassau County Department of Public Works. 80th Ave. near Rhodes St., New Hyde Park. Lat. 40°45'00", long. 73°42'05". Driven observation water-table well in deposits of late Pleistocene age, diameter 2 inches, depth 77 feet, screen 75-77. Land-surface datum is 125.4 feet above msl. Highest water level 62.17 above msl, May 25, 1953; lowest 55.27 below msl, May 1, 1942. Records available: 1939-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	+60.39	Apr. 27	+59.34	July 26	+58.44	Oct. 27	+58.52
Feb. 26	+60.02	May 26	+59.13	Aug. 23	+57.99	Dec. 2	+58.57
Mar. 24	+59.75	June 30	+58.78	Sept. 27	+58.28	28	+58.33

N1108. Nassau County Department of Public Works. Jacob St. and Rosalind Ave., Elmont. Lat. 40°42'15", long. 73°42'15". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 47 feet, screen 45-47. Land-surface datum is 70.1 feet above msl. Highest water level 43.62 above msl, Apr. 28, 1939; lowest 36.94 above msl, Jan. 30, 1942. Records available: 1939-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+38.91	Apr. 27	+38.58	July 26	+37.71	Oct. 26	+38.29
Feb. 26	+38.57	May 26	+38.77	Aug. 23	+37.27	Dec. 3	+38.53
Mar. 24	+38.47	June 30	+38.24	Oct. 4	+38.37	28	+38.77

N1109. Nassau County Department of Public Works. Dutch Broadway and Henry St., Elmont. Lat. 40°41'15", long. 73°42'10". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 38 feet, screen 36-38. Land-surface datum is 42.3 feet above msl. Highest water level 30.04 above msl, Apr. 21, 1939; lowest 23.42 above msl, July 29, 1954. Records available: 1939-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+26.17	Apr. 27	+25.57	July 29	+23.42	Oct. 26	+25.93
Feb. 26	+25.88	May 26	+25.50	Aug. 24	+24.59	Dec. 3	+26.72
Mar. 24	+25.91	June 30	+24.40	Oct. 4	+26.41	28	+26.79

N1110. Nassau County Department of Public Works. Henry St. near Southern State Parkway, North Valley Stream. Lat. 40°40'45", long. 73°42'00". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 27 feet, screen 25-27. Land-surface datum is 30.9 feet above msl. Highest water level 21.05 above msl, Apr. 21, 1939, June 6, 1946; lowest 17.08 above msl, July 29, 1954. Records available: 1939-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+19.03	Apr. 27	+18.87	July 29	+17.08	Oct. 26	+19.00
Feb. 26	+18.74	May 26	+18.65	Aug. 24	+18.32	Dec. 3	+19.80
Mar. 24	+18.83	June 30	+18.13	Oct. 4	+19.32	28	+19.76

N1111. Nassau County Department of Public Works. Fletcher and Teneyck Aves., Valley Stream. Lat. 40°40'20", long. 73°42'00". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 28 feet, screen 25-27. Land-surface datum is 20.4 feet above msl. Highest water level 14.79 above msl, June 6, 1946; lowest 11.62 above msl, Oct. 25, 1947. Records available: 1939-54.

N1111--Continued.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+14.01	Apr. 27	+13.49	July 29	+13.07	Oct. 26	+13.86
Feb. 26	+13.87	May 26	+12.99	Aug. 24	+13.64	Dec. 3	+14.46
Mar. 24	+14.07	June 30	+13.28	Oct. 4	+14.11	28	+13.87

N1113. Nassau County Department of Public Works. DuBois Ave. and Drew St., Gibson. Lat. 40°39'00", long. 73°42'10". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 22 feet, screen 20-22. Land-surface datum is 10.5 feet above msl. Highest water level 7.99 above msl, Jan. 6, 1949; lowest 0.12 above msl, June 24, 1952. Records available: 1939-54. Measurements taken after Apr. 30, 1952, affected by installation of storm sewers nearby.

Water level above msl

Jan. 28	+4.76	Apr. 27	+4.96	July 29	+2.74	Oct. 26	+3.64
Feb. 25	+4.48	May 26	+4.65	Aug. 24	+3.13	Dec. 3	+4.94
Mar. 24	+4.83	June 30	+3.62	Oct. 4	+4.15	28	+4.77

N1115. Nassau County Department of Public Works. Wood St. and Brower Ave., Woodmere. Lat. 40°37'50", long. 73°42'25". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 20 feet, screen 18-20. Land-surface datum is 22.8 feet above msl. Highest water level 13.05 above msl, July 14, 1948; lowest 8.57 above msl, Dec. 1, 1941. Records available: 1939-54.

Water level above msl

Jan. 28	+10.67	Apr. 27	+11.07	July 29	+9.66	Oct. 26	+11.00
Feb. 25	+10.51	May 26	+10.82	Aug. 24	+10.06	Dec. 3	+11.92
Mar. 24	+10.84	June 30	+10.16	Oct. 4	+11.44	28	+11.99

N1121. Nassau County Department of Public Works. Northern Blvd. and Searingtown Rd., Strathmore Village. Lat. 40°47'50", long. 73°40'30". Drilled water-table well in deposits of late Pleistocene age, diameter 2½ inches, depth 178 feet, screen 176-178. Land-surface datum is 220.1 feet above msl. Highest water level 65.42 above msl, Aug. 25, 1954; lowest 59.13 above msl, Dec. 20, 1951. Records available: 1943-54.

Water level above msl

Jan. 25	+61.76	Apr. 26	+61.13	July 27	+62.00	Oct. 27	+62.47
Feb. 23	+61.49	May 24	+62.23	Aug. 25	+65.42	Dec. 3	+59.32
Mar. 22	+61.21	June 28	+62.19	Sept. 27	+63.59	28	+59.23

N1132. Nassau County Department of Public Works. Sunrise Highway and Lakewood Blvd., Lynbrook. Lat. 40°39'25", long. 73°39'40". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 29 feet, screen 26-28. Land-surface datum is 20.9 feet above msl. Highest water level 9.77 above msl, Sept. 23, 1938; lowest 6.06 above msl, Feb. 24, 1940. Records available: 1938-54.

Water level above msl

Jan. 28	+7.44	Apr. 27	+7.59	July 30	+6.37	Oct. 26	+7.34
Feb. 25	+7.39	May 26	+7.67	Aug. 24	+6.89	Dec. 3	+8.18
Mar. 24	+7.78	June 30	+7.01	Oct. 4	+7.71	28	+8.10

N1147. Nassau County Department of Public Works. Seaman Ave. near Knollwood Rd., Baldwin. Lat. 40°39'50", long. 73°37'15". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 23 feet, screen 21-23. Land-surface datum is 27.3 feet above msl. Highest water level 19.72 above msl, Apr. 8, 1939; lowest 16.27 above msl, July 29, 1954. Records available: 1939-54.

Water level above msl

Jan. 28	+17.00	Apr. 27	+17.18	July 29	+16.27	Oct. 26	+16.62
Feb. 25	+16.83	May 26	+17.03	Aug. 24	+16.31	Dec. 3	+17.36
Mar. 24	+17.05	June 30	+16.66	Oct. 4	+16.92	28	+17.49

N1167. Nassau County Department of Public Works. North Ocean and Brooklyn Aves., Freeport. Lat. 40°39'30", long. 73°35'10". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 28 feet, screen 26-28. Land-surface datum is 23.8 feet above msl. Highest water level 12.12 above msl, Mar. 25, 1948; lowest 8.93 above msl, July 28, 1954. Records available: 1938-54.

N1147--Continued.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+9.64	Apr. 27	+9.94	July 28	+8.93	Oct. 26	+9.84
Feb. 25	+9.40	May 26	+9.74	Aug. 24	+9.24	Dec. 3	+10.10
Mar. 24	+9.84	June 30	+9.21	Oct. 4	+10.03	28	+10.27

N1185. Nassau County Department of Public Works. West Grand Ave. and Lindgren St., Merrick. Lat. 40°39'55", long. 73°33'45". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 17 feet, screen 15-17. Land-surface datum is 21.1 feet above msl. Highest water level 15.39 above msl, Apr. 8, 1939; lowest 10.01, Dec. 28, 1949. Records available: 1938-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+12.23	Apr. 27	+12.02	July 28	+10.31	Oct. 25	+12.46
Feb. 25	+12.00	May 26	+11.99	Aug. 24	+10.91	Dec. 2	+13.89
Mar. 24	+12.19	June 30	+10.30	Sept. 29	+12.27	28	+14.19

N1204. Nassau County Department of Public Works. Harris Ct. and John St., Bellmore. Lat. 40°40'20", long. 73°31'25". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 29 feet, screen 27-29. Land-surface datum is 21.5 feet above msl. Highest water level 12.56 above msl, Feb. 8, 1952; lowest 5.07 above msl, Jan. 26, 1950. Records available: 1939-54. Water levels affected by nearby pumping.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	+6.34	Apr. 27	+5.99	July 28	+9.47	Oct. 25	+10.89
Feb. 25	+5.87	May 26	+5.80	Aug. 24	+9.20	Dec. 2	+12.12
Mar. 23	+6.25	June 30	+5.87	Sept. 29	+9.42	29	+11.95

N1212. Nassau County Department of Public Works. Jericho Turnpike, Locust Grove. Lat. 40°48'25", long. 73°31'20". Drilled observation artesian well in sands of Magoghy formation(?), diameter 4 inches, depth 185 feet, screen 181-185. Land-surface datum is 228.2 feet above msl. Highest water level 89.74 above msl, Oct. 6, Dec. 7, 1953; lowest 83.72 above msl, Jan. 20, 1943. Records available: 1943-54.

Daily mean water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+89.46	+89.24	+89.28	+88.81	+88.70	+88.56	+88.13	+87.95	+87.67	+87.82	+87.51	+87.43
2	89.27	89.47	88.98	88.90	88.74	88.61	88.17	87.90	87.73	87.83	87.65	87.49
3	89.45	89.42	89.24	88.85	88.83	88.48	88.13	87.98	87.77	87.86	87.87	87.45
4	89.33	89.45	89.11	88.69	88.75	88.48	88.18	87.92	87.66	87.90	87.52	87.43
5	89.46	89.37	89.05	88.83	88.68	88.39	88.24	87.96	87.73	87.77	87.52	87.38
6	89.53	89.24	89.07	89.02	88.65	88.36	88.15	87.89	87.73	87.80	87.53	87.32
7	89.36	89.13	89.13	88.88	88.56	88.41	88.18	87.83	87.77	87.48	87.50	87.45
8	89.14	89.40	89.03	88.90	88.69	88.37	88.08	87.82	87.76	87.68	87.56	87.33
9	89.39	89.44	89.15	88.58	88.70	88.28	88.03	87.91	87.68	87.87	87.46	87.55
10	89.37	89.27	89.20	88.73	88.73	88.39	88.03	87.94	87.75	87.89	87.37	87.51
11	89.50	89.16	89.01	89.00	88.65	88.38	88.08	87.87	87.97	87.88	87.56	87.27
12	89.47	88.94	88.93	88.89	88.62	88.27	88.11	87.80	87.53	87.80	87.66	87.27
13	89.07	89.01	89.06	88.88	88.47	88.35	88.24	87.73	87.82	87.72	87.46	87.27
14	89.23	89.28	89.30	88.89	88.56	88.25	88.15	87.73	87.70	87.70	87.72	87.68
15	89.47	89.26	89.04	88.70	88.70	88.29	88.10	87.86	87.64	87.93	87.47	87.60
16	89.63	89.25	88.87	88.18	88.77	88.20	87.92	87.92	87.77	87.77	87.55	87.23
17	89.27	89.32	88.93	89.03	88.69	88.21	87.96	87.76	87.78	87.63	87.51	87.12
18	89.25	89.03	88.94	88.73	88.60	88.26	88.10	87.72	87.80	87.61	87.48	87.56
19	89.30	88.99	89.00	88.60	88.61	88.34	88.16	87.83	87.92	87.67	87.63	87.37
20	89.42	88.09	89.31	88.63	88.60	88.32	88.05	87.77	87.88	87.77	87.73	87.29
21	89.33	89.32	89.03	88.71	88.66	88.32	88.08	87.70	87.87	87.80	87.67	87.33
22	89.17	89.27	88.89	88.77	88.53	88.27	87.99	87.68	87.78	87.64	87.40	87.26
23	89.18	89.15	88.92	88.77	88.48	88.27	87.99	87.76	87.66	87.65	87.47	87.37
24	89.32	89.28	88.80	88.65	88.55	88.18	87.93	87.81	87.69	87.63	87.57	87.25
25	89.34	89.31	88.98	88.79	88.64	88.24	87.90	87.96	87.90	87.65	87.50	86.99
26	89.38	89.26	89.03	88.72	88.43	88.29	87.92	87.88	87.90	87.76	87.38	87.12
27	89.57	89.01	88.50	88.83	88.47	88.29	87.95	87.72	87.84	87.88	87.47	87.23
28	89.30	89.08	88.92	88.79	88.61	88.18	87.97	87.77	87.80	87.61	87.50	87.32
29	89.18		89.06	88.57	88.60	88.12	87.95	87.78	87.70	87.83	87.61	87.27
30	89.40		88.97	88.57	88.43	88.10	87.92	87.83	87.80	87.74	87.23	87.40
31	89.20		88.85		88.45		87.95	87.97		87.50		87.16

e Estimated.

N1222. Nassau County Department of Public Works. Cecelia Place and John St., Seaford. Lat. 40°40'25", long. 73°29'05". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 29 feet, screen 27-29. Land-surface datum is 21.2 feet above msl. Highest water level 9.80 above msl, Mar. 30, 1953; lowest 1.27 above msl, Jan. 31, 1942. Records available: 1939-54. Water levels affected by nearby pumping.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	+5.21	Apr. 27	+4.76	July 28	+4.08	Oct. 25	+8.83
Feb. 25	+4.52	May 25	+4.73	Aug. 23	+5.53	Nov. 29	+9.34
Mar. 23	+4.77	June 29	+3.81	Sept. 29	+8.90	Dec. 27	+9.39

N1240. Nassau County Department of Public Works. Manhattan Ave., Massapequa Park. Lat. 40°40'40", long. 73°27'10". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 28 feet, screen 26-28. Land-surface datum is 23.0 feet above msl. Highest water level 11.45 above msl, Mar. 30, 1953; lowest 1.08 below msl, Jan. 24, 1942. Records available: 1939-54. Water levels affected by nearby pumping.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	+6.13	Apr. 28	+3.53	July 28	+3.84	Oct. 25	+10.25
Feb. 25	+3.85	May 25	+3.50	Aug. 23	+6.12	Dec. 2	+10.67
Mar. 23	+3.94	June 29	+3.55	Sept. 29	+10.30	27	+10.77

N1244. Nassau County Department of Public Works. Jericho Turnpike and Avery Rd., Syosset. Lat. 40°49'15", long. 73°27'15". Drilled observation water-table well in sands of Magothy formation(?), diameter 4 inches, depth 259 feet, screen 255-259. Land-surface datum is 248.9 feet above msl. Highest water level 76.50 above msl, May 31, 1940; lowest 71.07 above msl, June 4, 1951. Records available: 1940-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	+76.23	Apr. 28	+75.84	July 27	+75.29	Oct. 25	+74.70
Feb. 25	+76.19	May 25	+75.69	Aug. 23	+75.05	Dec. 2	+74.49
Mar. 23	+76.05	June 28	+75.48	Sept. 29	+74.88	27	+74.32

N1245. Nassau County Department of Public Works. Plainview Rd. and Northern State Parkway. Plainview. Lat. 40°48'25", long. 73°27'00". Drilled observation artesian well in sands of Magothy formation(?), diameter 2½ inches, depth 202 feet, screen 198-202. Land-surface datum is 259.9 feet above msl. Highest water level 82.88 above msl, Feb. 2, 1940; lowest 75.63 above msl, June 4, 1951. Records available: 1940-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	+81.65	May 25	+80.95	Aug. 23	+80.09	Dec. 2	+79.50
Feb. 25	+81.66	June 29	+80.68	Sept. 29	+79.90	27	+79.26
Apr. 28	+81.24	July 27	+80.38	Oct. 25	+79.65		

N1246. Nassau County Department of Public Works. Plainview and Melville Rds., Plainview. Lat. 40°47'00", long. 73°26'50". Drilled observation water-table well in deposits of late Pleistocene age, diameter 4 inches, depth 125 feet, screen 121-125. Land-surface datum is 185.1 feet above msl. Highest water level 82.71 above msl, Oct. 29, 1953; lowest 76.85 above msl, Apr. 24, 1951. Records available: 1940-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	+82.27	Apr. 28	+81.51	July 27	+80.83	Oct. 25	+80.10
Feb. 25	+82.23	May 25	+81.44	Aug. 23	+80.53	Dec. 1	+80.03
Mar. 23	+81.88	June 29	+81.00	Sept. 29	+80.18	27	+79.79

N1247. Nassau County Department of Public Works. Near Motor Parkway, Bethpage. Lat. 40°45'55", long. 73°26'30". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 110 feet, screen 108-110. Land-surface datum is 157.1 feet above msl. Highest water level 76.98 above msl, July 28, 1939; lowest 70.52 above msl, July 31, 1942. Records available: 1939-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	+74.88	Apr. 28	+74.17	July 27	+73.66	Oct. 25	+73.23
Feb. 25	+74.81	May 25	+74.11	Aug. 23	+73.33	Dec. 1	+73.08
Mar. 23	+74.38	June 29	+73.82	Sept. 29	+73.28	27	+73.06

N1249. Nassau County Department of Public Works. Secatogue Ave. and Wall St., Farmingdale. Lat. 40°43'50", long. 73°26'05". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 34 feet, screen 32-34. Land-surface datum is 67.8 feet above msl. Highest water level 58.18 above msl, Apr. 21, 1939; lowest 50.34 above msl, Jan. 30, 1942. Records available: 1939-54.

N1249--Continued.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	+54.03	Apr. 28	+54.27	July 27	+52.97	Oct. 25	+53.42
Feb. 25	+53.76	May 25	+54.34	Aug. 23	+52.94	Dec. 2	+53.77
Mar. 23	+53.98	June 29	+53.64	Sept. 29	+53.97	27	+54.54

N1250. Nassau County Department of Public Works. Old Carmans Rd., Farmingdale. Lat. 40°43'15", long. 73°26'00". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 34 feet, screen 32-34. Land-surface datum is 62.2 feet above msl. Highest water level 49.79 above msl, Apr. 28, 1953; lowest 43.20 above msl, Jan. 30, 1942. Records available: 1939-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	+46.46	Apr. 28	+46.89	July 27	+45.33	Oct. 25	+45.86
Feb. 25	+46.25	May 25	+46.94	Aug. 23	+45.14	Dec. 2	+46.44
Mar. 23	+46.56	June 29	+46.02	Sept. 29	+46.35	27	+47.33

N1251. Nassau County Department of Public Works. County Line Rd. and Southern State Parkway, Farmingdale. Lat. 40°42'40", long. 73°25'50". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 29 feet, screen 27-29. Land-surface datum is 48.9 feet above msl. Highest water level 40.95 above msl, Apr. 28, 1953; lowest 35.57 above msl, Jan. 30, 1942. Records available: 1939-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	+37.48	Apr. 28	+38.85	July 27	+37.21	Oct. 25	+37.85
Feb. 25	+38.20	May 25	+38.84	Aug. 23	+37.15	Dec. 2	+38.65
Mar. 23	+38.55	June 29	+37.98	Sept. 29	+38.33	27	+39.33

N1252. Nassau County Department of Public Works. County Line Rd. and Smith St., Amityville. Lat. 40°41'40", long. 73°25'40". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 26 feet, screen 24-26. Land-surface datum is 29.3 feet above msl. Highest water level 26.51 above msl, Mar. 30, 1953; lowest 22.48 above msl, Jan. 30, 1942. Records available: 1939-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	+24.71	Apr. 28	+25.02	July 27	+23.48	Oct. 25	+24.58
Feb. 25	+24.52	May 25	+24.95	Aug. 23	+23.66	Dec. 2	+25.14
Mar. 23	+24.79	June 29	+24.20	Sept. 29	+24.83	27	+25.55

N1253. Nassau County Department of Public Works. Clocks Blvd. and Pine St., Amityville. Lat. 40°40'55", long. 73°25'35". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 29 feet, screen 27-29. Land-surface datum is 28.5 feet above msl. Highest water level 16.93 above msl, Mar. 30, 1953; lowest 11.31 above msl, Jan. 31, 1942. Records available: 1939-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	+13.60	Apr. 28	+13.76	July 28	+11.93	Oct. 25	+14.90
Feb. 25	+13.19	May 25	+13.59	Aug. 23	+12.45	Dec. 2	+15.46
Mar. 23	+13.38	June 29	+12.46	Sept. 29	+15.15	27	+15.88

N1254. Nassau County Department of Public Works. County Line and Merrick Rds., Amityville. Lat. 40°40'20", long. 73°25'25". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 29 feet, screen 27-29. Land-surface datum is 14.0 feet above msl. Highest water level 4.70 above msl, Mar. 30, 1953; lowest 2.35 above msl, Dec. 29, 1949. Records available: 1939-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	+3.44	Apr. 28	+3.65	July 28	+3.18	Oct. 25	+3.82
Feb. 25	+3.35	May 25	+3.54	Aug. 23	+3.12	Dec. 2	+3.82
Mar. 23	+3.38	June 29	+3.49	Sept. 29	+4.06	27	+3.93

N1255. Nassau County Department of Public Works. Clinton Rd. near St. James St., Garden City. Lat. 40°43'45", long. 73°37'10". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 35 feet, screen 33-35. Land-surface datum is 79.4 feet above msl. Highest water level 65.59 above msl, Apr. 15, 1939; lowest 57.71 above msl, Aug. 25, 1954. Records available: 1913-18, 1934-54.

N1255--Continued.

Water level above msl							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	+59.95	Apr. 29	+60.00	July 29	+57.84	Oct. 25	+58.65
Feb. 26	+59.63	May 25	+60.25	Aug. 25	+57.71	Dec. 3	+59.97
Mar. 25	+59.73	June 29	+58.97	Sept. 27	+59.02	31	+59.59

N1256. Nassau County Department of Public Works. Hillside Ave. and Bacon Rd., Westbury. Lat. 40°45'40", long. 73°37'05". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 51 feet, screen 49-51. Land-surface datum is 112.3 feet above msl. Highest water level 80.97 above msl, May 20, 1939; lowest 70.30 above msl, Feb. 27, 1933. Records available: 1913-18, 1932-54.

Water level above msl							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+77.85	Apr. 29	+77.44	July 28	+76.22	Oct. 22	+76.37
Feb. 24	+77.50	May 26	+77.32	Aug. 23	+76.34	Dec. 2	+77.16
Mar. 24	+77.70	July 1	+76.97	Sept. 27	+76.18	27	+76.94

N1259. U. S. Geol. Survey. Hicksville-Massapequa Rd., Plainedge. Lat. 40°43'15", long. 73°29'05". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 48 feet, screen 46-48. Land-surface datum is 78.4 feet above msl. Highest water level 56.99 above msl, June 23, 1952; lowest 47.83 above msl, Jan. 24, 1933. Records available: 1909-10, 1912-16, 1930-35, 1937-54.

Water level above msl							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	+53.53	Apr. 28	+53.39	July 28	+52.17	Oct. 25	+52.97
Feb. 24	+53.26	May 25	+53.46	Aug. 23	+52.17	Nov. 29	+53.14
Mar. 24	+53.29	June 29	+52.89	Sept. 29	+53.24	Dec. 27	+53.74

N1263. Nassau County Department of Public Works. Wantagh Ave. and Miller Place, Central Park. Lat. 40°43'00", long. 73°29'55". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 29 feet, screen 27-29. Land-surface datum is 66.0 feet above msl. Highest water level 55.24 above msl, June 23, 1952; lowest 46.22 above msl, Oct. 31, 1932. Records available: 1911-15, 1931-54.

Water level above msl							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	+51.64	Apr. 28	+51.61	July 28	+50.19	Oct. 22	+51.07
Feb. 24	+51.38	May 25	+51.56	Aug. 23	+50.39	Nov. 29	+51.77
Mar. 23	+51.52	June 29	+50.87	Sept. 29	+51.54	Dec. 27	+52.15

N1264. City of New York, Department of Water Supply, Gas and Electricity. Newbridge Rd. near Sunrise Highway, Bellmore. Lat. 40°39'55", long. 73°32'20". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 26 feet, screen 24-26. Land-surface datum is 13.7 feet above msl. Highest water level 9.41 above msl, Apr. 8, 1939; lowest 2.70 above msl, Feb. 17, 1940. Records available: 1932-36, 1937-54. Water levels affected by nearby pumping.

Water level above msl							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+3.75	Apr. 27	+4.00	Aug. 24	+6.97	Dec. 2	+8.57
Feb. 25	+3.48	June 30	+3.87	Oct. 7	+7.23	28	+8.20
Mar. 24	+3.99	July 28	+6.47	22	+7.46		

N1461. Nassau County Department of Public Works. New South Rd. and Long Island RR., Hicksville. Lat. 40°45'25", long. 73°30'20". Drilled observation artesian well in sands of Magothy formation(?), diameter 6 inches, depth 73 feet, screen 63-73. Land-surface datum is 129.5 feet above msl. Highest water level 81.06 above msl, May 2, 1953; lowest 74.34 above msl, Oct. 10, 1943. Records available: 1943-54.

Water level above msl							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	+79.96	Mar. 13	+79.40	May 22	+79.06	July 30	+77.47
9	79.79	20	79.41	29	79.01	Aug. 6	77.34
16	79.79	27	79.27	June 5	78.96	13	77.33
23	79.63	Apr. 3	79.21	11	78.79	20	77.25
30	79.65	10	79.06	18	78.61	27	77.12
Feb. 6	79.57	17	79.15	25	78.47	Sept. 3	77.23
13	79.49	24	78.94	July 2	78.33	10	77.20
20	79.39	May 1	78.97	9	78.22	17	77.59
27	79.45	8	79.10	16	77.99	23	77.73
Mar. 6	79.47	15	79.14	23	77.73	30	77.75

N1461--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 7	+77.61	Nov. 4	+78.10	Nov. 24	+78.47	Dec. 15	+78.66
14	77.68	10	78.31	Dec. 1	78.49	22	78.79
21	77.72	17	78.37	8	78.59	29	78.85
28	77.73						

N1462. Nassau County Department of Public Works. Mallard Rd. and Neptune Lane, Levittown. Lat. 40°43'55", long. 73°30'20". Drilled observation water-table well in deposits of late Pleistocene age, diameter 6 inches, depth 52 feet, screen 42-52. Land-surface datum is 95.0 feet above msl. Highest water level 67.78 above msl, May 18, 1953; lowest 61.26 above msl, Nov. 1, 1947. Records available: 1943-54. Recording gage discontinued July 20, 1954.

Daily mean water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+65.56	+65.23	+64.93	+64.93	+65.00	+64.99	+64.39	.....	.....	.....	h+64.87	.....
2	65.53	65.23	64.93	64.93	64.99	64.97	64.37	.....	.....	.....	.....	.....
3	65.55	65.23	64.93	64.94	65.01	64.95	64.37	.....	.....	.....	.....	.....
4	65.55	65.22	64.96	64.92	65.06	64.92	64.35	.....	.....	h+64.86	.....	.....
5	65.55	65.20	64.96	64.92	65.06	64.89	64.32	.....	.....	.....	.....	.....
6	65.55	65.18	64.96	64.92	65.06	64.88	64.30	.....	.....	.....	.....	.....
7	65.54	65.16	64.96	64.92	65.05	64.86	64.30	.....	h+64.92	.....	.....	.....
8	65.53	65.15	64.95	64.92	65.05	64.83	64.28	.....	.....	.....	h64.93	.....
9	65.49	65.15	64.94	64.91	65.06	64.80	64.26	.....	.....	.....	.....	.....
10	65.49	65.14	64.94	64.90	65.07	64.79	64.24	.....	.....	h64.77	.....	.....
11	65.49	65.12	64.93	64.89	65.07	64.77	64.22	.....	.....	.....	.....	.....
12	65.49	65.09	64.92	64.89	65.07	64.75	64.20	.....	.....	.....	.....	.....
13	.....	65.05	64.89	64.90	65.06	64.73	64.17	.....	.....	.....	.....	.....
14	.....	65.05	64.92	64.90	65.06	64.71	64.15	.....	h64.83	.....	.....	.....
15	.....	65.04	64.95	64.90	65.06	64.70	64.14	.....	.....	.....	h65.14	.....
16	.....	65.03	64.94	64.90	65.07	64.69	64.11	.....	.....	.....	.....	.....
17	.....	65.03	64.94	64.94	65.06	64.67	64.08	.....	.....	.....	h64.72	.....
18	.....	65.00	64.92	65.00	65.05	64.65	64.05	.....	.....	.....	.....	.....
19	.....	.....	64.92	65.00	65.03	64.63	64.04	.....	.....	.....	.....	.....
20	.....	.....	64.94	64.99	65.02	64.61	64.01	.....	.....	.....	.....	.....
21	.....	.....	64.96	64.99	65.01	64.58	.....	.....	.....	h64.75	.....	.....
22	.....	.....	64.96	64.99	65.06	64.56	.....	.....	.....	.....	h65.27	.....
23	.....	.....	64.96	64.99	65.06	64.54	.....	h+64.90	.....	.....	.....	.....
24	.....	.....	64.93	64.99	65.06	64.51	.....	.....	.....	h64.79	.....	.....
25	.....	64.95	64.93	65.00	65.06	64.51	.....	.....	.....	.....	.....	.....
26	.....	64.96	64.97	65.00	65.05	64.49	.....	.....	.....	.....	.....	.....
27	e65.29	64.94	64.96	65.00	65.02	64.47	.....	h+63.83	.....	.....	.....	.....
28	65.28	64.93	64.95	65.00	65.02	64.45	h64.63	.....	.....	h64.63	.....	.....
29	65.27	.....	64.97	65.01	65.02	64.42	.....	.....	.....	.....	h65.36	.....
30	65.26	.....	64.97	65.00	65.00	64.40	.....	.....	h64.97	.....	.....	.....
31	65.25	.....	64.94	.....	65.00	.....	.....	.....	.....	.....	.....	.....

e Estimated.

h Tape measurement.

N1463. Nassau County Department of Public Works. Seamans Neck Rd. near Southern State Parkway, Jerusalem. Lat. 40°41'50", long. 73°29'35". Drilled observation water-table well in deposits of late Pleistocene age, diameter 6 inches, depth 31 feet, screen 21-31. Land-surface datum is 50.7 feet above msl. Highest water level 42.91 above msl, June 7, 1952; lowest 36.51 above msl, July 21, 1954. Records available: 1943-54. Recording gage discontinued July 21, 1954.

Daily mean water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+38.49	+38.10	+37.77	+38.03	+37.97	+37.76	+37.10	.....	.....	.....	.....	h+38.85
2	38.46	38.09	37.76	38.02	37.96	37.76	36.99	.....	.....	.....	.....	.....
3	38.45	38.08	37.79	38.00	38.01	37.73	36.96	.....	.....	.....	.....	.....
4	38.43	38.07	37.89	37.80	38.05	37.72	36.93	.....	.....	.....	h+37.99	.....
5	38.41	38.06	37.88	37.95	38.01	37.68	36.92	.....	.....	.....	.....	.....
6	38.39	38.04	37.90	37.94	37.99	37.64	36.88	.....	.....	.....	.....	.....
7	38.38	38.02	37.91	37.93	37.96	37.62	36.82	.....	.....	h+38.03	.....	.....
8	38.35	38.01	37.92	37.89	38.07	37.58	36.82	.....	.....	.....	.....	h38.49
9	38.33	38.00	37.92	37.89	38.05	37.57	36.80	.....	.....	.....	.....	.....
10	38.31	37.99	37.94	37.86	38.05	37.55	36.79	.....	.....	.....	h38.09	.....
11	38.29	37.97	37.95	37.85	38.04	37.52	36.75	.....	.....	.....	.....	.....
12	38.27	37.95	37.94	37.86	38.03	37.48	36.72	.....	.....	.....	.....	.....
13	38.23	37.92	37.94	37.83	38.02	37.53	36.67	h+36.71	.....	.....	.....	.....
14	38.21	37.91	37.99	37.81	38.01	37.49	36.64	.....	.....	h37.88	.....	.....
15	38.19	37.89	38.05	37.79	38.01	37.45	36.70	.....	.....	.....	h38.62	.....

N1463--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	+38.20	+37.88	+38.01	+37.82	+37.99	+37.45	+36.63	.....	.....	.....	.....	.....
17	38.16	37.90	38.01	37.90	37.96	37.41	36.59	.....	.....	h+38.07	.....	.....
18	38.13	37.85	38.01	37.99	37.92	37.36	36.57	.....	.....	.....	.....	.....
19	38.11	37.83	38.02	37.98	37.90	37.32	36.54	.....	.....	.....	.....	.....
20	38.00	37.81	38.10	37.99	37.88	37.27	36.52	.....	.....	.....	.....	.....
21	38.16	37.83	38.06	38.00	37.97	37.25	36.51	.....	h+37.80	.....	.....	.....
22	38.17	37.85	38.05	38.02	37.98	37.21	.....	.....	.....	h+38.87	.....	.....
23	.....	37.80	38.05	38.02	37.95	37.20	h+36.84	h+38.29	.....	.....	.....	.....
24	.....	37.79	38.05	38.03	37.93	37.20	.....	.....	.....	h38.14	.....	.....
25	.....	37.80	38.04	38.03	37.88	37.16	.....	.....	.....	.....	.....	.....
26	.....	37.78	38.08	38.03	37.82	37.10	.....	.....	.....	.....	.....	.....
27	.....	37.76	38.08	38.03	37.84	37.07	.....	.....	.....	.....	.....	.....
28	38.20	37.75	38.05	38.04	37.82	37.10	.....	.....	h37.66	.....	.....	.....
29	38.15	.....	38.05	38.01	37.81	36.99	.....	.....	.....	.....	h38.93	.....
30	38.15	.....	38.05	37.99	37.80	37.00	.....	h38.14	.....	.....	.....	.....
31	38.12	.....	38.04	.....	37.78	.....	.....	.....	.....	.....	.....	.....

h Tape measurement.

N1464. Nassau County Department of Public Works. Seaford Woods, Seaford. Lat. 40°40'50", long. 73°29'25". Drilled observation water-table well in deposits of late Pleistocene age, diameter 6 inches (1½-inch access pipe at top), depth 41 feet, perforations 31-41. Land-surface datum is 28.8 feet above msl. Highest water level 17.59 above msl, Apr. 29, 1944; lowest 12.22 above msl, Jan. 26, 1950. Records available: 1943-54. Water levels affected by nearby pumping.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	+15.17	Apr. 27	+14.94	July 28	+13.10	Oct. 25	+15.61
Feb. 25	+14.74	May 25	+14.92	Aug. 23	+13.91	Nov. 29	+16.48
Mar. 23	+14.90	June 29	+13.71	Sept. 29	+15.75	Dec. 27	+16.81

N1613. Long Island State Park Commission. North Valley Stream State Park, Valley Stream. Lat. 40°41'00", long. 73°41'20". Drilled unused artesian well in sands of Magothy formation(?), diameter 6 inches (1½-inch access pipe at top), depth 496 feet, screen assumed at bottom. Land-surface datum is 24.4 feet above msl. Highest water level 24.56 above msl, July 28, 1948; lowest 16.38 above msl, July 29, 1954. Records available: 1940-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+20.36	Apr. 27	+20.30	July 29	+16.38	Oct. 25	+20.38
Feb. 26	+20.07	May 26	+19.75	Aug. 24	+19.63	Dec. 3	+20.30
Mar. 24	+20.23	June 30	+19.68	Oct. 4	+20.04	28	+21.59

N1614. Nassau County Department of Public Works. Herricks Rd. and Sally Place, Mineola. Lat. 40°44'45", long. 73°39'30". Driven observation water-table well in deposits of late Pleistocene age, diameter 2 inches, depth 35 feet, screen at 33-35. Land-surface datum is 100.7 feet above msl. Highest water level 72.48 above msl, May 31, 1949; lowest 61.90 above msl, Feb. 27, 1933. Records available: 1913-17, 1932-35, 1940-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	+68.45	Apr. 29	+67.93	July 26	+66.77	Oct. 22	+67.49
Feb. 24	+68.00	May 25	+68.14	Aug. 25	+66.56	Dec. 2	+66.92
Mar. 25	+67.88	June 30	+67.37	Sept. 27	+68.09	27	+68.14

N1615. Nassau County Department of Public Works. Formerly City of New York, Department of Water Supply, Gas and Electricity. Merrick Ave. near Wilson Rd., East Meadow. Lat. 40°42'10", long. 73°34'00". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 26 feet, screen 24-26. Land-surface datum is 62.8 feet above msl. Highest water level 47.17 above msl, Mar. 28, 1939; lowest 41.49 above msl, Oct. 27, 1932. Records available: 1913-15, 1932-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	+44.23	Apr. 27	+44.27	June 28	+43.92	Aug. 23	+43.75
Feb. 26	+43.97	May 25	+44.27	July 30	+43.70	Sept. 30	+44.27
Mar. 25	+44.50	.....	.....	.....	.....	.....	.....

N1616. Nassau County Department of Public Works. Post Ave. and Argyle Rd., Westbury. Lat. 40°45'55", long. 73°35'10". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 51 feet, screen 49-51. Land-surface datum is 122.8 feet above msl. Highest water level 85.42 above msl, June 1, 1939; lowest 74.05 above msl, Feb. 27, 1933. Records available: 1913-15, 1932-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	+82.68	Apr. 29	+82.42	July 28	+82.00	Oct. 25	+81.66
Feb. 24	+82.64	May 26	+82.51	Aug. 23	+82.11	Dec. 2	+81.72
Mar. 24	+82.48	July 1	+82.24	Sept. 27	+81.84	28	+82.31

N1828. Nassau County Department of Public Works. Melville Rd. and Suffolk County Line, Farmingdale. Lat. 40°44'45", long. 73°26'20". Drilled observation water-table well in deposits of late Pleistocene age, diameter 6 inches, depth 35 feet, screen 25-35. Land-surface datum is 81.9 feet above msl. Highest water level 64.52 above msl, Apr. 28, 1953; lowest 57.80 above msl, Dec. 19, 1950. Records available: 1939-42 (as N1248), 1942-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	+60.94	Apr. 28	+61.06	July 27	+59.79	Oct. 25	+60.11
Feb. 25	+60.73	May 25	+61.26	Aug. 23	+59.66	Dec. 2	+60.18
Mar. 23	+60.84	June 29	+60.44	Sept. 29	+60.66	27	+61.03

N1829. Nassau County Department of Public Works. Stewart Ave., near Post Ave., Westbury. Lat. 40°44'10", long. 73°34'40". Drilled observation water-table well in deposits of late Pleistocene age, diameter 6 inches, depth 27 feet, screen 17-27. Land-surface datum is 76.7 feet above msl. Highest water level 69.43 above msl, Apr. 28, 1953; lowest 66.00 above msl, Jan. 29, 1951. Records available: 1938-42 (as N1180), 1942-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	+68.06	Apr. 29	+67.88	July 29	+67.12	Oct. 25	+67.40
Feb. 26	+67.75	May 25	+67.96	Aug. 23	+66.97	Dec. 2	+67.94
Mar. 25	+67.78	June 29	+67.56	Sept. 29	+67.71	28	+68.24

N1830. Nassau County Department of Public Works. South Tyson Ave. near Long Island RR., Floral Park. Lat. 40°43'40", long. 73°42'20". Drilled observation water-table well in deposits of late Pleistocene age, diameter 6 inches, depth 65 feet, screen 55-65. Land-surface datum is 95.0 feet above msl. Highest water level 54.23 above msl, May 31, 1949; lowest 49.05 above msl, June 7, 1942. Records available: 1939-42 (as N1106), 1942-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+51.40	Apr. 27	+50.61	July 26	+49.64	Oct. 25	+49.50
Feb. 26	+51.07	May 26	+50.58	Aug. 24	+49.16	Dec. 2	+49.49
Mar. 24	+50.78	June 30	+50.20	Sept. 27	+49.57	28	+49.64

N2052. Port Washington Water District. Hewlett Lane, Port Washington. Lat. 40°48'45", long. 73°39'40". Drilled municipal artesian well in sands of Magothy formation(?), diameter 12 to 8 to 6 inches, depth 303 feet, screen 283-303. Land-surface datum is 157.9 feet above msl. Highest water level 34.95 above msl, Nov. 5, 1952; lowest 29.71 above msl, Mar. 14, 1946. Records available: 1946-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+32.56	Apr. 26	+32.22	Aug. 26	+31.44	Oct. 27	+32.64
Feb. 23	+32.47	May 24	+32.62	Oct. 4	+32.26	Dec. 3	+32.96
Mar. 23	+32.08	June 28	+31.70				

N2071. Appleby Estate. Herb Hill Rd. near site of Columbia Ribbon & Carbon Mfg. Co., Glen Cove. Lat. 40°51'30", long. 73°38'35". Drilled unused artesian well in Lloyd sand member of Raritan formation, diameter 8 inches (2½-inch access pipe at top), depth 266 feet, screen assumed at bottom. Land-surface datum is 5.1 feet above msl. Highest water level 14.62 above msl, Mar. 15, 1946; lowest 5.37 above msl, June 28, 1949. Records available: 1946-51, 1954. Measurements taken at or near high tide. June 18, +7.72; Sept. 21, +11.69; Dec. 9, +9.58.

N2400. Roslyn Water District. Old Westbury Rd. and Locust Valley Lane, Roslyn. Lat. 40°47'10", long. 73°38'00". Drilled municipal artesian well in sands of Magothy formation(?), diameter 18 inches, depth 439 feet, screen 399-439. Land-surface datum is 165.6 feet above msl. Highest water level 74.10 above msl, Sept. 30, 1949; lowest 70.04 above msl, Feb. 28, 1951. Records available: 1947-54. Dec. 7, +72.91.

N2528. Nassau County Department of Public Works. Southwest corner of Chicken Valley and Wolver Hollow Rds., Upper Brookville. Lat. 40°51'00", long. 73°34'40". Drilled observation artesian well in sands of Magothy formation(?), diameter 6 to 4 inches, depth 282 feet, slotted 278-282. Land-surface datum is 92.5 feet above msl. Highest water level 72.32 above msl, June 26, 1953; lowest 68.03 above msl, Jan. 22, 30, 1951. Records available: 1947-54.

N2528--Continued.

Water level above msl							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	+70.89	Apr. 26	+70.64	July 27	+70.08	Oct. 26	+69.66
Feb. 24	+70.69	May 24	+70.62	Aug. 25	+69.93	Nov. 29	+69.70
Mar. 23	+70.76	June 28	+70.39	Sept. 27	+70.90	Dec. 27	+69.75

N2635. Nassau County Department of Public Works. Washington St. and Webster Ave., Port Washington. Lat. 40°49'40", long. 73°41'55". Drilled observation artesian well in sands of Magothy formation(?), diameter 6 to 4 inches, depth 154 feet, slotted 150-154. Land-surface datum is 40.3 feet above msl. Highest water level 27.67 above msl, May 23, 27, 31, June 1, 1953; lowest 23.77 above msl, Jan. 22-23, 1951. Records available: 1948-54.

Daily mean water level, above msl, from recorder graph												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+26.12	+25.79	+25.65	+25.57	+25.48	+25.46	+25.18	+24.87	+24.82	+24.85	+24.62	+24.80
2	26.09	25.82	25.63	25.55	.....	25.46	25.17	24.87	24.80	24.85	24.70	24.82
3	26.11	25.82	25.65	25.58	.....	25.43	25.14	24.97	24.80	24.84	24.82	24.81
4	26.07	25.84	25.67	25.49	.....	25.42	25.15	24.98	24.77	24.84	24.77	24.81
5	26.07	25.82	25.64	25.49	.....	25.39	25.18	24.98	24.76	24.81	24.78	24.80
6	26.08	25.80	25.63	25.51	.....	25.36	25.16	24.97	24.75	24.79	24.78	24.78
7	26.05	25.76	25.64	25.51	25.50	25.35	25.15	24.93	24.73	24.73	24.78	24.78
8	25.99	25.77	25.63	25.52	25.54	25.33	25.15	24.89	24.73	24.72	24.79	24.76
9	26.00	25.79	25.64	25.46	25.54	25.30	25.12	24.95	24.71	24.75	24.77	24.80
10	26.01	25.76	25.66	25.44	25.56	25.29	25.08	24.98	24.71	24.77	24.73	24.81
11	26.06	25.73	25.63	25.49	25.57	25.31	25.06	24.96	24.95	24.77	24.74	24.77
12	26.08	25.67	25.60	25.51	25.56	25.29	25.05	24.91	24.91	24.76	24.76	24.74
13	25.99	25.63	25.61	25.48	25.52	25.31	25.06	24.88	24.89	24.74	24.73	24.73
14	25.95	25.65	25.70	25.47	25.52	25.30	25.05	24.86	24.90	24.70	24.76	24.80
15	25.99	25.67	25.68	25.43	25.53	25.29	25.04	24.85	24.89	24.72	24.73	24.87
16	26.03	25.66	25.62	25.46	25.55	25.26	25.00	24.86	24.92	24.74	24.72	24.82
17	25.98	25.71	25.60	25.54	25.53	25.25	24.99	24.81	24.95	24.69	24.72	24.76
18	25.92	25.67	25.57	25.55	25.54	25.23	25.00	24.78	24.95	24.66	24.70	24.84
19	25.91	25.63	25.57	25.49	25.50	25.22	25.02	24.78	24.99	24.15	24.71	24.86
20	25.91	25.61	25.68	25.45	25.53	25.21	25.00	24.79	25.01	24.66	24.81	24.84
21	25.90	25.66	25.64	25.46	25.56	25.20	24.98	24.79	24.99	24.68	24.86	24.84
22	25.85	25.70	25.60	25.46	25.53	25.19	24.96	24.78	24.99	24.65	24.81	24.83
23	25.83	25.66	25.58	25.47	25.51	25.25	24.94	24.77	24.94	24.63	24.81	24.84
24	25.85	25.65	25.55	25.49	25.50	25.27	24.91	24.77	24.92	24.62	24.84	24.84
25	25.86	25.68	25.57	25.50	25.51	25.27	24.90	24.78	24.92	24.61	24.86	24.79
26	25.86	25.68	25.62	25.50	25.48	25.25	24.90	24.78	24.93	24.62	24.84	24.78
27	25.88	25.64	25.57	25.52	25.47	25.25	24.90	24.75	24.92	24.66	24.84	24.79
28	25.85	25.61	25.56	25.54	25.50	25.21	24.90	24.75	24.89	24.63	24.84	24.80
29	25.81	.....	25.59	25.51	25.51	25.20	24.89	24.74	24.84	24.69	24.89	24.83
30	25.82	.....	25.61	25.48	25.49	25.20	24.87	24.74	24.85	24.71	24.83	24.92
31	25.80	.....	25.58	.....	25.46	.....	24.86	24.86	.....	24.66	.....	24.88

N2790. U. S. Geol. Survey and Nassau County Department of Public Works. Second Ave. near Williamson Ave., Bay Park. Lat. 40°38'05", long. 73°39'50". Drilled observation artesian well in sands of Magothy formation(?), diameter 6 to 4 inches, depth 560 feet, screen 538-560. Land-surface datum is 4.1 feet above msl. Highest water level 5.98 above msl, Mar. 26, Apr. 13, 1953; lowest 2.70 above msl, Aug. 1, 1954. Records available: 1950-54.

Daily mean water level, above msl, from recorder graph												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+4.53	+4.52	+4.83	+4.71	+4.66	+4.44	+3.76	+2.70	+4.50	+4.71	+4.72	+5.20
2	4.52	4.70	4.73	4.66	4.70	4.41	3.65	2.77	4.53	4.65	4.83	5.18
3	4.70	4.83	4.80	4.52	4.88	4.43	3.29	3.09	4.55	4.66	5.27	5.24
4	4.58	4.93	4.70	4.35	4.96	4.44	3.30	3.34	4.42	4.72	4.92	5.31
5	4.70	4.87	4.54	4.42	4.95	4.34	3.46	3.42	4.36	4.61	4.94	5.25
6	4.81	4.74	4.53	4.53	4.98	4.23	3.46	3.38	4.31	4.58	5.04	5.18
7	4.60	4.56	4.57	4.48	4.91	4.13	3.36	3.27	4.25	4.48	5.05	5.26
8	4.41	4.59	4.55	4.51	5.04	4.05	3.43	3.11	4.16	4.54	5.11	5.05
9	4.58	4.69	4.57	4.30	5.11	e3.94	3.34	3.29	4.22	4.61	4.98	5.04
10	4.55	4.64	4.70	4.32	5.14	e3.91	3.15	3.73	4.36	4.63	4.95	4.98
11	....	4.58	4.59	....	e5.04	3.89	3.06	3.88	4.92	4.68	4.96	4.82
12	....	....	4.50	e4.40	e4.95	3.82	3.00	3.86	4.88	4.66	4.86	4.87
13	....	e4.20	4.48	4.41	4.87	3.82	3.03	3.82	4.97	4.59	4.91	4.91
14	....	4.36	4.75	4.53	4.86	3.92	2.94	3.71	5.02	4.57	4.94	5.18
15	4.56	4.43	4.58	4.56	4.92	4.07	2.90	3.69	5.08	4.90	4.82	5.38

N2790--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	+4.78	+4.44	+4.48	+4.72	+4.96	+4.12	+2.93	+3.82	+5.20	+4.92	+4.90	+4.93
17	....	4.65	4.46	4.90	4.84	4.12	2.99	3.64	5.18	4.77	4.94	4.85
18	e4.46	4.56	4.42	4.79	4.76	3.97	3.05	3.49	5.18	4.63	4.93	5.25
19	4.42	4.50	4.55	4.80	4.76	3.85	3.16	3.52	5.32	4.61	5.05	5.21
20	4.55	4.47	4.93	4.75	4.78	3.69	3.11	3.58	5.33	4.76	5.18	5.21
21	4.58	4.62	4.77	4.70	4.94	3.57	3.02	3.74	5.24	4.85	5.31	....
22	4.58	4.64	4.57	4.72	4.84	3.42	2.89	3.86	5.08	4.75	5.09	....
23	....	4.61	4.59	4.72	4.77	e3.44	2.84	3.89	4.91	4.61	5.10	....
24	4.90	4.70	4.55	4.70	4.76	e3.76	2.78	3.95	4.83	4.42	5.29	4.94
25	4.80	4.79	4.60	4.77	4.77	3.81	2.78	3.94	....	4.36	5.40	4.75
26	4.74	4.82	4.72	4.72	4.60	3.84	2.79	3.96	....	4.42	5.28	4.82
27	4.86	4.66	4.47	4.79	4.50	3.76	2.85	3.93	....	4.59	5.30	4.84
28	4.76	4.66	4.51	4.96	4.56	3.66	2.86	3.91	4.84	4.53	5.28	4.87
29	4.74	....	4.65	4.80	4.60	3.63	2.85	3.89	4.77	4.84	5.38	4.91
30	4.73	....	4.64	4.65	4.51	3.73	2.79	3.98	4.77	4.93	4.92	5.14
31	4.56	....	4.69	....	4.47	....	2.71	4.41	....	4.73	....	5.04

e Estimated.

N3355. Nassau County Department of Public Works. Old Country Rd. and Round Swamp Rd., Plainview. Lat. 40°46'25", long. 73°26'55". Drilled observation artesian well in Lloyd sand member of Raritan formation, diameter 8 to 4 inches, depth 1,090 feet, screen 1,070-1,090. Land-surface datum is 183.3 feet above msl. Highest water level 35.07 above msl, Feb. 26, Mar. 14, 1954; lowest 31.17 above msl, Sept. 30, 1951. Records available: 1951-54. All previous measurements should be 0.05 foot higher.

Daily mean water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+34.59	+34.62	+34.97	+34.68	+34.54	+34.49	+33.45	+32.52	+32.41	+32.84	+33.31	+33.83
2	34.48	34.81	34.84	34.67	34.59	34.61	33.43	32.44	32.39	32.87	33.36	33.91
3	34.63	34.85	34.93	34.69	34.73	34.56	33.40	32.51	32.44	32.93	33.69	33.91
4	34.57	34.95	34.97	34.47	34.80	34.57	33.41	32.44	32.36	33.01	33.54	33.91
5	34.65	34.94	34.92	34.49	34.76	34.49	33.46	32.46	32.37	32.94	33.50	33.89
6	34.79	34.85	34.91	34.65	34.25	34.41	33.43	32.41	32.38	32.97	33.47	33.82
7	34.73	34.73	34.96	34.68	34.65	34.39	33.45	32.31	32.41	32.72	33.42	33.90
8	34.55	34.87	34.90	34.74	34.74	34.35	33.39	32.23	32.44	32.72	33.44	33.85
9	34.59	35.02	34.94	34.49	34.77	34.23	33.26	32.31	32.39	32.89	33.37	33.99
10	34.64	34.94	35.05	34.45	34.83	34.23	33.19	32.44	32.43	33.01	33.22	34.11
11	34.75	34.84	34.93	34.66	34.80	34.27	33.17	32.41	....	33.08	33.32	33.95
12	34.83	34.61	34.80	34.69	34.76	34.17	33.17	32.31	32.62	33.09	33.43	33.86
13	34.55	34.45	34.80	34.68	34.58	34.17	33.28	32.22	32.55	33.03	33.35	33.81
14	34.50	34.58	35.07	34.74	34.55	34.07	33.29	32.14	32.59	32.98	33.57	34.10
15	34.70	34.65	34.95	34.63	34.61	34.03	33.28	32.20	32.52	33.15	33.47	34.38
16	34.90	34.68	34.76	34.69	34.71	33.92	33.09	32.29	32.59	33.23	33.52	34.17
17	34.74	34.82	34.71	34.96	34.70	33.82	32.99	32.23	32.66	33.07	33.55	33.96
18	34.57	34.65	34.70	34.82	34.64	33.78	33.02	32.14	32.68	32.98	33.54	34.21
19	34.61	34.52	34.72	34.64	34.63	33.84	33.09	32.19	32.81	32.99	33.68	34.25
20	34.67	34.51	35.04	34.54	34.62	33.85	33.06	32.21	32.89	33.10	33.90	34.19
21	34.72	34.69	34.94	34.55	34.71	33.86	33.07	32.13	32.88	33.19	34.02	34.22
22	34.55	34.82	34.81	34.60	34.62	33.85	32.99	32.04	32.88	33.13	33.84	34.19
23	34.48	34.75	34.79	34.64	34.50	33.88	32.94	32.04	32.73	33.09	33.83	34.24
24	34.51	34.86	34.65	34.55	34.49	33.80	32.84	32.14	32.67	33.08	33.93	34.21
25	34.57	35.04	34.72	34.62	34.57	33.77	32.72	32.28	32.80	33.08	33.93	33.90
26	34.62	35.07	34.88	34.60	34.43	33.80	32.64	32.23	32.88	33.19	33.83	33.84
27	34.83	34.88	34.67	34.69	34.36	33.82	32.62	32.21	32.89	33.37	33.86	33.90
28	34.78	34.81	34.68	34.75	34.46	33.73	32.61	32.22	32.87	33.28	33.90	33.98
29	34.62	....	34.80	34.58	34.53	33.62	32.56	32.22	32.76	33.47	34.09	34.06
30	34.73	....	34.84	34.50	34.47	33.52	32.52	32.27	32.78	33.56	33.82	34.23
31	34.63	....	34.71	....	34.40	....	32.49	32.59	....	33.38	....	34.09

Queens County

Q64. American Ice Co. 83d St. and 45th Ave., Elmhurst. Lat. 40°44'30", long. 73°52'50". Drilled unused artesian well in Lloyd sand member of Raritan formation and in bedrock, diameter 10 to 8 inches, depth 560 feet. Land-surface datum is 34.3 feet above msl. Highest water level 1.40 above msl, Dec. 30, 1954; lowest 68.90 below msl, Nov. 2, 1947. Records available: 1947-54.

Q64 --Continued.

Daily mean water level, above and below msl, from recorder graph												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	-0.96	-0.82	-0.53	-0.48	-0.20	+0.29	-0.02	-0.27	-0.55	-0.56	-0.86	+0.46
2	1.05	.66	.64	.45	.17	.40	.01	.32	.56	.56	.79	.56
3	.94	.63	.55	.47	.06	.39	.05	.26	.53	.53	.55	.60
4	.96	.56	.54	...	.01	.40	-.03	.30	.61	.49	.67	.64
5	.87	.57	.58	...	.03	.33	+.02	.28	.61	.48	.67	.64
6	.76	.66	.55	...	.03	.29	-.02	.32	.62	.59	.68	.61
7	...	.78	.49	...	-.08	.29	.05	.40	.58	.82	.68	.71
8	e.99	.69	.53	...	+.01	.26	+.02	.47	.58	.82	.61	.71
9	.89	e.59	.47	e.70	.04	.18	-.07	.39	.63	.69	.62	.89
10	.85	e.61	.43	.67	.11	.22	.09	.37	.56	.62	.70	.97
11	.74	e.66	.52	.50	.11	.25	-.09	.38	.33	.59	.55	.85
12	.67	.83	.59	.49	+.09	.19	-.07	.46	.56	.61	.45	.82
13	.89	.94	.55	.48	-.04	.21	+.03	.53	.58	.69	.47	.82
14	.91	.82	.34	.42	-.04	.17	.05	.59	.57	.71	.31	1.16
15	.75	.75	.41	.50	+.04	.14	+.04	.52	.57	.56	.32	1.22
16	.57	.72	.54	.41	.14	.07	-.09	.45	.47	.65	.30	1.06
17	.71	.62	.57	.23	.16	.02	.15	.51	.45	.76	.19	.95
18	.82	.78	.57	.34	.13	.02	.10	.57	.41	.82	.17	1.22
19	.77	.88	.52	.45	.15	.09	.02	.54	e.33	.67	-.03	1.19
20	.70	.88	.28	.48	.16	.12	.04	.55	e.34	.81	+.18	1.17
21	.66	.74	.38	.45	.24	.15	.01	.64	e.38	.72	.32	1.21
22	.81	.67	.46	.38	.19	.17	.06	.72	...	.81	.19	1.20
23	.88	.72	.48	.32	.11	.20	.11	.71	e.40	.89	.23	e1.33
24	.85	.64	.57	.34	.14	.15	.17	.65	.55	...	.35	1.30
25	.79	.54	.51	.26	.23	.15	.25	.55	.45	...	.39	1.08
26	.77	.50	.40	.24	.14	.20	.30	.51	.42	...	.32	1.04
27	.62	.63	.54	.14	.11	.21	.32	.62	.46	...	.35	1.12
28	.68	.66	.51	.09	.21	.16	.31	.60	.49	...	.43	1.21
29	.83	...	.40	.22	.27	.07	.31	.62	.58	.66	.62	1.25
30	.72	...	.37	.25	.23	.01	.36	.57	.57	.65	.41	1.40
31	.81	...	.45	...	.19	...	.32	.36	...	.80	...	1.26

e Estimated.

Q273. City of New York, Department of Water Supply, Gas and Electricity. Grand Central Parkway and Van Wyck Expressway, Forest Hills. Lat. 40°42'55", long. 73°49'45". Drilled unused artesian well in Lloyd sand member of Raritan formation, diameter 24 to 12 inches, depth 438 feet, screen 308-374, 376-438. Land-surface datum is 25.6 feet above msl. Highest water level 8.47 above msl, Apr. 20, 1939; lowest 1.12 above msl, Mar. 21, 1942. Records available: 1935-54. Recording gage discontinued July 22, 1954.

Daily mean water level, above msl, from recorder graph												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+4.63	+4.41	+4.36	+4.21	+4.31	+4.33	+3.78	....	....	....	....	h+4.53
2	4.54	4.54	4.34	4.18	4.36	4.39	3.82	....	....	....	....	....
3	4.59	4.63	4.34	4.20	4.47	4.35	3.82	....	....	....	....	....
4	4.58	4.69	4.49	4.05	4.57	4.31	3.81	....	....	....	....	....
5	4.61	4.67	4.44	4.01	4.52	....	3.90	....	....	....	....	....
6	4.72	4.57	4.43	4.13	4.48	....	3.96	....	....	....	....	....
7	....	4.40	4.46	4.24	4.42	4.11	3.98	....	....	....	....	....
8	4.51	4.43	4.43	4.25	4.50	4.08	3.96	....	....	....	....	....
9	4.51	4.59	4.45	4.10	4.56	3.97	3.90	....	....	....	....	....
10	4.58	4.56	4.56	4.02	4.59	3.94	3.85	....	....	....	....	....
11	4.65	4.45	4.50	4.18	4.58	4.01	3.83	....	....	....	....	....
12	4.70	4.28	4.39	4.28	4.57	3.98	3.83	....	....	....	....	....
13	4.50	4.13	4.38	4.28	4.47	3.98	3.90	....	....	....	....	....
14	4.41	4.23	4.57	4.33	4.44	3.96	3.90	....	....	....	....	....
15	4.57	4.38	4.54	4.27	4.52	4.03	3.82	....	....	....	....	....
16	4.76	4.43	4.37	4.27	4.62	4.01	3.65	....	....	....	....	....
17	4.70	4.55	4.30	4.46	4.60	3.99	3.59	....	....	....	....	....
18	4.50	4.45	4.33	4.39	4.54	4.01	3.63	....	....	....	....	....
19	4.49	4.30	4.38	4.19	4.50	4.07	3.75	....	....	....	....	....
20	4.55	4.28	4.62	4.09	4.47	4.09	3.78	....	....	....	....	....
21	4.62	4.40	4.57	4.10	4.54	4.06	3.75	....	....	....	....	....
22	4.50	4.53	4.42	4.18	4.50	4.02	3.65	....	h+3.58	....	....	....
23	4.43	4.47	4.36	4.26	4.39	4.00	....	h+3.50	....	....	....	....
24	4.43	4.50	4.28	4.25	4.37	3.94	....	....	....	....	....	....
25	4.51	4.60	4.30	4.28	4.47	3.93	....	....	....	....	....	....
26	4.55	4.61	4.43	4.30	4.41	3.98	....	....	....	....	....	....
27	4.68	4.49	4.30	4.36	4.31	3.99	h3.34	....	....	....	....	....
28	4.66	4.29	4.25	4.44	4.37	3.90	....	....	h+4.02	....	....	....
29	4.48	....	4.32	4.36	4.44	3.82	....	....	....	....	....	....
30	4.50	....	4.37	4.29	4.41	3.78	....	....	....	....	....	h4.31
31	4.47	....	4.27	....	4.31	....	....	....	....	....	....	....

h Tape measurement.

Q278. City of New York, Department of Water Supply, Gas and Electricity. Alley Pond Parkway and Horace Harding Blvd., Douglaston. Lat. 40°45'15", long. 73°44'30". Drilled unused artesian well in Lloyd sand member of Raritan formation, diameter 26 to 18 inches, depth 512 feet, screen 380-411, 427-447, 461-512. Land-surface datum is 16.0 feet above msl. Highest water level 5.88 above msl, Dec. 27, 1954; lowest 8.10 below msl, July 27, 1954. Records available: 1946-54. Water levels affected by nearby pumping.

Water level above and below msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+0.18	Apr. 26	+0.78	July 27	-8.10	Oct. 28	-0.63
Feb. 23	+1.52	May 24	+.62	Aug. 25	-3.58	Nov. 30	+3.49
Mar. 24	+.08	June 28	-5.46	Sept. 22	-1.27	Dec. 27	+5.88

Q283. City of New York, Department of Water Supply, Gas and Electricity. Underhill Ave. and 171st St., Flushing. Lat. 40°44'55", long. 73°47'45". Drilled unused artesian well in Lloyd sand member of Raritan formation, diameter 26 to 12 inches, depth 409 feet, screen 309-352, 367-409. Land-surface datum is 27.0 feet above msl. Highest water level 1.31 above msl, Dec. 24, 1954; lowest 10.26 below msl, Sept. 3, 1947, Sept. 27, 1951. Records available: 1946-54.

Daily mean water level, above and below msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	-5.72	....	-5.02	-5.15	-4.42	-4.20	-7.15	-9.67	....	-6.64	....	+0.08
2	5.86	....	5.08	5.07	4.37	4.29	7.14	9.80	....	6.64	....	.13
3	5.77	....	5.00	5.10	4.26	4.48	7.22	9.87	-7.12	6.62	....	.17
4	5.78	....	5.01	5.25	4.10	4.64	7.31	9.56	7.10	6.60	....	.26
5	5.65	....	5.07	5.24	4.02	....	7.27	9.34	7.18	6.62	....	.36
6	5.50	....	5.08	5.10	3.99	....	7.18	9.14	7.22	....	....	.35
7	....	....	5.07	5.03	3.95	5.21	7.11	9.01	7.00	....	....	.48
8	5.67	....	5.14	4.99	3.75	5.36	7.11	8.92	7.02	....	....	.48
9	5.67	....	5.07	5.15	3.60	5.63	7.08	8.74	7.07	....	....	.57
10	5.69	....	5.00	5.17	3.48	5.85	7.06	8.54	7.04	....	....	+ .39
11	5.62	....	5.09	....	3.38	5.95	7.09	8.39	7.04	....	....	-.16
12	5.54	....	5.20	....	3.30	6.08	7.17	8.30	6.97	....	....	-.10
13	5.74	....	5.18	....	3.30	6.18	7.18	8.20	6.96	....	....	+ .05
14	5.77	....	5.00	....	3.22	6.26	7.32	8.12	6.88	....	....	.45
15	5.61	....	5.08	....	3.13	5.97	7.54	7.94	6.86	....	....	.77
16	5.43	....	5.20	....	2.99	6.18	7.82	7.79	6.84	....	-0.63	.75
17	5.50	....	5.19	4.65	3.23	6.16	7.91	7.74	6.80	....	.48	.67
18	5.61	....	5.16	....	3.38	6.13	7.93	7.68	6.74	....	.42	.96
19	5.58	-5.26	5.12	....	3.49	6.10	7.91	7.68	6.76	....	.27	.99
20	5.52	5.26	4.89	....	3.60	6.17	7.94	7.74	....	....	.09	1.01
21	5.50	5.14	5.00	....	3.59	6.31	8.03	7.82	....	....	.01	1.08
22	5.62	5.08	5.12	....	3.68	6.49	8.23	7.83	....	....	.10	1.14
23	....	5.09	5.14	....	3.82	6.66	8.43	7.73	6.50	....	.10	1.16
24	....	4.98	5.24	4.99	3.81	6.83	8.63	7.53	6.55	....	-.06	1.31
25	5.65	4.92	5.17	4.82	3.69	6.82	8.87	7.31	6.52	....	+ .06	.88
26	5.63	4.92	5.04	4.79	3.78	6.75	9.03	7.22	6.51	....	.03	+ .11
27	5.52	5.03	5.15	4.69	3.91	6.80	9.11	7.17	6.53	....	.08	-.28
28	5.63	5.09	5.18	4.60	3.91	6.99	9.18	7.03	6.56	....	+ .15	.56
29	5.79	....	5.11	4.57	3.91	7.12	9.28	6.93	6.66	3.36	-.32	.84
30	5.75	....	5.10	4.50	4.04	7.16	9.43	6.82	6.65	....	+ .11	.93
31	....	....	5.16	....	4.17	....	9.55	....	....	....	....	1.34

Q350. Formerly New York Water Service Corp. Rockaway Blvd. and Centerville St., Aqueeduct. Lat. 40°40'15", long. 73°50'00". Drilled unused artesian well in Jameco gravel, diameter 8 to 4 inches, depth 222 feet, screen assumed at bottom. Land-surface datum is 31.7 feet above msl. Highest water level 3.51 above msl, Apr. 29, 1939; lowest 0.74 below msl, Feb. 7, 10-11, 1948. Records available: 1937-54.

Water level above and below msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+1.15	Apr. 27	+0.76	July 27	+0.13	Oct. 27	+0.64
Feb. 24	+.93	May 24	+.83	Aug. 24	-.23	Dec. 1	+.97
Mar. 24	+.86	June 28	+.41	Sept. 22	+.78	30	+.99

Q470. City of New York, Department of Water Supply, Gas and Electricity. Northern Blvd. and Cross Island Parkway, Bayside. Lat. 40°45'40", long. 73°45'20". Drilled unused artesian well in Lloyd sand member of Raritan formation, diameter 6 inches, depth 375 feet, screen 349-375. Land-surface datum is 12.8 feet above msl. Highest water level 6.78 above msl, Jan. 8, 1938; lowest 12.75 below msl, July 15, 1937. Records available: 1933-54. Recording gage discontinued July 22, 1954.

Q470--Continued.

Daily mean water level, above and below msl, from recorder graph

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+0.98	+0.58	+1.12	+1.07	+1.22	+0.85	-2.87	....	....	....	....	....
2	.91	.68	1.08	1.15	1.21	.76	2.86	....	....	....	....	....
3	.90	.80	1.01	1.23	1.20	.63	2.84	....	....	....	....	....
4	.92	.93	.97	1.27	1.24	.44	2.84	....	....	....	....	....
5	.99	1.02	.89	1.31	1.25	....	2.82	....	....	....	....	....
6	....	1.08	.85	1.40	1.31	....	2.74	....	....	....	....	....
7	....	1.12	.82	1.49	1.39	.25	2.65	....	....	....	....	....
8	.96	1.19	.82	1.53	1.46	.45	2.59	....	....	....	....	....
9	.83	1.34	.82	1.48	1.55	-.66	2.56	....	....	....	....	....
10	.75	1.42	.83	1.37	1.66	+.93	2.55	....	....	....	....	....
11	.70	1.43	.82	1.28	1.79	-1.14	2.57	....	....	....	....	....
12	.73	1.40	.77	1.20	1.90	1.33	2.63	....	....	....	....	....
13	.69	1.33	.73	1.16	1.97	1.54	2.72	....	....	....	....	....
14	.61	1.30	.79	1.17	1.97	1.69	2.86	....	....	....	....	....
15	.59	1.33	.85	1.21	1.95	1.78	3.04	....	....	....	....	....
16	.65	1.40	.87	1.25	1.91	1.80	3.25	....	....	....	....	....
17	.74	1.46	.87	1.33	1.85	1.82	3.38	....	....	....	....	....
18	.76	1.47	.88	1.39	1.75	1.83	3.49	....	....	....	....	....
19	.80	1.42	.88	1.41	1.61	1.85	3.53	....	....	....	....	....
20	.82	1.40	.90	1.41	1.45	1.93	3.56	....	....	....	....	....
21	.84	1.39	.91	1.40	1.31	2.04	3.61	....	....	....	....	....
22	.80	1.46	.87	1.37	1.23	2.18	3.73	h-0.49	....	....	....	....
23	.72	1.49	.85	1.37	1.16	2.34	....	....	....	....	h+5.46	....
24	.64	1.51	.83	1.35	1.14	2.49	....	h-2.72	....	....	....	....
25	.61	1.47	.83	1.33	1.19	2.56	....	....	....	....	....	....
26	.62	1.42	.87	1.33	1.21	2.59	....	....	....	....	....	....
27	.65	1.33	.84	1.32	1.20	2.64	h4.77	....	....	....	....	....
28	.66	1.20	.78	1.32	1.16	2.72	....	....	h+0.39	....	....	....
29	.61	.79	1.28	1.12	2.80	....	....	....	....	....	....	....
30	.57	.88	1.24	1.06	2.85	....	....	....	....	h+4.02	....	....
31	.57	.97	....	....	.95	....	....	....	....	....	....	....

h Tape measurement.

Q471. City of New York, Department of Water Supply, Gas and Electricity. Northern Blvd. and Cross Island Parkway, Bayside. Lat. 40°45'40", long. 73°45'20". Drilled unused artesian well in sands of Magothy formation(?), diameter 6 inches, depth 117 feet, screen assumed at bottom. Land-surface datum is 12.8 feet above msl. Highest water level 17.45 above msl, Sept. 30, 1946; lowest 13.69 above msl, Mar. 31, 1939. Records available: 1939-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+15.43	Apr. 26	+15.23	July 27	+14.69	Oct. 28	+15.73
Feb. 23	+15.38	May 24	+15.21	Aug. 24	+14.84	Nov. 30	+15.78
Mar. 24	+15.34	June 28	+15.11	Sept. 22	+14.89	Dec. 23	+15.74

Q543. City of New York, Department of Water Supply, Gas and Electricity. Rockaway Beach Blvd. and Beach 110th St., Rockaway Park. Lat. 40°34'55", long. 73°50'05". Drilled unused artesian well in Lloyd sand member of Raritan formation, diameter 8 inches, depth 840 feet, screen assumed at bottom. Land-surface datum is 7.4 feet above msl. Records available: 1932, 1936-54. Water levels affected by tidal fluctuation; extremes were not determined as water levels were computed on different bases for period of record.

Daily mean water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+9.10	+9.36	+10.51	+10.15	+10.17	+10.10	+8.04	+5.69	+5.76	....	+8.41	+9.41
2	9.04	10.01	9.80	10.02	10.38	10.30	7.93	5.63	5.88	....	8.52	9.60
3	9.67	10.25	10.11	9.57	10.65	10.24	7.88	5.72	5.92	....	9.07	9.81
4	9.31	10.35	9.45	9.58	10.70	10.22	7.97	5.71	5.85	....	8.17	9.92
5	9.70	10.14	9.43	9.80	10.52	....	8.00	5.63	5.93	....	8.54	9.72
6	9.75	....	9.67	9.99	10.50	....	7.95	5.77	5.95	....	8.80	9.87
7	....	9.52	9.88	9.88	10.50	....	7.82	5.79	6.08	+7.50	8.83	9.68
8	9.20	9.63	9.95	10.10	10.70	9.82	7.62	5.71	....	7.41	8.70	9.43
9	9.58	10.15	10.28	9.62	10.62	9.67	7.51	5.78	....	7.47	8.81	9.57
10	9.55	10.16	10.33	9.66	10.58	9.59	7.34	5.80	....	7.64	8.68	9.47

Q543--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	+10.14	+10.03	+10.24	+9.89	+10.22	+9.61	+7.27	+5.66	....	+7.78	+8.80	+9.45
12	10.09	9.20	9.92	9.72	10.22	9.41	7.28	5.31	....	8.03	8.60	9.69
13	8.78	9.35	9.98	9.92	10.21	9.33	7.38	5.57	....	8.10	8.78	9.89
14	9.30	9.65	10.50	10.18	10.29	9.25	7.31	5.59	....	8.11	8.81	10.08
15	9.51	9.72	9.92	10.26	....	9.11	7.11	5.76	....	8.82	8.88	9.85
16	10.12	9.91	9.85	10.44	....	9.21	6.84	5.68	....	8.63	9.00	9.37
17	9.20	10.18	9.73	10.63	....	8.99	6.69	5.61	....	8.06	9.18	9.77
18	9.24	9.80	9.71	10.09	10.46	8.81	6.70	5.51	....	7.91	9.20	10.25
19	9.28	9.69	10.24	10.09	10.51	8.83	6.79	5.58	....	8.13	9.49	9.91
20	9.75	9.71	10.45	9.90	10.65	8.87	6.78	5.49	....	8.44	9.61	9.89
21	9.57	10.06	10.02	9.82	10.79	8.79	6.82	5.47	....	8.62	9.51	9.70
22	9.72	9.85	9.85	9.99	10.32	8.78	6.74	5.47	....	8.48	9.02	9.53
23	9.98	10.04	10.00	10.00	10.20	8.83	6.63	5.38	....	8.05	9.38	9.85
24	9.75	10.17	9.86	10.10	10.26	8.69	6.23	5.55	....	7.99	10.01	9.75
25	9.55	10.30	10.22	10.20	10.33	8.59	6.12	5.63	....	8.38	9.61	9.54
26	9.69	10.43	10.12	10.11	10.01	8.77	5.91	5.88	....	8.41	9.39	9.61
27	10.02	10.12	9.68	10.40	9.90	8.73	5.75	5.88	....	8.69	9.83	9.60
28	9.82	10.09	9.94	10.78	10.10	8.51	5.45	5.83	....	8.25	9.72	9.89
29	9.90		10.23	10.25	10.20	8.41	5.70	5.87	....	8.72	9.10	9.96
30	9.65		10.19	10.11	10.15	8.14	5.84	6.08	....	8.85	8.80	10.24
31	9.42		10.33		10.00		5.68	6.63		8.33		9.93

Q1027. City of New York, Department of Parks. Rodman Ave. and 58th Ave., Extended, Flushing Meadow Park. Lat. 40°44'40", long. 73°50'15". Drilled unused artesian well in Lloyd sand member of Raritan formation, diameter 8 inches, depth 274 feet, screen 247-274. Land-surface datum is 8.6 feet above msl. Highest water level 8.53 above msl, Apr. 28, 1953; lowest 4.08 above msl, Mar. 20, 1942. Records available: 1942-43, 1946-54. Jan. 25, +7.48; Feb. 23, +7.40; Mar. 24, +7.43; Apr. 26, +7.44; May 24, +7.55; June 28, +7.48; Dec. 30, +8.14.

Q1089. City of New York, Department of Water Supply, Gas and Electricity. North Conduit Ave. near Long Island RR., Aqueduct. Lat. 40°40'00", long. 73°49'50". Driven observation water-table well in deposits of late Pleistocene age, diameter 2 inches, depth 32 feet, screen 30-32. Land-surface datum is 20.5 feet above msl. Highest water level 4.04 above msl, Sept. 23, 1938; lowest 0.42 below msl, Oct. 17, 1932. Records available: 1911-17, 1932-39, 1941-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 24	+1.69	May 24	+2.00	Aug. 24	+1.99	Dec. 1	+1.93
Mar. 24	+1.59	June 28	+1.65	Sept. 22	+2.17	30	+2.13
Apr. 27	+1.65	July 27	+1.76	Oct. 27	+2.38		

Q1152. City of New York, Department of Water Supply, Gas and Electricity. Sunrise Highway and 131st St., South Ozone Park. Lat. 40°40'00", long. 73°48'30". Drilled observation artesian well in Jameco gravel, diameter 6 inches, depth 184 feet, screen assumed at bottom. Land-surface datum is 9.0 feet above msl. Highest water level 2.30 above msl, Mar. 27, 1953; lowest 6.12 below msl, Mar. 28, 1950. Records available: 1947-54. Jan. 25, -0.82; Feb. 24, -2.94; Mar. 24, -3.08; Apr. 27, -3.63; May 24, -3.39; June 28, -3.41. Measurement discontinued.

Q1222. City of New York, Department of Water Supply, Gas and Electricity. 142d St. and 20th Ave., Whitestone. Lat. 40°47'05", long. 73°49'25". Drilled unused artesian well in Lloyd sand member of Raritan formation, diameter 12 to 6 inches, depth 200 feet, screen 170-200. Land-surface datum is 7.6 feet above msl. Highest water level 4.35 above msl, Dec. 1, 1945; lowest 9.19 below msl, Feb. 28, 1942. Records available: 1940-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+2.07	Apr. 26	+2.29	July 27	+1.19	Nov. 4	+2.09
Feb. 23	+2.10	May 24	+2.87	Aug. 25	+1.14	Dec. 2	+2.92
Mar. 24	+2.20	July 1	+1.76	Sept. 22	+1.78	30	+3.67

Q1225. City of New York, Department of Water Supply, Gas and Electricity. 109th Ave. and 200th St., Hollis. Lat. 40°42'35", long. 73°45'25". Driven observation water-table well in deposits of late Pleistocene age, diameter 2 inches, depth 32 feet, screen 30-32. Land-surface datum is 49.4 feet above msl. Highest water level 32.19 above msl, Apr. 4, 1939; lowest 22.50 above msl, Dec. 29, 1954. Records available: 1933-54.

Q1225--Continued.

Water level above msl							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+24.22	Mar. 24	+23.92	May 24	+23.84	July 27	+23.17
Feb. 23	+24.05	Apr. 26	+23.77	June 28	+23.44	Dec. 29	+22.50

Q1237. City of New York, Department of Water Supply, Gas and Electricity. Belt Parkway and 150th St., Baisley Park. Lat. 40°40'00", long. 73°47'35". Drilled unused artesian well in Jameco gravel, diameter 8 inches, depth 220 feet, screen assumed at bottom. Land-surface datum is 17.5 feet above msl. Highest water level 5.03 above msl, Apr. 30, May 4, 1939; lowest 6.92 below msl, Mar. 26, 1950. Records available: 1939-40 as Q337, 1940-54.

Daily mean water level, above and below msl, from recorder graph												
Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	-2.01	-3.42	-3.83	-4.38	-4.80	-4.60	-1.40	-0.78	+2.04	+2.04	+0.78	+0.41
2	2.15	3.49	3.85	4.41	4.77	4.56	.90	.62	1.91	1.94	.80	.52
3	2.06	3.48	e3.90	4.48	4.65	4.58	.85	.38	1.82	1.96	1.00	.62
4	2.08	3.44	e4.08	4.65	4.57	4.55	.70	-1.12	1.73	1.93	.80	.73
5	2.09	3.71	4.25	4.67	4.58	4.55	.15	+.03	1.64	1.83	.69	.75
6	2.03	3.93	4.34	4.61	4.58	....	.10	.08	1.57	1.77	1.10	.69
7	....	4.14	4.34	4.62	4.61	4.63	-.15	.06	1.57	1.84	.87	.73
8	....	4.19	4.32	4.57	4.44	4.76	+.15	.10	1.55	2.31	1.22	.57
9	2.49	4.16	4.28	4.74	4.43	4.84	+.10	.28	1.50	2.30	.94	.55
10	2.44	4.17	4.18	4.77	4.39	4.84	-.18	.63	1.68	2.07	.75	.51
11	2.32	4.23	4.20	4.64	4.48	4.65	.34	.72	2.58	2.11	.74	.34
12	2.14	4.35	4.23	4.46	4.57	4.81	.31	.65	2.42	1.98	.70	.27
13	2.32	4.57	4.27	4.52	4.66	4.83	.35	.26	2.31	1.88	.67	.31
14	2.25	4.54	4.08	4.49	4.69	4.60	.50	.15	2.17	1.84	.72	.93
15	2.27	4.46	4.13	4.48	....	4.42	.57	.56	2.10	2.06	.76	1.12
16	2.20	4.30	4.27	4.34	....	4.17	.55	.76	2.17	2.08	.70	.76
17	2.25	4.13	4.26	4.14	e4.58	4.14	.37	.38	2.18	2.03	.72	.54
18	2.44	4.07	4.30	4.23	4.60	4.40	-.32	.27	2.21	1.93	.71	.80
19	2.47	4.12	4.31	4.20	4.58	4.61	+.02	+.18	2.43	1.92	.79	.79
20	2.46	4.11	4.02	4.21	4.59	4.72	-.22	-.03	2.43	1.99	.92	.75
21	2.43	4.00	4.03	4.35	4.49	4.71	.31	+.97	2.34	2.07	1.08	.76
22	2.40	3.71	4.16	4.43	4.51	4.81	.43	1.23	2.24	2.03	.80	.60
23	2.27	3.84	4.23	4.49	4.61	4.76	.48	1.13	2.06	e1.96	.62	.58
24	2.15	3.86	4.31	4.72	4.55	4.50	.56	1.31	1.93	1.84	.72	.54
25	2.16	3.86	4.37	4.69	4.58	4.50	.58	1.39	1.98	1.79	.80	.37
26	2.27	3.87	4.33	-4.75	4.71	4.56	.32	1.54	2.01	1.84	.73	.35
27	2.31	3.89	4.49	4.75	4.79	4.57	.53	1.72	2.28	1.97	.78	.37
28	2.35	3.90	4.52	4.73	4.78	4.54	.68	1.81	2.57	1.77	.79	.40
29	2.47		4.43	4.74	4.74	4.40	.73	1.69	2.18	1.42	.76	.67
30	2.63		4.39	4.79	4.74	3.15	.75	1.91	2.12	1.20	.36	.73
31	3.11		4.42		4.60		.80	2.32		.92		.63

e Estimated.

Q1248. City of New York, Department of Water Supply, Gas and Electricity. 100th Rd. and Belt Parkway, Queens Village. Lat. 40°43'00", long. 73°43'45". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 49 feet, screen 47-49. Land-surface datum is 76.5 feet above msl. Highest water level 38.16 above msl, May 31, 1949; lowest 33.10 above msl, Oct. 30, 1951. Records available: 1940-54. Jan. 25, +34.58; Feb. 23, +33.93; Mar. 24, +33.79; Apr. 26, +33.59; May 24, +33.57; June 28, +33.30; Dec. 29, +33.33.

Q1249. City of New York, Department of Water Supply, Gas and Electricity. 106th Ave. and 216th St., Queens Village. Lat. 40°42'15", long. 73°44'35". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 49 feet, screen 47-49. Land-surface datum is 72.4 feet above msl. Highest water level 33.41 above msl, Sept. 26, 1946; lowest 25.51 above msl, June 28, 1954. Records available: 1940-46, 1948-54. Jan. 25, +26.47; Feb. 23, +26.41; Mar. 24, +26.29; Apr. 26, +26.17; May 24, +26.02; June 28, +25.51; Dec. 29, +26.61.

Q1250. City of New York, Department of Water Supply, Gas and Electricity. Liberty and Camden Aves., Hollis. Lat. 40°42'15", long. 73°46'15". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 26 feet, screen 24-26. Land-surface datum is 37.6 feet above msl. Highest water level 22.52 above msl, Aug. 31, 1948; lowest 15.87 above msl, Nov. 30, Dec. 29, 1954. Records available: 1940-54.

Q1250--Continued.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+17.84	Apr. 26	+17.52	July 27	+16.86	Oct. 27	+16.12
Feb. 23	+17.67	May 24	+17.51	Aug. 23	+16.43	Nov. 30	+15.87
Mar. 24	+17.50	June 28	+17.26	Sept. 22	+16.59	Dec. 29	+15.87

Q1251. City of New York, Department of Water Supply, Gas and Electricity. 107th Ave. and 172d St., Jamaica. Lat. 40°42'00", long. 73°47'00". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 38 feet, screen 36-38. Land-surface datum is 42.7 feet above msl. Highest water level 14.25 above msl, Feb. 24, 1949; lowest 7.10 above msl, June 28, 1954. Records available: 1940-54. Jan. 25, +7.54; Feb. 23, +7.34; Mar. 24, +7.20; Apr. 26, +7.30; May 24, +7.20; June 28, +7.10; Dec. 29, +7.67.

Q1252. City of New York, Department of Water Supply, Gas and Electricity. Liberty Ave. and 157th St., Jamaica. Lat. 40°42'00", long. 73°47'55". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 28 feet, screen 26-28. Land-surface datum is 31.2 feet above msl. Highest water level 13.92 above msl, Nov. 2, 1948; lowest 7.26 above msl, Aug. 23, 1954. Records available: 1940-54.

Water level above msl

Jan. 25	+8.98	Apr. 26	+7.84	July 27	+7.28	Oct. 27	+7.34
Feb. 23	+8.58	May 24	+7.78	Aug. 23	+7.26	Nov. 30	+7.53
Mar. 24	+8.13	June 28	+7.47	Sept. 22	+8.18	Dec. 30	+7.58

Q1253. City of New York, Department of Water Supply, Gas and Electricity. 101st Ave. and 121st St., Richmond Hill. Lat. 40°41'30", long. 73°49'20". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 54 feet, screen 52-54. Land-surface datum is 49.2 feet above msl. Highest water level 4.58 above msl, Apr. 26, 1941; lowest 2.44 below msl, Dec. 30, 1954. Records available: 1940-54. Jan. 25, +0.19; Feb. 23, -0.76; Mar. 24, -0.86; Apr. 26, -1.05; May 24, -1.29; June 28, -1.57; Dec. 30, -2.44.

Q1254. City of New York, Department of Water Supply, Gas and Electricity. 101st Ave. and 108th St., Richmond Hill. Lat. 40°41'20", long. 73°50'10". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 54 feet, screen 52-54. Land-surface datum is 45.5 feet above msl. Highest water level 0.29 above msl, Apr. 12, 1941; lowest 6.81 below msl, Dec. 30, 1954. Records available: 1940-54. Jan. 25, -3.75; Feb. 23, -3.23; Mar. 24, -3.61; Apr. 26, -5.17; May 24, -5.48; June 28, -5.74; Dec. 30, -6.81.

Q1255. City of New York, Department of Water Supply, Gas and Electricity. Atlantic Ave. and Woodhaven Blvd., Woodhaven. Lat. 40°41'20", long. 73°50'55". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 53 feet, screen 51-53. Land-surface datum is 40.4 feet above msl. Highest water level 12.03 above msl, May 12, 1914; lowest 6.30 below msl, Nov. 3, 1947. Records available: 1911-17, 1932-54.

Water level below msl

Jan. 25	-3.33	Apr. 27	-3.82	July 27	-4.44	Oct. 27	-4.61
Feb. 24	-3.60	May 24	-4.02	Aug. 23	-4.53	Dec. 1	-4.08
Mar. 24	-3.56	June 28	-4.25	Sept. 22	-4.67	27	-4.31

Q1256. City of New York, Department of Water Supply, Gas and Electricity. 95th Ave. and 82d St., Woodhaven. Lat. 40°41'05", long. 73°51'25". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 38 feet, screen 36-38. Land-surface datum is 24.0 feet above msl. Highest water level 0.60 below msl, Dec. 19, 1953; lowest 6.98 below msl, Mar. 14, 1942. Records available: 1940-43, 1945-54. Feb. 24, -0.80; Mar. 24, -1.05; Apr. 27, -1.78; May 24, -1.87; June 28, -1.98; Dec. 27, -0.98.

Q1281. City of New York, Department of Water Supply, Gas and Electricity. Liberty Ave. and Woodhaven Blvd., Ozone Park. Lat. 40°40'50", long. 73°50'40". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 39 feet, screen 37-39. Land-surface datum is 28.8 feet above msl. Highest water level 8.59 above msl, June 4, 1913; lowest 3.62 below msl, Mar. 7, 1942. Records available: 1911-17, 1933, 1941-54. Jan. 25, -0.46; Feb. 24, -0.64; Mar. 24, -0.77; Apr. 27, -0.99; May 24, -1.04; June 28, -1.25; Dec. 30, -1.01.

Q1283. City of New York, Department of Water Supply, Gas and Electricity. Rockaway Blvd. and 121st St., South Ozone Park. Lat. 40°40'40", long. 73°49'05". Driven observation water-table well in deposits of late Pleistocene age, diameter 2 inches, depth 32 feet, screen 30-32. Land-surface datum is 26.7 feet above msl. Highest water level 13.33 above msl, Nov. 10, 1911; lowest 1.35 above msl, June 28, 1954. Records available: 1911-16, 1933-35, 1941-54. Jan. 25, +1.97; Feb. 24, +1.59; Mar. 24, +1.70; May 4, +1.38; May 24, +1.91; June 28, +1.35; Dec. 30, +1.61.

Suffolk County

S58. City of New York, Board of Water Supply. Grand Blvd. and 44th St., Islip. Lat. 40°44'45", long. 73°13'00". Drilled observation artesian well in sands of Magothy formation(?), diameter 12 inches, depth 468 feet, screen assumed at bottom. Land-surface datum is 37.0 feet above msl. Highest water level 25.50 above msl, Apr. 20, 1953; lowest 22.32 above msl, Oct. 6, 1951. Records available: 1944-54.

Daily mean water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+23.93	+23.44	+23.33	+23.76	+24.07	+23.98	+23.25	+22.60	+23.04	+23.83	+23.31	+23.58
2	23.90	e23.43	23.34	23.75	24.05	23.96	23.23	22.59	23.14	23.80	23.33	23.61
3	23.86	e23.43	23.34	23.72	24.03	23.93	23.21	22.59	23.21	23.78	23.41	23.64
4	23.82	e23.43	23.39	23.71	24.03	e23.92	23.20	22.59	23.25	23.75	23.45	23.67
5	23.79	e23.43	23.43	23.69	24.01	e23.91	23.18	22.58	23.30	23.71	23.48	23.70
6	23.77	e23.43	23.46	23.68	24.00	e23.90	23.15	22.57	23.32	23.68	23.50	23.71
7	23.73	e23.41	23.49	23.66	23.98	e23.88	23.13	22.56	23.33	23.65	23.51	23.72
8	23.70	e23.41	23.51	23.64	23.99	23.84	23.11	22.54	23.33	23.62	23.52	23.74
9	23.68	23.40	23.54	23.61	24.06	23.81	23.08	22.63	23.33	23.61	23.53	23.75
10	23.65	23.39	23.56	23.59	24.14	23.78	23.05	22.78	23.33	23.59	23.52	23.75
11	23.62	23.38	23.57	23.58	24.19	23.76	23.03	22.86	23.47	23.57	23.52	23.74
12	23.60	23.37	23.59	23.57	24.27	23.73	23.02	22.89	23.91	23.54	23.52	23.73
13	23.57	23.35	23.60	23.56	24.32	23.70	23.00	22.91	24.32	23.51	23.52	23.70
14	23.54	23.34	23.63	23.55	24.35	e23.68	22.97	22.91	24.50	23.49	23.52	23.70
15	23.53	23.34	23.64	.....	24.37	e23.65	22.94	22.91	24.55	23.48	23.51	23.76
16	23.51	23.33	23.66	.....	24.36	e23.63	22.91	22.90	24.53	23.46	23.50	23.79
17	23.48	23.33	23.67	.....	24.33	e23.60	22.90	22.89	24.46	23.45	23.48	23.82
18	23.46	23.32	23.68	.....	24.28	23.55	22.88	22.86	24.39	23.43	23.47	23.88
19	23.45	23.31	23.69	.....	24.22	23.52	22.86	22.85	24.33	23.42	23.46	23.93
20	23.45	23.30	23.71	24.07	24.17	23.49	22.84	22.86	24.27	23.41	23.48	24.01
21	23.47	23.30	23.73	24.22	24.17	23.46	22.82	22.88	24.23	23.40	23.49	24.11
22	23.48	23.32	23.74	24.34	24.19	23.44	22.79	22.90	24.18	23.38	23.49	24.20
23	23.49	23.32	23.75	24.36	24.17	23.42	22.77	22.90	24.13	23.36	23.49	24.27
24	23.49	23.33	23.76	24.27	24.15	23.39	22.75	22.89	24.08	23.35	23.49	24.30
25	23.49	23.35	23.77	.....	24.15	23.39	22.73	22.88	24.04	23.34	23.50	24.27
26	23.49	23.35	23.78	.....	24.12	23.37	22.71	22.88	23.99	23.32	23.50	24.24
27	23.49	23.33	23.78	24.27	24.09	23.35	22.70	22.87	23.98	23.32	23.49	24.21
28	23.48	23.32	23.78	24.22	24.09	23.32	22.68	22.87	22.94	23.31	23.50	24.17
29	23.46	.....	23.79	24.16	24.08	23.29	22.66	22.85	23.90	23.32	23.53	24.13
30	23.47	.....	23.79	24.12	24.03	23.26	22.64	22.84	23.87	23.34	23.55	24.14
31	23.45	.....	23.77	.....	24.01	.....	22.62	22.93	.....	23.33	.....	24.18

e Estimated.

S202. New York Water Service Corp. State Highway 25A and Spring St., Huntington. Lat. 40°52'15", long. 73°25'10". Driven unused artesian well in Lloyd sand member of Raritan formation, diameter 12 inches, depth 600 feet, screen assumed at bottom. Land-surface datum is 69.0 feet above msl. Highest water level 47.17 above msl, Apr. 10, 1937; lowest 36.93 above msl, Feb. 1, 1939. Records available: 1936-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+43.13	Apr. 26	+43.04	July 26	+42.33	Oct. 21	+42.72
Feb. 23	+43.05	May 28	+42.91	Aug. 23	+42.46	Nov. 19	+42.80
Mar. 22	+43.19	June 28	+42.59	Sept. 22	+42.64	Dec. 22	+42.82

S929. Village of Greenport Department of Public Works. State Highway 25 and North Country Rd., East Marion. Lat. 41°07'20", long. 72°21'05". Drilled unused water-table well in deposits of late Pleistocene age, diameter 6 inches, depth 84 feet, screen assumed at bottom. Land-surface datum is 35.1 feet above msl. Highest water level 4.05 above msl, May 4, 1953; lowest 0.69 above msl, July 27, 1954. Records available: 1949-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	+1.91	Apr. 27	+1.82	July 27	+0.69	Oct. 28	+2.41
Feb. 24	+1.51	May 26	+2.20	Aug. 24	+1.42	Nov. 19	+2.34
Mar. 24	+1.59	July 1	+1.22	Sept. 24	+2.76	Dec. 28	+2.33

S1803. City of New York, Department of Water Supply, Gas and Electricity. Belmont Ave. and Farmingdale Rd., Babylon. Lat. 40°42'15", long. 73°20'35". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 16 feet, screen 14-16. Land-surface datum is 21.7 feet above msl. Highest water level 18.19 above msl, Apr. 22, 1913; lowest 14.93 above msl, Oct. 25, 1941. Records available: 1912-14, 1932, 1936-54.

S1803--Continued.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+16.52	Apr. 28	+16.78	July 28	+15.15	Oct. 20	+16.23
Feb. 26	+16.25	May 28	+16.62	Aug. 25	+15.80	Nov. 22	+16.58
Mar. 26	+16.67	July 8	+15.62	Sept. 27	+16.82	Dec. 22	+17.17

S1805. City of New York, Department of Water Supply, Gas and Electricity. Farmingdale Rd. and Albany Ave., Amityville. Lat. 40°43'05", long. 73°24'05". Driven observation water-table well in deposits of late Pleistocene age, diameter 2 inches, depth 29 feet, screen 27-29. Land-surface datum is 57.2 feet above msl. Highest water level 47.17 above msl, Apr. 28, 1953; lowest 37.90 above msl, Oct. 27, 1932. Records available: 1912-14, 1932-54. Measurements at replacement well (same description) 15 feet away after Aug. 25, 1953.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+42.46	Apr. 28	+43.00	July 28	+41.59	Oct. 20	+42.00
Feb. 26	+42.17	May 28	+43.09	Aug. 25	+41.29	Nov. 22	+41.88
Mar. 26	+42.57	July 1	+42.34	Sept. 27	+42.53	Dec. 22	+43.04

S1806. City of New York, Department of Water Supply, Gas and Electricity. Wellwood and Long Island Aves., Pinelawn. Lat. 40°44'40", long. 73°23'55". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 40 feet, screen 38-40. Land-surface datum is 86.4 feet above msl. Highest water level 61.69 above msl, Apr. 22, 1939; lowest 50.61 above msl, Jan. 5, 1933. Records available: 1912-14, 1932-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+56.65	Apr. 28	+56.34	July 28	+55.92	Oct. 20	+55.76
Feb. 26	+56.10	May 28	+56.68	Aug. 25	+55.47	Nov. 22	+55.08
Mar. 29	+56.21	June 30	+56.54	Sept. 27	+55.55	Dec. 22	+55.68

S1807. City of New York, Department of Water Supply, Gas and Electricity. Higbie Lane near Hunter Ave., Babylon. Lat. 40°43'30", long. 73°18'40". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 21 feet, screen 19-21. Land-surface datum is 24.8 feet above msl. Highest water level 23.48 above msl, Oct. 14, 1938; lowest 20.45 above msl, Oct. 5, 1953. Records available: 1912-14, 1932-33, 1936-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+20.79	Apr. 28	+21.00	July 28	+20.51	Oct. 26	+20.72
Feb. 26	+20.69	May 28	+21.08	Aug. 25	+20.89	Nov. 22	+21.44
Mar. 26	+20.92	June 30	+20.78	Sept. 27	+21.07	Dec. 22	+21.64

S1808. City of New York, Department of Water Supply, Gas and Electricity. Sagtikos Manor Lane near South Country Rd., Brightwaters. Lat. 40°42'25", long. 73°16'55". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 15 feet, screen 13-15. Land-surface datum is 15.9 feet above msl. Highest water level 12.94 above msl, Sept. 23, 1938; lowest 9.45 above msl, Sept. 12, 1932. Records available: 1912-14, 1932-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+11.18	Apr. 28	+11.36	July 28	+9.78	Oct. 20	+11.80
Feb. 26	+11.14	May 28	+11.08	Aug. 25	+10.70	Nov. 22	+11.44
Mar. 26	+11.39	June 30	+10.27	Sept. 27	+11.28	Dec. 22	+11.70

S1809. City of New York, Department of Water Supply, Gas and Electricity. Manor Lane and Muncey Rd., Brightwaters. Lat. 40°44'05", long. 73°16'55". Driven observation water-table well in deposits of late Pleistocene age, diameter 2 inches, depth 27 feet, screen 25-27. Land-surface datum is 41.5 feet above msl. Highest water level 32.56 above msl, Apr. 15, 1939; lowest 25.00 above msl, Nov. 2, 1932. Records available: 1912-14, 1932-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+28.39	Apr. 28	+29.31	July 28	+27.97	Oct. 20	+29.02
Feb. 26	+28.17	May 28	+29.61	Aug. 25	+27.99	Nov. 22	+28.70
Mar. 26	+28.65	June 30	+28.79	Sept. 27	+29.50	Dec. 22	+29.48

S1810. City of New York, Department of Water Supply, Gas and Electricity. Sagtikos Parkway, Pineaire. Lat. 40°46'20", long. 73°16'50". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 47 feet, screen 45-47. Land-surface datum is 90.1 feet above msl. Highest water level 56.19 above msl, Apr. 29, 1939; lowest 45.24 above msl, Feb. 23, 1933. Records available: 1912-14, 1932-54.

S1810--Continued.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+52.29	Apr. 28	+51.85	July 28	+52.35	Oct. 27	+51.45
Feb. 26	+51.97	May 28	+52.72	Aug. 25	+52.27	Nov. 22	+52.00
Mar. 29	+51.94	June 30	+52.49	Sept. 27	+52.01	Dec. 22	+51.52

S1811. City of New York, Board of Water Supply. Near Smithtown Blvd., Ronkonkoma. Lat. 40°49'50", long. 73°07'50". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 22 feet, screen 20-22. Land-surface datum is 53.7 feet above msl. Highest water level 55.66 above msl, May 5, 1953; lowest 51.41 above msl, Aug. 28, 1941. Records available: 1937-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+54.49	Apr. 26	+54.43	July 26	+53.67	Oct. 22	+54.14
Feb. 23	+54.44	May 28	+54.45	Aug. 23	+53.70	Dec. 29	+54.72
Mar. 22	+54.41	June 28	+53.94				

S1814. U. S. Geol. Survey. Suffolk and Lowell Aves., Central Islip. Lat. 40°47'40", long. 73°11'40". Driven water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 49 feet, screen 47-49. Land-surface datum is 79.6 feet above msl. Highest water level 39.85 above msl, May 25, 1953; lowest 34.50 above msl, Jan. 25, 1951. Records available: 1939-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+36.93	Apr. 28	+36.74	July 28	+37.07	Oct. 27	+37.45
Feb. 26	+36.61	May 28	+37.32	Aug. 25	+37.02	Nov. 22	+37.19
Mar. 29	+36.44	June 30	+37.34	Sept. 27	+37.69	Dec. 22	+37.17

S1817. U. S. Geol. Survey. Long Island Ave. and 18th St., Wyandanch. Lat. 40°45'20", long. 73°21'45". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 26 feet, screen 24-26. Land-surface datum is 58.9 feet above msl. Highest water level 54.34 above msl, Apr. 28, 1953; lowest 49.66 above msl, Oct. 30, 1951. Records available: 1939-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	+52.40	Apr. 28	+52.50	July 28	+51.08	Oct. 20	+51.52
Feb. 26	+52.18	May 28	+52.52	Aug. 25	+51.27	Nov. 22	+52.05
Mar. 29	+52.38	June 30	+51.69	Sept. 27	+52.18	Dec. 22	+52.60

S2146. Montauk Beach Co. Golf Course, Montauk. Lat. 41°03'30", long. 71°57'00". Drilled unused water-table well in deposits of late Pleistocene age, diameter 8 inches, depth 92 feet, screen assumed at bottom. Land-surface datum is 49.0 feet above msl. Highest water level 3.97 above msl, May 26, 1953; lowest 2.50 above msl, Jan. 11, 1951. Records available: 1950-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	+3.52	Apr. 28	+3.41	July 27	+3.16	Oct. 1	+3.40
Feb. 25	+3.47	May 27	+3.49	Aug. 24	+3.16	Nov. 25	+3.44
Mar. 25	+3.35						

S2314. U. S. Geol. Survey. Burrs Lane, Wyandanch. Lat. 40°46'15", long. 73°21'15". Drilled unused artesian well in sands of Magothy formation(?), diameter 8 inches, depth 480 feet, screen 450-480. Land-surface datum is 92.8 feet above msl. Highest water level 62.48 above msl, May 26, 1953; lowest 57.63 above msl, Dec. 17, 1951. Records available: 1943-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+61.21	Apr. 28	+61.05	July 28	+60.38	Oct. 20	+60.28
Feb. 26	+61.05	May 28	+61.11	Aug. 25	+60.28	Nov. 22	+60.06
Mar. 29	+61.00	June 30	+60.71	Sept. 27	+60.51	Dec. 22	+60.33

S2455. City of New York, Board of Water Supply. Sandra Ave., Bayshore. Lat. 40°43'05", long. 73°17'20". Drilled observation water-table well in deposits of late Pleistocene age, diameter 10 inches, depth 18 feet, screen assumed at bottom. Land-surface datum is 33.1 feet above msl. Highest water level 24.85 above msl, Sept. 23, 1938; lowest 19.98 above msl, Nov. 6, 1937. Records available: 1933-40 (as S38), 1940-54.

S2455--Continued.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+22.13	Apr. 28	+22.76	July 28	+21.15	Oct. 26	+22.36
Feb. 26	+21.88	May 28	+22.71	Aug. 25	+21.47	Nov. 22	+22.46
Mar. 26	+22.42	June 30	+21.95	Sept. 27	+22.87	Dec. 22	+23.07

S3496. U. S. Geol. Survey. Coates Ave. near Long Island RR., Holbrook. Lat. 40°48'45", long. 73°04'55". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 76 feet, screen 74-76. Land-surface datum is 115.9 feet above msl. Highest water level 51.77 above msl, Aug. 4, 1953; lowest 45.79 above msl, Feb. 21, Mar. 27, 1951. Records available: 1942-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+49.35	Apr. 26	+48.12	July 28	+49.18	Oct. 27	+49.64
Feb. 26	+48.90	May 28	+48.07	Aug. 25	+49.39	Nov. 22	+49.70
Mar. 29	+48.46	June 30	+48.62	Sept. 29	+49.46	Dec. 22	+49.71

S3513. New York State Division of Highways. State Highway 25, Selden. Lat. 40°51'45", long. 73°02'55". Drilled unused water-table well in deposits of late Pleistocene age, diameter 8 inches, depth 65 feet, screen 63-65. Land-surface datum is 102.1 feet above msl. Highest water level 65.82 above msl, June 23, 1953; lowest 59.86 above msl, Feb. 15, 21, 23, 1948. Records available: 1942-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+63.57	Apr. 26	+62.95	July 26	+64.05	Oct. 21	+64.68
Feb. 23	+63.34	May 28	+63.28	Aug. 23	+63.65	Nov. 19	+64.70
Mar. 22	+63.10	June 28	+63.80	Sept. 22	+63.98	Dec. 23	+64.54

S3514. Herman Jurgens. Jericho Turnpike, Commack. Lat. 40°50'35", long. 73°18'00". Dug unused water-table well in deposits of late Pleistocene age, diameter 30 inches, depth 95 feet. Land-surface datum is 154.2 feet above msl. Highest water level 70.73 above msl, Sept. 6, 1953; lowest 64.23 above msl, Mar. 18, 26, 1951. Records available: 1942-54.

Daily mean water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+69.93	.....	+69.51	+69.08	+68.87	+68.64	+67.93	+67.11	+67.50	+67.74	+67.85	+68.05
2	69.82	.....	69.33	69.16	.....	e68.67	e67.91	67.09	67.48	67.75	67.96	68.07
3	69.98	.....	69.49	69.05	.....	e68.58	67.84	67.17	67.51	67.77	68.02	68.05
4	69.88	+69.75	69.36	69.02	.....	68.59	67.86	67.14	67.45	67.76	67.84	68.07
5	69.92	69.68	69.36	69.09	.....	68.54	67.88	67.22	67.52	67.72	67.91	68.03
6	69.97	69.61	69.36	69.18	.....	68.54	67.79	67.18	67.49	67.76	67.92	68.03
7	69.87	69.58	69.38	69.06	.....	68.55	67.77	67.18	67.55	67.63	67.90	68.09
8	69.77	69.74	69.31	69.04	.....	68.52	67.71	67.19	67.51	67.74	67.96	68.04
9	69.91	69.70	69.42	68.93	.....	68.50	67.67	67.26	67.50	67.83	67.90	68.18
10	69.84	69.61	69.38	69.07	.....	68.55	67.62	67.28	67.56	67.82	67.86	68.09
11	69.92	69.56	69.29	69.15	.....	68.52	67.62	67.25	67.66	67.82	68.01	68.01
12	69.87	69.44	69.26	69.01	.....	68.41	67.60	67.25	67.41	67.79	67.97	68.04
13	69.68	69.49	69.36	69.05	.....	68.42	67.62	67.25	67.51	67.77	67.93	68.03
14	69.82	69.63	69.42	69.04	.....	68.38	67.52	67.27	67.54	67.80	69.06	68.28
15	69.89	69.58	69.25	68.92	.....	68.40	67.50	67.34	67.53	e67.97	67.93	68.14
16	69.95	69.57	69.21	69.11	.....	68.35	67.38	67.38	67.61	.....	68.02	67.97
17	69.73	69.58	69.25	69.10	.....	68.36	.....	67.30	67.61	.....	67.99	68.00
18	69.75	69.43	69.24	68.92	.....	68.33	.....	67.32	67.62	.....	68.00	68.22
19	69.77	69.44	69.29	68.89	68.70	68.30	e67.43	67.38	67.71	.....	68.08	68.07
20	e69.83	69.48	69.39	68.91	68.70	68.23	.....	67.35	67.66	.....	68.09	68.09
21	.....	69.59	69.21	68.94	68.74	68.22	.....	67.33	67.68	e67.87	68.11	68.14
22	.....	69.53	69.17	68.96	68.63	68.14	.....	67.33	67.63	67.82	67.95	68.08
23	.....	69.45	69.19	68.93	68.63	68.12	.....	67.38	67.60	67.86	68.02	68.19
24	.....	69.51	69.14	68.88	68.67	68.09	.....	67.47	67.63	67.84	68.07	68.03
25	.....	69.50	69.29	68.96	68.69	68.10	.....	67.48	67.75	67.88	68.01	67.96
26	.....	69.49	69.19	68.89	68.58	68.08	e67.12	67.42	67.72	67.92	67.99	68.05
27	.....	69.36	69.09	68.96	68.60	68.03	67.18	67.40	67.69	67.96	68.06	68.09
28	.....	69.42	69.18	68.88	68.68	67.97	67.18	67.44	67.70	67.84	68.05	68.15
29	.....	.....	69.23	68.82	68.67	67.95	67.14	67.45	67.66	e68.07	68.10	68.10
30	.....	.....	69.15	68.83	68.60	67.94	67.11	67.48	67.73	e67.90	67.92	68.18
31	.....	.....	69.12	.....	68.57	.....	67.11	e67.66	.....	e67.82	.....	68.09

e Estimated.

S3516. City of New York, Board of Water Supply. East 3d Ave. near Walbridge Ave., Bayshore. Lat. 40°45'15", long. 73°15'35". Driven observation water-table well in deposits of late Pleistocene age, diameter 2 inches, depth 38 feet, screen 36-38. Land-surface datum is 60.5 feet above msl. Highest water level 41.38 above msl, Apr. 30, 1953; lowest 35.29 above msl, Dec. 21, 1950. Records available: 1907-9, 1942-54.

Water level above msl							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+37.97	May 28	+38.99	Sept. 2	+37.65	Nov. 22	+37.95
Mar. 26	+37.75	June 30	+38.65	27	+38.66	Dec. 22	+38.25
Apr. 28	+38.32	July 28	+38.09	Oct. 27	+38.25		

S3517. City of New York, Board of Water Supply. Lakeland Ave. and Tariff St., Sayville. Lat. 40°44'40", long. 73°05'20". Driven observation water-table well in deposits of late Pleistocene age, diameter 2 inches, depth 37 feet, screen 35-37. Land-surface datum is 31.6 feet above msl. Highest water level 14.57 above msl, Apr. 29, 1953; lowest 11.60 above msl, Dec. 4, 1909. Records available: 1907-9, 1942-54.

Water level above msl							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+12.68	Apr. 28	+13.11	July 28	+12.62	Oct. 27	+13.06
Feb. 26	+12.55	May 28	+13.56	Aug. 25	+12.49	Nov. 22	+13.16
Mar. 26	+12.77	July 1	+13.06	Sept. 29	+13.44	Dec. 23	+13.75

S3526. City of New York, Board of Water Supply. Near Yaphank, Long Island Ave. and South Haven Rd. Lat. 40°50'10", long. 72°53'10". Driven observation water-table well in deposits of late Pleistocene age, diameter 2 inches, depth 66 feet, screen 64-66. Land-surface datum is 89.8 feet above msl. Highest water level 30.52 above msl, Dec. 30, 1948; lowest 25.73 above msl, Jan. 25, 1951. Records available: 1943-54.

Water level above msl							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+27.83	Apr. 28	+26.70	July 26	+28.61	Oct. 26	+28.01
Feb. 24	+27.00	May 27	+26.93	Aug. 24	+27.69	Nov. 18	+28.95
Mar. 23	+26.87	June 30	+27.41	Sept. 29	+27.96		

S3532. City of New York, Board of Water Supply. Whiskey and Randall Rds., Ridge. Lat. 40°54'45", long. 72°53'00". Driven observation water-table well in deposits of late Pleistocene age, diameter 2 inches, depth 70 feet, screen 68-70. Land-surface datum is 85.0 feet above msl. Highest water level 51.95 above msl, June 8, 1908; lowest 45.23 above msl, Feb. 23, 1951. Records available: 1907-9, 1942-54.

Water level above msl							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+48.29	Apr. 26	+48.24	July 26	+49.09	Oct. 22	+49.95
Feb. 23	+48.07	May 27	+48.65	Aug. 23	+48.87	Nov. 19	+50.15
Mar. 22	+47.90	June 29	+49.19	Sept. 22	+49.24	Dec. 23	+50.05
Apr. 20	+48.02						

S3535. City of New York, Board of Water Supply. Chichester and Brookfield Aves., Center Moriches. Lat. 40°49'10", long. 72°48'00". Driven observation water-table well in deposits of late Pleistocene age, diameter 2 inches, depth 52 feet, screen 50-52. Land-surface datum is 50.9 feet above msl. Highest water level 22.81 above msl, May 26, 1953; lowest 17.51 above msl, Feb. 23, 1951. Records available: 1907-9, 1942-54.

Water level above msl							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+19.88	Apr. 28	+19.53	July 27	+20.15	Oct. 26	+20.94
Feb. 26	+19.66	May 27	+19.97	Aug. 24	+19.91	Nov. 18	+20.86
Mar. 29	+19.43	June 30	+20.31	Sept. 30	+20.53	Dec. 30	+20.77

S3537. City of New York, Board of Water Supply. Old Country Rd., Speonk. Lat. 40°50'00", long. 72°42'50". Driven observation water-table well in deposits of late Pleistocene age, diameter 2 inches, depth 43 feet, screen 41-43. Land-surface datum is 43.3 feet above msl. Highest water level 17.46 above msl, Apr. 30, 1953; lowest 14.09 above msl, Jan. 23, 1951. Records available: 1908-9, 1942-43, 1948-54.

Water level above msl							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+16.10	Apr. 28	+16.10	July 27	+15.95	Oct. 26	+16.55
Feb. 26	+15.88	May 27	+16.42	Aug. 24	+15.77	Nov. 18	+16.34
Mar. 26	+15.81	June 30	+16.22	Sept. 30	+16.65	Dec. 27	+16.23

S3539. City of New York, Board of Water Supply. Riverhead Rd., Speonk. Lat. 40°51'45", long. 72°41'50". Driven observation water-table well in deposits of late Pleistocene age, diameter 2 inches, depth 88 feet, screen 86-88. Land-surface datum is 79.3 feet above msl. Highest water level 27.14 above msl, Aug. 5, 1953; lowest 21.33 above msl, Mar. 28, 1951. Records available: 1907-9, 1942-43, 1947-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	+25.34	Apr. 28	+24.89	July 27	+25.46	Nov. 1	+25.81
Feb. 25	+25.28	May 27	+25.04	Aug. 24	+25.31	18	+25.98
Mar. 26	+25.12	June 30	+25.40	Sept. 30	+25.23	Dec. 27	+25.87

S3543. City of New York, Board of Water Supply. Suffolk Airport, Westhampton. Lat. 40°51'00", long. 72°39'00". Driven observation water-table well in deposits of late Pleistocene age, diameter 2 inches, depth 58 feet, screen 56-58. Land-surface datum is 64.4 feet above msl. Highest water level 20.87 above msl, June 24, 1953; lowest 15.18 above msl, Feb. 27, 1951. Records available: 1907-9, 1942-43, 1947-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	+19.06	Apr. 28	+18.45	July 27	+18.63	Oct. 26	+19.40
Feb. 25	+18.85	May 27	+18.68	Aug. 24	+18.44	Nov. 18	+19.43
Mar. 26	+18.59	June 29	+18.82	Sept. 30	+18.92	Dec. 27	+19.15

S3545. City of New York, Board of Water Supply. Lincoln Ave., West Sayville. Lat. 40°46'45", long. 73°05'00". Driven observation water-table well in deposits of late Pleistocene age, diameter 2 inches, depth 46 feet, screen 44-46. Land-surface datum is 56.6 feet above msl. Highest water level 39.23 above msl, May 25, 1953; lowest 33.51 above msl, Jan. 25, 1951. Records available: 1907-9, 1942-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+36.02	Apr. 28	+35.96	July 28	+36.72	Oct. 27	+37.06
Feb. 26	+35.74	May 28	+36.60	Aug. 25	+36.43	Dec. 23	+36.95
Mar. 26	+35.51	July 1	+37.00	Sept. 29	+36.99		

S3729. City of New York, Board of Water Supply. Barton and Dunton Aves., Hageman. Lat. 40°47'15", long. 72°57'55". Driven observation water-table well in deposits of late Pleistocene age, diameter 2 inches, depth 39 feet, screen 37-39. Land-surface datum is 58.6 feet above msl. Highest water level 31.58 above msl, May 25, 1953; lowest 27.34 above msl, Apr. 4, 1947. Records available: 1943-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 26	+28.34	May 28	+29.26	Aug. 24	+29.06	Nov. 18	+29.51
Mar. 26	+28.18	June 30	+29.64	Sept. 29	+29.59	Dec. 23	+29.38
Apr. 28	+28.49	July 27	+29.35	Oct. 27	+29.73		

S3730. City of New York, Board of Water Supply. Barton and South Haven Rds., Plainfield. Lat. 40°48'10", long. 72°58'10". Driven observation water-table well in deposits of late Pleistocene age, diameter 2 inches, depth 57 feet, screen 55-57. Land-surface datum is 80.5 feet above msl. Highest water level 38.01 above msl, June 23, 1953; lowest 33.04 above msl, Feb. 26, 1951. Records available: 1943-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+35.03	Apr. 28	+34.51	July 27	+35.85	Oct. 27	+36.06
Feb. 26	+34.76	May 28	+35.14	Aug. 24	+35.61	Nov. 18	+36.03
Mar. 26	+34.53	June 30	+35.98	Sept. 29	+35.59	Dec. 23	+35.77

S3737. U. S. Geol. Survey. Holbrook Rd., Centereach. Lat. 40°51'05", long. 73°04'50". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 64 feet, screen 62-64. Land-surface datum is 110.9 feet above msl. Highest water level 59.97 above msl, Oct. 6, 1953; lowest 54.33 above msl, Feb. 20, 1951. Records available: 1943-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+58.47	Apr. 20	+57.60	July 26	+57.97	Oct. 21	+58.42
Feb. 23	+58.16	May 28	+57.62	Aug. 23	+57.88	Nov. 19	+58.51
Mar. 22	+57.87	June 28	+57.87	Sept. 22	+57.93	Dec. 23	+58.48

S3868. U. S. Geol. Survey. Sheep Pasture Rd., Setauket. Lat. 40°55'10", long. 73°06'00". Driven observation water-table well in deposits of late Pleistocene age, diameter 4 to 2 inches, depth 114 feet, screen 108-114. Land-surface datum is 99.6 feet above msl. Highest water level 41.30 above msl, Oct. 4, 1953; lowest 36.21 above msl, Jan. 22, 1951. Records available: 1944-54. Jan. 25, +40.60; Feb. 23, +40.33; Mar. 22, +40.04; Apr. 26, +39.90; May 28, +39.86.

S3869. U. S. Geol. Survey. Mount Sinai Rd., Coram. Lat. 40°53' 25", long. 72°59'25". Driven observation water-table well in deposits of late Pleistocene age, diameter 4 to 2 inches, depth 44 feet, screen 40-44. Land-surface datum is 84.4 feet above msl. Highest water level 58.57 above msl, Aug. 4, 1953; lowest 52.97 above msl, Jan. 22, 1951. Records available: 1944-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+56.36	Apr. 26	+55.86	July 26	+56.21	Oct. 22	+57.00
Feb. 23	+56.10	May 28	+56.21	Aug. 23	+56.01	Nov. 19	+57.21
Mar. 22	+55.87	June 28	+56.41	Sept. 22	+56.47	Dec. 29	+57.38

S3870. U. S. Geol. Survey. Mill Pond Rd., Coram. Lat. 40°51'40", long. 72°59'15". Driven observation water-table well in deposits of late Pleistocene age, diameter 4 to 2 inches, depth 44 feet, screen 40-44. Land-surface datum is 88.1 feet above msl. Highest water level 57.71 above msl, June 23, 1953; lowest 52.84 above msl, Feb. 20, 1951. Records available: 1944-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+56.25	Apr. 26	+55.63	July 26	+55.74	Oct. 22	+56.35
Feb. 23	+55.98	May 28	+55.89	Aug. 23	+55.53	Nov. 18	+56.35
Mar. 22	+55.73	June 28	+55.97	Sept. 22	+55.94	Dec. 29	+56.67

S3871. U. S. Geol. Survey. Locust Ave. and Fire Rd., Plainfield. Lat. 40°50'05", long. 72°58'15". Driven observation water-table well in deposits of late Pleistocene age, diameter 4 to 2 inches, depth 92 feet, screen 88-92. Land-surface datum is 128.6 feet above msl. Highest water level 50.79 above msl, Aug. 27, 1953; lowest 45.84 above msl, Feb. 26, 1951. Records available: 1944-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+48.93	Apr. 28	+47.75	July 27	+48.00	Oct. 22	+48.44
Feb. 26	+48.55	May 28	+47.59	Aug. 23	+48.05	Nov. 18	+48.62
Mar. 29	+48.11	June 30	+47.85	Sept. 29	+48.28	Dec. 29	+48.90

S3955. U. S. Geol. Survey. Pond Path and Horseblock Rd., Setauket. Lat. 40°53'55", long. 73°05'55". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 76 feet, screen 74-76. Land-surface datum is 122.4 feet above msl. Highest water level 57.73 above msl, Aug. 24, 1953; lowest 51.40 above msl, Mar. 28, 1951. Records available: 1944-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+56.35	Apr. 26	+55.28	July 26	+55.47	Oct. 22	+55.83
Feb. 23	+55.99	May 28	+55.02	Aug. 23	+55.78	Nov. 19	+55.95
Mar. 22	+55.67	June 28	+55.21	Sept. 22	+55.98	Dec. 29	+55.95

S3956. U. S. Geol. Survey. Yaphank and Miller Place Rds., Miller Place. Lat. 40°56'10", long. 72°59'05". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 124 feet, screen 122-124. Land-surface datum is 145.5 feet above msl. Highest water level 34.57 above msl, Aug. 27, 1953; lowest 30.29 above msl, Mar. 28, 1951. Records available: 1944-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+33.71	Apr. 26	+32.78	July 26	+32.11	Oct. 22	+32.73
Feb. 23	+33.43	May 28	+32.53	Aug. 23	+32.13	Nov. 19	+32.89
Mar. 22	+33.15	June 28	+32.29	Sept. 22	+32.39	Dec. 29	+33.69

S3978. Village of Greenport Department of Public Works. Moores Lane, Greenport. Lat. 41°06'15", long. 72°22'25". Drilled unused water-table well in deposits of late Pleistocene age, diameter 4 inches, depth 55 feet, screen assumed at bottom. Land-surface datum is 15.6 feet above msl. Highest water level 2.08 above msl, Apr. 2, 1953; lowest 0.30 below msl, Dec. 29, 1949. Records available: 1949-54.

S3978--Continued.

Water level above and below msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	+0.75	Apr. 27	+0.92	July 27	-0.01	Oct. 28	+0.71
Feb. 24	+0.59	May 26	+0.82	Aug. 24	+0.41	Nov. 19	+0.75
Mar. 24	+0.71	July 1	+0.15	Sept. 24	+1.85	Dec. 28	+1.09

S4134. Town of Riverhead. Roanoke Ave., Riverhead. Lat. 40°55'35", long. 72°40'10". Drilled observation artesian well in sands of Magothy formation(?), diameter 4 inches, depth 225 feet, screen assumed at bottom. Land-surface datum is 23.3 feet above msl. Highest water level 14.23 above msl, Apr. 27, May 8, 1953; lowest 11.33 above msl, Nov. 23, 1950. Records available: 1945-54.

Daily mean water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	+13.09	+13.02	+13.04	+13.11	.....	+12.42	+11.90	+12.48	+13.44	+13.29	+13.24
2	.....	13.06	13.03	13.00	13.12	.....	12.42	11.95	12.47	13.43	13.23	13.24
3	.....	13.04	13.01	13.01	13.17	.....	12.40	12.00	12.47	13.42	13.33	13.25
4	.....	13.08	13.05	13.01	13.19	.....	12.38	12.05	12.47	13.43	13.39	13.29
5	+13.26	13.10	13.05	13.01	13.20	.....	12.42	12.06	12.47	13.40	13.40	13.33
6	13.28	13.09	13.04	13.02	13.18	.....	12.45	12.06	12.51	13.37	13.41	13.34
7	13.25	13.06	13.04	13.02	13.16	+12.96	12.45	12.06	12.52	13.34	13.41	13.35
8	13.18	13.05	13.04	13.00	13.14	12.92	12.44	12.04	12.52	13.31	13.41	13.36
9	13.16	13.07	13.02	12.97	13.19	12.86	12.40	12.03	12.52	13.32	13.40	13.36
10	13.20	13.09	13.03	12.94	13.24	12.81	12.33	12.22	12.52	13.35	13.37	13.42
11	13.22	13.07	13.05	12.96	13.25	12.80	12.27	12.29	12.80	13.40	13.35	13.40
12	13.25	13.03	12.99	13.03	13.24	12.74	12.24	12.30	.....	13.37	13.37	13.35
13	13.23	12.96	12.93	13.03	13.20	12.69	12.22	12.30	13.06	13.31	13.36	13.33
14	13.16	12.95	12.97	13.00	13.16	12.72	12.17	12.28	13.17	13.27	13.36	13.37
15	13.15	12.99	13.06	12.96	13.16	.....	12.10	12.27	13.23	13.27	13.35	13.54
16	13.14	12.99	13.05	12.92	13.19	.....	12.08	12.29	13.31	13.30	13.32	13.53
17	.....	13.00	13.03	13.03	13.24	.....	12.05	12.31	13.44	13.31	13.32	13.45
18	.....	13.01	13.03	13.13	13.23	.....	12.03	12.28	13.48	13.30	13.30	13.48
19	.....	12.93	12.99	13.13	13.19	.....	12.08	12.25	13.50	13.27	13.26	13.57
20	.....	12.87	13.01	13.09	13.17	.....	12.09	12.25	13.53	13.25	13.29	13.59
21	.....	12.91	13.05	13.06	13.17	12.58	12.05	12.25	13.53	13.25	13.32	13.60
22	13.14	13.02	13.06	13.06	13.21	12.54	.....	12.26	13.54	13.24	13.30	13.61
23	13.11	13.02	13.06	13.07	13.21	12.50	.....	12.26	13.50	13.21	13.24	13.61
24	13.11	13.02	13.05	13.08	13.21	12.50	.....	12.27	13.49	13.21	13.22	13.64
25	13.14	13.05	13.01	13.11	13.20	12.49	.....	12.29	13.49	13.20	13.24	13.60
26	13.14	13.07	13.04	13.17	13.19	12.46	11.95	12.30	13.50	13.18	13.25	13.58
27	13.14	13.05	13.03	13.17	13.15	12.46	11.96	12.29	13.52	13.18	13.22	13.60
28	13.18	13.02	13.03	13.17	13.13	12.45	11.95	12.27	13.50	13.18	13.22	13.63
29	13.16	.....	13.06	13.16	13.14	12.43	11.93	12.26	13.46	13.20	13.35	13.68
30	13.12	.....	13.09	13.13	13.14	12.42	11.94	12.24	13.43	13.29	13.31	13.74
31	13.12	.....	13.08	.....	13.14	.....	11.92	12.36	.....	13.31	.....	13.76

S4268. U. S. Geol. Survey. Town Line Rd., Northport. Lat. 40°52'55", long. 73°17'05". Drilled observation water-table well in deposits of late Pleistocene age, diameter 4 inches, depth 74 feet, screen 69-74. Land-surface datum is 111.0 feet above msl. Highest water level 53.12 above msl, Oct. 6, 1953; lowest 46.65 above msl, Mar. 27, 1951. Records available: 1945-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+52.54	Apr. 26	+51.57	July 26	+50.92	Oct. 21	+50.85
Feb. 23	+52.22	May 28	+51.31	Aug. 23	+50.80	Nov. 19	+50.71
Mar. 22	+51.93	June 28	+51.09	Sept. 22	+51.28	Dec. 22	+50.75

S4270. U. S. Geol. Survey. Wicks Ave. and Crooked Hill Rd., Pineaire. Lat. 40°47'10", long. 73°16'10". Drilled observation water-table well in deposits of late Pleistocene age, diameter 4 inches, depth 83 feet, screen 78-83. Land-surface datum is 120.2 feet above msl. Highest water level 56.30 above msl, May 26, 1953; lowest 49.86 above msl, Feb. 19, 1951. Records available: 1945-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	+54.88	Apr. 28	+53.42	July 28	+53.56	Oct. 27	+53.71
Feb. 26	+53.88	May 28	+53.45	Aug. 25	+53.88	Nov. 22	+53.49
Mar. 29	+53.48	June 30	+53.63	Sept. 27	+53.77	Dec. 22	+53.19

S4271. U. S. Geol. Survey. Long Island Research Farm, Riverhead. Lat. 40°57'30", long. 72°43'30". Drilled observation water-table well in deposits of late Pleistocene age, diameter 4 inches, depth 105 feet, screen 100-105. Land-surface datum is 100.3 feet above msl. Highest water level 11.58 above msl, Dec. 30, 1954; lowest 9.12 above msl, Sept. 10-12, 1950. Records available: 1945-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	+11.04	Apr. 27	+10.73	July 27	+9.70	Oct. 29	+11.18
Feb. 24	+10.94	May 26	+10.76	Aug. 24	+9.94	Nov. 19	+11.38
Mar. 23	+10.84	June 29	+10.25	Sept. 23	+10.55	Dec. 30	+11.58

S4524. U. S. Geol. Survey. Tuthill Rd., Laurel. Lat. 40°56'50", long. 72°36'05". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 23 feet, screen 21-23. Land-surface datum is 23.5 feet above msl. Highest water level 9.44 above msl, May 1, 1953; lowest 5.52 above msl, Nov. 2, 1950. Records available: 1945-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	+8.01	Apr. 27	+7.93	July 27	+6.23	Oct. 29	+8.17
Feb. 25	+7.87	May 26	+7.89	Aug. 24	+6.63	Nov. 19	+7.89
Mar. 24	+7.81	June 29	+6.80	Sept. 24	+8.45	Dec. 28	+8.32

S4526. J. T. Downe. Sound Ave., Riverhead. Lat. 40°58'10", long. 72°38'15". Dug unused water-table well in deposits of late Pleistocene age, diameter 36 inches, depth 65 feet. Land-surface datum is 67.9 feet above msl. Highest water level 11.42 above msl, Aug. 26, 1953; lowest 7.47 above msl, Dec. 28, 1950. Records available: 1945-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+10.01	Apr. 27	+9.83	July 27	+8.61	Nov. 19	+10.21
Feb. 24	+9.95	May 26	+9.89	Aug. 24	+8.69	Dec. 30	+10.44
Mar. 23	+9.84	June 29	+9.27	Sept. 23	+9.63		

S4530. U. S. Geol. Survey. Middle Country Rd. and Roanoke Ave., Riverhead. Lat. 40°56'15", long. 72°40'40". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 12 feet, screen 10-12. Land-surface datum is 21.2 feet above msl. Highest water level 19.90 above msl, May 1, 1953; lowest 13.91 above msl, Dec. 28, 1950. Records available: 1945-54. Jan. 25, +17.13; Feb. 24, +17.02; Mar. 23, +17.13; Apr. 27, +17.31; May 26, +17.39; June 29, +16.44. Measurement discontinued.

S4827. U. S. Geol. Survey. Broadway, Greenlawn. Lat. 40°51'45", long. 73°21'55". Drilled observation water-table well in deposits of late Pleistocene age, diameter 4 inches, depth 199 feet, screen 194-199. Land-surface datum is 215.0 feet above msl. Highest water level 60.32 above msl, Nov. 23, 1953; lowest 54.23 above msl, May 28, 1951. Records available: 1946-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+60.25	Apr. 26	+59.73	July 26	+58.89	Oct. 20	+58.43
Feb. 23	+60.07	May 28	+59.66	Aug. 23	+58.67	Nov. 19	+58.31
Mar. 22	+59.91	June 28	+59.25	Sept. 22	+58.54	Dec. 22	+58.12

S4828. U. S. Geol. Survey. Park Ave. and Broadway, Greenlawn. Lat. 40°50'20", long. 73°22'10". Drilled observation artesian well in sands of Magothy formation(?), diameter 4 inches, depth 141 feet, screen 136-141. Land-surface datum is 185.0 feet above msl. Highest water level 71.07 above msl, Oct. 23, 1953; lowest 65.17 above msl, Jan. 24, 1952. Records available: 1946-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+71.04	Apr. 26	+70.66	July 26	+69.68	Oct. 20	+69.58
Feb. 23	+70.97	May 28	+70.55	Aug. 23	+69.66	Nov. 19	+69.50
Mar. 22	+70.81	June 28	+70.16	Sept. 22	+69.76	Dec. 22	+69.30
Apr. 20	+70.56						

S4829. U. S. Geol. Survey. Randall Rd., Shoreham. Lat. 40°56'15", long. 72°53'55". Drilled observation water-table well in deposits of late Pleistocene age, diameter 4 inches, depth 97 feet, screen 92-97. Land-surface datum is 114.0 feet above msl. Highest water level 41.31 above msl, Aug. 27, 1953; lowest 36.74 above msl, Apr. 4, 1951. Records available: 1946-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+40.89	May 27	+39.31	Aug. 23	+39.34	Nov. 19	+40.40
Feb. 23	+40.08	June 29	+39.28	Sept. 22	+39.73	Dec. 23	+40.61
Mar. 22	+39.78	July 26	+39.15	Oct. 22	+40.07		

S5517. Brookhaven National Laboratory. Upton Rd. and Princeton Ave. Lat. 40°51'50", long. 72°53'15". Drilled observation water-table well in deposits of late Pleistocene age, diameter 4 inches, depth 91 feet, screen 85-91. Land-surface datum is 115.0 feet above msl. Highest water level 45.49 above msl, June 9, 13-19, 1953; lowest 39.60 above msl, Feb. 4-6, 8-9, 1951. Records available: 1948-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	+42.27	Apr. 26	+42.14	July 26	+42.72	Oct. 22	+43.53
Feb. 23	+41.99	May 28	+42.76	Aug. 23	+42.44	Nov. 23	+43.34
Mar. 23	+41.83	June 29	+42.99	Sept. 23	+42.99	Dec. 23	+43.49

S6400. Brookhaven National Laboratory. Fourth Ave. and Railroad St. Lat. 40°52'35", long. 72°53'05". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 61 feet, screen 59-61. Land-surface datum is 90.8 feet above msl. Highest water level 47.36 above msl, May 28, 1953; lowest 40.97 above msl, Jan. 26, 1951. Records available: 1948-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 26	+43.68	Apr. 26	+43.96	July 26	+44.37	Oct. 22	+45.25
Feb. 23	+43.42	May 27	+44.74	Aug. 23	+43.91	Nov. 23	+45.17
Mar. 22	+43.69	June 29	+44.85	Sept. 23	+44.49	Dec. 23	+45.31

S6409. Brookhaven National Laboratory. Yale and Upton Rds. Lat. 40°51'40", long. 72°53'50". Drilled observation artesian well in Lloyd sand member of Raritan formation, diameter 8 inches, depth 1,434 feet, screen 1,408-1,433. Land-surface datum is 113.2 feet above msl. Highest water level 35.02 above msl, July 2, 1953; lowest 31.46 above msl, Feb. 15, 1951. Records available: 1949-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+33.72	Apr. 26	+33.53	July 26	+33.54	Oct. 22	+34.02
Feb. 23	+33.70	May 27	+33.58	Aug. 23	+33.42	Nov. 23	+34.36
Mar. 23	+33.57	June 29	+33.72	Sept. 23	+33.85	Dec. 23	+34.50

S6410. Brookhaven National Laboratory. Ridge Rd. near State Highway 25A, Ridge. Lat. 40°55'20", long. 72°54'05". Drilled observation water-table well in deposits of late Pleistocene age, diameter 4 inches, depth 88 feet, screen 83-88. Land-surface datum is 108.7 feet above msl. Highest water level 48.36 above msl, Aug. 5, 1953; lowest 42.59 above msl, Feb. 25-26, 28, Mar. 1-7, 1951. Records available: 1948-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+46.15	Apr. 26	+45.38	July 26	+46.24	Oct. 22	+46.85
Feb. 23	+45.87	May 27	+45.66	Aug. 23	+46.05	Nov. 19	+47.30
Mar. 22	+45.60	June 29	+46.10	Sept. 22	+46.12	Dec. 23	+47.18

S6411. Brookhaven National Laboratory. Ridge Rd. and State Highway 25A, Shoreham. Lat. 40°56'50", long. 72°54'15". Drilled observation water-table well in deposits of late Pleistocene age, diameter 4 inches, depth 149 feet, screen 143-149. Land-surface datum is 138.4 feet above msl. Highest water level 32.14 above msl, Oct. 28, 1953; lowest 28.39 above msl, Apr. 4, 1951. Records available: 1948-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+31.60	Apr. 26	+30.88	July 26	+30.29	Oct. 22	+30.65
Feb. 23	+31.39	May 27	+30.65	Aug. 23	+30.24	Nov. 19	+30.79
Mar. 22	+31.16	June 29	+30.42	Sept. 22	+30.40	Dec. 23	+31.05

S6435. Brookhaven National Laboratory. Long Island Ave., South Haven. Lat. 40°49'00", long. 72°52'50". Driven observation water-table well in deposits of late Pleistocene age, diameter 2 inches, depth 82 feet, screen 80-82. Land-surface datum is 76.4 feet above msl. Highest water level 22.66 above msl, June 10, 1953; lowest 19.05 above msl, Feb. 26, 1951. Records available: 1949-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+20.27	Apr. 28	+19.75	July 26	+20.76	Nov. 18	+21.72
Feb. 24	+19.99	May 27	+20.10	Aug. 24	+20.66	Dec. 23	+21.15
Mar. 23	+19.79	June 30	+20.63	Oct. 26	+21.23		

S6441. Brookhaven National Laboratory. Wading River Rd. near North St., Manorville. Lat. 40°52'10", long. 72°49'25". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 21 feet, screen 19-21. Land-surface datum is 46.2 feet above msl. Highest water level 38.88 above msl, Apr. 25, 1953; lowest 34.42 above msl, Nov. 24, 1950. Records available: 1949-54.

Water level above msl							
Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+36.93	Apr. 27	+37.52	July 26	+35.89	Oct. 22	+37.20
Feb. 24	+36.79	May 26	+37.46	Aug. 24	+36.16	Nov. 18	+37.51
Mar. 23	+37.07	June 30	+36.59	Sept. 23	+38.35	Dec. 23	+38.60

S6524. Southold Fire Dept. Bayview Rd., Southold. Lat. 41°02'55", long. 72°26'10". Drilled fire protection water-table well in deposits of late Pleistocene age, diameter 6 inches, depth 40 feet, screen assumed at bottom. Land-surface datum is 5.7 feet above msl. Highest water level 3.04 above msl, May 4, 1953; lowest 0.66 above msl, Feb. 1, 1950. Records available: 1949-54.

Water level above msl							
Jan. 26	+2.35	Apr. 27	+2.35	Aug. 24	+1.76	Nov. 19	+2.17
Feb. 24	+2.20	May 26	+2.31	Sept. 24	+2.84	Dec. 28	+2.62
Mar. 24	+2.26	July 27	+1.46	Oct. 28	+2.33		

S6532. Conway Bros. Hortons Lane, Southold. Lat. 41°03'55", long. 72°26'10". Dug domestic water-table well in deposits of late Pleistocene age, diameter 24 inches, depth 52 feet. Land-surface datum is 45.9 feet above msl. Highest water level 5.52 above msl, May 27, 1953; lowest 1.95 above msl, Feb. 27, 1950. Records available: 1949-54.

Water level above msl							
Jan. 26	+3.80	Apr. 27	+3.64	July 27	+2.99	Nov. 19	+3.99
Feb. 23	+3.59	May 26	+3.94	Aug. 24	+3.11	Dec. 28	+3.88
Mar. 24	+3.46	July 1	+3.42	Sept. 24	+4.50		

S6542. Cutchogue Fire Dept. Depot Lane. Lat. 41°01'05", long. 72°29'25". Drilled fire-protection water-table well in deposits of late Pleistocene age, diameter 6 inches, depth 36 feet, screen assumed at bottom. Land-surface datum is 24.4 feet above msl. Highest water level 7.89 above msl, May 27, 1953; lowest 3.22 above msl, Nov. 2, 1950. Records available: 1949-54.

Water level above msl							
Jan. 26	+6.24	Apr. 27	+6.15	July 27	+4.78	Oct. 26	+6.12
Feb. 24	+6.04	May 26	+6.21	Aug. 24	+4.83	Nov. 19	+6.01
Mar. 24	+6.01	July 1	+5.08	Sept. 24	+6.43	Dec. 28	+6.41

S6558. Mattituck Fire Dept. State Highway 25, Mattituck. Lat. 40°58'30", long. 72°33'10". Drilled fire-protection water-table well in deposits of late Pleistocene age, diameter 6 inches, depth 37 feet, screen assumed at bottom. Land-surface datum is 13.9 feet above msl. Highest water level 6.23 above msl, May 1, 1953; lowest 2.78 above msl, June 27, 1950. Records available: 1949-54.

Water level above msl							
Jan. 25	+4.77	Apr. 27	+4.80	July 27	+3.75	Oct. 28	+4.71
Feb. 25	+4.62	May 26	+4.83	Aug. 24	+3.79	Nov. 19	+4.57
Mar. 23	+4.60	July 2	+4.19	Sept. 24	+5.15	Dec. 28	+4.89

S6780. J. Moisa. Breakwater Rd., Mattituck. Lat. 41°00'05", long. 72°33'45". Drilled irrigation water-table well in deposits of late Pleistocene age, diameter 10 inches, depth 100 feet, screen assumed at bottom. Land-surface datum is 48.3 feet above msl. Highest water level 5.69 above msl, May 27, 1953; lowest 2.77 above msl, June 26, 1950. Records available: 1949-54.

Water level above msl							
Jan. 26	+4.40	Apr. 27	+4.26	July 27	+3.51	Oct. 29	+4.55
Feb. 24	+4.31	May 26	+4.47	Aug. 24	+3.70	Nov. 19	+4.51
Mar. 23	+4.22	July 1	+3.86	Sept. 23	+4.37	Dec. 30	+4.47

S7287. Cutchogue Fire Dept. North Rd., Cutchogue. Lat. 41°01'50", long. 72°30'05". Drilled fire-protection water-table well in deposits of late Pleistocene age, diameter 6 inches, depth 43 feet, screen assumed at bottom. Land-surface datum in sand pit is 18.2 feet above msl. Highest water level 7.78 above msl, May 27, 1953; lowest 3.58 above msl, Aug. 30, 1950. Records available: 1949-54. Jan. 26, +6.26; Feb. 24, +6.14; Mar. 24, +5.99; Apr. 27, +6.01; May 26, +6.19; July 1, +5.47.

S7283. W. Karcher. State Highway 25, Orient. Lat. 41°08'50", long. 72°17'40". Dug unused water-table well in deposits of late Pleistocene age, diameter 24 inches, depth 30 feet. Land-surface datum is 23.1 feet above msl. Highest water level 5.09 above msl, Apr. 26-27; lowest 1.28 above msl, Jan. 28-31, Feb. 1-2, 1950. Records available: 1949-54.

Daily mean water level, above msl, from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	+3.87	+3.14	+2.89	+3.06	+3.25	+3.09	+2.43	+1.90	+2.48	+3.79	+3.16	+3.27
2	3.64	3.14	2.90	3.06	3.26	3.09	2.41	1.89	2.57	3.78	3.15	3.28
3	e3.62	3.14	2.90	3.06	3.28	3.08	2.40	1.89	2.61	3.74	3.26	3.28
4	3.61	....	2.93	3.02	3.28	3.07	2.38	1.89	2.63	3.73	3.43	3.27
5	3.59	....	2.93	3.02	3.29	3.05	2.37	1.89	2.63	3.71	3.53	3.25
6	3.58	....	2.95	3.02	3.29	3.03	2.35	1.88	2.64	3.69	3.58	3.24
7	3.55	3.09	2.99	3.00	3.28	3.02	2.32	1.88	2.64	3.66	3.58	3.24
8	3.51	3.09	3.00	3.00	3.29	2.92	2.30	1.87	2.64	3.54	3.58	3.23
9	3.48	3.08	3.01	2.97	3.29	2.76	2.15	e1.90	2.64	3.45	3.57	3.22
10	3.46	3.07	e3.03	2.95	3.29	2.73	2.11	e2.00	2.63	3.46	3.55	3.22
11	3.45	3.06	e3.03	2.95	3.29	2.81	2.07	e2.20	2.71	3.51	3.55	3.20
12	3.43	3.04	e3.03	2.94	3.29	2.81	2.07	e2.30	3.31	3.51	3.54	3.19
13	3.40	3.03	e3.03	2.93	3.27	2.80	1.88	e2.40	3.60	3.47	3.51	3.18
14	3.37	3.02	....	2.92	3.26	2.80	1.90	e2.50	3.73	3.45	3.51	3.19
15	3.35	3.01	....	2.90	3.26	2.77	1.95	e2.45	3.77	3.43	3.47	3.30
16	....	3.00	....	2.89	3.27	2.75	1.99	2.43	3.78	3.42	3.45	3.33
17	....	2.99	....	2.90	3.26	2.74	2.03	2.42	3.81	3.39	3.42	3.33
18	....	e2.98	....	2.91	3.24	2.66	2.02	2.41	3.91	3.38	3.39	3.37
19	....	e2.96	....	3.00	3.23	2.47	2.03	2.40	3.93	3.35	3.38	3.42
20	....	e2.94	....	3.04	3.23	2.43	2.00	2.39	....	3.34	3.37	3.48
21	....	2.93	....	3.07	3.22	2.53	1.98	2.38	....	3.33	3.37	3.52
22	....	2.93	....	3.09	3.21	2.58	1.98	2.36	....	3.31	3.35	3.55
23	....	2.91	....	3.12	3.18	2.59	1.97	2.36	....	3.28	3.33	3.59
24	....	2.90	e3.06	3.13	3.17	2.57	1.96	2.35	3.90	3.27	3.32	3.62
25	....	2.90	3.07	3.15	3.17	2.51	1.94	2.35	3.89	3.26	3.30	3.63
26	....	2.89	3.09	3.18	3.15	2.28	1.93	2.34	3.89	3.25	3.28	3.64
27	e3.19	2.89	3.08	3.20	3.14	2.35	1.92	2.33	3.87	3.24	3.27	3.67
28	3.18	2.88	3.06	3.22	3.13	2.43	1.92	2.32	3.85	3.21	3.26	3.67
29	3.16	....	3.07	3.23	3.13	2.44	1.91	2.30	3.83	3.20	3.28	3.67
30	3.16	....	3.08	3.24	3.11	2.44	1.91	2.29	3.81	3.19	3.26	3.68
31	3.16	....	3.07	....	3.10	....	1.90	2.33	....	3.17	....	3.69

e Estimated.

S8831. U. S. Geol. Survey. Lake Drive and North Sea Rd., Southampton. Lat. 40°55'15", long. 72°24'50". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 23 feet, screen 21-23. Land-surface datum is 18.5 feet above msl. Highest water level 8.41 above msl, Apr. 1, 1953; lowest 6.23 above msl, Oct. 31, 1950. Records available: 1950-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	+7.77	Apr. 28	+7.63	July 27	+6.82	Oct. 25	+7.62
Feb. 25	+7.64	May 26	+7.46	Aug. 24	+6.92	Nov. 18	+7.64
Mar. 25	+7.59	July 2	+7.05	Oct. 1	+7.93	Dec. 27	+8.13

S8834. U. S. Geol. Survey. State Highway 114, Sag Harbor. Lat. 40°59'10", long. 72°15'30". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 23 feet, screen 21-23. Land-surface datum is 26.1 feet above msl. Highest water level 14.36 above msl, Dec. 23, 1953; lowest 9.58 above msl, Dec. 26, 1950. Records available: 1950-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	+13.80	Apr. 28	+13.79	July 27	+12.66	Oct. 25	+12.77
Feb. 25	+13.73	May 27	+13.65	Aug. 24	+12.46	Nov. 18	+13.29
Mar. 25	+13.75	July 2	+13.15	Oct. 1	+13.29	Dec. 27	+13.65

S8835. U. S. Geol. Survey. State Highway 24, Hampton Bays. Lat. 40°53'10", long. 72°32'30". Driven observation water-table well in deposits of late Pleistocene age, diameter 2 inches, depth 33 feet, screen 31-33. Land-surface datum is 33.3 feet above msl. Highest water level 11.09 above msl, May 26, 1953; lowest 6.95 above msl, Jan. 23, 1951. Records available: 1950-54.

S8835--Continued.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	+9.36	Apr. 27	+9.38	July 27	+8.87	Oct. 25	+9.40
Feb. 25	+9.13	May 26	+9.52	Aug. 24	+8.55	Nov. 18	+9.25
Mar. 24	+9.05	July 2	+9.24	Sept. 30	+9.63	Dec. 27	+9.58

S8836. Southampton Fire Dept. Nugent St., Southampton. Lat. 40°53'15", long. 72°23'35". Drilled fire-protection water-table well in deposits of late Pleistocene age, diameter 8 inches, depth 37 feet, screen assumed at bottom. Land-surface datum is 17.4 feet above msl. Highest water level 8.88 above msl, Apr. 29, 1953; lowest 5.61 above msl, Jan. 23, 1951. Records available: 1950-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	+7.63	Apr. 27	+7.39	July 27	+6.80	Oct. 25	+7.65
Feb. 25	+7.37	May 26	+7.41	Aug. 24	+6.67	Nov. 18	+7.43
Mar. 24	+7.31	July 2	+7.06	Sept. 30	+8.02	Dec. 27	+7.52

S8837. East Hampton Fire Dept. State Highway 27, East Hampton. Lat. 40°58'05", long. 72°10'15". Drilled fire-protection water-table well in deposits of late Pleistocene age, diameter 6 inches, depth 34 feet, screen assumed at bottom. Land-surface datum is 14.8 feet above msl. Highest water level 9.71 above msl, May 26, 1953; lowest 6.92 above msl, Dec. 26, 1950. Records available: 1950-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	+9.19	Apr. 28	+8.90	July 27	+8.38	Oct. 25	+8.57
Feb. 25	+9.20	May 27	+8.86	Aug. 24	+8.27	Nov. 18	+8.60
Mar. 25	+8.99	July 2	+8.58	Oct. 1	+8.80	Dec. 27	+8.92

S8839. A. Toler. Windmill Lane, Amagansett. Lat. 40°58'35", long. 72°08'55". Driven observation water-table well in deposits of late Pleistocene age, diameter 1½ inches, depth 37 feet, screen 35-37. Land-surface datum is 39.3 feet above msl. Highest water level 9.51 above msl, May 26, 1953; lowest 6.29 above msl, Jan. 23, 1951. Records available: 1950-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	+8.60	Apr. 28	+8.22	July 27	+7.80	Oct. 25	+8.07
Feb. 25	+8.30	May 27	+8.28	Aug. 24	+7.64	Nov. 18	+8.19
Mar. 25	+8.20	July 2	+8.03	Oct. 1	+8.35	Dec. 27	+8.15

S8912. F. Lackman. State Highways 25 and 25A, The Branch. Lat. 40°51'20", long. 73°11'15". Dug unused water-table well in deposits of late Pleistocene age, diameter 36 inches, depth 28 feet. Land-surface datum is 59.3 feet above msl. Highest water level 36.95 above msl, Apr. 28, 1953; lowest 32.90 above msl, Jan. 27, 1948. Records available: 1947-54.

Water level above msl

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 25	+34.66	Apr. 26	+34.63	July 26	+34.16	Nov. 1	+34.82
Feb. 23	+34.40	May 28	+34.94	Aug. 23	+34.13	Nov. 19	+34.60
Mar. 22	+34.31	June 28	+34.58	Sept. 22	+35.22	Dec. 22	+34.83

UPSTATE NEW YORK

By E. S. Asselstine, F. K. Mack, and J. A. Ziarno

Scope of Water-Level Program

The observation-well program in Upstate New York was continued in 1954 in cooperation with the State Water Power and Control Commission. This program includes, in addition to the collection of water-level measurements, areal investigations to determine the occurrence, availability, and quality of ground water. Measurements were made periodically in 63 wells; recording gages were maintained on 20 wells. New wells were added to the network in Rensselaer, Saratoga, Ulster, and Washington Counties. Figure 29 shows the location of observation wells listed in this report.

Precipitation

Precipitation for New York State in 1954 averaged slightly above normal. Distribution was uneven throughout the various regions of the State. July was the only month that received below-normal rainfall; other monthly amounts varied from near normal to well above normal. The statewide average annual precipitation of 42.76 inches was 3.68 inches greater than normal. Individual station annual totals ranged from 65.43 inches at Highmarket east of Lake Ontario to 26.62 inches at West Cameron in Steuben County. During the first half of 1954, precipitation averaged about 12 percent above normal. April 1954 was the fifth wettest since 1890. July 1954 received only 55 percent of normal, ranking it as the third driest since 1890. The remaining 5 months averaged about 20 percent greater than the normal amount of precipitation for that period. Hurricanes Carol, Edna, and Hazel on August 31, September 11, and October 5, respectively, were responsible for localized heavy rains. Eastern New York felt the effect of the two earlier hurricanes, and the western part of the State received much precipitation as a result of the passing of hurricane Hazel. The statewide snowfall average of 74.4 inches was 5 percent above the normal annual total.

Pumpage

Pumpage data are tabulated below from four important areas of ground-water pumpage: the Schenectady area, the triple-cities area of Binghamton, Johnson City, and Endicott, the Jamestown area, and the Corning area. Neither the aquifers of these areas of heavy pumpage nor the aquifers of any other areas in Upstate New York are considered to be overdeveloped. AnSCO Corp. at Binghamton continued to recharge its aquifers artificially to safeguard its supply.

Average daily pumpage (millions of gallons)

Area	J	F	M	A	M	J	J	A	S	O	N	D	Total (acre-feet per year)
Triple-Cities													
Endicott Waterworks Co.	8.5	7.7	7.6	7.6	7.7	7.8	8.7	8.6	7.7	7.9	7.7	7.6	8,882
Johnson City Municipal	5.9	5.8	6.4	6.4	6.1	6.7	6.9	6.8	6.6	6.4	5.6	6.6	7,118
AnSCO Corp.	4.0	4.7	4.9	5.6	6.0	6.4	4.9	6.2	5.9	6.3	6.0	5.4	6,191
International Business Machines Corp.	2.1	2.3	2.3	2.2	2.3	2.3	2.3	2.3	2.1	2.2	2.2	2.2	2,501
Hillcrest Municipal	.2	.2	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3	327
Schenectady													
Schenectady Municipal	17.9	17.6	17.8	18.4	20.6	22.3	22.3	20.5	18.7	19.4	17.5	17.5	21,531
Rotterdam Water District													
5, Municipal	.5	.5	.5	.6	.9	1.3	1.7	1.1	.7	.7	.6	.6	908
Scotia Municipal	.9	.9	.9	.8	.9	.8	.8	.9	.9	.9	.9	1.0	990
Jamestown													
Jamestown Municipal	4.5	4.3	4.4	4.5	4.6	5.0	5.0	5.0	4.9	4.6	4.6	4.4	5,211
Corning													
Corning Glass Works	e1.0	1.1	1.0	1.0	1.0	.9	.7	1.1	1.7	1.7	1.5	1.4	1,334

e Estimated.

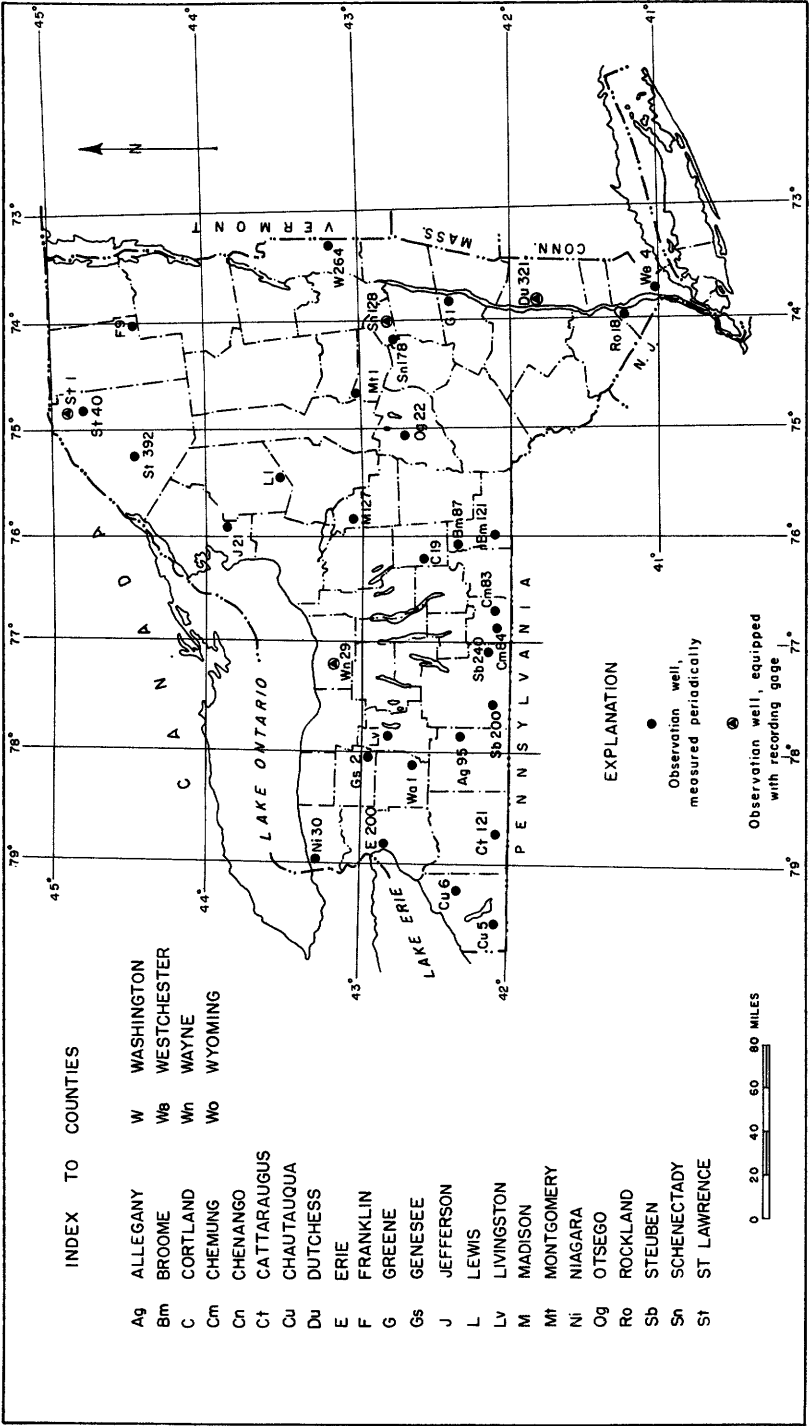
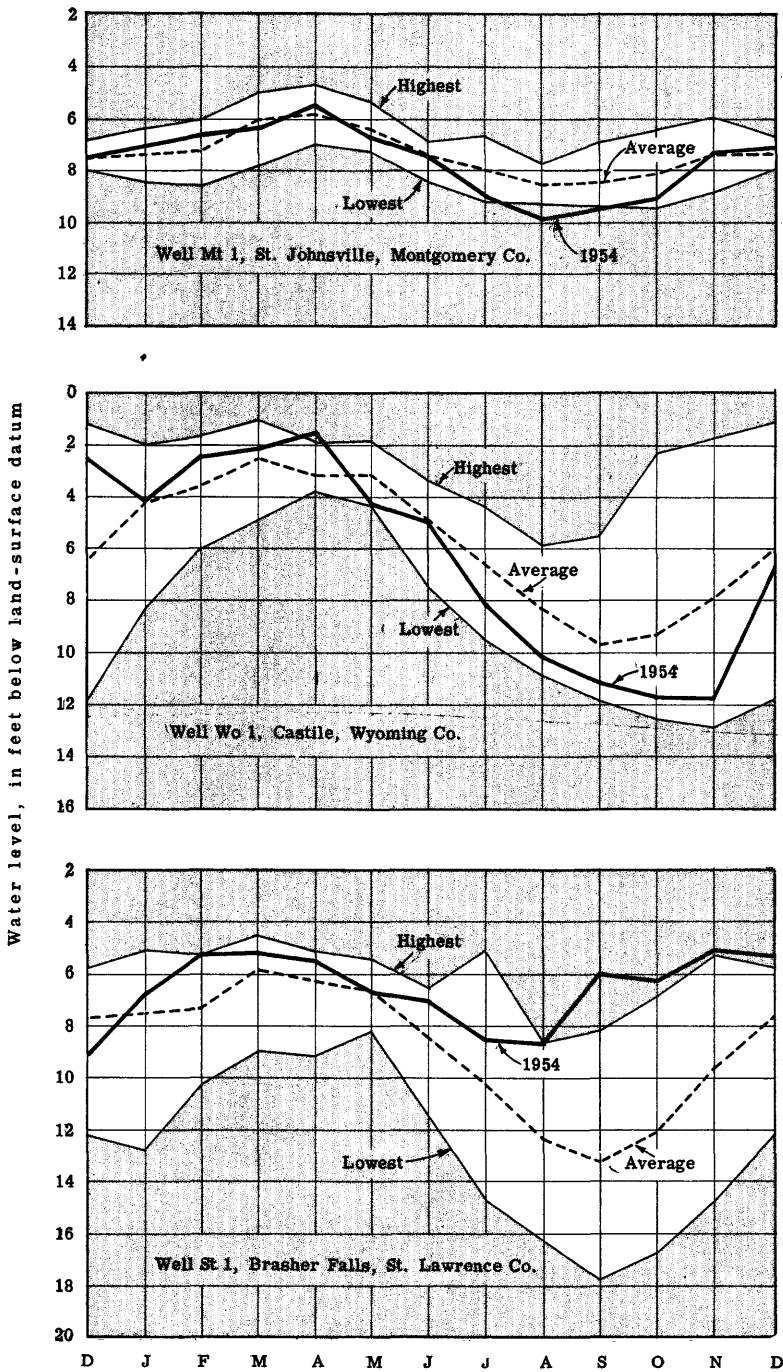


Figure 29. --Location of observation wells in Upstate New York, 1954.



Interpretation of Water-Level Fluctuations

The dominant feature of the water-level records for Upstate New York is the seasonal fluctuation, the water levels being highest during March or April of each year and lowest in September, October, or November. In wells not affected by pumping, the period of decline corresponds with the growing season and appears to be lowest during the hottest summers, although other factors may be contributing. The seasonal low is not closely related to minor fluctuations in precipitation. The rise commences shortly after the end of the growing season, when evapotranspiration losses are at a minimum and when a larger percentage of the precipitation reaches the water table. The rise continues until spring. Water levels during 1954 followed the normal annual cycle with deviations closely related to local climatological conditions. The year began with ground-water levels below average but trending upward. The trend continued at a greater rate, and by spring the water levels in most wells were up to average or above. Highest February water levels for 11 years of record were measured in well St 1 in northern New York. Highest April levels were measured in well Wo 1 in western New York. (See fig. 30.)

With the beginning of the growing season in May, the seasonal downward trend became established. In northern New York, because precipitation was high and temperatures were relatively low, water levels remained above average during the rest of 1954, though they followed the seasonal trends. Throughout the rest of the State, however, lower-than-normal precipitation in July brought water levels considerably below normal; and, although precipitation was above normal for the rest of the summer, levels did not recover to normal till late summer or autumn. The lowest September reading for 11 years of record was observed in well Mt 1 in the Mohawk Valley. The highest September reading for an equal period of record was observed in well St 1 in the St. Lawrence River valley. (See fig. 30.)

Water levels in eastern New York reached annual low stages during August and September. This was somewhat earlier than usual. Seepage from rains accompanying hurricane Carol recharged aquifers in quantities sufficient to break the seasonal downward trend. Water levels in the western part of the State continued to decline until the end of the growing season in October and November before reaching annual low stages. By the end of 1954, levels were generally higher than at the end of 1953, were above average, and were trending upward.

Well-Numbering System

Wells in Upstate New York are numbered in sequence in each county. A letter or combination of two letters from the name of the county is prefixed to the well numbers. Thus the letters "Ag" are prefixed to all well numbers in Allegany County.

Well Descriptions and Water-Level Measurements

(Water levels are in feet below land-surface datum.)

Allegany County

Ag 95. Ronald Mullikin. Near Almond. Lat. 42°20'04", long. 77°44'24". Dug domestic water-table well in glacial till of Pleistocene age, diameter 30 inches, depth 13 feet, stone-lined. Land-surface datum is about 1,550 feet above msl. Highest water level 0.40 below lsd, Apr. 12, 1952; lowest 12.72 below lsd, Nov. 21, 1953. Records available: 1946-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	10.93	Apr. 10	2.20	July 17	5.52	Oct. 9	9.17
9	10.56	17	2.17	24	5.53	16	10.47
16	9.63	24	2.11	31	5.63	23	10.18
23	9.14	May 1	1.97	Aug. 7	5.49	30	10.50
30	8.01	8	1.90	14	5.33	Nov. 6	11.32
Feb. 6	6.75	15	2.21	21	5.66	13	11.43
13	6.20	22	2.76	28	5.91	20	11.20
20	3.01	29	3.39	Sept. 4	7.27	27	11.43
27	2.33	June 5	3.07	11	8.05	Dec. 4	12.08
Mar. 6	3.37	12	3.43	18	7.46	11	11.70
13	3.21	19	3.68	25	8.16	18	11.58
20	2.99	26	4.03	Oct. 2	8.25	25	10.78
27	2.50	July 3	4.31	5	9.54	31	10.35
Apr. 3	2.21	13	5.49				

Broome County

Bm 87. Helen Frawley. Near Center Lisle. Lat. 42°19'40", long. 76°05'58". Dug unused water-table well in glacial till of Pleistocene age, diameter 36 inches, depth 19 feet, stone-lined. Land-surface datum is about 1,520 feet above msl. Highest water level 1.69 below lsd, Apr. 5, 1947; lowest 9.73 below lsd, Nov. 7, 1953. Records available: 1947-54. Apply correction to published record as follows: Apr. 10-July 3, 1948, +0.20; July 10, 1948-Nov. 28, 1953, +1.22.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 24	2.71	Aug. 26	9.12	Oct. 7	9.41	Nov. 20	4.35
Mar. 4	2.78	Sept. 2	9.13	14	9.47	27	3.02
July 23	8.81	9	9.20	21	9.54	Dec. 5	3.72
Aug. 5	8.93	16	9.25	28	9.62	12	4.57
12	8.99	23	9.30	Nov. 6	9.40	19	2.83
19	9.06	30	9.36	14	4.22		

Bm 121. U. S. Geol. Survey. Camden and Main Sts., Johnson City. Lat. 42°06'57", long. 75°58'35". Drilled observation artesian well in glacial sand of Pleistocene age, diameter 6 inches, depth 51 feet, cased to 51, open end. Land-surface datum is about 835 feet above msl. Highest water level 17.85 below lsd, Dec. 10, 1950; lowest 31.43 below lsd, Nov. 21-23, 1952. Records available: 1947-54.

Jan. 4	27.04	Apr. 5	24.21	July 12	26.96	Oct. 4	28.78
11	27.70	12	24.47	19	27.58	11	29.06
18	28.57	19	23.55	21	27.70	18	29.27
25	28.78	26	22.42	26	28.15	25	29.45
Feb. 1	27.28	May 3	22.18	Aug. 2	28.54	Nov. 1	29.78
8	26.78	11	21.34	9	28.79	8	28.70
15	27.11	17	21.70	16	28.96	18	27.62
22	22.46	24	23.08	23	28.98	22	27.62
24	21.33	June 1	24.27	30	29.09	29	24.65
Mar. 1	21.60	7	24.42	Sept. 6	28.74	Dec. 6	24.07
8	22.16	15	24.64	13	28.44	13	24.62
15	23.38	22	25.22	20	28.49	20	24.23
22	24.30	28	26.14	27	28.53	27	23.62
29	24.32	July 6	26.84				

Cattaraugus County

Ct 121. State Department of Conservation. Near Red House. Lat. 42°05'38", long. 78°44'52". Drilled unused artesian well in sand and gravel, diameter 6 inches, depth 59 feet, cased to 59, open end. Land-surface datum is about 1,455 feet above msl. Highest water level 4.8 below lsd, Apr. 22, 29, 1951; lowest 12.79 below lsd, Nov. 27, 1953. Records available: 1950-54.

Sept. 3, 1950	11.3	Mar. 11, 1951	6.0	Sept. 16, 1951	10.8	Dec. 5, 1952	11.3
10	11.2	18	5.7	23	10.7	12	10.6
17	11.3	25	5.5	30	10.9	19	10.6
24	11.2	Apr. 1	5.1	Oct. 7	10.9	26	9.6
Oct. 1	11.2	8	4.9	14	11.0	Jan. 2, 1953	9.44
8	11.2	15	4.9	21	10.7	9	9.18
15	11.2	22	4.8	28	9.9	16	8.65
22	11.2	29	4.8	Nov. 4	9.5	23	8.44
29	11.1	May 6	5.7	11	9.5	30	8.27
Nov. 5	11.0	13	5.9	18	9.7	Feb. 6	7.94
12	10.8	20	6.7	25	9.9	13	8.01
19	11.7	27	7.5	Dec. 2	10.0	20	8.06
26	10.5	June 3	7.8	9	9.9	27	7.46
Dec. 3	10.4	10	7.9	16	7.7	Mar. 6	7.28
10	9.9	17	8.5	21	7.6	13	7.20
17	9.8	24	8.8	28	7.7	20	7.04
24	9.7	July 1	8.8	Jan. 6, 1952	7.7	27	6.94
31	8.8	8	9.1	13	6.9	Apr. 3	6.11
Jan. 7, 1951	8.0	15	9.1	20	6.8	10	6.14
14	8.2	22	8.9	27	6.8	17	6.15
21	8.4	29	8.9	Oct. 6	12.32	24	6.07
28	7.8	Aug. 5	9.6	24	12.6	May 1	4.95
Feb. 4	7.7	12	9.7	31	12.7	8	5.58
11	7.7	19	9.8	Nov. 7	12.6	15	5.06
18	7.4	26	10.1	14	12.3	22	5.44
25	6.7	Sept. 2	10.1	21	12.5	29	5.55
Mar. 4	6.3	9	10.4	28	12.5	June 5	5.78

Ct 121--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 12, 1953	5.91	Oct. 30, 1953	12.40	Mar. 26, 1954	7.71	Aug. 13, 1954	11.43
16	6.08	Nov. 6	12.52	Apr. 2	7.55	20	11.82
19	6.61	13	12.64	9	6.74	27	11.82
26	7.74	20	12.78	16	6.45	Sept. 3	12.00
July 3	8.25	27	12.79	23	5.91	10	12.20
10	9.30	Dec. 4	12.20	30	5.57	17	12.33
17	9.23	11	12.02	May 7	5.10	24	12.46
24	9.50	18	11.70	14	5.62	Oct. 1	12.55
31	9.77	25	11.40	21	6.71	8	12.64
Aug. 7	10.10	Jan. 1, 1954	10.65	28	7.55	15	12.21
14	10.40	8	10.40	June 4	7.71	22	12.12
21	10.90	15	10.25	11	7.96	29	12.00
28	11.36	22	10.07	18	8.27	Nov. 5	11.60
Sept. 4	11.70	29	9.74	25	8.45	12	11.20
11	11.86	Feb. 5	9.23	July 2	8.70	19	10.75
18	11.90	12	8.82	9	9.30	26	10.46
25	12.02	19	8.70	13	9.72	Dec. 3	10.13
Oct. 2	12.05	26	8.26	16	10.04	10	9.90
9	12.11	Mar. 5	7.72	23	10.43	17	9.20
16	12.18	12	7.72	30	10.70	24	9.06
23	12.29	19	7.72	Aug. 6	11.04	31	8.95

Chautauqua County

Cu 5. State Department of Conservation. Near Panama. Lat. 42°03'28", long. 79°29'59". Dug unused water-table well in glacial till of Pleistocene age, diameter 36 inches, depth 33 feet. Land-surface datum is about 1,770 feet above msl. Highest water level 1.61 below lsd, Jan. 26, 1952; lowest 9.41 below lsd, May 24, 1949. Records available: 1949-54.

Jan. 9	4.79	Apr. 24	2.62	July 17	5.38	Oct. 9	7.63
16	4.28	May 1	2.56	24	5.66	16	6.89
23	3.61	8	2.62	31	5.97	23	5.41
30	3.17	15	3.02	Aug. 7	6.18	30	3.45
Feb. 6	2.84	22	3.18	14	6.55	Nov. 6	2.51
13	2.43	29	3.39	21	6.78	13	2.46
20	2.37	June 5	3.84	28	6.90	20	2.40
27	2.45	12	4.36	Sept. 4	7.16	27	2.42
Mar. 27	2.49	19	4.67	11	7.39	Dec. 4	2.42
Apr. 20	2.37	26	4.87	18	7.57	11	2.39
3	2.40	July 3	4.96	25	7.80	18	2.36
10	2.49	10	5.17	Oct. 2	7.98	24	2.39
17	2.37	14	5.38				

Cu 6. State Department of Conservation. Near Cherry Creek. Lat. 42°19'53", long. 79°11'15". Dug unused water-table well in glacial till of Pleistocene age, diameter 36 inches, depth 13 feet, stone-lined. Land-surface datum is about 2,065 feet above msl. Highest water level 2.20 below lsd, Mar. 26, 1952; lowest 9.80 below lsd, Oct. 30, 1953. Records available: 1950-54.

July 20, 1950	4.69	May 5, 1951	2.99	Sept. 22, 1951	9.10	July 12, 1952	7.45
26	3.86	12	4.05	29	9.23	19	7.89
Aug. 2	4.99	19	4.20	Oct. 6	9.35	27	8.28
10	4.94	26	4.80	13	8.85	Aug. 3	7.75
17	6.16	June 2	4.71	20	7.98	10	9.10
24	6.78	9	4.63	27	8.05	17	9.17
Sept. 1	4.98	16	4.52	Nov. 30	4.85	21	8.97
8	4.11	23	5.88	Mar. 26, 1952	2.20	25	8.11
14	4.45	30	6.10	Apr. 12	3.68	31	7.97
21	3.11	July 7	5.28	19	2.48	Sept. 6	8.44
28	4.30	14	4.98	26	3.39	13	8.57
Oct. 6	5.27	21	5.32	May 10	3.15	20	4.88
13	2.42	28	5.02	17	2.85	27	4.96
20	3.49	Aug. 4	6.92	24	3.15	Oct. 7	3.8
24	4.05	11	7.43	31	3.48	8	8.1
Nov. 3	4.00	18	7.90	June 9	4.97	9	8.68
10	2.97	25	8.05	14	4.92	10	8.24
17	2.57	31	8.53	20	5.90	11	8.01
Jan. 19, 1951	3.05	Sept. 8	8.75	27	6.52	13	8.88
Apr. 28	2.73	15	8.98	July 7	7.22	17	4.45

Cu 6--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 21, 1952	4.92	June 20, 1953	4.85	Apr. 28, 1954	2.69	July 31, 1954	8.50
26	4.01	26	5.42	May 3	3.05	Aug. 14	9.19
Nov. 3	4.12	Aug. 13	8.51	9	2.77	21	9.53
16	3.12	20	8.98	15	3.16	28	9.65
22	2.56	28	9.29	22	4.69	Sept. 4	8.84
Apr. 10, 1953	2.91	Sept. 4	9.52	29	5.48	11	8.65
26	2.78	12	9.75	June 12	5.56	18	8.94
May 6	2.83	28	8.32	18	4.81	25	8.12
15	2.88	Oct. 17	9.09	26	5.30	Oct. 2	8.12
22	2.95	30	9.80	July 8	6.69	10	7.67
29	2.85	Nov. 28	5.50	15	7.27	17	3.29
June 5	3.05	Apr. 7, 1954	2.70	17	7.45	24	3.95
11	4.35	18	2.83	24	8.01	31	3.78
17	5.04						

j Pumped dry for performance test after this measurement.

k Recovering from Oct. 7, 1952 pump test.

Chemung County

Cm 83. Wallace Dailey. Near Lowman. Lat. 42°04'43", long. 76°41'01". Dug domestic water-table well in glacial till of Pleistocene age, diameter 30 inches, depth 21 feet, stone-lined. Land-surface datum is about 1,480 feet above msl. Highest water level 2.46 below lsd, Mar. 25, 1950; lowest 12.93 below lsd, Oct. 23, 1954. Records available: 1946-54.

Jan. 11	10.06	Apr. 17	3.90	July 12	11.54	Oct. 6	12.79
16	10.20	24	3.20	17	11.74	9	12.78
30	10.90	May 1	3.15	24	11.89	16	12.90
Feb. 6	9.10	8	3.10	31	12.23	23	12.93
13	9.09	15	3.55	Aug. 7	12.30	30	12.80
20	8.40	22	4.10	14	12.28	Nov. 6	12.75
27	5.55	29	6.90	30	12.47	13	12.69
Mar. 7	3.55	June 5	7.90	Sept. 4	12.49	20	12.42
13	4.40	12	8.70	11	12.50	27	12.17
20	3.79	19	9.45	18	12.49	Dec. 4	11.56
27	3.33	26	10.25	25	12.45	11	11.10
Apr. 3	3.24	July 3	10.80	Oct. 2	12.64	18	9.88
10	3.50	10	11.37				

Cm 84. Remington Rand Inc. South Main St., Elmira. Lat. 42°04'17", long. 76°47'47". Drilled unused artesian(?) well in glacial outwash of Pleistocene age, diameter 6 inches, depth 257 feet. Land-surface datum is about 850 feet above msl. Highest water level 15.35 below lsd, Apr. 3, 1950; lowest 20.93 below lsd, Nov. 1, 1954. Records available: 1947-54.

Jan. 4	17.73	Apr. 5	16.44	July 5	17.00	Oct. 11	20.66
11	17.75	12	16.46	12	17.33	18	20.64
18	17.80	19	16.41	19	17.60	25	20.81
25	17.76	26	16.33	26	18.13	Nov. 1	20.93
Feb. 1	17.54	May 3	15.96	Aug. 16	18.89	8	20.75
8	17.30	10	15.84	22	19.49	15	20.71
15	17.10	17	15.97	30	19.81	22	20.45
22	16.90	24	16.26	Sept. 6	20.02	28	20.02
28	16.75	31	16.49	13	20.25	Dec. 6	19.66
Mar. 8	16.36	June 7	16.59	20	20.20	13	19.44
15	16.42	14	16.47	27	20.50	20	18.66
22	16.51	21	16.66	Oct. 4	20.57	27	18.88
29	16.46	28	16.74	6	20.70		

Cortland County

C 19. City of Cortland. Broadway, Cortland. Lat. 42°35'45", long. 76°11'45". Dug unused water-table well in glacial gravel of Pleistocene age, diameter 6 inches, depth 12 feet, cased to 12, open end, no perforations. Land-surface datum is about 1,150 feet above msl. Highest water level 2.98 below lsd, Apr. 5, 1947; lowest 7.74 below lsd, Sept. 29, 1953. Records available: 1947-54. In December 1953 a 12-foot length of 6-inch casing was set in the center of the 40-foot well. The well was then filled in around the 6-inch casing.

Oct. 7	6.46	Oct. 30	6.93	Nov. 20	5.95	Dec. 11	5.00
16	6.53	Nov. 6	6.80	27	5.65	18	4.07
23	6.85	13	6.12	Dec. 4	5.24	25	4.17

Dutchess County

Du 321. U. S. National Park Service. Near Hyde Park. Lat. 41°47'38", long. 73°56'33". Drilled unused artesian well, diameter 6 inches, depth 128 feet. Land-surface datum is about 170 feet above msl. Highest water level 65.62 below lsd, June 22, 1953; lowest 71.29 below lsd, Dec. 10, 1949. Records available: 1948-50, 1953-54. Recording gage installed Apr. 22, 1953.

Water level from nonrecording gage, 1948

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 30	70.17	Oct. 23	70.03	Nov. 13	69.96	Dec. 3	70.11
Oct. 1	69.87	24	69.97	14	69.93	4	70.05
2	69.74	25	69.94	15	69.94	5	70.05
3	69.76	26	69.94	16	70.00	6	70.02
4	69.86	27	69.93	17	69.99	7	70.02
5	69.87	28	70.00	18	70.02	8	69.98
6	69.82	29	69.99	19	70.09	9	70.05
7	69.81	30	69.95	20	69.88	10	70.08
8	69.72	31	69.97	21	69.88	11	70.05
11	69.74	Nov. 1	69.94	22	69.93	12	70.06
12	69.79	2	69.99	23	69.96	13	70.08
13	69.79	3	70.03	24	69.95	14	70.06
14	69.81	4	69.94	25	69.93	15	70.14
15	69.87	5	69.92	26	70.00	16	70.12
16	69.86	6	69.90	27	69.95	17	70.07
17	69.86	7	69.89	28	69.99	18	70.07
18	69.85	8	70.00	29	69.98	19	70.00
19	69.85	9	70.04	30	70.01	20	69.98
20	69.86	10	69.99	Dec. 1	70.05	21	70.00
21	69.94	11	69.93	2	70.10	22	70.04
22	70.02	12	70.00				

Water level from nonrecording gage, 1949

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	69.29	69.35	68.87	68.76	68.78	68.84	69.27	69.68	70.42	70.88	70.90	71.07
2	69.39	69.39	68.95	.....	68.75	68.81	69.30	69.75	70.50	71.00	70.90	71.03
3	69.59	69.45	68.97	.....	68.69	68.84	69.30	69.78	70.59	70.88	70.91	.....
4	69.72	69.39	69.05	68.80	68.69	68.86	69.03	69.78	70.59	70.94	70.88	.....
5	69.74	69.31	68.99	68.84	68.70	68.84	69.24	69.78	70.60	70.85	70.94	71.15
6	69.50	69.37	68.88	68.56	68.65	68.78	69.25	69.79	70.49	70.85	71.00	71.10
7	69.35	69.37	68.89	68.67	.....	68.76	69.27	69.80	70.51	70.87	71.00	71.13
8	69.37	69.35	68.97	68.67	68.64	.....	69.31	69.77	70.52	70.88	71.00	71.13
9	69.47	69.31	68.97	68.71	68.63	68.91	69.39	69.75	70.50	70.89	71.02	71.20
10	69.52	69.31	68.95	68.82	68.63	68.96	69.40	69.77	70.57	70.87	71.09	71.29
11	69.55	69.30	68.85	68.86	68.66	68.94	69.31	69.82	70.66	70.89	71.04	.....
12	69.50	69.40	68.80	68.86	68.68	68.93	69.33	69.86	70.77	70.89	71.10	.....
13	69.42	69.37	68.81	68.80	68.68	68.91	69.30	69.90	70.79	70.92	71.08	71.15
14	69.36	69.32	68.88	68.66	68.70	68.94	69.29	69.93	70.71	71.00	71.03	71.05
15	69.47	69.25	68.92	68.67	68.71	68.98	69.32	69.98	70.69	70.98	70.98	71.05
16	69.52	69.17	68.93	68.67	68.75	69.01	69.37	70.02	70.68	70.95	71.00	71.06
17	69.48	69.16	68.96	68.65	68.77	69.05	69.43	70.05	70.70	71.03	71.00	71.10
18	69.55	69.23	68.90	68.75	68.79	69.07	69.44	70.02	70.72	71.04	71.00	71.03
19	69.50	69.26	68.90	68.75	68.75	69.08	69.45	70.03	70.64	70.98	71.02	71.03
20	69.62	69.17	69.00	68.76	68.69	69.08	69.46	.....	70.60	70.94	70.77	71.04
21	69.65	69.07	69.05	68.79	68.62	69.05	69.45	70.06	70.65	70.92	71.00	71.02
22	69.53	69.27	69.00	68.78	68.67	69.00	69.47	70.04	70.69	70.91	71.08	71.01
23	69.51	69.13	68.87	68.72	68.58	68.98	69.53	70.17	70.64	70.91	71.03	70.90
24	69.51	69.13	68.87	68.63	68.58	69.04	69.50	70.19	70.66	70.97	71.13	71.04
25	69.45	69.09	68.92	68.68	68.57	69.10	69.51	70.25	70.78	71.07	71.09	71.15
26	69.50	69.03	.....	68.73	68.62	68.97	69.51	70.32	70.91	71.03	71.06	71.21
27	69.41	69.07	.....	68.70	68.62	68.97	69.54	70.34	70.97	71.06	71.10	71.07
28	69.33	69.00	68.74	68.69	68.68	69.05	69.55	70.38	70.93	.....	71.18	70.95
29	69.26		68.87	68.77	68.77	69.14	69.58	70.37	70.85	71.07	71.17	70.93
30	69.37		68.84	68.88	68.75	69.21	69.63	70.37	70.80	71.07	71.05	71.00
31	69.36		68.82		68.73		69.66	70.44		71.00		71.08

Water level from nonrecording gage, 1950

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	71.06	Jan. 4	70.88	Jan. 7	70.82	Jan. 10	70.93
2	71.03	5	70.92	8	70.88	11	70.80
3	70.96	6	70.98	9	70.95	12	70.88

Du 321--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 13	70.93	Feb. 5	70.88	Mar. 1	70.75	Mar. 23	70.50
14	70.86	6	70.88	2	70.76	24	70.35
15	70.82	7	70.81	3	70.78	25	70.37
16	70.81	9	70.91	4	70.92	26	70.47
17	70.87	10	70.90	5	70.96	27	70.50
18	70.82	11	70.89	6	70.83	28	70.41
19	70.82	12	70.80	7	70.86	29	70.36
21	70.89	13	70.84	8	70.83	30	70.39
22	70.91	14	70.83	9	70.59	31	70.50
23	70.85	15	70.73	10	70.63	Apr. 1	70.56
24	70.85	16	70.62	11	70.73	2	70.50
25	70.88	17	70.60	12	70.70	3	70.47
26	70.87	18	70.66	13	70.65	4	70.42
27	70.87	20	70.65	14	70.60	5	70.36
28	70.94	21	70.73	15	70.65	6	70.38
29	70.84	22	70.71	16	70.67	7	70.45
30	70.80	23	70.61	17	70.66	8	70.46
31	70.83	24	70.62	18	70.57	9	70.46
Feb. 1	70.85	25	70.65	19	70.66	10	70.52
2	70.85	26	70.71	20	70.74	11	70.49
3	70.80	27	70.76	21	70.72	12	70.42
4	70.83	28	70.81	22	70.63		

Water level from recorder graph, 1953

Apr. 22	65.92	July 22	67.56	Sept. 16	68.87	Nov. 11	69.64
30	66.07	29	67.69	23	69.09	18	69.66
May 6	65.90	Aug. 5	67.92	30	69.29	25	69.58
12	65.89	12	68.08	Oct. 7	69.28	Dec. 3	69.80
19	65.80	19	68.36	14	69.56	9	69.57
June 21	65.63	26	68.56	21	69.58	16	69.38
22	65.62	Sept. 2	68.76	28	69.51	23	69.55
28	66.00	9	68.87	Nov. 4	69.59	30	69.60

Water level from recorder graph, 1954

Jan. 6	69.63	Apr. 7	69.84	July 5	69.77	Oct. 9	70.64
13	69.75	14	69.72	12	70.03	18	70.57
20	69.89	21	69.75	19	70.02	25	70.62
27	69.79	28	69.57	26	70.24	Nov. 3	70.37
Feb. 3	69.74	May 5	69.52	Aug. 2	70.23	10	70.54
10	69.70	12	69.36	9	70.43	16	70.46
18	69.76	19	69.47	16	70.50	23	70.13
24	69.75	26	69.46	23	70.80	29	70.09
Mar. 3	69.72	June 1	69.46	Sept. 1	70.50	Dec. 6	70.23
10	69.61	7	69.49	6	70.71	13	70.27
17	69.77	14	69.61	13	70.55	20	69.91
24	69.78	21	69.60	24	70.56	27	70.16
31	69.75	28	69.71	Oct. 1	70.57		

Erie County

E 200. Stanley Cole. West Church St., Eden. Lat. 42°39'28", long. 78°53'56". Drilled unused well, diameter 8 inches, depth 26 feet. Land-surface datum is about 810 feet above msl. Highest water level 2.25 below lsd, May 8, 1954; lowest 4.77 below lsd, Nov. 28, 1953. Records available: 1953-54.

June 18, 1953	2.74	Sept. 12, 1953	3.96	Dec. 5, 1953	4.54	Feb. 27, 1954	2.94
27	2.91	19	4.05	12	4.28	Mar. 6	2.81
July 4	3.05	26	4.06	19	4.13	13	2.83
11	3.19	Oct. 3	4.17	26	3.99	20	2.78
19	3.30	10	4.28	Jan. 2, 1954	3.99	27	2.65
25	3.50	17	4.39	9	3.98	Apr. 3	2.58
Aug. 1	3.62	24	4.50	16	4.02	10	2.50
8	3.61	31	4.60	23	3.81	17	2.31
15	3.55	Nov. 7	4.72	30	3.50	24	2.27
22	3.65	14	4.73	Feb. 6	3.47	May 1	2.27
29	3.74	21	4.76	13	3.48	8	2.25
Sept. 5	3.96	28	4.77	20	3.08	15	2.29

E 200--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 22, 1954	2.38	July 17, 1954	3.04	Sept. 11, 1954	4.36	Nov. 6, 1954	3.36
29	2.47	24	3.25	18	4.46	13	3.36
June 5	2.49	31	3.60	25	4.49	20	3.33
12	2.50	Aug. 7	3.74	Oct. 2	4.54	27	3.28
19	2.60	14	3.91	9	4.46	Dec. 4	3.23
26	2.65	21	3.97	16	3.78	11	3.27
July 3	2.72	28	4.14	23	3.69	18	3.06
10	2.96	Sept. 4	4.24	30	3.60	25	3.06
July 15	2.96						

Franklin County

F 9. Arthur Fletcher. Near Bloomingdale. Lat. 44°25'36", long. 74°03'30". Dug unused water-table well in glacial till of Pleistocene age, diameter 4 feet, depth 11 feet, stone-lined. Land-surface datum is about 1,680 feet above msl. Highest water level 2.68 below lsd, Mar. 30, 1951; lowest 8.72 below lsd, Oct. 3, 1952. Records available: 1949-54.

Jan. 1	7.50	Apr. 9	3.68	July 2	4.71	Oct. 8	4.77
8	7.50	16	3.80	9	5.00	15	4.41
15	7.31	23	3.56	16	5.66	22	5.22
22	6.88	30	3.90	23	5.44	29	5.10
29	7.18	May 7	4.07	30	5.33	Nov. 5	4.53
Feb. 5	7.20	14	4.42	Aug. 6	5.02	12	5.01
12	7.29	21	5.06	13	4.94	19	5.08
19	7.32	28	4.83	20	5.51	26	4.64
26	7.33	June 4	4.41	Sept. 3	5.39	Dec. 3	4.72
Mar. 5	7.24	7	4.30	10	5.22	10	5.02
12	4.87	11	5.02	17	4.65	17	4.95
19	5.50	18	5.02	24	4.55	24	4.83
26	3.93	25	5.09	Oct. 1	5.02	31	4.02
Apr. 2	4.40						

Genesee County

Gs 2. Paul Rigoni. Near Pavilion. Lat. 42°55'16", long. 78°03'17". Dug unused water-table well in glacial till of Pleistocene age, diameter 36 inches, depth 21 feet, stone-lined. Land-surface datum is about 1,045 feet above msl. Highest water level 0.58 below lsd, Dec. 18, 1954; lowest 5.04 below lsd, Nov. 7, 1953. Records available: 1950-54.

Sept. 14, 1950	4.78	Feb. 6, 1954	1.65	May 29, 1954	2.10	Sept. 11, 1954	4.63
May 8, 1951	1.91	13	1.69	June 5	2.23	18	4.58
Oct. 23, 1952	4.98	20	1.00	12	2.34	25	4.63
June 2, 1953	1.18	27	.93	19	2.65	Oct. 2	4.47
19	2.29	Mar. 6	.78	26	2.87	9	4.36
Oct. 31	4.92	13	1.86	July 3	2.99	16	3.37
Nov. 7	5.04	20	1.52	10	3.29	23	3.52
14	4.96	27	1.03	15	3.46	30	3.03
21	5.00	Apr. 3	.63	17	3.35	Nov. 6	1.66
28	4.57	10	1.00	24	3.82	13	2.00
Dec. 5	4.63	17	.80	31	3.90	20	2.17
26	2.12	24	.67	Aug. 7	4.13	27	1.80
Jan. 2, 1954	2.31	May 1	.90	14	4.24	Dec. 4	1.52
9	2.38	8	1.03	21	4.40	11	1.04
16	2.44	15	1.65	28	4.55	18	.58
23	1.91	22	2.00	Sept. 4	4.49	25	1.00
30	1.11						

Greene County

G 1. Magnus Andersen. Near West Coxsackie. Lat. 42°23'20", long. 73°48'19". Dug domestic water-table well in glacial till(?) of Pleistocene age, diameter 36 inches, depth 19 feet. Land-surface datum is about 125 feet above msl. Highest water level 1.34 below lsd, May 10, 1954; lowest 12.75 below lsd, Nov. 1, 1948. Records available: 1945-54.

Jan. 4	6.81	Feb. 15	5.51	Mar. 29	4.01	May 10	1.34
11	7.42	22	2.51	Apr. 5	4.28	17	2.90
18	7.72	Mar. 1	2.06	12	3.98	24	2.13
25	6.82	8	2.58	19	2.00	31	3.22
Feb. 1	5.38	15	2.33	26	3.22	June 7	3.94
8	5.15	22	3.03	May 3	2.02	14	4.38

G 1--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 21	4.65	Aug. 16	7.03	Oct. 4	5.57	Nov. 15	7.47
28	5.08	23	7.26	11	5.95	22	7.65
July 5	5.47	31	7.42	13	6.07	29	6.49
12	5.94	Sept. 6	6.22	18	6.56	Dec. 6	5.43
19	6.33	13	5.70	25	8.44	13	5.45
26	6.49	20	5.17	Nov. 1	8.71	20	2.67
Aug. 5	6.49	27	5.29	8	7.65	27	4.14
9	6.97						

Jefferson County

J 21. State Department of Conservation. Near Rodman. Lat. 43°48'53", long. 75°52'16". Dug unused water-table well in glacial till(?) of Pleistocene age, diameter 36 inches, depth 16 feet. Land-surface datum is about 1,300 feet above msl. Highest water level 1.09 below lsd, Dec. 3, 1950; lowest 8.51 below lsd, Sept. 12, 1953. Records available: 1949-54.

Jan. 2	2.16	Apr. 10	1.68	July 10	4.55	Oct. 2	1.89
9	2.67	17	1.67	17	5.45	9	2.34
16	2.87	24	2.64	24	6.12	16	2.77
23	1.22	May 1	1.89	31	4.67	23	1.22
30	1.21	8	2.23	Aug. 7	5.34	30	1.66
Feb. 6	2.78	15	2.29	12	6.97	Nov. 6	1.76
13	2.89	22	2.45	14	6.45	13	1.42
20	1.34	29	2.24	21	6.70	20	2.27
27	1.92	June 5	1.21	28	7.27	27	1.21
Mar. 6	1.22	9	2.76	Sept. 4	4.32	Dec. 4	1.24
13	2.45	12	3.07	11	3.21	11	2.37
20	1.45	19	4.12	18	2.13	18	1.57
27	1.67	26	4.54	25	1.76	25	1.43
Apr. 3	2.19	July 3	3.76				

Lewis County

L 1. State Department of Conservation. Near West Leyden. Lat. 43°29'32", long. 75°27'40". Dug domestic water-table well in glacial till(?) of Pleistocene age, diameter 36 inches, depth 19 feet. Land-surface datum is about 1,670 feet above msl. Highest water level 3.20 below lsd, Mar. 30, 1951; lowest 10.63 below lsd, Aug. 19, 1949. Records available: 1949-53. Measurement discontinued.

Livingston County

Lv 1. William Redmond. 33 North St., Geneseo. Lat. 42°48'00", long. 77°48'46". Dug unused water-table well in glacial till(?) of Pleistocene age, diameter 36 inches, depth 28 feet, stone-lined. Land-surface datum is about 790 feet above msl. Highest water level 0.3 below lsd, Mar. 15, 1945; lowest 9.74 below lsd, Nov. 29, 1952. Records available: 1942-54.

Jan. 26	6.05	Apr. 24	3.97	July 24	6.49	Oct. 25	6.30
Feb. 25	4.08	May 26	4.88	Aug. 25	6.80	Nov. 26	5.90
Mar. 25	4.23	June 25	5.17	Sept. 24	6.65	Dec. 28	5.78

Madison County

M 127. Nels Merrill. Near Chittenango. Lat. 43°00'25", long. 75°49'26". Dug unused water-table well in glacial till of Pleistocene age, diameter 24 inches, depth 16 feet, stone-lined. Land-surface datum is about 1,100 feet above msl. Highest water level 2.55 below lsd, Feb. 21, 1953; lowest 7.55 below lsd, Sept. 18, 1954. Records available: 1950-54.

Jan. 2	5.10	Mar. 6	5.61	May 8	4.84	July 3	5.95
9	5.15	13	5.96	15	5.40	10	6.15
16	5.40	20	5.91	22	5.46	17	6.39
23	4.95	27	5.46	29	5.70	24	6.52
30	5.48	Apr. 3	5.22	June 5	5.31	31	6.68
Feb. 6	5.85	10	5.01	11	5.61	Aug. 7	6.90
13	5.55	17	4.20	12	5.55	14	6.02
20	5.20	24	4.41	19	5.84	21	7.27
27	5.50	May 1	4.88	26	5.91	28	7.39

M 127--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Sept. 4	7.45	Oct. 9	7.32	Nov. 6	5.20	Dec. 4	5.30
11	7.51	16	7.35	13	5.13	11	5.37
18	7.55	23	7.40	20	4.80	18	5.46
25	7.49	30	6.59	27	5.03	25	5.48
Oct. 2	7.44						

Montgomery County

Mt 1. Floyd Groff. Near St. Johnsville. Lat. 43°01'43", long. 74°42'38". Dug unused water-table well in glacial till of Pleistocene age, diameter 24 inches, depth 12 feet, stone-lined. Land-surface datum is about 720 feet above msl. Highest water level 4.08 below lsd, Apr. 15, 1948; lowest 9.99 below lsd, Aug. 28, 1949. Records available: 1942-54.

Jan. 2	7.55	Apr. 10	6.00	July 3	7.82	Oct. 2	9.46
9	7.71	17	4.76	10	8.15	9	9.32
16	7.89	24	5.39	17	8.49	16	9.25
23	7.65	May 1	5.56	24	8.82	23	9.20
30	7.00	8	5.84	31	9.09	30	9.18
Feb. 6	7.43	15	5.70	Aug. 7	9.31	Nov. 6	8.65
13	7.73	22	6.39	14	9.52	13	8.32
20	6.34	29	6.67	21	9.72	20	8.30
27	6.55	June 5	6.37	28	9.92	27	7.32
Mar. 6	6.44	11	6.77	Sept. 4	9.74	Dec. 4	6.80
13	6.80	12	6.88	11	9.85	11	7.25
20	6.93	19	7.18	18	9.68	18	7.22
27	6.36	26	7.50	25	9.48	27	7.24
Apr. 3	6.22						

Niagara County

Ni 30. Richard Tower. Near Youngstown. Lat. 43°15'17", long. 78°59'19". Dug unused water-table well in lacustrine silt and clay of Pleistocene age, diameter 36 inches, depth 25 feet, stone-lined. Land-surface datum is about 300 feet above msl. Highest water level 2.49 below lsd, Apr. 25, 1954; lowest 9.34 below lsd, Oct. 2, 1954. Records available: 1950-54.

Jan. 2	5.24	Apr. 11	2.58	July 10	6.46	Oct. 2	9.34
9	5.19	18	2.88	15	6.77	9	8.11
16	5.38	25	2.49	17	6.95	16	6.95
23	4.71	May 1	2.84	24	7.52	23	6.56
30	4.24	8	3.03	31	7.76	30	6.29
Feb. 6	4.10	15	3.95	Aug. 7	8.09	Nov. 6	5.64
13	3.87	22	3.47	14	8.46	13	4.95
20	2.81	29	4.16	21	8.67	20	4.74
27	3.05	June 5	4.82	28	8.99	27	4.27
Mar. 6	3.07	12	5.27	Sept. 4	9.06	Dec. 4	3.98
13	3.58	19	5.49	11	9.11	11	3.50
20	3.08	26	5.96	18	9.27	18	3.19
27	2.96	July 3	6.19	25	9.08	25	3.38
Apr. 4	2.91						

Otsego County

Og 22. Clarke Estate, Iroquois Farm. Near Cooperstown. Lat. 42°40'58", long. 74°55'23". Dug unused water-table well in glacial outwash of Pleistocene age, diameter 42 inches, depth 12 feet, stone-lined. Land-surface datum is about 1,230 feet above msl. Highest water level 4.65 below lsd, Sept. 2, 1950; lowest 8.13 below lsd, Sept. 5, 1953. Records available: 1948-54. Recording gage temporarily installed for the period Oct. 20-Nov. 19, 1953.

June 16, 1948	6.75	Sept. 4, 1948	7.22	Nov. 28, 1948	6.57	Feb. 19, 1949	6.29
19	6.60	11	7.44	Dec. 4	6.57	26	6.16
30	6.85	18	7.58	11	6.55	Mar. 5	6.27
July 3	6.99	25	7.64	18	6.61	12	6.30
10	6.88	Oct. 2	7.71	25	6.68	19	6.48
17	7.04	9	7.70	Jan. 1, 1949	6.29	26	6.48
24	6.30	16	7.61	8	6.01	Apr. 2	6.33
31	7.18	23	7.47	15	6.27	9	6.25
Aug. 8	6.71	30	7.36	22	6.31	16	6.46
14	6.68	Nov. 7	6.90	29	6.47	25	6.48
21	6.76	14	6.84	Feb. 5	6.48	30	6.50
28	6.88	21	6.72	12	6.48	May 8	6.44

Og 22--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 15, 1949	6.52	Apr. 15, 1950	6.46	Mar. 17, 1951	6.52	Feb. 9, 1952	6.46
22	6.58	22	6.41	24	6.39	16	6.52
29	6.67	29	6.48	31	6.09	23	6.64
June 4	6.76	May 6	6.57	Apr. 7	6.36	Mar. 1	6.73
11	6.90	13	6.49	14	6.33	8	6.62
18	7.18	20	6.42	21	6.43	15	6.55
25	7.21	27	6.49	28	6.48	22	6.44
July 2	7.24	June 3	6.57	May 5	6.48	29	6.40
9	7.44	10	6.52	12	6.55	Apr. 5	6.25
16	7.56	17	6.72	19	6.64	12	6.36
24	7.62	24	6.88	26	6.74	19	6.44
30	6.44	July 1	7.00	June 2	6.85	26	6.45
Aug. 6	6.49	8	6.96	9	6.90	May 3	6.56
13	6.54	15	6.92	16	6.80	10	6.61
20	6.68	22	6.86	23	7.10	17	6.50
27	6.99	29	7.32	30	6.49	24	6.47
Sept. 3	6.50	Aug. 5	7.22	July 7	6.54	31	6.45
10	6.54	12	7.50	14	6.58	June 7	6.48
17	6.63	19	7.33	21	6.52	14	6.60
24	6.54	26	6.49	28	6.54	21	6.71
Oct. 1	6.50	Sept. 2	4.65	Aug. 4	6.68	28	6.90
8	6.56	9	6.50	11	6.98	July 5	6.94
15	6.69	16	6.60	18	6.76	12	6.48
22	6.72	23	6.62	25	7.16	19	6.51
29	6.68	30	6.75	Sept. 1	7.22	26	6.50
Nov. 5	6.60	Oct. 7	6.86	8	7.01	Aug. 2	6.56
12	6.54	14	6.90	15	7.32	9	6.61
19	6.48	21	6.98	22	7.40	16	6.61
26	6.54	28	7.16	29	7.29	23	6.58
Dec. 3	6.60	Nov. 4	6.52	Oct. 6	6.80	30	6.75
10	6.28	11	6.72	13	6.96	Sept. 6	6.90
17	6.49	18	6.68	20	7.10	13	7.03
24	6.48	25	6.25	27	7.26	20	7.12
31	6.47	Dec. 2	6.46	Nov. 3	6.46	27	7.28
Jan. 7, 1950	6.38	9	6.47	10	6.42	Oct. 4	7.18
15	6.45	16	6.48	17	6.42	11	7.31
21	6.49	23	6.55	24	6.44	18	7.48
28	6.50	30	6.62	Dec. 1	6.46	25	7.55
Feb. 4	6.50	Jan. 6, 1951	6.46	8	6.33	Nov. 1	7.56
11	6.51	13	6.46	15	6.36	8	7.55
18	6.52	20	6.48	22	6.39	15	7.55
25	6.68	27	6.48	29	6.24	22	7.49
Mar. 4	6.72	Feb. 3	6.45	Jan. 5, 1952	6.36	29	7.21
11	6.46	10	6.48	12	6.46	Dec. 6	6.57
18	6.49	17	6.49	19	6.42	13	6.36
25	6.50	24	6.48	26	6.04	20	6.40
Apr. 1	6.47	Mar. 3	6.51	Feb. 2	6.26	27	6.49
8	6.43	10	6.52				

Daily noon water level from recorder graph, 1953

Jan. 3	h6.61	May 23	h6.49	Oct. 3	h7.61	Nov. 6	7.11
10	h6.58	30	h6.65	10	h7.51	7	7.10
17	h6.60	June 6	h6.79	17	h7.46	8	7.10
24	h6.09	13	h6.88	20	h7.40	9	7.10
31	h6.47	20	h7.05	21	7.39	10	7.08
Feb. 7	h6.48	27	h7.20	22	7.38	11	7.03
14	h6.50	July 4	h7.39	23	7.37	12	6.98
21	h6.49	11	h7.56	24	7.36	13	6.93
28	h6.48	18	h7.61	25	7.35	14	6.90
Mar. 7	h6.47	25	h7.69	26	7.34	15	6.85
14	h6.45	Aug. 1	h7.75	27	7.34	16	6.81
21	h6.42	8	h7.80	28	7.33	17	6.79
23	h6.20	15	h7.96	29	7.32	18	6.78
Apr. 4	h6.35	22	h7.80	30	7.10	19	6.77
11	h6.42	29	h7.07	31	7.07	21	h6.68
18	h6.47	Sept. 5	h8.13	Nov. 1	7.07	28	h6.48
25	h6.53	12	h7.99	2	7.08	Dec. 7	h6.34
May 2	h6.38	19	h7.88	3	7.09	12	h6.37
9	h6.44	26	h7.79	4	7.09	19	h6.40
16	h6.46	28	h7.79	5	7.10	26	h6.45

h Tape measurement.

Og 22--Continued.

Water level below lsd, 1954

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	6.53	Apr. 3	6.45	July 3	6.99	Oct. 2	7.21
9	6.60	10	6.34	10	7.17	9	7.16
16	6.65	17	6.21	17	7.34	16	7.18
23	6.60	24	6.43	24	7.47	23	7.09
30	6.49	May 1	6.42	31	7.54	30	6.94
Feb. 6	6.52	8	6.40	Aug. 7	7.50	Nov. 6	6.63
13	6.59	15	6.50	14	7.48	13	6.62
20	6.47	22	6.39	21	7.58	20	6.40
27	6.47	29	6.10	28	7.67	27	6.50
Mar. 6	6.47	June 5	6.40	Sept. 4	7.61	Dec. 4	6.49
13	6.48	12	6.48	11	7.56	11	6.54
20	6.47	19	6.61	18	7.44	18	6.52
27	6.43	26	6.78	25	7.29	25	6.50

Rockland County

Ro 18. Palisades Interstate Park. In Bear Mountain section near Doodletown Rd. and Seven Lakes Dr. Lat. 41°18'02", long. 73°59'30". Drilled unused water-table well in glacial drift of Pleistocene age, diameter 6 inches, depth 61 feet. Land-surface datum is about 380 feet above msl. Highest water level 11.15 below lsd, Mar. 14, 1952; lowest 27.87 below lsd, Oct. 31, 1953. Records available: 1949-54. Recording gage temporarily installed for period Jan. 27-Feb. 17, 1954.

Jan. 1	22.75	Feb. 10	j23.10	May 14	12.29	Sept. 10	19.78
8	23.22	11	j23.11	21	13.90	14	18.63
15	23.41	12	j23.17	28	14.65	17	18.20
22	23.92	13	j23.15	June 2	15.02	24	17.45
27	23.68	14	j22.89	4	15.14	Oct. 1	17.43
28	j23.82	15	j22.82	11	15.78	8	17.88
29	j23.84	16	j22.83	18	16.35	15	18.40
30	j23.58	17	j22.71	25	16.82	22	19.27
31	j23.63	Mar. 5	20.67	July 2	17.35	29	19.75
Feb. 1	j23.57	12	18.37	9	17.75	Nov. 5	19.04
2	j23.36	19	17.11	16	18.27	12	18.22
3	j23.38	26	15.87	23	18.77	19	18.15
4	j23.32	Apr. 2	15.20	30	19.40	26	15.28
5	j23.30	9	15.69	Aug. 6	19.75	Dec. 3	14.15
6	j23.32	16	15.70	13	19.82	10	14.43
7	j23.33	23	15.61	20	20.06	17	14.83
8	j23.13	30	15.29	27	20.27	24	13.35
9	j22.99	May 7	15.23	Sept. 3	19.55	31	13.95

j Noon reading from recorder graph.

St. Lawrence County

St 1. Benjamin Compeau. Near Brasher Falls. Lat. 44°51'52", long. 74°46'53". Dug unused water-table well in glacial till(?) of Pleistocene age, diameter 34 inches, depth 21 feet, stone-lined. Land-surface datum is 257.13 feet above msl. Highest water level 3.00 below lsd, Apr. 6, 1947; lowest 17.8 below lsd, Oct. 1-4, 1949. Records available: 1942-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	9.02	6.66	5.10	5.08	5.42	6.80	7.01	8.61	8.65	5.06	6.32	5.14
2	8.92	6.56	4.66	5.08	5.49	6.85	7.06	8.63	8.52	5.05	6.36	5.26
3	8.83	6.49	4.78	5.16	5.55	6.85	7.11	8.65	8.20	5.04	6.35	5.38
4	8.78	6.49	4.92	5.26	5.51	6.82	7.16	8.67	7.50	4.99	5.96	5.50
5	8.71	6.50	5.06	5.30	5.06	6.74	7.22	8.67	6.83	5.04	5.05	5.64
6	8.66	6.56	5.07	5.16	5.07	6.64	7.25	8.67	6.50	5.05	5.14	5.76
7	8.62	6.62	5.09	5.07	5.10	6.59	7.30	8.67	6.37	5.13	5.27	5.85
8	8.50	6.63	5.20	5.05	5.15	6.50	7.34	8.66	6.33	5.26	5.40	5.94
9	8.50	6.66	5.29	5.04	5.08	6.43	7.39	8.65	6.27	5.40	5.52	6.00
10	8.57	6.70	5.40	5.06	5.04	6.50	7.43	8.64	6.28	5.47	5.63	6.00
11	8.57	6.78	5.49	5.06	5.06	6.61	7.48	8.63	6.36	5.49	5.72	5.98
12	8.56	6.81	5.59	5.04	5.07	6.71	7.52	8.63	6.46	5.42	5.81	6.05
13	8.56	6.85	5.66	5.06	5.12	6.80	7.57	8.63	6.52	5.04	5.88	6.11
14	8.56	6.86	5.74	5.06	5.26	6.80	7.64	8.63	6.52	5.05	5.96	6.15
15	8.57	6.91	5.84	5.07	5.39	6.78	7.70	8.62	5.47	5.04	6.03	6.14

St 1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	8.58	6.91	5.91	5.07	5.52	5.79	7.77	8.62	5.55	5.11	6.10	5.77
17	8.61	5.08	5.97	4.95	5.65	5.59	7.84	8.61	5.51	5.31	6.16	5.75
18	8.63	5.08	6.04	5.01	5.73	5.77	7.90	8.61	5.34	5.44	6.22	5.78
19	8.65	5.14	6.07	5.04	5.84	5.93	7.97	8.59	5.40	5.57	6.26	5.49
20	8.66	5.25	6.07	5.04	5.95	6.08	8.03	8.58	5.06	5.68	6.28	5.20
21	8.66	5.26	5.23	5.05	6.06	6.23	8.09	8.58	5.24	5.80	6.28	5.31
22	8.66	4.59	5.08	5.06	6.10	6.37	8.15	8.59	5.22	5.91	5.82	5.42
23	8.62	4.86	5.08	5.07	6.11	6.48	8.20	8.60	5.21	6.00	5.52	5.53
24	8.56	5.03	5.08	5.11	6.16	6.58	8.26	8.62	5.42	6.10	5.39	5.64
25	8.51	5.07	5.04	5.24	6.26	6.68	8.31	8.63	5.56	6.17	5.34	5.72
26	8.47	5.08	4.63	5.36	6.36	6.77	8.35	8.66	5.66	6.24	5.35	5.79
27	8.41	5.08	4.91	5.41	6.45	6.85	8.40	8.68	5.66	6.27	5.38	5.84
28	8.26	5.12	4.99	5.39	6.53	6.89	8.45	8.71	5.77	6.24	5.35	5.84
29	7.79		4.92	5.19	6.61	6.93	8.50	8.74	5.86	6.11	5.25	5.76
30	7.19		5.06	5.32	6.68	6.96	8.54	8.77	5.88	6.18	5.15	5.43
31	6.82		5.07		6.74		8.58	8.77		6.26		5.38

e Estimated.

St 40. State Department of Conservation. Near Brasher Falls. Lat. 44°49'02", long. 74°45'55". Dug domestic water-table well in glacial sand of Pleistocene age, diameter 36 inches, depth 12 feet, concrete cased to 12, open end. Land-surface datum is about 300 feet above msl. Highest water level 3.96 below lsd, Apr. 13, 1954; lowest 7.90 below lsd, Nov. 18, 1953. Records available: 1953-54. Recording gage temporarily installed for the period June 8-Sept. 1, 1954.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 5, 1953	4.67	Oct. 28, 1953	7.53	Apr. 13, 1954	3.96	July 29, 1954	6.55
12	5.22	Nov. 4	7.66	20	4.09	Aug. 6	6.25
19	4.55	11	7.79	27	4.40	13	6.25
26	4.87	18	7.90	May 5	4.06	20	6.50
June 3	5.29	25	7.71	12	4.24	27	6.68
10	5.45	Dec. 1	7.39	19	4.66	Sept. 1	6.47
17	5.77	8	7.29	26	4.91	8	5.91
24	6.15	15	6.70	June 7	5.03	15	5.92
July 1	6.60	22	6.59	10	j5.15	22	5.56
8	6.54	29	6.43	11	j5.19	28	5.65
15	6.62	Jan. 6, 1954	6.60	12	j5.23	Oct. 6	5.02
22	6.97	13	6.81	13	j5.26	13	5.16
29	7.10	20	7.05	14	j5.23	20	5.21
Aug. 6	7.52	27	6.67	15	j4.89	27	5.47
13	6.79	Feb. 3	6.60	16	j4.81	Nov. 6	4.89
20	7.22	10	6.72	17	j4.79	13	5.25
27	7.36	17	6.52	18	j4.85	20	5.44
Sept. 4	7.73	24	6.58	19	j4.94	27	5.01
11	7.44	Mar. 1	5.02	20	j5.02	Dec. 1	4.73
18	7.60	8	5.13	28	5.46	8	5.06
25	7.70	15	5.39	July 8	5.74	15	5.19
Oct. 7	7.80	22	5.21	15	6.09	22	5.08
14	7.26	29	4.25	22	6.32	29	5.26
21	7.33	Apr. 6	4.56				

j Daily highest water level from recorder graph.

St 392. Leland Blevins. Formerly Murray Babcock. Hermon. Lat. 44°28'10", long. 75°13'31". Dug unused water-table well in glacial outwash of Pleistocene age, diameter 36 inches, depth 28 feet. Land-surface datum is about 565 feet above msl. Highest water level 2.85 below lsd, Mar. 28, 1953; lowest 16.19 below lsd, Sept. 17, 1949. Records available: 1949-54.

Jan.	2	12.52	Apr.	3	3.71	June	25	8.02	Sept.	25	7.61
	9	9.78		10	3.64	July	3	9.01	Oct.	2	7.38
	16	10.07		17	3.72		10	9.18		30	6.61
	23	9.70		24	3.82		17	9.34	Nov.	6	4.81
	30	8.61	May	1	4.04		24	10.29		13	5.10
Feb.	6	8.59		8	3.07		31	10.86		20	5.35
	13	8.84		15	4.54	Aug.	7	11.29		27	5.12
	20	6.63		22	5.41		14	11.47	Dec.	4	4.1
	27	4.10		29	6.02		21	11.98		11	5.2
Mar.	6	3.84	June	5	6.24		28	12.62		18	3.2
	13	4.54		9	6.53	Sept.	4	11.39		25	4.3
	20	3.91		12	7.12		11	10.65		31	3.34
	27	3.62		19	7.23		18	8.52			

Schenectady County

Sn 128. City of Schenectady. Lat. 42°49'26", long. 73°59'22". Dug unused water-table well in glacial outwash of Pleistocene age, diameter 47 feet, depth 40 feet. Land-surface datum is 241.36 feet above msl. Highest water level 18.29 below lsd, Feb. 18, 1954; lowest 37.47 below lsd, Feb. 15, 1948. Records available: 1946-54. Water level affected by stage of Mohawk River and pumping from city of Schenectady well field.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	35.55	Apr. 3	34.40	July 3	33.07	Oct. 2	33.00
10	35.90	7	34.57	10	33.67	9	32.99
16	36.75	10	33.32	17	33.10	16	32.68
23	36.82	17	31.22	24	33.12	23	32.58
30	27.55	24	32.42	31	33.40	30	32.05
Feb. 6	29.65	May 1	32.17	Aug. 7	32.83	Nov. 6	30.50
13	31.10	8	30.92	14	32.92	13	32.40
18	18.29	15	30.91	21	33.27	20	32.32
20	22.20	22	30.90	28	33.58	27	30.55
27	31.32	29	32.58	Sept. 4	32.80	Dec. 4	31.00
Mar. 6	31.95	June 5	30.43	11	32.28	11	31.87
13	33.70	12	33.87	18	31.71	18	32.50
20	34.56	19	33.38	25	32.40	25	32.71
27	33.80	26	33.61				

Sn 178. Leroy Kennedy. Near Duanesburg. Lat. 42°45'49", long. 74°08'37". Dug domestic water-table well in glacial gravel of Pleistocene age, diameter 40 inches, depth 14 feet. Land-surface datum is about 670 feet above msl. Highest water level 2.28 below lsd, Dec. 10, 1950; lowest 11.10 below lsd, Aug. 28, 1949. Records available: 1946-54.

Jan. 1	5.06	Apr. 10	5.01	July 12	7.30	Oct. 4	5.16
9	5.08	19	4.68	18	6.94	11	5.23
16	5.07	26	4.96	25	8.13	18	5.18
23	5.05	May 1	4.85	31	7.60	25	5.06
31	5.10	8	4.10	Aug. 7	6.18	31	5.19
Feb. 6	5.06	15	4.90	14	7.48	Nov. 7	4.44
13	5.10	22	4.12	20	8.28	15	5.05
20	3.68	29	5.02	21	8.77	23	4.23
28	4.36	June 5	5.10	30	8.68	30	4.34
Mar. 6	5.13	12	5.32	Sept. 6	5.30	Dec. 7	3.59
13	5.10	19	5.29	13	5.19	14	3.48
20	5.04	26	5.40	20	5.20	20	4.24
27	4.89	July 3	5.60	27	5.18	27	4.70
Apr. 5	5.03						

Steuben County

Sb 200. Roy Calkins. Near Woodhull. Lat. 42°05'34", long. 77°25'18". Dug unused water-table well in glacial till of Pleistocene age, diameter 24 inches, depth 16 feet, stone-lined. Land-surface datum is about 1,420 feet above msl. Highest water level 4.06 below lsd, Mar. 31, 1951; lowest 13.80 below lsd, Dec. 24, 1949. Records available: 1946-54.

Jan. 2	12.25	Apr. 3	5.00	July 3	9.81	Sept. 25	10.91
9	11.56	10	4.90	10	9.90	Oct. 5	11.50
16	10.96	17	5.16	12	10.01	16	11.72
23	10.34	24	5.24	17	9.94	23	11.85
30	9.51	May 1	5.69	24	9.99	30	11.90
Feb. 6	9.30	8	6.14	31	10.10	Nov. 6	11.95
13	8.62	15	6.66	Aug. 7	10.16	13	11.92
21	8.14	22	7.32	14	10.22	20	11.89
27	7.89	29	7.60	21	10.26	27	11.86
Mar. 6	7.43	June 5	8.10	28	10.31	Dec. 4	11.83
13	6.92	12	8.65	Sept. 4	10.39	11	11.80
20	6.00	19	9.51	11	10.55	18	11.78
27	5.49	26	9.74	18	10.72	26	11.75

Sb 240. Corning Glass Works. West Market St., Corning. Lat. 42°08'37", long. 77°03'18". Drilled unused artesian well in glacial outwash of Pleistocene age, diameter 10 inches, depth 78 feet, cased, screened. Land-surface datum is about 940 feet above msl. Highest water level 20.60 below lsd, Apr. 2, 1951; lowest 30.7 below lsd, Oct. 5, 1954. Records available: 1943-44, 1946-54.

Sb 240--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	28.8	Apr. 12	26.0	July 12	28.4	Oct. 5	30.7
11	28.4	19	25.1	19	28.6	11	30.6
18	29.1	26	25.8	26	28.4	18	30.1
25	29.2	May 3	24.4	Aug. 3	30.0	25	30.4
Feb. 1	28.4	10	24.0	9	29.0	Nov. 1	30.6
8	28.3	17	25.7	16	29.4	8	30.1
15	28.8	24	26.7	23	30.0	15	30.2
21	26.5	June 1	27.0	30	30.1	22	30.2
Mar. 1	26.8	7	25.6	Sept. 7	30.4	29	30.2
8	26.0	14	25.8	13	30.3	Dec. 6	30.3
15	26.8	21	27.5	20	30.0	13	30.2
21	27.0	28	28.0	27	30.4	20	29.2
29	26.6	July 6	28.2	Oct. 4	30.6	27	29.0
Apr. 5	26.6						

Washington County

W 264. Village of Salem. North Main St., Salem. Lat. 43°10'27", long. 73°19'43". Dug fire-protection water-table well in glacial gravel of Pleistocene age, approximate size 8 by 12 feet, depth 15 feet. Land-surface datum is 485.5 feet above msl. Highest water level 7.19 below lsd, May 18, 1953; lowest 11.32 below lsd, Oct. 5, 1953. Records available: 1946-54.

Jan. 4	9.96	Apr. 5	9.22	July 5	9.45	Oct. 4	10.36
11	10.28	12	9.22	12	9.60	11	10.59
18	10.46	19	9.21	19	10.29	18	10.68
25	10.77	26	9.20	26	10.41	25	10.70
Feb. 1	9.86	May 3	9.16	Aug. 2	10.46	Nov. 1	10.72
8	10.08	10	9.09	9	10.67	8	10.64
15	10.27	17	8.99	16	10.71	15	10.48
22	9.08	24	8.96	23	10.73	22	10.16
Mar. 1	8.88	31	8.77	30	10.75	29	10.10
8	8.92	June 7	8.85	Sept. 6	10.75	Dec. 6	10.07
15	8.97	14	8.90	13	10.68	13	10.06
22	9.00	21	8.79	20	10.55	20	9.87
29	9.17	28	9.03	27	10.31	27	9.80

Wayne County

Wn 29. Village of Marion. 55 Mill St., Marion. Lat. 43°08'14", long. 77°11'19". Drilled unused artesian well in Lockport dolomite, diameter 8 inches, depth 107 feet, cased to 25. Land-surface datum is about 460 feet above msl. Highest water level 10.03 below lsd, Mar. 30, 1950; lowest 20.83 below lsd, Sept. 11, 1952. Records available: 1947-54.

Jan. 6	18.65	Apr. 7	17.51	July 7	18.96	Sept. 29	19.86
13	18.80	14	17.91	14	19.14	Oct. 6	19.91
20	18.78	21	17.82	21	19.38	13	19.67
27	18.34	28	17.44	28	19.61	20	19.64
Feb. 3	18.30	May 5	17.53	Aug. 4	19.61	Nov. 3	19.3
10	18.37	12	17.76	11	19.85	10	19.2
17	17.94	19	18.16	18	20.10	17	19.1
24	17.95	26	18.43	25	19.93	24	18.9
Mar. 3	17.63	June 2	18.36	Sept. 1	19.72	Dec. 1	19.16
10	17.95	9	18.51	8	19.77	8	18.65
17	18.09	16	18.73	15	19.85	15	18.20
24	18.05	23	18.76	22	19.70	22	17.76
31	18.04	30	18.94				

Westchester County

We 4. Westchester County Jail. Court and Martine Aves., White Plains. Lat. 41°01'52", long. 73°46'04". Drilled unused artesian well in Inwood limestone, diameter 6 inches, depth 398 feet. Land-surface datum is about 215 feet above msl. Highest water level 24.1 below lsd, Apr. 20, 1953; lowest 27.4 below lsd, Feb. 15, Aug. 2, 9, 23, 30, 1954. Records available: 1953-54. Recording gage installed Feb. 6, 1953.

We 4--Continued.

Weekly highest water level from recorder graph

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 9, 1953	25.8	Aug. 3, 1953	26.1	Jan. 25, 1954	27.0	July 19, 1954	27.1
15	25.7	10	26.0	Feb. 1	27.0	26	27.3
22	....	17	26.2	8	27.0	Aug. 2	27.4
Mar. 2	25.7	24	26.3	15	27.4	9	27.4
9	e25.6	31	26.4	22	27.3	16	27.3
16	....	Sept. 7	26.4	Mar. 1	27.3	23	27.4
23	25.0	14	26.6	8	26.9	30	27.4
30	24.7	21	26.7	15	27.0	Sept. 7	27.2
Apr. 6	24.7	28	26.4	22	26.9	13	26.6
14	24.3	Oct. 5	26.9	29	26.7	20	26.1
20	24.1	12	27.0	Apr. 5	26.8	27	26.0
27	24.2	19	27.2	12	27.0	Oct. 4	26.0
May 4	24.4	26	27.3	19	26.8	11	26.0
11	24.4	Nov. 2	27.0	26	26.8	18	26.2
18	24.4	9	27.0	May 3	26.5	25	26.3
25	24.6	16	27.1	10	26.4	Nov. 1	26.3
June 1	24.7	23	27.1	17	26.2	8	26.0
8	25.2	30	27.2	24	26.2	14	26.1
14	25.1	Dec. 7	27.3	June 1	26.6	21	25.8
22	25.3	14	26.9	7	26.4	29	25.4
29	25.4	21	27.0	14	26.8	Dec. 6	25.7
July 6	25.5	28	27.0	21	26.7	13	25.8
13	25.5	Jan. 4, 1954	26.8	28	26.8	20	25.6
20	25.8	11	27.0	July 6	26.9	27	25.5
27	25.6	18	27.2	12	27.1		

e Estimated.

Wyoming County

Wo 1. State Department of Conservation. In Letchworth State Park, near Castile. Lat. 42°37'39", long. 78°00'03". Dug unused water-table well in glacial till(?) of Pleistocene age, diameter 24 inches, depth 14 feet, stone-lined. Land-surface datum is about 1,030 feet above msl. Highest water level 0.5 below lsd, Apr. 5, 1947; lowest 12.94 below lsd, Nov. 22, 1952. Records available: 1942-54. Recording gage installed for period July 16 to Aug. 15, 1954.

Jan. 3	3.79	May 16	3.30	July 25	j7.43	Sept. 5	10.45
9	4.15	23	3.93	26	j7.57	12	10.73
16	4.53	30	4.35	27	j7.70	19	10.97
24	4.71	June 6	4.45	28	j7.83	26	11.18
30	4.17	13	4.46	29	j7.96	Oct. 3	11.38
Feb. 6	4.28	20	4.63	30	j8.06	4	11.40
13	4.64	27	4.91	31	j8.19	10	11.54
20	3.05	July 4	5.21	Aug. 1	j8.29	17	11.60
27	2.39	11	5.43	2	j8.39	24	11.66
Mar. 6	1.05	16	6.04	3	e8.49	31	11.72
14	2.18	17	j6.27	4	e8.58	Nov. 6	11.71
20	2.97	18	j6.44	5	e8.67	13	11.70
28	2.13	19	j6.60	6	e8.77	20	11.70
Apr. 4	1.23	20	j6.75	7	e8.86	27	11.74
11	2.26	21	j6.88	8	j8.94	Dec. 4	11.60
17	1.32	22	j7.02	15	9.44	11	11.43
24	1.52	23	j7.16	22	9.83	18	10.43
May 2	1.66	24	j7.29	29	10.17	25	9.03
9	2.15						

e Estimated.

j Noon reading from recorder graph.

OHIO

By W. C. Walton and R. K. Cash

Scope of Water-Level Program

The observation-well program in Ohio was continued in 1954 in cooperation with the Ohio Department of Natural Resources, Divisions of Water and Wildlife, the Commissioners of Hamilton County, and the city of Canton. Water-level measurements were made in 150 wells, 135 of which were equipped with recording gages. Monthly clocks were installed on 122 recording gages. About 175 water-table wells in an area 6 miles northeast of Dayton were measured during October and November. Monthly water-level measurements were made in 30 wells at Canton. The records of 89 wells are included in this report. Figures 31-36 show the location of the cooperative observation wells. Water-level data were also collected by means of well surveys in Licking, Portage, and Pickaway Counties.

Bulletin 27, The ground-water resources of Summit County, Ohio, by R. C. Smith and G. W. White; Information Circular No. 4, The water resources of Ross County, Ohio, by J. J. Schmidt; and a series of circulars entitled "Monthly summary of ground-water levels in index wells in Ohio," by Paul Kaser, were published in 1954 by the Ohio Department of Natural Resources, Division of Water.

Precipitation

A period of unusual dryness continued from June 1952 through the fall months of 1953 and into the winter months of 1954. Precipitation during 1954 averaged 36.50 inches for the State, or 1.11 inches below normal. The 1954 deficit is small compared with 1953 when the total precipitation of 28.64 inches was 8.98 inches below normal. The pattern of weather conditions throughout the recent dry years, combined with the effects of the drought itself, has resulted in considerable moisture deficiencies in many parts of Ohio. In 1954, above-normal amounts of precipitation fell during March, April, August, and October; below-normal conditions prevailed during the remainder of the year. Rainfall in 1954 exceeded the normal in the northern and south-eastern sections of the State. The greatest departure above average, 9.50 inches, was recorded at Van Wert in northwestern Ohio. Near-normal moisture conditions prevailed over one-third of the State. Negative departures in excess of 5 inches were measured in southwestern and south-central counties. Lancaster had the largest recorded deficiency, 8.33 inches below normal. In general, weather conditions were more favorable for the replenishment and maintenance of ground-water supplies than in 1952 and 1953. Moderate amounts of precipitation in 1954, falling during the height of the wet season in March and April, reduced the moisture deficiency left over from previous months. April was the most favorable month for recharge to the ground-water reservoir. Heavy rainfall in August decreased the seasonal demand for water. The generous supply of rainfall in October, 3.13 inches above normal, was largely responsible for improved moisture conditions at the end of 1954.

Interpretation of Water-Level Fluctuations

The downward trend of water levels during the fall months of 1953 continued into the winter months of 1954. Minimum levels measured in January, February, and March were record lows. Spring rains produced a large amount of recharge, causing water levels to rise substantially in April and May; but this recharge was not sufficient to replenish water taken from storage in previous years. Maximum water levels were below average. The seasonal downward trend of water levels continued from the middle of May to October. Above-normal rainfall in October contributed recharge to the ground-water reservoirs; continued near-normal amounts of precipitation prevented further decline. As a result, yearly net declines were far less than in 1953. Year-end levels averaged 1 foot above those of 1953 in 70 percent of the wells whose records are given in this report. Water-level trends in areas unaffected by heavy pumping are illustrated by the records of 13 observation wells in figures 37, 38, and 39. In general, ground-water conditions improved most in the northern part of the State, where precipitation was above or near normal in 1954.

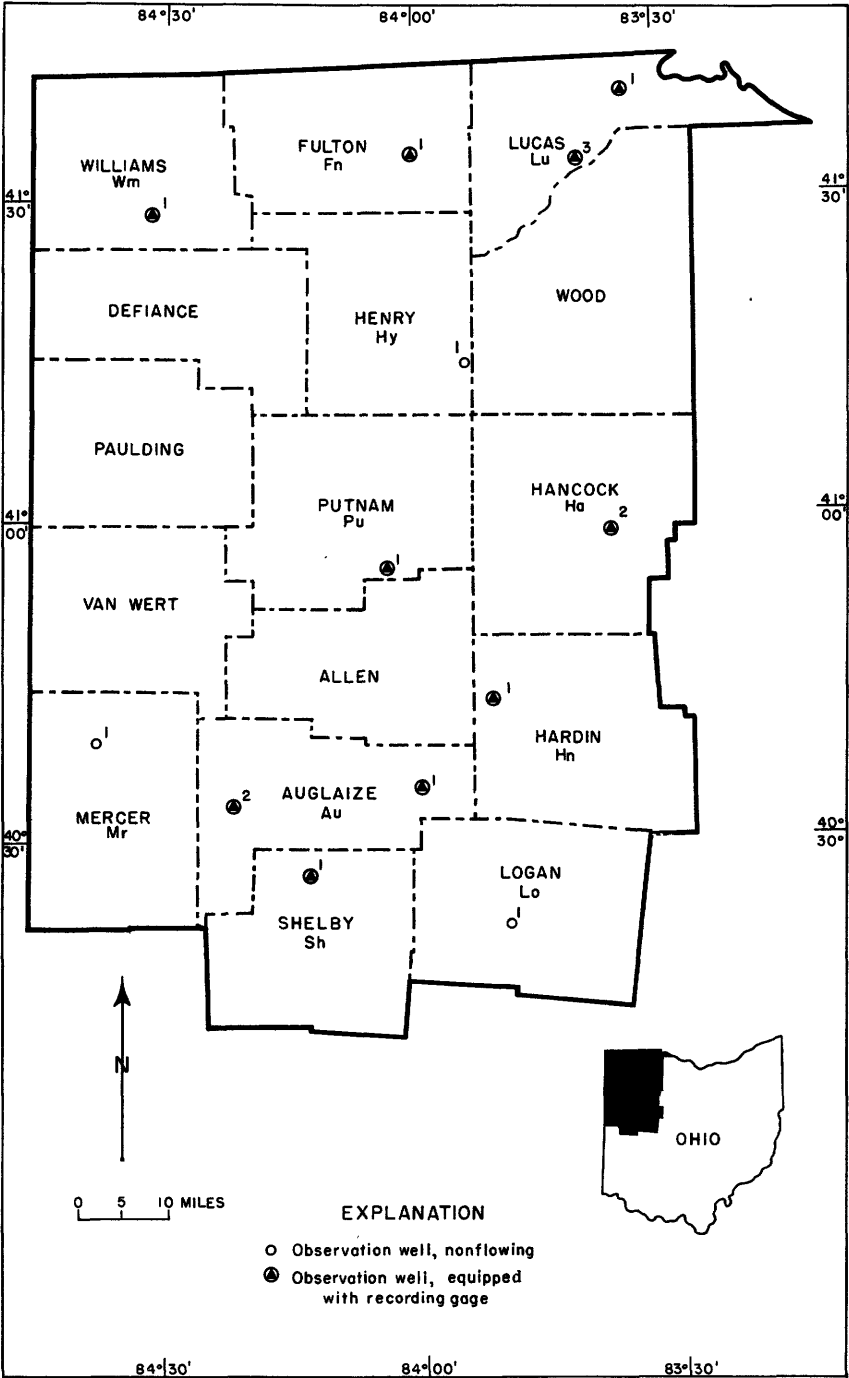


Figure 31. --Location of observation wells in northwestern Ohio, 1954.

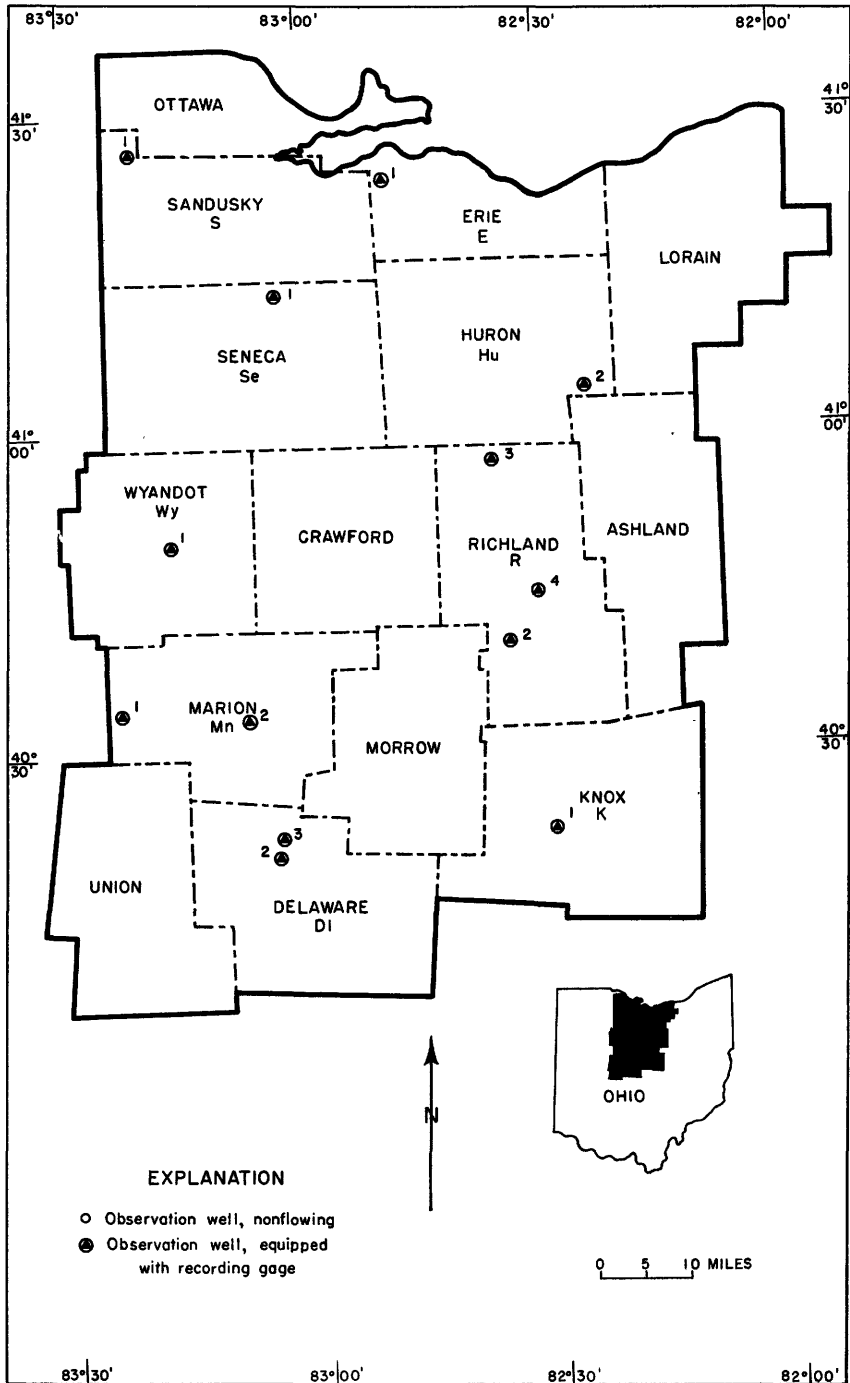


Figure 32. --Location of observation wells in north-central Ohio, 1954.

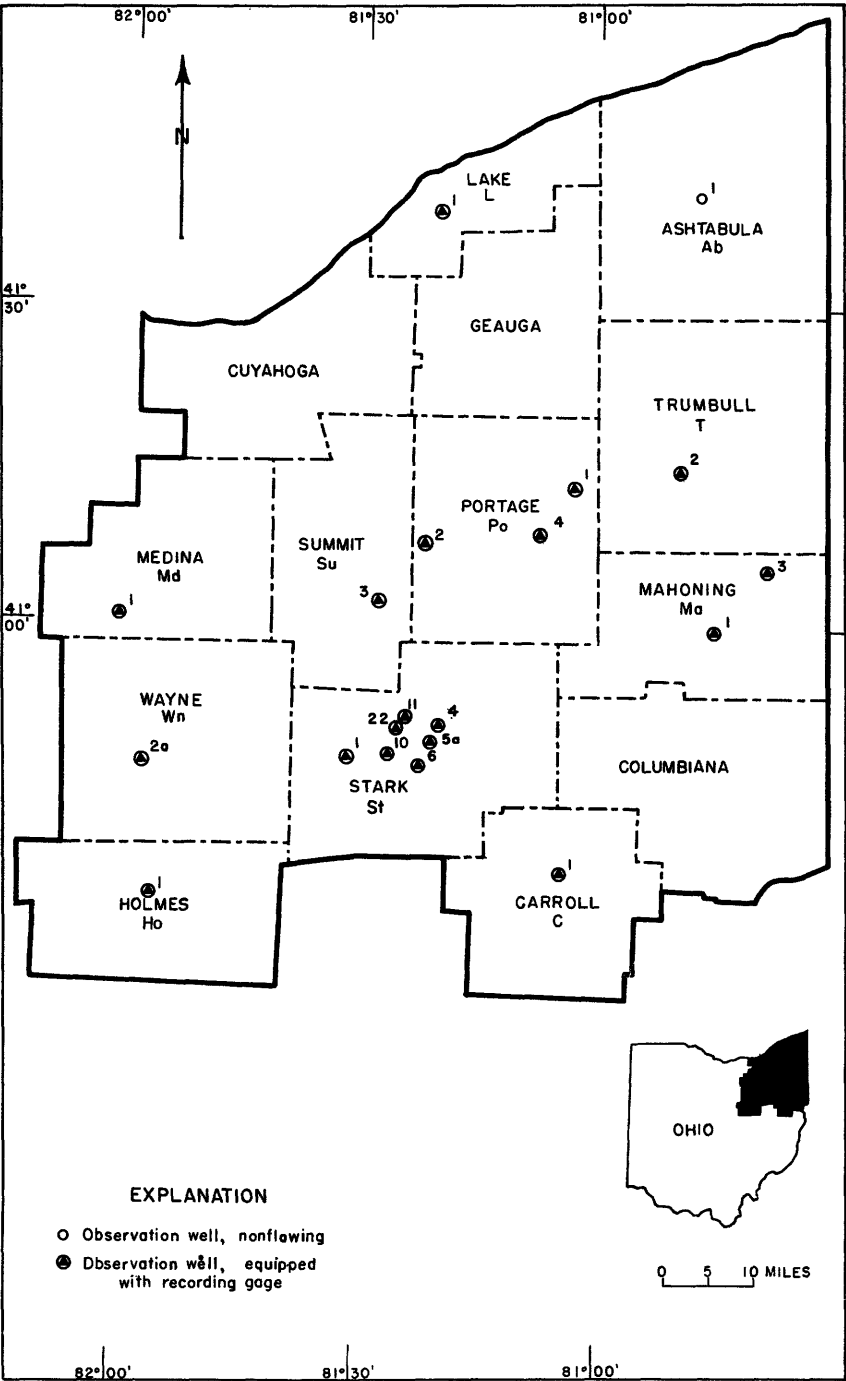


Figure 33. --Location of observation wells in northeastern Ohio, 1954.

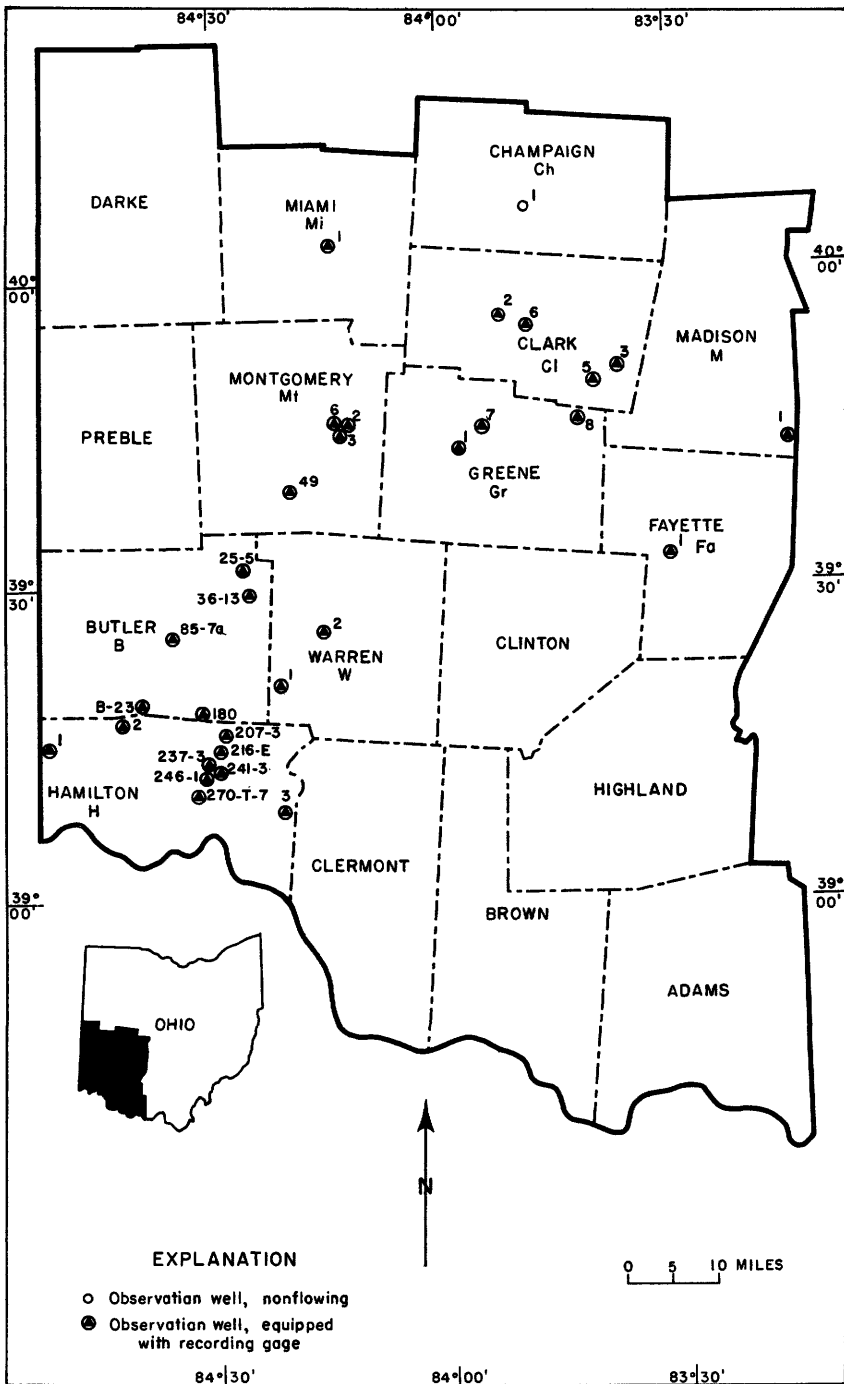


Figure 34. --Location of observation wells in southwestern Ohio, 1954.

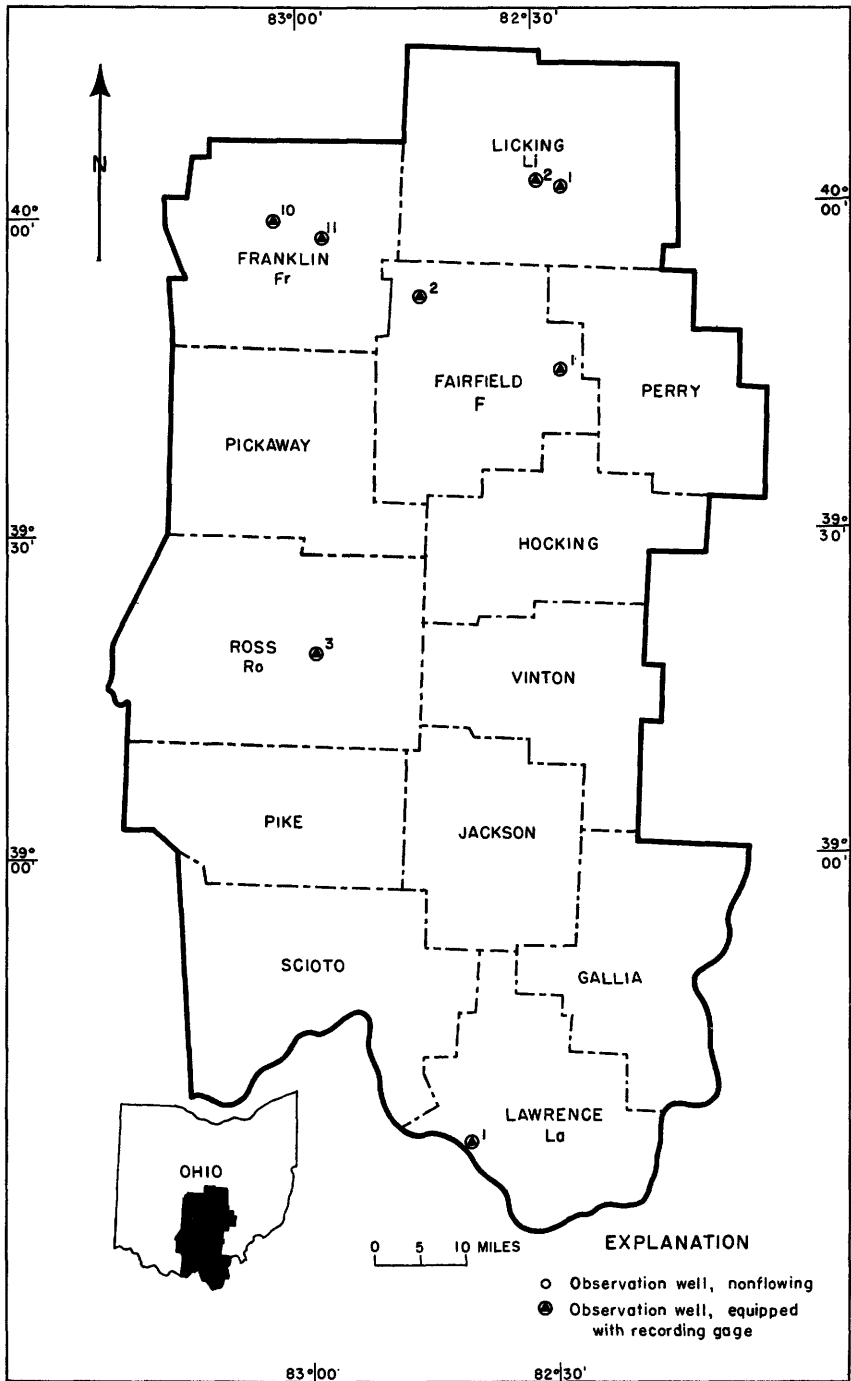


Figure 35. --Location of observation wells in south-central Ohio, 1954.

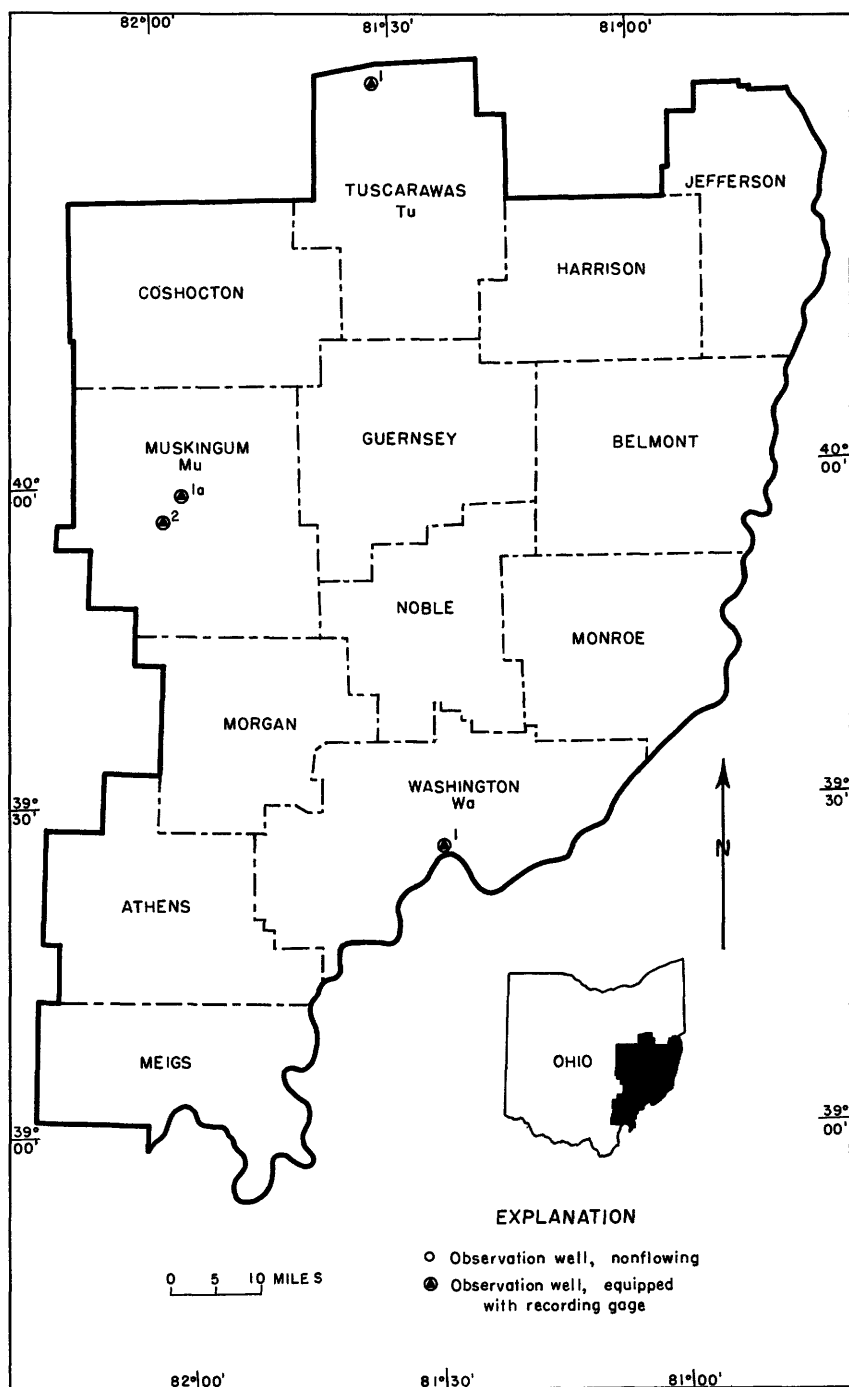


Figure 36. --Location of observation wells in southeastern Ohio, 1954.

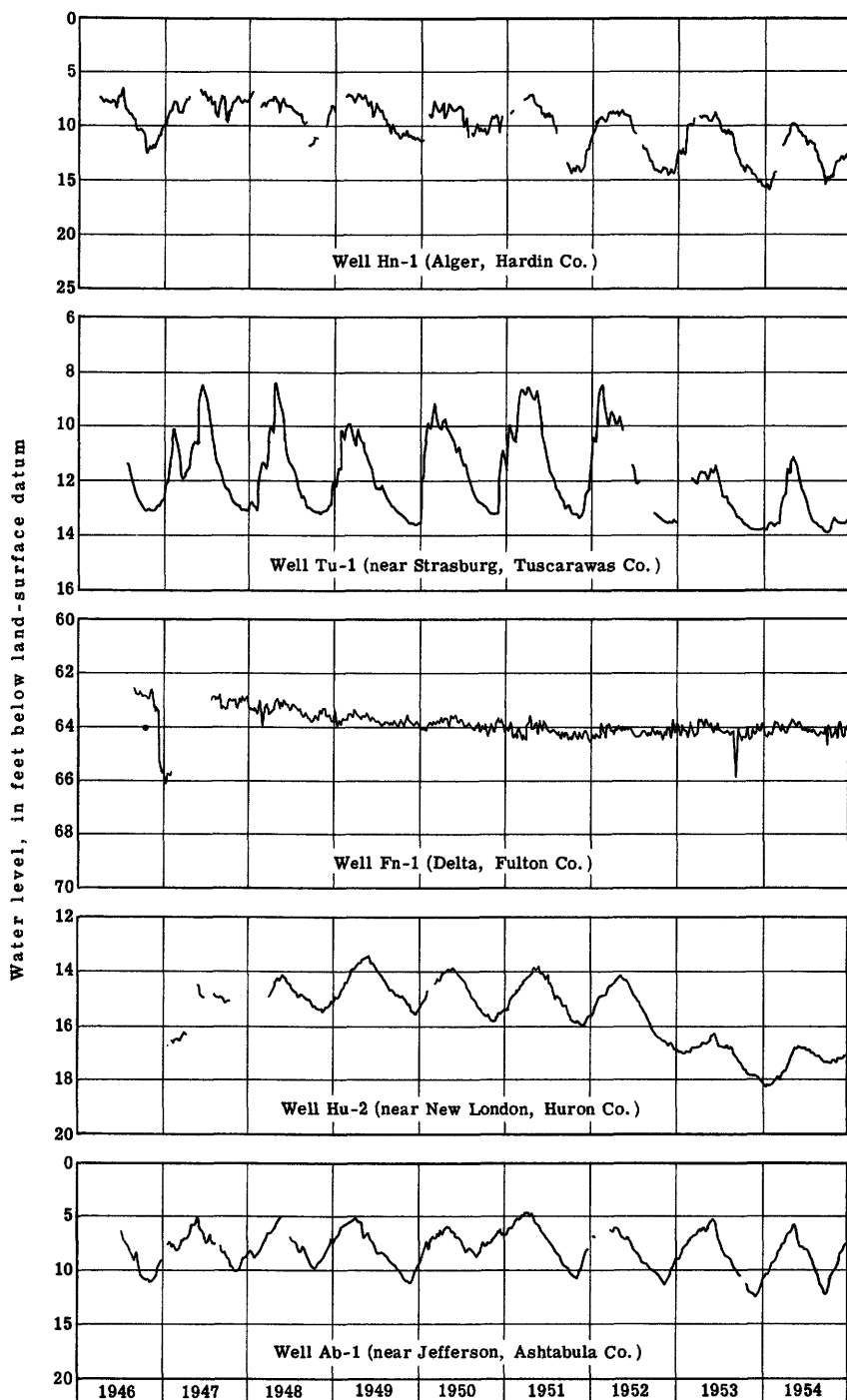


Figure 37. --Water levels in selected wells in northern Ohio.

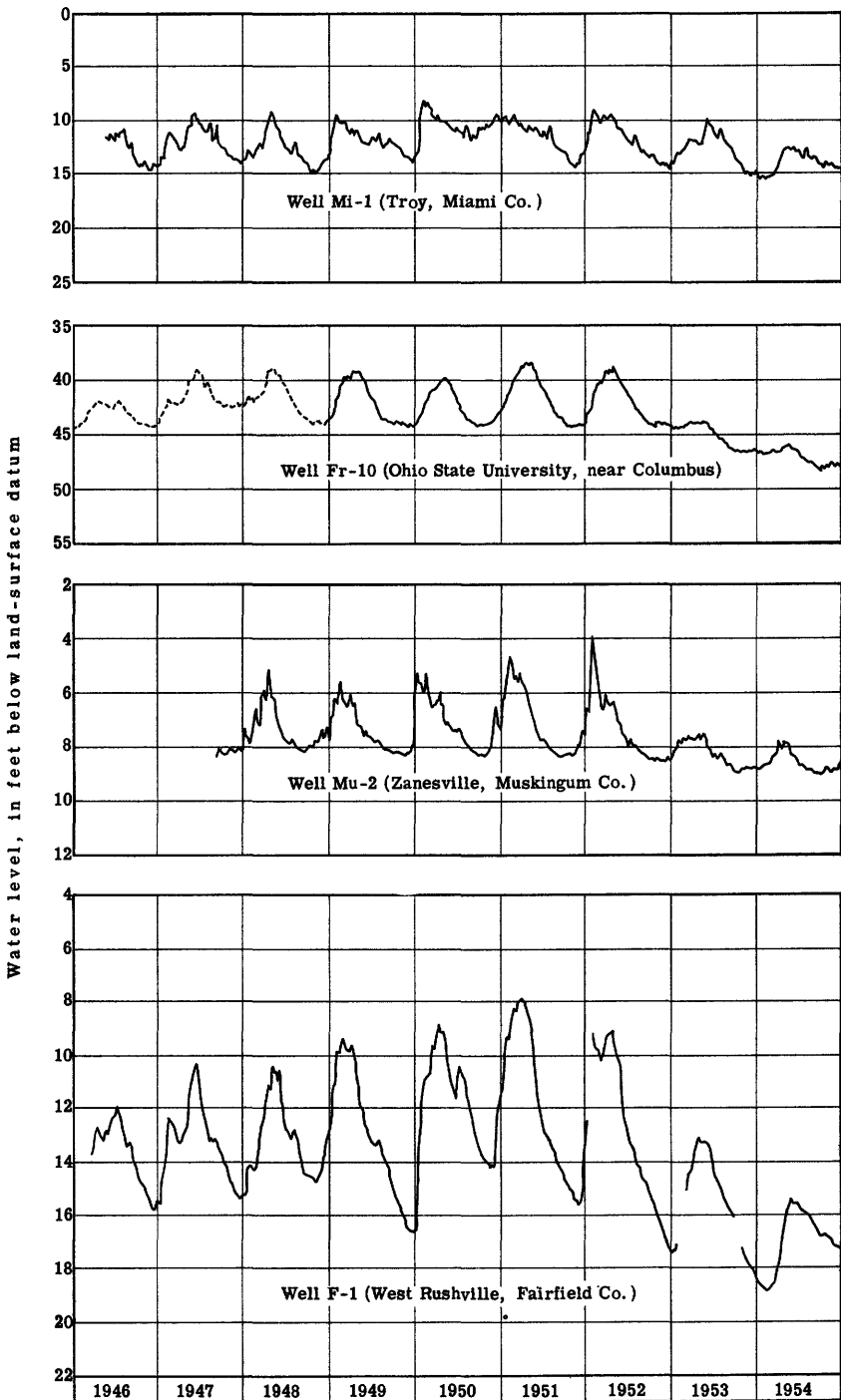


Figure 38. --Water levels in selected wells in central Ohio.

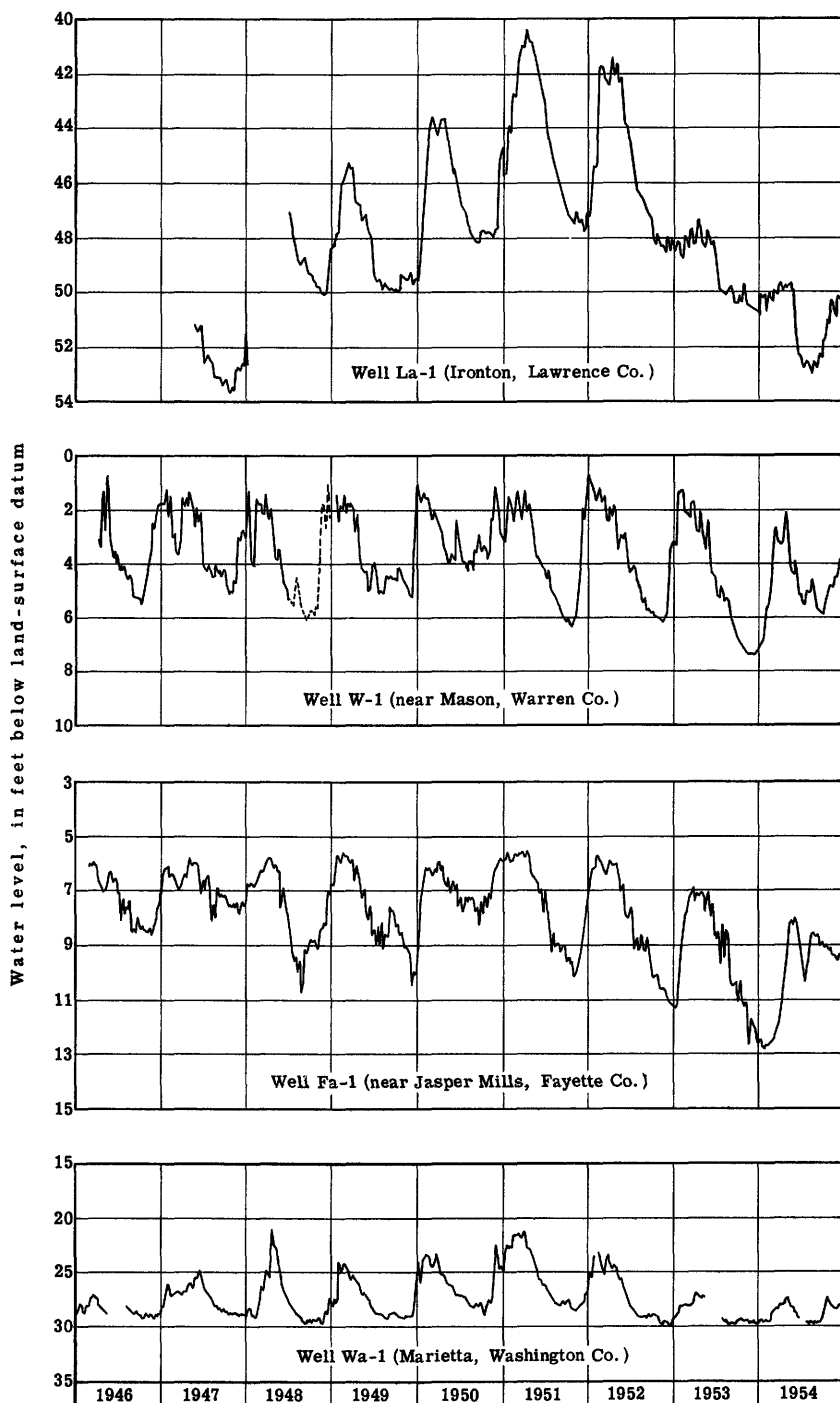


Figure 39. --Water levels in selected wells in southern Ohio.

The most heavily pumped aquifers in Ohio are glacial sands and gravels in buried valleys under major streams. The valley-fill deposits receive replenishment from the flow of rivers by induced infiltration. Recharge is greatest during periods of high streamflow. Ground-water storage in the valley-fill deposits has been reduced as the result of below-normal runoff and increased rates of pumping.

Mill Creek valley. --The valley-fill deposits in the Mill Creek valley are separated into two water-bearing formations by a thick bed of till. At present, the shallow aquifer, about 25 feet in thickness near Lockland, is dewatered in the southern part of the valley. The lower aquifer is about 100 feet thick in the vicinity of Lockland. The relatively impermeable till stratum in the valley south of Lockland excludes recharge to the lower aquifer. North of Lockland the till layer is absent in places or is sufficiently permeable to allow percolation of water from the shallow aquifer to the lower aquifer. Recharge is from direct precipitation and from the flow of Mill Creek. The intake area is several miles from centers of pumping in the southern part of the valley. The perennial yield of the lower glacial deposits is limited, therefore, by the capacity of the formation to transmit water as well as by the amount of recharge available. Withdrawal of a large amount of water from storage in the aquifer has caused a continued downward trend of water levels in the area. The saturated thickness of the aquifer at Ivorydale was reduced to about 20 feet in 1948. The hydrograph of well 270-T-7 in figure 40 shows that water levels at the Procter & Gamble Co. were 129 feet below the surface in the autumn of 1948. In June 1952, the Procter & Gamble Co. and 10 other industries in Mill Creek valley began purchasing water from the Southwestern Ohio Water Co. Since then an average of 12 mgd (million gallons per day) pumped from a collector along the Miami River near Venice has been distributed to participating industries. Water levels in the Lockland-Wyoming and Carthage-Ivorydale districts rose in response to the decrease in withdrawal as ground water moved from storage in outlying areas into the deep cones of depression. The rate of recovery of water levels (see well 270-T-7 in fig. 40) decreases with the filling of the cones of depression. The water level in well 270-T-7 recovered 8.5 feet in the period 1952 through 1954: 4.5 feet in 1952, 2.5 feet in 1953, and 1.5 feet in 1954. The large cone of depression at the Gardner-Richardson Co. plant at Lockland recovered 12 feet from June 1952 to September 1954. The rise in water levels ended in September. The record of well 241-3 indicates a net lowering since September of about 1 foot.

The trend of the water level in well 216-E (fig. 40) at the Electric Auto-Lite plant north of Lockland has been generally downward, the total decline being about 42 feet between 1941 and 1955. Below-normal precipitation, movement of water downgradient to the southern part of the valley, and increased use of ground water caused the water level in well 216-E to recede about 8 feet during 1953 and 1954. Water levels now are 5 feet below the bottom of the aquiclude.

Rates of decline in water levels have increased during the past 3 years of deficient precipitation in the northern part of Mill Creek valley. Water levels at the village of Glendale well field declined 6.5 feet during 1954, as shown by the hydrograph of well 207-3 (fig. 40). The highest level for the year is below the maximum level in previous years; the minimum 1954 level is the record low. Recharge conditions are more favorable in the part of the valley between Flockton and Crescentville in Butler County. There is no continuous downward trend in water levels in this part of the valley. The area is largely under cultivation and the upper and lower gravels are hydraulically connected. Natural fluctuations of ground-water levels in the area are shown by the record of well 180 in figure 40. The dry fall and winter season of 1953-54 caused the water level in well 180 to decline to a record low in March. Water levels only partially recovered during the spring and early summer months. The downward trend continued from August to December.

In general, the reduction of withdrawals from the valley-fill deposits in the Mill Creek valley has decreased the rapid rate of depletion of the aquifer. However, draft by the municipalities and by those industries not supplied by the Southwestern Ohio Water Co. is increasing. The average daily pumpage for the past years by several municipalities is given in the following table in mgd:

	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>1954</u>
Lockland	0.55	0.58	0.68	0.81	0.69
Reading	.73	.92	.97	1.07	1.15
Glendale	.22	.25	.25	.28	.26
Wyoming	.48	.59	.58	.67	.69

Miami River valley. --Declining water levels in the Mill Creek valley resulted in the development in 1952 of a large ground-water supply in the Big Bend area of the Miami River south of Hamilton and importation of water into Mill Creek valley. Water is pumped by the Southwestern Ohio Water Co. from a water collector, 1.2 miles southwest of Venice in Hamilton County. The average amounts of water withdrawn from the collector, in mgd, in 1952, 1953, and 1954 were 9.77, 11.86, and 11.39, respectively. About 125 feet of permeable deposits of sand and gravel underlie the Miami River in the vicinity of the collector. Before the withdrawal of ground water from the collector, the water table fluctuated in response to natural conditions of discharge and recharge. Discharge of ground water was by evapotranspiration and by seepage into the Miami River to sustain streamflow. Pumping from the collector reversed the natural hydraulic gradients

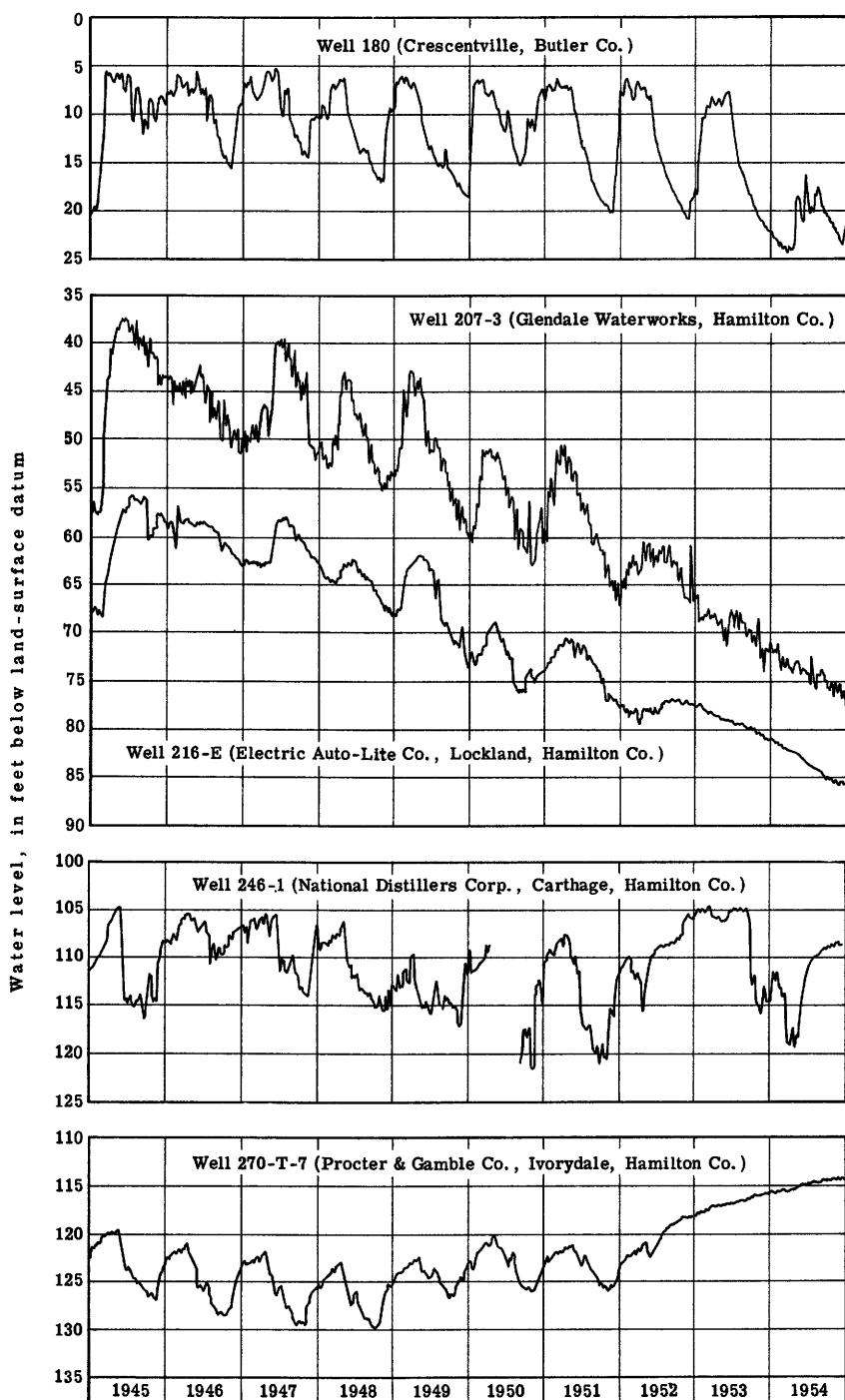


Figure 40. --Water levels in selected wells in the Mill Creek valley, Ohio.

and induced recharge from streamflow. When the stage of the river is high, as it was on May 26 and 27, 1953, storage in the aquifer is likewise above normal, as shown by the hydrograph of well H-2 in figure 41. The excess water is rapidly deflected by pumping the collector. When water levels recede below stream level, however, the downward trend subsides, as discharge is increasingly balanced by induced infiltration. Thus, the water level in well H-2 was stabilized during 1954 near the stage of the low flow of the river. During periods of near-minimum streamflow, silt is deposited on the streambed, the wetted portion of the river channel is decreased, and infiltration rates are reduced. The cone of depression, caused by pumping the collector, must then grow until it diverts water from a greater length of stream. Higher streamflows that scour the streambed periodically restore infiltration rates. A net decline of 0.7 foot in the water level in well H-2 occurred in 1954 because of low flows in the river. However, the decline was only 0.4 foot greater than the decline in the water level in well B-23, in an area unaffected by heavy pumping. The hydrograph of well H-2 (fig. 41) reveals that recharge during 1954 was below average. The maximum level was considerably below that in previous years; the minimum level in well H-2 is the lowest of record. Peak levels were observed in well H-2 in April; the lowest levels of record occurred in December. However, ground-water levels in the vicinity of the collector have not been seriously affected during recent years of deficient precipitation. The data collected indicate that the aquifer will sustain withdrawals of at least 11 mgd, even under adverse conditions.

The Hamilton municipal water supply is obtained from 6 wells in the Miami River valley, about 1 mile north of the city limits. The average daily pumpage, in mgd, in 1950, 1951, 1952, 1953, and 1954 was 5.4, 6.5, 6.6, 7.2, and 6.8, respectively. The valley-fill deposits at Hamilton, more than 170 feet thick, consist of permeable sands and gravels interbedded with lenses of clay. A confining bed of till 28 feet thick, 92 feet below the surface, produces artesian conditions at the municipal well field. The till is of local occurrence, for water levels in wells drilled in the lower aquifer rise when the stage of the Miami River is high. The Hamilton Coke & Iron Co. has developed a large ground-water supply at New Miami north of and across the river from the municipal well field; 11.8 mgd were pumped by the company in 1954 from wells in the valley-fill deposits. The company built a low dam across the Miami River at the plant site to impound water during low streamflows. The water level in well 85-7 in the municipal well field was affected by pumping at the Coke & Iron Co. plant during a recent aquifer-rating test. Water levels were several feet below the riverbed, and there was interference between well fields on opposite sides of the river. The village of New Miami pumped 0.09 mgd in 1954 from 2 wells near the Hamilton Coke & Iron Co. plant. The hydrograph of well 85-7 (fig. 41) shows the effect of the concentration of pumping in the Hamilton-New Miami area. In 1951, an increase in the rate of pumping by the city of Hamilton caused water levels to recede to a record low in November of that year. However, recharge during the spring months of 1952 was sufficient to fill the aquifer. A further increase in municipal pumpage and heavy withdrawals by the Hamilton Coke & Iron Co. during 1953, together with below-average recharge, reduced ground-water storage considerably. Because there were very few high-river stages in 1953 and 1954, recharge rates were generally low. As a result, the 1954 peak levels in well 85-7 were far below those of previous years; the minimum level in July 1954 was the record low.

Ground water at Middletown also is pumped from the glacial deposits in the buried valley of the Miami River. The maximum thickness of the valley-fill deposits at Middletown is about 250 feet. The deposits consist of permeable beds of sand and gravel interbedded with lenses of clay. A relatively impervious layer of clay occurs in some places at a depth of about 40 feet. The clay lenses in the deeper beds are not continuous over large areas. Recharge to the valley-fill deposits is confined to an area in the northwestern part of the city, where the Miami River crosses the deep part of the buried valley. The amount of ground water that can be obtained from wells in the southern part of Middletown is limited by the ability of the deposits to transmit water from the principal source of recharge. Both the shallow and deep water-bearing beds of sand and gravel have been developed for water supply in a small area along the east bank of the Miami River in the northwestern part of Middletown. In 1954, a total of 12.1 mgd was withdrawn by the Middletown Waterworks, the Sorg Paper Co., the Gardner-Richardson Paper Co., and the Wrenn Paper Co. Of this total, 4.65 mgd was used by the city. Comparison of the hydrograph of well 25-5 (fig. 41) with stages of the Miami River shows that rises in ground-water levels in the northwestern part of Middletown are greatest when the river stage is high. Rises in ground-water levels are especially pronounced when lowlands adjacent to the normal river channel are flooded. Few high-river stages occurred during 1953 and 1954. Maximum water levels in well 25-5 during 1953 and 1954 were far below those recorded in previous years. In the period June 1952 through December 1954, the greatest amount of recharge occurred in May 1953. Recharge in April 1954 caused the water level in well 25-5 to rise about 2.5 feet. During periods of low-water levels when the capacities of the shallow wells are reduced, deep wells are pumped more to add to the supply available from the shallow deposits. Water levels in well 25-5 were stabilized during 1954 in response to decreases in the rates of pumping from the shallow aquifer. The minimum water level in January was not the record low. The downward trend of water levels in well 36-13 in the southeastern part of Middletown, in the vicinity of the American Rolling Mill Co., continued during 1954. The water pumped by that company in 1950, 1951, 1952, 1953, and 1954 amounted to 9.5, 8.7, 8.6, 8.8, and 10.2 mgd, respectively.

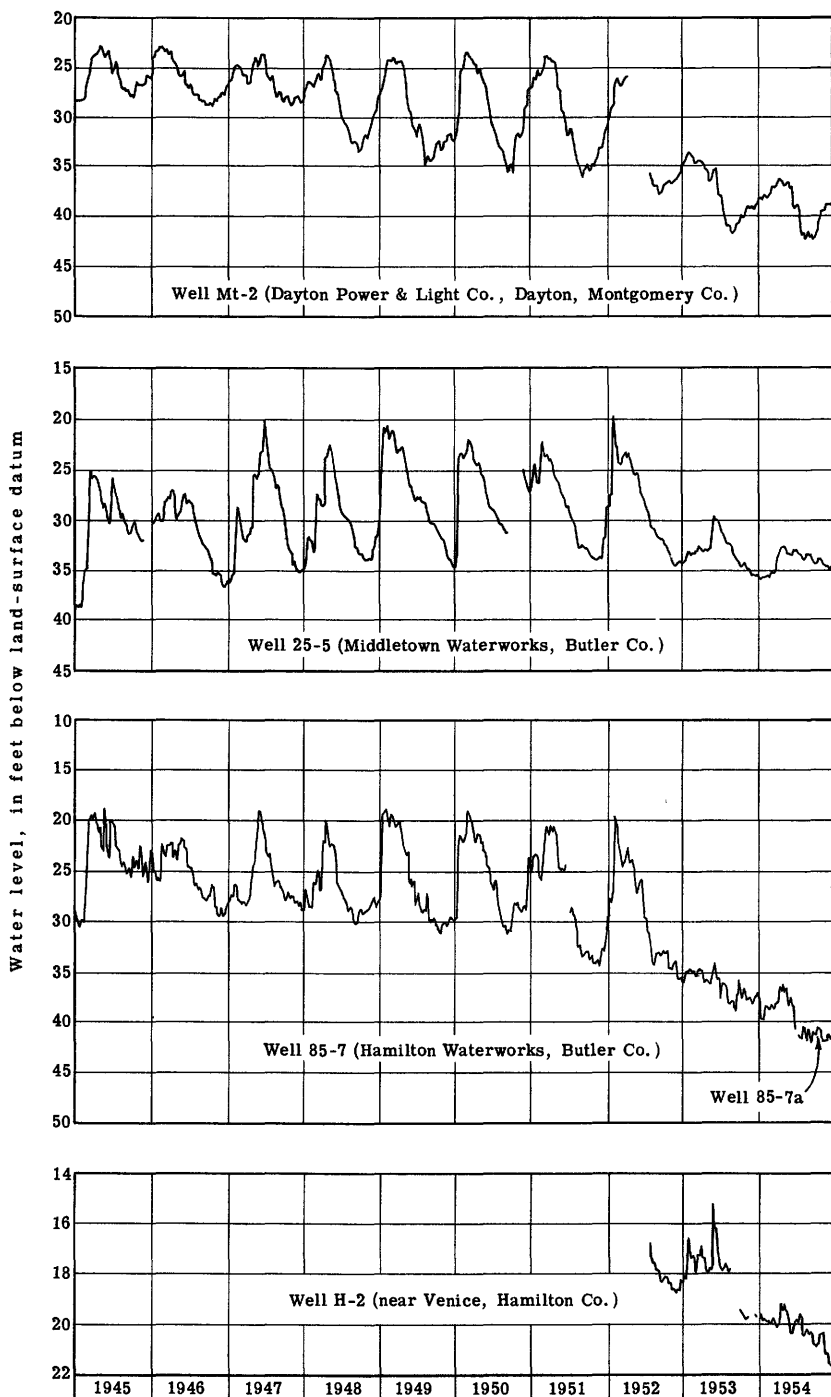


Figure 41. --Water levels in selected wells in the Miami River valley, Ohio.

Large ground-water supplies are pumped from the glacial gravels in the Miami and Mad River valleys in Montgomery County. Municipal supplies include those at Dayton, Miamisburg, and West Carrollton. The city of Dayton supply is obtained from 30 shallow wells and 10 deep wells in the Mad River valley at Rohrer's Island, about 4.5 miles northeast of the center of town. Municipal pumpage averaged 43.9 mgd in 1954. High ground-water levels are maintained by periodically flooding infiltration ditches and recharging lagoons on Rohrer's Island. Many industrial and commercial establishments in and immediately south of Dayton pump large quantities of ground water. It is probable that withdrawals have increased during recent years. The effects of the concentrated pumping on water levels are illustrated by the hydrograph of well Mt-2 given in figure 41. Heavy withdrawals from the valley-fill deposits lower the water table below stream level. Surface water is thus induced to percolate from the river to recharge the underlying sands and gravels. Maximum rates of recharge occur when the stage of the Miami River is high. The fluctuations of the water level in well Mt-2 indicate that summer rates of pumping are in excess of recharge. Large amounts of ground water are taken from storage in the aquifer during the warm months of each year. Since 1948 the water table has declined each year to progressively lower autumn levels, producing a succession of record-low water levels in well Mt-2. Prior to 1952, reduced winter rates of pumping and spring rainfall restored water levels each year to their former maximum levels, indicating that in general recharge from the river balanced withdrawals. The current period of deficient precipitation has resulted in below-normal streamflow and a substantial decrease in recharge to the aquifer at Dayton. Large flows in the Miami River in 1953 and 1954 were less in number and in magnitude than during previous years. Maximum levels in well Mt-2 during 1953 and 1954 were 8 feet below the previous high levels. The rate of decline of water levels that began in June 1952 seems to be decreasing. Although conditions of recharge in 1954 were poor, the water level in well Mt-2 declined only 0.5 foot below the previous minimum in September 1953. The peak level in April was only 2 feet lower than the peak level in 1953. The seasonal downward trend ended in October, as the result of heavy precipitation and increased streamflow.

Upper Little Miami River basin. --An investigation to determine the effects on ground-water storage and surface-water flow of changes in land use and stream-improvement practices in the upper Little Miami River basin was begun in 1952. Figure 42 shows the location of the 9 drilled wells and 1 dug well included in the program. The drilled wells, cased with either 8-inch precast gravel wall screens or 4-inch perforated pipe, are sealed 2.5 feet below land surface with a 3-inch layer of concrete to prevent surface runoff from leaking downward around the well casing, or from percolating directly to the wells through the disturbed material adjacent to the casings. Three wells are in outwash -plain deposits; the others are in the various till deposits. The wells are at various distances from streams; some on hills and others in low areas, so that fluctuations of the water table under all conditions may be observed. The wells range from 15 to 40 feet in depth. All are equipped with recording gages.

The water table in Ohio recedes during the summer and fall months when evapotranspiration losses are greatest. Water levels begin to recover during the late fall, when evapotranspiration losses are at a minimum and conditions are favorable for the infiltration of rainfall to the water table. Fluctuations due to recharge are pronounced during the wet spring months. The high and low points of the annual cycle of water levels occur at different times of the year, depending in part upon the seasonal and areal distribution of rainfall. The 1954 cycle of ground-water levels in the upper Little Miami River basin is illustrated by the records of the wells shown in figure 42. Deficient precipitation, 9.75 inches below normal, and above-normal temperatures in 1953 caused the water table to decline almost without interruption from the last half of May 1953 through January 1954. The downward trend ended during the last part of January, when precipitation falling on unfrozen ground replenished the ground-water reservoir. The recovery of water levels during February was steady but small, partly because precipitation was below average. The rise of water levels accelerated during March. Heavy rainfall in April, 0.86 inch above normal, produced peak water levels that averaged 1.4 feet below those of 1953. The seasonal decline of the water table was interrupted by heavy rainfall over most of the basin in June and August. A local thunderstorm in the Yellow Springs area on June 8 that produced 4.81 inches of precipitation caused the water level in well Gr-6 to rise 5 feet. Precipitation in October, 1.77 inches above average, produced a large amount of recharge to the ground-water reservoir. Minimum levels in October were about the same as minimum levels in January. Water levels declined somewhat during November and in most of December. Precipitation in November averaged 1.61 inches below normal. Moderate amounts of rainfall on saturated unfrozen ground during the last 2 weeks of December caused the water table to rise abruptly. As a result of greater precipitation in the fall of 1954, water levels began recovering much earlier than in 1953. Year-end levels showed an areal net rise of about 2.8 feet in 1954. Data on wells Gr-1 at Xenia, Cl-2 at Springfield, and Fa-1 at Jasper Mills show that recharge was below normal in 1952, 1953, and 1954 and that low water levels resulted from dry periods during the summer and fall months. The fluctuation of the water table in the upper Little Miami basin has, therefore, been observed during below-normal conditions.

Superimposed upon the annual cycle of water-level fluctuations are short-term fluctuations caused by various natural phenomena. Small lenses or layers of sand generally are interbedded in the till of ground-moraine and end-moraine deposits above the depth to which the water table recedes. Ground water in these lenses, confined by the relatively impervious till, produces local

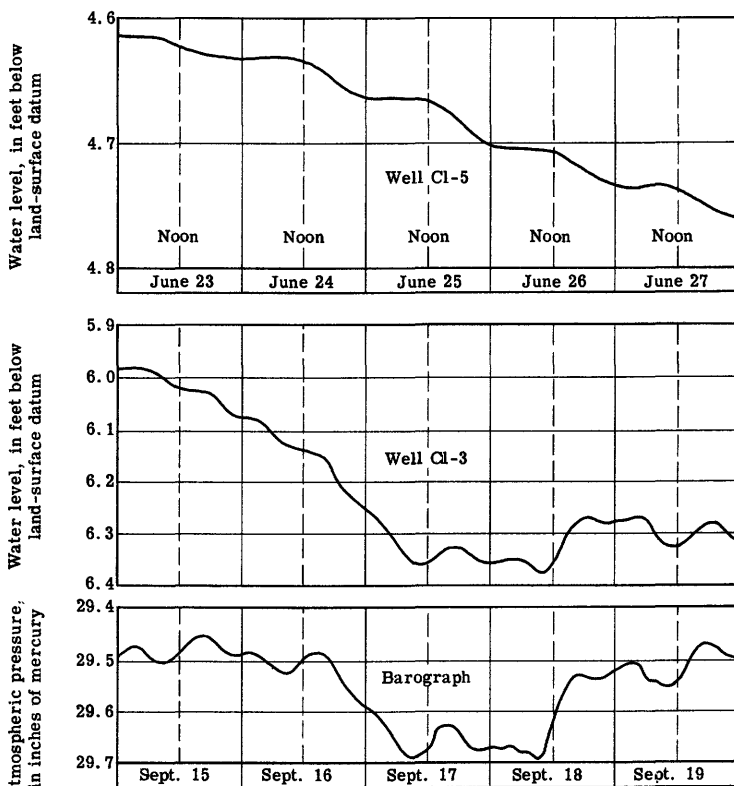
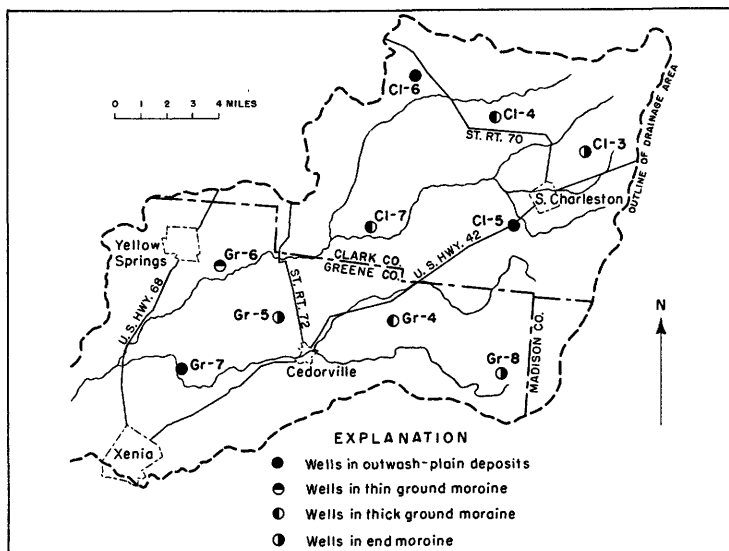


Figure 42. --Location of observation wells in the upper Little Miami River basin and water levels in wells CI-5 and CI-3, Clark County, Ohio, in 1953.

artesian conditions. The water levels in several of the observation wells fluctuate, to a very small degree, in response to changes in atmospheric pressure. The till, overlying the lenses of sand, is competent to some degree in resisting the load imposed by a rising barometer. Therefore, the full increase in pressure is not transmitted to the lenses of sand overlain by till. The full increase in pressure, however, is transmitted to the water-level surface in the well. As a result, the water levels in the wells in till are depressed an amount equal to the portion of the increase in atmospheric pressure that is not transmitted by the till. Thus, water levels in wells recede when the atmospheric pressure increases and rise when the atmospheric pressure decreases. The ratio of a change in the water level in a well to a change in atmospheric pressure, expressed in percent, is termed the "barometric efficiency" of the well. Diurnal and semidiurnal atmospheric pressure changes, culminating in two maximums and two minimums during the course of 24 hours, are recorded by barometers. Diurnal pressure changes produce maximums during the coldest hours and minimums during the warmest hours. Barometric records show semidiurnal pressure changes culminating in maximums at about 10 a. m. and 10 p. m. and minimums at about 4 a. m. and 4 p. m., depending in part upon the season, elevation, and weather conditions. These diurnal and semidiurnal atmospheric pressure changes persist through all seasons and are produced by daily temperature changes. Water levels in some wells in till respond to fluctuations in atmospheric pressure as shown by the hydrograph of well Cl-3 and the barograph in figure 42. Water-level maximums occur at about 4 a. m. and 4 p. m., and water-level minimums occur at about 10 a. m. and 10 p. m. The barometric efficiency of well Cl-3 was about 25 percent in January 1954. The magnitude of the barometric efficiency of wells in till decreases as the water table recedes. Changes in atmospheric pressure do not affect the water levels in the wells in outwash deposits of sand and gravel.

During the growing season, the water table fluctuates in response to evapotranspiration losses. Ground-water storage is reduced as the water requirements of plants are met. The drawdown of water levels is greatest during the sunlight period when evapotranspiration losses are high; the maximum rate of drawdown occurs during the midday hours. Acceleration of the drawdown of water levels generally begins about 8 a. m. each day; the rate of drawdown begins to decrease about 6 p. m. The decreased rate of drawdown during the hours of darkness appears as recovery, but water levels do not actually rise. The magnitude of fluctuations of the water table in response to evapotranspiration losses is relatively small and depends in part upon weather conditions. The hydrograph of well Cl-5, in figure 43, illustrates the daily cycle of water-level fluctuations caused by evapotranspiration.

Canton area, Stark County. --Most of the ground-water supplies at Canton are derived from permeable deposits of sand and gravel in the buried valleys. The glacial materials are more than 200 feet thick in the deepest parts of these valleys. Large amounts of recharge are received from infiltration of the flow in the three branches of Nimishillen Creek. Industries at Canton pump ground water from gravels in the main buried valley that underlies the city proper and trends westward to the Tuscarawas River. The municipal water supply is obtained from four well fields: the Grovemiller and Ninth Street fields in the main buried valley and the Northeast and Northwest fields in tributary buried valleys that underlie the Middle and West Branches of Nimishillen Creek. Average daily pumpage in million gallons per day at the municipal well fields is given in the table below:

	<u>1950</u>	<u>1951</u>	<u>1952</u>	<u>1953</u>	<u>1954</u>
Northeast	7.59	7.70	9.27	9.96	9.17
Northwest	5.70	6.82	6.36	5.89	6.22
Ninth Street*	4.77	4.25	3.86	4.16	3.72
Grovemiller*	1.81	1.36	1.26	1.12	1.17

* Average based on days of operation. Wells are pumped only during the warm months of each year.

The effect of pumping on water levels in the glacial deposits underlying the city proper is shown by the record of well St-6 in figure 44. The general recovery of water levels that began in 1945 ended in 1952. The rise was caused by a reduction in the rates of pumping by industries and by the city of Canton after the adoption of conservation measures in 1945 and the completion of the Northwest well field in 1948. Record-high water levels measured in 1952 were not attained during 1953 and 1954 because of deficient precipitation. The trend of water levels in St-6 has been generally downward since June 1952, the total decline being about 6 feet. The rate of decline decreased during 1954 under near-normal weather conditions. Total precipitation at the Akron-Canton WB Airport was 37.57 inches, 0.31 inch above normal. Above-normal precipitation fell during January, March, April, August, and October; below-normal precipitation conditions prevailed during the remainder of 1954. Heavy rainfall in October, 6.03 inches above normal, more than balanced the cumulative deficiencies. The downward trend that began in April 1953 ended during the last week of March. Water levels rose to a seasonal maximum in May, when they were 3 feet below the record-high level. The minimum water level in September, however, was only 0.4 foot lower than the water level recorded in March. The year-end water level in well St-6 was 0.6 foot higher than at the end of 1953.

The records of wells St-5A and St-4 in figure 44 illustrate the cumulative effect of 2 years of deficient rainfall on ground-water storage in the Northeast well-field area. Streamflow in the

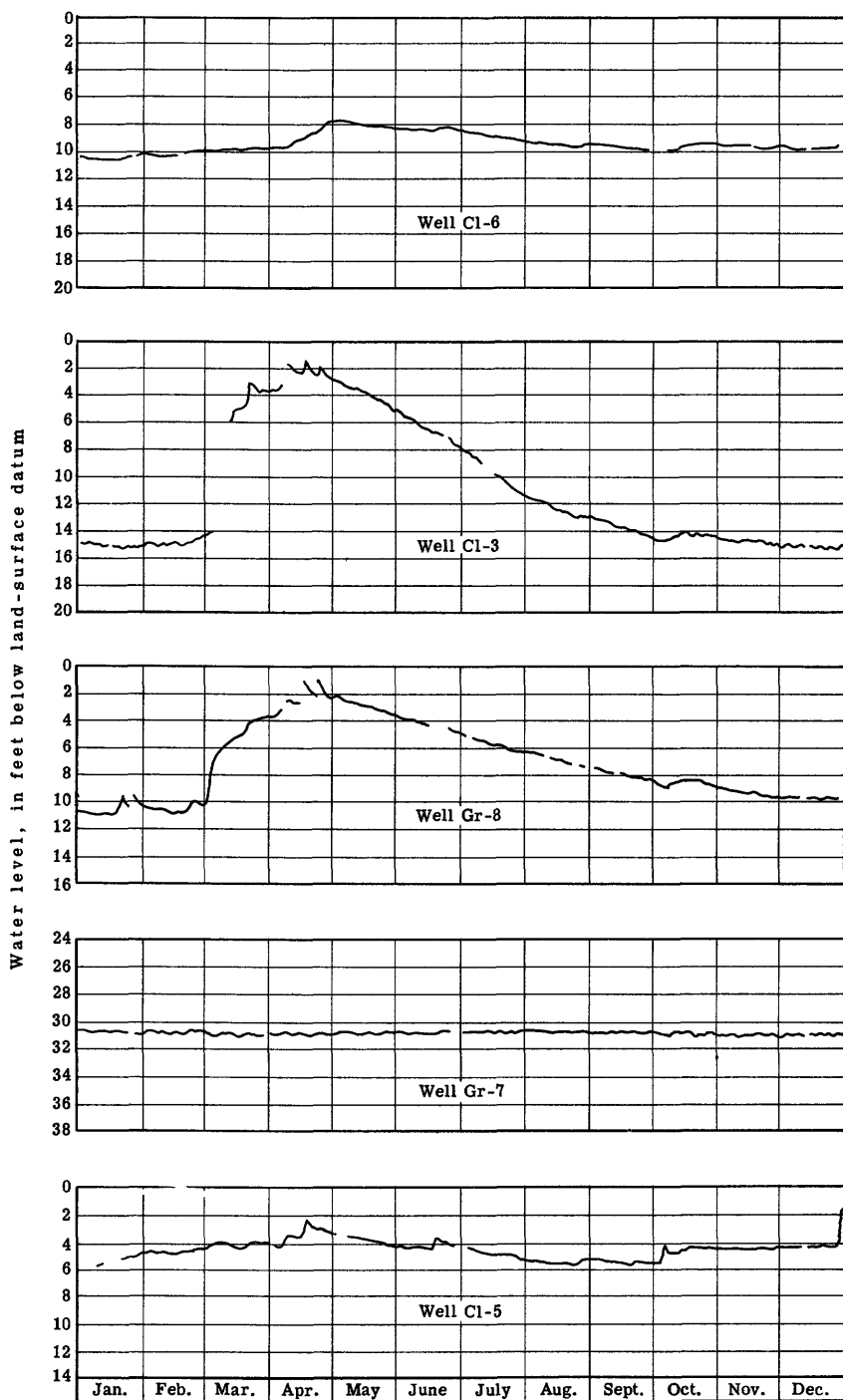


Figure 43. --Water levels in selected wells in the upper Little Miami River basin, Ohio.

Middle Branch of Nimishillen Creek was reduced; high discharges were fewer in number and lower in magnitude. As a result, recharge from streamflow was not sufficient to cause a rise to previous maximum levels. The peak level in well St-5A in January 1954 was 13 feet below the 1952 maximum. The 1954 maximum water level in well St-4 in May was 6.5 feet lower than the record peak level in 1952. Despite the lack of large streamflows, recharge by induced infiltration prevented depletion of the aquifer. The downward trend in well St-4 that began in July 1953 ended in January 1954. Water levels rose during the spring months of 1954 to a maximum in May, 0.2 foot higher than the 1953 peak level. Water taken from storage in the summer and fall of 1953 was replenished. The 1954 seasonal downward trend that began in the middle of May ended in October, when heavy rainfall produced large amounts of recharge. Water levels declined at the end of 1954 as the result of an increase in the rate of pumping in the Northeast well field. The year-end level is 0.5 foot higher than in 1953. Ground-water levels fluctuated in well St-5A within a 5-foot range during 1954, except in November and December, when increased pumping caused the water level to decline to a record-low point, 1.2 feet below the 1953 minimum. The average daily pumpage from wells in the Northeast well field by months for 1954 was: Jan., 4.51; Feb., 7.78; Mar., 9.17; Apr., 9.84; May, 8.81; June, 9.53; July, 10.53; Aug., 9.88; Sept., 9.71; Oct., 8.94; Nov., 10.11; Dec., 11.23. Longer stretches of the creek are infiltrated as water levels decline in the Northeast well-field area and the recharge opportunity is increased. Future floods should produce large volumes of recharge, because storage space in the aquifer is available.

The city of Canton has pumped an average of 6.5 mgd since July 1948 from a system of horizontal infiltration collectors in the Northwest well field along the West Branch of Nimishillen Creek, about 3.5 miles northwest of the city hall. A buried valley, about 2,500 feet wide and 200 feet deep, crosses the well-field area. The permeable glacial deposits of sand and gravel that fill the buried valley are separated into two aquifers by a till layer that averages 4 feet in thickness. The shallow aquifer is about 40 feet thick. The two aquifers are connected through horizontal perforated pipes in three collectors. The water stored in the deep aquifer is used during periods of low streamflow when storage in the shallow aquifer is exhausted. The shallow aquifer is replenished during wet periods by induced infiltration from the two forks of the West Branch of Nimishillen Creek. The deep aquifer is artificially recharged by the three collectors. Before the withdrawal of ground water from the collector system, the water levels in the shallow wells were above stream level. Wells in the deep aquifer flowed originally with a head several feet above land surface. Pumpage in excess of recharge during the summer and fall months of 1948 lowered the water table in the shallow aquifer and the piezometric surface of the deep aquifer several feet below stream level. Water levels have never returned to their original stages. Above-normal late winter and spring precipitation and resulting high streamflows filled the shallow aquifer slightly above stream level during 1950 and 1951. Despite below-normal precipitation in 1952, 1953, and the first 9 months of 1954, the shallow aquifer was not seriously depleted and the deep aquifer was not dewatered. Ground-water conditions in the Northwest well-field area are illustrated by the record of well St-11 in figure 44. The maximum 1954 water level is about 10 feet lower than the peak level of 1952. Record-low levels were recorded in February and July 1954. The downward trend since 1952 may be attributed to the current dry period, because pumping rates have not changed appreciably. The average amounts of ground water withdrawn in mgd from the Northwest well field for 1948, 1949, 1950, 1951, 1952, 1953, and 1954 are 7.62, 6.60, 5.70, 6.82, 6.36, 5.89, and 6.22, respectively. The deep aquifer stores sufficient water to balance pumpage in excess of recharge during several years of deficient precipitation. It remains to be seen whether recharge by induced infiltration during years of normal and above-normal rainfall will replenish the cumulative withdrawals of water from storage. Storage space in the aquifers is available for large amounts of recharge from high streamflows. A comparison between water levels in St-11 and the stage of the west fork of Nimishillen Creek shows a rapid response of ground-water levels to large increases in discharge of the stream.

Toledo, Akron, Massillon, Columbus, and Chillicothe. --Ground-water conditions in the Toledo area are illustrated by the hydrograph of well Lu-1 (fig. 45). Several industrial and commercial establishments pump ground water from a dolomite aquifer. Relatively impervious glacial deposits and consolidated rocks overlying the aquifer limit recharge in the immediate area. The water level in well Lu-1 has declined continuously since 1948, the net decline being about 10 feet. The records show that annual withdrawals exceed recharge. Seasonal fluctuations in well Lu-1 are accentuated by seasonal variations in pumping. Lowest water levels ordinarily occur in August and September when the use of water is greatest. When summer pumping rates were increased in 1953 because of unusually high temperatures, water levels declined to record lows in September. Near-normal weather conditions in 1954 and reduced withdrawals were responsible for decreased drawdowns during the year. The minimum water level for the year in October was 5 feet above the 1953 minimum. The peak level on June 1, 1954, was about 1 foot lower than the maximum water level on May 1, 1953. The incomplete recovery represents a loss in ground-water storage.

Industries pump large quantities of ground water from the glacial deposits at Akron. Most of the water is used for cooling purposes. Pumpage is seasonal; surface water is used during the cool months of the year. The amounts of water withdrawn by the Goodyear Tire & Rubber Co. during 9-month pumping periods in 1950, 1951, 1952, 1953, and 1954 were 3.1, 5.8, 3.9, 4.2, and 3.1 mgd, respectively. The record of well Su-3, an unused well in the Goodyear Tire & Rubber Co. well field, is shown on figure 45. The decrease in pumpage in 1954 was responsible for

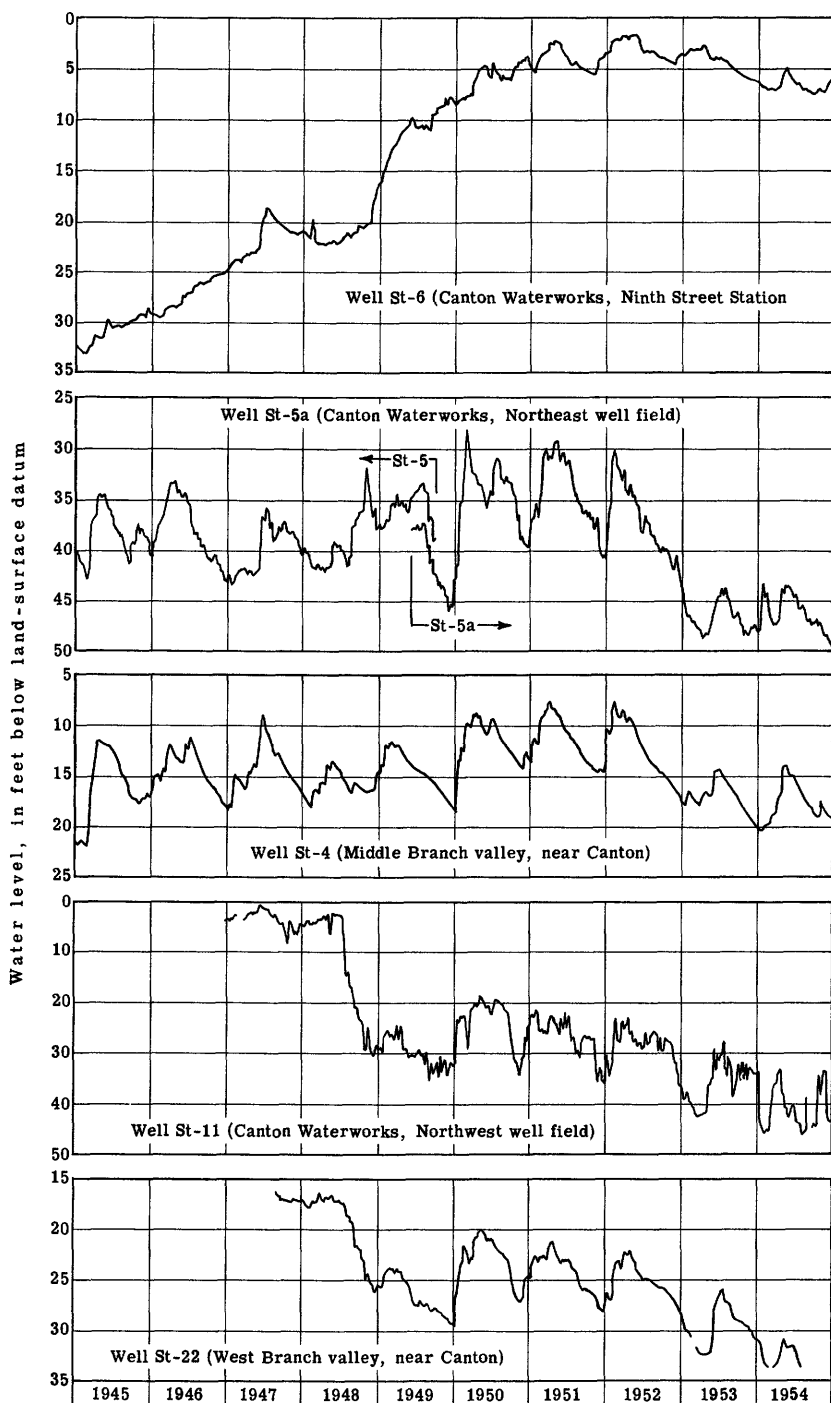


Figure 44. --Water levels in selected wells in the Canton area, Stark County, Ohio.

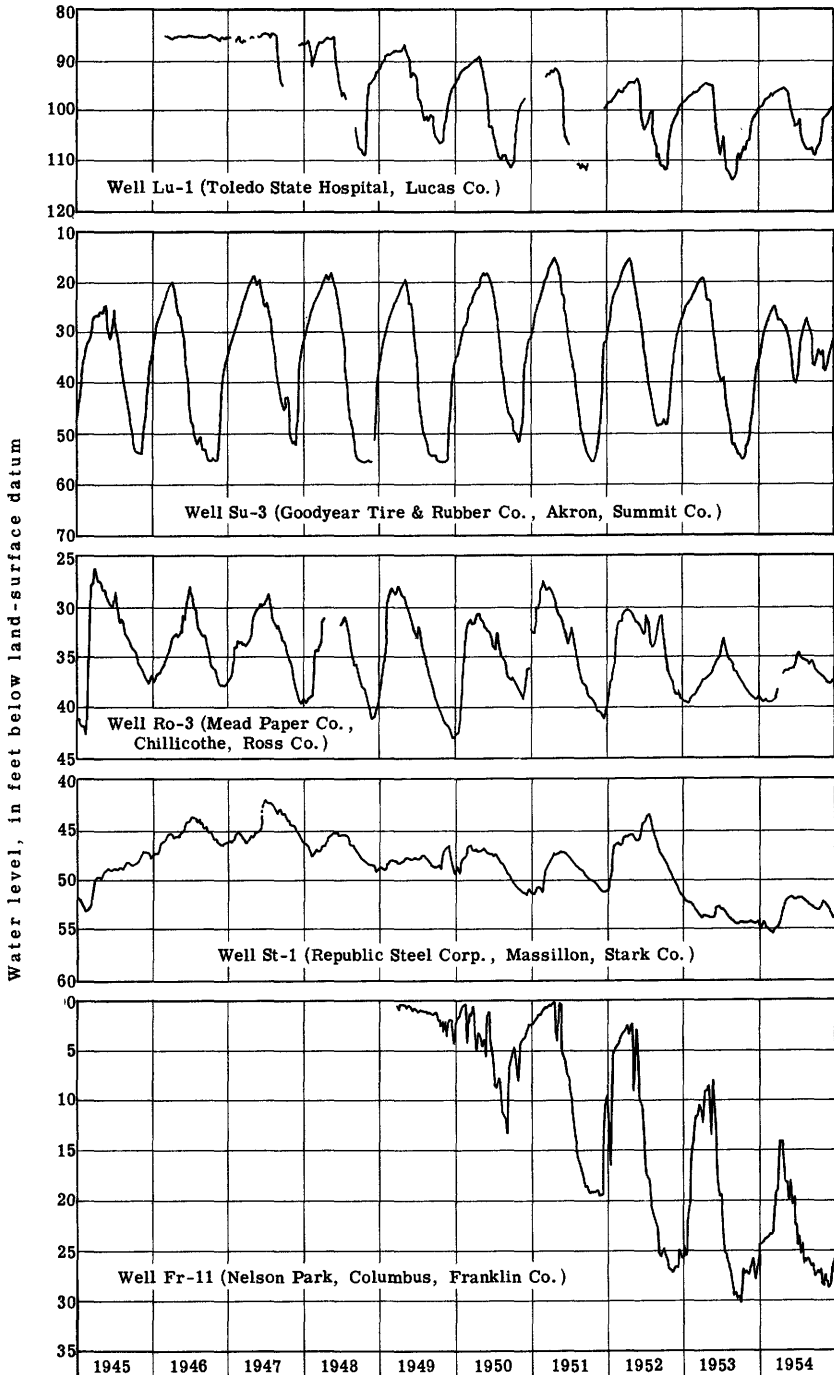


Figure 45. --Water levels in wells Lu-1, Su-3, Ro-3, St-1, and Fr-11 in heavily pumped areas in Ohio.

reduced drawdowns during the summer. The maximum water level in April 1954 was about 5 feet lower than average; however, it is 0.7 foot higher than the 1945 peak. The minimum water level in July 1954 was about 15 feet above previous seasonal lows. Water levels were recovering at the end of 1954 and had reached a stage 5.5 feet above the 1953 year-end level.

The Ohio Water Service Co. owns and operates the municipal water supply for Massillon. Ground water is pumped from two wells in glacial sands and gravels, 600 feet west of the Tuscarawas River. Several industries, including the Republic Steel Corp., Massillon Steel Casting, and the Massillon Paper Co., have private well supplies. Water-level conditions in the southern part of Massillon are shown by the record of well St-1 in figure 45. Well St-1 is about 500 feet west of the Tuscarawas River. Heavy pumping during the last half of 1952 and in 1953 coincident with below-normal precipitation reduced ground-water storage. The water level in well St-1 declined almost without interruption from July 1952 to a record low in March 1954. The downward trend ended in March when water levels recovered to a point 0.5 foot higher than in March 1953. Near-normal rainfall and reduced pumping rates were responsible for improved ground-water conditions. Year-end water levels also were about 0.5 foot higher than at the end of 1953. Industrial and municipal withdrawals of ground water were reduced during 1954 as the result of chloride contamination. It is reported that the chloride content of water pumped from wells adjacent to the Tuscarawas River has gradually increased since August 1952 to reach an average of 700 ppm (parts per million) in November 1953, and that the ground-water supply of the Massillon Paper Co. showed a chloride content of 2,000 ppm in 1954. The contamination of ground-water supplies at Massillon may be attributed in part to receding water levels in the area. The source of pollution may be the brine-contaminated Tuscarawas River, or ground water of high-chloride content in formations underlying the glacial gravels, or a combination of the two. As water levels decline below the river, infiltration of streamflow increases. A deep cone of depression in the glacial deposits creates a vertical hydraulic gradient that may induce more water to flow from lower formations.

The city of Columbus began pumping large quantities of ground water from four wells in glacial deposits along Alum Creek in the eastern part of the city in June 1950. The water-supply system was designed to produce 6 mgd to supplement surface-water supplies during the late spring, summer, and early fall months when consumption of water reaches a maximum. The wells were to be used temporarily until water impounded behind Hoover Dam on Big Walnut Creek became available to the city. Two additional wells were drilled, one in 1953 and the other in 1954, increasing the rated capacity of the well system to 11 mgd. The glacial materials at the well field are about 116 feet in thickness--12 feet of fine alluvial materials and 24 feet of till covering 80 feet of coarse sands and gravels. The till layer acts as a confining bed that limits recharge from the flow of Alum Creek. A deep cone of depression is necessary to induce appreciable leakage through the aquiclude. Water levels in the well field respond in a small degree to high stages of the stream. The poor hydraulic connection between the aquifer and the creek limits greatly the perennial yield of the area. The general downward trend of well Fr-11 in figure 45 shows that discharge exceeds recharge. Well Fr-11 is about 1,200 feet south of the municipal well field. The maximum and minimum levels have declined to progressively lower points as storage in the aquifer is reduced. Some of the decline may be attributed to below-normal precipitation and resulting low streamflows. In 1954, because of reduced summer pumping rates, water levels did not decline below the 1953 minimum levels. The year-end reading was 1 foot lower than that of 1953; water levels were near or below the bottom of the aquiclude.

Industrial and municipal wells in Chillicothe obtain water from the deposits of glacial outwash gravels that fill a buried valley under the Scioto River, the major source of recharge to the aquifer. Large amounts of water infiltrate into the glacial materials, especially when floodwaters fill the valley lowlands. The city of Chillicothe pumps water from two wells in the northwestern part of the city. The amounts of water used during 1950, 1951, 1952, and 1953 were 1.28, 1.25, 1.33, and 1.52 mgd, respectively. The Mead Corp., a paper company in the southern part of the city, uses large quantities of ground water; 20.5 mgd have been pumped during peak demand periods from two horizontal infiltration collectors. The average amounts of withdrawals for 1950, 1951, 1952, 1953, and 1954 were 19.6, 20.3, 19.0, 18.7, and 17.9, respectively. Before the installation of the collectors in 1954, the water supply was derived from six vertical wells and an open pit. Several laundries, a brewery, and other commercial establishments also pump ground water from the valley-fill deposits at Chillicothe. The record of well Ro-3 in figure 45 illustrates ground-water conditions in the vicinity of the Mead plant. The 1953 downward trend of water levels ended in March. Water levels continued rising from the last week of March through the middle of July. The peak high in July was 1.5 feet lower than in 1953. Deficient precipitation and low streamflow are responsible for the below-average recovery of water levels. Water levels rose sharply during the first 2 weeks of July during the annual vacation shutdown of the Mead plant. The water level in well Ro-3 declined steadily from the middle of September to the middle of December. Year-end levels are higher than the last 9 years of record, partly because of reduced pumping rates in 1954. The 1954 minimum water level was 0.1 foot above the 1953 low and 7.3 feet above the record low in 1949.

Barometric fluctuations. --Hydrographs of several observation wells in Ohio show fluctuations of water levels in response to changes in atmospheric pressure. Water-level changes under artesian conditions due to variations in atmospheric pressure are called "barometric fluctuations."

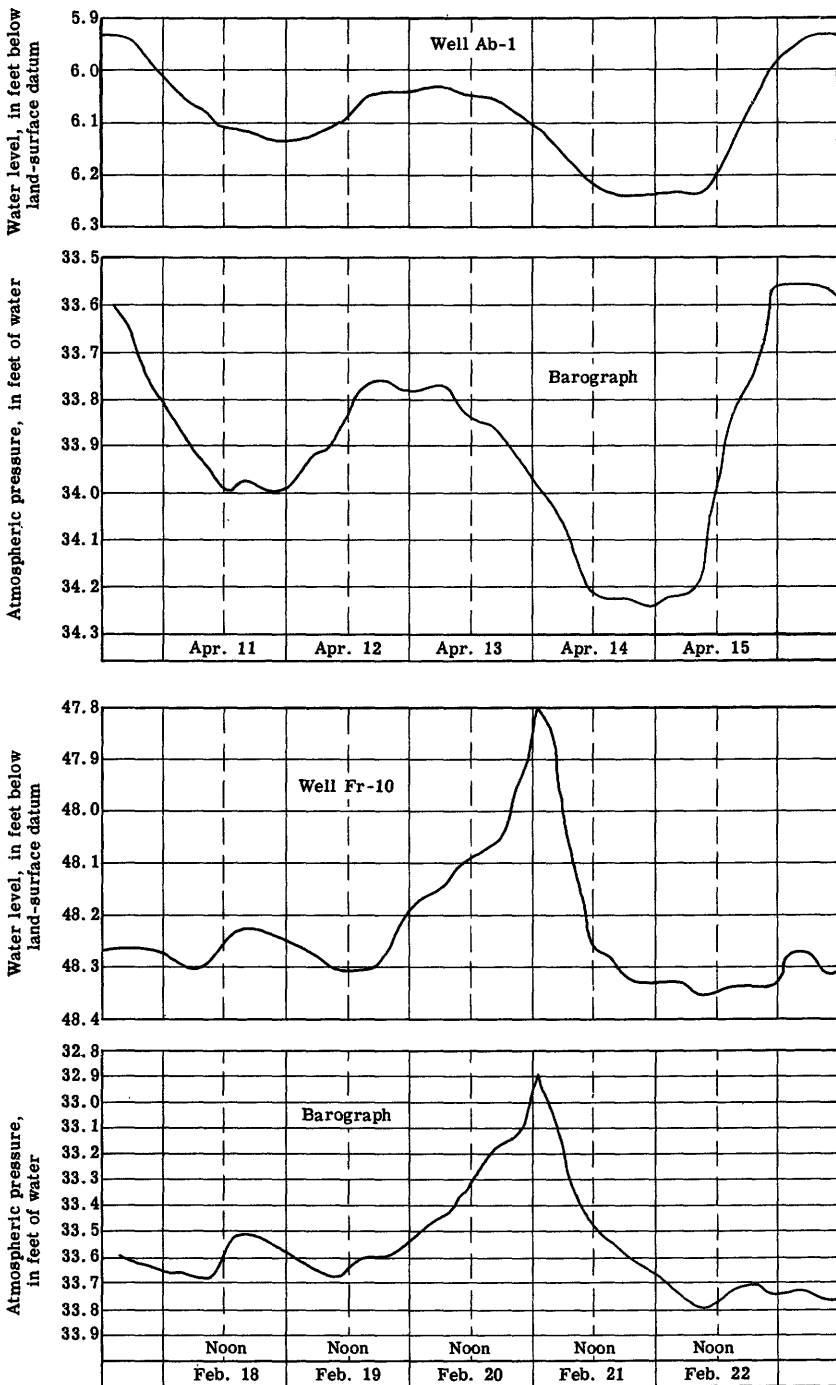


Figure 46. --Effect of barometric fluctuations on the water levels in wells Ab-1 and Fr-10 in Ohio in 1953.

They indicate the degree of confinement of the water in an aquifer. The ratio of the change in water level to the change in atmospheric pressure is termed the "barometric efficiency" of the well. Rises in atmospheric pressure cause corresponding declines in water level in a well, and a decrease in atmospheric pressure causes a rise. The conditions producing barometric fluctuations are explained in the section "Upper Little Miami River basin." The barometric efficiency can be determined by a comparison between the water level in a well and the atmospheric pressure recorded by a barograph. Microbarometers were placed in the vicinity of several observation wells for a period of a week. Barometric readings, converted to feet of water, were inverted and plotted on plain coordinate paper, together with water-level data from the wells, as shown on figure 46. Barometric efficiencies were calculated as the ratio of the change in water level to the change in barometric pressure. The values of barometric efficiencies computed from data of 15 observation wells are listed below:

Well No.	Aquifer	Date of observation	Average depth to water (feet)	Barometric efficiency (percent)
Sh-1	Limestone	6/3-10/53	12	28
B-40	Glacial gravels	3/18-24/53	59	79
Fr-10	Glacial gravels	2/18-25/53	48	57
Ab-1	Shale	4/8-15/53	6	43
Po-1	Sandstone	4/8-15/53	21	21
DI-3	Limestone	4/24-30/53	27	54
216-E	Glacial gravels	9/28/53-10/53	86	75
LI-2	Glacial gravels	11/12-15/54	15	8
Fr-12	Glacial gravels	4/17-18/53	11	70
85-7	Glacial gravels	10/19-24/53	39	50
CI-3	Glacial till	1/1-4/54	15	25
CI-4	Glacial till	1/1-4/54	10	45
Ha-2	Limestone	6/15-22/53	4	18
270-A-4	Glacial gravels	3/16-23/53	85	63
Gr-7	Glacial gravels	9/14-21/53	30	50

Well-Numbering System

The observation wells for which records are given in this report, except those in the Mill Creek and Miami River valley areas of Butler and Hamilton Counties, are identified by numbers prefixed by abbreviations of the counties. The same prefix is used for all wells in a particular county. The wells in the Mill Creek and Miami River valleys are numbered consecutively according to their geographic location, beginning in the northern part of Butler County.

Well Descriptions and Water-Level Measurements

Water levels are in feet below land-surface datum unless otherwise indicated. When some measurements in a table are above and others below the plane of reference, a plus (+) or minus (-) sign is placed before the first entry in each column of each mixed table. Readings between minus signs are below the plane of reference, and those between plus signs are above the plane of reference.

Ashtabula County

Ab-1. K. K. Tisch. Near Jefferson. Lat. 41°41'12", long. 80°46'54". Drilled unused well in shale, diameter 3 inches, depth 40 feet. Highest water level 4.40 below lsd, Apr. 14, 1951; lowest 12.36 below lsd, Dec. 1, 1953. Records available: 1946-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	10.76	Apr. 6	6.55	July 6	8.01	Oct. 5	12.25
12	10.40	13	6.35	13	8.35	12	11.90
19	10.30	20	6.20	20	8.75	19	10.92
26	9.92	27	5.65	27	9.06	26	10.65
Feb. 2	9.30	May 4	5.53	Aug. 3	9.40	Nov. 2	10.34
9	9.00	11	5.90	10	9.70	9	10.02
16	8.90	18	6.30	17	9.95	16	9.60
23	8.15	25	6.80	24	10.40	23	9.23
Mar. 2	8.00	June 1	7.40	31	10.62	30	8.50
9	7.45	8	7.80	Sept. 7	11.20	Dec. 7	8.40
16	7.50	15	7.80	14	11.40	14	7.95
23	7.25	22	7.75	21	11.60	21	7.66
30	6.90	29	7.99	28	12.08	28	7.59

Auglaize County

Au-1. C. W. Manchester. Lat. 40°33'42", long. 83°54'18". Drilled unused well in limestone, diameter 4 inches, depth 96 feet. Highest water level 14.33 below lsd, Apr. 11, 1948; lowest 21.58 below lsd, Jan. 26, 1954. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	21.32	21.50	20.55	19.35	17.71	17.69	18.28	18.69	18.95	19.71	19.84	19.57
2	21.32	21.43	20.50	19.32	17.70	17.53	18.34	18.55	18.95	19.72	19.82	19.52
3	21.37	21.41	20.46	19.31	17.61	17.48	18.33	18.52	19.00	19.72	19.81	19.50
4	21.37	21.40	20.46	19.29	17.61	17.44	18.10	18.53	19.02	19.72	19.79	19.49
5	21.33	21.35	20.45	19.25	17.56	17.48	18.20	18.45	19.03	19.71	19.78	19.52
6	21.44	21.35	20.44	19.19	17.55	17.47	18.17	18.43	19.26	19.72	19.79	19.53
7	21.35	21.35	.....	18.97	17.54	17.54	18.11	18.46	19.32	19.77	19.78	19.53
8	21.35	21.35	.....	19.02	17.52	17.55	18.02	18.46	19.35	19.76	19.78	19.48
9	21.38	21.28	.....	19.02	17.48	17.48	18.00	18.47	19.35	19.77	19.79	19.43
10	21.44	21.21	.....	19.01	17.46	17.55	18.00	18.53	19.33	19.77	19.79	19.50
11	21.42	21.21	20.24	18.95	17.44	17.53	18.01	18.55	19.31	19.76	19.77	19.48
12	21.43	21.20	20.21	18.92	17.43	17.59	18.11	18.57	19.34	19.76	19.78	19.44
13	21.47	21.20	20.16	18.89	17.48	17.73	18.28	18.60	19.35	19.74	19.78	19.41
14	21.46	21.11	20.13	18.78	17.46	17.71	18.46	18.69	19.37	19.74	19.74	19.39
15	21.44	21.07	20.12	18.72	17.42	17.71	18.47	18.64	19.38	19.66	19.75	19.36
16	21.46	21.02	20.10	18.51	17.41	17.66	18.35	18.64	19.38	19.69	19.76	19.36
17	21.51	21.02	20.09	18.39	17.43	17.68	18.28	18.67	19.38	19.74	19.75	19.36
18	21.51	21.01	20.04	18.39	17.47	17.72	18.21	18.67	19.38	19.77	19.73	19.33
19	21.51	20.98	19.97	18.32	17.46	17.83	18.30	18.64	19.39	19.86	19.70	19.32
20	21.51	20.91	19.78	18.31	17.42	17.90	18.33	18.67	19.39	19.83	19.68	19.34
21	21.49	20.89	19.81	18.25	17.43	17.97	18.32	18.72	19.39	19.84	19.78	19.34
22	21.51	20.90	19.81	18.19	17.46	18.00	18.25	18.72	19.39	19.84	19.85	19.33
23	21.51	20.83	19.79	18.13	17.49	18.16	18.24	18.75	19.40	19.89	19.82	19.30
24	21.51	20.77	19.78	18.02	17.61	18.33	18.27	18.78	19.40	19.90	19.65	19.33
25	21.54	20.73	19.72	17.98	17.56	18.30	18.31	18.77	19.40	19.88	19.58	19.34
26	21.58	20.70	19.62	17.93	17.58	18.29	18.38	18.76	19.40	19.86	19.58	19.34
27	21.42	20.68	19.62	17.89	17.54	18.33	18.61	18.77	19.41	19.86	19.55	19.34
28	21.45	20.60	19.61	17.79	17.48	18.20	18.73	18.77	19.41	19.85	19.50	19.32
29	21.45		19.45	17.82	17.46	18.17	18.77	18.86	19.42	19.81	19.55	19.26
30	21.53		19.42	17.74	17.48	18.25	18.69	18.86	19.42	19.85	19.57	19.27
31	21.53		19.42		17.71		18.77	18.86		19.85		19.26

Au-2. City of St. Marys. Lat. 40°33'42", long. 84°23'26". Drilled unused well in gravel, diameter 8 inches, depth 100 feet. Highest water level 0.09 below lsd, Apr. 30, 1946; lowest 7.45 below lsd, Mar. 26, 1954. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.33	6.42	6.71	7.25	6.57	5.69	6.54	2.03	5.25	6.95	6.50	6.67
2	5.95	6.57	.....	7.25	3.60	6.10	6.58	4.26	5.33	6.95	7.03	6.58
3	5.86	6.77	.....	6.97	5.72	6.18	6.53	4.64	5.60	4.19	7.13	6.49
4	6.15	6.84	.....	3.88	6.09	6.57	4.15	4.82	5.65	6.35	6.94	6.36
5	6.28	6.87	.....	5.98	6.26	6.57	3.00	4.80	2.75	6.73	7.00	3.57
6	6.52	6.80	7.15	6.38	6.35	3.70	5.80	3.90	1.55	7.20	6.90	6.35
7	6.60	6.78	.....	6.49	6.48	5.60	6.28	4.01	4.71	7.37	4.40	6.49
8	6.65	6.40	.....	6.32	6.49	5.94	6.30	1.10	5.38	7.26	6.40	6.46
9	6.46	6.66	.....	6.89	3.20	6.10	5.87	3.55	5.55	7.13	6.83	6.50
10	5.93	6.83	.....	6.70	5.73	6.22	5.75	4.00	5.65	4.12	6.94	6.80
11	.....	7.22	6.94	3.63	6.13	6.22	2.90	4.21	5.67	5.97	6.93	6.80
12	6.77	7.33	6.98	5.99	6.40	6.16	4.87	4.35	3.00	6.37	6.98	4.58
13	6.91	7.22	6.82	6.18	6.50	3.95	4.17	4.43	5.20	6.53	6.98	6.20
14	6.80	6.85	6.55	6.29	6.57	5.95	5.21	4.36	5.62	6.53	4.42	6.27
15	6.80	6.78	6.99	6.35	6.56	6.32	5.37	1.25	5.85	6.40	6.21	6.55
16	6.60	.....	7.18	6.27	3.96	6.48	5.46	3.65	5.99	6.25	6.38	6.73
17	6.10	7.23	7.19	6.10	5.82	6.68	5.39	4.04	6.04	3.94	6.47	6.71
18	6.53	7.25	7.07	3.04	6.25	6.81	2.45	4.09	5.98	6.63	6.50	6.44
19	6.58	7.16	6.87	5.77	6.47	6.80	4.70	4.15	3.10	6.86	6.43	4.10
20	6.61	7.08	6.50	6.17	6.63	4.05	4.88	4.28	5.25	6.95	6.54	6.22
21	6.82	6.81	4.35	6.27	6.75	5.75	5.06	4.38	5.80	6.97	6.63	6.50
22	6.81	6.88	6.45	6.29	6.72	6.10	5.14	1.29	6.15	7.15	6.67	6.54
23	6.68	6.90	6.99	6.35	4.25	6.33	5.15	3.75	6.32	7.15	6.62	6.46
24	6.03	6.84	7.12	6.30	5.90	6.41	5.15	3.97	6.37	4.92	6.47	6.74
25	6.64	6.89	7.19	3.17	6.43	6.42	2.24	4.06	6.22	6.26	6.43	5.15

Au-2--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	....	7.00	7.45	5.65	6.65	6.37	4.65	3.95	3.45	6.60	6.40	3.52
27	6.84	7.00	7.40	6.01	6.69	3.90	4.88	4.04	5.48	7.00	6.41	4.00
28	7.01	6.84	3.95	6.36	6.60	5.90	4.95	4.03	6.17	7.02	6.24	4.02
29	6.98		6.48	6.47	6.45	6.17	5.03	1.05	6.60	6.95	6.24	3.91
30	6.88		6.87	6.59	4.22	6.36	5.12	4.00	6.84	6.97	6.71	3.79
31	6.29		7.08		3.01		5.11	4.88		4.80		3.77

Butler County

B-23. Carl E. Schiering. Lat. 39°20'15", long. 84°34'56". Drilled unused well in gravel, diameter 6 inches, depth 176 feet. Highest water level 11.41 below lsd, June 5, 1947; lowest 28.10 below lsd, Dec. 26, 1944. Records available: 1943-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	25.15	25.10	25.20	.....	24.00	24.45	24.50	24.95	25.00	25.50	25.60	25.75
2	25.15	25.10	25.20	.....	24.00	24.45	24.50	25.00	25.00	25.55	25.60	25.75
3	25.15	25.10	25.20	.....	24.00	24.40	24.55	25.00	25.05	25.55	25.60	25.75
4	25.20	25.10	25.20	.....	23.95	24.40	24.55	25.00	25.05	25.55	25.60	25.75
5	25.20	25.10	25.15	.....	23.90	24.40	24.55	25.00	25.10	25.60	25.60	25.75
6	25.20	25.15	25.15	24.50	23.90	24.40	24.60	25.00	25.10	25.60	25.60	25.75
7	25.20	25.15	25.15	24.50	23.90	24.45	24.60	24.95	25.15	25.60	25.60	25.75
8	25.20	25.15	25.10	24.45	23.90	24.45	24.60	24.90	25.15	25.60	25.65	25.75
9	25.20	25.15	25.10	24.45	23.90	24.45	24.60	24.80	25.15	25.60	25.65	25.75
10	25.20	25.20	25.10	24.40	23.95	24.45	24.60	24.85	25.20	25.65	25.65	25.75
11	25.20	25.20	25.10	24.35	23.95	24.40	24.65	24.85	25.20	25.65	25.65	25.75
12	25.25	25.20	25.10	24.35	23.95	24.35	24.65	24.85	25.25	25.65	25.65	25.80
13	25.25	25.20	25.10	24.35	24.00	24.35	24.70	24.90	25.25	25.65	25.65	25.80
14	25.25	25.20	25.10	24.35	24.00	24.30	24.70	24.90	25.25	25.60	25.65	25.80
15	25.25	25.25	25.10	24.35	24.05	24.30	24.75	24.95	25.30	25.60	25.70	25.80
16	25.25	25.25	25.05	24.35	24.05	24.30	24.75	24.95	25.30	25.60	25.70	25.80
17	25.25	25.25	25.05	24.30	24.05	24.30	24.80	25.00	26.30	25.55	25.70	25.80
18	25.30	25.25	25.05	24.25	24.10	24.30	24.80	25.00	25.35	25.50	25.70	25.80
19	25.30	25.25	25.05	24.20	24.15	24.20	24.85	24.95	25.35	25.50	25.70	25.80
20	25.30	25.25	25.05	24.15	24.15	24.15	24.90	24.95	25.35	25.45	25.70	25.80
21	25.30	25.20	25.00	24.15	24.20	24.10	24.90	24.95	25.35	25.45	25.75	25.85
22	25.30	25.20	25.00	24.15	24.25	24.15	24.80	24.95	25.40	25.45	25.75	25.85
23	25.25	25.20	25.00	24.15	24.25	24.20	24.75	24.95	25.40	25.45	25.75	25.85
24	25.25	25.20	24.95	24.15	24.30	24.45	24.75	25.00	25.40	25.45	25.75	25.85
25	25.25	25.20	24.95	24.10	24.30	24.45	24.80	25.00	25.45	25.50	25.75	25.85
26	25.30	25.20	24.95	24.10	24.35	24.30	24.85	25.00	25.45	25.50	25.75	25.85
27	25.25	25.20	24.95	24.05	24.35	24.35	24.85	25.00	25.50	25.50	25.75	25.85
28	25.25	25.20	24.95	24.05	24.40	24.35	24.85	25.00	25.50	25.50	25.75	25.85
29	25.20		24.95	24.05	24.40	24.45	24.90	24.95	25.50	25.55	25.75	25.85
30	25.15		24.95	24.00	24.40	24.45	24.90	24.95	25.50	25.55	25.80	25.75
31	25.10		24.90		24.45		24.95	25.00		25.55		25.60

25-5. City of Middletown. Columbia Ave., Middletown. Lat. 39°32', long. 84°25'. Drilled unused well in gravel, diameter 8 inches, depth 62 feet. Highest water level 13.25 below lsd, May 4, 1947; lowest 41.10 below lsd, Sept. 25, 1941. Records available: 1941-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	35.45	35.30	35.25	34.70	32.60	33.35	32.75	33.40	33.15	34.10	33.65	34.35
2	35.40	35.35	35.25	34.55	32.60	33.35	32.85	33.50	33.20	34.10	33.65	34.40
3	35.40	35.35	35.20	34.35	32.60	33.30	32.90	33.60	33.25	34.10	33.65	34.40
4	35.40	35.40	35.20	34.20	32.60	33.30	32.90	33.65	33.25	34.10	33.65	34.40
5	35.40	35.45	35.15	34.05	32.60	33.30	32.90	33.70	33.25	34.15	33.70	34.40
6	35.45	35.50	35.15	34.05	32.60	33.25	32.85	33.70	33.25	34.20	33.70	34.40
7	35.45	35.50	35.05	33.90	32.60	33.30	32.85	33.70	33.30	34.20	33.70	34.40
8	35.45	35.40	35.00	33.80	32.60	33.35	32.85	33.55	33.35	34.25	33.75	34.45
9	35.45	35.40	35.00	33.75	32.60	33.40	32.85	33.35	33.35	34.30	33.85	34.50
10	35.45	35.30	.....	33.60	32.70	33.45	32.90	33.30	33.40	34.25	33.90	34.55
11	35.50	35.30	.....	33.50	32.75	33.40	32.90	33.25	33.45	34.25	33.95	34.55
12	35.55	35.35	.....	33.40	32.75	33.25	33.00	33.20	33.50	34.20	33.95	34.55
13	35.60	35.30	.....	33.35	32.80	33.10	33.10	33.55	33.55	34.00	34.00	34.55
14	35.60	35.25	.....	33.25	32.85	32.95	33.10	33.20	33.65	34.25	34.00	34.55
15	35.60	35.25	.....	33.25	32.85	32.95	33.15	33.20	33.65	34.25	34.00	34.55

25-5--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	35.60	35.30	35.05	33.20	32.90	32.95	33.20	33.15	33.75	34.20	34.05	34.60
17	35.60	35.30	35.05	33.15	32.90	33.00	33.20	33.20	33.80	34.10	34.05	34.60
18	35.65	35.35	35.10	33.05	33.05	32.95	33.20	33.20	33.80	33.90	34.10	34.65
19	35.65	35.35	35.15	32.90	33.05	32.90	33.25	33.15	33.80	33.75	34.10	34.65
20	35.65	35.35	35.20	32.80	33.10	32.70	33.30	33.15	33.85	33.60	34.15	34.65
21	35.65	35.35	35.20	32.75	33.10	32.50	33.30	33.15	33.85	33.55	34.15	34.70
22	35.65	35.40	35.20	32.70	33.10	32.50	33.25	33.10	33.90	33.50	34.15	34.75
23	35.60	35.45	35.15	32.70	33.10	32.45	33.15	33.10	33.90	33.50	34.20	34.85
24	35.55	35.40	35.10	32.60	33.15	32.45	33.05	33.10	33.90	33.50	34.25	34.90
25	35.55	35.40	35.10	32.50	33.30	32.45	33.05	33.15	33.95	33.55	34.25	34.80
26	35.55	35.40	35.05	32.55	33.35	32.45	33.10	33.25	33.95	33.55	34.35	34.70
27	35.55	35.40	35.05	32.55	33.35	32.50	33.15	33.25	34.00	33.60	34.35	34.70
28	35.50	35.35	35.00	32.50	33.40	32.55	33.25	33.25	34.00	33.60	34.35	34.70
29	35.50		34.95	32.55	33.40	32.60	33.30	33.20	34.05	33.65	34.30	34.70
30	35.45		34.95	32.60	33.35	32.70	33.35	33.10	34.05	33.65	34.35	34.70
31	35.40		34.90		33.30		33.35	33.10		33.65		34.60

36-13. American Rolling Mill Co. Crawford St. and South Ave., Middletown. Lat. 39°30'00", long. 84°23'00". Drilled unused well in gravel, diameter 26 inches, depth 183 feet. Highest water level 76.83 below lsd, Aug. 1, 1936; lowest 137.25 below lsd, July 26, 1954. Records available: 1938-54. Measurement discontinued.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July
1	.....	.....	.....	134.60	135.30	131.95	136.05
2	.....	134.50	133.40	134.80	135.15	.....	136.05
3	.....	134.65	134.05	134.80	134.95	.....	136.20
4	.....	134.70	134.05	134.60	135.10	.....	136.20
5	133.05	134.70	134.20	134.40	135.10	.....	135.50
6	.....	134.85	134.20	134.30	135.25	.....	135.55
7	.....	134.80	.....	134.30	135.35	.....	135.85
8	.....	.....	.....	134.30	135.35	132.60	136.30
9	.....	134.60	132.85	134.30	135.20	133.55	136.50
10	.....	134.70	.....	134.30	135.05	133.95	136.50
11	.....	134.95	.....	134.45	135.00	134.20	136.65
12	133.40	134.95	.....	134.60	135.00	134.30	136.75
13	.....	.....	.....	134.65	135.15	134.40	136.60
14	.....	.....	.....	134.80	135.20	134.40	136.75
15	.....	.....	.....	135.00	135.20	134.75	.....
16	.....	134.80	133.05	135.15	135.10	134.90	.....
17	.....	134.85	133.30	135.15	134.90	135.05	.....
18	.....	.....	.....	135.00	134.95	135.05	136.65
19	134.00	.....	.....	134.90	134.95	135.10	136.80
20	134.20	.....	.....	134.90	134.90	135.05	136.90
21	136.10	.....	.....	134.95	133.40	135.15	136.95
22	136.25	.....	133.05	135.20	132.75	135.30	137.05
23	.....	134.55	133.55	135.20	132.60	135.40	137.20
24	.....	.....	133.55	135.20	132.35	135.35	137.20
25	.....	.....	133.65	135.00	132.20	135.45	.....
26	136.50	.....	134.25	134.80	132.20	135.50	137.25
27	.....	.....	.....	135.05	132.15	135.70	.....
28	.....	.....	133.60	135.05	132.10	135.80	.....
29	.....	.....	133.60	135.20	132.10	135.90	.....
30	.....	.....	134.15	135.30	132.10	135.90	.....
31	.....	.....	134.45	.....	132.05	.....	.....

85-7. City of Hamilton. Lat. 39°25', long. 84°32'. Drilled unused well in gravel, diameter 3 inches, depth 110 feet. Highest water level 12.45 below lsd, Apr. 23, 1940; lowest 40.90 below lsd, July 3, 1954. Records available: 1939-54. Measurement discontinued.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July
1	37.55	37.85	38.10	37.25	36.15	37.35	40.55
2	37.60	37.90	37.90	37.30	36.00	37.20	40.80
3	37.60	38.10	38.00	36.60	35.85	36.90	40.90
4	38.40	38.15	38.05	36.40	36.00	37.25	40.75
5	38.55	38.20	38.05	36.25	36.10	37.15	39.55

85-7--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July
6	38.65	38.20	38.05	36.15	36.60	36.40	.....
7	38.75	38.20	37.85	36.15	36.80	37.05	.....
8	39.40	37.95	37.40	36.35	35.95	37.15	.....
9	38.20	38.00	37.40	36.35	35.90	37.25	.....
10	37.90	38.05	37.40	36.35	36.65	37.35	.....
11	39.50	38.15	37.50	35.80	36.20	37.35	.....
12	39.80	38.20	37.95	36.85	36.15	38.30	.....
13	.....	38.30	38.25	36.85	36.20	38.35	.....
14	39.30	38.30	38.30	36.55	36.35	37.25	.....
15	39.50	38.15	38.20	36.55	36.40	37.85	.....
16	39.65	38.20	37.90	36.55	36.30	38.45	.....
17	39.40	38.30	38.25	35.65	36.55	38.00	.....
18	39.65	38.40	38.50	35.45	37.05	37.85	.....
19	39.75	38.50	38.60	35.80	37.20	37.45	.....
20	39.80	38.50	38.05	35.85	37.35	38.45	.....
21	39.25	38.45	37.95	35.95	37.40	37.70	.....
22	39.10	38.60	37.85	36.00	37.00	38.90	.....
23	38.95	38.55	37.90	36.05	37.25	39.10	.....
24	38.75	38.45	37.90	36.10	37.70	39.30	.....
25	38.70	37.55	37.95	35.75	38.25	39.65	.....
26	38.75	37.50	37.95	36.45	38.05	39.85	.....
27	38.60	37.45	37.95	36.45	38.05	39.95	.....
28	38.60	37.85	37.95	36.45	38.30	40.00	.....
29	38.25		37.85	36.85	37.50	40.15	.....
30	38.05		37.85	36.35	37.30	.....	.....
31	38.05		37.75		37.10		.....

85-7a. City of Hamilton. Lat. 39°25', long. 84°32'. Drilled unused well in gravel, diameter 18 inches, depth 180 feet. The record of well 85-7a is a continuation of the record of well 85-7. Well 85-7a is 640 feet east of well 85-7. Highest water level 35.60 below lsd, July 25, 1954; lowest 42.05 below lsd, Sept. 16-17, 1954. Records available: 1954. Recording gage installed July 20, 1954.

Daily lowest water level from recorder graph

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	41.55	40.10	.....	40.70	40.50
2	.....	39.50	39.95	.....	40.70	41.40
3	.....	40.85	39.95	.....	41.05	41.55
4	.....	41.15	39.70	41.00	41.10	41.60
5	.....	39.75	39.80	41.15	40.65	40.90
6	.....	40.65	39.65	.....	40.65	40.75
7	.....	40.85	40.95	40.65	40.70	40.65
8	.....	39.50	41.55	.....	41.60	40.95
9	.....	39.80	40.50	.....	41.75	41.05
10	.....	39.35	40.60	40.60	41.75	41.10
11	.....	40.45	40.75	40.70	41.70	40.00
12	.....	39.85	40.05	40.75	41.60	39.80
13	.....	39.60	40.75	40.25	41.60	40.80
14	.....	39.60	40.85	40.35	40.50	40.90
15	.....	39.30	41.40	40.30	41.50	41.00
16	.....	39.70	42.05	40.25	41.50	41.05
17	.....	39.90	42.05	39.20	40.75	40.55
18	.....	40.00	40.90	39.60	41.65	40.60
19	.....	40.05	40.85	40.30	41.70	40.65
20	40.85	40.55	40.75	40.60	40.60	40.65
21	41.15	40.40	40.90	40.25	40.85	40.75
22	40.65	39.95	40.90	40.30	41.55	40.80
23	40.50	40.25	.....	40.40	41.55	41.25
24	40.85	41.70	.....	39.85	41.60	41.50
25	38.75	41.50	.....	39.90	41.65	41.55
26	38.50	41.10	.....	40.15	40.60	40.90
27	39.75	40.90	.....	40.55	40.50	41.10
28	40.65	40.95	.....	40.40	41.20	40.80
29	40.80	40.55	.....	40.30	41.50	40.65
30	41.15	40.00	.....	40.10	41.45	40.45
31	41.45	40.00		39.70		41.15

180. Fox Paper Co. Crescentville. Lat. 39°18'05", long. 84°26'18". Drilled unused well in gravel, diameter 26 inches, depth 90 feet. Highest water level 3.77 below lsd, Jan. 27, 1949; lowest 24.40 below lsd, Mar. 16, 1954. Records available: 1938-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	22.05	22.80	23.85	23.80	18.75	21.05	20.20	18.40	19.42	20.73	21.77	.....
2	22.05	22.55	23.95	23.60	18.55	21.15	20.25	18.40	19.37	20.69	21.92	.....
3	22.40	22.75	24.05	23.85	17.85	21.00	20.25	15.07	19.46	20.63	21.90	.....
4	22.35	22.80	24.10	23.80	17.70	21.15	20.10	15.20	19.55	20.72	21.75	.....
5	22.00	22.90	24.00	23.60	17.40	21.20	19.40	15.15	19.59	20.77	21.94	.....
6	22.25	23.30	23.85	23.50	17.35	21.20	15.70	15.25	19.59	21.20	21.84	.....
7	22.30	23.35	23.75	23.55	17.60	21.00	15.90	15.37	19.54	21.32	21.97	.....
8	22.30	23.15	23.85	24.00	17.70	21.00	16.20	15.55	19.69	21.10	22.07	.....
9	22.25	22.85	23.70	24.05	17.90	20.95	16.60	15.73	19.70	20.87	.....	.....
10	22.35	22.95	23.65	23.70	17.95	20.95	17.00	16.05	19.62	20.74	.....	.....
11	22.25	23.58	23.75	23.80	17.95	20.90	17.40	16.50	19.85	20.68	.....	.....
12	22.75	23.75	23.85	24.05	18.15	16.10	17.70	16.87	20.00	20.92	.....	.....
13	22.80	23.55	23.85	23.85	18.25	16.30	18.25	17.17	19.94	21.13	.....	.....
14	22.50	23.05	24.20	23.50	18.50	15.95	18.70	17.47	19.87	21.06	.....	.....
15	22.85	23.15	24.35	23.55	18.65	16.05	19.45	17.70	19.92	21.01	.....	.....
16	22.40	23.15	24.40	23.50	18.85	16.10	19.65	17.92	20.02	21.25	.....	.....
17	22.80	23.60	24.25	23.45	18.90	16.20	19.70	18.24	20.04	21.41	.....	.....
18	22.70	23.60	23.90	22.90	19.45	16.20	19.75	.....	19.97	21.61	.....	.....
19	22.45	23.45	23.55	22.90	19.70	16.40	19.95	.....	19.87	21.63	.....	.....
20	22.40	23.25	24.00	23.00	20.05	16.65	20.05	.....	20.00	21.50	.....	.....
21	22.85	23.40	24.10	22.90	20.25	17.05	20.05	.....	20.23	21.31	.....	.....
22	22.85	23.60	24.10	22.70	20.45	17.40	15.80	.....	20.40	21.51	.....	.....
23	22.80	23.55	23.90	21.50	20.60	17.95	15.85	.....	20.53	21.61	.....	.....
24	22.60	23.30	23.95	19.35	20.60	18.35	15.95	.....	20.50	21.62	.....	.....
25	22.75	23.30	23.65	18.80	20.80	18.70	16.05	.....	20.28	21.47	.....	.....
26	22.60	23.55	24.05	18.65	20.90	19.00	16.35	.....	20.28	21.33	.....	.....
27	22.90	23.55	24.05	18.50	20.90	19.50	16.65	.....	20.35	21.50	.....	.....
28	23.05	23.60	23.70	18.55	20.80	19.15	16.95	.....	20.38	21.51	.....	.....
29	22.90	.....	23.50	18.60	21.20	19.85	17.40	.....	20.50	21.37	.....	.....
30	22.95	.....	23.60	18.65	21.35	20.00	17.85	.....	20.65	21.63	.....	21.16
31	23.00	.....	23.60	.....	21.25	.....	18.20	19.29	.....	21.77	.....	20.50

Carroll County

C-1. City of Carrollton. Lat. 40°37'26", long. 81°05'12". Drilled unused well in sandstone, diameter 10 inches, depth 60 feet. Highest water level 11.65 below lsd, May 22, 1954; lowest 37.65 below lsd, Dec. 16, 1952. Records available: 1951-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	34.10	36.05	35.40	20.20	17.90	.....	21.05	23.35	25.95	31.40	26.10	.....
2	34.35	34.60	35.50	19.60	17.90	.....	21.20	23.45	26.35	31.65	26.35	.....
3	34.15	35.15	35.40	19.95	18.35	.....	21.45	23.40	26.40	31.55	25.70	.....
4	33.20	35.50	35.60	20.20	17.65	17.65	22.00	23.50	26.90	31.65	25.00	.....
5	33.45	35.75	35.55	19.55	16.85	17.30	22.40	23.00	26.95	30.20	25.10	.....
6	32.50	36.05	35.25	18.40	15.90	17.65	22.40	23.25	27.40	30.70	25.25	.....
7	33.20	36.15	34.90	18.00	14.75	18.80	22.50	23.25	27.55	31.10	25.30	.....
8	33.70	36.00	33.80	17.10	14.90	19.10	22.70	24.20	27.85	30.05	25.40	.....
9	33.65	36.10	33.75	16.60	16.15	17.85	22.80	24.15	27.40	29.80	24.95	.....
10	33.45	36.15	32.15	15.70	15.40	18.05	23.25	23.80	27.65	30.10	25.15	.....
11	34.00	36.35	32.20	16.20	14.00	17.55	23.65	23.60	27.25	30.40	23.90	.....
12	34.55	36.55	31.50	17.40	13.55	17.65	23.75	23.75	.....	30.50	23.15	.....
13	34.80	36.60	31.50	17.65	13.80	18.45	23.55	23.95	.....	30.00	24.40	.....
14	35.40	35.30	30.00	18.25	12.90	18.75	22.65	23.00	.....	29.75	24.65	.....
15	35.70	34.10	29.85	18.65	13.35	18.35	22.35	23.50	27.55	30.50	24.85	.....
16	35.85	34.05	29.90	19.05	15.00	18.90	23.00	23.85	27.90	30.70	24.65	.....
17	36.25	34.80	29.80	19.10	14.40	18.60	23.35	23.60	27.95	30.95	24.95	.....
18	35.85	35.05	28.40	18.75	13.20	18.15	23.85	23.00	28.55	30.65	23.85	.....
19	36.30	35.20	28.55	17.95	12.50	18.70	23.55	23.65	29.45	30.35	23.25	.....
20	36.45	35.50	28.55	18.35	12.55	19.20	22.90	24.00	29.85	30.70	23.25	.....

C-1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	36.65	35.85	28.10	18.55	12.10	19.10	21.95	24.15	30.00	30.80	23.40	.....
22	36.85	34.50	27.60	19.05	14.35	18.90	22.10	24.50	30.35	29.15	23.60	.....
23	37.05	34.95	.....	19.35	14.95	18.35	21.25	24.45	30.90	29.05	23.20	.....
24	37.15	35.05	26.05	19.45	14.60	18.50	20.80	24.30	31.20	28.80	23.55	.....
25	37.20	35.25	26.25	19.25	13.35	17.70	21.40	24.85	31.80	27.85	24.00	.....
26	36.90	35.00	25.20	18.55	13.35	17.25	21.80	24.45	30.85	.....	24.15	.....
27	36.60	35.40	23.95	17.25	13.35	18.05	21.55	25.20	30.55	.....	24.40	.....
28	36.55	35.45	24.50	17.15	14.25	18.40	21.75	26.10	30.85	26.50	24.60	.....
29	36.85		24.10	17.95	14.85	19.30	21.90	26.35	30.25	26.75	24.80	.....
30	37.10		22.30	18.15	15.10	20.15	22.45	26.40	30.60	26.50	23.60	.....
31	37.00		21.10	.....			22.25	25.70		26.75		.....

Champaign County

Ch-1. State of Ohio. Lat. 40°06'36", long. 83°48'00". Drilled observation well in gravel, diameter 6 inches, depth 45 feet. Highest water level 1.43 below lsd, Jan. 17, 1950; lowest 9.56 below lsd, Dec. 22, 1954. Records available: 1948-54. Recording gage removed Feb. 18, 1954.

Daily lowest water level from recorder graph

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	9.42	Jan. 20	9.47	Feb. 4	9.36	Feb. 17	9.47
2	9.42	21	9.42	5	9.38	Mar. 16	9.35
3	9.43	22	9.37	6	9.40	Apr. 13	8.58
4	9.43	23	9.37	7	9.42	May 11	8.78
5	9.43	24	9.39	8	9.42	June 8	8.90
6	9.44	25	9.41	9	9.43	30	8.83
7	9.44	26	9.42	10	9.45	July 12	9.00
8	9.45	28	9.20	11	9.46	Aug. 31	9.17
9	9.45	29	9.22	12	9.48	Sept. 24	9.36
10	9.45	30	9.25	13	9.48	29	9.40
11	9.46	31	9.28	14	9.49	Oct. 27	9.42
12	9.46	Feb. 1	9.30	15	9.50	Nov. 24	9.50
18	9.46	2	9.32	16	9.50	Dec. 22	9.56
19	9.47	3	9.35				

Clark County

Cl-2. City of Springfield. Lat. 39°55'50", long. 83°51'12". Drilled unused well in gravel, diameter 6 inches, depth 74 feet. Highest water level 0.20 below lsd, Jan. 15, 1950; lowest 7.63 below lsd, Sept. 30, 1954. Records available: 1949-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.35	6.90	6.95	5.88	6.86	7.17	7.23	7.42	7.37	7.60	7.27	7.22
2	7.30	7.00	6.86	6.09	6.85	6.97	7.25	7.34	7.40	7.59	7.28	7.24
3	7.30	7.00	6.76	6.26	6.68	7.02	7.25	7.38	7.45	7.55	7.30	7.27
4	7.35	7.05	6.75	6.33	6.71	7.01	7.20	7.37	7.46	7.41	7.30	7.30
5	7.35	7.05	6.80	6.36	6.75	6.98	7.17	7.38	7.46	7.42	7.27	7.31
6	7.35	7.10	6.84	6.32	6.80	6.97	7.22	6.83	7.45	7.42	7.27	7.35
7	7.40	7.10	6.89	6.07	6.84	7.04	7.22	7.00	7.44	7.35	7.28	7.37
8	7.40	7.15	6.91	6.08	6.88	7.06	7.23	7.04	7.49	7.39	7.29	7.38
9	7.40	7.15	6.93	6.19	6.88	5.95	7.26	7.09	7.51	7.42	7.33	7.38
10	7.35	7.25	6.95	6.33	6.89	6.31	7.27	7.15	7.54	7.42	7.35	7.40
11	7.35	7.25	6.93	6.42	6.94	6.36	7.26	7.20	7.50	7.40	7.36	7.40
12	7.40	7.25	6.94	6.52	6.98	6.52	7.29	7.24	7.50	7.32	7.37	7.40
13	7.40	7.25	6.97	6.58	7.04	6.66	7.33	7.27	7.54	7.18	7.37	7.42
14	7.40	7.25	6.98	6.60	7.08	6.79	7.35	7.26	....	7.20	7.32	7.40
15	7.40	7.25	7.00	6.61	7.09	6.83	7.37	7.18	....	7.00	7.32	7.40
16	7.35	7.25	7.03	6.62	7.08	6.80	7.38	7.19	....	6.88	7.34	7.40
17	....	7.10	7.06	6.36	7.11	6.05	7.40	7.23	....	6.92	7.35	7.40
18	7.40	6.95	7.08	6.17	7.14	6.28	7.38	7.22	....	7.03	7.35	7.35
19	7.40	6.98	7.09	6.31	7.15	6.49	7.38	7.26	....	7.08	7.35	7.35
20	7.40	6.98	6.98	6.43	7.17	6.62	7.42	7.28	....	7.13	7.36	7.37

Cl-2--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	7.05	6.95	6.72	6.52	7.18	6.77	7.39	7.30	....	7.17	7.36	7.38
22	7.15	6.91	6.79	6.59	7.21	6.83	7.35	7.27	....	7.20	7.37	7.38
23	7.20	6.95	6.87	6.56	7.21	6.91	7.36	7.33	....	7.22	7.38	7.37
24	7.20	6.98	6.92	6.46	7.23	6.96	7.38	7.36	....	7.23	7.37	7.38
25	7.25	7.00	6.94	6.55	7.25	7.02	7.39	7.34	....	7.26	7.32	7.38
26	7.25	7.04	6.99	6.46	7.26	7.05	7.43	6.98	....	7.28	7.29	7.37
27	6.35	7.05	7.02	6.55	7.26	7.07	7.46	7.09	....	7.30	7.28	7.37
28	6.50	7.05	7.03	6.64	7.25	7.12	7.49	7.16	....	7.31	7.23	7.36
29	6.65	....	6.99	6.68	7.23	7.16	7.49	7.19	7.62	7.32	7.19	6.35
30	6.75	....	5.67	6.78	7.17	7.18	7.50	7.25	7.63	7.32	7.20	6.10
31	6.80	....	5.64	....	7.18	....	7.51	7.29	....	7.32	....	6.15

Cl-3. Harold Blecher. Lat. 39°51', long. 83°37'. Drilled observation well in deposits of Pleistocene age, diameter 4 inches, depth 17 feet. Highest water level 1.25 below lsd, Apr. 17, 1954; lowest 15.40 below lsd, Dec. 25, 1954. Records available: 1953-54.

Daily lowest water level from recorder graph, 1953*

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	2.90	2.41	3.97	7.16	8.42	8.48	12.04	13.65	14.20
2	3.03	2.72	4.02	7.25	8.41	8.62	12.10	13.68	14.20
3	3.02	2.78	4.11	7.49	7.35	8.80	12.17	13.70	14.20
4	3.07	3.06	4.22	7.54	7.21	9.05	12.24	13.74	14.16
5	3.10	3.08	4.47	7.59	6.68	9.30	12.27	13.77	14.27
6	3.05	3.11	4.60	7.64	5.92	9.40	12.39	13.78	14.20
7	3.20	3.11	4.66	7.65	5.80	9.63	12.48	13.75	14.33
8	3.26	3.20	4.69	....	5.80	9.81	12.50	13.73	14.33
9	3.15	3.27	....	....	5.91	9.91	12.48	13.81	14.29
10	3.11	3.29	....	....	6.05	....	12.51	13.83	14.37
11	3.14	3.37	....	....	6.12	....	12.58	13.83	14.40
12	3.06	3.37	....	....	6.16	....	12.84	13.88	14.38
13	3.07	3.52	....	8.57	6.23	....	12.89	13.89	14.35
14	3.18	3.52	....	8.80	6.30	10.26	12.91	13.89	14.27
15	....	3.52	5.19	9.05	6.44	10.35	12.93	13.83	14.46
16	....	3.52	5.19	9.20	6.54	10.53	13.02	13.86	14.56
17	....	....	5.39	9.27	6.65	10.68	13.09	13.91	14.59
18	....	1.57	5.48	9.28	6.72	10.72	13.14	13.94	14.59
19	....	1.93	5.61	9.17	6.80	10.78	13.20	13.96	14.56
20	....	2.22	5.74	9.04	6.94	10.88	....	13.90	14.49
21	1.70	2.42	6.00	8.96	7.05	11.16	....	13.93	14.46
22	1.84	2.60	6.07	8.96	7.11	11.30	....	13.93	14.61
23	1.98	2.81	6.24	8.72	7.20	11.34	13.30	13.91	14.69
24	....	2.85	6.30	8.38	7.37	11.33	13.42	13.89	14.69
25	....	2.98	6.41	8.24	7.50	11.34	13.47	13.94	14.63
26	....	3.22	6.62	8.13	7.60	11.38	13.49	14.05	14.64
27	2.29	3.42	6.75	8.08	7.69	11.50	13.48	14.10	14.69
28	2.30	3.45	6.89	8.09	7.79	11.65	13.50	....	14.65
29	2.31	3.46	7.03	8.18	7.94	11.74	13.58	....	14.70
30	2.26	3.56	7.13	8.30	8.13	11.97	13.63	14.16	14.77
31	....	3.75	....	8.38	8.32	....	13.64	....	14.80

* No record for January, February, and March.

Daily lowest water level from recorder graph, 1954

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14.79	15.02	14.22	3.73	2.96	5.13	7.92	11.26	12.77	14.40	14.53	15.07
2	14.79	14.85	14.24	3.61	2.89	5.24	8.03	11.26	12.78	14.43	14.58	15.00
3	14.90	14.77	14.17	3.72	2.96	5.24	8.11	11.42	12.88	14.44	14.58	14.97
4	14.90	14.79	14.17	3.69	2.98	5.46	8.15	11.54	12.95	14.45	14.58	14.98
5	14.78	14.84	14.13	3.55	3.04	5.55	8.26	11.57	13.00	14.46	14.62	15.11
6	14.88	14.93	....	3.20	3.08	5.62	8.35	11.62	13.04	14.50	14.61	15.17
7	14.92	14.97	....	....	3.25	5.64	8.42	11.66	13.08	14.52	14.66	15.17
8	14.94	14.93	....	....	3.29	5.79	8.57	11.68	13.17	14.42	14.70	15.09
9	14.90	14.74	....	1.60	3.38	5.88	8.71	11.74	13.19	14.30	14.74	15.03
10	14.96	14.74	....	1.84	3.42	5.99	8.84	11.82	13.22	14.26	14.74	15.17
11	14.96	14.90	....	2.14	3.40	6.11	....	11.92	13.35	14.25	14.72	15.20
12	15.10	14.96	....	2.32	3.50	6.21	....	12.01	13.92	14.24	14.72	....
13	15.13	14.95	5.93	2.31	3.53	6.34	....	12.11	13.44	14.08	14.71	....
14	15.10	14.78	5.10	2.43	3.62	6.38	....	12.15	13.50	14.04	14.68	15.16
15	15.01	14.73	5.10	2.48	3.65	6.44	....	12.18	13.54	13.98	14.72	15.15

CI-3--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	.....	14.73	5.13	2.36	3.71	6.56	9.76	12.25	13.63	14.08	14.69	15.27
17	.....	14.83	5.08	1.40	3.80	6.66	9.79	12.32	13.66	14.17	14.74	15.27
18	15.12	14.84	4.99	1.75	3.88	6.68	9.81	12.32	13.67	14.26	14.75	15.18
19	15.11	14.79	4.84	2.10	3.96	6.70	9.96	12.37	13.73	14.28	14.73	15.28
20	15.11	14.71	4.72	2.32	4.08	6.71	10.02	12.45	13.79	14.25	14.78	15.33
21	15.22	14.60	3.05	2.44	4.14	6.79	10.12	12.52	13.88	14.19	14.84	15.34
22	15.22	14.66	3.10	2.60	4.24	6.90	10.20	12.58	13.98	14.26	14.86	15.34
23	15.22	14.65	3.35	2.58	4.35	.....	10.29	12.62	14.03	14.31	14.86	15.26
24	15.18	14.49	3.54	1.90	4.38	.....	10.93	12.63	14.04	14.34	14.78	15.38
25	15.18	14.39	3.53	2.02	4.56	7.11	10.57	12.64	14.04	14.32	14.91	15.40
26	15.16	14.39	3.77	2.12	4.65	7.22	10.68	12.63	14.08	14.29	14.95	15.38
27	15.11	14.39	3.77	2.33	4.65	7.43	10.76	12.58	14.13	14.37	14.94	15.38
28	15.15	14.23	3.63	2.63	4.68	7.52	10.80	12.62	14.20	14.38	14.86	15.34
29	15.13	.....	3.67	2.76	5.00	7.60	10.96	12.63	14.27	14.34	15.06	15.28
30	15.02	.....	3.75	2.87	5.12	7.74	11.11	12.62	14.34	14.45	15.10	14.99
31	15.05	.....	3.70	.....	5.12	.....	11.18	12.70	.....	14.53	.....	14.83

CI-5. State of Ohio. Lat. 39°49', long. 83°40'. Drilled observation well in deposits of Pleistocene age, diameter 4 inches, depth 16 feet. Highest water level 1.61 below lsd, Dec. 31, 1954; lowest 5.78 below lsd, Nov. 10-13, 1953. Records available: 1953-54.

Daily lowest water level from recorder graph, 1953*

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	3.13	3.13	3.46	4.07	4.22	5.01	5.58	5.73	5.75
2	3.20	3.20	3.47	4.07	4.05	5.05	5.59	5.74	5.75
3	3.20	3.24	3.50	4.11	4.17	5.08	5.60	5.74	5.75
4	3.21	3.20	3.54	4.14	4.18	5.11	5.61	5.74	5.75
5	3.22	3.21	3.58	4.15	4.16	5.14	5.62	5.74	5.75
6	3.24	3.22	3.60	4.19	4.17	5.16	5.63	5.77	5.75
7	3.28	3.23	3.62	4.20	4.18	5.19	5.64	5.77	5.73
8	3.29	3.24	3.66	4.21	4.21	5.21	5.64	5.77	5.73
9	3.29	3.27	3.67	4.24	4.25	5.23	5.65	5.77	5.72
10	3.30	3.28	3.68	4.27	4.28	5.25	5.65	5.78	5.71
11	.....	3.36	3.42	4.29	4.29	5.28	5.66	5.78	5.71
12	.....	3.37	3.41	4.32	4.32	5.29	5.66	5.78	5.71
13	.....	3.39	3.44	4.35	4.36	5.32	5.67	5.78	5.71
14	.....	3.40	3.49	4.36	4.40	5.33	5.67	.....	5.71
15	.....	3.40	3.58	4.38	4.43	5.34	5.68	.....	5.70
16	.....	3.12	3.58	4.31	4.45	5.36	5.68	.....	5.70
17	.....	2.54	3.65	4.33	4.48	5.37	5.69	.....	.....
18	.....	2.69	3.70	4.33	4.66	5.39	5.69	.....	.....
19	.....	2.83	3.72	4.19	4.66	5.41	5.70	.....	.....
20	2.74	2.91	3.76	4.32	4.67	5.42	5.70	5.77	.....
21	2.73	2.98	3.80	4.32	4.70	5.46	5.71	5.77	5.70
22	2.71	3.08	3.81	3.86	4.74	5.47	5.71	5.77	5.64
23	2.78	3.10	3.83	3.85	4.77	5.48	5.71	5.76	5.66
24	2.84	.....	3.86	3.86	4.81	5.50	5.72	5.76	5.64
25	2.88	3.13	3.90	3.92	4.84	5.51	5.72	5.76	5.63
26	2.96	3.19	3.93	3.97	4.87	5.52	5.72	5.76	5.63
27	3.06	3.25	3.96	4.03	4.91	5.53	5.72	5.76	5.63
28	3.07	3.29	3.99	4.05	4.94	5.55	5.73	.....	5.63
29	3.08	3.30	4.06	4.10	4.97	5.56	5.73	.....	5.63
30	3.09	3.32	4.07	4.13	5.00	5.57	5.73	5.75	5.63
31	.....	3.36	.....	4.18	4.99	.....	5.73	.....	5.63

* No record for January, February, and March.

Daily lowest water level from recorder graph, 1954

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.77	4.52	.....	3.31	4.23	.....	5.29	5.15	5.51	4.43	4.52
2	4.75	4.48	4.12	.....	4.24	4.35	5.32	5.17	5.51	4.44	4.50
3	4.73	4.27	4.15	.....	.....	4.38	5.36	5.21	5.51	4.45	4.49
4	4.74	4.17	4.17	.....	4.26	4.42	5.38	5.23	4.26	4.45	4.47
5	4.74	4.10	4.17	.....	4.28	4.46	5.40	5.26	4.27	4.47	4.47
6	4.75	4.07	4.04	.....	4.29	4.50	5.39	5.28	4.80	4.47	4.51
7	4.77	4.07	3.79	3.51	4.30	4.53	5.41	5.30	4.78	4.48	4.51
8	4.77	4.01	3.37	3.54	4.32	4.58	5.43	5.32	4.73	4.49	4.50
9	5.60	4.75	3.98	3.32	3.58	4.30	4.60	5.45	5.34	4.71	4.49	4.50
10	5.60	4.76	4.01	3.35	3.61	4.32	4.61	5.46	5.34	4.70	4.54	4.51

CI-5--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	5.60	4.79	4.03	3.43	3.62	4.33	4.64	5.48	5.36	4.70	4.54	4.55
12	5.55	4.83	4.07	3.49	3.68	4.34	4.66	5.50	5.37	4.59	4.54	....
13	4.83	4.11	3.50	3.70	4.36	4.68	5.50	5.39	4.52	4.54	....
14	4.83	4.14	3.54	3.75	4.37	4.71	5.51	5.40	4.49	4.54	4.55
15	4.84	4.18	3.56	3.76	4.39	4.74	5.52	5.41	4.44	4.55	4.52
16	4.84	4.20	3.50	3.79	4.40	4.75	5.53	5.43	4.37	4.54	4.49
17	4.84	4.21	2.29	3.82	3.65	4.77	5.54	5.48	4.32	4.55	4.50
18	4.80	4.21	2.45	3.89	3.75	4.80	5.56	5.49	4.27	4.56	4.45
19	4.76	4.21	2.66	3.89	3.83	4.83	5.57	5.50	4.25	4.56	4.43
20	4.76	4.04	2.80	3.94	3.88	4.86	5.58	5.32	4.24	4.57	4.41
21	4.73	3.82	2.90	3.96	3.93	4.88	5.59	5.35	4.24	4.57	4.41
22	4.64	3.79	2.99	4.00	3.99	4.90	5.60	5.39	4.27	4.58	4.40
23	4.63	3.78	3.01	4.03	4.04	4.91	4.61	5.40	4.29	4.59	4.39
24	4.60	3.79	2.92	4.05	4.08	4.93	5.55	5.42	4.31	4.58	4.39
25	4.51	3.80	2.96	4.09	4.09	4.96	5.55	5.43	4.32	4.59	4.40
26	4.56	3.89	3.01	4.12	4.13	4.99	5.09	5.44	4.33	4.60	4.41
27	4.56	3.89	3.09	4.14	4.17	5.02	5.09	5.46	4.36	4.40	4.40
28	4.55	3.90	3.16	4.15	....	5.06	5.10	5.49	4.37	4.57	4.40
29	3.91	3.20	4.19	....	5.19	5.11	5.50	4.37	4.53	4.24
30	3.96	3.29	4.22	....	5.22	5.11	5.50	4.40	4.54	2.13
31	3.99	....	4.23	....	5.26	5.13	....	4.42	....	1.62

CI-6. C. H. Clark. Lat. 39°54', long. 83°44'. Drilled observation well in sand and gravel, diameter 4 inches, depth 18 feet. Highest water level 7.31 below lsd, Apr. 2, 1953; lowest 10.42 below lsd, Jan. 15-16, 19-20, 1954. Records available: 1953-54.

Daily lowest water level from recorder graph, 1953*

Day	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	7.55	7.46	8.08	....	8.87	9.63	10.04	10.23
2	7.34	7.60	7.50	8.09	....	8.91	9.65	10.05	10.24
3	7.38	....	7.52	8.11	8.42	6.93	9.67	10.06	10.24
4	7.41	7.66	7.55	8.13	8.41	8.98	9.69	10.06	10.25
5	7.43	7.66	7.57	8.15	8.37	9.00	9.71	10.06	10.25
6	7.46	7.67	7.62	8.16	8.28	9.02	9.73	10.07	10.26
7	7.48	7.68	7.64	8.17	8.24	9.05	9.74	10.07	10.26
8	....	7.70	7.68	8.20	8.22	9.11	9.76	10.09	10.26
9	....	7.72	7.70	8.23	8.24	9.13	9.77	10.10	10.27
10	....	7.73	7.72	8.25	8.29	9.15	9.78	10.11	10.26
11	....	7.73	7.67	8.27	8.31	9.18	9.80	10.12	10.27
12	....	7.75	....	8.29	8.33	9.21	9.82	....	10.27
13	7.59	7.77	....	8.34	8.36	9.23	9.83	10.13	10.27
14	7.61	....	....	8.36	8.38	9.27	9.84	10.13	10.29
15	7.61	....	7.75	8.38	8.41	9.29	9.86	10.14	10.29
16	7.63	....	7.76	8.41	8.43	9.30	9.87	10.14	10.30
17	....	....	7.79	8.44	8.48	9.33	9.89	10.15	10.31
18	....	....	7.81	8.45	8.53	9.36	9.90	10.16	10.31
19	....	....	7.81	8.46	8.55	9.39	9.91	10.16	10.32
20	7.51	....	7.86	8.47	8.56	9.42	9.92	10.17	10.33
21	7.50	7.45	7.90	8.47	8.59	9.43	9.93	10.18	10.33
22	7.46	7.45	7.89	8.47	8.60	9.44	9.94	10.18	10.33
23	7.43	7.43	7.91	8.47	8.63	9.47	9.95	10.18	10.26
24	7.44	7.39	7.93	8.49	8.66	9.50	9.96	10.20	10.25
25	7.44	7.33	7.96	....	8.69	9.52	9.97	10.20	10.27
26	7.56	7.36	7.99	....	8.71	9.53	9.96	10.21	10.28
27	7.50	7.37	8.02	....	8.74	9.55	10.00	10.21	10.30
28	7.50	7.37	8.04	....	8.77	9.57	10.01	10.22	10.30
29	7.51	7.38	8.05	....	8.80	9.59	10.01	10.22	10.31
30	7.51	....	8.07	....	8.83	9.61	10.02	10.23	10.32
31	....	....	....	....	8.84	....	10.03	....	10.33

* No record for January, February, and March.

Daily lowest water level from recorder graph, 1954

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	10.33	10.15	9.95	9.60	7.86	8.33	8.34	9.19	9.45	....	9.43	9.65
2	10.34	10.14	9.94	9.59	7.85	8.30	8.38	9.21	9.47	....	9.43	9.65
3	10.35	10.14	9.91	9.55	7.83	8.31	8.42	9.22	9.49	....	9.44	9.65
4	10.35	10.14	9.89	9.55	7.83	8.32	8.44	9.26	9.52	....	9.46	9.66
5	10.35	10.19	9.87	9.55	7.82	8.33	8.47	9.27	9.53	9.90	9.47	9.67

Cl-6--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	10.36	10.20	9.85	9.53	7.82	8.34	8.50	9.23	9.55	9.87	9.48	9.68
7	10.37	10.21	9.84	9.48	7.81	8.36	8.54	9.25	9.58	9.83	9.52	9.69
8	10.37	10.21	9.82	9.43	7.84	8.37	8.59	9.28	9.60	9.82	9.53	9.69
9	10.37	10.22	9.80	9.31	7.86	8.31	8.62	9.30	9.61	9.82	9.54	9.70
10	10.38	10.23	9.78	9.17	7.88	8.27	8.63	9.32	9.62	9.83	9.55	9.71
11	10.40	10.25	9.77	9.08	7.91	8.27	8.65	9.34	9.65	9.83	9.56	9.72
12	10.40	10.25	9.76	9.03	7.99	8.29	8.66	9.36	9.66	9.70	9.57	....
13	10.40	10.26	9.74	8.98	7.98	8.33	8.67	9.36	9.68	9.64	9.57	....
14	10.41	10.26	9.74	8.94	8.00	8.35	8.70	9.38	9.70	9.60	9.58	9.74
15	10.42	10.26	9.75	8.91	8.01	8.37	8.72	9.38	9.72	9.60	9.59	9.74
16	10.42	10.27	9.76	8.81	8.03	8.38	8.73	9.39	9.73	9.56	9.60	9.74
17	10.39	10.27	9.75	8.82	8.05	8.29	8.74	9.40	9.73	9.54	9.61	9.74
18	10.40	.....	9.75	8.70	8.07	8.15	8.76	9.41	9.75	9.51	....	9.74
19	10.42	10.04	9.75	8.64	8.09	8.14	8.79	9.43	9.77	9.48	9.65	9.74
20	10.42	10.04	9.73	8.59	8.11	8.12	8.82	9.46	9.78	9.46	9.66	9.74
21	10.35	10.03	9.70	8.56	8.13	8.12	8.84	9.47	9.79	9.44	9.67	9.74
22	10.26	10.01	9.68	8.49	8.15	8.14	8.86	9.49	9.80	9.42	9.67	9.75
23	10.22	9.98	9.64	8.44	8.17	8.16	8.88	9.51	9.83	9.41	9.68	9.75
24	10.20	9.96	9.62	8.27	8.19	8.17	8.92	9.52	9.85	9.40	9.68	9.76
25	10.19	9.96	9.60	8.11	8.20	8.18	8.96	9.54	9.88	9.40	9.68	9.77
26	.....	9.95	9.65	8.01	8.21	8.19	8.99	9.47	9.89	9.40	9.68	9.77
27	.....	9.95	9.65	7.94	8.22	8.23	9.03	9.34	9.92	9.40	9.68	9.77
28	10.23	9.95	9.64	7.90	8.24	8.24	9.07	9.35	.....	9.41	9.67	9.57
29	10.21		9.63	7.89	8.27	8.28	9.09	9.37	.....	9.42	9.65	....
30	10.17		9.62	7.86	8.29	8.31	9.12	9.40	.....	9.42	9.65	....
31	10.16		9.61		8.31		9.15	9.42		9.42		.....

Delaware County

Di-2. U. S. Army Engineer Corps. Lat. 40°21'42", long. 83°04'25". Dug unused well in sand and gravel, diameter 24 inches, depth 31 feet. Highest water level 1.45 below lsd, Jan. 26, 1952; lowest 19.40 below lsd, Jan. 24-30, 1954. Records available: 1949-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18.55	19.35	17.13	4.00	6.71	9.90	11.68	12.94	13.51	14.76	14.17	14.23
2	18.60	19.30	16.85	4.55	6.94	9.95	11.76	12.95	13.52	.....	14.17	14.22
3	18.60	19.20	16.50	5.25	7.12	9.95	11.82	12.96	13.54	.....	14.17	14.22
4	18.65	19.15	15.88	5.87	7.28	9.97	11.86	12.99	13.57	.....	14.17	14.20
5	18.65	19.10	15.66	6.40	7.42	10.05	11.86	13.02	13.62	.....	14.17	14.19
6	18.70	19.00	15.48	6.47	7.57	10.13	11.91	13.04	13.66	.....	14.17	14.24
7	18.75	19.00	15.30	5.20	7.73	10.20	11.93	13.06	13.68	.....	14.16	14.26
8	18.80	18.95	15.00	4.50	7.90	10.23	11.99	13.07	13.72	.....	14.17	14.25
9	18.80	18.90	14.66	3.71	8.05	10.32	12.05	13.08	13.77	.....	14.19	14.22
10	18.85	18.90	14.35	4.25	8.08	10.39	12.10	13.10	13.78	.....	14.21	14.26
11	18.90	18.75	14.15	4.78	8.05	10.47	12.14	13.15	13.82	.....	14.21	14.29
12	18.95	18.75	14.00	5.30	8.03	10.55	12.16	13.20	13.89	.....	14.22	14.30
13	19.00	18.75	13.83	5.65	8.10	10.65	12.18	13.25	13.94	.....	14.22	14.30
14	19.05	18.75	13.68	6.05	8.17	10.75	12.20	13.28	13.99	.....	14.20	14.29
15	19.10	18.70	13.61	6.10	8.26	10.84	12.28	13.30	14.03	.....	14.18	14.28
16	19.10	18.65	13.60	4.09	8.35	10.90	12.35	13.32	14.08	.....	14.17	14.31
17	19.15	18.65	13.59	3.02	8.45	10.93	12.39	13.34	14.13	.....	14.15	14.31
18	19.20	18.65	13.56	3.45	8.55	10.99	12.40	13.35	14.15	.....	14.15	14.31
19	19.25	18.60	13.48	4.00	8.67	11.03	12.43	13.36	14.17	.....	14.13	14.35
20	19.25	18.58	13.05	4.61	8.78	11.06	12.46	13.38	14.21	.....	14.10	14.38
21	19.30	18.50	11.89	5.14	8.90	11.09	12.49	13.42	14.24	.....	14.12	14.42
22	19.35	18.13	11.61	5.57	9.03	11.12	12.52	13.45	14.31	.....	14.14	14.43
23	19.35	18.02	11.46	5.70	9.15	11.19	12.56	13.48	14.38	.....	14.15	14.43
24	19.40	17.90	11.41	5.62	9.25	11.25	12.61	13.49	14.44	.....	14.14	14.49
25	19.40	17.75	11.38	5.83	9.36	11.30	12.66	13.50	14.48	.....	14.13	14.52
26	19.40	17.60	11.42	6.07	9.49	11.33	12.72	13.50	14.51	.....	14.16	14.56
27	19.40	17.45	11.45	6.23	9.57	11.42	12.76	13.50	14.56	.....	14.15	14.57
28	19.40	17.30	11.46	6.06	9.62	11.50	12.80	13.50	14.61	.....	14.14	14.56
29	19.40		7.65	6.17	9.71	11.55	12.82	13.51	14.66	.....	14.16	14.56
30	19.40		2.99	6.41	9.82	11.62	12.87	13.51	14.72	.....	14.22	14.08
31	19.35		3.41		9.89		12.91	13.50		.....		13.12

DI-3. U. S. Army Engineer Corps. Lat. 40°21'42", long. 83°04'00". Drilled unused well in limestone, diameter 12 inches, depth 135 feet. Highest water level 23.40 below lsd, Jan. 29, 1952; lowest 37.04 below lsd, Nov. 1, 1948. Records available: 1948-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	30.33	29.30	28.67	27.25	27.69	27.46	27.33	27.63	28.01	27.95	29.10
2	.....	30.17	29.31	28.83	27.27	27.70	27.48	27.31	27.56	27.96	27.87	29.06
3	.....	30.20	29.30	28.92	27.27	27.60	27.44	27.44	27.63	27.95	27.91	29.07
4	30.95	30.15	29.24	28.80	27.37	27.52	27.40	27.49	27.66	27.97	27.90	29.15
5	30.85	30.13	29.16	28.60	27.42	27.68	27.43	27.47	27.63	27.96	28.01	29.36
6	30.96	30.23	29.17	28.46	27.42	27.75	27.44	27.41	27.63	28.08	27.97	29.45
7	31.00	30.24	29.17	28.29	27.60	27.68	27.39	27.44	27.61	28.14	28.10	29.43
8	31.01	30.00	29.17	28.01	27.62	27.69	27.45	27.43	27.68	27.97	28.15	29.30
9	31.01	29.96	29.20	27.85	27.63	27.70	27.46	27.43	27.67	27.89	28.24	29.27
10	31.04	29.93	29.05	27.49	27.62	27.72	27.46	27.46	27.61	27.86	28.30	29.47
11	30.97	30.11	28.93	27.61	27.54	27.75	27.46	27.51	27.74	27.85	28.22	29.52
12	31.16	30.16	.....	27.71	27.57	27.77	27.42	27.54	27.80	27.83	28.30	29.47
13	31.17	30.08	.....	27.54	27.58	27.81	27.46	27.55	27.75	27.94	28.22	29.45
14	31.12	29.85	.....	27.52	27.55	27.79	27.50	27.54	27.71	27.86	28.24	29.36
15	31.05	29.85	.....	27.57	27.54	27.75	27.63	27.47	27.71	27.80	28.35	29.46
16	31.07	29.86	29.51	27.36	27.50	27.50	27.64	27.50	27.76	27.82	28.30	29.57
17	31.23	29.92	29.50	26.95	27.63	27.41	27.59	27.54	27.76	27.92	28.35	29.57
18	31.15	29.91	29.42	26.50	27.66	27.34	27.52	27.53	27.69	27.99	28.37	29.40
19	31.12	29.77	29.25	26.32	27.70	26.50	27.52	27.46	27.71	27.99	28.35	29.59
20	31.25	29.68	29.17	26.93	27.74	26.65	27.52	27.53	27.76	27.90	28.48	29.62
21	31.23	29.47	29.07	27.12	27.76	27.00	27.50	27.55	27.84	27.82	28.57	29.65
22	31.21	29.32	29.04	27.26	27.78	27.12	27.54	27.57	27.94	27.92	28.63	29.56
23	31.19	29.27	29.15	27.25	27.83	27.24	27.54	27.55	27.98	27.95	28.63	29.53
24	31.21	29.10	29.17	26.68	27.80	27.27	27.56	27.50	27.94	27.96	28.61	29.72
25	31.21	29.21	29.27	26.77	27.82	27.26	27.56	27.46	27.83	27.87	28.81	29.72
26	31.15	29.37	29.34	26.82	27.87	27.33	27.57	27.45	27.85	27.75	28.85	29.65
27	31.07	29.38	29.27	27.20	27.82	27.41	27.47	27.48	27.87	27.85	28.80	29.63
28	31.07	29.28	29.07	27.27	27.70	27.43	27.40	27.50	27.92	27.85	28.77	29.52
29	30.78	.....	28.90	26.78	27.85	27.42	27.41	27.50	27.97	27.87	29.15	29.43
30	30.63	.....	28.25	26.93	27.91	27.38	27.45	27.48	27.99	27.77	29.19	29.06
31	30.58	.....	27.94	.....	27.82	.....	27.37	27.56	.....	27.96	.....	28.98

Erie County

E-1. State of Ohio. Lat. 41°25', long. 83°50'. Drilled unused well in dolomite, diameter 10 inches, depth 169 feet. Highest water level 3.97 below lsd, Mar. 13, 1952; lowest 5.88 below lsd, Nov. 30, 1954. Records available: 1952-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	5.79	5.63	5.63	5.20	4.94	5.12	5.23	5.35	5.47	5.74	5.62	5.82
2	5.78	5.59	5.84	5.20	4.93	5.25	5.23	5.33	5.47	5.73	5.61	5.63
3	5.74	5.60	5.77	5.22	5.02	5.16	5.19	5.37	5.49	5.72	5.62	5.65
4	5.74	5.60	5.68	5.24	5.07	5.16	5.17	5.37	5.49	5.70	5.63	5.65
5	5.62	5.61	5.70	5.15	5.04	5.20	5.20	5.37	5.47	5.67	5.64	5.67
6	.....	5.66	5.67	5.17	5.00	5.19	5.20	5.38	5.46	5.64	5.61	5.67
7	5.66	5.69	5.66	5.17	4.97	5.16	5.20	5.39	5.42	5.67	5.60	5.63
8	5.67	5.67	5.60	5.26	4.99	5.13	5.20	5.37	5.44	5.69	5.62	5.64
9	5.67	5.67	5.49	5.25	4.99	5.14	5.25	5.35	5.53	5.78	5.61	5.66
10	5.69	5.69	5.47	5.17	5.01	5.14	5.25	5.37	5.51	5.79	5.60	5.73
11	5.59	5.75	5.45	5.17	5.02	5.16	5.24	5.46	5.55	5.71	5.58	5.75
12	5.72	5.75	5.44	5.17	5.04	5.15	5.24	5.48	5.52	5.70	5.60	5.70
13	5.72	5.72	5.34	5.15	5.04	5.19	5.26	5.47	5.52	5.71	5.58	5.67
14	5.70	5.66	5.52	5.12	5.04	5.18	5.27	5.45	5.52	5.68	5.61	5.58
15	.....	5.69	5.59	5.11	5.02	5.17	5.31	5.40	5.48	5.65	5.60	5.66
16	.....	5.69	5.58	5.05	5.02	5.15	5.31	5.28	5.51	5.67	5.55	5.71
17	.....	5.66	5.55	4.97	5.04	5.13	5.30	5.31	5.52	5.68	5.55	5.70
18	.....	5.66	5.51	4.83	5.04	5.12	5.27	5.33	5.48	5.64	5.55	5.68
19	.....	5.64	5.45	4.81	5.04	5.12	5.28	5.33	5.48	5.58	5.54	5.71
20	.....	5.59	5.48	4.68	5.04	5.14	5.29	5.36	5.50	5.53	5.54	5.72

E-1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	5.66	5.66	5.56	4.62	5.05	5.13	5.27	5.37	5.64	5.52	5.57	5.70
22	5.64	5.70	5.55	4.60	5.08	5.16	5.27	5.36	5.75	5.54	5.60	5.69
23	5.57	5.68	5.53	4.61	5.10	5.19	5.27	5.38	5.74	5.57	5.61	5.67
24	5.63	5.64	5.53	4.65	5.10	5.18	5.31	5.40	5.67	5.58	5.54	5.77
25	5.65	5.64	5.50	4.73	5.11	5.18	5.32	5.45	5.65	5.55	5.61	5.78
26	5.64	5.64	5.36	4.73	5.13	5.18	5.33	5.40	5.64	5.51	5.64	5.72
27	5.64	5.64	5.36	4.75	5.10	5.19	5.34	5.35	5.67	5.56	5.61	5.70
28	5.65	5.61	5.20	4.86	5.07	5.20	5.34	5.36	5.70	5.57	5.63	5.67
29	5.60		5.15	4.87	5.15	5.21	5.34	5.39	5.70	5.53	5.72	5.67
30	5.71		5.12	4.88	5.21	5.20	5.36	5.37	5.73	5.63	5.88	5.65
31	5.71		5.15		5.17		5.35	5.40		5.64		5.68

Fairfield County

F-1. C. E. Howdyshell. West Rushville. Lat. 39°46'06", long. 82°26'42". Drilled unused well in sandstone, diameter 4 inches, depth 110 feet. Highest water level 7.44 below lsd, Apr. 4, 1951; lowest 18.80 below lsd, Mar. 6, 1954. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18.20	.....	18.71	18.16	16.37	15.34	15.62	15.92	16.13	16.67	16.62	17.02
2	18.22	.....	18.72	18.13	16.32	15.30	15.65	15.91	16.14	16.67	16.63	16.98
3	18.26	.....	18.75	18.08	16.20	15.28	15.66	15.91	16.17	16.68	16.63	16.98
4	18.32	.....	18.79	18.05	16.14	15.30	15.65	15.94	16.23	16.61	16.63	16.98
5	18.30	.....	18.79	17.99	16.11	15.33	15.64	15.94	16.24	16.61	16.65	17.03
6	18.33	.....	18.80	17.92	16.04	15.37	15.65	15.92	16.25	16.67	16.67	17.10
7	18.36	.....	18.79	17.87	15.96	15.37	15.65	15.94	16.25	16.73	16.71	17.11
8	18.36	18.53	18.76	17.85	15.89	15.36	15.66	15.94	16.24	16.73	16.74	17.11
9	18.39	18.54	18.76	17.85	15.85	15.36	15.69	15.93	16.26	16.70	16.76	17.05
10	18.54	18.56	18.70	17.80	15.78	15.38	15.72	15.92	16.26	16.69	16.77	17.04
11	18.46	18.65	18.70	17.73	15.73	15.40	15.75	15.96	16.29	16.64	16.78	17.10
12	18.46	18.71	18.67	17.68	15.65	15.43	15.76	15.98	16.35	16.63	16.75	17.12
13	.....	18.71	18.66	17.66	15.61	15.46	15.75	16.00	16.37	16.64	16.76	17.11
14	.....	18.67	18.62	17.54	15.57	15.47	15.76	16.00	16.37	16.65	16.75	17.10
15	.....	18.68	18.65	17.48	15.52	15.48	15.75	16.00	16.37	16.64	16.75	17.05
16	.....	18.68	18.68	17.39	15.49	15.50	15.80	15.96	16.40	16.56	16.75	17.11
17	.....	18.71	18.68	17.26	15.43	15.47	15.81	15.98	16.42	16.58	16.75	17.11
18	.....	18.73	18.64	17.24	15.39	15.50	15.80	15.98	16.42	16.67	16.75	17.06
19	.....	18.73	18.55	17.22	15.38	15.51	15.80	15.99	16.42	16.68	16.78	17.08
20	.....	18.73	18.43	17.21	15.35	15.51	15.80	15.99	16.40	16.68	16.82	17.10
21	.....	18.71	18.50	17.18	15.35	15.51	15.75	16.03	16.41	16.65	16.83	17.11
22	.....	18.77	18.49	17.09	15.35	15.52	15.74	16.05	16.47	16.64	16.84	17.11
23	.....	18.77	18.45	16.98	15.37	15.48	15.79	16.08	16.51	16.67	16.83	17.09
24	.....	18.73	18.42	16.87	15.35	15.50	15.81	16.08	16.52	16.68	16.84	17.11
25	.....	18.72	18.40	16.80	15.34	15.50	15.84	16.08	16.52	16.67	16.88	17.13
26	.....	18.74	18.33	16.75	15.39	15.50	15.87	16.05	16.55	16.64	16.89	17.13
27	.....	18.74	18.33	16.62	15.39	15.52	15.88	16.04	16.58	16.60	16.83	17.12
28	.....	18.72	18.31	16.49	15.35	15.57	15.89	16.07	16.60	16.59	16.84	17.09
29	.....		18.23	16.47	15.31	15.58	15.91	16.08	16.62	16.57	16.97	17.01
30	.....		18.17	16.41		15.36	15.58	15.92	16.08	16.65	17.02	16.95
31	.....		18.17		15.37		15.94	16.10		16.61		16.95

F-2. Pickerington Creamery Co. Lat. 39°53'25", long. 82°44'50". Drilled unused well in sandstone, diameter 6 inches, depth 190 feet. Highest water level 17.64 below lsd, June 16, 1954; lowest 26.40 below lsd, Oct. 26, 1951. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18.47	18.26	18.14	.....	17.85	17.89	18.05	18.24	18.27	18.47	18.27	18.20
2	18.47	18.23	18.09	.....	17.83	17.81	18.07	18.24	18.27	18.47	18.27	18.19
3	18.48	18.23	18.09	.....	17.78	17.80	18.08	18.21	18.30	18.47	18.28	18.19
4	18.48	18.23	18.08	.....	17.78	17.80	18.07	18.23	18.31	18.42	18.27	18.18
5	18.48	18.23	18.08	.....	17.78	17.82	18.07	18.23	18.32	18.42	18.27	18.19
6	18.47	18.23	18.08	.....	17.78	17.84	18.08	18.16	18.33	18.40	18.27	18.20
7	18.46	18.24	18.08	.....	17.78	17.84	18.08	18.18	18.34	18.42	18.28	18.20
8	18.46	18.24	18.09	.....	17.77	17.86	18.07	18.18	18.34	18.42	18.28	18.20
9	18.46	18.21	18.09	.....	17.77	17.84	18.10	18.16	18.34	18.41	18.29	18.15
10	18.45	18.21	18.09	.....	17.76	17.85	18.11	18.18	18.35	18.41	18.32	18.18

F-2--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	18.45	18.24	18.09	.....	17.76	17.86	18.13	18.20	18.37	18.39	18.31	18.18
12	18.47	18.25	18.09	.....	17.76	17.87	18.13	18.22	18.38	18.38	18.30	18.18
13	18.47	18.25	18.09	.....	17.76	17.90	18.15	18.24	18.38	18.38	18.30	18.16
14	18.47	18.23	18.09	17.97	17.77	17.91	18.16	18.25	18.39	18.38	18.29	18.14
15	18.45	18.23	18.09	17.97	17.77	17.91	18.16	18.20	18.40	18.38	18.29	18.12
16	18.39	18.23	18.10	17.93	12.77	17.92	18.16	18.18	18.40	18.25	18.28	18.14
17	18.40	18.23	18.10	17.84	17.77	17.79	18.17	18.19	18.40	18.27	18.27	18.14
18	18.40	18.24	18.10	17.87	17.77	17.82	18.17	18.19	18.40	18.29	18.27	18.09
19	18.40	18.24	18.10	17.89	17.78	17.84	18.18	18.19	18.40	18.29	18.27	18.09
20	18.40	18.23	18.01	17.92	17.79	17.85	18.19	18.20	18.38	18.29	18.21	18.09
21	18.32	18.20	18.03	17.92	17.80	17.86	18.07	18.21	18.38	18.29	18.21	18.09
22	18.30	18.20	18.03	17.92	17.82	17.87	18.08	18.23	18.40	18.30	18.21	18.09
23	18.30	18.20	18.03	17.89	17.83	17.90	18.10	18.24	18.42	18.31	18.21	18.09
24	18.30	18.20	18.03	17.84	17.83	17.92	18.12	18.25	18.42	18.32	18.20	18.11
25	18.30	18.19	18.03	17.84	17.84	17.93	18.15	18.25	18.42	18.32	18.17	18.11
26	18.30	18.17	18.03	17.84	17.85	17.95	18.17	18.22	18.43	18.31	18.19	18.11
27	18.23	18.16	18.03	17.84	17.87	17.98	18.18	18.21	18.43	18.28	18.19	18.11
28	18.24	18.16	18.03	17.84	17.86	18.00	18.19	18.22	18.45	18.29	18.15	18.11
29	18.24		18.00	17.84	17.86	18.02	18.21	18.23	18.47	18.28	18.20	18.02
30	18.26		17.99	17.84	17.89	18.02	18.23	18.23	18.47	18.25	18.20	18.02
31	18.26		.....		17.89		18.26	18.26		18.26		18.02

Fayette County

Fa-1. Martha Slagle. Near Jasper Mills. Lat. 39°32'09", long. 83°31'50". Drilled unused well in limestone, diameter 5 inches, depth 78 feet. Highest water level 5.23 below lsd, Jan. 28, 1949; lowest 12.85 below lsd, Jan. 17, 19, 1954. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	12.65	12.65	12.40	11.25	8.85	7.95	9.45	8.95	8.50	8.90	9.20	9.45
2	12.45	12.60	12.55	11.10	8.65	7.90	9.15	8.95	8.50	8.90	9.15	9.45
3	12.55	12.55	12.40	11.15	8.45	7.75	9.15	8.70	8.55	8.90	9.15	9.45
4	12.50	12.55	12.40	11.05	8.40	7.90	9.40	8.75	8.65	8.95	9.15	9.45
5	12.45	12.55	12.45	10.90	8.25	7.95	9.35	8.65	8.80	9.00	9.20	9.50
6	12.50	12.55	12.40	10.80	8.20	7.95	9.85	8.65	8.75	9.00	9.15	9.60
7	12.50	12.65	12.30	10.75	8.15	8.00	9.35	8.65	8.70	9.10	9.25	9.55
8	12.55	12.50	12.30	10.75	8.25	7.95	8.95	8.60	8.65	9.05	9.35	9.50
9	12.55	12.55	12.20	10.70	8.20	8.05	10.05	8.55	8.65	9.05	9.30	9.50
10	12.60	12.55	12.25	10.60	8.20	8.00	9.50	8.50	8.65	9.00	9.30	9.55
11	12.55	12.65	12.15	10.50	8.15	8.05	9.55	8.55	8.70	8.95	9.25	9.55
12	12.75	12.70	12.15	10.60	8.10	8.15	9.95	8.60	9.00	8.90	9.30	9.55
13	12.80	12.65	12.10	10.45	8.05	8.85	9.70	8.50	9.00	8.95	9.30	9.50
14	12.75	12.55	12.15	10.30	8.10	8.15	10.45	8.55	9.05	8.95	9.30	9.50
15	12.75	12.55	12.15	10.25	8.05	9.15	9.90	8.50	9.00	8.90	9.35	9.45
16	12.80	12.65	12.15	10.10	8.10	8.05	10.15	8.50	9.00	8.95	9.30	9.55
17	12.85	12.65	12.10	9.90	8.05	8.05	10.15	8.55	8.95	9.00	9.40	9.40
18	12.80	12.65	12.00	9.80	8.00	8.10	9.95	8.40	8.95	9.05	9.40	9.35
19	12.85	12.60	11.80	9.75	8.00	8.20	8.95	8.40	8.90	9.15	9.35	9.35
20	12.75	12.50	11.80	9.75	7.95	8.15	8.70	8.40	8.65	9.10	9.35	9.40
21	12.70	12.55	11.85	9.70	8.00	9.10	8.50	8.50	8.70	9.05	9.40	9.40
22	12.65	12.60	11.75	9.65	8.05	8.70	8.55	8.70	8.85	9.10	9.40	9.35
23	12.70	12.55	11.65	9.50	8.15	8.25	8.50	8.55	8.85	9.20	9.40	9.30
24	12.65	12.50	11.60	9.45	8.25	8.75	8.60	8.55	8.85	9.15	9.35	9.40
25	12.70	12.50	11.45	9.35	8.35	8.40	8.95	8.50	8.85	9.10	9.45	9.40
26	12.65	12.55	11.50	9.35	8.15	8.70	9.10	8.50	8.80	9.10	9.45	9.40
27	12.65	12.45	11.35	9.25	8.00	8.80	9.60	8.40	9.15	9.15	9.35	9.45
28	12.70	12.45	11.30	9.15	8.00	8.85	9.45	8.45	9.05	9.15	9.35	9.35
29	12.65		11.35	9.05	8.00	9.50	9.70	8.45	8.95	9.05	9.45	9.30
30	12.65		11.20	8.95	8.05	8.85	9.65	8.35	8.95	9.10	9.60	9.25
31	12.65		11.20		8.05		9.20	8.50		9.15		9.25

Franklin County

Fr-10. State of Ohio. Lat. 40°01'00", long. 83°02'18". Drilled unused well in gravel, diameter 4 inches, depth 75 feet. Highest water level 37.75 below lsd, Apr. 14, 1951; lowest 48.20 below lsd, Oct. 7, 1954. Records available: 1944-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	46.40	46.55	46.45	46.60	46.15	46.10	46.75	47.20	47.50	48.00	47.60	47.75
2	46.40	46.35	46.55	46.55	46.15	46.05	46.80	47.20	47.50	48.00	47.65	47.65
3	46.60	46.35	46.65	46.65	46.05	45.95	46.80	47.30	47.50	48.00	47.65	47.60
4	46.55	46.35	46.65	46.60	46.05	45.95	46.75	47.30	47.55	48.00	47.60	47.50
5	46.40	46.35	46.65	46.45	45.95	46.00	46.65	47.25	47.55	48.00	47.70	47.70
6	46.40	46.55	.....	46.40	45.90	46.05	46.65	47.25	47.55	48.10	47.65	47.80
7	46.50	.....	.....	46.35	45.85	46.05	46.65	47.25	47.55	48.20	47.70	47.80
8	46.50	.....	.....	46.60	45.90	46.10	46.70	47.25	47.65	48.05	47.75	47.65
9	46.45	.....	.....	46.60	45.90	46.20	46.75	47.25	47.65	47.90	47.85	47.50
10	.....	46.35	.....	46.45	45.95	46.20	46.80	47.30	47.55	47.80	47.85	47.70
11	.....	46.65	.....	46.40	45.90	46.25	46.80	47.35	47.65	47.65	47.80	47.70
12	.....	46.75	46.45	46.50	45.90	46.30	46.80	47.40	47.75	47.75	47.70	47.70
13	.....	46.70	46.35	46.40	45.95	46.35	46.85	47.40	47.70	47.80	47.70	47.65
14	.....	46.50	46.50	46.20	45.90	46.35	46.85	47.50	47.70	47.80	47.60	47.50
15	.....	46.50	46.70	46.20	45.90	46.35	47.05	47.35	47.80	47.70	47.50	47.45
16	.....	46.50	46.75	46.10	45.85	46.35	47.05	47.40	47.80	47.70	47.50	47.55
17	.....	46.65	46.75	46.15	45.95	46.35	47.05	47.40	47.80	47.75	47.50	47.55
18	.....	46.65	46.65	46.15	45.95	46.40	47.00	47.40	47.75	47.85	47.50	47.40
19	.....	46.60	46.50	46.20	45.90	46.35	47.05	47.35	47.70	47.90	47.40	47.60
20	46.35	46.55	46.50	46.30	45.85	46.30	47.05	47.35	47.75	47.85	47.45	47.65
21	46.55	46.45	46.55	46.30	45.90	46.25	47.00	47.35	47.75	47.75	47.50	47.75
22	.....	46.55	46.55	46.20	45.90	46.25	46.95	47.40	47.85	47.80	47.50	47.70
23	.....	46.55	46.55	46.20	46.00	46.35	46.95	47.45	47.90	47.85	47.50	47.65
24	.....	46.40	46.60	46.20	46.05	46.40	47.00	47.45	47.90	47.85	47.40	47.85
25	.....	46.40	46.50	46.15	46.10	46.45	47.10	47.45	47.80	47.80	47.50	47.85
26	.....	46.45	46.65	46.15	46.15	46.50	47.20	47.45	47.80	47.65	47.55	47.80
27	46.50	46.45	46.65	46.05	46.05	46.55	47.20	47.45	47.85	47.60	47.55	47.75
28	46.55	46.35	46.50	46.05	46.00	46.65	47.30	47.50	47.85	47.60	47.40	47.70
29	46.60	.....	46.45	46.05	46.15	46.65	47.30	47.50	47.95	47.45	47.80	47.70
30	46.60	.....	46.45	46.10	46.25	46.65	47.30	47.40	48.00	47.55	47.85	.....
31	46.60	.....	46.55	.....	46.20	.....	47.30	47.45	.....	47.60	.....	.....

Fr-11. City of Columbus. Nelson Park. Lat. 39°58'30", long. 82°56'42". Drilled unused well in gravel, diameter 6 inches, depth 85 feet. Highest water level 0.20 above lsd, Feb. 14, 1950; lowest 30.20 below lsd, Sept. 28, 1953. Records available: 1949-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	21.75	22.40	22.30	14.90	18.00	19.25	24.45	.....	25.75	27.55	27.30	28.15
2	20.95	22.40	22.75	14.90	18.15	18.80	23.65	25.25	25.35	27.55	27.25	27.90
3	.....	22.80	22.05	14.20	17.00	19.40	23.80	25.85	25.25	27.35	28.00	28.25
4	23.50	22.85	23.10	14.05	.....	19.55	23.50	25.15	25.55	26.85	27.90	27.95
5	23.85	23.80	22.15	13.75	.....	17.15	23.50	25.20	25.65	26.75	28.25	28.35
6	24.15	23.35	22.05	13.55	15.10	15.45	23.30	25.40	25.25	26.95	27.95	28.40
7	24.20	21.30	19.90	13.45	17.00	18.60	23.10	24.55	25.75	27.25	28.20	28.15
8	23.25	22.95	21.70	13.50	17.65	18.45	23.40	25.05	26.70	27.25	28.30	28.35
9	23.70	22.30	21.55	13.40	18.05	19.55	23.60	25.95	26.70	27.15	28.05	28.25
10	21.30	22.65	20.30	13.10	18.30	19.80	23.25	25.95	26.80	27.10	27.55	28.65
11	23.80	23.40	20.25	12.95	17.80	19.85	23.40	26.00	25.95	26.60	25.70	28.30
12	24.05	23.80	19.95	13.00	19.60	.....	23.60	25.95	26.15	26.60	25.30	28.50
13	24.20	23.50	18.35	12.85	19.85	.....	24.75	25.20	25.75	26.65	25.20	28.50
14	23.25	22.25	17.60	12.50	18.55	21.65	25.30	23.70	26.30	26.65	25.20	28.35
15	24.00	23.20	17.50	12.45	17.95	22.00	24.25	23.65	25.80	26.45	25.15	25.50
16	24.20	23.25	17.15	14.05	15.05	21.60	24.10	25.65	26.50	26.50	25.20	26.85
17	21.30	22.65	16.60	12.90	17.25	21.70	23.90	25.60	26.35	26.45	25.15	26.80
18	23.20	22.65	19.50	12.35	17.35	22.05	23.90	25.70	26.60	27.30	25.15	26.55
19	22.95	22.65	18.80	13.80	17.65	21.90	24.15	25.95	26.50	26.75	25.25	26.45
20	23.05	22.95	16.70	12.60	15.35	21.80	24.10	25.95	26.15	27.20	25.60	26.65
21	24.15	20.40	16.20	12.70	17.95	21.95	23.90	25.65	26.15	26.55	24.95	26.45
22	23.45	22.50	18.50	.....	17.05	22.10	24.00	25.65	26.80	26.60	27.70	26.55
23	24.10	.....	18.55	.....	16.50	22.45	23.85	25.90	26.35	26.55	27.50	26.40
24	21.35	.....	16.25	.....	18.45	22.50	23.95	26.10	26.90	26.45	27.95	26.50
25	23.25	.....	16.75	.....	19.20	22.55	23.90	26.10	27.00	26.00	26.30	24.00

Fr-11--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	22.65	.....	15.30	16.15	19.10	22.50	24.00	26.25	27.05	26.95	28.00	23.15
27	23.20	.....	15.20	15.00	18.75	22.50	24.15	26.25	26.55	26.95	27.65	25.55
28	23.95	.....	14.80	14.75	18.80	22.85	24.30	26.25	26.75	26.75	27.85	25.60
29	23.85	.....	14.60	14.55	19.10	.....	25.85	26.15	27.30	26.75	28.25	25.70
30	23.95	.....	14.35	14.55	20.45	23.55	.....	26.25	27.55	26.80	27.95	25.75
31	21.30	.....	16.15	.....	19.85	.....	26.30	26.35	.....	26.70	.....	25.85

Fulton County

Fn-1. City of Delta. Lat. 41°35'05", long. 84°00'12". Drilled unused well in gravel, diameter 8 inches, depth 130 feet. Highest water level 61.83 below lsd, Oct. 18, 1946; lowest 66.10 below lsd, Jan. 8, 1947. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	63.78	63.90	63.35	63.93	63.68	63.57	64.05	63.96	64.08	64.00	63.85	64.27
2	63.73	63.55	63.50	63.86	63.67	63.47	64.08	63.95	64.01	63.96	63.93	64.04
3	64.11	63.57	63.63	64.09	63.50	63.43	64.05	63.83	64.03	63.90	63.93	63.86
4	64.09	63.56	63.77	64.12	63.54	63.50	63.95	63.92	64.11	63.88	63.78	63.65
5	63.65	63.56	63.79	63.89	63.50	63.68	63.87	63.90	64.05	64.03	64.00	64.11
6	.....	64.00	63.75	63.60	63.50	63.83	63.90	63.98	64.11	64.45	63.92	64.38
7	63.97	64.06	63.70	63.62	63.44	63.74	63.75	64.03	63.96	64.60	63.98	64.37
8	64.00	63.59	63.80	64.07	63.53	63.68	63.94	63.98	64.11	64.45	64.17	64.02
9	63.81	63.39	63.52	64.20	63.57	63.75	63.98	63.90	64.13	64.05	64.34	63.59
10	63.99	63.45	63.43	63.98	63.65	63.70	64.04	63.92	63.92	63.90	64.43	63.93
11	63.82	64.06	63.50	63.90	63.62	63.73	64.05	64.04	64.03	63.57	64.33	64.08
12	64.16	64.25	63.61	64.17	63.65	63.68	63.97	64.08	64.17	63.70	64.31	64.07
13	64.24	64.15	63.50	64.05	63.78	63.83	63.81	64.15	64.12	63.93	64.26	64.07
14	64.03	63.59	63.42	63.65	63.79	63.80	63.78	64.08	64.06	63.83	64.00	63.80
15	63.86	63.61	63.90	63.53	63.76	63.73	63.98	63.93	64.05	63.63	64.02	63.52
16	63.86	63.57	64.12	63.36	63.65	63.72	64.13	64.00	64.06	63.67	63.78	63.84
17	64.14	64.05	64.10	63.45	63.58	63.89	64.11	64.09	64.07	64.05	63.83	63.84
18	64.05	64.12	63.91	63.57	63.62	64.03	63.92	64.03	63.91	64.34	63.79	63.32
19	63.86	64.02	63.62	63.88	63.64	64.00	63.85	63.92	63.65	64.42	63.66	63.64
20	63.80	63.90	63.48	63.91	63.74	63.98	63.84	64.08	63.66	64.27	63.57	63.77
21	64.26	63.52	63.75	63.89	63.82	63.80	63.86	64.20	63.67	64.02	63.87	63.95
22	64.25	63.88	63.80	63.82	63.82	63.69	63.90	64.25	64.02	64.11	63.71	63.92
23	64.22	63.88	63.76	63.90	63.91	63.93	63.95	64.22	64.19	64.20	63.72	63.57
24	63.90	63.46	63.82	63.90	63.87	64.00	64.00	64.14	64.17	64.27	63.42	63.93
25	64.03	63.40	63.67	63.81	63.75	63.90	64.05	64.00	63.91	64.20	63.54	64.06
26	63.80	63.42	63.89	63.81	63.94	63.80	64.14	64.03	63.84	63.96	63.76	63.97
27	64.04	63.45	63.91	63.40	63.92	63.93	64.12	64.06	63.80	63.82	63.75	63.97
28	64.21	63.34	63.67	63.60	63.64	64.03	64.03	64.07	63.77	63.87	63.32	63.90
29	64.07	.....	63.62	63.62	63.52	64.00	63.98	64.05	63.78	63.57	63.93	63.95
30	64.14	.....	63.75	63.62	63.83	63.90	64.04	63.95	63.88	63.62	64.29	63.92
31	64.19	.....	63.81	.....	63.80	.....	63.94	63.94	.....	63.83	.....	63.92

Greene County

Gr-1. City of Xenia. Lat. 39°44'30", long. 83°56'12". Drilled unused well in gravel, diameter 30 inches, depth 77 feet. Highest water level 2.45 above lsd, Jan. 27, 1952; lowest 13.85 below lsd, Sept. 4, 1953. Records available: 1944-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	11.05	11.20	10.70	9.90	6.55	8.70	10.10	9.50	9.30	10.00	8.00	8.10
2	10.85	11.25	10.70	9.95	6.45	7.80	10.05	9.95	9.35	9.80	8.00	8.00
3	10.55	10.85	10.20	9.80	6.45	7.25	9.65	9.75	9.40	9.10	8.70	8.00
4	11.25	11.70	9.85	9.80	6.55	7.15	8.45	9.85	9.90	9.75	8.10	8.05
5	10.85	11.40	9.80	9.95	6.55	7.20	9.05	9.90	9.85	9.70	8.00	8.05
6	10.75	.....	9.75	9.55	6.65	7.15	9.30	9.55	10.20	8.90	8.05	8.05
7	11.00	.....	9.70	9.25	6.65	7.30	9.05	9.60	9.85	8.25	8.05	9.05
8	11.00	.....	9.80	9.10	6.65	7.30	9.20	8.80	9.80	8.10	8.75	8.60
9	10.20	.....	9.90	9.05	6.65	4.80	9.10	8.65	9.75	8.20	8.10	8.50
10	10.10	11.65	9.95	9.05	6.75	7.00	9.40	9.40	10.05	8.25	8.20	8.45

Gr-1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	11.35	11.40	9.95	8.90	6.75	7.10	9.30	9.35	9.80	9.10	8.10	8.40
12	10.90	11.15	9.95	9.30	6.80	7.55	9.90	9.45	9.05	8.45	8.10	8.35
13	.....	11.40	10.00	9.50	6.85	6.45	10.25	9.60	9.90	8.10	8.10	8.00
14	12.00	11.25	9.80	9.40	6.85	8.00	10.40	9.25	10.05	8.65	8.10	7.90
15	11.95	11.95	10.10	9.30	6.95	8.05	10.50	9.40	10.15	8.15	8.45	8.20
16	12.00	11.70	10.15	8.95	6.95	7.85	10.50	9.40	10.10	7.70	8.10	8.00
17	11.65	11.35	10.05	8.40	7.00	8.20	10.55	9.25	10.20	7.70	8.20	8.10
18	11.60	11.25	10.10	7.60	8.10	6.90	10.00	9.40	10.60	8.40	8.25	7.65
19	11.20	11.40	10.00	7.90	7.20	6.70	9.65	9.45	9.60	7.80	8.10	7.95
20	11.10	10.85	9.80	8.05	7.10	6.80	9.80	8.95	9.35	7.85	8.10	8.10
21	10.50	10.55	9.25	8.20	7.05	8.30	9.40	9.50	9.25	7.90	8.10	8.20
22	10.85	10.95	9.50	8.30	7.10	8.70	9.50	8.80	8.70	7.95	8.10	8.10
23	10.75	10.70	9.55	8.30	7.15	7.30	9.30	9.90	8.70	8.00	8.10	8.15
24	10.40	10.30	9.60	7.65	7.10	8.50	9.45	9.95	9.45	8.00	8.10	7.95
25	10.55	10.80	9.65	7.45	8.15	8.60	8.65	9.85	9.70	8.55	8.10	8.00
26	.....	10.40	9.70	7.65	7.20	9.00	9.70	9.70	8.90	8.55	8.65	7.95
27	11.20	10.50	9.70	7.70	7.20	8.40	10.05	8.95	9.85	8.90	8.40	8.00
28	11.00	10.50	9.60	7.15	7.25	9.00	10.25	9.20	9.85	8.85	8.00	7.60
29	11.00	.....	9.70	7.25	7.25	9.65	10.65	8.80	9.90	8.10	7.95	7.45
30	11.30	.....	9.75	7.35	7.25	10.00	10.85	9.35	10.10	8.00	8.90	6.90
31	10.70	.....	9.85	.....	8.45	.....	10.65	8.55	.....	8.00	.....	6.70

Gr-7. G. H. Jones. Lat. 39°44', long. 83°54'. Drilled observation well in deposits of Pleistocene age, diameter 4 inches, depth 40 feet. Highest water level 29.54 below lsd, July 20, 1953; lowest 31.04 below lsd, Nov. 30, 1954. Records available: 1953-54.

Daily lowest water level from recorder graph, 1953*

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	h29.73	.....	29.98	30.03	30.35	30.32	.....
2	29.96	30.03	30.33	30.32	.....
3	30.02	30.02	30.28	30.30	.....
4	30.02	30.03	30.27	30.35	.....
5	29.94	30.12	h30.13	.....	.....
6	h29.55	.....	30.13	30.19	h30.41	.....
7	30.20	30.31	30.40	.....
8	h29.58	.....	.....	h30.24	30.31	30.32	.....
9	30.24	30.24	30.33	.....
10	h30.06	30.23	30.16	30.36	.....
11	30.14	30.36	.....
12	30.32	30.39	.....
13	h29.62	.....	.....	30.34	30.43	.....
14	h30.11	30.33	30.43	.....
15	h29.58	.....	.....	30.11	30.27	30.41	.....
16	30.11	30.24	30.33	.....
17	h30.08	30.20	30.27	30.36	.....
18	30.08	30.20	30.26	30.36	.....
19	30.08	30.18	30.26	30.39	.....
20	29.56	30.08	30.18	.....	30.35	.....
21	29.69	30.12	h30.21	.....	30.32	30.28
22	h29.66	29.76	30.12	30.30	.....	30.32	30.42
23	29.85	30.08	30.30	30.15	30.32	30.51
24	29.95	30.05	30.28	30.15	30.29	30.51
25	29.98	.....	30.21	30.24	30.29	30.48
26	29.98	.....	30.09	30.24	30.29	30.37
27	29.98	.....	30.05	30.22	30.40	30.37
28	29.98	.....	h30.16	30.19	30.48	30.36
29	h29.64	29.96	.....	30.16	30.30	.....	30.37
30	29.98	.....	30.27	30.36	30.44	30.44
31	29.98	h30.02	.....	30.33	.....	30.49

* No record for January, February, March, April, and May.

h Tape measurement.

Daily lowest water level from recorder graph, 1954

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	30.46	30.64	30.66	.....	30.81	30.60	.....	30.66	30.72	30.75	30.75	30.96
2	30.46	30.48	30.73	30.79	30.81	30.55	30.71	30.65	30.72	30.75	30.79	30.91
3	30.58	30.48	30.69	30.83	30.77	30.54	30.69	30.64	30.70	30.75	30.80	30.89
4	30.58	30.49	30.78	30.83	30.76	30.66	30.68	30.68	30.71	30.74	30.79	30.82
5	30.57	30.56	30.80	30.82	30.76	30.72	30.68	30.67	30.71	30.75	30.80	30.96

Gr-7--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	30.53	30.69	30.80	30.79	30.75	30.75	30.68	30.71	30.71	30.83	30.79	31.00
7	30.58	30.69	30.78	30.74	30.70	30.73	30.67	30.71	30.71	30.88	30.79	31.00
8	30.60	30.69	30.73	30.85	30.75	30.73	30.67	30.71	30.71	30.88	30.80	30.90
9	30.54	30.49	30.70	30.89	30.75	30.73	30.69	30.68	30.71	30.80	30.86	30.82
10	30.57	30.51	.....	30.85	30.77	30.73	30.69	30.68	30.65	30.77	30.83	30.94
11	30.55	30.71	.....	30.84	30.77	30.66	30.69	30.70	30.70	30.65	30.93	30.95
12	30.61	30.78	30.67	30.88	30.75	30.65	30.68	30.74	30.75	30.69	30.86	.....
13	30.61	30.78	30.66	30.88	30.76	30.66	30.62	30.75	30.75	30.75	30.86	.....
14	30.61	30.60	30.70	30.85	30.75	30.66	30.62	30.74	30.74	30.75	30.82	30.84
15	30.58	30.60	30.83	30.85	30.75	30.65	30.67	30.70	30.72	30.72	30.82	30.80
16	30.59	30.73	30.87	30.72	30.74	30.65	30.76	30.69	30.73	30.74	30.82	30.87
17	30.71	30.73	30.87	30.78	30.73	30.67	30.76	30.70	30.73	30.75	30.77	30.87
18	30.71	30.77	30.84	30.80	30.72	30.68	30.69	30.70	30.72	30.87	30.77	30.80
19	30.62	30.72	30.71	30.83	30.73	30.68	30.64	30.67	30.66	30.90	30.77	30.87
20	30.62	30.68	30.71	30.90	30.74	30.66	30.64	30.72	30.64	30.90	30.73	30.90
21	30.67	30.55	30.69	30.90	30.77	30.65	30.64	30.72	30.63	30.85	30.78	30.95
22	30.67	30.68	30.76	30.88	30.77	30.61	30.68	30.73	30.72	30.79	30.81	30.95
23	30.67	30.68	30.76	30.83	30.77	30.64	30.69	30.73	30.78	30.80	30.81	30.86
24	30.67	30.63	30.76	30.83	30.77	30.65	30.70	30.73	30.78	30.80	30.80	30.98
25	30.66	30.55	30.74	30.83	30.73	30.63	30.70	30.72	30.78	30.80	30.84	31.01
26	.....	30.60	30.84	30.82	30.74	30.60	30.73	30.65	30.75	30.77	30.88	31.00
27	.....	30.60	30.89	30.80	30.74	30.61	30.73	30.68	30.73	30.69	30.84	30.99
28	30.67	30.55	30.86	30.73	30.64	30.65	30.72	30.68	30.74	30.69	30.82	30.91
29	30.61	.....	30.78	30.73	30.62	.....	30.65	30.68	30.74	30.64	31.02	30.89
30	30.58	.....	.....	30.78	30.69	.....	30.67	30.67	30.75	30.69	31.04	30.95
31	30.65	.....	.....	.....	30.69	.....	30.67	30.66	.....	30.75	.....	30.95

Gr-8. F. G. Roberts. Lat. 39°46', long. 83°40'. Drilled observation well in deposits of Pleistocene age, diameter 8 inches, depth 17 feet. Highest water level 0.69 below lsd, Apr. 23, 1954; lowest 11.02 below lsd, Jan. 18-21, 1954. Records available: 1953-54.

Daily lowest water level from recorder graph, 1953*

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	3.36	4.41	4.90	6.28	7.55	9.14	10.10
2	....	3.42	4.44	4.94	6.31	7.59	9.19	10.13
3	....	3.47	4.49	4.98	6.35	7.63	9.23	10.15
4	....	3.55	4.51	5.00	6.40	7.67	9.28	10.17
5	....	3.63	4.53	5.05	6.45	7.69	9.32	10.20
6	....	3.68	4.55	5.08	6.48	7.73	9.40	10.22
7	....	3.71	4.57	5.12	6.52	7.77	9.43	10.24
8	....	3.75	4.61	5.15	6.56	7.81	9.46	10.26
9	....	3.81	4.66	5.19	6.60	7.84	9.50	10.28
10	....	3.82	4.70	5.26	6.63	7.87	9.54	10.31
11	....	3.51	4.72	5.30	6.65	7.91	9.57	10.33
12	....	3.56	4.75	5.34	6.68	7.93	9.61	10.35
13	....	3.62	4.79	5.38	6.73	7.98	9.66	10.37
14	....	3.69	4.83	5.42	6.76	8.02	9.69	10.39
15	....	3.73	4.88	5.48	6.80	8.06	9.72	10.41
16	....	3.77	4.92	5.53	6.85	8.10	9.75	10.43
17	....	3.84	4.94	5.58	6.90	8.15	9.78	10.46
18	....	3.89	4.94	5.61	6.95	8.20	9.82	10.48
19	....	3.94	4.85	5.66	6.99	8.25	9.85	10.50
20	....	3.99	4.80	5.71	7.03	8.31	9.86	10.51
21	....	4.06	4.75	5.76	7.11	8.37	9.89	10.56
22	....	4.08	4.75	5.80	7.17	8.44	9.92	10.58
23	....	4.13	4.60	5.84	7.23	8.50	9.94	10.60
24	....	4.17	4.61	5.88	7.27	8.61	9.97	10.61
25	2.77	4.21	4.64	5.93	7.31	8.71	9.99	10.63
26	2.91	4.26	4.67	5.98	7.35	8.81	10.02	10.65
27	3.02	4.32	4.70	6.03	7.38	8.87	10.05	10.66
28	3.08	4.34	4.74	6.07	7.41	8.94	10.06	10.70
29	3.11	4.36	4.79	6.12	7.45	9.00	10.06	10.71
30	3 20	4.40	4.83	6.17	7.50	9.03	10.07	10.73
31	3.29	.....	4.87	6.23	.....	9.09	.....	10.75

* No record for January, February, March, and April.

Gr-8--Continued.

Daily lowest water level from recorder graph, 1954

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	10.76	10.52	10.25	3.89	2.57	3.82	5.04	6.44	....	8.42	8.74	9.45
2	10.78	10.60	10.25	3.87	2.47	3.82	5.08	6.45	....	8.52	8.78	9.46
3	10.80	10.66	8.43	3.87	2.42	3.81	5.13	6.47	7.47	8.60	8.81	9.47
4	10.88	10.77	7.72	3.87	2.46	3.88	5.17	6.51	7.51	8.66	8.85	9.48
5	10.89	10.75	7.11	3.85	2.55	3.92	5.22	6.51	7.54	8.72	8.89	9.51
6	10.92	10.77	6.86	3.36	2.64	3.94	5.27	6.49	7.57	8.76	8.92	9.53
7	10.93	10.80	6.81	....	2.73	3.97	5.31	6.54	7.61	8.77	8.96	9.54
8	10.95	10.81	6.71	....	2.77	3.99	5.38	6.57	7.64	8.77	8.99	9.54
9	10.96	10.82	6.47	2.70	2.82	4.02	5.45	6.62	7.68	8.48	9.00	9.55
10	10.97	10.83	6.21	2.75	2.83	4.04	5.50	6.64	7.70	8.39	9.03	9.57
11	10.98	10.84	6.12	2.85	2.85	4.06	5.56	....	7.73	8.35	9.05	9.58
12	10.99	10.85	6.07	2.91	2.90	4.11	5.60	....	7.76	8.30	9.08	....
13	11.00	10.87	5.93	2.92	2.93	4.16	5.65	6.80	....	8.26	9.09	....
14	11.00	10.89	5.73	2.97	2.99	4.20	5.69	6.83	7.84	8.24	9.11	9.59
15	11.01	10.90	5.55	2.97	3.02	4.24	5.77	6.86	7.87	8.23	9.13	9.59
16	11.01	10.92	5.47	2.85	3.06	4.30	5.81	6.90	7.90	8.20	9.14	9.60
17	11.01	10.93	5.43	1.36	3.10	....	5.84	6.93	7.93	8.20	9.15	9.61
18	11.02	10.94	5.39	1.74	3.15	....	5.88	6.95	7.96	8.22	9.17	9.61
19	11.02	10.95	5.34	2.03	3.18	....	5.93	6.98	7.98	8.24	9.18	9.62
20	11.02	10.96	5.23	2.19	3.24	....	5.95	7.03	8.01	8.26	9.20	9.64
21	11.02	10.95	4.52	2.29	3.30	....	5.97	7.06	8.02	8.27	9.23	9.64
22	9.45	10.95	4.32	2.35	3.36	....	6.02	7.08	8.07	8.30	9.26	9.65
23	9.93	10.90	4.19	1.47	3.42	....	6.10	....	8.10	8.31	9.27	9.65
24	10.26	10.19	4.16	1.25	3.45	....	6.14	....	8.14	8.36	9.28	9.65
25	10.47	10.00	4.08	1.70	3.51	4.65	6.20	....	8.16	8.38	9.31	9.66
26	....	10.06	4.02	1.93	3.55	4.71	6.23	....	8.20	8.41	9.34	9.67
27	....	10.15	4.02	2.13	3.58	4.80	6.28	7.25	8.24	8.48	9.34	9.67
28	9.71	10.22	3.96	2.31	3.63	4.86	6.32	7.28	8.28	8.52	9.36	9.67
29	10.01	....	3.90	2.42	3.71	4.91	6.33	....	8.32	8.57	9.39	....
30	10.23	....	3.89	2.52	3.78	4.97	6.38	....	8.36	8.63	9.42	....
31	10.41	....	3.89	....	3.82	....	6.41	....	....	8.69	....	....

Hamilton County

H-1. R. Weber. Lat. 39°12', long. 84°47'. Drilled test well in gravel, diameter 6 inches, depth 124 feet. Highest water level 13.15 below lsd, Feb. 15, 1950; lowest 25.30 below lsd, Dec. 21-28, 1954. Records available: 1949-54.

Daily lowest water level from recorder graph, 1951

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	19.33	18.76	17.82	17.91	18.94	19.78	19.99	21.34	22.38	23.13	23.58	....
2	19.36	18.83	17.89	18.06	18.98	19.83	20.03	21.37	22.42	23.13	23.60	23.57
3	19.32	18.85	17.92	18.19	19.03	19.91	20.15	21.42	22.47	23.15	23.60	23.60
4	....	18.85	17.57	....	19.06	19.93	20.27	21.47	22.49	23.17	23.62	23.60
5	....	18.89	17.76	....	19.10	19.97	20.37	21.50	22.53	23.19	23.63	23.23
6	....	18.90	17.89	....	19.15	20.02	20.45	21.54	22.54	23.21	23.63	23.04
7	18.39	18.90	18.00	18.50	19.18	20.06	20.52	21.56	22.58	23.22	23.62	22.78
8	18.57	18.82	18.14	18.50	19.23	20.10	20.58	21.59	22.58	23.20	23.62	22.06
9	18.77	18.92	18.26	18.25	19.28	20.12	20.64	21.62	22.65	23.21	23.62	21.91
10	18.68	18.97	18.26	18.25	19.29	20.06	20.66	21.65	22.65	23.22	23.64	21.64
11	18.68	19.00	18.41	18.15	19.29	20.14	20.66	21.67	22.69	23.27	23.69	21.90
12	18.50	18.98	18.45	17.81	19.09	20.20	20.47	21.72	22.70	23.28	23.70	22.02
13	18.61	17.02	18.46	17.25	19.22	20.25	20.42	21.74	22.73	23.31	23.70	22.11
14	18.61	17.58	18.44	17.19	19.29	20.25	20.51	21.77	22.71	23.34	23.66	22.17
15	18.37	17.91	18.46	17.63	19.35	20.26	20.60	21.80	22.71	23.37	23.31	22.20
16	17.14	17.97	18.46	17.89	19.40	20.33	20.67	21.85	22.75	23.39	23.39	22.26
17	17.44	17.61	18.43	18.05	19.45	20.38	20.73	21.89	22.78	23.39	23.39	22.31
18	17.44	17.83	18.33	18.17	19.48	20.42	20.77	21.92	22.81	23.42	23.46	22.32
19	17.44	17.84	17.52	18.29	19.51	20.48	20.85	21.98	22.84	23.43	23.52	22.33
20	17.69	17.60	17.89	18.34	19.52	20.54	20.91	22.01	22.86	23.44	23.55	22.34
21	17.90	....	17.90	18.50	19.53	20.55	20.96	22.05	22.89	23.43	23.59	....
22	18.03	....	17.98	18.51	19.54	20.59	21.02	22.08	22.90	23.45	23.62	....
23	18.12	....	17.91	18.36	19.58	20.59	21.02	22.12	22.90	23.48	23.64	....
24	18.21	....	17.70	18.36	19.63	20.48	20.95	22.15	22.90	23.46	23.60	....
25	18.26	17.26	17.96	18.58	19.65	20.51	20.98	22.19	22.91	23.48	23.30	....

H-1-- Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	18.38	17.47	18.13	18.66	19.65	20.62	21.05	22.22	22.93	23.48	23.34	.....
27	18.38	17.63	18.24	18.72	19.65	20.65	21.11	22.25	22.95	23.50	23.37	.....
28	18.45	17.73	18.26	18.77	19.65	.....	21.16	22.27	22.99	23.52	.....	.....
29	18.54		17.94	18.84	19.65	.....	21.21	22.29	22.99	23.53	.....	.....
30	18.65		17.49	18.88	19.70	.....	21.26	22.31	23.01	23.55	.....	.....
31	18.66		17.70		19.74		21.30	22.36		23.58		.....

Daily lowest water level from recorder graph, 1952

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	19.22	18.75	19.30	19.85	20.75	21.90	22.70	23.20	23.70	24.00
2	19.27	.....	19.36	19.90	20.85	21.90	22.65	23.20	23.75	24.00
3	19.29	18.70	19.41	19.95	20.85	21.95	22.55	23.20	23.75	24.00
4	19.31	18.76	19.48	20.00	20.95	22.00	22.55	23.25	23.80	24.00
5	19.37	18.66	19.52	20.00	20.95	22.05	22.60	23.25	23.80	24.00
6	19.41	18.13	19.58	20.10	21.05	22.05	22.65	23.30	23.80	23.75
7	19.47	18.37	19.59	20.15	21.05	22.10	22.70	23.30	23.85	23.80
8	19.50	18.53	19.62	20.20	21.10	22.15	22.75	23.35	23.85	23.80
9	19.53	18.65	19.63	20.20	21.15	22.15	22.75	23.35	23.85	23.80
10	18.29	19.53	18.76	19.63	20.25	21.20	22.15	22.80	23.35	23.85	23.65
11	18.42	19.23	18.79	19.63	20.30	21.25	22.15	22.80	23.40	23.85	23.35
12	18.52	17.85	18.82	19.66	20.35	21.30	22.25	22.85	23.40	23.85	23.40
13	18.62	18.26	18.81	19.70	20.30	21.35	22.30	22.85	23.40	23.90	23.45
14	18.67	.....	18.22	19.72	20.30	21.35	22.30	22.85	23.40	23.90	23.45
15	18.73	.....	.....	19.78	20.35	21.35	22.25	22.90	23.45	23.90	23.50
16	18.79	18.77	.....	19.80	20.40	21.30	22.15	22.90	23.45	23.95	23.50
17	18.86	18.86	.....	19.85	20.50	21.25	22.00	22.85	23.45	23.95	23.55
18	18.92	18.91	.....	19.85	20.50	21.30	22.15	22.85	23.50	23.90	23.60
19	18.95	18.91	.....	19.90	20.55	21.30	22.20	22.85	23.55	23.90	23.60
20	18.96	18.72	18.97	19.90	20.60	21.45	22.25	22.85	23.55	23.90	23.60
21	18.23	18.84	19.04	19.90	20.65	21.45	22.30	22.90	23.55	23.90	23.60
22	18.85	19.10	19.85	20.75	21.50	22.35	22.95	23.55	23.90	23.50
23	17.00	19.12	19.90	20.50	21.55	22.35	22.95	23.60	23.95	23.40
24	18.86	17.72	19.06	19.95	.....	21.55	22.40	23.00	23.60	23.95	23.30
25	18.94	18.01	18.79	19.20	.....	21.60	22.45	23.00	23.60	23.90	23.20
26	19.01	18.22	18.93	19.20	.....	21.65	22.50	23.05	23.65	23.95	23.20
27	19.05	18.40	19.03	.....	.....	21.70	22.55	23.05	23.65	23.95	23.20
28	19.10	.....	19.11	.....	20.45	21.70	22.60	23.10	23.60	24.00	23.20
29	19.14	.....	19.17	.....	20.55	21.80	22.60	23.10	23.65	24.00	23.20
30	18.70	19.24	19.70	20.65	21.80	22.65	23.10	23.65	24.00	23.25
31	18.75	.....	19.80	.....	21.85	22.65	.....	23.65	.....	23.25

Daily lowest water level from recorder graph, 1953

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	23.25	21.10	20.90	20.30	20.30	19.90	21.10	21.60	.....	23.35	23.90	24.30
2	23.25	21.10	20.90	20.35	20.40	19.95	21.10	21.60	.....	23.40	23.90	24.30
3	23.30	21.15	20.90	20.35	20.45	20.00	21.15	21.45	.....	23.40	.....	24.35
4	23.30	21.15	20.20	20.40	20.45	20.10	21.25	21.55	.....	23.40	.....	24.35
5	23.30	21.15	20.20	20.40	20.45	20.15	21.25	21.55	.....	23.45	.....	24.35
6	23.35	21.15	20.20	.....	20.40	20.20	21.00	21.60	.....	23.45	.....	24.35
7	23.35	21.15	20.20	.....	20.40	19.85	20.20	21.65	22.75	23.45	.....	24.35
8	23.35	21.15	20.20	20.45	20.40	20.00	20.45	21.65	22.75	23.50	24.00	24.30
9	22.30	21.20	20.25	20.45	20.40	20.10	20.55	21.70	22.80	23.50	24.00	24.35
10	22.35	21.20	20.30	20.40	20.45	21.15	20.65	21.75	22.85	23.50	24.05	24.35
11	21.95	21.15	20.35	20.40	20.50	.....	20.70	21.80	22.85	23.55	24.05	24.35
12	22.10	20.95	20.35	20.40	20.55	.....	20.75	21.85	22.90	23.55	24.05	24.35
13	22.15	20.70	20.35	20.40	20.55	.....	20.80	21.90	22.90	23.60	24.05	24.40
14	22.20	20.75	20.30	20.45	20.45	.....	20.90	21.90	22.95	23.60	24.10	24.40
15	22.20	20.80	20.20	20.45	20.25	20.30	21.00	21.95	22.95	23.65	24.10	24.40
16	22.20	20.85	20.10	20.45	19.70	20.30	21.05	22.00	23.00	23.65	24.10	24.40
17	22.05	20.90	20.15	20.35	18.95	20.25	21.05	22.05	23.05	23.65	24.10	24.45
18	21.10	20.95	20.15	20.35	18.55	20.35	21.05	22.10	23.05	23.70	24.15	24.45
19	21.25	20.95	19.45	20.15	19.10	20.40	21.00	22.10	23.10	23.70	24.15	24.45
20	21.35	20.95	19.75	20.00	19.35	20.50	21.05	22.15	23.15	.....	24.15	24.45
21	21.45	20.95	19.85	20.05	19.50	20.60	21.10	22.20	23.15	.....	24.15	24.45
22	21.50	20.75	19.95	20.10	19.50	20.65	21.15	22.25	23.20	.....	24.20	24.50
23	21.50	20.75	20.00	20.15	18.75	20.75	21.15	22.25	23.20	.....	24.20	24.50
24	21.50	20.80	20.10	20.20	19.00	20.80	21.20	22.30	23.20	.....	24.20	24.50
25	21.45	20.80	20.15	20.20	19.10	20.80	21.25	22.35	23.25	.....	24.20	24.50

H-1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	21.40	20.80	20.20	20.25	19.30	20.90	21.35	22.40	23.25	23.80	24.20	24.50
27	21.40	20.85	20.20	20.25	19.45	20.95	21.40	22.40	23.30	23.85	24.25	24.50
28	21.25	20.90	20.25	20.30	19.55	21.00	21.45	22.45	23.30	23.85	24.25	24.55
29	21.00		20.30	20.30	19.65	21.05	21.50	22.50	23.35	23.85	24.30	24.55
30	21.05		20.35	20.30	19.70	21.05	21.55	22.50	23.35	23.85	24.30	24.55
31	21.05		20.35		19.80		21.60	22.60		23.90		24.60

Daily lowest water level from recorder graph, 1954

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	24.60	24.55	24.60	23.70	23.20	23.50	23.75	23.95	24.25	24.80	25.00	25.15
2	24.60	24.60	24.55	23.75	23.20	23.50	23.80	23.95	24.25	24.80	25.00	25.15
3	24.60	24.65	24.60	23.80	22.85	23.30	23.80	23.95	24.30	24.80	25.05	25.15
4	24.60	24.65	24.60	23.85	22.75	23.35	23.75	23.90	24.35	24.85	25.05	25.15
5	24.60	24.70	24.65	23.90	22.75	23.40	23.35	23.95	24.35	24.85	25.05	25.20
6	24.65	24.70	24.65	23.65	22.75	23.45	23.15	23.95	24.35	24.85	25.05	25.20
7	24.65	24.70	24.70	23.35	22.80	23.45	23.20	24.00	24.40	24.85	25.05	25.20
8	24.65	24.70	24.75	23.25	22.80	23.50	23.20	24.00	24.40	24.85	25.05	25.20
9	24.65	24.70	24.75	23.30	22.90	23.55	23.25	24.00	24.45	24.85	25.10	25.20
10	24.70	24.75	24.80	23.40	22.90	23.50	23.30	24.05	24.45	24.90	25.10	25.25
11	24.70	24.75	24.80	23.45	22.95	23.50	23.30	24.05	24.45	24.90	25.10	25.25
12	24.70	24.75	24.80	23.50	22.95	23.50	23.35	24.10	24.50	24.90	25.10	25.25
13	24.75	24.80	24.50	23.55	23.00	23.55	23.45	24.10	24.50	24.90	25.10	25.25
14	24.70	24.80	24.45	23.60	23.05	23.50	23.50	24.10	24.55	24.85	25.10	25.25
15	24.70	24.80	24.45	23.60	23.05	23.45	23.55	24.15	24.55	24.85	25.10	25.25
16	24.70	24.80	24.40	23.60	23.10	23.35	23.60	24.15	24.55	24.85	25.15	25.25
17	24.75	24.80	24.40	23.40	23.10	23.15	23.65	24.20	24.60	24.85	25.15	25.25
18	24.75	24.70	24.35	23.05	23.15	23.20	23.65	24.20	24.60	24.85	25.15	25.25
19	24.75	24.75	24.30	23.10	23.20	23.20	23.65	24.10	24.60	24.85	25.15	25.25
20	24.75	24.75	24.25	23.20	23.20	23.25	23.70	24.15	24.60	24.90	25.15	25.25
21	24.70	24.75	24.15	23.25	23.25	23.30	23.70	24.15	24.65	24.90	25.15	25.30
22	24.55	24.80	24.10	23.30	23.25	23.35	23.60	24.20	24.65	24.90	25.15	25.30
23	24.60	24.80	24.05	23.25	23.30	23.40	23.65	24.25	24.65	24.95	25.15	25.30
24	24.70	24.85	24.05	23.10	23.30	23.45	23.70	24.25	24.70	24.95	25.15	25.30
25	24.70	24.85	24.05	23.00	23.35	23.50	23.75	24.30	24.70	24.95	25.15	25.30
26	24.70	24.85	24.05	23.05	23.40	23.55	23.75	24.30	24.70	24.95	25.15	25.30
27	24.70	24.85	24.05	23.05	23.40	23.60	23.80	24.20	24.70	24.95	25.15	25.30
28	24.30	24.85	24.05	23.10	23.40	23.65	23.85	24.20	24.75	24.95	25.15	25.30
29	24.40		24.05	23.15	23.35	23.70	23.90	24.05	24.75	25.00	25.15	24.90
30	24.45		24.05	23.20	23.45	23.70	23.90	24.15	24.75	25.00	25.15	24.65
31	24.50		23.60		23.45		23.95	24.20		25.00		24.55

H-2. Leo Willheim. Lat. 39°18', long. 84°39'. Drilled unused well in gravel, diameter 7 inches, depth 89 feet. Highest water level 13.90 below lsd, May 27, 1953; lowest 21.70 below lsd, Dec. 23-24, 1954. Records available: 1952-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	19.40	19.60	19.50	19.40	20.10	19.95	20.45	20.05	20.85	20.00	21.05
2	.....	19.45	19.55	19.30	19.40	20.00	19.95	20.35	20.15	20.80	19.95	21.10
3	.....	19.60	19.60	19.25	19.30	20.00	19.95	20.40	20.20	20.80	20.05	21.20
4	.....	19.80	19.60	19.10	19.25	20.05	19.85	20.50	20.25	20.65	20.15	21.20
5	.....	19.85	19.65	19.05	19.25	20.05	19.70	20.55	20.20	20.65	20.25	21.20
6	.....	19.90	19.65	19.00	19.40	19.95	19.45	20.55	20.10	20.70	20.35	21.10
7	.....	19.85	19.60	19.10	19.45	19.75	19.30	20.50	20.00	20.80	20.35	21.20
8	19.60	19.75	19.50	19.20	19.45	19.75	19.30	20.25	20.10	20.80	20.40	21.25
9	19.60	19.70	19.55	19.20	19.40	19.85	19.30	20.00	20.25	20.75	20.45	21.30
10	19.60	19.80	19.70	19.20	19.35	19.90	19.30	19.90	20.30	20.70	20.55	21.35
11	19.50	19.90	19.85	19.15	19.30	19.90	19.25	19.95	20.35	20.60	20.60	21.40
12	19.55	20.00	19.95	19.10	19.35	19.85	19.20	20.00	20.35	20.55	20.70	21.40
13	19.70	20.00	19.95	19.20	19.50	19.75	19.30	20.00	20.30	20.60	20.75	21.35
14	19.85	19.95	19.90	19.30	19.60	19.65	19.40	19.95	20.40	20.60	20.75	21.40
15	19.90	19.80	19.75	19.40	19.65	19.65	19.45	19.95	20.50	20.60	20.75	21.45
16	.....	19.85	19.80	19.40	19.65	19.80	19.50	20.00	20.55	20.55	20.80	21.50
17	.....	19.95	19.90	19.35	19.65	19.90	19.55	20.10	20.70	20.40	20.90	21.55
18	.....	19.95	20.05	19.20	19.55	19.90	19.55	20.10	20.75	20.15	20.95	21.60
19	.....	19.95	20.10	18.85	19.65	19.70	19.60	20.15	20.75	19.95	21.00	21.60
20	.....	19.90	20.10	18.70	19.80	19.50	19.75	20.15	20.70	19.90	21.05	21.55

H-2--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	.....	19.90	20.00	18.80	19.95	19.30	19.75	20.15	20.75	19.90	21.05	21.60
22	.....	19.75	19.80	18.95	20.05	19.35	19.75	20.15	20.80	20.00	21.05	21.65
23	19.85	19.60	19.80	19.05	20.10	19.45	19.85	20.05	20.85	20.05	21.10	21.70
24	19.80	19.65	19.90	19.05	20.10	19.60	19.85	20.15	20.85	20.05	21.20	21.70
25	19.70	19.75	19.95	19.00	20.05	19.75	19.90	20.25	20.85	20.00	21.20	21.65
26	19.75	19.80	20.00	18.95	20.15	19.85	19.90	20.30	20.80	20.15	21.15	21.50
27	19.85	19.80	20.00	19.05	20.20	19.85	20.00	20.35	20.65	20.20	21.10	21.35
28	19.90	19.75	20.00	19.20	20.30	19.80	20.15	20.35	20.65	20.30	21.05	21.25
29	19.90		19.85	18.30	20.35	19.85	20.25	20.20	20.70	20.40	21.00	21.20
30	19.80		19.80	19.35	20.35	19.90	20.40	20.05	20.80	20.35	21.00	.....
31	19.65		19.70		20.25		20.40	19.95		20.20		.....

H-3. Village of Indian Hill. Lat. 39°11', long. 84°17'. Drilled unused well in gravel, diameter 4 inches, depth 60 feet. Highest water level 19.95 below lsd, May 22, 1953; lowest 33.30 below lsd, Sept. 18, 1954. Records available: 1952-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	27.75	26.50	26.75	26.05	26.05	29.00	.....	31.45	28.40	29.90	28.65	28.75
2	27.80	26.50	26.40	26.10	25.60	28.00	.....	30.95	29.40	30.05	27.80	28.60
3	27.75	26.50	26.60	26.15	25.35	27.85	.....	29.75	30.30	29.70	29.25	28.85
4	27.70	26.50	29.85	26.20	25.40	27.85	.....	29.60	30.65	30.15	28.70	30.05
5	27.85	26.55	26.40	26.45	25.40	27.30	.....	29.15	30.95	30.15	27.95	29.10
6	27.85	26.95	26.30	26.05	25.95	27.80	.....	29.25	31.50	29.90	28.15	29.75
7	27.70	26.75	26.25	25.65	25.75	27.80	.....	29.25	31.75	29.60	28.90	29.50
8	27.00	27.05	26.40	25.55	26.25	29.25	.....	28.75	31.45	29.65	28.30	29.45
9	27.25	27.05	26.35	25.60	26.15	28.35	.....	28.40	31.05	30.40	28.75	29.70
10	27.00	27.15	26.55	25.80	26.20	27.65	.....	28.00	31.45	29.55	28.10	29.35
11	27.15	27.20	26.50	25.65	25.95	28.05	.....	28.75	31.10	30.25	28.25	29.20
12	.....	27.15	25.95	25.80	26.80	28.15	.....	28.05	31.20	29.75	28.00	29.55
13	.....	27.15	25.70	25.85	26.35	28.10	.....	29.10	31.45	29.75	28.85	29.65
14	.....	27.20	25.70	26.05	26.95	28.40	.....	28.40	31.50	29.05	28.55	29.30
15	27.25	27.35	25.85	26.05	26.85	28.30	.....	29.05	31.45	27.20	28.60	29.20
16	27.20	27.25	.....	25.35	27.35	27.95	.....	29.25	32.00	27.65	28.35	27.55
17	27.05	27.20	.....	23.25	27.25	28.50	.....	29.30	33.15	27.00	28.80	27.30
18	27.20	27.10	.....	23.55	28.20	28.60	.....	28.50	33.30	28.30	28.65	27.95
19	27.10	27.15	.....	24.15	28.15	28.45	.....	28.05	33.10	27.15	29.60	27.30
20	26.85	27.05	25.40	24.55	28.15	28.90	.....	27.55	31.25	28.50	28.60	28.40
21	26.20	26.95	25.15	24.95	28.35	29.15	26.60	27.70	30.00	27.95	29.15	28.45
22	26.05	27.05	25.30	26.80	28.85	30.30	26.30	27.50	30.50	28.20	29.10	28.25
23	26.15	26.85	25.40	25.60	29.45	29.80	27.40	28.45	29.95	28.25	28.90	28.00
24	26.05	26.95	25.30	25.15	29.65	30.15	28.20	28.75	29.90	.....	27.90	28.95
25	26.30	26.95	25.40	25.65	29.90	30.40	28.30	29.15	30.70	28.85	29.00	27.85
26	26.35	26.95	25.60	25.85	28.65	32.15	29.35	29.15	30.50	29.10	29.05	.....
27	26.45	26.95	25.65	25.25	28.35	.....	30.00	28.75	30.35	28.60	29.05	27.65
28	26.20	27.00	26.20	25.30	27.65	.....	31.00	28.50	30.70	28.75	29.25	28.55
29	26.30		25.95	.....	28.70	.....	30.95	28.45	30.50	27.40	28.70	27.15
30	26.30		25.85	.....	28.45	.....	31.90	28.45	30.35	28.80	28.20	27.20
31	26.30		26.15		28.60		32.15	27.90		27.65		26.20

207-3. Village of Glendale. Glendale Waterworks. Mosteller and Sharon Rds. Lat. 39°16', long. 84°25'. Drilled unused well in gravel, diameter 8 inches, depth 167 feet. Highest water level 13.35 below lsd, Apr. 29, 1939; lowest 77.65 below lsd, Dec. 31, 1954. Records available: 1938-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	69.25	70.95	69.70	73.60	71.45	71.35	73.85	73.45	73.75	75.80	74.45	74.15
2	68.20	70.55	71.05	73.80	69.95	73.15	74.15	72.15	73.95	.....	74.80	75.45
3	69.95	70.90	72.60	71.55	70.95	73.25	72.35	72.80	74.10	75.80	74.95	76.10
4	68.60	70.90	73.05	69.85	71.45	73.80	71.55	72.70	72.95	75.80	74.40	74.85
5	69.50	70.45	73.65	70.90	71.35	72.25	71.35	74.30	71.55	73.60	74.25	74.00
6	71.05	69.75	70.95	71.15	72.75	71.20	71.85	74.70	72.10	74.90	73.85	74.40
7	71.65	68.00	69.20	73.05	72.90	71.40	74.35	72.70	72.90	75.20	72.95	74.65
8	71.65	70.95	70.55	74.25	72.15	71.70	75.35	71.55	73.55	75.10	73.45	74.25
9	69.25	70.30	70.70	73.75	70.05	72.90	74.45	72.20	74.40	74.20	74.25	75.75
10	67.85	71.85	72.85	71.60	71.25	73.90	70.75	72.30	74.15	73.60	74.20	.....

207-3--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	69.00	72.90	73.60	70.60	71.25	73.75	71.35	73.80	72.80	73.85	75.45	77.00
12	70.75	72.60	73.30	71.35	71.55	72.35	72.30	73.80	72.05	73.90	75.35	73.55
13	72.05	70.25	71.05	71.55	73.10	71.10	71.60	74.45	72.65	75.10	75.05	73.80
14	71.30	70.25	70.15	73.15	72.75	71.50	71.85	72.35	73.35	75.85	73.75	74.65
15	71.35	69.50	71.75	73.50	71.40	72.40	71.50	71.50	74.25	75.85	73.70	74.75
16	69.55	72.60	71.20	73.65	70.15	73.05	71.45	72.20	74.60	75.95	74.50	76.15
17	67.75	73.95	72.80	71.70	71.10	73.95	71.15	72.65	74.95	74.00	74.15	75.65
18	70.85	72.65	72.90	69.95	71.35	74.10	73.25	72.45	73.20	74.65	75.70	74.75
19	69.30	71.20	72.75	71.20	71.40	73.00	72.65	73.75	71.90	75.15	76.30	74.70
20	71.00	69.70	70.80	71.85	72.85	71.10	73.15	74.45	73.00	74.95	74.25	75.35
21	71.65	68.75	69.75	72.95	73.10	72.05	73.20	72.70	73.70	75.15	73.20	74.90
22	70.80	69.95	70.65	73.30	74.35	72.35	74.75	71.40	73.25	74.85	74.00	75.50
23	69.75	69.25	71.30	72.90	70.50	73.35	74.95	71.50	74.35	75.10	74.25	76.00
24	67.60	71.35	73.60	72.20	71.70	74.15	72.85	72.25	74.95	73.85	74.05	76.65
25	68.85	72.10	73.35	70.10	72.05	74.15	71.75	73.95	73.50	74.35	74.70	.....
26	69.55	72.60	73.25	71.15	72.45	72.40	72.50	73.95	71.60	74.55	75.35	73.10
27	72.25	70.25	71.85	71.15	73.45	71.30	72.85	74.05	73.05	74.85	74.25	74.60
28	71.85	70.35	70.20	72.50	73.55	71.85	74.85	72.55	73.75	75.10	73.00	74.90
29	71.50		71.05	72.55	71.95	72.35	74.95	71.35	74.50	76.55	74.60	.....
30	70.00		71.30	73.05	70.55	73.75	75.75	72.60	75.30	76.55	74.55	.....
31	68.50		73.10		71.10		75.25	72.55		74.70		77.65

216-E. Electric Auto-Lite Co. Jimson Rd., Lockland. Lat. 39°14'56", long. 84°26'20". Drilled unused well in gravel, diameter 6 inches, depth 180 feet. Highest water level 42.93 below lsd, Apr. 9, 1941; lowest 85.90 below lsd, Nov. 30, 1954. Records available: 1941-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	80.95	81.40	81.80	82.45	82.70	82.90	83.70	84.00	84.45	.....	85.30	85.65
2	80.95	80.95	81.95	82.40	82.65	82.95	83.75	83.95	84.45	.....	85.40	85.45
3	81.20	81.05	82.05	82.45	82.55	82.90	83.65	84.00	84.45	.....	85.40	85.25
4	81.20	81.05	82.20	82.45	82.65	83.20	83.60	84.10	84.50	.....	85.20	85.05
5	80.80	81.20	82.20	82.25	82.65	83.35	83.55	84.05	84.50	.....	85.25	85.45
6	81.05	81.55	82.00	82.05	82.55	83.40	83.65	84.15	84.45	85.10	85.20	85.70
7	81.10	81.70	81.90	82.05	82.60	83.30	83.55	84.15	84.35	85.25	.....	85.70
8	81.15	81.10	81.90	82.45	82.70	83.25	83.75	84.10	.....	85.10	85.35	85.40
9	80.95	81.15	81.75	82.55	82.80	83.25	83.80	84.05	.....	85.80	85.45	84.95
10	81.10	81.20	81.55	82.35	82.85	83.25	83.85	84.15	.....	.....	85.50	85.35
11	81.00	81.75	81.65	82.30	82.85	83.25	83.85	84.25	.....	.....	85.45	85.50
12	81.45	82.05	81.75	82.55	82.80	83.25	83.80	84.30	.....	.....	85.25	85.50
13	.....	82.00	81.70	82.50	82.85	83.30	83.65	84.30	.....	84.80	85.25	85.35
14	.....	81.40	82.05	82.05	82.80	83.35	83.70	84.25	.....	84.75	85.00	85.10
15	.....	81.40	82.35	82.05	82.85	83.30	83.90	84.15	.....	84.65	85.05	85.00
16	.....	81.40	82.50	82.00	82.80	83.30	84.05	84.10	.....	84.85	84.95	85.40
17	.....	81.80	82.45	82.25	82.75	83.45	84.05	84.20	.....	85.05	84.95	85.40
18	81.10	81.85	82.10	82.30	82.80	83.55	83.85	84.20	.....	85.30	85.00	85.05
19	81.10	81.70	81.70	82.50	82.85	83.50	83.85	84.15	.....	85.30	84.90	85.40
20	81.05	81.55	81.90	82.65	82.95	83.45	83.85	84.30	.....	85.20	85.00	85.50
21	81.40	81.45	82.20	82.65	83.05	83.35	83.85	84.40	.....	84.90	85.20	85.55
22	81.40	81.75	82.25	82.45	83.05	83.35	83.95	84.45	.....	85.00	85.25	85.55
23	81.40	81.75	82.10	82.50	83.05	83.55	84.05	84.40	.....	85.10	85.20	85.20
24	81.25	81.45	82.10	82.55	83.05	83.60	84.10	84.35	.....	85.10	84.90	85.60
25	81.30	81.35	81.90	82.50	82.95	83.55	84.15	84.25	.....	84.95	85.25	85.70
26	81.25	81.50	82.30	82.45	83.05	83.45	84.20	84.20	.....	.....	85.40	85.60
27	81.30	81.55	82.35	82.25	83.00	83.55	84.15	84.25	.....	84.80	85.30	85.50
28	81.55	81.55	82.10	82.40	82.85	83.65	84.05	84.35	.....	84.80	85.00	85.30
29	81.50		81.95	82.45	82.95	83.65	84.00	84.35	.....	84.75	85.70	85.30
30	81.40		82.15	82.60	83.15	83.60	84.05	84.25	.....	85.15	85.90	85.55
31	81.50		82.25		83.15		84.05	84.30		85.35		85.55

237-3. Village of Wyoming. Vine and Water Sts. Lat. 39°13', long. 84°28'. Drilled unused well in gravel, diameter 8 inches, depth 194 feet. Highest water level 111.32 below lsd, May 8, 1939; lowest 148.70 below lsd, Nov. 11, 1948. Records available: 1938-54.

237-3--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	143.35	142.95	143.25	.....	142.60	143.00	144.10	144.00	143.50	143.65	142.80	143.35
2	143.00	142.85	143.30	.....	142.35	142.95	143.70	144.15	143.35	143.60	143.35	143.85
3	143.45	142.75	143.65	.....	142.45	142.30	143.60	143.75	143.25	143.30	143.25	143.80
4	143.40	142.40	143.55	.....	142.40	142.80	143.40	143.55	143.40	143.50	143.05	143.10
5	143.25	142.80	143.50	143.25	142.40	142.95	143.20	143.45	143.70	143.60	143.30	143.35
6	143.55	143.25	143.55	143.10	142.55	143.05	143.10	143.50	143.70	144.00	143.15	143.90
7	143.50	143.45	143.25	143.10	142.60	142.95	142.85	143.50	143.70	144.10	143.20	143.55
8	143.25	142.70	143.35	143.65	142.65	143.05	143.25	143.25	143.75	143.75	143.45	143.20
9	143.20	142.80	142.85	143.45	142.60	143.15	143.10	143.40	143.55	143.65	143.60	142.90
10	143.25	142.80	143.05	143.30	143.00	143.10	143.30	143.40	143.35	143.25	143.70	143.30
11	142.95	143.20	143.10	143.40	142.60	142.95	143.30	143.45	143.65	143.35	143.55	143.40
12	144.20	143.65	142.85	143.75	143.10	142.95	143.30	143.55	143.80	143.45	143.45	143.30
13	144.30	143.25	142.85	143.20	142.90	143.05	143.30	143.60	143.60	143.55	143.25	142.95
14	143.45	143.10	143.10	143.40	142.80	143.20	143.50	143.30	143.65	143.20	143.05	142.80
15	143.15	143.10	143.65	143.35	142.85	143.10	144.10	143.40	143.70	143.00	143.15	142.60
16	143.35	143.10	143.80	142.75	142.90	142.95	144.00	143.30	143.95	143.10	142.90	143.15
17	143.65	143.65	143.65	142.95	143.00	143.25	143.85	143.45	143.90	143.25	142.85	142.55
18	143.45	143.55	143.20	142.80	142.85	143.05	143.70	143.20	143.75	143.90	142.80	142.60
19	143.30	143.40	142.55	143.25	143.05	143.05	143.75	143.20	143.65	143.75	142.60	143.00
20	143.20	143.00	143.05	143.55	142.95	143.05	143.65	143.50	143.75	143.45	142.65	143.15
21	143.55	142.95	143.40	143.45	142.95	143.20	143.70	143.50	143.75	143.35	142.65	143.30
22	143.50	143.45	143.25	143.30	143.15	143.25	143.55	143.60	143.70	143.45	143.05	143.00
23	143.35	143.25	143.40	143.25	143.20	143.65	143.35	143.65	143.65	143.65	142.85	142.85
24	143.25	143.05	143.30	143.25	143.25	143.60	143.55	143.60	143.50	143.55	142.55	143.35
25	143.45	142.80	142.90	143.05	143.25	143.35	143.50	143.50	143.35	143.40	142.90	143.40
26	143.35	143.05	143.25	143.00	143.25	143.25	143.60	143.50	143.55	143.15	143.25	143.25
27	143.40	142.70	143.25	142.55	143.05	143.70	143.80	143.50	143.15	143.10	142.65	143.20
28	143.70	142.85	142.95	142.65	142.65	143.80	143.85	143.35	143.45	142.95	142.55	143.05
29	143.20		142.65	142.50	142.90	143.50	144.00	143.25	143.75	142.75	143.50	142.55
30	143.35		.....	142.55	143.25	144.05	144.10	143.25	143.80	143.00	143.70	143.40
31	143.55		.....		143.00		144.20	143.40		142.95		143.20

241-3. Gardner-Richardson Co. South Cooper Ave., Lockland. Lat. 39°14', long. 84°27'.
 Drilled unused well in gravel, diameter 10 inches, depth 168 feet. Highest water level 104.70
 below lsd, Jan. 30, 1939; lowest 136.80 below lsd, Nov. 9, 1947. Records available: 1938-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	119.35	119.10	119.15	119.20	119.10	118.70	119.25	119.05	119.05	118.95	119.55	119.80
2	119.35	118.80	119.25	119.00	119.00	118.70	119.30	118.90	118.90	118.95	119.75	119.60
3	119.50	118.95	119.40	119.15	118.90	118.60	119.25	118.95	118.80	118.90	119.70	119.40
4	119.50	119.10	119.40	119.00	118.90	119.00	119.20	119.10	118.85	118.95	119.60	119.35
5	119.05	119.15	119.35	118.70	118.80	119.10	118.95	119.00	118.80	119.00	119.75	119.80
6	119.35	119.60	119.25	118.60	118.75	119.10	118.95	119.10	118.70	119.45	.....	120.00
7	119.35	119.65	119.10	118.60	118.95	118.90	118.75	119.15	118.55	119.55	.....	119.95
8	119.40	119.35	119.05	119.15	119.00	118.90	118.90	119.10	118.70	119.35	119.70	119.60
9	119.30	118.90	118.80	119.20	119.00	118.90	118.90	118.90	118.70	119.00	119.80	119.55
10	119.30	119.00	118.80	118.90	119.05	118.95	118.80	118.95	118.60	118.95	119.90	119.85
11	119.15	119.65	118.85	118.75	118.90	119.00	118.75	119.10	118.85	118.80	119.75	119.95
12	119.65	119.85	118.90	118.95	119.00	119.00	118.65	119.15	118.95	119.00	119.65	119.95
13	119.65	119.65	118.90	118.75	119.00	119.05	118.55	119.15	118.85	119.15	119.60	119.80
14	119.35	119.20	119.15	118.35	119.00	118.95	118.60	119.15	118.70	119.10	119.45	119.65
15	119.15	119.10	119.35	118.40	119.05	118.85	119.00	119.00	118.75	119.05	119.45	119.45
16	119.25	119.05	119.40	118.50	118.95	118.95	119.05	118.90	118.85	119.30	119.30	119.60
17	119.50	119.45	119.30	118.65	118.75	119.10	119.00	119.00	118.80	119.40	119.40	119.90
18	119.25	119.45	119.00	118.65	118.70	119.15	118.85	118.95	118.75	119.60	119.40	119.90
19	119.05	119.35	118.65	118.80	118.85	119.15	118.70	118.90	118.55	119.60	119.30	119.55
20	119.05	119.10	119.10	119.00	119.00	119.05	118.75	119.05	118.60	119.50	119.45	119.90
21	119.55	119.05	119.15	118.95	119.10	118.90	118.85	119.20	118.80	119.25	119.50	120.00
22	119.40	119.25	119.10	118.90	119.15	118.90	119.00	119.20	118.95	119.40	119.50	120.05
23	119.50	119.15	118.90	118.95	119.15	119.10	119.00	119.10	119.10	119.50	119.45	120.00
24	119.25	118.95	118.90	118.95	119.00	119.20	119.10	119.00	119.05	119.50	119.25	120.00
25	119.20	118.95	118.75	118.95	118.95	119.15	119.10	118.90	118.80	119.30	119.55	120.10
26	119.05	119.15	119.10	118.80	119.05	119.05	119.05	119.00	118.75	119.10	119.60	120.15
27	119.40	119.05	119.15	118.60	119.00	119.15	119.05	119.10	118.65	119.25	119.35	119.95
28	119.55	119.00	118.80	118.80	118.85	119.20	119.00	119.15	118.65	119.25	119.15	119.75
29	119.40		118.65	118.80	119.10	119.20	119.00	119.15	118.75	119.15	119.85	119.65
30	119.45		118.85	118.95	119.20	119.15	119.10	118.95	118.90	119.45	119.95	119.65
31	119.45		119.05		119.00		119.10	119.00		119.55		120.05

246-1. National Distillers Corp. Wayne Ave. and 78th St., Carthage. Lat. 39°12', long. 84°28'. Drilled unused well in gravel, diameter 8 inches, depth 170 feet. Highest water level 103.20 below lsd, May 28, 1945; lowest 121.58 below lsd, Nov. 10, 1950. Records available: 1944-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	112.00	112.00	112.75	117.80	115.65	114.20	111.40	110.15	109.45	108.95	108.55	108.35
2	111.50	112.60	112.80	118.90	114.85	113.95	111.35	110.05	109.35	108.85	108.60	108.35
3	111.45	112.45	113.00	118.20	116.85	113.65	111.25	110.05	109.30	108.85	108.60	108.15
4	113.00	112.50	113.10	115.40	117.35	113.55	111.20	110.15	109.35	108.80	108.55	108.10
5	112.65	112.60	113.25	118.05	117.50	113.50	111.10	110.00	109.35	108.80	108.55	108.35
6	113.10	111.70	112.10	116.80	117.65	113.40	111.10	110.00	109.30	109.10	.....	108.45
7	114.10	111.60	111.75	118.60	119.45	113.20	110.95	110.00	109.25	109.15	.....	108.40
8	114.45	111.10	111.55	119.10	118.30	113.05	111.00	109.90	109.25	108.95	108.55	.....
9	113.10	110.60	113.25	119.25	115.85	112.90	111.00	109.90	109.25	108.80	108.60	.....
10	112.55	110.40	113.40	118.25	116.85	112.85	110.95	109.85	109.10	108.70	108.65	.....
11	113.05	110.60	113.50	116.80	117.20	112.75	110.90	109.95	109.20	108.65	108.55	.....
12	113.55	110.60	114.00	117.50	117.75	112.60	110.80	109.95	109.30	108.70	108.50	.....
13	113.45	110.45	112.70	118.55	117.85	112.60	110.70	119.90	109.20	108.75	108.40	.....
14	112.95	110.40	112.20	118.65	118.10	112.45	110.70	109.90	109.10	108.65	108.35	.....
15	113.25	111.30	113.60	117.55	116.20	112.35	110.75	109.75	109.10	108.60	108.35	.....
16	111.85	111.90	113.75	117.60	115.25	112.25	110.80	109.70	109.10	108.70	108.20	.....
17	111.65	112.25	113.90	116.55	117.15	112.25	110.75	109.75	109.00	108.80	108.25	.....
18	112.55	112.40	113.70	115.25	117.70	112.20	110.55	109.70	108.90	108.90	108.20	.....
19	.....	112.45	113.35	117.00	118.00	112.10	110.50	109.65	108.95	108.90	108.15	.....
20	.....	111.95	113.75	117.45	118.10	111.95	110.50	109.70	109.05	108.80	108.25	.....
21	.....	111.20	112.90	117.65	118.30	111.90	110.45	109.70	109.10	108.65	108.25	.....
22	.....	111.90	113.75	117.95	117.20	111.80	110.45	109.70	109.15	108.70	108.25	.....
23	.....	112.25	115.90	118.15	116.50	111.80	110.45	109.65	109.10	108.75	108.25	.....
24	.....	112.40	116.45	116.05	117.50	111.80	110.45	109.60	108.90	108.75	108.10	.....
25	111.40	112.85	117.05	115.50	117.90	111.65	110.40	109.50	108.85	108.50	108.30	.....
26	111.20	113.15	117.45	116.95	117.90	111.55	110.40	109.45	108.85	108.50	108.35	.....
27	110.95	111.95	116.55	117.30	116.50	111.55	110.30	109.50	108.85	108.55	108.20	.....
28	110.95	111.80	113.35	116.95	116.05	111.55	110.20	109.45	108.90	108.50	108.15	.....
29	110.70	.....	116.25	116.55	116.20	111.50	110.20	109.45	108.90	108.40	108.60	.....
30	.....	.....	117.00	116.75	115.25	111.40	110.25	109.35	108.90	108.50	108.65	.....
31	.....	.....	117.70	.....	114.60	.....	110.15	109.40	.....	108.55	.....	.....

270-T-7. Procter & Gamble Co. Vine St., Ivorydale. Lat. 39°10', long. 84°29'. Drilled unused well in sand and gravel, diameter 6 inches, depth 151 feet. Highest water level 110.6 below lsd, Apr. 8, 1940; lowest 129.70 below lsd, Oct. 6, 1947. Records available: 1939-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	115.70	115.60	115.30	115.35	115.05	114.90	114.75	114.60	114.55	114.45	114.15	114.40
2	115.70	115.30	115.40	115.35	115.10	114.80	114.75	114.60	114.55	114.45	114.25	114.35
3	115.65	115.30	115.40	115.30	115.00	114.80	114.70	114.50	114.50	114.45	114.25	114.30
4	115.70	115.30	115.50	115.35	115.05	114.80	114.65	114.55	114.50	114.40	114.25	114.10
5	115.55	115.40	115.55	115.30	115.05	114.90	114.60	114.55	114.55	114.40	114.20	114.10
6	115.50	115.50	115.55	115.20	115.05	115.00	114.60	114.60	114.55	114.50	114.20	114.25
7	115.60	115.60	115.50	115.10	115.05	115.00	114.55	114.65	114.50	114.60	.....	114.30
8	115.60	115.60	115.40	115.20	115.05	115.00	114.55	114.65	114.50	114.60	114.30	114.30
9	115.55	115.20	115.40	115.20	115.05	115.00	114.60	114.55	114.50	114.45	114.35	114.00
10	115.60	115.25	115.10	115.25	115.10	114.95	114.65	114.55	114.45	114.35	114.45	113.90
11	115.60	115.40	115.15	115.25	115.10	114.95	114.65	114.60	114.45	114.15	114.45	114.05
12	115.70	115.60	115.20	115.30	115.05	114.95	114.65	114.65	114.50	114.20	114.40	114.10
13	115.80	115.65	115.20	115.30	115.10	114.95	114.60	114.65	114.50	114.25	114.40	114.10
14	115.80	115.40	115.30	115.00	115.05	114.95	114.60	114.65	114.50	114.25	114.20	114.05
15	115.55	115.40	115.45	114.95	115.05	114.95	114.60	114.60	114.50	114.25	114.15	113.95
16	115.40	115.40	115.35	114.95	115.05	114.90	114.70	114.60	114.50	114.25	114.15	113.95
17	115.55	115.45	115.55	115.00	115.00	114.90	114.70	114.55	114.50	114.35	114.10	114.00
18	115.60	115.55	115.45	115.05	115.00	114.95	114.70	114.55	114.50	114.45	114.10	114.00
19	115.60	115.55	115.10	115.15	115.00	114.95	114.60	114.50	114.35	114.50	114.10	113.95
20	115.60	115.45	114.95	115.20	115.05	114.95	114.60	114.55	114.30	114.50	114.05	114.05
21	115.60	115.15	115.15	115.25	115.05	114.85	114.55	114.60	114.30	114.40	114.10	114.15
22	115.65	115.30	115.20	115.20	115.10	114.80	114.60	114.65	114.40	114.30	114.15	114.15
23	115.70	115.35	115.25	115.20	115.10	114.80	114.65	114.65	114.50	114.35	114.20	114.15
24	115.65	115.30	115.25	115.20	115.10	114.80	114.65	114.65	114.55	114.35	114.15	113.95
25	115.65	115.25	115.20	115.20	114.95	114.80	114.70	114.55	114.50	114.35	114.00	114.10

270-T-7--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	115.60	115.10	115.20	115.15	115.00	114.75	114.70	114.45	114.40	114.20	114.15	114.15
27	115.45	115.15	115.25	115.00	115.00	114.70	114.70	114.50	114.40	114.10	114.15	114.20
28	115.55	115.20	115.25	114.90	114.90	114.75	114.70	114.50	114.35	114.10	114.00	114.15
29	115.55		115.20	114.95	114.80	114.75	114.60	114.55	114.40	114.00	114.15	114.00
30	115.55		115.20	115.00	114.90	114.75	114.60	114.50	114.40	114.05	114.35	113.85
31	115.60		115.25		114.95		114.65	114.50		114.15		114.00

Hancock County

Ha-2. R. E. Ascham. Lat. 40°57'00", long. 83°46'00". Drilled unused well in limestone, diameter 6 inches, depth 27 feet. Highest water level 2.88 above lsd, Mar. 22, 1943; lowest 7.65 below lsd, Nov. 16-17, 1952. Records available: 1947-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.21	3.51	2.55	2.15	2.90	3.45	5.00	4.90	3.80	5.60	3.20	2.90
2	7.19	3.51	2.60	2.25	2.65	3.40	5.00	4.35	3.90	5.65	3.20	2.90
3	7.37	3.56	2.25	2.45	2.35	3.35	5.05	4.90	3.65	5.65	3.20	2.85
4	7.35	3.56	2.50	2.55	2.35	3.45	5.00	5.10	3.80	3.90	3.20	2.85
5	7.24	....	2.65	2.55	2.50	3.55	5.05	4.80	4.15	3.95	3.00	3.00
6	7.35	3.66	2.75	2.60	2.60	3.55	5.10	3.85	4.30	3.60	3.00	3.10
7	7.40	3.70	2.75	2.60	2.75	3.55	5.05	4.40	4.40	3.65	3.00	3.05
8	7.43	3.78	2.75	2.60	2.80	3.55	3.65	4.70	4.55	3.70	3.05	3.00
9	7.40	4.09	2.65	2.55	2.85	3.40	3.85	4.85	4.60	3.75	3.10	2.95
10	7.45	3.67	2.80	2.55	2.90	3.45	4.45	5.10	4.65	3.75	3.15	3.10
11	7.36	3.77	2.85	2.55	2.95	3.50	4.65	5.25	4.85	3.00	3.15	3.15
12	7.54	4.34	2.90	2.05	3.00	3.55	4.70	5.35	4.90	2.55	3.15	3.15
13	7.55	4.52	2.90	2.15	3.05	3.60	4.85	5.40	4.95	2.40	3.15	3.15
14	7.50	4.60	3.00	2.30	3.05	3.60	5.00	5.45	5.00	2.50	3.15	3.10
15	7.46	4.30	3.05	2.35	3.10	3.55	5.15	5.40	5.05	1.75	3.15	3.00
16	7.45	3.71	3.10	1.20	3.10	3.50	5.25	5.50	5.10	2.00	3.15	3.15
17	....	3.45	3.10	1.25	3.15	3.55	5.25	5.55	5.15	2.20	3.20	3.15
18	7.51	3.45	3.05	1.65	3.15	3.60	5.20	5.55	5.10	2.50	3.20	3.05
19	7.55	3.48	3.00	1.90	3.15	3.60	5.30	3.30	5.10	2.60	3.20	3.10
20	7.52	3.40	2.90	2.05	3.20	3.55	5.30	3.25	5.20	2.65	3.20	3.10
21	3.96	3.00	2.95	2.15	3.25	3.55	5.05	3.35	5.25	2.75	3.25	3.15
22	4.18	3.10	2.95	2.35	3.25	3.65	4.10	3.45	5.40	2.85	3.25	3.10
23	5.25	3.10	3.00	2.40	3.30	3.75	4.70	3.50	5.50	2.95	3.25	3.05
24	5.64	3.05	3.00	2.50	3.30	4.05	4.95	3.55	5.50	2.95	3.10	3.20
25	5.82	3.10	2.90	2.65	3.35	4.25	5.15	3.55	5.45	2.95	3.10	3.20
26	5.62	3.15	2.50	2.65	3.35	4.45	5.25	3.10	5.50	3.00	3.00	3.15
27	3.30	3.00	2.55	2.55	3.35	4.65	5.30	3.25	5.50	3.05	3.00	3.15
28	3.41	2.75	2.50	2.70	3.30	4.70	5.35	3.35	5.60	3.05	2.75	2.55
29	3.43		2.45	2.75	3.35	4.75	5.45	3.40	5.65	3.05	2.95	1.90
30	3.52		2.00	2.85	3.45	4.85	5.50	3.50	5.65	3.15	3.00	1.50
31	3.54		1.95		3.45		5.50	3.60		3.20		1.10

Hardin County

Hn-1. Village of Alger. Lat. 40°42'15", long. 83°50'08". Drilled unused well in limestone, diameter 6 inches, depth 140 feet. Highest water level 4.35 below lsd, Apr. 15, 1951; lowest 15.65 below lsd, Dec. 25, 1953, Jan. 4-5, 22-23, 1954. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	15.35	14.35	....	11.40	9.50	10.40	10.50	11.95	13.45	14.75	13.15	12.75
2	15.25	14.30	....	11.15	9.55	10.00	11.60	11.90	13.55	14.75	13.30	12.75
3	15.35	14.20	....	11.05	9.30	9.80	11.65	12.15	13.65	14.50	13.25	12.55
4	15.65	14.10	....	11.00	9.50	9.95	11.30	12.10	13.80	13.50	13.05	12.55
5	15.65	14.00	....	10.75	9.60	10.00	11.30	12.05	13.95	14.55	13.15	12.50
6	15.30	....	....	10.70	9.75	10.20	11.30	12.10	13.75	....	13.10	12.50
7	15.20	....	....	10.65	9.85	10.25	11.00	12.15	13.90	....	13.00	12.70
8	15.10	....	....	10.60	9.05	10.10	11.10	11.95	14.00	....	....	12.65
9	15.10	13.80	....	10.65	9.50	10.15	11.00	12.05	14.00	14.65	13.25	12.50
10	15.40	13.85	....	10.30	9.65	10.35	11.05	12.25	13.95	14.60	13.25	12.40

Hn-1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	15.40	13.90	.....	10.15	9.65	10.55	11.05	12.30	14.10	14.45	13.10	12.50
12	15.35	14.15	.....	10.70	9.80	10.65	11.20	12.45	14.10	14.40	13.05	12.55
13	.....	14.15	.....	10.50	9.80	10.70	11.30	12.70	15.30	14.55	12.95	12.55
14	.....	14.15	.....	10.20	9.90	10.60	11.45	13.00	14.20	14.25	12.95	12.40
15	.....	13.85	.....	9.90	9.95	10.45	11.45	13.15	14.20	14.30	13.00	12.25
16	.....	13.70	.....	9.50	9.75	10.40	11.25	.....	14.15	14.30	.....	12.30
17	.....	13.75	.....	9.85	10.15	10.40	11.35	.....	14.15	14.25	12.95	12.25
18	15.20	.....	.....	9.80	10.25	10.40	11.05	.....	14.25	14.10	12.85	12.20
19	15.10	.....	11.90	9.85	10.05	10.50	11.35	.....	14.25	14.15	12.80	12.20
20	15.00	.....	11.80	9.90	10.15	10.40	11.40	.....	14.20	13.95	12.80	12.30
21	15.50	.....	11.95	9.95	10.00	10.60	11.45	.....	14.35	.....	12.70	12.35
22	15.65	.....	11.95	9.70	10.05	10.55	11.30	.....	14.45	13.90	12.75	12.55
23	15.65	.....	11.85	9.70	10.05	10.75	11.30	.....	14.55	.....	12.45	13.05
24	15.20	.....	11.85	9.80	10.30	10.85	11.60	.....	14.60	.....	12.60	13.10
25	14.90	.....	11.45	9.85	10.30	10.85	11.75	.....	14.55	13.60	12.65	13.10
26	15.05	.....	11.70	9.75	10.30	11.00	11.40	.....	14.30	13.50	12.75	12.85
27	14.85	.....	11.60	9.65	10.40	11.10	11.75	.....	14.30	13.55	12.80	12.95
28	14.90	.....	11.25	9.60	10.35	11.05	12.05	.....	14.60	13.45	12.65	12.80
29	14.75	.....	11.25	9.95	10.15	11.20	12.10	.....	14.75	13.25	12.80	12.70
30	14.75	.....	11.60	9.85	10.25	11.35	12.10	12.40	14.80	13.25	12.90	12.50
31	14.60	.....	11.50	.....	10.45	.....	11.75	13.25	.....	13.20	.....	12.40

Henry County

Hy-1. H. Fosnow. Lat. 41°14'26", long. 83°54'03". Drilled unused well in limestone, diameter 4 inches, depth 81 feet. Highest water level 19.59 below lsd, May 21, 1948; lowest 26.44 below lsd, June 29, 1954. Records available: 1946-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 7	24.90	Feb. 8	25.82	June 2	26.10	Sept. 21	25.89
13	25.72	Mar. 10	25.70	29	26.44	Oct. 19	25.76
19	25.85	Apr. 7	26.20	July 27	26.32	Nov. 16	25.37
26	25.75	May 4	25.90	Aug. 24	26.05	Dec. 15	25.07
Feb. 1	25.73						

Holmes County

Ho-1. Sarah Walters. Millersburg. Lat. 40°35', long. 81°55'. Drilled unused well in sandstone, diameter 4 inches, depth 43 feet. Highest water level 2.50 below lsd, May 22, 1953; lowest 6.73 below lsd, Jan. 14, 1954. Records available: 1953-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.67	6.30	6.50	3.68	3.21	4.48	5.30	5.73	6.31	6.63	6.05	6.35
2	6.67	6.33	....	3.68	3.23	4.29	5.34	5.78	6.31	6.62	6.08	6.36
3	6.67	6.36	5.52	3.70	3.10	4.32	5.37	5.80	6.32	6.62	6.10	6.36
4	6.67	6.40	5.44	3.81	3.15	4.32	5.39	5.83	....	6.62	6.11	6.36
5	6.68	6.42	5.52	3.92	3.22	4.38	5.42	5.83	....	6.62	6.13	6.37
6	6.68	6.45	5.64	3.94	3.25	4.47	5.45	5.69	....	6.58	6.15	6.40
7	6.69	6.49	5.65	3.77	3.25	4.51	5.45	5.79	6.38	6.61	6.18	6.41
8	6.70	6.49	5.57	3.70	3.26	4.54	5.46	5.82	6.38	6.63	6.20	6.42
9	6.70	6.52	5.22	3.66	3.27	4.58	5.50	5.87	6.40	6.64	6.22	6.41
10	6.70	6.53	4.78	3.73	3.30	4.62	5.52	5.90	6.42	6.64	6.24	6.42
11	6.70	6.55	4.52	3.73	3.31	4.69	5.53	5.93	6.43	6.64	6.25	6.43
12	6.71	6.60	....	3.67	3.29	4.72	5.57	5.97	6.43	6.62	6.27	6.44
13	6.72	6.61	....	3.66	3.32	4.77	5.60	6.01	6.44	6.62	6.27	6.44
14	6.73	6.62	....	3.77	3.34	4.79	5.62	....	6.46	6.62	6.28	6.44
15	....	6.63	....	3.83	3.39	4.81	5.63	....	6.47	....	6.29	6.35
16	....	6.63	....	3.71	3.47	4.85	5.67	....	6.48	5.00	6.30	6.05
17	....	6.63	....	3.11	3.60	4.88	5.68	....	6.50	5.11	6.31	6.10
18	....	6.60	....	3.17	3.67	4.93	5.68	....	6.51	5.08	6.32	6.35
19	....	6.60	....	3.22	3.79	4.97	5.71	....	6.51	5.23	6.32	6.05
20	....	6.62	....	3.23	3.90	5.00	5.74	6.12	6.53	5.35	6.32	6.10
21	....	6.62	....	3.23	3.97	5.04	5.72	6.13	6.53	5.47	6.33	6.15
22	6.36	6.61	4.65	3.26	4.03	5.06	5.67	6.15	6.55	5.58	6.34	6.15
23	6.45	6.61	4.76	3.22	4.10	5.10	5.72	6.16	6.56	5.66	6.35	6.15
24	6.49	6.61	4.85	3.12	4.18	5.13	5.73	6.19	6.57	5.74	6.35	6.14
25	6.52	6.61	4.85	3.14	4.24	5.15	5.77	6.18	....	5.80	6.35	6.13

Ho-1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	6.54	6.62	4.44	3.18	4.29	5.17	5.80	6.19	....	5.84	6.36	6.15
27	6.36	6.63	4.52	3.20	4.32	5.20	5.81	6.23	6.60	5.88	6.36	6.15
28	6.02	6.63	4.55	3.20	4.34	5.24	5.82	6.24	6.61	5.91	6.35	6.14
29	6.13		3.96	3.21	4.35	5.25	5.84	6.25	6.62	5.94	6.34	5.60
30	6.17		3.78	3.19	4.40	5.27	5.89	6.27	6.63	5.99	6.35	5.03
31	6.26		3.65		4.44		5.90	6.29		6.03		4.70

Huron County

Hu-2. City of New London. Lat. 41°04'54", long. 82°25'00". Drilled unused well in sandstone, diameter 4 inches, depth 105 feet. Highest water level 13.25 below lsd, May 22, 1949; lowest 18.17 below lsd, Jan. 21-23, 1954. Records available: 1947-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18.01	18.11	17.85	17.69	17.01	16.71	16.80	16.92	17.08	17.28	17.17	17.17
2	18.00	18.02	.....	17.67	16.98	16.63	16.82	16.91	17.08	17.29	17.17	17.11
3	18.08	18.01	.....	17.70	16.87	16.62	16.82	16.92	17.10	17.28	17.16	17.07
4	18.08	18.01	.....	17.72	16.88	16.60	16.79	16.94	17.13	17.24	17.14	17.04
5	18.03	18.00	.....	17.66	16.86	16.65	16.79	16.94	17.14	17.24	17.17	17.13
6	18.02	18.07	.....	17.61	16.84	16.68	16.80	16.94	17.15	17.30	17.16	17.17
7	18.06	18.10	.....	17.55	16.81	16.68	16.79	16.97	17.14	17.36	17.19	17.15
8	18.09	18.16	17.93	17.62	16.81	16.67	16.75	16.97	17.17	17.34	17.23	17.10
9	18.05	17.97	17.90	17.64	16.80	16.69	16.79	16.96	17.18	17.28	17.26	17.00
10	18.09	17.98	17.84	17.58	16.81	16.69	16.80	16.97	17.14	17.26	17.28	17.08
11	18.06	18.10	17.87	17.53	16.79	16.70	16.81	17.01	17.19	17.18	17.25	17.10
12	18.14	18.14	17.88	17.55	16.79	16.71	16.80	17.04	17.22	17.15	17.24	17.09
13	18.16	18.14	17.84	17.53	16.81	16.73	16.79	17.07	17.22	17.18	17.24	17.09
14	18.15	18.05	17.85	17.44	16.80	16.74	16.78	17.07	17.22	17.17	17.19	17.03
15	18.10	18.05	17.94	17.42	16.78	16.74	16.82	17.02	17.22	17.13	17.20	16.96
16	.....	18.05	17.98	17.32	16.76	16.72	16.87	17.02	17.22	17.07	17.16	17.05
17	.....	18.10	17.97	17.17	16.74	16.71	16.87	17.02	17.23	17.17	17.15	17.05
18	.....	18.11	17.94	17.23	16.74	16.74	16.84	17.01	17.20	17.20	17.14	16.94
19	.....	18.10	17.88	17.27	16.75	16.73	16.84	16.96	17.13	17.22	17.12	17.00
20	.....	18.07	17.79	17.30	16.76	16.73	16.84	17.00	17.16	17.21	17.07	17.02
21	18.17	18.01	17.84	17.29	16.77	16.71	16.79	17.04	17.16	12.17	17.10	17.04
22	18.17	18.07	17.84	17.26	16.77	16.69	16.81	17.05	17.22	17.21	17.10	17.04
23	18.17	18.07	17.84	17.23	16.78	16.73	16.83	17.06	17.27	17.23	17.10	16.97
24	18.14	17.99	17.85	17.20	16.77	16.75	16.86	17.06	17.29	17.24	17.13	17.06
25	18.15	17.96	17.76	17.18	16.76	16.74	16.89	17.06	17.24	17.23	17.06	17.08
26	18.13	17.97	17.78	17.16	16.79	16.72	16.91	17.04	17.23	17.18	17.09	17.06
27	18.06	17.97	17.79	17.03	16.77	16.77	16.92	17.03	17.24	17.16	17.08	17.06
28	18.12	17.93	17.74	17.01	16.71	16.79	16.91	17.05	17.26	17.16	17.00	17.02
29	18.11		17.70	17.01	16.73	16.79	16.91	17.07	17.28	17.09	17.14	17.00
30	18.12		17.65	17.01	16.77	16.77	16.93	17.07	17.30	17.11	17.18	16.96
31	18.13		17.65		16.77		16.93	17.05		17.16		16.96

Knox County

K-1. City of Mount Vernon. Lat. 40°23'45", long. 82°30'05". Drilled unused well in gravel, diameter 8 inches, depth 90 feet. Highest water level 1.90 above lsd, Mar. 19, 1948; lowest 14.13 below lsd, June 28, 1949. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.20	6.05	5.05	5.15	5.35	6.50	7.90	6.00	8.35	8.50	5.45	7.05
2	5.00	7.75	6.20	5.35	4.95	6.80	7.85	7.15	7.85	8.40	5.85	7.40
3	4.20	....	5.25	4.40	4.75	6.90	7.80	7.45	7.50	7.95	6.05	6.85
4	6.00	....	5.65	3.45	4.65	6.90	7.80	7.65	7.50	5.95	6.10	6.70
5	6.55	....	5.70	4.20	6.75	4.85	6.70	10.95	7.35	11.00	6.20	5.15
6	7.05	....	6.05	4.45	7.25	4.35	9.10	7.60	6.90	9.00	6.00	6.00
7	5.75	....	4.10	5.35	7.35	6.15	9.90	7.60	7.75	8.15	5.70	6.15
8	6.45	5.20	7.00	5.60	4.80	5.40	6.70	5.80	8.05	6.95	5.85	6.65
9	5.65	8.45	5.55	4.80	3.95	6.65	6.45	6.10	8.15	5.50	7.35	7.05
10	7.55	7.85	5.45	3.90	4.90	7.75	6.85	7.40	8.20	5.35	7.95	6.40

K-1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	6.60	6.15	5.45	3.25	4.55	8.20	6.10	7.65	8.20	7.00	6.75	6.35
12	9.60	7.65	7.50	4.00	6.05	6.05	7.25	7.75	6.60	7.45	8.20	6.15
13	8.05	7.70	7.65	4.30	6.40	5.45	9.35	7.75	8.10	7.65	8.25	6.85
14	7.75	5.50	4.40	5.15	5.40	7.75	9.85	7.75	8.85	7.80	6.25	7.60
15	7.95	6.10	5.00	5.60	4.40	8.35	10.15	5.95	8.70	7.80	7.70	8.15
16	7.95	9.15	5.55	5.55	3.85	7.85	8.65	5.85	9.25	7.45	8.40	8.50
17	5.45	9.55	5.70	5.00	4.70	7.80	8.25	10.45	8.40	5.45	7.30	8.50
18	5.65	7.60	7.45	4.15	6.35	8.35	7.95	8.90	8.40	5.85	7.45	6.20
19	6.75	9.65	5.85	6.40	8.65	7.85	9.35	7.10	6.30	6.15	7.45	5.85
20	6.10	9.15	5.00	6.65	8.70	5.65	9.85	7.55	8.00	6.20	7.30	5.40
21	5.95	5.75	4.00	5.80	7.25	7.75	8.25	7.65	8.20	6.25	6.80	6.55
22	7.45	5.50	4.25	5.95	6.05	8.00	8.70	6.15	8.20	6.95	6.50	7.00
23	7.45	5.85	4.90	8.25	4.55	7.60	8.90	7.20	7.00	7.30	7.35	6.10
24	6.55	6.45	5.70	7.90	6.80	7.70	6.85	8.60	8.40	6.00	7.20	5.70
25	8.15	9.65	4.90	4.25	7.00	7.75	5.80	8.75	8.55	7.25	5.30	5.50
26	10.25	8.40	5.55	4.65	8.00	7.75	8.30	8.70	6.65	7.95	5.40	4.85
27	10.25	5.55	5.45	6.15	8.70	6.35	8.40	9.05	7.90	6.45	6.30	6.00
28	10.20	4.20	3.95	6.25	9.05	8.50	10.25	9.05	8.30	6.35	6.35	6.25
29	8.20		4.65	6.35	7.30	9.45	9.75	6.20	8.35	6.25	7.20	6.10
30	6.30		4.65	6.30	5.30	9.50	8.65	7.40	8.45	6.10	7.85	6.10
31	5.85		4.95		5.30		8.70	9.25		5.75		5.85

Lake County

L-1. City of Menfor. Lat. 41°41'00", long. 81°22'03". Drilled unused well in sand, diameter 8 inches, depth 32 feet. Highest water level 14.30 below lsd, Apr. 11, 1950; lowest 23.30 below lsd, Oct. 3-7, 1954. Records available: 1948-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	20.35	19.65	21.70	22.20	22.45	22.65	23.15	21.65	19.60
2	20.20	19.60	21.75	22.25	22.55	22.65	23.25	21.35	19.60
3	20.30	19.60	21.25	22.25	22.60	22.65	23.30	21.35	19.35
4	20.40	19.55	21.05	22.30	22.65	22.65	23.30	21.50	19.50
5	20.45	19.40	21.00	22.30	22.70	22.90	23.30	21.60	19.45
6	20.35	19.50	20.80	22.30	22.70	23.00	23.30	21.15	19.35
7	20.45	19.50	20.95	.....	22.80	23.00	23.30	21.15	19.00
8	19.20	19.45	21.35	.....	22.70	23.00	23.20	21.05	19.30
9	20.00	19.45	21.55	.....	22.65	22.80	23.10	20.90	19.40
10	20.05	19.25	21.85	.....	22.60	22.85	23.15	20.80	19.35
11	19.95	19.50	22.05	22.20	22.65	22.60	23.10	20.65	19.70
12	19.85	19.60	22.10	22.00	22.55	22.05	23.15	20.50	19.85
13	20.25	19.55	21.90	22.15	22.70	22.70	23.20	20.45	19.70
14	21.80	.....	20.15	19.50	21.90	22.15	22.75	22.95	23.10	20.30	19.85
15	21.80	.....	20.00	19.60	22.25	22.20	22.65	22.85	23.00	20.35	19.80
16	19.85	19.90	.....	22.25	22.45	23.00	22.75	20.20	19.90
17	19.25	19.85	.....	22.25	22.50	23.05	22.70	20.15	20.00
18	19.60	20.10	.....	22.20	22.35	22.85	22.50	20.05	19.65
19	18.70	20.05	.....	22.20	22.25	.....	22.50	20.00	19.45
20	19.75	20.05	22.35	22.20	22.25	.....	22.35	19.95	19.30
21	19.95	20.20	22.35	22.25	22.40	.....	22.35	20.00	19.10
22	19.75	20.35	22.45	22.30	22.55	.....	22.20	19.85	19.10
23	20.75	19.50	20.40	22.45	22.30	22.65	23.05	22.20	19.85	19.15
24	20.55	19.55	20.50	22.45	22.40	22.70	23.10	22.15	19.80	19.15
25	20.40	19.65	21.15	22.25	22.45	22.70	23.00	22.15	19.65	19.05
26	20.55	19.55	21.25	22.25	22.35	22.75	23.05	22.20	.....	19.25
27	21.85	.....	20.45	19.35	21.35	22.15	22.25	22.60	23.00	21.85	.....	19.30
28	21.85	.....	20.45	19.35	21.15	22.20	22.40	22.60	22.95	21.75	.....	19.20
29	21.75	.....	20.45	19.35	21.00	22.20	22.45	22.80	23.05	21.75	.....	18.50
30	20.40	19.35	21.05	22.20	22.45	22.85	23.15	21.65	19.65	18.60
31	20.45	.....	21.50	.....	22.60	22.80	.....	21.65	.....	19.00

Lawrence County

La-1. Crystal Ice Co. Ninth and Railroad Sts., Ironton. Lat. 38°32', long. 83°41'. Drilled unused well in gravel, diameter 16 inches, depth 77 feet. Highest water level 40.03 below lsd, Apr. 13, 1951; lowest 53.77 below lsd, Oct. 19, 1947. Records available: 1947-54.

La-1--Continued.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	50.47	50.35	49.62	49.85	49.93	51.91	52.83	52.85	51.45	50.63	50.53
2	.....	50.58	50.35	49.59	49.82	49.93	52.00	52.64	52.84	51.45	50.59	50.62
3	.....	50.67	50.32	49.70	49.68	49.95	52.14	52.61	52.84	51.56	50.53	50.67
4	50.80	50.74	50.22	49.62	49.57	49.97	52.14	52.63	52.84	51.39	50.58	50.79
5	50.87	50.77	50.07	49.58	49.54	49.96	52.13	52.68	52.94	51.75	50.85	50.95
6	50.93	50.80	50.01	49.58	49.47	50.00	52.25	52.68	52.11	51.93	51.02	50.75
7	50.98	50.63	49.96	49.55	49.45	50.04	52.32	52.72	52.35	51.99	51.10	50.61
8	50.72	50.13	49.91	49.69	49.50	50.07	52.32	52.73	52.44	52.05	51.07	50.49
9	50.47	50.01	49.87	49.61	49.41	50.01	52.17	52.43	52.40	52.28	51.11	50.36
10	50.07	50.40	49.84	49.55	49.62	50.12	52.14	52.43	52.53	52.39	51.00	50.36
11	49.95	50.10	49.87	49.72	49.70	50.42	52.12	52.41	52.55	52.42	50.77	50.29
12	49.95	50.06	49.86	49.83	49.74	50.62	52.12	52.40	52.56	51.89	50.63	50.25
13	49.86	50.28	49.90	49.88	49.75	50.82	52.13	52.46	52.57	51.70	50.52	50.24
14	49.82	49.96	49.83	49.94	49.77	50.86	52.13	52.55	52.63	51.62	50.45	50.18
15	50.11	50.03	49.73	49.97	49.73	50.95	52.15	52.55	52.43	51.59	50.40	50.22
16	49.82	49.92	49.74	49.98	49.60	51.08	52.17	52.34	52.40	51.47	50.36	50.19
17	49.80	49.94	49.72	49.90	49.52	51.30	52.20	52.39	52.56	51.39	50.34	50.18
18	50.23	49.89	49.78	49.78	49.48	51.45	52.32	52.30	52.60	51.31	50.32	50.15
19	49.90	49.90	49.92	49.65	49.59	51.47	52.43	52.29	52.70	51.62	50.36	50.12
20	50.27	49.88	50.02	49.61	49.71	51.66	52.45	52.45	52.53	51.65	50.33	50.15
21	50.10	49.88	50.07	49.63	49.41	51.72	52.39	52.53	52.41	51.80	50.28	50.12
22	50.08	49.91	50.12	49.57	49.37	51.83	52.28	52.56	52.34	51.75	50.28	50.09
23	49.84	49.90	50.16	49.66	49.33	51.88	52.23	52.59	52.23	51.88	50.25	50.08
24	49.78	49.96	50.15	49.58	49.54	51.83	51.86	52.65	52.19	51.73	50.30	50.16
25	50.15	50.15	50.06	49.68	49.63	51.79	52.33	52.77	52.30	51.46	50.33	50.12
26	50.13	50.24	49.96	49.75	49.72	51.80	52.32	52.82	52.35	51.14	50.25	50.07
27	49.85	50.27	49.82	49.81	49.75	51.82	52.45	52.82	52.39	51.00	50.25	50.10
28	50.07	50.32	49.73	49.83	49.80	51.84	52.27	52.85	52.09	50.93	50.19	50.07
29	49.80	.....	.....	49.85	49.93	51.87	52.25	52.95	51.84	50.82	50.23	50.08
30	50.22	.....	49.67	49.88	49.93	51.88	52.32	53.02	51.53	50.74	50.20	50.08
31	49.86	.....	49.69	.....	49.99	.....	52.71	53.05	.....	50.70	.....	50.38

Licking County

Li-1. Newark Stove Co. Lat. 40°03', long. 82°25'. Drilled unused well in sand and gravel, diameter 8 inches, depth 68 feet. Highest water level 21.50 below lsd, Feb. 8, 1952; lowest 25.03 below lsd, Dec. 16, 1954. Records available: 1951-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	24.70	24.55	24.78	24.60	24.40	24.35	24.54	24.70	24.80	24.85	24.80	24.90
2	24.65	24.55	24.78	24.58	24.37	.....	24.55	24.67	24.77	24.82	24.80	24.90
3	24.75	24.60	24.77	24.63	24.40	.....	24.53	24.69	24.80	24.81	24.78	24.88
4	24.70	24.65	24.75	24.57	24.40	.....	24.54	24.72	24.81	24.82	24.80	24.90
5	24.65	24.65	24.72	24.52	24.35	.....	24.52	24.71	24.78	24.81	24.83	24.99
6	24.70	24.70	24.70	24.52	24.34	.....	24.56	24.72	24.77	24.90	24.81	25.01
7	24.70	24.70	24.68	24.52	24.35	.....	24.56	24.71	24.78	24.90	24.83	24.93
8	24.70	24.60	24.69	24.60	24.35	.....	24.58	24.70	24.81	24.79	24.83	24.87
9	24.70	24.65	24.62	24.59	24.34	.....	24.58	24.69	24.81	24.77	24.84	24.91
10	24.70	24.70	24.64	24.49	24.34	.....	24.57	24.72	24.77	24.75	24.86	24.99
11	24.65	24.75	24.65	24.52	24.30	.....	24.57	25.72	24.83	24.80	24.80	24.99
12	24.80	.....	24.65	24.56	24.33	.....	24.56	24.70	24.89	24.82	24.89	24.95
13	.....	.....	24.65	24.49	24.32	.....	24.55	24.73	24.80	24.83	24.86	24.93
14	.....	.....	24.62	24.45	24.30	.....	24.57	24.73	24.80	24.78	24.87	24.87
15	.....	24.70	24.67	24.50	24.30	.....	24.63	24.70	24.79	24.75	24.88	24.97
16	.....	24.69	24.68	24.53	24.29	.....	24.63	24.74	24.81	24.80	24.85	25.03
17	.....	24.80	24.70	24.52	24.30	.....	24.59	24.75	24.81	24.82	24.87	24.97
18	.....	24.77	24.65	24.51	24.30	.....	24.58	24.76	24.80	24.81	24.86	24.91
19	24.65	24.73	24.60	24.50	24.30	.....	24.60	24.75	24.82	24.78	24.83	24.99
20	24.65	24.69	24.53	24.50	24.34	.....	24.65	24.78	24.82	24.74	24.90	24.98
21	24.80	24.72	24.67	24.45	24.34	.....	24.65	24.77	24.87	24.72	24.91	24.98
22	24.70	24.78	24.67	24.46	24.34	.....	24.67	24.77	24.87	24.75	24.90	24.92
23	24.65	24.73	24.65	24.44	24.35	.....	24.67	24.75	24.88	24.77	24.88	24.93
24	24.65	24.65	24.64	24.42	24.33	24.49	24.67	24.75	24.85	24.76	24.88	25.01
25	24.65	24.70	24.64	24.40	24.35	24.49	24.67	24.73	24.78	24.71	24.95	25.00
26	24.60	24.78	24.60	24.38	24.35	24.51	24.67	24.77	24.81	24.69	24.95	24.95
27	24.70	24.72	.....	24.37	24.35	24.53	24.67	24.77	24.81	24.77	24.89	24.92
28	24.70	24.71	.....	24.41	24.33	24.53	24.66	24.77	24.82	24.75	24.88	24.94
29	24.60	.....	.....	24.39	24.42	24.51	24.68	24.76	24.84	24.75	25.02	24.93
30	24.65	.....	.....	24.41	24.45	24.52	24.70	24.74	24.85	24.80	25.01	24.97
31	24.65	.....	.....	.....	24.41	.....	24.71	24.79	.....	24.81	.....	24.89

254 WATER LEVELS AND ARTESIAN PRESSURES, 1954, NORTHEASTERN STATES

Li-2. Heath Refinery. Newark. Lat. 40°02', long. 82°28'. Drilled observation well in gravel, diameter 6 inches, depth 23 feet. Highest water level 1.55 below lsd, May 22, 1953; lowest 18.55 below lsd, Dec. 17-18, 1953. Records available: 1953-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	15.35	17.55	13.00	15.20	12.80	13.17	13.96	12.80	12.42	12.84	12.18	12.40
2	15.45	17.60	12.95	15.10	12.81	13.22	13.99	12.77	12.42	12.85	12.21	12.41
3	15.55	.....	12.85	15.00	12.71	13.24	14.62	12.71	12.45	12.86	12.21	12.42
4	15.60	17.00	12.85	14.90	12.79	13.29	14.04	12.71	12.46	12.85	12.22	12.44
5	15.75	16.90	12.75	14.65	12.84	13.33	14.07	12.66	12.47	12.87	12.24	12.50
6	15.85	16.55	12.70	14.35	12.87	13.36	14.08	12.42	12.51	12.92	12.25	12.54
7	15.85	16.30	12.60	14.25	12.92	13.38	14.10	12.29	12.51	12.92	12.27	12.54
8	15.95	16.00	12.55	14.00	12.94	13.42	14.13	12.27	12.54	12.89	12.30	12.53
9	16.15	15.70	12.55	13.80	12.95	13.42	14.19	12.25	12.54	12.87	12.31	12.52
10	16.30	15.45	12.95	13.55	12.95	13.44	14.22	12.28	12.55	12.86	12.22	12.58
11	16.30	15.25	13.20	13.35	12.93	13.46	14.12	12.36	12.59	12.88	12.05	12.60
12	16.40	.....	13.35	13.10	12.95	13.48	13.85	12.42	12.59	12.92	11.92	12.61
13	.....	.....	13.45	13.25	12.95	13.51	13.61	12.44	12.61	12.93	.....	12.61
14	.....	.....	13.65	13.45	12.96	13.53	13.44	12.42	12.62	12.92	.....	12.60
15	.....	14.35	13.75	13.65	12.97	13.55	13.27	12.35	12.63	12.89	.....	12.62
16	.....	14.30	13.85	13.80	12.97	13.59	13.16	12.32	12.63	12.86	.....	12.67
17	.....	14.15	13.95	13.85	12.98	13.62	13.06	12.31	12.64	12.82	.....	12.68
18	.....	14.05	14.05	14.00	12.99	13.65	13.14	12.30	12.64	12.69	.....	12.65
19	16.90	13.95	14.10	14.15	12.99	13.67	13.16	12.25	12.65	12.58	.....	12.70
20	17.05	13.80	14.25	14.27	12.99	13.68	13.13	12.34	12.67	12.46	.....	12.72
21	17.10	13.70	14.30	14.28	12.77	13.69	13.07	12.35	12.70	12.34	.....	12.74
22	17.10	13.60	14.30	.....	12.75	13.71	13.03	12.36	12.73	12.26	.....	12.73
23	17.10	13.55	14.35	.....	12.76	13.74	13.02	12.36	12.76	12.20	.....	12.71
24	17.20	13.40	14.25	.....	12.76	13.76	13.02	12.35	12.76	12.14	.....	12.78
25	17.35	13.30	14.40	.....	12.87	13.77	13.02	12.34	12.76	12.07	.....	12.80
26	17.45	13.20	14.65	12.98	12.93	13.80	13.01	12.35	12.77	12.00	12.48	12.74
27	17.45	13.15	14.65	13.00	12.95	13.84	13.00	12.36	12.78	12.07	12.38	12.63
28	17.50	13.05	14.80	12.90	12.99	13.86	12.98	12.37	12.80	12.07	12.30	12.50
29	17.50	.....	14.90	12.68	13.06	13.89	12.92	12.37	12.82	12.08	12.39	12.39
30	17.50	.....	15.15	12.70	13.12	13.92	12.88	12.36	12.84	12.13	12.42	12.38
31	17.50	.....	15.20	.....	13.15	.....	12.84	12.40	.....	12.17	.....	12.36

Logan County

Lo-1. Ohio Grange. Bellefontaine. Lat. 40°21'45", long. 83°47'18". Drilled unused well in gravel, diameter 4 inches, depth 120 feet. Highest water level 12.68 below lsd, Apr. 14, 1946; lowest 22.30 below lsd, Feb. 11-12, 1954. Records available: 1946-54. Recording gage removed Feb. 17.

Daily lowest water level from recorder graph

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	21.90	Jan. 16	22.10	Jan. 31	22.15	Feb. 14	22.20
2	21.90	17	22.15	Feb. 1	22.15	15	22.20
3	21.95	18	22.15	2	22.15	16	22.25
4	21.95	19	22.10	3	22.20	Mar. 16	22.06
5	21.95	20	22.15	4	22.20	Apr. 13	20.88
6	22.00	21	22.20	5	22.20	May 11	20.15
7	22.00	22	22.20	6	22.25	June 8	20.07
8	22.00	23	22.20	7	22.25	July 5	19.89
9	22.05	24	22.20	8	22.20	Aug. 2	20.13
10	22.05	25	22.25	9	22.20	30	20.17
11	22.05	26	22.20	10	22.20	Sept. 27	20.45
12	22.10	27	22.15	11	22.30	Oct. 25	20.36
13	22.10	28	22.15	12	22.30	Nov. 22	20.38
14	22.05	29	22.10	13	22.25	Dec. 20	20.25
15	22.05	30	22.15				

Lucas County

Lu-1. State of Ohio. Toledo State Hospital. Detroit Ave. and Arlington St., Toledo. Lat. 41°40'32", long. 83°36'24". Drilled unused well in limestone, diameter 12 inches, depth 250 feet. Highest water level 84.10 below lsd, July 18, 1947; lowest 113.95 below lsd, Sept. 5, 1953. Records available: 1946-54.

Lu-1--Continued.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	99.60	98.15	.....	96.15	.....	95.30	102.65	104.75	107.15	108.35	.....	101.30
2	99.55	97.70	.....	96.10	.....	95.45	102.90	104.40	107.25	108.50	.....	101.05
3	99.75	97.65	.....	96.20	.....	95.40	103.10	104.55	107.50	108.50	.....	100.75
4	99.75	97.65	.....	96.15	95.80	95.90	102.90	105.00	107.60	108.75	.....	100.55
5	99.35	97.65	.....	96.05	95.75	96.05	102.55	105.20	107.60	108.95	.....	100.90
6	99.20	97.95	.....	95.85	95.75	96.15	102.45	105.40	107.60	108.80	.....	101.05
7	99.35	97.95	.....	95.75	95.75	96.25	102.05	105.55	107.20	108.65	.....	101.05
8	99.45	97.45	.....	95.80	95.80	97.65	102.15	105.45	107.60	108.10	.....	100.60
9	99.10	97.35	96.35	.....	95.80	98.30	101.95	105.05	107.75	107.35	.....	100.15
10	99.20	97.40	96.45	.....	95.80	98.80	101.95	105.15	107.55	107.05	.....	100.45
11	98.95	97.90	96.55	.....	95.70	99.20	101.60	105.45	107.85	106.30	.....	100.45
12	99.25	98.00	96.50	.....	95.75	99.40	101.25	105.70	107.80	106.95	.....	100.40
13	99.25	97.85	96.25	.....	95.80	99.50	101.10	105.90	107.25	107.30	.....	100.35
14	99.10	97.30	96.35	.....	95.75	99.20	101.10	105.90	106.80	107.30	.....	99.95
15	98.85	97.30	96.85	.....	95.70	99.50	101.40	105.75	107.25	107.35	.....	99.70
16	98.80	97.35	96.85	.....	95.50	100.05	101.60	105.65	107.45	107.10	101.95	99.95
17	99.05	97.75	96.75	.....	95.55	100.55	101.50	105.75	107.45	106.80	102.00	99.90
18	99.00	.....	96.50	.....	95.55	100.90	101.30	105.75	107.50	106.70	101.85	99.75
19	98.70	.....	96.20	.....	95.65	101.10	101.30	106.10	106.95	106.60	101.55	.....
20	98.55	.....	96.20	.....	95.65	100.90	101.65	106.45	106.40	.....	101.50	.....
21	98.95	.....	96.25	.....	95.70	100.50	102.45	106.60	106.90	.....	101.55	.....
22	98.90	.....	96.25	.....	95.65	100.90	102.90	106.60	107.30	.....	101.50	99.65
23	98.75	.....	96.25	.....	95.75	101.45	103.60	.....	107.50	.....	101.45	99.25
24	98.40	.....	96.25	.....	95.65	101.75	103.80	106.45	107.45	.....	100.90	99.75
25	98.45	.....	96.15	.....	95.65	101.90	103.70	106.65	107.10	.....	101.20	99.75
26	98.25	.....	96.25	.....	95.85	102.10	103.75	107.10	106.85	.....	101.20	99.55
27	98.35	.....	96.25	.....	95.70	102.10	103.95	107.25	106.45	.....	101.15	99.50
28	98.50	.....	96.15	.....	95.35	101.95	104.25	107.40	106.75	.....	100.80	99.40
29	98.40	.....	96.15	.....	95.75	101.90	104.65	107.35	107.45	.....	101.35	99.40
30	98.40	.....	96.15	.....	95.75	102.20	104.75	107.00	107.95	.....	101.40	99.25
31	98.40	.....	96.15	.....	95.65	.....	104.75	107.10	.....	.....	.....	99.20

Lu-3. Metropolitan Parks. Toledo. Lat. 41°30', long. 83°45'. Drilled unused well in limestone, diameter 6 inches, depth 39 feet. Highest water level 10.90 below lsd, Jan. 1, 1952; lowest 18.64 below lsd, Sept. 15, 1954. Records available: 1950-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	16.80	16.35	15.72	15.73	16.09	16.45	16.74	16.76	16.43	16.80	16.36	15.73
2	16.75	16.40	15.72	15.58	15.80	16.34	16.86	16.71	16.44	16.83	16.38	15.77
3	16.85	16.55	15.73	15.60	15.59	16.18	16.80	16.75	16.60	16.75	16.35	15.83
4	16.80	16.50	15.90	15.69	15.60	16.05	16.84	16.92	16.77	16.70	16.32	16.05
5	16.60	16.50	15.97	15.78	15.77	16.44	16.75	16.75	17.45	16.60	16.42	16.17
6	16.65	16.65	16.05	15.80	15.92	16.63	16.73	16.77	17.35	16.40	16.39	16.24
7	16.85	16.65	16.15	15.89	16.12	16.45	16.46	16.68	16.87	16.24	16.41	16.23
8	16.85	16.50	16.13	16.06	16.13	16.38	16.42	16.48	16.94	15.94	16.43	16.18
9	16.80	16.70	16.08	16.12	16.32	16.34	16.36	16.40	16.82	15.89	16.42	16.29
10	16.75	16.70	16.17	16.04	16.20	16.41	16.29	16.54	16.75	15.97	16.40	16.33
11	16.70	16.85	16.20	16.04	16.20	16.38	16.49	16.50	16.84	15.75	16.41	16.36
12	16.90	16.85	16.41	15.82	16.42	16.64	16.50	16.62	16.87	15.62	16.37	16.39
13	16.85	16.70	16.15	15.67	16.38	17.02	16.55	16.63	16.80	15.55	16.37	16.38
14	16.70	16.65	16.32	15.81	16.41	16.83	16.66	16.55	16.78	15.35	16.67	16.32
15	16.75	16.60	16.42	15.80	16.44	16.56	16.65	16.99	16.84	14.97	16.40	16.39
16	16.80	16.60	16.43	15.72	16.70	16.46	16.60	16.70	.....	14.79	16.42	16.64
17	17.15	16.37	16.40	15.76	16.60	16.38	16.87	16.55	.....	14.99	16.37	16.52
18	16.85	16.30	16.40	15.71	16.49	16.24	17.17	16.53	.....	15.32	16.35	16.37
19	16.75	16.27	16.28	15.66	16.38	16.40	16.82	16.45	.....	15.41	16.32	16.46
20	16.70	16.20	16.43	15.57	16.41	16.72	16.65	16.35	.....	15.53	16.29	16.46
21	16.70	16.26	16.43	15.77	16.43	16.51	16.69	16.20	16.59	15.71	16.09	16.43
22	16.65	16.36	16.35	15.86	16.66	16.43	16.61	16.50	16.64	15.90	16.08	16.33
23	16.65	16.30	16.38	15.90	16.78	16.43	16.78	16.58	16.63	15.97	16.09	16.45
24	16.60	16.23	16.41	16.27	16.65	16.48	16.65	16.55	16.64	16.12	16.00	16.54
25	16.70	16.25	15.60	16.35	16.57	16.66	17.19	16.32	16.67	16.22	16.18	16.53
26	16.60	16.31	15.26	16.19	16.60	16.65	17.00	16.33	17.18	16.20	16.13	16.54
27	16.45	16.23	15.37	15.88	16.59	16.68	17.00	16.19	17.18	16.33	16.00	16.47
28	16.45	16.08	15.61	15.79	16.40	16.63	17.00	16.07	16.68	16.33	15.88	16.12
29	16.40	.....	15.70	15.84	16.52	16.65	16.84	16.69	16.74	16.23	15.86	15.63
30	16.40	.....	15.77	16.07	17.05	16.77	17.00	16.04	16.69	16.32	15.86	15.22
31	16.40	.....	15.72	.....	17.05	.....	16.85	16.27	.....	16.36	.....	15.21

Madison County

M-1. Max Chenoweth. Lat. 39°43'40", long. 83°15'35". Drilled unused well in gravel, diameter 4 inches, depth 60 feet. Highest water level 21.89 below lsd, Apr. 14, 1948; lowest 28.90 below lsd, Nov. 17, 1953. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	28.20	28.15	27.95	27.80	26.95	26.70	26.90	27.05	26.95	27.60	27.45	27.95
2	28.15	28.15	27.95	27.70	26.65	26.70	26.80	26.90	27.00	27.60	27.45	27.95
3	28.40	28.20	27.95	27.95	26.60	26.55	26.90	26.85	26.95	27.55	27.50	27.85
4	28.40	28.15	28.05	27.85	26.65	26.65	26.80	26.90	27.10	27.40	27.50	27.80
5	28.30	28.15	28.05	27.75	26.65	26.75	26.60	26.95	27.25	27.40	27.50	27.85
6	28.35	28.20	28.05	27.55	26.65	26.75	26.70	26.65	27.15	27.35	27.50	28.10
7	28.30	28.25	28.00	27.50	26.55	26.80	26.70	26.65	27.30	27.35	27.50	28.10
8	28.30	28.10	28.10	27.70	26.65	26.75	26.70	26.90	27.20	27.40	27.60	28.00
9	28.30	28.15	28.00	27.70	26.60	26.50	26.70	26.90	27.25	27.35	27.60	27.80
10	28.25	28.25	28.00	27.70	26.65	26.55	26.80	26.95	27.20	27.30	27.60	27.85
11	28.25	28.30	28.00	27.55	26.65	26.55	26.90	26.90	27.25	27.25	27.60	27.90
12	28.40	28.45	27.95	27.75	26.85	26.60	26.85	26.90	27.30	27.25	27.70	27.90
13	28.50	28.30	27.90	27.70	26.70	26.65	27.15	26.90	27.30	27.30	27.65	27.80
14	28.40	28.30	27.90	27.60	26.75	26.75	27.25	26.90	.....	27.30	27.65	27.65
15	28.30	23.35	28.10	27.45	26.80	26.75	27.30	26.80	27.35	27.25	27.65	27.70
16	28.20	28.25	28.20	27.35	26.65	26.75	27.10	26.90	27.40	27.30	27.60	27.80
17	28.30	28.35	28.15	27.20	26.70	26.45	27.20	26.85	27.45	27.30	27.65	27.75
18	28.25	28.40	28.00	27.15	26.75	26.45	27.20	26.80	27.45	27.45	27.70	27.60
19	28.30	28.40	27.85	27.40	26.85	26.50	27.05	26.80	27.35	27.45	27.55	27.65
20	28.15	28.35	27.65	27.45	26.95	26.45	27.00	26.85	27.25	27.45	27.55	27.80
21	28.15	28.15	27.70	27.50	27.00	26.45	26.75	26.95	27.25	27.40	27.60	27.80
22	28.15	28.30	27.75	27.40	27.05	26.45	26.70	27.00	27.30	27.50	27.70	27.70
23	28.20	28.20	27.80	27.15	26.95	26.45	26.80	27.05	27.40	27.55	27.65	27.70
24	28.25	28.10	27.80	27.05	27.00	26.45	26.80	27.00	27.40	27.50	27.55	27.80
25	28.25	28.05	27.75	27.00	27.05	26.50	26.80	27.05	27.35	27.50	27.65	27.80
26	28.15	28.15	27.90	27.05	27.05	26.55	26.95	27.10	27.35	27.40	27.75	27.75
27	28.20	28.05	27.85	26.95	26.90	26.60	26.90	26.85	27.40	27.35	27.80	27.80
28	28.30	27.95	.....	26.90	26.85	26.70	27.00	26.95	27.45	27.35	27.55	27.80
29	28.25	.....	.....	26.90	26.85	26.85	27.00	26.95	27.55	27.25	27.80	27.60
30	28.30	.....	.....	26.95	26.90	26.80	27.10	27.00	27.55	27.35	27.95	27.35
31	28.30	.....	27.75	.....	26.85	.....	27.10	27.00	.....	27.35	.....	27.35

Mahoning County

Ma-1. City of Canfield. Lat. 41°00'46", long. 80°45'36". Drilled unused well in sandstone, diameter 8 inches, depth 300 feet. Highest water level 27.15 below lsd, May 22, 1949; lowest 110.75 below lsd, Sept. 27, 1946. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	35.45	35.50	.....	.....	32.46	.....	32.83	33.72	34.95	36.05	35.58	34.75
2	35.50	35.35	.....	33.64	32.38	.....	32.83	33.70	35.03	36.17	35.72	34.77
3	35.60	35.35	.....	33.65	32.31	.....	32.83	33.72	35.15	36.31	35.74	34.65
4	35.65	35.35	.....	33.61	32.26	.....	32.94	33.75	.....	36.35	35.54	34.44
5	35.60	35.35	.....	33.55	32.26	.....	32.91	33.77	.....	36.12	35.44	34.35
6	35.60	35.30	.....	33.48	32.25	.....	32.94	33.79	.....	36.17	35.40	34.35
7	35.60	35.30	.....	33.48	32.23	.....	32.94	33.82	.....	36.23	35.26	34.38
8	35.50	35.25	.....	33.36	32.15	.....	32.95	33.83	.....	36.16	35.00	34.37
9	35.60	35.20	.....	33.32	32.15	32.40	32.98	33.90	35.50	36.40	34.63	34.27
10	35.65	35.30	.....	33.28	32.14	32.40	33.01	33.90	35.52	36.64	34.40	34.28
11	35.60	35.35	.....	33.25	32.13	32.44	33.06	33.92	35.77	36.60	35.13	34.27
12	35.50	35.35	.....	33.15	32.09	32.43	33.07	33.96	35.67	36.62	35.25	34.22
13	.....	35.35	.....	33.15	32.13	32.44	33.14	33.98	35.49	36.49	35.27	34.13
14	.....	35.40	.....	33.10	32.10	32.47	33.24	34.03	35.52	36.49	35.02	34.06
15	.....	35.55	.....	33.01	32.07	32.51	33.21	34.00	35.68	36.00	35.09	34.00
16	.....	35.60	.....	32.92	32.06	32.47	33.25	34.03	35.75	35.50	35.02	34.04
17	.....	35.60	.....	32.85	32.04	32.41	33.27	34.03	35.75	35.52	35.08	33.99
18	.....	.....	.....	32.83	32.04	32.45	33.30	34.04	35.70	35.55	35.15	34.22
19	.....	.....	.....	32.82	32.05	32.53	33.33	34.04	35.67	35.52	35.20	34.03
20	35.65	.....	.....	32.80	32.06	32.54	33.34	34.08	35.74	35.48	35.12	34.10
21	35.65	.....	.....	32.79	32.07	32.57	33.38	34.10	35.72	35.57	35.11	34.07
22	35.60	.....	.....	32.75	32.28	32.56	33.43	34.12	35.69	35.57	35.08	34.05
23	35.45	.....	.....	32.70	32.18	32.58	33.49	34.18	35.64	35.54	35.07	33.95
24	35.60	.....	34.12	32.67	32.12	32.63	33.51	34.17	35.58	35.58	35.07	33.82
25	35.65	.....	.....	32.63	32.12	32.65	33.55	34.00	35.63	35.60	34.82	33.72

Ma-1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	35.80	.....	.....	32.60	32.13	32.67	33.62	34.07	35.58	35.60	34.83	33.72
27	35.80	.....	.....	32.50	32.13	32.68	33.65	34.50	35.18	35.85	34.60	33.73
28	35.75	.....	.....	32.43	32.15	32.72	33.70	34.70	35.04	35.85	34.60	33.72
29	35.60	.....	.....	32.49	32.15	32.75	33.70	34.83	34.97	35.67	34.85	33.52
30	35.60	.....	.....	32.45	.....	32.77	33.74	34.92	35.52	35.67	34.85	33.47
31	35.55	.....	.....	.....	.....	.....	33.75	34.92	.....	35.67	.....	33.57

Ma-3. Tod Hotel. 7 Market St., Youngstown. Lat. 41°06', long. 80°39'. Drilled unused well in sandstone, diameter 8 inches, depth 250 feet. Highest water level 23.35 below lsd, Apr. 14, 1951; lowest 28.34 below lsd, Aug. 22, 1954. Records available: 1947-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	27.01	27.21	.....	.....	27.23	27.67	27.90	28.10	28.23	28.00	27.07	27.09
2	27.02	27.15	.....	.....	27.23	27.67	27.94	28.09	28.24	28.02	27.06	27.05
3	27.03	27.13	.....	.....	27.21	27.71	27.94	28.08	28.24	28.02	27.05	27.00
4	27.04	27.13	.....	.....	27.23	27.74	27.94	28.11	28.26	28.00	27.02	26.95
5	27.02	27.13	.....	.....	27.23	27.75	27.93	28.11	28.27	27.99	27.02	26.92
6	26.99	27.14	.....	.....	27.20	27.75	27.93	28.13	28.26	27.98	27.02	26.92
7	27.02	27.17	.....	.....	27.19	27.74	27.91	28.14	28.23	27.98	27.02	26.91
8	27.05	27.16	.....	.....	27.17	27.76	27.92	28.15	28.23	27.96	27.02	26.86
9	27.05	27.08	.....	.....	27.17	27.78	27.94	28.13	28.26	27.90	27.03	26.80
10	27.04	27.12	.....	.....	27.17	27.81	27.95	28.16	28.24	27.85	27.03	26.73
11	27.04	27.28	.....	.....	27.18	27.84	27.96	28.19	28.22	27.79	27.03	26.75
12	27.05	27.28	.....	.....	27.22	27.86	27.96	28.25	28.23	27.75	27.02	26.75
13	27.15	.....	.....	.....	27.27	27.87	27.95	28.28	28.22	27.76	27.02	26.73
14	.....	.....	.....	.....	27.29	27.88	27.96	28.29	28.21	27.77	27.01	26.67
15	.....	.....	.....	.....	27.29	27.92	27.97	28.28	28.18	27.76	26.99	26.61
16	.....	.....	.....	.....	27.30	27.90	28.01	28.26	28.14	27.69	26.99	26.58
17	.....	.....	.....	.....	27.34	27.88	28.03	28.29	28.15	27.64	26.99	26.58
18	.....	.....	.....	.....	27.35	27.90	28.02	28.29	28.15	27.59	26.99	26.53
19	.....	.....	.....	.....	27.36	27.88	28.01	28.31	28.09	27.54	26.99	26.48
20	27.21	.....	.....	.....	27.40	27.85	28.02	28.33	28.06	27.48	26.98	26.47
21	27.29	.....	.....	.....	27.42	27.81	28.02	28.33	28.06	27.40	27.00	26.48
22	27.32	.....	.....	.....	27.43	27.80	28.02	28.34	28.06	27.33	27.02	26.48
23	27.33	.....	.....	.....	27.17	27.45	27.81	28.02	28.33	28.08	27.30	27.02
24	27.32	.....	.....	.....	27.18	27.45	27.84	28.03	28.32	28.08	27.29	27.01
25	27.28	.....	.....	.....	27.18	27.48	27.85	28.05	28.29	28.05	27.26	27.01
26	27.26	.....	.....	.....	27.19	27.53	27.84	28.06	28.29	28.00	27.22	27.03
27	27.22	.....	.....	.....	27.18	27.56	27.84	28.08	28.32	27.97	27.17	27.03
28	27.25	.....	.....	.....	27.21	27.58	27.85	28.08	28.30	27.97	27.14	26.99
29	27.25	.....	.....	.....	27.22	27.58	27.85	28.08	28.28	27.98	27.11	27.03
30	27.23	.....	.....	.....	27.22	27.65	27.86	28.09	28.25	27.98	27.07	27.09
31	27.22	.....	.....	.....	27.68	.....	.....	28.11	28.21	.....	27.06	26.59

Marion County

Mn-1. Village of La Rue. Lat. 40°34'50", long. 83°23'00". Drilled unused well in gravel, diameter 4 inches, depth 100 feet. Highest water level 5.55 below lsd, June 3, 1947; lowest 14.55 below lsd, Aug. 10, 1950. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	12.85	12.25	11.74	.....	.....	11.00	11.75	11.96	12.52	13.12	12.75	12.75
2	12.90	11.95	11.77	.....	.....	11.05	11.71	12.01	12.45	13.11	12.84	12.71
3	13.45	12.45	11.75	.....	.....	10.90	11.67	12.11	12.45	12.96	12.82	12.64
4	13.40	12.10	11.55	.....	.....	10.96	11.56	12.25	12.53	13.15	12.81	12.48
5	13.00	12.45	11.45	.....	.....	10.97	11.60	12.13	12.50	13.04	12.72	12.53
6	.....	12.45	.....	.....	.....	10.93	11.83	12.07	12.68	13.20	12.74	12.75
7	.....	12.35	.....	.....	.....	11.25	11.60	11.90	12.78	13.27	12.62	12.75
8	12.90	12.35	.....	.....	.....	11.19	11.55	11.96	12.85	13.05	12.88	12.62
9	12.90	12.40	.....	.....	.....	11.23	11.57	12.11	12.85	13.04	13.30	12.70
10	12.80	12.20	.....	.....	.....	11.30	11.55	12.13	12.76	12.87	13.25	12.87
11	12.85	12.35	.....	.....	.....	10.42	11.17	11.69	12.24	12.75	13.05	12.93
12	12.85	12.50	.....	.....	.....	10.52	11.33	11.72	12.33	12.69	13.03	12.75
13	12.85	12.45	.....	.....	.....	10.53	11.36	11.84	12.33	12.84	13.04	12.64
14	13.00	12.30	.....	.....	.....	10.54	12.08	11.92	12.18	12.94	12.85	12.58
15	12.85	12.30	.....	.....	.....	10.55	12.35	11.96	12.03	13.01	12.71	12.68

Mn-1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	12.85	12.25	.....	.....	10.44	12.09	11.90	12.24	13.00	12.54	12.76	12.78
17	12.95	12.31	.....	.....	10.55	11.05	11.93	12.34	12.99	13.25	12.78	12.80
18	12.90	12.34	.....	.....	10.65	11.00	11.95	12.33	12.86	13.13	13.01	12.83
19	13.00	12.12	.....	.....	10.72	10.94	12.04	12.26	12.79	12.92	13.06	12.38
20	12.90	11.97	.....	.....	10.78	11.00	12.07	12.25	12.94	12.83	13.00	13.38
21	12.95	11.91	.....	.....	10.82	11.18	11.95	12.20	13.05	12.75	12.80	13.20
22	12.95	11.85	.....	.....	10.81	11.26	11.90	12.19	13.11	12.72	12.80	12.91
23	12.80	11.85	.....	.....	11.03	11.21	11.92	12.35	13.13	12.83	12.85	12.85
24	12.80	11.85	.....	.....	11.38	11.24	12.04	12.50	13.04	12.80	12.53	12.62
25	12.90	11.80	.....	.....	11.37	11.25	11.86	12.36	13.08	12.87	12.52	12.72
26	12.80	11.92	.....	.....	11.30	11.29	12.24	12.30	12.94	12.85	12.52	12.66
27	12.55	11.77	.....	.....	11.20	11.28	12.18	12.21	13.16	12.84	12.45	12.63
28	12.25	11.66	.....	.....	11.10	11.43	12.30	12.22	13.25	12.82	12.40	12.69
29	12.20		.....	.....	10.90	11.67	12.28	12.38	13.32	12.68	12.73	12.57
30	12.10		.....	.....	10.95	11.68	12.39	12.38	13.22	12.66	12.81	12.05
31	12.20		.....	.....	10.99		12.16	12.48		12.62		12.03

Mn-2. City of Marion. Lat. 40°35'46", long. 80°10'56". Drilled unused well in limestone, diameter 12 inches, depth 67 feet. Highest water level 31.14 below lsd, Apr. 16, 1951; lowest 45.51 below lsd, July 3, 1954. Records available: 1950-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	42.44	43.59	44.36	44.45	44.24	44.23	45.41	45.08	44.97	45.21	44.94	45.24
2	42.35	43.79	44.53	44.57	43.95	44.33	45.48	44.76	45.01	45.23	45.02	45.29
3	42.35	43.89	44.66	44.56	43.92	44.58	45.51	44.84	45.00	45.18	45.05	45.33
4	42.37	44.01	44.72	44.30	44.00	44.65	45.43	44.93	45.00	45.08	45.09	45.37
5	.....	44.08	44.83	44.21	44.10	44.68	45.13	44.95	44.89	.....	45.13	45.38
6	.....	44.11	44.83	44.32	44.19	44.52	45.10	44.95	44.74	.....	45.15	45.27
7	.....	43.95	44.55	44.46	44.32	44.33	45.15	44.96	44.83	.....	45.18	45.32
8	42.56	43.81	44.46	44.54	44.33	44.60	45.15	44.85	44.96	.....	45.13	45.35
9	42.54	44.04	44.62	44.58	44.09	44.80	45.18	44.65	45.01	.....	45.22	45.37
10	42.48	44.18	44.74	44.59	43.92	45.00	45.14	44.78	45.07	.....	45.25	45.40
11	42.41	44.29	44.80	44.32	44.02	45.12	44.95	44.88	45.08	.....	45.29	45.40
12	42.50	44.37	44.81	44.23	44.03	45.13	44.94	44.92	44.95	.....	45.32	45.33
13	42.56	44.40	44.74	44.32	44.06	45.16	45.12	44.96	44.83	.....	45.32	45.28
14	42.65	44.35	44.65	44.36	44.08	45.15	45.24	44.97	44.97	.....	45.32	45.30
15	42.68	.....	44.51	44.47	44.07	45.27	45.30	44.84	45.03	.....	45.17	45.31
16	42.65	.....	44.63	44.45	43.82	45.34	45.30	44.68	45.10	.....	45.21	45.34
17	42.59	44.50	44.70	44.43	43.75	45.35	45.25	44.76	45.14	.....	45.27	45.35
18	42.59	44.58	44.64	44.17	43.81	45.35	45.13	44.83	45.15	.....	45.31	45.35
19	42.69	44.65	44.95	44.06	43.90	45.38	45.06	44.87	45.02	44.90	45.33	45.35
20	42.92	44.66	44.99	44.25	43.98	45.33	45.20	44.92	44.98	44.99	45.35	45.33
21	43.28	44.40	44.76	44.33	44.13	45.24	45.23	44.92	45.06	45.07	45.26	45.36
22	43.41	44.32	44.55	44.42	44.17	46.35	45.14	44.78	45.06	45.13	45.10	45.37
23	43.48	44.49	44.58	44.43	44.02	45.39	45.15	44.70	45.12	45.18	45.18	45.39
24	43.41	44.63	44.64	44.39	43.91	45.42	45.13	44.88	45.13	45.23	45.24	45.41
25	43.43	44.70	44.60	44.12	44.25	45.48	44.90	45.00	45.14	45.25	45.26	45.25
26	43.52	44.70	44.58	43.90	44.41	45.48	44.88	45.04	45.05	45.29	45.18	45.24
27	43.60	44.70	44.58	44.05	44.55	45.28	44.97	45.05	44.93	45.29	45.10	45.31
28	43.72	44.46	44.40	44.11	44.72	44.96	45.05	45.08	45.05	45.23	45.07	45.35
29	43.80		44.27	44.20	44.75	45.10	45.12	44.94	45.15	45.22	45.05	45.40
30	43.82		44.30	44.24	44.48	45.25	45.18	44.83	45.21	45.16	45.17	45.42
31	43.64		44.36		44.13		45.20	44.87		45.11		45.45

Medina County

Md-1. City of Lodi. Lat. 41°01'46", long. 82°01'06". Drilled unused well in gravel, diameter 6 inches, depth 65 feet. Highest water level 9.00 below lsd, Mar. 2, 1952; lowest 29.70 below lsd, July 13, 1954. Records available: 1946-54. Recording gage installed June 29.

Daily lowest water level from recorder graph

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 21	15.49	Feb. 15	19.10	Mar. 15	17.86	Apr. 12	14.21
28	16.06	22	16.40	22	21.80	19	13.79
Feb. 4	15.07	Mar. 3	17.55	28	14.71	26	16.75
12	15.38	8	17.60	Apr. 5	16.02	May 3	15.23

Md-1--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 10	15.13	July 14	28.00	Aug. 2	26.90	Aug. 21	20.70
17	19.06	15	26.40	3	22.60	27	20.60
24	20.06	16	25.70	6	21.20	Sept. 4	21.10
June 1	18.09	17	26.40	7	21.60	5	21.30
7	26.57	18	22.50	8	21.50	7	21.70
July 2	23.10	19	26.70	9	25.10	8	21.90
3	23.70	20	26.40	10	20.90	11	21.10
4	28.00	21	22.40	11	21.10	13	21.00
5	26.70	22	25.70	12	21.20	14	20.60
6	28.30	23	26.20	13	21.10	16	20.30
7	23.00	24	25.90	14	21.50	18	20.40
8	21.90	25	21.80	15	21.30	19	20.30
9	21.90	26	21.60	16	24.30	22	20.20
10	21.90	27	22.30	17	24.70	26	20.50
11	21.90	28	26.90	18	20.70	30	20.40
12	28.10	29	25.90	19	23.10	Oct. 4	20.30
13	29.70	Aug. 1	21.80	20	20.50	20	17.90

Mercer County

Mr-1. S. O. Self. Lat. 40°39'36", long. 84°38'56". Drilled unused well in limestone, diameter 4 inches, depth 130 feet. Highest water level 8.47 below lsd, Mar. 27, 1950; lowest 12.96 below lsd, Apr. 8, 1954. Records available: 1946-54. Recording gage removed Mar. 16.

Daily lowest water level from recorder graph

Jan. 1	12.04	Feb. 7	12.58	Feb. 20	12.63	Mar. 11	12.90
2	12.01	8	12.42	21	12.67	Apr. 8	12.96
4	12.09	9	12.43	22	12.73	May 4	12.64
5	12.07	10	12.51	23	12.70	June 3	12.02
6	12.13	11	12.67	24	12.63	30	12.45
7	12.13	12	12.72	25	12.65	July 5	12.42
8	12.13	13	12.66	26	12.67	Aug. 3	12.30
9	12.16	14	12.57	27	12.64	31	11.83
Feb. 2	12.29	15	12.63	28	12.65	Sept. 28	11.88
3	12.36	16	12.62	Mar. 1	12.71	Oct. 25	11.47
4	12.38	17	12.73	2	12.73	Nov. 23	11.14
5	12.38	18	12.71	10	12.90	Dec. 21	11.04
6	12.53	19	12.68				

Miami County

Mi-1. Troy Sunshade Co. 612 Grant St., Troy. Lat. 40°02', long. 84°13'. Drilled unused well in gravel, diameter 8 inches, depth 49 feet. Highest water level 7.15 below lsd, Feb. 26, 1951; lowest 15.40 below lsd, Jan. 21, 29, Feb. 12, 1954. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14.30	14.70	14.55	14.60	12.35	12.20	13.10	12.40	13.10	13.80	13.90	14.25
2	14.00	15.20	15.10	14.30	11.85	12.05	12.85	12.50	12.90	13.55	13.80	14.35
3	13.85	15.00	14.80	13.85	12.50	12.50	12.50	12.50	13.40	13.10	14.25	14.40
4	14.65	15.30	15.20	13.45	12.30	12.30	12.15	12.55	13.00	.....	13.95	14.40
5	14.55	15.05	14.90	14.10	12.70	11.95	12.00	12.50	12.40	.....	14.25	13.95
6	15.00	14.80	14.60	13.85	12.40	11.60	12.80	12.50	12.20	.....	13.85	14.15
7	14.80	14.40	14.20	14.15	12.75	12.40	12.65	12.40	12.65	13.85	13.35	14.25
8	15.15	15.00	14.85	13.85	12.15	12.25	13.05	12.20	13.20	14.20	13.60	14.40
9	14.65	14.85	14.65	14.10	11.65	12.75	12.80	13.05	13.05	13.70	14.15	14.45
10	14.35	15.25	15.05	.....	12.00	12.50	12.70	12.90	13.45	13.20	13.95	14.55
11	14.60	15.05	14.80	.....	12.50	12.70	12.45	13.35	13.10	13.50	14.35	14.30
12	15.10	15.40	15.15	.....	12.20	.....	13.15	13.15	12.55	14.00	14.10	13.95
13	14.95	15.05	14.75	.....	12.55	.....	12.90	13.50	12.90	13.85	13.90	14.30
14	15.30	14.50	14.15	.....	12.25	12.05	13.40	13.15	13.45	14.30	13.50	14.45
15	15.05	14.80	14.45	.....	11.90	12.55	13.15	12.60	13.20	13.85	14.05	14.60
16	14.75	15.30	14.90	.....	11.55	.....	13.55	12.85	13.65	13.60	13.55	14.60
17	14.40	15.00	14.70	.....	12.35	.....	13.05	13.40	13.45	13.15	14.35	14.65
18	15.10	15.35	15.05	.....	12.10	.....	12.55	13.20	13.20	13.80	14.15	14.45
19	15.00	15.05	14.75	13.15	12.55	.....	12.85	13.60	12.75	13.65	14.20	.....
20	15.05	14.75	14.45	.....	12.25	.....	13.45	13.30	13.40	14.50	14.05	14.45

Mi-1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	15.40	14.30	14.00	.....	12.60	12.55	13.20	13.10	13.30	13.80	13.60	14.60
22	15.15	14.95	14.70	.....	12.00	12.40	13.65	12.65	13.75	14.20	13.95	14.70
23	14.85	14.75	14.55	13.20	11.55	12.85	13.35	13.30	13.60	13.75	14.10	14.75
24	14.45	15.20	14.95	12.55	11.90	12.60	13.15	13.25	13.95	13.20	14.15	.....
25	15.15	14.90	14.65	12.10	12.40	12.95	12.65	13.70	13.50	13.45	13.90	.....
26	15.00	15.25	15.00	12.45	12.20	12.40	12.60	13.20	12.95	13.60	14.10	.....
27	15.35	14.90	14.55	12.95	12.65	11.95	12.60	13.25	13.25	13.70	13.85	.....
28	15.05	14.25	14.00	12.65	12.35	12.30	12.65	12.80	13.80	13.75	13.50	.....
29	15.40		14.25	13.00	12.00	12.85	12.70	12.30	13.60	13.80	13.95	.....
30	14.95		14.60	12.70	11.65	12.65	12.70	12.90	14.05	13.60	14.15	.....
31	14.40		14.25		11.45		12.65	12.55		13.20		.....

Montgomery County

Mt-2. Dayton Power & Light Co. 118 East Fourth St. Lat. 39°45', long. 84°11'. Drilled unused well in gravel, diameter 8 inches, depth 57 feet. Highest water level 20.97 below lsd, Mar. 25, 1943; lowest 42.30 below lsd, Oct. 2, 1954. Records available: 1942-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	38.30	37.70	37.45	36.65	36.85	36.65	38.90	41.40	41.25	42.25	39.60	38.55
2	38.05	37.70	37.50	36.55	36.75	36.80	38.90	41.25	41.05	42.30	39.55	38.65
3	37.85	37.75	37.50	36.45	36.60	37.00	38.85	41.55	41.00	42.15	39.55	38.65
4	37.80	37.80	37.45	36.20	36.50	37.05	38.70	41.70	40.95	42.05	39.55	38.65
5	37.90	37.85	37.40	35.90	36.55	37.00	38.35	41.85	40.80	42.25	39.55	38.50
6	38.00	37.80	37.30	35.95	36.55	36.85	38.30	41.90	40.45	42.20	39.50	38.40
7	38.15	37.65	37.10	36.05	36.65	36.90	38.40	41.80	40.50	42.00	39.20	38.50
8	38.30	37.50	36.95	36.15	36.60	37.25	38.35	41.60	40.90	41.90	39.10	38.50
9	38.25	37.60	37.00	36.15	36.40	37.55	38.40	41.10	41.15	41.80	39.15	38.60
10	38.15	37.75	37.10	36.10	36.25	37.85	38.30	41.25	41.40	41.50	39.25	38.65
11	37.95	37.85	37.10	36.00	36.30	38.10	38.20	41.30	41.30	41.40	39.30	38.65
12	38.05	38.00	37.15	35.95	36.40	38.20	38.20	41.25	41.15	41.55	39.40	38.50
13	38.15	38.00	37.10	35.90	36.45	38.10	38.50	41.25	40.90	41.80	39.40	38.30
14	38.20	37.80	36.95	36.05	36.60	38.15	38.90	41.25	41.20	41.90	39.25	38.40
15	38.25	37.85	36.80	36.20	36.55	38.40	38.30	41.10	41.50	41.80	38.95	38.50
16	38.25	38.00	36.85	36.35	36.45	38.65	39.50	40.95	41.60	41.65	39.05	38.60
17	38.05	38.10	36.90	36.35	36.40	38.80	39.65	41.20	41.85	41.15	39.15	38.65
18	37.90	38.15	36.95	36.15	36.45	38.90	39.55	41.45	41.95	40.60	39.30	38.55
19	38.00	38.15	37.10	36.10	36.50	38.85	39.60	41.65	41.85	40.45	39.40	38.40
20	38.10	38.10	37.10	36.20	36.60	38.60	39.90	41.80	41.75	40.40	39.40	38.50
21	38.25	37.95	36.95	36.30	36.65	38.45	40.20	41.75	41.85	40.40	39.35	38.55
22	38.30	37.80	36.85	36.50	36.60	38.65	40.45	41.65	41.85	40.45	39.00	38.65
23	38.30	37.85	36.90	36.55	36.50	38.80	40.65	41.50	41.80	40.35	39.10	38.70
24	38.10	37.85	36.90	36.50	36.50	39.00	40.65	41.80	41.75	40.20	39.10	38.65
25	.....	37.85	37.00	36.35	36.70	39.20	40.55	42.00	41.70	40.00	39.05	38.60
26	.....	37.85	37.10	36.35	36.75	39.20	40.45	42.10	41.65	40.10	38.80	38.35
27	.....	37.80	37.10	36.50	36.85	39.05	40.75	42.15	41.40	40.20	38.70	38.30
28	.....	37.65	36.95	36.55	37.05	38.80	40.95	42.10	41.65	40.20	38.50	38.50
29	38.20		36.80	36.65	37.05	38.85	41.20	41.95	41.80	40.20	38.35	38.55
30	38.10		36.85	36.85	36.95	38.85	41.45	41.45	42.05	40.15	38.45	38.60
31	37.90		36.75		36.60		41.50	41.40		40.00		38.55

Mt-3. State of Ohio. State Highway Dept. Stewart St., Patterson Blvd. and Miami River. Lat. 39°44', long. 84°12'. Drilled unused well in gravel, diameter 6 inches, depth 80 feet. Highest water level 34.53' below lsd, Aug. 17, 1947; lowest 62.15 below lsd, July 30-31, 1954. Records available: 1945-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	59.25	59.80	60.30	59.50	61.10	58.80	61.25	61.90	61.00	61.75	57.95	57.35
2	58.90	59.95	60.35	59.60	60.70	59.20	61.45	61.25	61.25	61.80	57.95	57.60
3	58.50	60.20	60.45	59.60	60.30	59.60	61.45	61.00	61.50	61.55	58.00	57.75
4	58.45	60.50	60.40	59.25	60.35	59.95	61.05	60.90	61.50	61.15	58.15	57.70
5	58.70	60.70	60.25	58.95	60.40	59.95	60.45	60.75	61.10	61.35	58.25	57.35
6	58.95	60.70	60.20	59.30	60.55	59.70	59.85	60.60	60.55	61.55	58.30	57.15
7	59.25	60.25	59.85	59.70	60.70	59.30	60.10	60.35	60.10	61.65	57.85	57.40
8	59.60	59.65	59.45	59.90	60.70	59.55	.....	59.90	60.45	61.75	57.60	57.60
9	59.65	59.70	59.70	60.00	60.25	59.80	.....	59.35	60.80	61.75	57.80	57.90
10	59.40	60.05	59.90	60.00	59.70	60.10	.....	58.70	61.10	61.35	58.00	58.10

Mt-3--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	59.15	60.30	60.10	59.70	59.75	60.40	.....	58.40	61.10	61.00	58.25	57.95
12	59.25	60.40	60.25	59.30	60.00	60.40	60.15	58.15	60.75	61.15	58.60	57.55
13	59.35	60.40	60.25	59.55	60.25	60.10	60.50	58.00	60.20	61.35	58.65	57.40
14	59.50	59.90	59.95	59.95	60.55	59.90	60.95	57.85	60.35	61.65	58.20	57.60
15	59.70	59.70	59.50	60.35	60.55	60.20	61.30	57.65	60.65	61.80	57.85	57.85
16	59.70	60.10	59.55	60.65	60.10	60.60	61.55	58.20	60.90	61.75	58.20	58.10
17	59.50	60.35	59.60	60.65	59.75	60.85	61.55	58.65	61.20	61.30	58.55	58.30
18	59.30	60.60	59.65	60.25	60.00	60.95	.....	59.15	61.25	60.70	58.90	58.20
19	59.45	60.85	59.80	59.75	60.20	61.00	60.95	59.55	60.90	60.50	59.20	57.75
20	59.90	60.85	59.75	59.95	60.40	60.65	61.25	59.95	60.60	60.40	59.15	.....
21	60.05	60.55	59.35	60.30	60.65	60.15	61.50	59.90	60.75	60.30	58.65	.....
22	60.15	60.30	59.85	60.60	60.65	60.35	61.70	59.55	60.95	60.25	58.10	.....
23	60.15	60.45	59.10	60.85	60.25	60.60	61.85	59.50	61.20	60.05	58.20	.....
24	59.85	60.60	59.25	60.85	59.75	60.85	61.90	59.95	61.40	56.55	58.35	.....
25	59.75	60.75	59.70	60.45	59.85	61.10	.....	60.35	61.40	59.00	58.35	.....
26	60.05	60.95	59.95	60.00	60.05	61.10	61.10	60.70	61.00	59.05	57.75	.....
27	60.25	60.95	59.95	60.30	60.30	60.55	61.45	60.95	60.80	59.10	57.75	.....
28	60.40	60.65	59.75	60.55	60.50	60.45	61.70	60.85	60.95	59.10	57.25	.....
29	60.55		59.55	60.80	60.50	60.60	61.95	60.40	61.20	59.05	57.00	57.05
30	60.55		59.60	61.05	60.00	60.95	62.15	60.50	61.40	59.05	57.15	57.00
31	60.20		59.60		59.30		62.15	60.75		58.60		56.60

Mt-6. City of Dayton. Third and Ludlow Sts. Lat. 39°46', long. 84°12'. Drilled unused well in gravel, diameter 8 inches, depth 60 feet. Highest water level 23.70 below lsd, Feb. 20, 1950; lowest 44.45 below lsd, Sept. 4, 1953. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	39.05	38.30	38.15	37.10	37.50	39.35	41.70	43.35	43.80	44.35	40.15	39.95
2	38.95	38.35	38.25	37.10	37.55	39.50	41.75	43.70	43.70	44.25	40.10	39.25
3	38.85	38.35	38.10	37.10	37.50	39.60	41.65	43.95	43.80	43.25	40.00	39.25
4	39.00	38.15	38.00	36.60	37.10	38.75	41.25	44.05	43.75	43.95	40.00	39.25
5	38.85	38.35	37.90	36.60	37.15	37.75	41.00	44.10	42.65	44.30	40.00	39.30
6	39.00	38.40	37.85	36.90	37.15	37.75	41.35	44.15	42.05	43.75	39.95	39.35
7	39.05	38.15	37.75	37.10	37.30	39.35	41.40	43.80	43.20	42.65	39.85	39.20
8	39.15	38.15	37.95	37.20	37.15	39.95	41.40	42.80	43.40	42.45	40.15	39.25
9	39.30	38.20	38.00	37.10	37.05	40.10	.....	43.25	43.65	42.30	40.20	39.50
10	39.05	38.45	37.75	37.15	37.10	40.25	.....	43.40	43.70	42.20	40.20	39.40
11	38.80	38.35	37.75	36.70	37.10	40.50	.....	43.45	43.65	42.20	40.30	39.40
12	38.80	38.40	38.00	36.70	37.15	40.60	41.15	43.35	42.65	43.40	40.40	39.30
13	38.80	38.40	38.10	36.85	37.20	40.30	41.30	43.35	43.40	43.80	40.35	39.25
14	38.80	38.35	37.80	37.00	37.30	40.55	41.65	43.15	43.45	43.95	40.10	36.25
15	39.05	38.75	37.60	37.20	37.35	40.85	42.00	41.95	43.90	42.65	40.10	39.30
16	39.10	38.90	37.95	37.35	37.20	41.00	42.15	43.20	44.00	42.20	40.20	39.35
17	38.90	39.05	38.05	37.35	37.35	41.15	42.25	43.35	44.05	41.80	40.25	36.45
18	38.65	39.10	38.25	36.85	37.35	41.15	41.15	43.50	44.20	41.50	40.35	39.45
19	38.90	39.10	38.30	36.80	37.40	41.10	42.15	43.75	43.20	41.25	40.50	39.40
20	39.25	39.10	38.00	36.80	37.50	40.55	42.45	43.90	44.15	40.95	40.45	39.35
21	39.10	38.80	37.85	36.85	37.55	40.95	42.70	43.75	44.20	40.95	40.10	39.40
22	38.95	38.85	37.65	37.00	37.55	41.25	42.90	42.70	43.35	40.95	39.80	39.55
23	38.90	38.85	37.75	37.00	37.45	41.40	43.05	43.65	43.25	41.00	40.05	39.60
24	38.85	38.60	38.10	36.95	37.55	41.40	43.00	43.95	43.15	40.95	39.95	39.60
25	38.90	38.40	38.35	36.70	37.65	41.45	41.95	44.15	43.10	40.85	39.70	39.50
26	39.05	38.65	38.50	36.85	37.65	41.45	42.90	44.30	42.40	40.90	39.55	39.40
27	39.00	38.45	38.30	37.00	37.65	41.30	43.15	44.40	42.70	41.00	39.50	39.50
28	38.90	38.30	38.00	37.10	37.80	41.40	43.35	44.29	43.65	40.85	39.35	39.80
29	38.75		38.30	37.15	38.15	41.50	43.55	43.00	43.85	40.85	39.25	39.85
30	38.65		38.05	37.30	38.10	41.55	43.75	43.80	44.15	40.60	39.25	39.50
31	38.40		37.55		37.75		43.90	43.80		40.40		39.35

Mt-49. E. F. Stenger. Lat. 39°40'20", long. 84°16'30". Drilled unused well in gravel, diameter 6 inches, depth 212 feet. Highest water level 10.82 below lsd, Feb. 18, 1950; lowest 21.82 below lsd, Dec. 24, 1954. Records available: 1947-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	20.20	20.17	20.35	19.91	19.53	19.84	20.11	20.70	20.92	21.37	21.40	21.65
2	20.20	20.20	20.34	19.89	19.50	19.81	20.13	20.70	20.94	.....	21.41	21.65
3	.....	20.21	20.33	19.88	19.47	19.83	20.15	20.73	20.95	.....	21.43	21.66
4	.....	20.23	20.32	19.86	19.48	19.85	20.14	20.75	20.95	.....	21.45	21.66
5	20.23	20.24	20.30	19.84	19.48	19.85	20.15	20.76	20.95	21.40	21.45	21.67

Mt-49--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	20.25	20.24	20.30	19.81	19.50	19.86	20.18	20.75	20.95	21.41	21.45	21.69
7	20.26	20.24	20.28	19.80	19.52	19.86	20.21	20.65	20.97	21.41	21.45	21.69
8	20.26	20.24	20.27	19.77	19.52	19.88	20.22	20.62	21.01	21.43	21.47	21.69
9	20.26	20.27	20.28	19.75	19.51	19.88	20.25	20.60	21.04	21.43	21.49	21.72
10	20.26	20.30	20.30	19.71	19.52	19.86	20.25	20.63	21.07	21.42	21.50	21.73
11	20.26	20.37	20.31	19.69	19.54	19.86	20.26	20.67	21.08	21.42	21.51	21.73
12	20.29	20.34	20.33	19.68	19.57	19.86	20.29	20.70	21.08	21.40	21.52	21.73
13	20.30	20.34	20.34	19.68	19.59	19.85	20.32	20.73	21.10	21.41	21.52	21.72
14	20.32	20.33	20.33	19.69	19.61	19.86	20.34	20.73	21.13	21.41	21.52	21.73
15	20.32	20.35	20.35	19.69	19.61	19.89	20.38	20.72	21.15	21.39	21.53	21.76
16	20.31	20.35	20.36	19.68	19.61	19.91	20.41	20.74	21.17	21.35	21.56	21.78
17	20.31	20.36	20.37	19.66	19.63	19.90	20.43	20.76	21.19	21.29	21.58	21.79
18	20.30	20.37	20.38	19.56	19.66	19.76	20.44	20.78	21.19	21.26	21.59	21.79
19	20.33	20.37	20.39	19.50	19.68	19.76	20.44	20.81	21.19	21.26	21.60	21.79
20	20.33	20.37	20.37	19.50	19.69	19.75	20.48	20.82	21.19	21.27	21.60	21.79
21	20.33	20.34	20.36	19.50	19.71	19.79	20.48	20.82	21.21	21.29	21.60	21.79
22	20.32	20.34	20.33	19.51	19.72	19.83	20.51	20.82	21.23	21.32	21.62	21.79
23	20.31	20.36	20.33	19.51	19.73	19.88	20.52	20.84	21.24	21.32	21.64	21.81
24	20.30	20.37	20.33	19.49	19.76	19.92	20.53	20.86	.....	21.31	21.64	21.82
25	20.31	20.37	20.34	19.48	19.79	19.95	20.53	20.90	.....	21.33	21.64	21.81
26	20.32	20.37	20.35	19.48	19.81	19.98	20.57	20.90	.....	21.34	21.64	21.79
27	20.33	20.35	20.34	19.50	19.82	19.99	20.60	20.88	.....	21.37	21.63	21.79
28	20.30	20.35	20.32	19.51	19.83	20.02	20.62	20.85	.....	21.38	21.62	21.77
29	20.22	.....	20.29	19.53	19.84	20.05	20.67	20.84	.....	21.41	21.64	21.75
30	20.20	.....	20.18	19.53	19.84	20.08	20.68	20.86	.....	21.41	21.64	21.62
31	20.19	.....	20.00	.....	19.84	.....	20.69	20.90	.....	21.40	.....	21.54

Muskingum County

Mu-1a. City of Zanesville. Lat. 39°57'15", long. 81°59'30". Drilled unused well in gravel, diameter 6 inches, depth 135 feet. Highest water level 11.40 below lsd, Mar. 29, 1945; lowest 37.25 below lsd, Aug. 1-2, 1954. Records available: 1942-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	33.00	33.40	35.55	34.05	29.80	30.50	32.90	37.25	34.10	34.55	29.55	30.75
2	32.65	31.35	35.70	33.75	29.75	30.25	33.60	37.25	33.90	34.60	29.70	30.80
3	32.65	33.95	35.65	33.75	29.85	30.15	34.25	36.95	33.95	34.60	29.70	30.90
4	33.05	34.00	35.50	33.10	29.85	30.20	34.50	36.45	34.05	34.25	29.95	30.35
5	33.10	33.95	35.60	32.95	29.45	29.80	34.55	36.30	34.10	34.25	30.05	30.70
6	33.00	31.50	35.20	32.60	29.35	27.10	34.50	36.20	33.80	34.45	29.95	31.15
7	33.10	30.55	35.05	32.95	29.40	29.75	33.95	36.10	34.20	34.20	29.65	31.15
8	33.10	34.00	35.15	33.40	29.75	30.25	33.90	35.65	34.35	34.15	29.65	31.05
9	33.20	34.35	35.20	33.45	28.90	30.95	33.75	35.45	34.20	33.90	30.10	31.35
10	33.10	34.35	35.25	33.45	28.80	30.15	33.85	35.30	34.30	32.90	30.20	31.35
11	33.25	34.50	35.60	33.15	28.65	32.20	33.80	35.30	34.40	32.50	30.15	31.40
12	.....	.....	35.45	33.05	28.75	30.60	33.70	35.20	34.45	32.40	30.25	31.15
13	.....	.....	35.05	33.05	28.80	31.00	34.40	35.20	34.20	32.40	30.35	31.20
14	.....	.....	35.00	32.85	28.95	31.05	35.25	35.00	34.40	32.55	27.50	31.45
15	.....	34.75	34.55	32.45	28.90	31.20	35.50	34.70	34.40	32.55	30.45	31.70
16	.....	35.00	34.95	32.35	29.05	31.55	35.60	34.20	34.50	32.55	30.60	31.70
17	.....	35.20	34.95	32.20	29.05	31.50	35.40	34.50	34.60	32.10	30.65	31.55
18	.....	35.30	34.95	31.80	28.90	31.85	35.30	34.55	34.60	31.30	30.60	31.60
19	34.50	35.40	35.15	31.85	28.80	32.00	35.50	34.65	34.60	31.20	30.70	31.60
20	34.30	35.50	35.60	31.90	29.00	31.45	35.80	34.80	34.30	31.15	29.85	31.40
21	34.35	35.50	35.50	32.05	29.15	31.65	36.00	34.70	34.35	30.75	30.45	31.50
22	34.55	35.10	34.70	31.60	29.15	32.20	36.00	34.45	34.25	30.50	30.75	31.45
23	34.75	35.65	34.80	31.65	29.20	32.35	35.75	34.45	34.20	30.10	30.75	31.35
24	34.75	35.35	34.85	31.45	29.40	32.35	35.50	34.70	34.30	30.15	30.85	30.80
25	34.60	35.55	34.90	31.20	29.75	32.45	35.40	35.00	33.75	29.70	30.60	30.90
26	34.60	35.70	34.75	31.05	29.95	32.35	35.10	35.00	33.85	29.70	30.70	31.25
27	34.40	35.80	34.60	30.85	29.75	32.15	35.45	34.95	33.85	29.80	30.65	30.90
28	34.20	35.55	.....	30.45	30.25	32.40	35.95	34.75	34.00	29.80	30.65	31.25
29	34.65	.....	.....	29.50	30.40	32.55	36.45	34.70	34.15	29.90	30.85	31.30
30	33.90	.....	34.10	29.75	30.40	32.65	36.80	34.35	34.35	29.65	30.80	31.55
31	31.25	.....	34.15	.....	30.25	.....	37.05	34.40	.....	27.00	.....	31.40

Mu-2. State of Ohio. Zanesville. Lat. 39°57'00", long. 82°01'30". Drilled test well in gravel, diameter 6 inches, depth 54 feet. Highest water level 0.00, Jan. 27, 1952; lowest 9.03 below lsd, Sept. 28-Oct 3, 1954. Records available: 1947-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	8.79	....	8.45	7.48	7.83	8.33	8.65	8.88	8.89	9.03	8.81	8.80
2	8.79	....	8.42	7.62	7.85	8.26	8.68	8.88	8.89	9.03	8.81	8.78
3	8.82	....	8.36	7.76	7.63	8.24	8.68	8.88	9.00	9.03	8.81	8.77
4	8.82	....	8.32	7.84	7.45	8.27	8.70	8.90	8.93	8.92	8.81	8.77
5	8.79	....	8.29	7.89	7.51	8.33	8.69	8.89	8.94	8.89	8.82	8.80
6	8.78	....	8.29	7.93	7.58	8.35	8.68	8.71	8.95	8.90	8.83	8.84
7	8.79	....	8.29	7.94	7.61	8.36	8.68	8.76	8.95	8.91	8.84	8.84
8	8.78	....	8.29	7.95	7.63	8.38	8.65	8.77	8.94	8.91	8.86	8.83
9	....	....	8.19	7.97	7.65	8.21	8.68	8.77	8.94	8.91	8.88	8.80
10	....	....	8.03	8.02	7.62	8.21	8.70	8.76	8.94	8.88	8.88	8.81
11	....	....	8.05	8.03	7.63	8.29	8.73	8.81	8.98	8.88	8.88	8.84
12	....	....	8.09	8.07	7.69	8.33	8.75	8.83	8.99	8.89	8.86	8.85
13	....	....	8.13	8.07	7.74	8.38	8.77	8.86	9.00	8.90	8.88	8.83
14	....	....	8.19	8.08	7.80	8.40	8.78	8.87	9.00	8.89	8.87	8.81
15	....	8.66	8.25	8.09	7.85	8.41	8.79	8.82	9.01	8.86	8.88	8.76
16	....	8.66	8.28	8.09	7.90	8.41	8.81	8.80	9.00	8.86	8.87	8.76
17	....	8.67	8.29	7.99	7.93	8.29	8.81	8.83	9.02	8.85	8.87	8.79
18	....	8.67	8.29	7.44	7.96	8.31	8.82	8.85	9.01	8.87	8.87	8.70
19	....	8.67	8.29	7.53	8.00	8.35	8.82	8.83	8.96	8.61	8.86	8.58
20	....	8.66	8.20	7.65	8.04	8.39	8.82	8.84	8.88	8.63	8.85	8.56
21	....	8.62	8.05	7.75	8.08	8.43	8.76	8.87	8.92	8.65	8.86	8.57
22	....	8.63	8.07	7.83	8.13	8.46	8.69	8.88	8.96	8.70	8.86	8.56
23	....	8.61	8.13	7.84	8.16	8.49	8.72	8.89	8.99	8.73	8.86	8.56
24	....	8.57	8.14	7.43	8.17	8.51	8.77	8.89	8.99	8.74	8.85	8.63
25	....	8.57	8.13	7.53	8.20	8.52	8.79	8.87	8.99	8.75	8.85	8.64
26	....	8.59	8.16	7.62	8.24	8.55	8.81	8.83	9.00	8.74	8.85	8.64
27	....	8.59	....	7.66	8.25	8.57	8.83	8.82	9.01	8.75	8.85	8.65
28	....	8.58	....	7.73	8.26	8.60	8.84	8.83	9.03	8.75	8.80	8.64
29	....	....	....	7.76	8.28	8.63	8.86	8.83	9.03	8.74	8.82	8.40
30	....	....	7.23	7.79	8.31	8.63	8.87	8.83	9.03	8.78	8.83	7.90
31	....	....	7.33	....	8.33	....	8.89	8.87	....	8.80	....	7.80

Portage County

Po-1. Edward Tiddle. Lat. 41°14'06", long. 81°02'48". Drilled unused well in sandstone, diameter 6 inches, depth 55 feet. Highest water level 14.49 below lsd, June 13, 1947; lowest 23.08 below lsd, Feb. 22, 1954. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	22.87	22.92	22.90	22.42	21.35	20.71	20.92	21.36	21.89	22.12	21.60	21.45
2	22.87	22.93	22.87	22.39	21.26	20.74	20.91	21.35	21.85	22.13	21.58	21.41
3	22.94	22.96	22.88	22.39	21.19	20.72	20.90	21.41	21.81	22.13	21.56	21.39
4	22.90	22.97	22.85	22.35	21.19	20.76	20.90	21.42	21.84	22.12	21.56	21.38
5	22.86	22.97	22.82	22.31	21.15	20.76	20.89	21.44	21.82	22.11	21.57	21.43
6	22.89	23.01	22.81	22.32	21.13	20.76	20.91	21.45	21.85	22.13	21.55	21.44
7	22.89	23.00	22.83	22.31	21.08	20.75	20.97	21.47	21.83	22.14	21.55	21.42
8	22.89	22.94	22.87	22.31	21.06	20.76	21.01	21.48	21.87	22.10	21.53	21.37
9	22.92	22.98	22.85	22.28	21.01	20.76	21.02	21.50	21.88	22.05	21.55	21.35
10	22.93	23.00	22.85	22.22	20.97	20.75	21.02	21.46	21.88	22.04	21.56	21.37
11	22.89	23.04	22.82	22.23	20.95	20.72	20.99	21.47	21.88	22.03	21.54	21.41
12	22.97	23.05	22.81	22.18	20.94	20.73	20.99	21.55	21.94	22.03	21.53	21.41
13	....	23.01	22.82	22.13	20.92	20.74	20.99	21.58	21.95	22.05	21.53	21.37
14	....	22.96	22.82	22.05	20.89	20.78	21.00	21.54	21.95	22.05	21.50	21.35
15	....	22.98	22.79	22.05	20.88	20.81	21.06	21.57	21.96	21.99	21.50	21.30
16	....	22.98	22.78	21.99	20.86	20.82	21.07	21.57	21.96	21.89	21.49	21.37
17	....	23.04	....	21.95	20.85	20.81	21.07	21.56	21.98	21.77	21.48	21.37
18	....	23.04	....	21.90	20.85	20.81	21.04	21.60	21.98	21.77	21.48	21.27
19	....	23.05	....	21.84	20.84	20.80	21.07	21.64	21.97	21.77	21.46	21.28
20	22.93	23.04	....	21.85	20.82	20.77	21.10	21.64	21.95	21.74	21.46	21.30
21	22.97	23.07	....	21.84	20.81	20.75	21.18	21.62	21.97	21.69	21.48	21.29
22	22.95	23.08	....	21.77	20.82	20.77	21.20	21.60	21.98	21.71	21.48	21.27
23	22.95	22.99	22.79	21.68	20.82	20.87	21.20	21.60	22.06	21.71	21.47	21.23
24	22.96	22.99	22.74	21.66	20.80	20.85	21.20	21.60	22.08	21.70	21.43	21.31
25	22.98	22.97	22.64	21.63	20.78	20.82	21.19	21.65	22.08	21.68	21.48	21.32

Po-1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	22.96	22.99	22.62	21.61	20.81	20.80	21.21	21.72	22.04	21.64	21.48	21.27
27	22.94	22.94	22.58	21.50	20.82	20.82	21.25	21.75	22.07	21.64	21.47	21.25
28	22.97	22.93	22.48	21.44	20.76	20.86	21.29	21.78	22.07	21.64	21.44	21.23
29	22.93		22.48	21.42	20.77	20.88	21.30	21.79	22.10	21.58	21.50	21.24
30	22.96		22.52	21.39	20.80	20.91	21.34	21.83	22.11	21.59	21.50	21.21
31	22.95		22.48		20.77		21.36	21.87		21.60		21.18

Po-2. City of Kent. Lat. 41°08'43", long. 81°22'08". Drilled unused well in gravel, diameter 10 inches, depth 65 feet. Highest water level 10.67 below lsd, June 9, 1947; lowest 26.25 below lsd, Feb. 11-12, 1954. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	25.00	.....	25.70	25.25	23.20	22.20	22.80	24.15	23.70	.....	.....	25.65
2	25.00	.....	25.75	25.30	22.85	22.50	23.00	24.25	23.70	.....	25.35	25.70
3	24.90	25.95	26.00	25.35	22.55	22.50	23.15	24.25	23.75	.....	25.20	25.85
4	25.05	26.00	26.15	25.25	22.45	22.45	22.85	24.35	23.80	.....	25.35	25.90
5	25.25	26.05	26.15	25.15	22.30	22.45	22.65	24.25	23.80	.....	25.45	25.75
6	25.35	26.10	26.15	25.25	22.30	21.95	22.80	24.15	23.75	.....	25.45	25.60
7	25.35	.....	25.90	25.20	22.30	22.20	23.00	23.95	23.95	.....	25.35	25.85
8	25.40	.....	26.00	25.30	22.00	22.30	22.85	23.75	.....	.....	25.15	25.85
9	25.45	.....	26.00	25.20	21.75	22.40	22.85	23.90	.....	.....	25.35	25.85
10	25.35	.....	26.05	25.05	21.65	22.50	22.90	23.95	.....	.....	25.55	25.90
11	.....	26.25	26.05	24.80	21.85	22.55	22.60	23.90	.....	.....	25.65	26.00
12	.....	26.25	26.05	24.55	21.75	22.65	22.95	23.80	.....	.....	25.65	26.00
13	.....	.....	26.10	24.70	21.75	22.35	23.25	24.00	.....	.....	25.65	25.70
14	.....	.....	25.95	24.70	22.05	22.40	23.50	24.15	.....	.....	25.40	25.85
15	.....	.....	25.85	24.70	21.75	22.45	23.55	23.65	.....	.....	25.30	25.95
16	.....	26.00	25.95	24.60	21.60	22.45	23.55	23.90	.....	.....	25.55	26.00
17	.....	26.05	26.00	24.45	21.95	22.20	23.75	23.95	.....	.....	25.55	26.05
18	.....	26.05	26.05	24.25	21.80	22.00	23.85	23.85	.....	.....	25.75	26.05
19	.....	25.95	26.10	24.15	21.95	21.85	23.70	23.75	.....	.....	25.80	25.85
20	25.80	26.00	26.15	24.25	22.05	21.80	24.00	23.75	.....	.....	25.80	25.65
21	25.80	25.80	.....	24.25	22.15	22.05	24.05	23.75	.....	.....	25.70	25.70
22	25.85	25.75	.....	24.20	21.85	22.20	23.75	23.55	.....	.....	25.90	25.70
23	.....	25.75	25.60	24.15	21.85	22.10	23.80	23.75	.....	.....	25.75	25.60
24	.....	25.80	25.60	24.00	22.05	22.00	23.85	23.90	.....	.....	25.90	25.55
25	.....	26.00	25.60	23.70	22.30	22.25	23.85	23.85	.....	.....	25.65	25.45
26	.....	25.95	25.50	23.65	22.50	22.30	23.90	23.75	.....	.....	25.55	25.10
27	25.85	25.95	25.50	23.75	22.60	21.95	24.15	23.75	.....	.....	25.35	25.25
28	25.85	25.80	25.45	23.75	22.75	22.10	24.35	23.75	.....	.....	25.40	25.25
29	25.90		25.15	23.60	22.70	22.40	24.60	23.55	.....	.....	25.45	25.35
30	25.95		25.25	23.35	22.05	22.60	24.60	23.70	.....	.....	25.60	25.10
31	25.95		25.35		21.85		24.65	23.80	.....	.....		25.00

Po-4. U. S. Army Engineer Corps. Ravenna Ordnance Plant. Lat. 41°11', long. 81°06'. Drilled unused well in sandstone, diameter 12 inches, depth 225 feet. Highest water level 24.15 below lsd, May 4, 1951; lowest 35.35 below lsd, Feb. 17, 1954. Records available: 1950-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	34.45	34.85	35.10	34.70	32.90	31.80	32.15	32.65	33.15	33.85	33.70	33.80
2	34.35	34.85	35.30	34.45	32.65	31.90	32.15	32.65	33.15	33.90	33.65	33.60
3	34.55	34.95	35.20	34.65	32.35	31.85	32.15	32.70	33.25	33.85	33.55	33.65
4	34.45	34.95	35.20	34.65	32.35	32.10	32.05	32.75	33.25	33.90	33.60	33.55
5	34.35	35.00	35.15	34.40	32.35	32.10	32.20	32.75	33.20	33.90	33.75	33.70
6	34.60	35.10	35.05	34.35	32.30	32.05	32.35	32.85	33.35	34.15	33.60	33.90
7	34.65	35.05	35.05	34.35	32.15	31.90	32.20	32.85	33.20	34.15	33.65	33.65
8	34.75	34.95	35.15	34.55	32.15	32.00	32.20	32.80	33.30	34.95	33.75	33.55
9	34.75	35.00	35.00	34.55	32.10	32.05	32.40	32.65	33.40	33.90	33.75	33.40
10	34.85	35.05	34.95	34.25	32.15	32.15	32.35	32.80	33.30	33.90	33.80	33.70
11	34.75	35.20	35.00	34.10	32.05	32.20	32.35	33.00	33.35	33.75	33.30	33.80
12	35.00	35.30	35.10	34.15	32.15	32.15	32.20	33.00	33.45	33.85	33.65	33.65
13	35.00	35.20	34.90	34.00	32.15	32.05	32.20	33.00	33.45	33.90	33.70	33.65
14	34.90	35.10	34.85	33.60	32.25	32.00	32.30	33.00	33.50	33.90	33.70	33.50
15	34.90	35.10	35.00	33.80	32.20	32.05	32.50	33.00	33.35	33.80	33.65	33.55
16	34.80	35.05	35.05	33.65	31.90	32.05	32.50	32.90	33.55	33.90	33.60	33.80
17	34.90	35.35	34.95	33.55	32.10	32.25	32.45	32.90	33.60	33.95	33.65	33.80
18	34.90	35.25	34.85	33.60	32.10	32.20	32.30	33.00	33.55	33.95	33.65	33.30
19	34.90	35.20	34.65	33.75	32.10	32.20	32.30	33.05	33.35	33.95	33.60	33.50
20	34.85	35.15	34.65	33.75	32.10	31.95	32.40	33.00	33.35	33.80	33.60	33.60

Po-4--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
21	35.00	35.05	34.90	33.65	32.05	32.00	32.50	32.95	33.30	33.70	33.55	33.60
22	34.95	35.25	34.90	33.55	32.20	32.00	32.55	33.05	33.65	33.80	33.60	33.55
23	34.95	35.25	34.85	33.40	32.20	32.20	32.55	33.00	33.65	33.80	33.60	33.50
24	34.85	35.05	34.95	33.25	32.20	32.20	32.45	33.05	33.75	33.80	33.45	33.70
25	34.90	35.10	34.65	33.20	32.15	32.00	32.55	33.05	33.70	33.55	33.65	33.65
26	34.85	35.20	34.90	33.15	32.15	32.05	32.60	33.10	33.65	33.55	33.65	33.50
27	34.95	35.25	34.85	32.75	32.00	32.00	32.65	33.15	33.75	33.70	33.60	33.45
28	35.05	35.00	34.55	32.85	32.00	32.15	32.70	33.15	33.75	33.65	33.45	33.20
29	34.90		34.45	32.85	31.95	32.15	32.60	33.15	33.85	33.45	33.95	33.15
30	35.05		34.55	32.90	32.25	32.15	32.80	32.95	33.90	33.50	34.00	33.20
31	35.05		34.50		32.15		32.60	33.10		33.70		33.25

Putnam County

Pu-1. City of Columbus Grove. Lat. 40°55'10", long. 84°03'20". Drilled unused well in limestone, diameter 6 inches, depth 110 feet. Highest water level 7.34 below lsd, Jan. 7, 1950; lowest 23.30 below lsd, Aug. 30, 1953. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	17.15	17.35	16.15	13.55	11.40	12.95	16.65	14.15	14.45	16.00	12.45	12.50
2	17.30	17.25	15.30	13.75	11.75	12.15	17.35	13.30	14.95	16.45	12.25	12.05
3	16.90	17.15	15.50	13.25	11.25	11.35	17.40	13.75	15.05	14.90	12.65	12.35
4	17.15	16.85	14.85	13.50	11.85	.....	14.45	.....	15.15	15.50	12.75	12.10
5	17.00	17.55	15.05	13.15	11.05	.....	13.65	.....	15.00	15.50	12.75	12.20
6	17.50	16.65	.....	13.30	11.85	.....	13.85	13.85	15.25	14.95	12.45	12.20
7	16.90	17.00	.....	12.95	11.65	.....	12.60	.....	14.30	14.95	12.45	12.50
8	17.15	16.85	.....	12.35	12.65	.....	13.40	13.75	15.70	16.80	12.30	12.40
9	16.80	17.65	.....	14.05	12.75	.....	12.55	14.15	15.25	15.95	12.80	12.55
10	17.20	17.25	14.05	14.15	12.75	.....	13.65	.....	15.60	14.55	12.50	12.05
11	17.25	17.65	14.45	13.25	11.90	.....	12.80	14.60	15.30	14.55	12.85	12.70
12	17.20	17.35	14.30	13.65	12.15	.....	14.35	14.25	14.95	14.85	12.65	11.95
13	17.10	17.45	14.45	13.20	11.65	.....	14.35	15.15	15.10	.....	.....	12.70
14	17.15	16.40	.....	13.00	11.25	.....	14.75	15.05	15.80	.....	11.90	12.10
15	15.00	17.90	14.55	12.20	12.35	.....	.....	14.30	15.05	.....	.....	12.65
16	18.45	16.75	14.00	12.65	12.25	.....	.....	.....	15.85	.....	.....	12.15
17	16.75	17.05	14.45	12.70	12.35	.....	14.25	14.80	15.30	.....	12.90	12.45
18	17.65	16.35	14.40	12.50	13.05	.....	12.95	14.35	15.85	.....	.....	11.80
19	17.15	16.45	14.15	13.20	12.15	.....	14.65	14.30	14.50	.....	.....	12.30
20	17.40	16.45	14.10	13.05	12.45	.....	15.20	13.65	15.95	.....	12.90	12.20
21	16.80	16.80	14.15	12.35	12.45	.....	13.90	.....	15.20	.....	12.60	12.80
22	17.25	16.80	14.15	12.10	13.60	.....	14.25	.....	16.05	.....	12.20	12.65
23	16.80	15.75	14.10	11.75	12.75	.....	13.70	14.45	15.60	11.75	12.70	12.25
24	16.90	16.15	14.45	12.10	14.15	.....	14.65	14.20	16.10	11.05	12.25	12.20
25	16.35	15.80	14.20	11.75	.....	.....	.....	14.80	15.50	11.75	12.35	12.60
26	.....	14.90	13.80	12.15	.....	.....	15.45	14.10	15.25	.....	12.10	12.45
27	.....	16.20	14.85	11.50	.....	.....	15.45	14.25	15.25	.....	12.10	12.40
28	17.60	15.80	.....	12.15	.....	.....	16.60	.....	16.45	12.50	12.20	12.10
29	16.90		14.10	11.50	.....	.....	15.30	.....	16.00	11.80	12.50	12.20
30	17.45		13.25	12.15	.....	17.05	15.55	.....	16.60	12.50	12.45	12.10
31	16.40		13.85		13.35		14.55	14.45		11.80		12.05

Richland County

R-2. City of Lexington. Lat. 40°40'42", long. 82°34'40". Drilled unused well in sandstone, diameter 6 inches, depth 129 feet. Highest water level 22.12 below lsd, June 8, 1947; lowest 28.24 below lsd, Dec. 3, 1952. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	28.04	27.76	27.59	26.35	25.53	26.62	26.95	27.41	27.67	28.10	28.02	28.04
2	28.04	27.73	.....	26.38	25.44	26.62	26.98	27.40	27.65	28.12	28.02	28.04
3	28.06	27.71	.....	.....	25.51	26.62	27.00	.....	27.70	28.13	28.02	28.04
4	28.06	27.71	.....	.....	25.61	26.64	27.02	27.50	27.67	28.14	28.00	28.04
5	28.06	27.70	.....	26.52	25.67	26.64	27.04	27.44	27.66	28.14	27.97	28.04
6	28.07	27.70	.....	26.55	25.72	26.66	27.06	.....	27.67	28.16	27.97	28.05
7	28.08	27.71	.....	26.54	25.70	26.67	27.07	.....	27.75	28.16	27.98	28.05
8	28.08	27.71	27.40	26.53	25.65	26.69	27.08	27.44	27.78	28.16	28.00	28.05
9	.....	27.70	27.37	26.48	25.68	26.70	27.11	27.44	27.78	28.18	28.02	28.04
10	.....	27.70	27.28	26.33	25.80	26.74	27.12	.....	27.74	28.17	28.02	28.03

R-2--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	27.71	27.15	26.17	25.94	26.80	27.14	.....	27.74	28.18	28.04	28.03
12	27.72	27.10	26.03	26.02	26.88	27.16	27.51	27.74	28.16	28.04	27.97
13	27.72	27.06	26.00	26.12	26.89	27.18	27.56	27.75	28.11	28.05	27.93
14	27.72	27.01	26.01	26.17	26.95	27.20	27.52	27.75	28.10	28.05	27.94
15	27.73	26.98	26.02	26.09	27.06	27.25	27.50	27.75	28.08	28.06	27.95
16	27.72	26.97	26.02	26.07	27.10	27.24	.....	27.76	28.04	28.06	27.95
17	26.99	25.74	26.25	27.04	27.26	.....	27.77	28.02	28.07	27.95
18	27.01	25.53	26.32	26.67	27.27	.....	27.86	28.00	28.07	27.85
19	27.01	25.64	26.25	26.65	27.30	.....	27.81	27.99	28.07	27.96
20	27.72	27.00	25.82	26.25	26.66	27.35	.....	27.91	27.98	28.07	27.96
21	27.70	26.92	25.90	26.29	26.69	27.33	.....	27.96	27.97	28.08	27.97
22	27.68	26.95	25.92	26.33	26.72	27.33	27.57	27.98	27.98	28.08	27.97
23	27.65	26.99	25.79	26.36	26.76	27.34	27.64	27.97	27.98	28.05	27.98
24	27.64	27.03	25.63	26.38	26.79	27.35	27.67	27.89	27.99	28.06	27.98
25	27.63	27.04	25.69	26.42	26.82	27.36	27.63	27.89	27.99	28.06	27.98
26	27.63	27.03	25.77	26.45	26.85	27.38	27.61	27.88	28.00	28.06	27.99
27	27.62	27.12	25.78	26.47	26.86	27.42	27.62	27.98	28.00	28.06	27.99
28	27.83	27.60	27.15	25.48	26.50	26.89	27.44	27.60	28.03	28.01	28.05	27.99
29	27.83	.....	27.04	25.43	26.53	26.92	27.47	27.60	28.07	28.01	28.05	27.94
30	27.79	.....	26.94	25.50	26.58	26.93	27.49	27.61	28.09	28.01	28.05	27.89
31	27.78	.....	26.54	.....	26.62	.....	27.47	27.68	.....	28.01	.....	27.84

R-3. Voisard Factory. Shiloh. Lat. 41°58'00", long. 82°36'06". Drilled unused well in gravel, diameter 8 inches, depth 150 feet. Highest water level 23.42 below lsd, June 24, 1947; lowest 31.96 below lsd, Dec. 25, 1954. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	31.05	30.65	30.55	30.60	29.25	29.40	29.80	30.37	30.60	31.28	31.20	31.59
2	30.90	30.55	30.80	30.25	29.20	29.20	29.80	30.19	30.55	31.25	31.29	31.45
3	31.10	30.65	30.75	30.60	29.00	29.25	29.85	30.30	30.58	31.25	31.22	31.38
4	30.95	30.60	30.90	30.45	29.05	29.05	29.70	30.38	30.68	31.28	31.09	31.27
5	30.65	30.60	30.70	30.40	29.00	29.35	29.75	30.34	30.68	31.25	31.36	31.57
6	30.75	30.85	30.70	30.15	28.85	29.45	29.70	30.35	30.74	31.65	31.28	31.83
7	30.85	31.05	30.60	30.00	28.85	29.40	29.50	30.38	30.62	31.65	31.31	31.80
8	31.00	30.45	30.85	30.35	28.95	29.35	29.70	30.34	30.79	31.40	31.45	31.48
9	30.60	30.60	30.45	30.55	28.95	29.75	29.70	30.27	30.79	31.25	31.58	31.20
10	30.90	30.55	30.45	30.30	29.05	30.55	29.75	30.28	30.62	31.08	31.62	31.55
11	30.60	31.00	30.60	30.10	29.05	30.95	29.70	30.37	30.84	31.03	31.45	31.72
12	30.85	31.30	30.70	30.45	28.95	31.00	29.65	30.49	30.94	31.10	31.55	31.66
13	31.20	31.05	30.40	30.10	29.10	30.75	29.70	30.56	30.91	31.29	31.50	31.52
14	30.90	30.80	30.65	29.85	29.10	30.50	29.65	30.52	30.91	31.24	31.37	31.37
15	30.85	30.90	30.70	29.70	29.05	30.35	29.95	30.38	30.88	31.02	31.42	31.21
16	.....	30.70	31.00	29.65	28.90	30.15	30.10	30.42	30.98	31.06	31.25	31.63
17	.....	31.10	30.85	29.65	29.05	30.15	30.05	30.43	30.93	31.31	31.27	31.67
18	.....	31.20	30.70	29.70	29.00	30.15	29.85	30.44	30.80	31.55	31.28	31.25
19	.....	31.10	30.25	29.85	29.00	30.00	29.95	30.31	30.68	31.50	31.17	31.55
20	.....	30.65	30.50	29.95	29.05	29.80	29.95	30.43	30.76	31.37	31.17	31.64
21	31.00	30.70	30.65	29.80	29.10	29.70	29.85	30.50	30.79	31.17	31.27	31.46
22	31.10	30.95	30.70	29.70	29.15	29.65	29.90	30.50	31.01	31.28	31.33	31.68
23	31.15	30.65	30.50	29.70	29.20	29.80	29.90	30.46	31.24	31.40	31.27	31.49
24	30.90	30.55	30.65	29.70	29.25	29.75	30.00	30.50	31.24	31.40	31.00	31.90
25	31.10	30.55	30.30	29.60	29.25	29.60	30.05	30.35	31.00	31.29	31.20	31.96
26	30.90	30.70	30.60	29.30	29.35	29.55	30.16	30.43	30.90	31.09	31.44	31.88
27	30.75	30.50	30.60	29.05	29.40	29.05	30.20	30.50	31.02	31.02	31.15	31.87
28	31.20	30.55	30.35	29.35	29.20	29.65	30.25	30.48	31.10	31.08	31.14	31.89
29	30.95	.....	30.30	29.25	29.35	29.60	30.21	30.48	31.15	30.80	31.62	31.80
30	30.90	.....	30.30	29.25	29.45	29.60	30.28	30.38	31.20	30.96	31.84	31.86
31	31.10	.....	30.45	.....	29.50	.....	30.33	30.45	.....	31.25	.....	31.91

R-4. City of Mansfield. Lat. 40°45'30", long. 82°31'00". Drilled unused well in gravel, diameter 14 inches, depth 127 feet. Highest water level 28.70 below lsd, May 31, 1949; lowest 53.95 below lsd, Oct. 30-31, 1953. Records available: 1942-47, 1949-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	46.85	50.90	.....	53.70	50.85	46.80	51.50	47.95	51.90	53.30	49.90	50.90
2	46.75	52.30	.....	53.80	49.75	49.70	51.60	47.45	52.20	53.30	51.90	51.25
3	45.05	53.10	.....	53.90	48.30	50.60	51.65	48.60	52.35	51.95	52.70	51.45
4	47.55	53.35	.....	50.30	49.75	51.00	48.25	49.15	51.70	50.75	53.20	51.45
5	50.15	53.60	.....	50.90	50.65	50.90	45.05	49.40	49.25	52.25	53.50	47.80

R-4--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	51.55	53.65	.....	52.60	51.45	46.75	43.75	49.55	46.00	53.10	53.50	48.20
7	52.40	49.75	.....	53.10	51.95	47.60	44.20	49.60	47.55	53.50	50.00	49.95
8	52.85	50.00	49.60	53.75	52.00	49.85	44.30	49.25	50.40	53.60	49.60	50.50
9	52.85	52.10	51.95	53.85	48.25	50.75	44.10	47.25	51.30	53.65	51.95	50.95
10	48.90	52.85	52.85	53.75	48.60	51.15	43.80	49.00	51.85	53.10	52.65	51.40
11	49.20	53.55	53.20	49.95	50.70	51.25	42.85	49.90	51.90	51.60	53.00	51.40
12	51.45	53.75	53.45	50.90	51.50	50.85	45.70	50.35	51.70	52.85	53.45	49.40
13	52.15	53.75	53.45	52.35	51.90	48.50	48.75	50.50	49.10	53.40	53.50	48.20
14	52.65	49.15	50.05	52.40	52.10	49.20	49.70	50.55	51.10	53.45	50.25	50.05
15	52.70	50.25	50.40	52.30	52.10	50.65	50.25	48.30	51.95	53.65	49.90	50.75
16	.....	52.10	51.70	52.20	47.95	51.35	50.25	48.30	52.45	53.80	51.85	51.30
17	.....	53.15	51.90	52.10	48.30	51.80	50.05	49.60	52.70	50.70	52.70	51.45
18	.....	53.40	52.00	48.20	50.60	51.95	49.55	50.00	52.80	51.05	53.10	51.65
19	.....	53.65	52.30	48.60	51.40	51.95	48.45	50.35	52.65	52.50	53.35	50.05
20	.....	53.65	52.65	50.40	51.80	47.80	49.15	50.80	50.90	53.10	53.45	48.40
21	.....	49.35	49.95	50.85	52.10	47.90	49.50	50.80	52.35	53.50	50.05	50.25
22	.....	49.50	49.60	51.20	52.10	50.20	49.70	47.40	53.00	53.80	50.05	50.85
23	.....	51.30	52.00	51.30	51.70	50.70	49.80	47.95	53.35	53.85	51.80	51.15
24	.....	52.50	52.75	51.30	48.75	.....	49.80	49.80	53.45	50.70	52.65	51.25
25	.....	53.15	53.20	47.80	50.75	.....	46.20	51.05	53.45	49.80	52.70	47.50
26	.....	53.70	53.75	47.85	51.50	.....	46.50	51.90	51.15	51.80	49.85	44.20
27	.....	53.75	53.80	49.50	51.80	.....	48.00	52.10	49.75	52.75	50.25	47.00
28	.....	49.55	50.05	50.40	51.85	49.30	48.45	52.15	51.65	53.10	47.70	49.80
29	53.10	.....	50.75	50.65	51.20	50.60	48.70	50.40	52.65	53.35	48.80	50.50
30	53.15	.....	52.65	50.85	47.00	51.15	48.90	49.00	53.10	53.45	50.40	51.30
31	53.20	.....	53.30	.....	44.60	.....	48.95	51.15	.....	50.30	.....	51.45

Ross County

Ro-3. Mead Paper Corp. Hickory St. and Baltimore & Ohio RR. tracks, Chillicothe. Lat. 39°20', long. 82°58". Drilled unused well in gravel, diameter 30 inches, depth 51 feet. Highest water level 17.20 below lsd, Mar. 21, 1943; lowest 42.92 below lsd, Dec. 24, 1949. Records available: 1941-54.

Daily lowest water level from recorder graph*

Day	Jan.	Feb.	Mar.	May	June	July	Aug.	Sept.	Dec.
1	.....	39.24	39.44	.....	36.20	35.80	35.12	.....	.....
2	.....	39.21	39.39	.....	36.15	35.68	35.12	.....	.....
3	.....	39.21	39.32	36.56	36.12	35.57	35.11	.....	.....
4	.....	39.23	39.32	36.55	36.11	35.47	35.11	.....	.....
5	38.68	39.27	39.32	36.49	36.10	35.37	35.13	.....	.....
6	38.71	39.32	39.32	36.45	36.09	35.24	35.17	.....	.....
7	38.75	39.35	39.30	36.43	36.07	35.10	35.19	.....	37.40
8	38.81	39.35	39.23	36.43	36.00	34.92	35.22	.....	37.42
9	38.87	39.32	39.18	36.43	35.93	34.74	35.22	.....	37.51
10	38.92	39.29	39.17	36.42	35.92	34.56	35.18	.....	37.53
11	38.93	39.29	39.17	36.36	35.94	34.58	35.16	.....	37.53
12	38.95	39.32	39.18	36.28	35.96	34.20	35.16	.....	37.52
13	39.00	39.34	39.18	36.25	35.98	34.04	35.18	.....	37.55
14	39.05	39.37	39.15	36.24	35.98	34.02	35.20	35.35	37.58
15	39.12	39.36	39.05	36.25	35.98	34.09	35.24	.....	37.61
16	39.18	39.33	38.95	36.25	35.98	34.20	35.24	.....	37.63
17	39.25	39.33	38.87	36.25	35.99	34.32	35.21	.....	37.65
18	39.26	39.37	38.79	36.18	36.00	34.43	35.22	.....	37.65
19	39.27	39.40	38.72	36.13	36.01	34.50	.....	.....	37.62
20	39.30	39.45	38.67	36.12	36.02	34.55	.....	.....	37.57
21	39.33	39.47	38.62	36.14	36.02	34.63	.....	.....	37.52
22	39.36	39.47	38.55	36.16	36.00	34.73	.....	.....	37.53
23	39.37	39.44	38.46	36.18	36.00	34.82	.....	.....	37.53
24	39.38	39.41	38.38	36.18	36.00	34.87	.....	.....	37.47
25	39.37	39.41	38.32	36.17	36.02	34.91	.....	.....	37.38
26	39.32	39.43	38.26	36.17	36.04	34.91	.....	.....	37.24
27	39.26	39.44	38.20	36.18	36.07	34.91	.....	.....	37.11
28	39.22	39.45	38.13	36.21	36.06	34.94	.....	.....	37.05
29	39.21	.....	38.10	36.24	36.01	34.98	.....	.....	37.03
30	39.22	.....	38.03	36.26	35.92	35.02	.....	.....	37.04
31	39.24	.....	.....	36.26	.....	35.08	.....	.....	37.05

* No record for April, October, and November.

Sandusky County

S-1. City of Woodville. Lat. 41°27', long. 83°22'. Drilled unused well in limestone, diameter 10 inches, depth 188 feet. Highest water level 8.85 below lsd, May 2, 1950; lowest 25.60 below lsd, Dec. 7, 1953. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	25.35	25.30	24.80	23.30	21.95	21.85	22.52	22.61	22.38	22.30	21.92	22.17
2	25.25	25.35	24.75	23.15	21.80	22.03	22.50	22.62	22.34	22.24	21.80	22.03
3	25.40	25.35	24.65	23.10	21.80	21.83	22.65	22.46	22.37	22.38	21.85	21.82
4	25.35	25.30	24.50	23.00	21.80	22.08	22.57	22.50	22.38	22.55	21.82	21.80
5	25.35	25.20	24.50	22.85	21.75	22.07	22.54	22.47	22.50	22.58	21.97	21.88
6	25.40	25.35	24.45	22.95	21.70	22.03	22.67	22.57	22.50	22.67	21.98	21.95
7	25.45	25.25	24.40	22.80	21.70	21.97	22.60	22.56	22.42	22.68	21.83	21.94
8	25.35	25.25	24.35	23.10	21.80	21.98	22.65	22.57	22.45	22.47	21.90	21.65
9	25.45	25.30	24.30	23.05	21.80	22.02	22.67	22.55	22.45	22.42	21.95	21.54
10	25.25	25.30	24.30	22.85	21.80	22.05	22.71	22.40	22.24	22.43	21.95	21.98
11	25.35	25.35	24.25	22.80	21.70	22.07	22.70	22.44	22.52	22.38	21.93	21.90
12	25.45	25.30	24.20	22.75	21.80	22.09	22.65	22.46	22.49	22.22	21.96	21.90
13	25.35	25.25	24.15	22.75	21.85	22.22	22.63	22.48	22.30	22.35	21.96	21.75
14	25.40	25.25	24.15	22.50	21.85	22.27	22.68	22.54	22.32	22.20	21.87	21.60
15	.....	25.30	24.15	22.55	21.85	22.19	22.78	22.60	22.39	22.11	21.86	21.67
16	.....	25.25	24.15	22.40	21.80	22.25	22.84	22.65	22.36	22.22	21.78	21.79
17	.....	25.25	24.05	22.35	21.75	22.27	22.62	22.63	22.38	22.17	21.87	21.73
18	.....	25.15	24.00	22.25	21.85	22.31	22.61	22.53	22.37	22.29	21.82	21.65
19	25.40	25.10	23.95	22.30	21.85	22.30	22.63	22.39	22.36	22.21	21.77	21.93
20	25.45	25.05	23.85	22.20	21.90	22.34	22.63	22.48	22.45	21.88	21.93	21.94
21	25.45	25.05	24.05	22.10	21.95	22.20	22.67	22.65	22.57	21.73	21.95	21.93
22	25.45	25.05	23.95	21.95	21.90	22.30	22.68	22.62	22.58	21.77	21.92	21.76
23	25.50	25.00	23.90	22.05	21.95	22.35	22.65	22.42	22.53	21.93	21.90	21.52
24	25.45	24.95	23.75	22.00	22.00	22.25	22.72	22.32	22.43	21.85	21.70	21.92
25	25.45	24.95	23.80	21.95	21.90	22.23	22.73	22.23	22.46	21.68	21.95	21.89
26	25.45	24.95	23.50	21.90	22.05	22.42	22.64	22.52	22.37	21.65	22.00	21.89
27	25.40	24.90	23.45	21.70	22.05	22.46	22.55	22.47	22.30	21.65	21.94	21.86
28	25.30	24.80	23.40	21.95	21.85	22.38	22.54	22.51	22.37	21.65	21.70	21.91
29	25.25		23.40	21.90	21.95	22.41	22.50	22.42	22.32	21.57	22.05	21.87
30	25.30		23.40	21.90	22.05	22.50	22.54	22.35	22.26	21.62	22.19	21.98
31	25.30		23.35		21.95		22.56	22.32		21.88		21.99

Seneca County

Se-1. City of Green Springs. Lat. 41°13'15", long. 83°03'18". Drilled unused well in limestone, diameter 10 inches, depth 88 feet. Highest water level 24.20 below lsd, June 3, 1947; lowest 36.60 below lsd, Nov. 19, 1953. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	34.85	35.80	.....	.....	.....	33.65	35.25	35.85	35.10	34.85	34.55	34.20
2	34.95	33.95	.....	.....	.....	34.10	35.30	35.90	34.95	35.15	34.90	34.55
3	34.55	34.60	.....	.....	33.05	32.80	34.35	35.25	35.45	35.25	34.90	34.20
4	34.70	34.35	.....	.....	32.85	32.90	33.60	35.55	35.50	35.00	34.50	34.55
5	35.50	34.85	.....	.....	32.95	33.40	33.70	34.30	35.20	35.10	35.60	34.35
6	34.75	34.30	.....	.....	32.75	33.00	33.95	34.90	35.10	34.65	35.65	34.65
7	35.10	34.35	.....	.....	32.80	33.65	33.65	34.65	35.20	34.85	34.65	34.10
8	35.95	34.75	.....	.....	33.10	33.70	33.60	34.25	35.25	35.35	34.70	34.70
9	34.75	34.55	.....	.....	32.90	34.65	33.65	34.40	35.40	34.95	34.75	34.70
10	34.50	35.05	.....	.....	33.10	34.00	33.95	35.40	35.65	34.95	34.50	34.45
11	34.80	33.95	.....	.....	32.75	33.60	33.50	35.65	34.90	35.95	34.65	34.60
12	35.90	34.15	.....	.....	32.85	33.55	34.55	34.40	34.55	35.00	34.65	34.65
13	35.45	34.70	.....	.....	33.00	33.05	33.90	35.65	34.80	34.85	34.45	34.55
14	34.65	34.10	.....	.....	33.15	33.75	33.85	35.70	35.35	34.80	34.20	34.95
15	34.35	34.65	.....	.....	33.15	33.65	33.80	35.50	35.00	34.85	34.80	34.40
16	.....	34.95	.....	.....	33.10	33.00	33.85	35.40	34.95	34.70	34.00	34.55
17	.....	34.45	.....	.....	33.35	33.65	34.35	34.85	35.15	34.40	34.20	34.25
18	.....	.....	.....	.....	33.10	33.70	34.10	34.60	34.60	34.95	35.50	34.10
19	.....	.....	.....	.....	32.60	33.90	34.25	29.55	34.45	34.85	34.80	34.35
20	.....	.....	.....	.....	33.20	33.55	35.00	35.30	34.95	34.65	34.20	34.65
21	34.40	.....	.....	.....	32.95	33.85	33.75	36.15	34.95	34.70	35.10	34.75
22	34.50	.....	.....	.....	33.25	34.10	34.25	36.10	35.20	34.75	34.35	34.75
23	34.85	.....	.....	.....	33.15	33.65	34.20	35.60	35.95	34.90	34.50	34.70
24	36.50	.....	.....	.....	33.20	34.30	35.25	36.00	35.55	35.10	34.75	34.70
25	34.00	.....	.....	.....	32.60	34.25	34.90	36.15	34.90	34.95	34.35	34.30

Se-1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	34.85	.....	.....	.....	33.15	33.65	34.60	35.10	34.80	34.55	34.25	34.05
27	34.60	.....	.....	.....	32.90	33.75	34.45	34.65	35.35	34.80	34.40	34.65
28	34.80	.....	.....	.....	32.75	34.15	35.10	34.75	35.50	34.35	34.05	34.45
29	34.55	.....	.....	.....	33.10	33.55	35.25	34.70	35.55	34.40	34.60	34.35
30	34.65	.....	.....	.....	32.90	34.25	35.40	34.70	35.10	34.10	34.40	34.15
31	35.70	.....	.....	.....	33.30	.....	35.80	35.05	.....	34.35	.....	34.05

Shelby County

Sh-1. John Wenger. Lat. 40°26'15", long. 84°12'06". Drilled unused well in limestone, diameter 4 inches, depth 120 feet. Highest water level 10.35 below lsd, Jan. 28, 1949; lowest 15.08 below lsd, Jan. 13-14, 17-18, 1954. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14.90	14.53	14.35	13.89	13.24	13.54	13.90	14.25	13.53	14.13	13.47	13.90
2	14.90	14.46	14.30	13.85	13.24	13.46	13.92	14.23	13.54	14.14	13.51	13.87
3	14.97	14.47	14.25	13.80	13.19	13.46	13.93	14.21	13.55	14.14	13.53	13.87
4	14.98	14.48	14.18	13.83	13.16	13.46	13.93	14.23	13.61	14.13	13.53	13.87
5	14.96	14.51	14.18	13.82	13.16	13.56	13.93	14.25	13.64	14.12	13.53	13.97
6	14.93	14.59	14.18	13.78	13.12	13.59	13.95	13.55	13.66	14.11	13.53	14.09
7	14.97	14.64	14.17	13.64	13.10	13.59	13.95	13.28	13.66	14.14	13.50	14.12
8	14.99	14.64	14.17	13.45	13.14	13.59	13.91	13.12	13.69	14.14	13.51	14.12
9	14.96	14.50	14.17	13.40	13.14	13.60	13.95	13.14	13.71	14.10	13.54	14.07
10	15.00	14.50	14.13	13.38	13.17	13.62	13.98	13.20	13.71	14.08	13.56	14.12
11	15.00	14.61	14.15	13.30	13.17	13.62	13.99	13.30	13.73	14.01	13.56	14.22
12	15.04	14.68	14.16	13.36	13.20	13.60	13.99	13.39	13.78	13.96	13.55	14.24
13	15.08	14.68	14.16	13.37	13.22	13.62	13.99	13.44	13.79	13.82	13.55	14.25
14	15.08	14.61	14.18	13.35	13.24	13.63	13.99	13.47	13.80	13.69	13.52	14.24
15	15.03	14.60	14.28	13.30	13.25	13.63	14.03	13.47	13.80	13.49	13.53	14.22
16	15.00	14.60	14.35	13.27	13.25	13.61	14.09	13.43	13.82	13.16	13.53	14.32
17	15.08	14.63	14.36	12.98	13.26	13.61	14.10	13.44	13.84	13.13	13.53	14.32
18	15.08	14.64	14.35	12.78	13.29	13.62	14.10	13.44	13.84	13.22	13.53	14.26
19	15.04	14.62	14.28	12.72	13.30	13.62	14.08	13.38	13.84	13.26	13.53	14.30
20	15.04	14.59	14.16	12.82	13.34	13.62	14.08	13.37	13.85	13.27	13.56	14.35
21	15.05	14.42	14.25	12.89	13.39	13.61	14.08	13.41	13.85	13.26	13.62	14.40
22	15.05	14.49	14.27	12.92	13.41	13.62	14.10	13.44	13.94	13.31	13.67	14.41
23	15.05	14.49	14.24	12.99	13.44	13.68	14.11	13.46	14.01	13.37	13.71	14.39
24	15.02	14.41	14.24	13.04	13.45	13.71	14.15	13.47	14.02	13.40	13.71	14.40
25	15.03	14.39	14.22	13.09	13.45	13.71	14.18	13.47	14.02	13.40	13.70	14.49
26	15.02	14.36	14.24	13.09	13.50	13.71	14.21	13.43	14.01	13.39	13.79	14.49
27	.....	14.36	14.27	13.09	13.50	13.77	14.23	13.43	14.02	13.36	13.79	14.48
28	14.71	14.35	14.24	13.09	13.49	13.81	14.23	13.45	14.06	13.38	13.69	14.48
29	14.60	.....	14.14	13.19	13.44	13.82	14.23	13.46	14.07	13.37	13.77	14.09
30	14.51	.....	14.07	13.21	13.54	13.84	14.27	13.46	14.10	13.38	13.90	13.75
31	14.53	.....	14.00	.....	13.54	.....	14.27	13.48	.....	13.44	.....	13.63

Stark County

St-1. Republic Steel Corp. Oberlin Ave., Massillon. Lat. 40°47', long. 81°31'. Drilled unused well in gravel, diameter 6 inches, depth 48 feet. Highest water level 41.70 below lsd, June 16, 1947; lowest 55.16 below lsd, Mar. 6, 1954. Records available: 1942-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	54.75	54.97	54.43	.....	51.66	51.91	52.14	52.70	53.14	51.92	52.85
2	.....	54.85	55.04	54.40	52.16	51.76	51.91	52.02	52.75	53.14	51.97	52.89
3	.....	54.90	55.07	54.35	52.00	51.81	51.90	52.13	52.80	53.07	52.03	52.94
4	.....	54.95	55.12	54.25	51.95	51.88	51.80	52.20	52.81	52.66	52.08	52.97
5	.....	54.95	55.15	54.10	51.94	51.89	51.68	52.27	52.71	53.00	52.14	52.98
6	54.35	55.00	55.16	54.02	51.95	51.82	51.59	52.31	52.65	53.05	52.14	53.01
7	54.40	54.75	55.05	54.00	51.95	51.68	51.53	52.32	52.73	53.09	52.07	53.06
8	54.45	54.85	54.93	54.05	51.95	51.78	51.63	52.24	52.81	53.17	52.05	53.11
9	54.45	54.95	55.00	54.05	51.86	51.83	51.72	52.19	52.87	53.17	52.11	53.16
10	54.40	.....	55.05	53.99	51.73	51.89	51.75	52.30	52.93	53.09	52.14	55.22

St-1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	54.35	.....	55.08	53.91	51.73	51.93	51.68	52.39	52.93	52.98	52.18	53.24
12	54.45	.....	55.08	53.80	51.78	51.94	51.59	52.47	52.87	53.10	52.24	53.25
13	.....	.....	55.04	53.71	51.82	51.82	51.71	52.51	52.75	53.14	52.26	53.26
14	.....	.....	54.90	53.66	51.86	51.70	51.81	52.53	52.86	53.17	52.24	53.30
15	.....	.....	54.77	53.64	51.86	51.78	51.91	52.46	52.92	53.17	52.26	53.35
16	.....	54.98	54.79	53.63	51.72	51.84	51.99	52.34	52.94	53.10	52.33	53.40
17	.....	55.02	54.82	53.58	51.63	51.90	52.00	52.43	52.94	52.80	52.40	53.44
18	.....	55.02	54.85	53.44	51.67	51.93	51.93	52.48	52.94	52.50	52.45	53.47
19	.....	55.03	.....	53.25	51.69	51.94	51.80	52.55	52.83	52.30	52.50	53.46
20	.....	55.03	.....	53.14	51.73	51.85	51.92	52.61	52.78	52.18	52.53	53.50
21	.....	54.94	.....	53.09	51.77	51.68	52.01	52.62	52.89	52.11	52.53	53.55
22	.....	54.88	.....	53.07	51.77	51.71	52.08	52.52	52.95	52.12	52.55	53.60
23	.....	54.96	54.75	53.06	51.68	51.79	52.15	52.44	53.00	52.13	52.58	53.65
24	.....	55.02	54.79	53.03	51.57	51.84	52.17	52.54	53.03	52.06	52.60	53.67
25	.....	55.05	54.82	52.90	51.67	51.87	52.11	52.60	53.03	51.95	52.64	53.64
26	.....	55.10	54.83	.....	51.73	51.87	52.01	52.67	52.95	51.96	52.68	53.52
27	54.75	55.10	54.82	.....	51.79	51.80	52.07	52.70	52.90	51.99	52.69	53.45
28	54.80	55.02	54.68	.....	51.81	51.72	52.15	52.70	53.00	52.00	52.69	53.55
29	54.85	.....	54.53	.....	51.79	51.83	52.20	52.59	53.06	52.05	52.76	53.62
30	54.85	.....	54.45	.....	51.72	51.87	52.22	52.53	53.11	52.05	52.81	53.62
31	54.80	.....	54.45	.....	51.61	.....	52.21	52.65	.....	51.98	.....	53.60

St-4. Adessi Bros. Near Canton. Lat. 40°51'00", long. 81°20'00". Drilled unused well in gravel, diameter 4 inches, depth 190 feet. Highest water level 6.92 below lsd, Feb. 6, 1952; lowest 22.42 below lsd, Feb. 2, 1942. Records available: 1941-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	19.84	19.91	19.73	17.79	14.08	14.54	15.12	16.41	17.55	18.73	17.33	18.53
2	19.86	19.87	19.73	17.52	14.04	14.58	15.15	16.45	17.59	18.76	17.38	18.55
3	19.89	19.84	19.62	17.31	14.01	14.61	15.19	16.49	17.63	18.80	17.42	18.61
4	19.92	19.84	.....	17.18	13.99	14.65	15.23	16.53	17.67	18.83	17.46	18.65
5	19.94	19.83	.....	17.11	13.99	14.69	15.29	16.57	17.70	18.85	17.54	18.67
6	19.97	19.84	.....	17.05	13.98	14.74	15.29	16.61	17.74	18.86	17.59	18.71
7	19.99	19.86	.....	17.02	13.99	14.77	15.33	16.64	17.78	18.86	17.64	18.74
8	20.02	19.87	19.02	16.99	14.00	14.80	15.37	16.68	17.81	18.86	17.69	18.78
9	20.05	19.88	18.95	16.97	13.99	14.82	15.42	16.72	17.86	18.86	17.73	18.81
10	20.07	19.90	18.88	16.89	13.95	14.83	15.46	16.76	17.89	18.86	17.78	18.85
11	20.10	19.91	18.82	16.79	13.91	14.85	15.51	16.80	17.93	18.88	17.82	18.89
12	20.12	19.93	18.77	16.73	13.90	14.87	15.54	16.84	17.97	18.91	17.86	18.93
13	20.15	19.95	18.74	16.59	13.91	14.88	15.57	16.88	18.01	18.94	17.90	18.96
14	20.17	19.96	18.71	16.45	13.93	14.87	15.61	16.93	18.05	18.95	17.93	19.00
15	20.20	19.98	18.69	16.34	13.94	14.83	15.66	16.97	18.10	18.95	17.97	19.03
16	20.23	19.98	18.69	16.27	13.96	14.80	15.71	17.01	18.15	18.95	18.00	19.07
17	20.25	19.98	18.70	16.18	13.99	14.78	15.75	17.05	18.19	18.80	18.04	19.10
18	20.27	19.97	18.71	15.86	14.02	14.79	15.79	17.07	18.23	18.27	18.08	19.13
19	20.29	19.92	18.73	15.44	14.05	14.80	15.83	17.10	18.27	18.81	18.10	19.15
20	20.32	19.85	18.75	15.13	14.09	14.81	15.87	17.13	18.28	17.46	18.14	19.16
21	29.33	19.79	18.76	14.99	14.13	14.83	15.91	17.17	.....	17.24	18.17	19.18
22	20.32	19.75	18.75	14.90	14.17	14.85	15.96	17.21	.....	17.13	18.21	19.19
23	20.26	19.73	18.73	14.86	14.21	14.88	16.00	17.25	.....	17.07	18.25	19.20
24	20.19	19.70	18.72	14.80	14.24	14.91	16.05	17.29	.....	17.05	18.28	19.22
25	20.15	19.69	18.71	14.60	14.26	14.93	16.10	17.33	.....	17.06	18.31	19.24
26	20.14	19.69	18.70	14.56	14.32	14.96	16.14	17.36	.....	17.09	18.35	19.26
27	20.13	19.69	18.58	14.50	14.36	14.99	16.19	17.39	18.58	17.12	18.38	19.29
28	20.13	19.71	18.45	14.44	14.39	15.02	16.23	17.42	18.62	17.15	18.42	19.31
29	20.08	.....	18.35	14.30	14.43	15.05	16.28	17.49	18.66	17.20	18.46	19.32
30	20.00	.....	18.22	14.16	14.47	15.08	16.32	17.48	18.69	17.24	18.49	19.32
31	19.94	.....	18.05	.....	14.51	.....	16.37	17.52	.....	17.29	.....	.....

St-5A. City of Canton. Canton Waterworks. Northeast well field. 30th St. and Harrisburg Rd. Lat. 40°50', long. 81°21'. Drilled unused well in gravel, diameter 12 inches depth 132 feet. Highest water level 26.45 below lsd, Mar. 11, 1950; lowest 49.65 below lsd, Dec. 29-31, 1954. Records available: 1949-54.

St-5A--Continued.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	48.10	42.15	46.10	47.30	45.45	43.40	43.75	45.85	45.40	47.15	46.45	48.20
2	47.30	42.45	45.90	47.40	45.05	43.30	43.90	44.75	46.15	47.30	47.00	48.15
3	46.95	44.05	46.05	47.30	44.70	43.50	44.00	45.20	46.20	47.15	47.10	48.15
4	47.30	44.60	46.45	46.65	44.20	43.20	44.00	45.50	46.10	46.85	46.90	48.25
5	47.85	44.15	46.40	46.90	44.25	42.80	44.40	45.65	46.35	46.95	47.35	48.30
6	48.00	44.15	46.40	47.15	44.45	42.55	44.45	45.55	46.10	47.10	47.40	48.30
7	48.00	44.15	46.30	47.15	44.40	42.70	44.55	45.50	46.30	47.10	46.80	48.30
8	48.20	44.15	46.05	47.25	43.75	42.85	44.20	44.80	46.45	46.80	46.80	48.40
9	48.20	44.15	46.50	47.40	43.45	43.25	44.25	44.95	46.60	46.60	47.15	48.45
10	47.55	44.20	46.70	47.40	43.65	43.45	44.25	44.95	46.65	.....	47.20	48.55
11	47.30	44.30	46.55	46.60	43.65	43.65	44.15	45.25	46.75	46.80	46.90	48.60
12	47.20	44.35	46.85	46.80	43.65	43.60	43.95	45.40	46.75	47.00	46.90	48.65
13	46.85	44.35	46.80	47.05	43.90	43.00	44.00	45.55	46.55	47.15	47.00	48.70
14	45.90	44.40	46.50	47.20	43.70	43.20	44.15	45.70	46.60	47.20	47.00	48.80
15	45.85	44.60	46.70	47.25	43.60	43.50	44.25	45.55	46.85	47.00	46.65	48.90
16	45.10	44.90	46.85	47.25	43.65	43.25	44.20	45.10	47.00	47.15	46.75	49.00
17	44.10	45.10	46.85	46.95	43.70	43.00	44.25	45.35	46.90	47.10	46.85	49.05
18	43.85	45.25	47.15	47.05	43.90	43.45	44.35	45.50	46.55	46.70	46.95	49.15
19	44.25	45.35	47.15	47.15	44.00	43.60	44.60	45.30	46.40	46.90	47.20	49.20
20	44.05	45.45	46.80	47.15	44.15	43.70	43.90	45.40	46.50	46.60	47.35	49.25
21	44.10	45.55	46.40	46.75	44.15	43.25	43.60	45.50	46.65	46.40	47.25	49.25
22	43.85	45.65	46.75	46.75	43.60	43.50	43.15	45.50	46.70	46.40	47.20	49.30
23	43.55	45.70	47.10	46.90	43.85	43.75	43.50	45.30	46.65	46.50	47.25	49.35
24	42.95	45.80	47.35	46.90	44.05	43.80	43.80	45.55	46.45	46.35	47.40	49.40
25	42.85	45.85	47.40	47.00	44.25	43.50	43.85	45.55	46.35	46.10	47.55	49.40
26	43.00	45.90	47.40	46.85	44.25	43.50	44.05	45.60	46.15	45.85	47.45	49.45
27	42.70	46.00	47.30	47.00	44.10	43.75	44.20	45.75	46.40	45.65	47.80	49.55
28	43.15	46.05	46.65	46.75	44.20	43.70	45.30	45.80	46.50	45.80	48.05	49.55
29	43.10		46.95	46.00	44.10	43.50	45.70	45.80	46.75	46.10	48.20	49.65
30	42.65		47.15	45.95	43.50	43.55	45.70	45.60	46.95	46.85	48.35	49.65
31	42.85		47.10		43.25		45.30	45.35		46.50		49.65

St-6. City of Canton. Ninth Street pumping station. Lat. 40°47', long. 81°23'. Drilled unused well in gravel, diameter 12 inches, depth 80 feet. Highest water level 1.29 above lsd, May 22, 1953; lowest 33.11 below lsd, Feb. 21, 1945. Records available: 1944-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.46	6.76	7.04	6.81	5.33	5.40	6.34	6.81	7.15	7.44	7.01	6.65
2	6.46	6.75	7.00	6.81	5.30	5.45	6.37	6.82	7.18	7.35	7.03	6.59
3	6.48	6.77	7.00	6.82	5.23	5.48	6.39	6.85	7.19	7.35	7.05	6.56
4	6.49	6.79	7.01	6.84	5.18	5.54	6.40	6.88	7.20	7.35	7.07	6.52
5	6.49	6.82	7.04	6.84	5.14	5.60	6.40	6.91	7.20	7.27	7.09	6.46
6	6.50	6.85	7.05	6.83	5.12	5.64	6.40	6.94	7.18	7.25	7.10	6.43
7	6.52	6.88	7.05	6.81	5.10	5.67	6.40	6.97	7.16	7.29	7.11	6.41
8	6.54	6.88	7.04	6.80	5.08	5.70	6.38	6.98	7.16	7.31	7.12	....
9	6.54	6.88	7.04	6.81	5.05	5.74	6.38	6.99	7.18	7.32	7.14	....
10	6.56	6.90	7.01	6.81	5.01	5.77	6.38	7.01	7.20	7.32	7.17	....
11	6.57	6.94	7.00	6.80	4.98	5.78	6.38	7.04	7.22	7.32	7.18	....
12	6.59	6.98	7.00	6.79	4.96	5.79	6.37	7.07	7.24	7.31	7.20	....
13	6.61	7.00	7.00	6.77	4.94	5.80	6.36	7.10	7.25	7.31	7.21	....
14	6.64	7.00	6.99	6.76	4.94	5.81	6.35	7.12	7.26	7.31	7.21	....
15	6.64	7.00	7.01	6.73	4.92	5.83	6.33	7.12	7.26	7.31	7.20	....
16	6.64	7.00	7.05	6.70	4.89	5.87	6.35	6.96	7.13	6.16	7.19	....
17	6.67	7.01	7.07	6.63	4.86	5.91	6.35	6.83	7.17	6.36	7.19	....
18	6.70	7.03	7.08	6.38	4.83	5.96	6.35	6.87	7.19	6.51	7.19	....
19	6.71	7.04	7.08	6.21	4.82	6.00	6.35	6.92	7.19	6.64	7.20	....
20	6.71	7.04	7.04	6.10	4.81	6.02	6.37	6.98	7.21	6.73	7.19	....
21	6.70	7.02	7.03	6.04	4.81	6.04	6.41	7.02	7.23	6.78	7.19	....
22	6.71	7.00	7.04	5.95	4.81	6.06	6.46	7.06	7.27	6.85	7.19	....
23	6.72	7.00	7.05	5.81	4.80	6.11	6.51	7.09	7.32	6.89	7.20	....
24	6.72	7.00	7.06	5.73	4.78	6.15	6.56	7.11	7.35	6.90	7.19	....
25	6.74	7.00	7.06	5.69	4.78	6.18	6.59	7.12	7.36	6.90	7.20	....
26	6.74	7.03	6.91	5.64	4.96	6.20	6.62	7.12	7.36	6.90	7.22	....
27	6.74	7.05	6.92	5.57	5.10	6.22	6.65	7.11	7.37	6.91	7.22	....
28	6.67	7.05	6.92	5.43	5.18	6.24	6.69	7.12	7.39	6.93	6.90	....
29	6.69		6.91	5.39	5.27	6.27	6.72	7.16	7.41	6.93	6.71	....
30	6.71		6.88	5.36	5.34	6.30	6.76	7.12	7.44	6.96	6.68	5.70
31	6.74		6.84		5.38		6.79	7.12		6.99		5.70

St-10. City of Canton. Lat. 45°48'40", long. 81°27'36". Drilled unused well in gravel, diameter 12 inches, depth 188 feet. Highest water level 0.78 above lsd, Feb. 4, 1952; lowest 10.21 below lsd, Dec. 21, 1945. Records available: 1944-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	1.92	1.74	1.86	0.95	....	0.50	1.03	1.51	1.77	2.00	1.32	1.70
2	1.86	1.74	1.80	.89	....	.52	1.04	1.53	1.77	2.00	1.35	1.65
3	1.89	1.77	1.70	.86	....	....	1.05	1.55	1.79	2.00	1.36	1.70
4	1.89	1.79	1.67	.84	....	....	1.06	1.56	1.80	1.99	1.38	1.71
5	1.88	1.81	1.61	.83	....	....	1.10	1.57	1.81	....	1.41	1.74
6	1.90	....	1.57	.81	....	....	1.11	1.59	1.83	....	1.42	1.75
7	1.92	....	1.57	.81	....	.63	1.12	1.60	1.84	....	1.44	1.74
8	1.92	1.84	1.57	.83	....	.64	1.14	1.61	1.86	1.89	1.46	1.74
9	1.93	1.88	1.54	.83	....	.65	1.16	1.62	1.86	1.89	1.48	1.74
10	1.93	1.89	1.50	.80	....	.67	1.17	1.63	1.86	1.89	1.49	1.78
11	1.92	1.92	1.48	.79	....	.68	1.18	1.65	1.88	1.89	1.49	1.79
12	1.97	1.94	1.46	.78	....	.70	1.22	1.67	1.90	1.89	1.52	1.79
13	1.97	1.93	1.44	.74	....	.71	1.23	1.68	1.91	1.88	1.52	1.79
14	1.96	....	1.46	.71	....	.72	1.23	1.69	1.91	1.86	1.53	1.78
15	1.96	1.92	1.49	.71	....	.73	1.27	1.68	1.91	1.79	1.54	1.80
16	1.96	1.91	1.50	.68	0.04	.75	1.28	1.65	1.90	1.41	1.54	1.82
17	1.99	1.92	1.50	.61	.07	.78	1.29	1.64	1.90	1.19	1.56	1.82
18	1.99	1.91	1.49	.47	.10	.80	1.29	1.63	1.90	1.13	1.57	1.78
19	1.99	1.89	1.48	.43	.13	.81	1.31	1.63	1.89	1.10	1.57	1.78
20	1.99	1.86	1.48	.39	.16	.83	1.33	1.66	1.91	1.08	1.59	1.78
21	1.90	1.86	1.50	.33	.20	.83	1.35	1.68	1.93	1.09	1.61	1.78
22	1.88	1.89	1.51	.30	.24	.85	1.37	1.70	1.95	1.12	1.62	1.78
23	1.86	1.89	1.51	.23	.27	.88	1.39	1.71	1.96	1.15	1.62	1.77
24	1.85	1.85	1.51	.09	.30	.89	1.41	1.71	1.96	1.17	1.62	1.83
25	1.88	1.86	1.48	.02	.30	.90	1.42	1.71	1.95	1.18	1.65	1.83
26	....	1.90	1.36	....	....	.91	1.45	1.71	1.95	1.19	1.66	1.82
27	1.87	1.90	1.33	....	....	.94	1.45	1.72	1.98	1.23	1.66	1.83
28	1.77	1.89	1.27	....	....	.98	1.46	1.73	1.99	1.24	1.66	1.81
29	1.74	....	1.22	....	....	.99	1.47	1.73	1.99	1.25	1.70	1.80
30	1.73	....	1.18	....	....	1.00	1.49	1.74	2.00	1.29	1.71	1.69
31	1.74	....	1.05	....	....	....	1.50	1.76	....	1.32	....	1.65

St-11. City of Canton. Lat. 40°51'02", long. 81°24'03". Drilled unused well in gravel, diameter 6 inches, depth 87 feet. Highest water level 0.29 below lsd, June 7, 1947; lowest 46.85 below lsd, July 29, 1954. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	33.40	45.65	37.35	34.05	37.75	41.10	42.55	40.00	....	38.05	33.05	39.35
2	33.40	45.15	42.95	33.90	38.20	35.70	43.20	39.60	....	38.00	33.10	39.80
3	33.50	39.40	37.80	33.85	38.80	35.40	43.35	39.30	....	37.95	33.15	40.10
4	33.60	38.65	36.95	33.90	39.20	35.20	43.40	45.40	....	37.90	33.15	39.95
5	33.60	44.45	36.65	33.95	39.60	35.10	37.00	44.00	....	37.85	33.20	35.25
6	33.15	38.80	36.50	33.95	39.90	35.00	36.70	45.30	....	37.65	33.15	40.25
7	33.35	38.30	36.40	33.95	40.30	34.85	42.40	45.50	....	42.50	33.15	40.75
8	33.45	38.10	36.35	33.95	40.50	34.75	36.85	39.20	....	44.45	33.20	41.10
9	33.55	44.35	36.30	33.85	40.45	39.30	36.55	45.30	....	39.00	33.20	41.45
10	33.65	44.70	36.20	33.55	39.90	39.80	36.35	39.30	....	38.20	33.20	41.75
11	37.85	44.95	36.00	33.45	40.50	40.00	36.20	38.85	....	44.20	33.20	41.75
12	39.35	45.15	35.90	33.45	40.70	35.45	41.60	38.70	....	38.45	33.20	35.90
13	40.45	39.50	35.85	33.10	40.25	34.85	42.20	38.60	....	38.15	33.20	41.60
14	41.15	38.70	35.85	32.95	40.55	39.65	43.00	38.50	....	44.15	33.20	42.00
15	41.80	44.95	35.90	32.90	40.95	40.20	43.40	38.35	....	38.30	33.20	42.25
16	42.35	45.35	35.90	32.90	35.30	....	43.55	38.25	....	37.25	33.20	42.55
17	42.75	39.15	35.95	32.75	40.20	36.00	37.30	38.15	....	34.00	33.20	42.75
18	43.10	38.70	35.95	31.50	40.65	35.20	....	37.95	....	32.15	33.25	37.25
19	43.45	44.55	35.95	34.30	35.30	35.00	43.90	37.85	38.10	31.85	33.25	36.65
20	43.80	39.10	36.00	35.65	40.50	34.80	44.40	....	37.95	31.85	33.25	42.30
21	43.80	38.35	36.00	36.65	41.25	40.15	44.80	....	37.85	31.90	33.25	42.60
22	44.00	37.50	35.90	37.25	41.75	40.85	45.35	....	37.75	32.00	33.25	42.85
23	44.25	43.45	35.85	33.15	41.75	35.95	45.60	....	42.00	32.05	33.25	43.15
24	44.50	42.80	35.85	32.30	41.40	40.75	45.35	....	44.60	32.10	33.25	43.45
25	44.80	38.40	35.85	31.80	42.10	41.60	45.95	....	44.00	36.95	33.30	37.85

St-11--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	45.00	44.15	35.75	35.00	42.20	41.80	46.25	.....	38.30	37.95	33.30	37.15
27	45.20	38.60	35.35	35.85	36.40	36.20	46.80	.....	38.15	36.00	33.30	43.20
28	45.10	38.15	35.20	36.20	41.60	41.25	46.90	.....	38.10	33.15	33.30	43.25
29	44.95		35.15	36.55	36.80	42.15	46.95	.....	43.75	33.05	38.10	43.65
30	45.20		35.05	37.15	35.75	42.25	46.85	.....	38.50	33.05	38.90	43.30
31	45.45		34.60		40.40		46.40	.....		33.05		42.85

St-22. City of Canton. Lat. 50°50'56", long. 81°24'42". Drilled unused well in gravel, diameter 6 inches, depth 37 feet. Highest water level 15.50 below lsd, Apr. 15, 1948; lowest 33.44 below lsd, Mar. 1, 1954. Records available: 1947-54. Measurement discontinued.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
1	30.76	32.97	33.44	33.23	30.69	31.47	31.46	33.31
2	30.78	33.03	.....	33.19	30.64	31.49	31.50	33.35
3	30.79	33.08	.....	33.15	30.60	31.50	31.55	33.38
4	30.80	33.11	.....	33.11	30.57	31.51	31.60	33.40
5	30.80	33.14	.....	33.06	30.56	31.51	31.66	33.41
6	30.81	33.17	.....	33.00	30.57	31.51	31.69	33.42
7	30.82	33.20	.....	32.93	30.59	31.51	31.73	.....
8	30.84	33.22	.....	32.86	30.61	31.50	31.77	.....
9	30.85	33.23	.....	32.79	30.65	31.50	31.80	.....
10	30.86	33.25	.....	32.73	30.69	31.49	31.82	.....
11	30.88	33.28	.....	32.68	30.72	31.48	31.85	.....
12	30.90	33.31	.....	32.62	30.76	31.47	31.87	.....
13	30.94	33.33	.....	32.56	30.81	31.47	31.90	.....
14	30.99	33.35	.....	32.50	30.85	31.46	31.93	.....
15	31.08	33.37	.....	32.44	30.89	31.44	31.97	.....
16	31.20	33.37	.....	32.38	30.93	31.42	32.00	.....
17	31.34	33.39	.....	32.25	30.97	31.42	32.04	.....
18	31.47	33.40	.....	32.18	31.00	31.41	32.08	.....
19	31.63	33.40	33.43	32.12	31.03	31.40	32.13	.....
20	31.79	33.41	33.42	32.00	31.05	31.39	32.18	.....
21	31.93	33.42	33.41	31.84	31.08	31.37	32.25	.....
22	32.06	33.42	33.40	31.66	31.12	31.37	32.32	.....
23	32.18	33.42	33.39	31.53	31.16	31.36	32.41	.....
24	32.30	33.42	33.38	31.42	31.19	31.36	32.50	.....
25	32.40	33.42	33.36	31.31	31.24	31.36	32.58	.....
26	32.50	33.42	33.34	31.19	31.29	31.37	32.68	.....
27	32.59	33.42	33.33	31.07	31.34	31.38	32.83	.....
28	32.68	33.43	33.32	30.94	31.38	31.39	32.96	.....
29	32.77		33.30	30.84	31.42	31.41	33.06	.....
30	32.84		33.28	30.75	31.45	31.44	33.16	.....
31	32.91		33.26		31.46		33.25	.....

Summit County

Su-3. Goodyear Tire & Rubber Co. Akron. Lat. 41°03'09", long. 81°28'00". Drilled unused well in gravel, diameter 20 inches, depth 140 feet. Highest water level 14.75 below lsd, May 16, 1951; lowest 55.87 below lsd, Oct. 18-20, 26-28, 1944. Records available: 1943-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	35.85	30.65	27.60	24.80	27.00	29.40	39.35	30.85	27.15	36.25	34.35	37.25
2	35.65	30.45	27.50	24.70	27.00	29.90	39.70	30.60	27.75	36.70	34.50	37.30
3	35.40	30.30	27.35	24.60	26.65	30.30	40.10	30.35	28.45	36.80	34.45	37.30
4	35.25	30.20	27.30	24.55	26.50	30.90	40.20	30.15	28.00	36.65	34.10	37.05
5	35.00	30.15	27.20	24.45	26.35	31.40	40.10	29.90	29.10	36.15	33.70	36.65
6	34.75	30.05	27.10	24.35	26.50	31.50	40.20	29.70	29.05	36.10	33.30	36.30
7	34.60	30.00	26.95	24.25	26.70	31.65	40.10	29.50	28.90	35.80	32.90	35.85
8	34.45	29.80	26.85	24.15	26.95	32.05	39.70	29.30	29.40	35.50	32.55	35.45
9	34.20	29.65	26.75	24.15	26.90	32.50	39.95	29.10	30.00	35.15	32.50	35.05
10	34.05	29.55	26.60	24.05	26.60	32.95	40.05	28.95	30.60	34.80	32.75	34.75
11	33.85	29.45	26.55	23.90	26.80	33.45	39.95	28.80	31.15	34.45	32.95	34.55
12	33.65	29.45	26.45	23.80	27.00	.....	39.55	28.65	31.25	34.10	33.15	34.35
13	33.60	29.25	26.30	23.75	27.20	.....	39.05	28.50	31.30	34.45	33.25	34.10
14	33.40	29.10	26.25	23.60	27.50	.....	38.55	28.35	31.70	34.90	33.45	33.80
15	33.20	29.00	26.20	24.05	27.85	34.60	37.95	28.15	32.15	35.25	33.60	33.50

Su-3--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	33.00	28.90	26.15	24.55	27.85	34.95	37.40	28.00	32.65	35.15	33.70	33.30
17	32.85	28.85	26.10	24.80	27.65	35.30	36.85	27.85	.....	33.60	34.05	33.10
18	32.75	28.80	25.95	24.80	27.80	35.80	36.40	27.70	.....	32.95	34.50	32.85
19	32.65	28.70	25.80	24.80	27.95	35.95	35.95	27.50	.....	32.40	35.00	32.65
20	32.40	28.60	.....	25.15	28.10	35.95	35.45	27.30	.....	31.95	35.65	32.50
21	32.25	28.45	.....	25.55	28.25	36.10	35.05	27.15	.....	31.55	36.25	32.25
22	32.15	28.35	.....	25.95	28.40	36.55	34.65	27.05	34.10	31.65	36.80	32.00
23	32.00	28.30	25.50	26.30	28.40	37.10	34.20	26.90	34.60	32.00	37.30	31.80
24	31.85	28.10	25.50	26.55	28.10	37.65	33.80	26.75	35.15	32.15	37.75	31.55
25	31.75	28.00	25.40	26.55	28.05	38.15	33.45	26.60	35.50	32.10	37.85	31.35
26	31.60	27.90	25.25	26.35	28.40	38.45	33.05	26.45	35.50	32.35	37.80	31.10
27	31.40	27.85	25.25	26.40	28.80	38.50	32.75	26.30	35.30	32.90	37.85	30.95
28	31.25	27.70	25.15	26.45	29.20	38.45	32.40	26.20	35.25	33.35	37.90	30.70
29	31.10	.....	25.05	26.45	29.70	38.75	32.10	26.05	35.45	33.85	37.70	30.50
30	30.90	.....	24.95	26.75	29.85	39.00	31.35	25.95	35.80	34.35	37.40	30.25
31	30.80	.....	24.90	.....	29.75	.....	31.10	26.50	.....	34.40	.....	30.10

Trumbull County

T-2. Copperweld Steel Co. Mahoning Ave., Warren. Lat. 41°16'00", long. 80°50'30". Drilled unused well in sandstone, diameter 10 inches, depth 124 feet. Highest water level 25.95 below lsd, June 20, 1949; lowest 56.75 below lsd, Oct. 24, 1952. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	42.50	.....	40.14	39.86	40.75	40.95	44.81	48.90	50.55	53.15	48.15	46.15
2	42.05	.....	40.31	40.04	40.25	41.57	45.43	48.20	51.00	52.70	48.55	49.35
3	41.50	42.80	40.37	40.04	40.15	41.09	45.40	48.80	51.45	51.35	48.65	49.35
4	42.05	42.85	40.45	39.41	40.35	41.13	44.45	49.30	51.25	50.70	48.80	49.30
5	42.65	42.80	40.45	39.68	40.34	41.06	42.60	49.90	50.30	50.80	48.95	48.95
6	42.85	42.65	40.21	40.67	40.03	40.26	43.25	49.95	51.15	50.75	48.80	48.55
7	43.00	41.90	39.45	41.12	40.03	40.35	44.80	49.60	52.00	50.80	48.45	48.55
8	42.90	41.40	39.62	41.25	40.03	41.40	45.74	48.05	52.20	50.75	48.75	48.70
9	42.60	42.05	39.78	41.15	39.35	42.24	45.86	47.70	52.20	50.80	49.00	49.00
10	42.15	42.25	40.10	40.91	38.96	42.67	45.78	48.40	52.20	50.70	45.05	49.20
11	.....	42.35	40.24	40.19	39.16	42.93	44.95	49.00	52.20	50.45	49.05	49.25
12	.....	.....	40.17	39.95	39.32	42.90	44.85	49.30	51.05	50.15	49.30	48.90
13	.....	.....	39.68	40.15	39.55	41.93	46.16	49.60	50.50	49.80	49.25	48.65
14	.....	.....	38.94	40.55	39.65	41.67	46.90	49.95	51.10	50.50	48.95	48.70
15	.....	.....	39.44	40.63	39.65	42.60	47.05	48.55	51.60	50.95	48.35	49.15
16	.....	.....	39.98	40.45	39.05	43.25	47.10	48.20	51.90	51.25	48.65	49.50
17	.....	42.07	40.22	40.37	39.38	43.01	47.10	48.85	51.90	51.20	49.05	49.20
18	.....	42.30	40.47	39.70	40.08	42.92	46.15	49.20	51.80	50.70	49.35	49.20
19	.....	42.30	40.25	39.88	40.46	42.89	45.60	49.50	50.90	50.10	49.45	49.20
20	43.30	42.18	39.77	40.58	40.77	41.55	46.90	49.50	50.30	49.90	49.35	48.90
21	43.50	41.27	.....	40.86	40.75	41.12	47.60	48.05	50.85	49.45	48.80	48.90
22	43.40	41.40	.....	41.12	40.45	43.03	48.00	47.10	51.20	49.35	48.15	48.85
23	.....	41.51	.....	41.19	39.50	43.70	48.00	48.10	51.35	49.35	48.35	48.80
24	.....	41.40	40.08	41.14	39.43	43.93	47.85	49.50	51.40	49.35	48.70	48.80
25	.....	41.45	40.04	40.08	40.60	44.28	46.80	50.00	51.30	49.30	48.80	48.05
26	.....	41.35	40.03	39.80	40.65	44.26	47.30	50.10	50.70	48.70	48.80	46.90
27	43.40	41.17	40.01	40.17	40.58	43.25	48.50	50.45	50.50	48.65	48.60	46.90
28	43.25	40.28	39.32	40.25	40.86	42.68	49.30	50.40	52.30	48.75	48.55	47.40
29	.....	.....	39.15	40.45	40.82	43.06	49.45	49.65	53.15	48.80	48.85	47.75
30	.....	.....	39.63	40.77	40.06	43.58	50.00	50.80	53.20	49.00	49.05	48.30
31	43.30	.....	39.85	.....	40.35	.....	50.00	50.20	.....	48.45	.....	48.75

Tuscarawas County

Tu-1. Everett Waltz. Near Strasburg. Lat. 40°37'09", long. 81°32'00". Drilled unused well in gravel, diameter 4 inches, depth 23 feet. Highest water level 8.03 below lsd, Feb. 8, 1952; lowest 13.87 below lsd, Sept. 30, Oct. 1-3, 1954. Records available: 1946-54.

Tu-1--Continued.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	.....	13.46	13.53	11.71	11.08	12.17	12.94	13.47	13.68	13.87	13.34	13.51
2	.....	13.47	13.39	11.59	11.12	12.20	12.96	13.47	13.70	13.87	13.35	13.50
3	.....	13.47	13.27	11.56	11.14	12.22	12.98	13.47	13.70	13.87	13.36	13.50
4	.....	13.47	13.17	11.56	11.14	12.26	13.01	13.48	13.71	13.86	13.36	13.50
5	.....	13.49	13.11	11.59	11.16	12.29	13.02	13.48	13.72	13.86	13.38	13.52
6	13.74	13.50	13.08	11.61	11.20	12.32	13.05	13.49	13.73	13.85	13.38	13.53
7	13.74	13.51	13.05	11.60	11.23	12.34	13.06	13.49	13.74	13.82	13.40	13.53
8	13.75	13.51	13.04	11.61	11.22	12.38	13.08	13.49	13.75	13.79	13.40	13.53
9	13.75	13.53	12.98	11.61	11.21	12.40	13.09	13.53	13.76	13.79	13.42	13.54
10	13.75	13.53	12.88	11.61	11.23	12.41	13.10	13.54	13.76	13.79	13.43	13.55
11	13.75	13.53	12.75	11.64	11.26	12.44	13.12	13.56	13.77	13.80	13.43	13.55
12	13.75	13.53	12.66	11.65	11.30	12.47	13.14	13.57	13.78	13.80	13.43	13.55
13	13.75	13.54	12.62	11.63	11.34	12.50	13.17	13.57	13.78	13.78	13.45	13.55
14	.....	13.55	12.61	11.67	11.39	12.53	13.18	13.58	13.79	13.75	13.45	13.55
15	.....	13.56	12.61	11.70	11.43	12.55	13.20	13.59	13.80	13.73	13.46	13.55
16	.....	13.59	12.62	11.68	11.48	12.57	13.22	13.60	13.80	13.61	13.46	13.56
17	.....	13.58	12.62	11.50	11.53	12.60	13.25	13.60	13.81	13.47	13.47	13.55
18	.....	13.57	12.63	11.32	11.60	12.62	13.26	13.61	13.81	13.47	13.49	13.53
19	.....	13.55	12.64	11.18	11.64	12.64	13.28	13.61	13.81	13.46	13.49	13.48
20	13.75	13.55	.....	11.11	11.68	12.67	13.30	13.62	13.81	13.30	13.50	13.46
21	13.70	13.54	.....	11.10	11.73	12.69	13.31	13.63	13.82	13.21	13.50	13.41
22	13.60	13.53	.....	11.14	11.78	12.72	13.32	13.64	13.82	13.23	13.51	13.40
23	13.58	13.53	12.54	11.14	11.82	12.75	13.33	13.65	13.83	13.24	13.51	13.38
24	13.57	13.52	12.54	11.05	11.86	12.77	13.35	13.66	13.83	13.25	13.52	13.38
25	13.58	13.52	12.55	10.98	11.90	12.80	13.36	13.66	13.84	13.26	13.52	13.38
26	13.58	13.53	12.52	11.00	11.94	12.81	13.38	13.64	13.84	13.27	13.52	13.37
27	13.57	13.54	12.47	11.01	11.97	12.84	13.40	13.64	13.85	13.28	13.52	13.37
28	13.52	13.54	12.46	11.03	12.01	12.86	13.41	13.65	13.85	13.29	13.52	13.36
29	13.47	.....	12.42	11.04	12.06	12.89	13.43	13.66	13.86	13.29	13.52	13.30
30	13.46	.....	12.20	11.04	12.10	12.91	13.45	13.66	13.87	13.30	13.52	13.11
31	13.46	.....	11.91	.....	12.12	.....	13.46	13.67	.....	13.31	.....	12.86

Warren County

W-1. Crosley Broadcasting Co. Near Mason. Lat. 39°20'36", long. 84°19'45". Dug unused well in gravel, diameter 4 feet, depth 50 feet. Highest water level 0.26 below lsd, Feb. 8, 1950; lowest 7.40 below lsd, Dec. 8-9, 1953. Records available: 1946-54

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	7.10	5.85	4.30	2.90	1.80	4.45	5.05	5.05	.....	5.80	4.90	4.40
2	7.10	5.80	4.00	3.00	1.70	4.35	5.15	5.05	.....	5.80	.....	4.35
3	7.10	5.75	3.70	3.15	1.20	4.30	5.15	5.05	.....	5.80	.....	4.35
4	7.05	5.75	3.50	3.20	1.50	4.25	5.05	5.05	.....	5.85	.....	4.35
5	7.05	5.70	3.50	3.25	1.80	4.25	5.05	5.05	.....	5.85	.....	4.35
6	7.05	5.65	3.50	3.25	2.10	4.30	5.05	5.05	.....	5.85	.....	4.40
7	7.05	5.60	3.55	3.05	2.10	4.35	5.05	5.05	.....	5.90	.....	4.45
8	7.00	5.60	3.60	2.80	2.00	4.45	5.05	5.05	.....	5.90	.....	4.45
9	7.00	5.55	3.60	2.80	2.05	4.35	5.10	5.05	.....	5.90	.....	4.50
10	7.00	5.55	3.60	2.90	2.25	4.35	5.15	5.00	.....	5.90	4.80	4.45
11	6.95	5.50	3.60	3.00	2.45	4.35	5.20	5.00	.....	5.90	4.80	4.50
12	6.95	5.50	3.30	3.10	2.65	4.05	5.25	4.95	.....	5.85	4.80	4.50
13	6.95	5.50	2.45	3.20	2.85	3.90	5.30	4.95	.....	5.85	4.80	4.50
14	6.95	5.50	2.60	3.30	3.00	3.85	5.35	4.95	5.45	5.85	4.80	4.35
15	6.90	5.45	2.70	3.30	3.20	3.85	5.40	5.00	5.50	5.60	4.80	4.20
16	6.85	5.45	2.85	3.30	3.35	3.75	5.45	5.00	5.55	5.60	4.80	4.05
17	6.80	5.25	2.90	1.85	3.45	3.55	5.50	5.05	5.60	5.55	4.80	3.95
18	6.80	5.25	2.90	2.15	3.60	3.70	5.55	4.95	5.60	5.55	4.80	3.85
19	6.80	5.15	2.95	2.50	3.65	3.80	5.55	4.80	5.65	5.50	4.80	3.80
20	6.75	5.10	2.00	2.75	3.75	3.95	5.60	4.70	5.65	5.40	4.80	3.75
21	6.50	5.00	2.20	2.95	3.80	4.10	5.20	4.45	5.65	5.35	4.80	3.75
22	6.50	4.85	2.30	3.10	3.90	4.25	5.00	4.30	5.70	5.30	4.85	3.75
23	6.45	4.70	2.45	2.40	4.00	4.35	4.75	4.35	5.70	5.30	4.85	3.75
24	6.90	4.65	2.50	1.85	4.05	4.50	4.65	4.40	5.70	5.25	4.80	3.80
25	6.35	4.55	2.50	2.10	4.15	4.55	4.65	4.45	5.70	5.25	4.75	3.80

W-1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	6.35	4.55	2.50	2.40	4.15	4.70	4.70	4.50	5.75	5.20	4.75	3.80
27	6.25	4.55	2.55	2.50	4.20	4.75	4.75	4.50	5.75	5.15	4.75	3.80
28	6.15	4.50	2.65	1.90	4.20	4.85	4.80	4.55	5.75	5.10	4.55	3.70
29	6.10		2.70	1.95	4.30	4.95	4.85	....	5.80	5.05	4.50	2.35
30	6.00		2.70	1.80	4.35	5.00	4.95	....	5.80	5.00	4.45	1.75
31	5.95		2.80		4.45		5.00	....		4.95		1.85

W-2. City of Lebanon. Lat. 29°26'06", long. 84°13'06". Drilled unused well in gravel, diameter 6 inches, depth 100 feet. Highest water level 11.89 below lsd, June 30, 1947; lowest 27.80 below lsd, Sept. 17, 1954. Records available: 1947-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	23.60	24.15	24.20	24.45	24.70	24.85	....	27.15	27.30	27.30	26.90	27.25
2	23.65	24.10	24.15	24.35	24.45	....	....	27.20	26.85	27.20	27.05	27.30
3	23.55	24.10	24.25	24.45	24.70	....	26.95	27.10	26.95	26.90	27.00	27.35
4	23.70	23.80	24.30	24.35	24.55	....	26.50	27.10	27.30	27.35	27.10	27.25
5	23.75	23.90	24.25	24.40	24.75	....	26.40	27.00	26.80	27.35	27.00	26.85
6	23.90	23.85	24.10	24.55	24.55	....	26.35	26.95	26.95	27.60	26.90	27.00
7	23.75	23.35	23.70	24.60	24.65	....	26.40	27.05	27.10	27.55	27.20	27.05
8	23.75	24.00	23.65	24.55	24.50	....	26.15	26.65	27.15	27.55	27.15	26.95
9	23.65	24.20	23.55	24.60	24.65	....	26.20	26.90	27.50	27.10	27.40	27.05
10	23.60	24.20	24.15	24.45	24.50	....	26.15	26.65	27.60	26.90	27.35	27.10
11	23.65	24.30	24.15	24.50	24.85	....	26.20	26.45	27.45	27.60	27.20	27.00
12	23.95	24.05	24.25	24.65	24.85	....	26.45	26.40	27.20	27.50	26.95	26.85
13	23.85	23.95	24.20	24.35	24.75	....	26.80	26.35	27.40	27.55	26.90	27.25
14	23.95	24.05	24.10	24.65	24.90	....	27.00	26.35	27.25	27.50	26.90	27.45
15	23.85	24.05	24.25	24.65	24.90	....	26.95	26.25	27.30	27.55	26.95	27.45
16	23.85	24.10	24.25	24.55	24.85	25.60	26.70	26.85	27.35	27.45	27.00	27.45
17	23.75	24.30	24.30	24.40	25.00	25.65	27.05	26.80	27.80	27.25	27.00	27.30
18	24.05	24.15	24.30	24.40	25.00	25.75	26.50	26.50	27.75	27.35	27.05	26.95
19	23.85	24.15	24.15	24.70	25.00	25.75	26.85	26.60	27.50	27.15	27.35	26.95
20	23.85	24.10	24.20	24.65	25.00	25.70	26.45	26.90	27.30	27.05	27.40	27.15
21	23.85	24.05	24.15	24.70	25.00	26.00	26.85	26.95	27.25	27.15	27.25	27.20
22	24.10	24.10	24.25	25.05	25.05	26.05	26.35	26.70	27.20	27.05	27.45	27.25
23	23.75	24.15	24.35	24.85	25.00	26.05	26.65	27.15	27.55	27.05	27.30	27.15
24	23.60	24.30	24.25	24.50	25.15	26.10	26.55	26.85	27.50	26.85	27.35	27.15
25	23.85	24.05	24.30	24.60	25.20	26.25	26.15	26.80	27.50	27.50	27.20	27.35
26	24.10	24.25	24.35	24.65	25.15	26.30	26.65	27.25	27.30	27.35	27.10	26.90
27	23.45	24.05	24.15	24.85	25.20	26.35	26.60	26.90	27.20	27.35	26.80	26.90
28	23.60	24.00	24.20	24.85	25.10	26.40	26.45	26.90	27.60	27.30	26.75	27.10
29	23.55		24.20	25.25	25.10	26.30	27.15	26.75	27.30	27.35	26.90	26.90
30	23.85		24.25	24.75	25.05	....	27.30	27.30	27.35	27.35	27.00	27.45
31	23.35		24.35		25.15		27.35	27.35		27.25		27.35

Washington County

Wa-1. Marietta Osteopathic Clinic. Fourth and Putnam Sts., Marietta. Lat. 39°25', long. 81°27'. Drilled unused well in gravel, diameter 6 inches, depth 42 feet. Highest water level 16.57 below lsd, Mar. 25, 1945; lowest 30.70 below lsd, Sept. 9, 1942. Records available: 1942-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	29.40	27.15	29.20	27.85	27.00	28.15	29.10	29.75	29.45	29.55	27.15	28.20
2	29.35	29.55	29.20	27.75	27.10	28.15	....	29.75	29.40	29.65	27.15	28.20
3	29.45	29.60	29.05	27.75	26.90	28.10	....	29.60	29.40	29.65	27.20	28.20
4	29.40	29.25	28.95	27.75	26.90	28.10	....	29.70	29.55	29.60	27.25	28.20
5	29.60	29.25	28.65	27.85	26.95	28.10	....	29.65	29.65	29.65	27.30	28.25
6	29.40	29.25	28.35	27.85	26.85	28.15	....	29.55	29.80	29.45	27.35	28.25
7	29.40	29.25	28.20	27.85	26.85	28.20	....	29.60	29.80	29.45	27.35	28.25
8	29.40	29.20	28.20	27.90	27.00	28.40	....	29.65	29.75	29.35	27.40	28.25
9	29.40	29.25	28.20	27.90	27.00	28.35	....	29.65	29.70	29.35	27.45	28.25
10	29.40	29.25	28.25	27.85	27.05	28.50	....	29.65	29.70	29.30	27.45	28.30
11	29.40	29.25	28.25	27.85	27.10	28.60	....	29.70	29.70	29.35	27.45	28.35
12	29.45	29.25	28.50	27.90	27.15	28.70	....	29.40	29.60	29.30	27.50	28.35
13	29.40	29.25	28.25	27.90	27.20	28.70	....	29.55	29.60	29.30	27.55	28.30
14	29.40	29.25	28.25	27.85	27.25	28.75	....	29.55	29.60	29.30	27.60	28.35
15	29.40	29.45	28.25	27.85	27.25	28.80	....	29.55	29.60	29.30	27.65	28.35

Wa-1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	29.45	29.30	28.20	27.90	27.30	28.85	.....	29.75	29.65	29.20	27.70	28.35
17	29.45	29.30	28.20	27.90	27.40	28.85	.....	29.65	29.65	28.90	27.75	28.30
18	29.40	29.30	28.20	27.75	27.45	28.80	.....	29.60	29.60	28.05	27.75	28.25
19	29.40	29.25	28.20	27.55	27.45	28.85	.....	29.75	29.75	26.85	27.80	28.20
20	29.40	29.25	28.25	27.30	27.55	28.90	.....	29.75	29.60	26.20	27.85	28.10
21	29.45	29.20	28.25	27.10	27.60	28.90	.....	29.70	29.50	26.20	27.90	28.00
22	29.35	29.20	28.25	27.00	27.65	28.95	.....	29.80	29.45	26.45	27.95	27.90
23	29.35	29.15	28.20	27.05	27.65	28.90	.....	29.85	29.40	26.60	27.95	27.90
24	29.30	29.15	28.25	27.05	27.70	28.90	.....	29.85	29.40	26.70	28.00	27.95
25	29.30	29.40	28.25	27.25	27.75	29.00	.....	29.85	29.35	26.80	28.05	28.00
26	29.25	29.20	28.25	27.10	27.80	29.10	.....	29.70	29.35	26.85	28.05	28.00
27	29.30	29.15	28.25	27.10	28.05	29.10	.....	29.70	29.35	26.95	28.10	28.05
28	29.30	29.20	28.15	27.10	28.10	29.05	.....	29.65	29.35	26.95	28.10	28.10
29	29.25		28.40	27.05	28.20	29.10	.....	29.70	29.50	27.05	28.15	28.10
30	29.20		28.05	27.05	28.10	29.05	.....	29.65	29.55	27.10	28.15	28.00
31	29.15		27.95		28.15		.....	29.45		27.15		27.65

Wayne County

Wn-2a. City of Wooster. Lat. 40°48', long. 81°59'. Drilled unused well in gravel, diameter 6 inches, depth 65 feet. Highest water level 1.55 below lsd, Jan. 27, 1952; lowest 23.60 below lsd, Oct. 14, 1954. Records available: 1951-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	19.55	19.60	18.65	14.75	9.10	17.25	20.00	20.55	23.00	.....	18.35	19.00
2	19.45	19.20	.....	14.65	8.95	17.70	20.55	22.20	21.85	22.80	18.60	19.10
3	19.40	19.50	18.90	14.15	10.25	.....	20.15	22.50	23.20	22.50	18.60	19.25
4	19.45	19.60	18.90	13.65	10.20	17.50	19.05	22.40	22.35	22.90	18.75	19.25
5	20.50	19.50	18.75	13.85	10.40	.....	20.00	22.70	22.25	22.95	18.85	18.80
6	19.85	19.20	.....	14.15	10.55	.....	20.20	22.40	22.20	23.10	18.85	19.25
7	19.85	18.95	.....	14.15	10.85	17.10	19.30	22.40	23.00	23.05	18.05	19.30
8	19.80	19.35	18.55	15.05	11.25	16.60	20.25	20.55	23.45	23.20	19.00	19.25
9	19.45	19.85	18.55	15.25	10.25	16.60	19.85	22.30	23.20	23.35	19.05	19.85
10	19.45	19.40	19.10	14.40	12.05	18.35	20.20	22.60	23.40	23.55	19.05	19.55
11	19.60	19.55	18.55	13.25	11.45	18.50	18.90	22.65	22.35	23.00	18.80	19.35
12	19.70	19.90	18.10	13.30	11.70	17.05	19.25	22.60	21.95	23.20	18.80	19.10
13	.....	19.70	17.75	13.05	12.90	16.10	.....	22.70	23.50	23.10	18.80	19.55
14	.....	19.05	17.05	13.60	12.60	17.85	.....	22.75	23.40	23.60	18.00	19.60
15	.....	19.75	17.25	13.75	12.60	18.10	.....	20.75	23.35	22.80	18.95	19.85
16	.....	19.75	17.75	12.95	12.15	18.25	.....	22.50	23.35	22.10	18.85	21.35
17	.....	19.80	18.45	11.25	13.15	18.35	.....	22.20	23.45	20.45	18.90	21.35
18	.....	19.95	18.50	7.05	13.60	19.70	.....	22.65	22.45	19.45	18.80	19.45
19	.....	19.55	17.55	8.55	14.05	17.00	21.75	21.85	22.20	19.10	19.00	19.40
20	.....	19.50	17.65	10.40	14.65	17.45	21.75	21.85	22.80	18.90	20.05	20.70
21	.....	18.90	16.80	10.55	14.60	18.85	21.60	21.55	22.70	18.55	18.35	20.55
22	.....	19.55	16.95	10.85	14.20	19.30	21.40	20.80	22.70	18.55	19.00	20.40
23	.....	19.45	18.10	10.95	14.10	19.45	21.70	22.70	22.95	18.60	19.05	19.90
24	.....	18.90	18.15	10.90	14.45	19.50	21.85	22.95	22.50	17.40	19.00	19.65
25	.....	19.35	17.70	9.30	15.75	19.45	21.50	23.15	22.65	18.05	18.90	19.30
26	.....	19.10	17.80	11.35	15.95	19.75	21.90	22.85	.....	18.35	19.00	19.75
27	.....	18.95	17.00	12.15	15.30	18.25	22.25	23.10	.....	18.40	19.00	19.60
28	.....	18.45	16.25	10.10	16.45	19.75	22.25	21.80	.....	18.35	18.10	19.90
29	19.25		16.10	8.90	16.95	19.90	22.40	21.10	.....	18.30	19.15	19.90
30	19.45		16.45	9.25	16.25	19.85	22.25	23.05	.....	18.15	19.10	19.65
31	19.20		15.50		14.40		22.55	23.05		17.50		19.50

Williams County

Wm-1. City of Bryan. Lat. 41°20', long. 84°33'. Drilled unused well in gravel, diameter 8 inches, depth 118 feet. Highest water level 0.95 below lsd, Feb. 25, 1952; lowest 17.05 below lsd, Sept. 1-2, 4, 1953. Records available: 1951-54.

Wm-1--Continued.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	4.90	5.35	3.90	4.35	7.15	7.10	13.15	.....	12.50	12.45	5.25	4.80
2	4.60	5.80	4.75	4.90	6.80	7.15	13.65	.....	13.20	11.95	5.85	5.70
3	3.50	5.80	4.75	....	5.85	7.15	12.80	11.35	14.55	11.10	6.20	5.30
4	4.45	5.45	4.45	....	5.85	7.50	11.10	11.15	14.00	9.40	6.65	5.20
5	4.15	5.35	4.30	....	6.65	7.20	9.45	12.25	12.50	8.85	7.40	4.40
6	....	6.55	5.45	....	6.65	6.30	9.50	11.25	10.80	9.55	6.70	4.40
7	....	5.00	3.90	4.55	6.90	6.75	9.15	11.35	13.00	9.05	5.75	4.45
8	....	4.80	4.05	5.15	6.50	8.85	9.05	11.30	13.85	8.85	6.20	5.95
9	....	5.95	5.85	5.15	6.10	8.95	8.90	9.45	13.50	8.45	6.50	5.90
10	....	4.80	5.30	5.15	6.55	10.20	8.80	11.35	14.25	7.25	6.40	5.80
11	....	6.10	6.30	4.50	6.40	10.75	7.75	11.95	13.50	....	7.15	5.85
12	5.55	5.55	5.70	3.85	6.15	11.25	8.20	13.20	11.85	7.35	6.55	4.80
13	5.45	5.45	5.85	4.80	6.85	9.90	11.45	12.90	11.55	7.50	6.60	4.85
14	5.45	4.15	4.70	4.70	7.15	11.75	13.20	12.50	12.30	8.15	6.15	4.85
15	5.10	4.55	4.70	6.05	6.95	11.60	.....	11.60	12.10	8.45	5.40	6.00
16	5.45	5.35	5.30	5.85	6.55	11.55	.....	10.30	13.80	7.50	5.80	6.90
17	5.00	5.25	5.10	5.20	6.15	11.70	.....	10.00	13.35	6.25	5.80	5.85
18	4.25	5.55	5.10	4.10	6.90	11.05	.....	10.00	12.05	....	5.80	6.00
19	5.00	5.25	5.40	4.50	8.45	11.50	10.85	11.00	10.45	7.05	5.50	4.60
20	4.90	4.85	5.40	5.35	8.55	11.55	11.35	11.65	10.55	7.35	5.55	4.75
21	5.65	4.35	3.40	6.05	7.90	10.40	11.40	11.15	11.20	7.00	5.05	5.55
22	5.60	4.40	4.60	5.90	8.20	11.15	11.50	10.25	11.60	6.90	4.65	5.35
23	5.40	5.45	5.20	6.05	7.05	11.90	11.45	10.35	11.70	6.85	5.65	5.70
24	4.15	5.05	4.70	5.85	7.60	11.85	11.15	11.40	12.95	6.80	6.70	6.00
25	5.75	5.10	4.85	5.35	8.40	11.65	11.05	12.45	11.85	5.80	5.40	4.80
26	6.20	4.70	4.95	5.40	8.90	11.65	10.75	12.20	11.35	6.15	4.15	2.10
27	6.30	4.30	4.65	5.95	9.05	10.50	12.10	12.10	11.60	6.50	4.25	3.95
28	6.45	3.85	3.55	6.05	9.10	10.05	13.20	12.20	12.70	6.35	3.60	4.60
29	6.40		3.10	6.35	8.65	11.00	.....	10.85	12.40	6.75	4.25	4.40
30	5.15		4.55	6.40	8.20	12.70	.....	10.00	11.95	6.45	5.00	5.40
31	5.00		3.75		7.00			11.35		6.00		5.95

Wyandot County

Wy-1. State of Ohio. State Highway Dept. Lat. 40°50'00", long. 83°17'00". Drilled unused well in limestone, diameter 5 inches, depth 90 feet. Highest water level 26.50 below lsd, Apr. 13, 1952; lowest 36.95 below lsd, Dec. 1, 1952. Records available: 1951-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	34.20	34.05	35.00	35.05	33.60	35.45	34.00	34.15	35.00	35.25	35.35	33.20
2	35.55	34.15	34.35	33.05	33.30	34.65	34.65	34.60	35.60	34.75	36.10	34.85
3	32.35	34.55	34.55	32.80	33.55	34.50	34.35	34.75	36.30	34.40	34.80	35.00
4	34.10	36.50	34.60	32.30	33.75	34.55	33.45	35.40	34.75	34.70	34.90	34.50
5	35.55	35.15	34.50	35.35	33.80	35.55	33.55	35.50	34.60	35.55	35.90	33.60
6	.....	36.60	34.05	35.45	34.20	33.05	34.40	36.30	35.60	35.35	34.85	35.05
7	.....	32.60	32.35	33.70	34.85	34.05	33.45	34.65	36.25	35.75	32.10	35.05
8	34.85	34.20	35.55	33.35	35.70	33.85	33.50	34.55	36.25	35.65	36.05	34.90
9	33.75	34.35	34.95	33.85	32.90	33.80	34.30	35.30	36.60	34.75	35.55	35.35
10	32.40	33.65	34.15	33.55	33.75	34.05	33.15	35.60	36.15	34.00	35.75	35.15
11	34.35	34.35	34.60	31.65	35.10	34.05	33.35	35.45	35.00	35.35	35.10	34.80
12	.....	34.05	35.00	34.25	34.30	32.75	34.25	35.80	35.60	35.70	35.85	34.05
13	.....	34.25	34.50	35.35	34.90	33.40	34.80	35.85	.....	35.65	34.90	35.25
14	35.40	32.30	32.20	34.45	34.80	33.85	35.10	35.55	36.55	35.70	32.65	35.45
15	34.35	34.30	35.30	32.75	35.35	36.05	34.10	34.25	36.80	35.55	34.20	34.90
16	33.20	36.50	35.60	34.85	33.40	.....	34.55	35.75	36.00	34.10	34.50	35.65
17	32.75	35.50	36.45	33.00	35.20	.....	33.50	35.45	35.65	34.10	36.70	35.40
18	.....	35.45	35.40	32.70	35.25	.....	33.50	35.20	34.85	35.95	34.75	34.60
19	.....	36.70	36.35	34.10	35.55	.....	34.40	35.00	.....	35.60	34.55	33.85
20	.....	35.45	34.15	34.05	35.20	.....	34.40	35.90	.....	35.60	32.35	35.60
21	.....	32.60	32.65	34.20	34.95	35.35	33.90	35.55	35.60	35.40	33.85	35.55
22	.....	35.20	34.25	33.30	35.95	34.40	34.25	34.65	35.00	36.35	34.95	35.10
23	.....	35.05	34.65	34.55	33.30	34.20	34.60	36.10	35.50	34.50	34.75	35.70
24	.....	36.80	35.40	33.80	34.20	34.20	33.70	35.85	35.90	34.40	34.45	34.45
25	.....	36.65	35.75	32.95	34.00	34.60	34.15	35.65	34.65	.....	32.55	32.10

Wy-1--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	.....	36.90	36.50	33.60	34.10	33.40	35.85	34.95	34.35	.....	35.05	34.45
27	34.30	33.85	34.75	33.95	35.75	33.55	35.15	35.60	35.10	36.75	33.90	34.70
28	35.40	32.45	33.75	33.55	35.20	34.35	34.60	34.75	35.35	36.05	31.55	34.60
29	34.70		34.90	33.85	35.70	34.40	36.10	34.40	34.75	35.25	35.30	35.30
30	34.80		34.95	33.85	33.35	34.40	36.20	35.55	34.60	34.25	33.85	.....
31	32.95		35.35		33.55		36.85	34.90		34.00		.....

PENNSYLVANIA

By Maurice O. Holtzer

Scope of Water-Level Program

The observation-well program in Pennsylvania was continued in 1954 in cooperation with the Topographic and Geologic Survey, Pennsylvania Department of Internal Affairs. Measurements were made in 90 wells in 38 counties, 27 of which were equipped with recording gages. In 1954, 15 observation wells were added and measurements were discontinued in 8 wells. Measurements were made monthly or less frequently in some wells, weekly in others, and several times a day in those observed during pumping tests. Figures 47 and 48 show the location of wells for which records are given in this report, except those in the Philadelphia and Pittsburgh areas. Figure 49 shows the location of wells in the Philadelphia area, and figure 50 shows the location of wells in the Pittsburgh area.

Weekly water levels reported for 18 wells in the drainage basin of the Susquehanna River in Pennsylvania are used by the Pennsylvania Water and Power Co. to predict the dry-weather flow of the stream 2 weeks in advance.

Precipitation

The average precipitation in Pennsylvania in 1954 was 40.67 inches, the least since 1949. The average was below the normal of 42.23 inches for the second time since 1949. Although the departure from the annual average was not large, the monthly average was below normal for 7 months of the year; and the cumulative departure from average at the end of November was 6.44 inches. Rainfall in June was only 75 percent of normal and in July only 55 percent.

Interpretation of Water-Level Fluctuations

Water levels in all observation wells declined appreciably below average as a result of the drought which continued into midsummer. However, the downward trend ceased after the abnormally high precipitation in August and October.

Natural changes in ground-water storage are reflected in the observation wells in rural areas because they are unaffected by pumping of nearby wells. A rise of water level can be attributed to an increase of ground-water storage, resulting either from precipitation at the aquifer outcrop or from recharge from a stream hydraulically related to the aquifer tapped by the observation well. A decline can be attributed to a local reduction of ground-water storage, resulting from seepage losses to a nearby stream, from flattening of the water table in an extensive aquifer, or from transpiration and evaporation losses to the atmosphere. The hydrologic significance of unit rise or fall of water level generally is much different from well to well, as a result of differences in the hydraulic characteristics of aquifers tapped by the wells, differences in the topographic situation of water-table wells and the resulting aquifer drainage factors affecting water levels, and differences in vegetal cover and resulting local transpiration losses.

In Philadelphia and Allegheny Counties, most observation wells tap aquifers from which moderate to large withdrawals are made continually. Water-level records show primarily changes in pressure head caused by changes in the rate or locus of the pumping. Interpretation of fluctuations of water level in any well in the Philadelphia or Pittsburgh areas, therefore, requires careful study of the local pumping conditions.

Well-Numbering System

Wells are designated by a two-letter abbreviation of the name of the county and a serial number beginning with 1. The location is shown by the part of the number enclosed by parentheses. A location number consists of letters and figures which identify a small area within which one or more wells are situated. Along the west border of the map of Pennsylvania (fig. 47) are letters

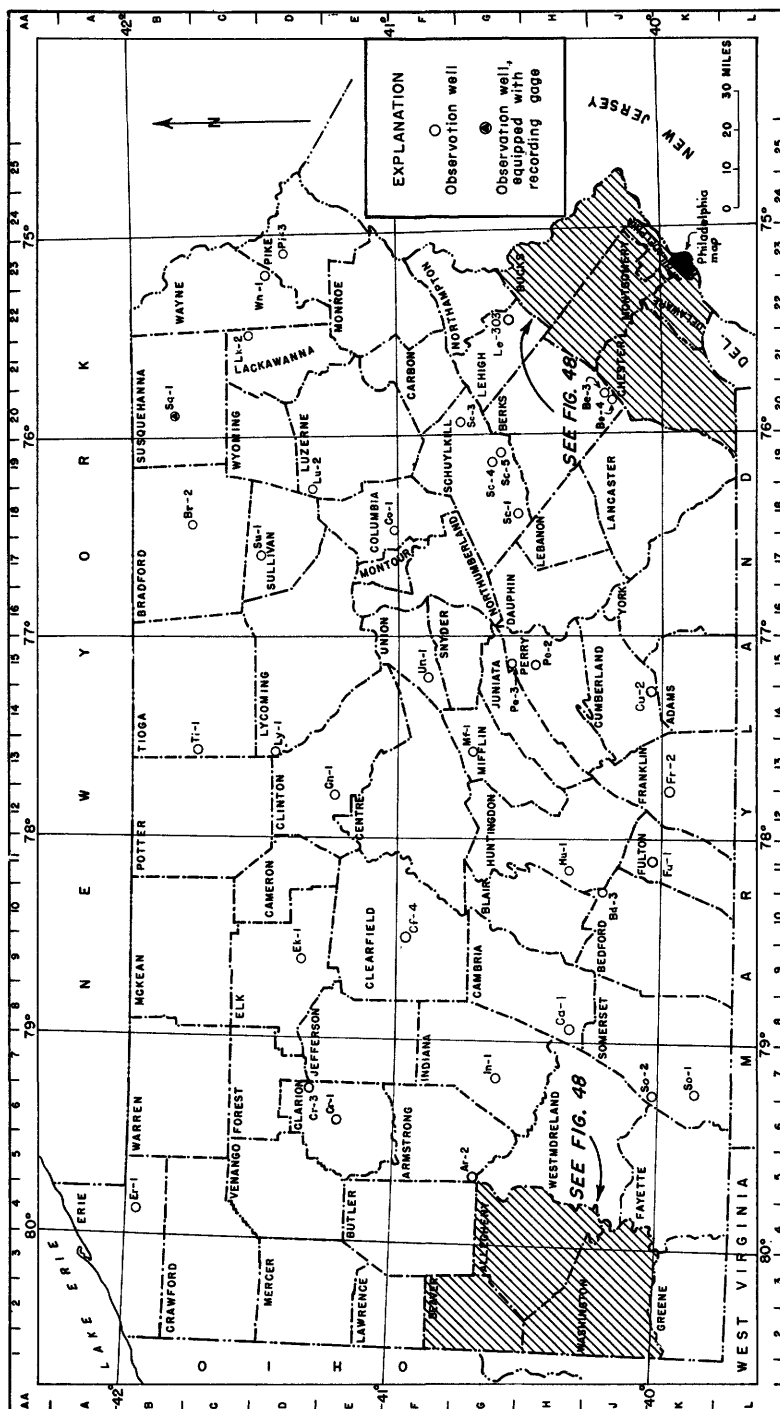


Figure 47. --Location of observation wells in Pennsylvania, 1954.

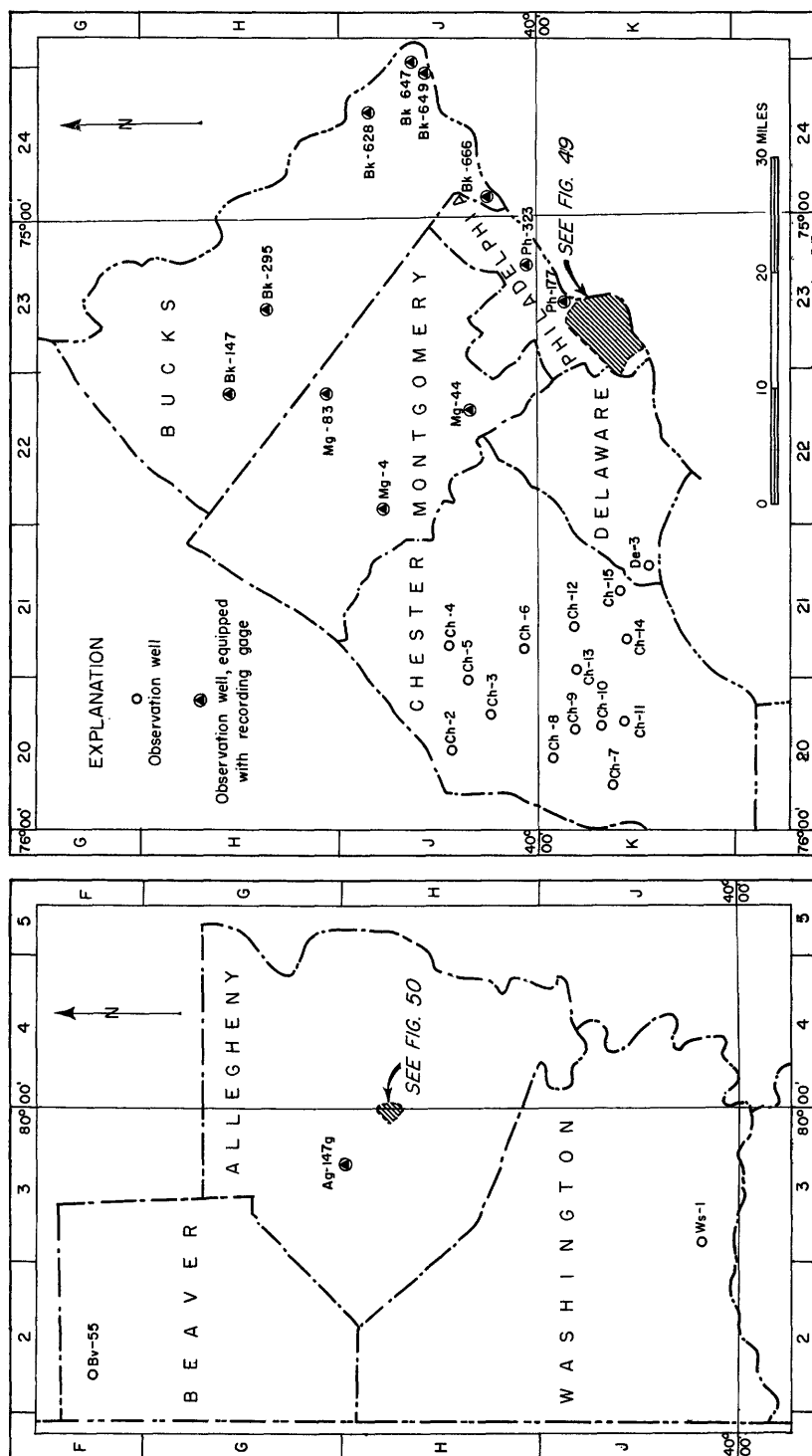


Figure 48. --Location of observation wells in Beaver, Allegheny, Washington, Bucks, Montgomery, Chester, Delaware, and Philadelphia Counties, 1954.

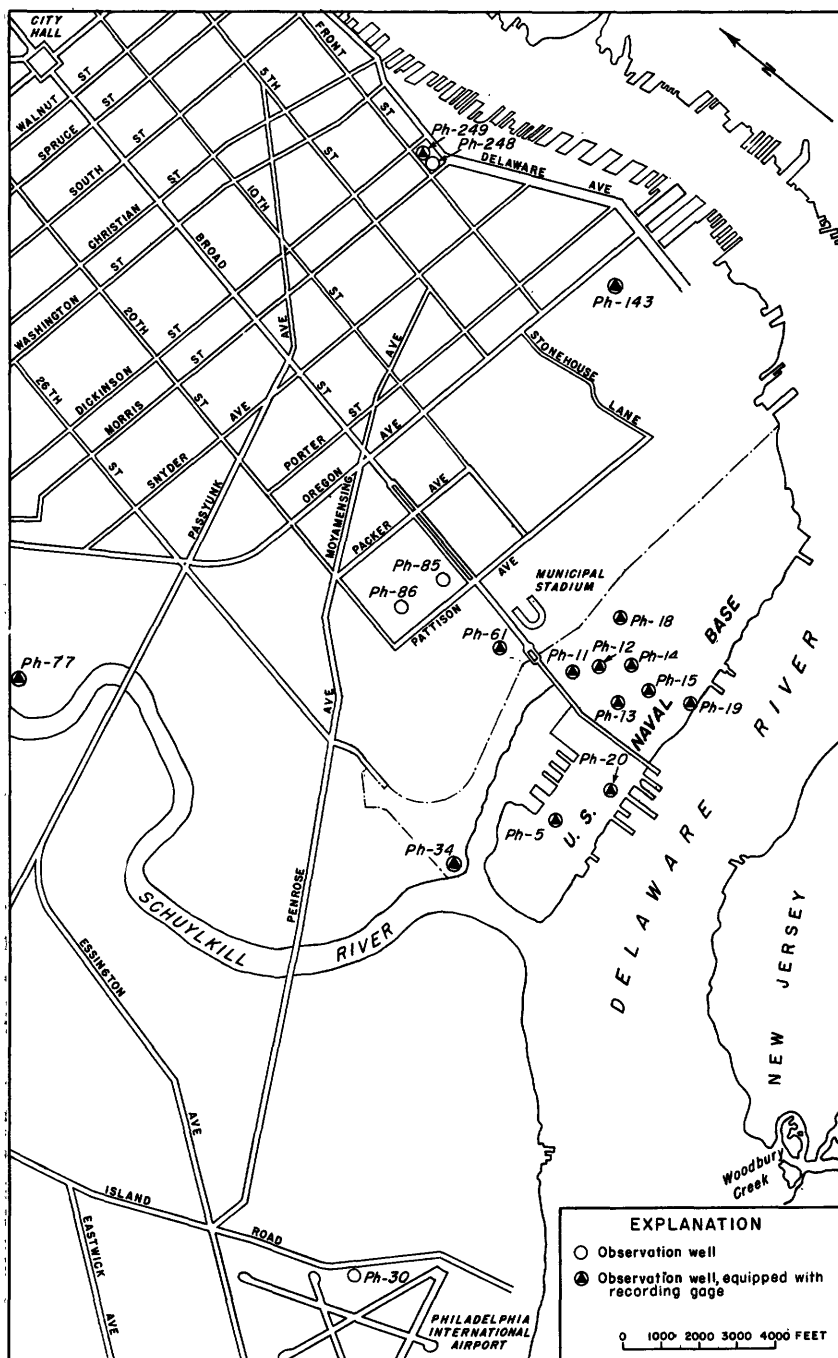


Figure 49. --Location of observation wells in southern part of Philadelphia County, Pa., 1954.

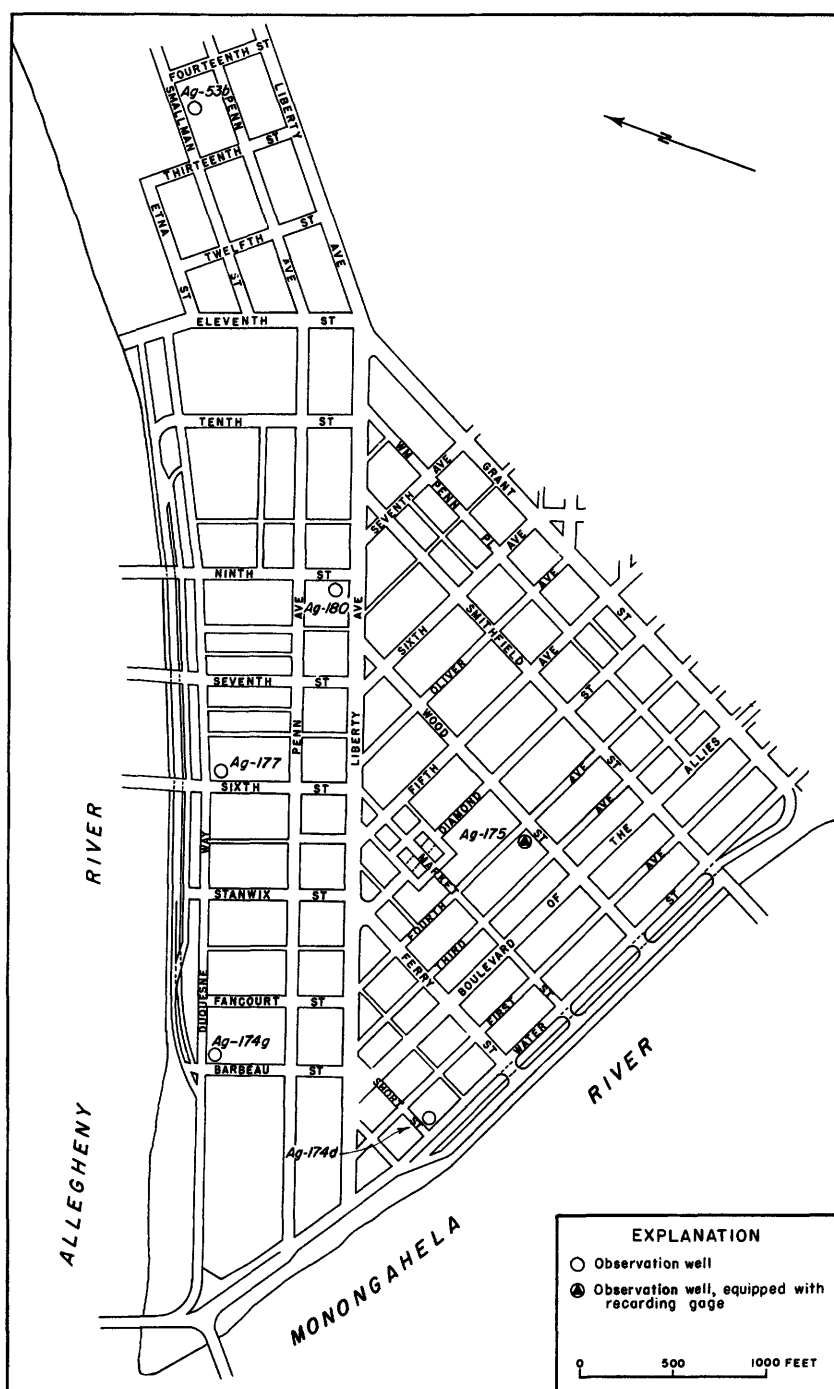


Figure 50. --Location of observation wells in Triangle area of Pittsburgh, Allegheny County, Pa., 1954.

A through L (except I) and along the north border are numbers 1 through 25. Each of these letters and numbers corresponds to 15 minutes of longitude and latitude, respectively. Therefore, a letter-number such as "K3" refers to quadrangle area 15 minutes on a side with "K" as its west and east borders and "3" as its north and south borders. The "K3" area is divided into 4 parts by using "a" to represent the northwest quarter, "b" the northeast, "c" the southwest, and "d" the southeast. Thus, "K3a" is a quadrangle $7\frac{1}{2}$ minutes on a side. The second half of the location number consists of 4 figures. These figures are distances south and east of the northwest corner of a $7\frac{1}{2}$ -minute quadrangle, such as quadrangle "K3a." Location "K3a-7534" is between 7.5 and 7.6 miles south and between 3.4 and 3.5 miles east of the northwest corner of "K3a." The number Ag-17a(H3b-3965) designates a well in Allegheny County within a tenth of a mile south and east of a point 3.9 miles south and 6.5 miles east of the northwest corner of quadrangle H3b.

Well Descriptions and Water-Level Measurements

All water-level measurements are below land-surface datum.

Allegheny County

Ag-53b (H4a-3604). Hardie Bros. Co. 14th and Smallman Sts., Pittsburgh. Lat. $40^{\circ}26'50''$, long. $79^{\circ}59'30''$. Drilled unused water-table well in sand and gravel of Pleistocene age, diameter 14 inches, depth 70 feet. Land-surface datum is about 735 feet above msl. Highest water level 34.98 below lsd, Feb. 4, 1952; lowest 44.38 below lsd, July 25, 1952. Records available: 1948-54. Jan. 18, 40.57. Measurement discontinued.

Ag-147g (H3b-0428). West View Municipal Water Authority. Neville Island. Lat. $40^{\circ}29'30''$, long. $80^{\circ}04'20''$. Drilled observation water-table well in sand and gravel of Pleistocene age, diameter 6 inches, depth 60 feet. Land-surface datum is 725 feet above msl. Highest water level 23.30 below lsd, Aug. 4, 1950; lowest 46.5 below lsd, Dec. 21-26, 1954. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	40.6	40.6	42.9	42.9	43.2	41.2	42.1	41.7	43.0	42.3	41.9	44.2
2	40.6	40.6	43.0	42.8	43.2	41.2	42.1	41.2	43.0	42.2	42.2	44.3
3	40.7	40.6	43.0	42.7	43.1	41.2	42.2	40.6	43.1	42.3	41.7	44.4
4	40.7	40.6	43.0	42.7	43.2	41.0	42.2	40.3	42.9	42.3	41.5	44.5
5	40.5	40.6	43.0	42.6	42.8	40.9	42.2	40.5	42.9	42.3	41.2	44.6
6	40.6	40.6	43.1	42.6	42.7	40.8	42.1	40.6	42.9	42.2	41.2	44.7
7	40.6	40.6	43.1	42.6	42.2	40.6	42.0	40.7	42.8	42.2	41.1	44.9
8	40.7	40.6	43.1	42.5	41.5	40.8	41.9	40.8	43.0	42.3	42.2	45.1
9	40.6	41.3	42.9	42.5	41.7	41.0	41.8	40.8	43.0	42.4	42.9	45.2
10	40.6	42.1	42.4	42.3	41.8	41.1	41.3	43.3	43.1	42.4	43.1	45.2
11	39.9	43.0	42.5	42.3	41.8	41.5	40.7	43.3	43.1	42.4	43.3	45.2
12	40.3	43.4	42.6	42.3	42.1	42.0	40.2	43.0	42.8	42.5	43.4	45.3
13	40.4	43.6	42.6	42.2	42.1	42.2	40.8	42.5	42.7	42.5	43.6	45.5
14	40.4	43.7	42.5	42.1	42.1	42.4	41.0	42.7	42.9	42.0	43.6	45.6
15	40.4	43.8	42.5	42.2	42.1	42.4	41.1	42.6	42.9	42.0	43.6	45.6
16	40.5	43.7	42.5	42.1	42.0	42.4	41.3	42.2	42.4	41.9	43.9	45.7
17	40.3	43.5	42.5	42.3	41.9	42.4	41.4	41.7	42.2	37.4	43.9	45.8
18	40.0	43.0	42.5	42.5	41.9	42.4	41.4	....	42.6	40.1	43.7	45.8
19	39.9	41.8	42.6	42.6	41.8	42.3	41.4	....	42.7	40.8	43.7	46.1
20	40.0	42.0	42.7	42.5	41.7	42.4	41.4	....	42.3	41.2	43.8	46.4
21	40.1	42.3	42.8	42.6	41.7	42.5	41.4	....	42.2	41.3	43.9	46.5
22	40.2	42.5	42.9	42.5	41.6	42.8	41.3	....	42.2	41.4	43.8	46.5
23	40.3	42.6	42.8	42.8	41.5	42.8	41.3	....	41.6	41.6	44.0	46.5
24	40.4	42.7	42.8	42.8	41.4	42.6	41.3	e42.3	41.3	41.8	44.1	46.5
25	40.5	42.7	42.8	42.8	41.4	42.0	41.4	42.3	40.8	42.0	44.1	46.5
26	40.6	42.7	42.7	42.9	41.4	42.1	41.4	42.2	41.1	42.5	44.1	46.5
27	40.7	42.7	42.8	43.1	41.4	42.1	41.3	42.0	41.0	42.7	44.1	46.3
28	40.6	42.8	42.9	43.1	41.4	42.2	41.1	42.3	41.5	42.9	44.3	43.6
29	40.6		42.9	42.9	41.4	42.2	41.5	42.7	41.9	42.6	44.3	e43.3
30	40.6		43.0	43.1	41.3	42.2	41.5	42.9	42.2	42.4	44.3	43.5
31	40.7		43.0		41.3		41.7	42.9		42.0		43.2

e Estimated.

Ag-174d (H3b-4162). City of Pittsburgh well 4. Water and Short Sts. Lat. $40^{\circ}26'20''$, long. $80^{\circ}00'20''$. Drilled observation water-table well in sand and gravel of Pleistocene age, diameter 12 inches, depth 35 feet. Land-surface datum is 730 feet above msl. Highest water level 14.74 below lsd, Jan. 28, 1952; lowest 28.39 below lsd, Mar. 16, 1946. Records available: 1945-54. Jan. 19, 24.47. Measurement discontinued.

Ag-174g (H3b-3962). City of Pittsburgh well 7. Duquesne Way and Barbeau St. Lat. 40°26'30", long. 80°00'00". Drilled observation water-table well in sand and gravel of Pleistocene age, diameter 12 inches, depth 40 feet. Land-surface datum is 723 feet above msl. Highest water level 0.33 below lsd, Apr. 15, 1948; lowest 19.23 below lsd, Aug. 31, 1953. Records available: 1948-54. Jan. 19, 17.40. Measurement discontinued.

Ag-175 (H3b-4165). Columbia Building. Fourth Ave. and Wood St. Lat. 40°26'20", long. 80°00'00". Drilled unused water-table well in sand and gravel of Pleistocene age, diameter 8 inches, depth 60 feet. Land-surface datum is about 735 feet above msl. Highest water level 29.62 below lsd, Jan. 30, 1952; lowest 44.9 below lsd, July 3, 1954. Records available: 1947-54. Measurement discontinued.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.
1	40.2	39.7	40.9	44.8	44.3
2	40.3	39.7	41.2	44.8	43.9
3	40.4	39.8	41.5	44.9	44.0
4	40.4	39.8	41.6	44.7	44.1
5	40.4	39.7	41.8	44.4	44.1
6	40.5	39.5	41.5	44.3	44.1
7	40.7	39.4	41.4	44.4	44.1
8	35.5	40.7	39.3	41.7	44.4	43.9
9	35.6	....	39.2	42.0	44.4	43.6
10	35.6	....	39.0	42.4	44.4	43.4
11	35.7	....	39.0	42.7	44.3	43.8
12	35.7	....	39.0	42.9	44.1	43.7
13	35.7	....	39.1	42.8	44.3	43.6
14	35.8	....	39.1	43.1	44.6	43.5
15	35.7	....	39.2	43.4	44.7	43.3
16	35.7	37.5	39.2	43.7	44.8	43.2
17	35.8	37.5	39.4	43.8	44.8	43.3
18	35.8	37.4	39.5	44.0	44.7	43.4
19	e35.11	....	35.8	37.4	39.5	44.1	44.4	43.5
20	35.9	37.8	39.5	44.0	44.6	43.6
21	35.9	38.1	39.5	44.0	44.7	43.7
22	35.8	38.4	39.5	44.2	44.7	43.7
23	35.8	38.7	39.5	44.4	44.7	43.5
24	35.9	38.8	39.6	44.5	44.7	43.7
25	40.0	38.8	39.8	44.6	44.8	....
26	40.1	38.9	40.0	44.6	44.1	....
27	40.1	39.2	40.2	44.5	44.2	....
28	40.0	39.4	40.4	44.4	44.3	....
29	40.0	39.4	40.7	44.5	44.3	....
30	40.1	39.5	40.7	44.6	44.4	....
31	40.1	....	40.6	....	44.4	....

e Estimated.

Ag-177 (H3b-3864). Fulton Building. Duquesne Way and Sixth St. Lat. 40°26'40", long. 80°00'10". Drilled unused water-table well in sand and gravel of Pleistocene age, diameter 12 inches, depth 67 feet. Land-surface datum is about 733 feet above msl. Highest water level 24.25 below lsd, Jan. 28, 1952; lowest 40.91 below lsd, July 20, 1953. Records available: 1945-54. Jan. 19, 31.69. Measurement discontinued.

Ag-180 (H4a-3900). Victory Building. Liberty Ave. and Ninth St. Lat. 40°26'30", long. 79°59'50". Drilled unused water-table well in sand and gravel of Pleistocene age, diameter 4 inches, depth 61 feet. Land-surface datum is about 736 feet above msl. Highest water level 32.10 below lsd, Feb. 4-5, 1952; lowest 46.88 below lsd, July 25, 1952. Records available: 1946-54. Jan. 18, 37.16. Measurement discontinued.

Armstrong County

Ar-2 (G5a-4744). Martin J. Cordera. Schenley. Lat. 40°40'50", long. 79°39'50". Drilled unused water-table well in sand and gravel of Pleistocene age, diameter 6 inches, depth 82 feet. Land-surface datum is about 780 feet above msl. Highest water level 27.83 below lsd, Mar. 29, 1950; lowest 39.95 below lsd, Oct. 28, 1953. Records available: 1949-54.

Ar-2 (G5a-4744)--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	39.29	Apr. 14	34.37	July 14	39.08	Oct. 6	36.33
13	39.32	21	33.42	21	39.03	13	38.49
20	39.00	28	31.78	22	39.16	20	30.00
27	33.10	May 5	34.65	28	39.29	27	37.20
Feb. 3	36.97	12	36.02	Aug. 4	38.83	Nov. 3	37.95
10	38.59	19	37.60	11	38.54	10	37.05
17	38.85	26	38.33	18	38.89	17	38.05
24	34.16	June 2	38.17	25	38.74	24	37.42
Mar. 3	30.97	9	37.29	Sept. 1	39.05	Dec. 1	36.92
10	35.30	16	37.92	8	39.32	8	37.39
17	36.07	23	38.03	15	39.22	15	35.22
24	35.97	30	38.58	22	38.66	22	33.69
31	33.67	July 7	38.79	29	39.24	29	36.68
Apr. 7	36.58						

Beaver County

Bv-55 (F2c-4540). Mrs. F. E. Duff. Pennsylvania Route 51, Darlington. Lat. 40°48'30", long. 80°25'20". Drilled unused water-table well in sand and gravel of Pleistocene age, diameter 6 inches, depth 45 feet. Land-surface datum is about 915 feet above msl. Highest water level 12.5 below lsd, Apr. 3, 1951; lowest 19.4 below lsd, Jan. 14-20, 1954. Records available: 1949-54. Measurement discontinued.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	Day	Jan.	Feb.	Mar.	Apr.	May
1	19.3	18.7	18.7	16.7	e15.5	17	19.4	18.8	17.5	16.2	....
2	19.3	18.7	18.4	16.7	....	18	19.4	18.8	17.5	15.9	....
3	19.3	18.7	18.2	16.6	....	19	19.4	18.8	17.5	15.8	....
4	19.3	18.7	18.0	16.6	....	20	19.4	18.8	17.5	15.7	....
5	19.3	18.7	17.9	16.6	....	21	19.2	18.7	17.6	15.7	....
6	19.3	18.7	17.8	16.5	....	22	19.1	18.7	17.6	15.6	....
7	19.3	18.7	17.7	16.5	....	23	19.1	18.7	17.6	15.6	....
8	19.3	18.7	17.7	16.5	....	24	19.0	18.7	17.6	15.6	....
9	19.3	18.7	17.6	16.5	....	25	19.0	18.7	17.6	15.6	....
10	19.3	18.7	17.6	16.5	....	26	19.0	18.7	17.3	15.6	....
11	19.3	18.7	17.6	16.5	....	27	19.0	18.7	17.2	15.6	....
12	19.3	18.7	17.6	16.5	....	28	18.8	18.7	17.1	15.5	....
13	19.3	18.8	17.5	16.4	....	29	18.8		17.0	15.5	....
14	19.4	18.8	17.5	16.4	....	30	18.7		16.9	15.5	....
15	19.4	18.8	17.5	16.4	....	31	18.7		16.8		....
16	19.4	18.8	17.5	16.4	....					

e Estimated.

Bedford County

Bd-3 (J10b-2363). W. M. Hoffman. Norris and Liberty Sts., Saxton. Lat. 40°12'50", long. 78°15'20". Dug unused water-table well in shale of Chemung formation or Portage group, diameter 5 feet, depth 58 feet, cased with stone. Land-surface datum is about 895 feet above msl. Highest water level 44.08 below lsd, Apr. 16, 1948; lowest 53.69 below lsd, Feb. 13, 1948. Records available: 1941-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	53.12	Apr. 9	51.20	July 16	51.24	Oct. 8	52.39
8	53.18	16	51.32	23	51.36	15	52.32
15	53.24	23	50.98	28	51.67	22	50.66
22	53.24	30	50.96	30	51.58	29	51.02
29	53.20	May 7	50.88	Aug. 6	51.90	Nov. 5	51.22
Feb. 5	53.22	14	51.12	13	52.02	12	51.38
12	53.22	21	51.04	20	52.04	19	51.40
19	53.24	28	51.24	27	51.88	26	51.02
26	53.22	June 4	51.36	Sept. 3	51.94	Dec. 3	51.08
Mar. 5	49.68	11	51.48	10	52.06	10	51.06
12	51.02	18	51.58	17	52.10	17	50.76
19	51.48	25	51.64	24	52.22	24	51.02
26	51.60	July 2	51.92	Oct. 1	52.32	31	49.24
Apr. 2	51.14	9	52.06				

Berks County

Be-3 (J20b-3547). Commonwealth of Pennsylvania. French Creek State Park. Near Elverson. Lat. 40°11'50", long. 75°47'00". Drilled unused water-table well in Vintage dolomite, diameter 4 inches, depth 39 feet. Land-surface datum is about 540 feet above msl. George L. Clouser, voluntary observer. Highest water level 22.43 below lsd, June 22, 1948; lowest below 50.0 below lsd, Nov. 19-Dec. 24, 1954. Records available: 1948-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 8	37.56	Apr. 16	36.62	July 12	34.27	Oct. 1	37.28
15	37.67	23	36.34	16	34.48	15	37.67
22	37.79	30	36.06	23	34.72	22	38.49
29	37.80	May 7	35.42	29	35.08	29	38.73
Feb. 5	37.83	14	34.90	Aug. 6	35.41	Nov. 5	38.87
19	38.50	21	34.56	13	35.73	12	44.70
26	37.91	28	34.33	20	35.96	19	(j)
Mar. 5	37.48	June 4	34.12	27	36.18	26	(j)
12	37.28	11	33.98	Sept. 3	36.32	Dec. 3	(j)
19	37.22	18	33.98	10	36.58	10	(j)
26	37.00	25	33.97	17	36.78	17	(j)
Apr. 2	36.75	July 2	34.00	24	37.08	24	(j)
9	36.77	9	34.20				

j Below 50.0 feet.

Be-4 (J20b-4426). Commonwealth of Pennsylvania. French Creek State Park. Near Elverson. Lat. 40°11'00", long. 75°49'30". Dug unused water-table well in sandstone or shale of Stockton formation, diameter 4 feet, depth 20 feet. Land-surface datum is 694 feet above msl. George L. Clouser, voluntary observer. Highest water level 5.04 below lsd, May 2, 1952; lowest dry, Aug. 12, 1949. Records available: 1948-54.

Jan. 8	14.31	Apr. 23	10.48	July 16	15.27	Oct. 15	17.27
22	11.67	30	8.90	23	15.54	22	17.33
29	12.22	May 7	8.32	29	15.82	29	17.48
Feb. 5	13.03	14	8.87	Aug. 6	15.01	Nov. 5	16.70
19	13.83	21	10.61	13	16.13	12	16.48
26	12.38	28	11.59	20	16.29	19	16.60
Mar. 5	7.98	June 4	12.39	27	16.09	26	14.04
12	11.17	11	13.10	Sept. 3	15.99	Dec. 3	14.66
19	10.80	18	13.64	10	16.27	10	13.87
26	8.88	25	14.02	17	16.46	17	14.99
Apr. 2	10.61	July 2	14.51	24	16.63	24	13.26
9	11.38	9	14.89	Oct. 1	16.76		
16	11.56	12	15.10				

Bradford County

Br-2 (B18c-7333). C. Holon. East Towanda. Lat. 41°46'00", long. 76°26'00". Dug unused water-table well in shale of Chemung formation and/or drift of Pleistocene age, diameter 30 inches, depth 64 feet, cased with brick. Land-surface datum is about 820 feet above msl. Highest water level 17.00 below lsd, May 25, 1947; lowest 61.70 below lsd, Feb. 15, 1942. Records available: 1931-54.

Jan. 3	50.85	Apr. 4	33.44	July 11	45.95	Oct. 6	55.05
7	52.15	11	35.26	14	46.28	10	54.38
10	51.49	18	33.26	18	46.79	17	54.93
16	52.25	25	28.58	25	47.60	24	55.52
24	52.20	May 2	26.30	29	48.03	31	56.03
31	48.80	9	24.65	Aug. 1	48.35	Nov. 4	57.32
Feb. 7	47.65	16	31.60	8	48.96	7	56.55
11	47.51	23	37.02	15	49.57	14	56.31
14	47.75	25	37.74	22	50.23	21	56.89
21	40.37	30	39.71	29	50.82	28	53.90
28	31.39	June 6	37.72	Sept. 2	52.13	Dec. 5	49.74
Mar. 7	30.39	13	40.58	5	51.39	12	50.31
11	31.59	20	42.06	12	52.02	16	49.78
14	31.35	24	39.65	19	52.65	19	45.23
21	31.10	27	43.79	26	53.18	26	41.62
28	30.85	July 4	44.97	Oct. 3	53.78		

Bucks County

Bk-147 (H22d-0338). Heat Transfer Products, Inc. Park Ave. north of 7th St., Perkasie. Lat. 40°22'11", long. 75°18'11". Drilled unused water-table well in Brunswick shale, diameter 8 inches, depth 350 feet. Land-surface datum is about 395 feet above msl. Highest water level 48.3 below lsd, May 28, 1953; lowest 52.6 below lsd, Oct. 21, 1953. Records available: 1953-54. Recording gage installed July 7, 1953.

Daily lowest water level from recorder graph, 1953*

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	50.3	51.5	....	51.8	50.8
2	50.3	51.6	....	51.8	50.8
3	50.3	51.8	....	51.7	50.9
4	50.4	51.8	....	51.9	50.8
5	50.3	51.8	....	52.0	50.8
6	e48.3	....	....	50.5	51.6	51.6	52.0	50.8
7	e48.7	50.7	51.4	52.0	51.7	50.3
8	48.8	50.6	51.2	52.0	51.7	50.4
9	48.8	50.5	51.4	52.0	51.7	50.4
10	49.0	50.3	51.5	51.9	51.7	50.2
11	49.0	50.6	51.5	51.8	51.6	50.3
12	e48.8	49.0	50.7	e51.4	52.0	51.6	50.3
13	e48.5	....	49.1	50.7	....	52.1	51.6	49.9
14	49.2	50.7	....	52.1	51.5	49.7
15	49.4	50.6	e51.2	52.0	51.1	49.9
16	49.6	50.6	....	52.1	51.2	50.1
17	50.0	50.6	....	52.2	51.3	50.3
18	e48.8	50.0	50.6	....	52.2	51.4	50.3
19	49.8	50.7	....	52.1	51.4	50.3
20	49.8	50.9	....	52.2	51.4	50.1
21	50.0	51.0	....	52.6	51.3	50.0
22	e48.5	....	50.0	51.1	....	52.3	51.2	50.1
23	50.0	51.0	....	52.2	50.9	50.4
24	e49.3	50.0	50.9	....	52.1	50.8	50.3
25	50.2	51.0	....	52.2	50.8	50.2
26	50.0	51.1	....	52.3	50.8	49.9
27	e48.3	....	49.9	51.2	....	52.2	50.8	50.1
28	50.8	51.3	....	52.1	50.8	50.0
29	50.2	51.4	....	52.0	50.8	50.2
30	50.2	51.4	....	51.9	50.7	50.2
31	50.2	51.2	....	51.9	....	50.4

* No records for January, February, March, and April.

e Estimated.

Daily lowest water level from recorder graph, 1954

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	50.3	50.1	49.6	49.4	49.1	49.5	51.3	51.9	51.7	51.7	51.2	50.1
2	50.3	50.1	49.8	49.4	49.0	49.6	51.4	51.9	51.8	51.6	51.2	49.9
3	50.2	50.1	49.8	49.4	48.8	49.8	51.3	51.9	51.8	51.5	50.7	50.0
4	50.3	50.1	49.6	49.5	48.7	49.9	51.1	52.0	51.7	51.5	50.9	49.9
5	50.2	50.2	49.8	49.5	48.8	50.0	51.1	51.9	51.6	51.6	50.9	49.9
6	50.3	50.2	49.7	49.4	48.9	50.0	50.9	52.0	51.5	51.7	50.9	50.0
7	50.5	50.3	49.5	49.5	49.1	50.1	50.8	52.0	51.5	51.9	50.8	50.0
8	50.7	50.2	49.5	49.6	49.0	50.3	50.9	51.9	51.6	51.8	50.8	50.1
9	50.7	50.2	49.5	49.8	48.7	50.4	51.0	51.8	51.7	51.7	51.0	50.0
10	50.4	50.3	49.6	49.8	48.6	50.4	51.0	51.7	51.7	51.4	51.0	49.8
11	50.3	50.5	49.7	49.5	48.6	50.5	51.0	51.8	51.6	51.4	51.0	49.9
12	50.6	50.8	49.9	49.5	48.8	50.5	51.0	52.0	51.6	51.5	50.9	49.9
13	50.9	50.8	49.9	49.5	48.9	50.4	50.9	52.0	51.6	51.7	50.9	49.9
14	50.8	50.6	49.3	49.4	48.9	50.5	50.9	51.9	51.7	51.7	50.7	49.8
15	50.7	50.4	49.5	49.6	48.9	50.6	50.9	51.8	51.7	51.6	50.6	49.3
16	50.5	50.3	49.7	49.5	48.7	50.7	51.1	51.6	51.6	51.5	50.6	49.8
17	50.6	50.4	49.7	49.0	48.8	50.8	51.2	51.8	51.5	51.5	50.7	49.9
18	50.6	50.6	49.7	49.1	49.0	50.9	51.1	51.9	51.5	51.6	50.7	49.8
19	50.7	50.6	49.7	49.3	49.1	50.8	50.9	51.8	51.3	51.6	50.6	49.3
20	50.6	50.6	49.3	49.4	49.2	50.6	51.1	51.9	51.2	51.5	50.5	49.5
21	50.4	50.2	49.3	49.4	49.2	50.6	51.3	51.9	51.3	51.5	49.9	49.6
22	50.5	50.0	49.4	49.4	49.2	50.7	51.5	51.8	51.5	51.6	50.1	49.7
23	50.5	50.0	49.5	49.4	49.3	50.8	51.6	51.8	51.7	51.6	50.1	49.6
24	50.4	49.9	49.7	49.5	49.3	51.0	51.7	51.7	51.7	51.5	50.1	49.7
25	50.2	49.9	49.6	49.3	49.3	50.9	51.6	51.6	51.6	51.5	50.1	49.9

Bk-147 (H22d-0338)--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	50.2	49.9	49.5	49.3	49.5	50.8	51.8	51.8	51.4	51.4	50.2	49.8
27	50.1	50.0	49.5	49.1	49.5	50.7	51.9	52.2	51.4	51.4	50.2	49.8
28	50.4	49.8	49.3	48.9	49.5	50.9	51.9	52.1	51.6	51.5	50.0	49.7
29	50.3		49.2	49.1	49.4	51.0	51.9	51.9	51.6	51.4	49.9	49.6
30	50.2		49.3	49.2	49.5	51.2	51.9	51.9	51.6	51.1	50.1	49.2
31	50.1		49.3		49.5		51.9	51.8		51.1		49.3

Bk-295 (H23c-4063). Modern Cleaners. Doylestown. Lat. 40°18'58", long. 75°07'49". Drilled unused water-table well in Stockton formation, diameter 6 inches, depth 67 feet. Land-surface datum is about 390 feet above msl. Highest water level 20.68 below lsd, May 7, 1953; lowest 46.40 below lsd, Nov. 6-7, 1953. Records available: 1953-54.

Daily lowest water level from recorder graph, 1953

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 7	e20.68	Oct. 14	e42.73	Nov. 17	43.84	Dec. 13	41.79
11	e20.85	15	e42.80	18	43.76	14	40.79
20	e21.29	18	e43.37	19	43.74	15	38.60
22	e21.24	Nov. 4	e46.22	20	43.73	16	37.01
Aug. 21	31.83	5	46.36	21	43.68	17	35.90
22	32.37	6	46.40	22	43.48	18	35.55
23	32.74	7	46.40	23	43.50	19	34.72
24	33.33	8	46.39	24	43.52	20	34.32
25	33.84	9	46.35	25	43.45	21	34.02
26	34.35	10	46.03	26	43.31	22	33.77
27	34.88	11	45.49	Dec. 7	e45.17	23	33.68
28	35.45	12	45.07	8	44.82	24	33.64
Sept. 7	e36.50	13	44.77	9	44.17	25	33.47
12	e37.54	14	44.47	10	43.91	26	33.38
13	37.55	15	44.12	11	43.12	27	33.37
18	39.85	16	43.97	12	42.42	28	33.29
19	40.14						

e Estimated.

Daily lowest water level from recorder graph, 1954

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	29.6	....	....	25.3	28.4	....	44.1	42.6	45.3	40.0
2	....	....	29.6	....	....	25.4	28.6	....	44.2	43.1	45.3	39.9
3	....	....	29.4	....	....	25.5	28.7	36.7	44.3	43.1	45.4	39.7
4	33.8	30.0	....	....	....	25.6	28.7	37.2	44.4	43.4	45.7	39.6
5	33.8	29.9	....	....	24.9	25.7	28.8	37.4	44.3	43.5	45.5	39.0
6	34.0	29.8	....	....	24.8	25.7	28.9	37.7	44.4	43.6	45.2	38.7
7	34.2	29.8	....	....	24.8	25.8	28.9	37.8	44.8	43.9	45.0	38.5
8	34.3	29.7	....	....	24.8	26.0	29.0	37.8	45.0	43.9	45.0	38.4
9	34.4	29.7	....	....	24.7	28.1	29.2	38.0	45.2	44.0	45.0	38.1
10	34.4	29.7	....	....	24.7	26.2	29.5	38.1	45.2	43.8	45.0	38.1
11	34.5	29.7	....	....	24.6	26.3	29.6	38.3	....	44.1	44.9	38.3
12	34.8	29.8	....	....	24.6	26.4	29.9	38.3	....	44.1	45.0	38.0
13	35.0	29.8	....	....	24.7	28.4	30.4	38.6	....	44.7	44.9	37.8
14	35.1	29.8	....	....	24.7	26.7	30.9	38.6	....	44.9	44.8	37.7
15	35.2	29.8	....	....	24.7	26.8	31.3	38.6	....	45.0	44.9	37.8
16	35.3	29.8	....	....	24.6	27.0	....	39.0	....	45.2	45.0	37.7
17	35.4	29.8	....	....	24.6	27.2	31.8	39.2	....	45.4	45.6	37.5
18	35.6	29.9	....	....	24.7	27.4	32.0	39.5	....	45.4	46.1	37.6
19	35.6	30.0	....	....	24.8	27.4	32.4	39.8	....	45.5	46.1	37.4
20	35.0	30.0	....	....	24.8	27.4	32.9	40.1	....	45.5	45.8	36.8
21	34.5	30.0	....	....	24.8	27.3	33.3	40.2	....	45.7	45.1	36.6
22	33.9	29.9	....	....	24.8	27.4	33.9	40.3	....	45.7	43.9	36.4
23	33.3	29.9	....	....	24.8	27.4	....	40.6	....	45.7	43.1	36.1
24	32.8	29.8	....	....	24.9	27.4	....	40.8	....	45.6	42.6	35.9
25	....	29.8	....	....	24.9	27.5	....	41.1	....	45.6	41.8	35.5
26	....	29.7	....	....	25.0	27.6	....	41.6	....	45.7	41.1	35.2
27	....	29.7	....	....	25.1	27.8	....	41.6	....	45.7	40.8	34.9
28	....	29.7	....	....	25.1	27.9	....	41.6	....	45.8	40.4	34.6
29	....	....	....	....	25.2	27.9	....	42.1	....	45.7	40.1	34.5
30	....	....	....	....	25.2	....	....	42.1	42.4	45.5	40.1	34.4
31	....	....	....	....	25.3	....	....	44.1	....	45.3	....	34.2

Bk-628 (J24b-3857). Morrisville Borough. Pennsylvania Ave., Falls Township. Near Morrisville. Lat. 40°11'40", long. 74°46'00". Drilled unused artesian well in sand and gravel of Wisconsin or Recent age, diameter 16 to 10 inches, depth 175 feet, screen 139-164. Land-surface datum is about 15 feet above msl. Highest water level 15.2 below lsd, Apr. 3, 1953; lowest 18.9 below lsd, Dec. 2, 1953. Records available: 1953-54.

Daily lowest water level from recorder graph, 1953*

Day	Apr.	Aug.	Sept.	Oct.	Nov.	Dec.
1	17.6	18.4	18.6	18.7
2	17.6	18.4	18.6	18.9
3	e15.2	....	17.6	18.4	18.6	18.4
4	17.6	18.4	18.7	....
5	e16.7	17.6	18.5	18.8	....
6	17.6	18.5	18.8	....
7	17.7	18.5	18.8	e18.8
8	17.7	18.6	18.7	18.7
9	17.7	18.6	18.7	18.5
10	17.8	18.6	18.8	18.4
11	17.8	18.5	18.7	18.4
12	e17.0	17.8	18.6	18.7	18.4
13	17.8	18.6	18.7	18.4
14	17.9	18.7	18.8	18.3
15	17.9	18.7	18.8	18.0
16	18.0	18.7	18.8	18.0
17	18.0	18.7	18.8	18.0
18	18.0	18.8	18.8	18.0
19	17.2	18.0	18.8	18.8	18.1
20	17.3	18.0	18.8	18.8	18.1
21	17.3	18.0	18.8	18.8	18.1
22	17.3	18.1	18.8	18.8	18.1
23	17.3	18.1	18.7	18.7	18.1
24	17.3	18.1	18.6	18.7	18.2
25	17.3	....	18.6	18.7	18.2
26	17.4	....	18.7	18.6	18.2
27	17.4	....	18.7	18.7	18.2
28	17.4	....	18.7	18.8	18.3
29	17.4	e18.3	18.7	18.8	18.3
30	17.5	18.3	18.7	18.8	18.3
31	17.5	....	18.7	....	18.3

e Estimated.

* No record for January, February, March, May, June, and July.

Daily lowest water level from recorder graph, 1954

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	18.4	18.6	18.4	18.0	17.6	17.6	18.3	18.9	18.6	18.1	18.4	17.9
2	18.5	18.6	18.4	18.0	17.6	17.7	18.3	18.9	18.6	18.2	18.4	17.8
3	18.4	18.6	18.3	18.1	17.6	17.7	18.4	18.9	18.6	18.2	18.4	17.7
4	18.5	18.5	18.1	18.1	17.6	17.7	18.4	18.9	18.6	18.1	18.4	17.6
5	18.5	18.5	18.2	18.1	17.5	17.7	18.4	18.9	18.6	18.2	18.4	17.7
6	18.5	18.6	18.2	18.1	17.4	17.8	18.4	18.9	18.6	18.2	18.4	17.8
7	18.5	18.6	18.1	18.1	17.4	17.8	18.4	18.9	18.6	18.2	18.3	17.8
8	18.6	18.7	18.2	18.2	17.4	17.9	18.4	18.9	18.7	18.2	18.3	17.8
9	18.6	18.7	18.1	18.2	17.4	17.8	18.5	18.9	18.7	18.2	18.3	17.9
10	18.6	18.7	18.1	18.2	17.4	17.8	18.5	18.8	18.7	18.2	18.4	17.9
11	18.6	18.7	18.1	18.2	17.4	17.9	18.5	18.8	18.5	18.2	18.4	18.0
12	18.6	18.8	18.2	18.2	17.4	17.9	18.6	18.8	18.3	18.2	18.4	18.0
13	18.7	18.9	18.2	18.3	17.4	17.9	18.6	18.8	18.2	18.2	18.4	18.0
14	18.7	18.9	18.2	18.3	17.3	18.0	18.6	18.9	18.1	18.2	18.4	18.0
15	18.7	18.9	18.2	18.2	17.4	17.9	18.6	18.9	18.1	18.2	18.5	17.8
16	18.7	18.9	18.3	18.2	17.4	18.0	18.7	18.8	18.0	18.0	18.5	17.8
17	18.7	18.9	18.3	18.0	17.5	17.9	18.7	18.8	18.0	18.1	18.5	17.9
18	18.7	18.9	18.3	17.9	17.5	17.9	18.7	18.9	17.9	18.2	18.5	17.8
19	18.7	18.7	18.3	17.8	17.5	18.0	18.7	18.9	17.9	18.2	18.5	17.8
20	18.8	18.6	18.1	17.7	17.6	18.0	18.7	18.9	17.9	18.2	18.4	17.8
21	18.7	18.6	18.1	17.8	17.6	18.0	18.7	18.9	17.9	18.2	18.3	17.8
22	18.7	18.5	18.2	17.8	17.5	18.0	18.7	18.8	17.9	18.2	18.1	17.9
23	18.6	18.5	18.1	17.8	17.5	18.0	18.8	18.8	17.9	18.3	17.9	17.9
24	18.6	18.4	18.1	17.8	17.5	18.1	18.8	18.8	18.1	18.3	17.8	17.9
25	18.5	18.4	18.1	17.8	17.5	18.1	18.8	18.8	18.1	18.4	17.7	17.8
26	18.5	18.4	18.0	17.8	17.6	18.1	18.8	18.8	18.0	18.4	17.8	17.8
27	18.6	18.5	18.1	17.8	17.6	18.2	18.8	18.8	18.0	18.4	17.7	17.9
28	18.7	18.5	18.1	17.8	17.6	18.2	18.8	18.8	18.0	18.4	17.7	17.9
29	18.7	....	18.1	17.7	17.6	18.3	18.8	18.8	18.0	18.4	17.7	17.9
30	18.5	....	18.0	17.6	17.6	18.3	18.8	18.8	18.1	18.4	17.9	17.9
31	18.6	....	18.0	....	17.6	....	18.8	18.7	....	18.4	....	17.8

Bk-647 (J25a-5506). United States Corp. Fairless Works. Falls Township. Near Morrisville. Lat. 40°10'10", long. 74°44'10". Drilled unused water-table well in sand and gravel of Wisconsin or Recent age, diameter 8 inches, depth 62 feet, screen 34-53. Land-surface datum is about 15 feet above msl. Highest water level 9.98 below lsd, Mar. 15, 1951; lowest 15.97 below lsd, Oct. 25, 1951. Records available: 1950-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 25, 1950	12.04	Mar. 15, 1951	9.98	Mar. 7, 1952	14.45	July 17, 1953	13.15
July 20	12.32	27	10.96	14	13.41	Aug. 12	13.48
27	11.85	June 28	11.61	Apr. 3	12.56	28	13.54
Sept. 12	11.47	Aug. 27	13.96	May 15	11.79	Sept. 8	13.23
20	11.99	Oct. 25	15.97	27	12.10	29	13.74
Oct. 9	11.54	Nov. 2	15.83				

Daily lowest water level from recorder graph, 1954

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	e13.7	13.3	....	14.0	14.5	13.7	13.5	13.5	13.5
2	13.7	13.3	13.3	14.1	14.4	13.7	13.6	13.5	e13.4
3	e14.3	e13.7	14.0	13.3	13.4	14.0	14.4	13.8	13.5	13.4	e13.3
4	14.0	13.2	13.4	14.0	14.4	13.9	13.5	13.7	13.4
5	e14.1	....	....	13.9	13.2	13.5	13.9	14.4	13.8	13.6	13.6	13.4
6	13.9	13.1	e13.5	13.9	14.5	13.8	13.7	13.6	13.7
7	13.9	13.1	....	13.9	14.4	13.8	13.8	13.4	13.8
8	14.0	13.0	e13.7	14.0	14.2	13.9	13.7	13.4	13.7
9	14.0	13.0	13.6	14.1	e14.1	14.0	13.7	13.5	13.9
10	e14.3	e13.5	14.0	13.0	13.6	14.1	....	13.8	13.7	13.6	14.0
11	14.0	13.1	13.7	14.1	....	13.5	13.6	13.6	14.2
12	14.0	....	13.7	14.1	e14.4	13.5	13.6	13.8	14.2
13	14.1	....	13.6	14.1	14.5	13.4	13.7	13.8	14.2
14	14.1	....	13.6	14.1	14.5	13.5	e13.6	13.6	14.2
15	14.0	e13.1	13.7	14.2	14.3	13.5	e13.6	13.7	14.0
16	13.9	13.0	13.7	14.3	14.2	13.4	13.4	13.7	14.2
17	e14.6	e14.1	13.7	13.0	13.6	14.3	14.2	13.4	13.4	13.7	14.3
18	e13.9	13.6	13.0	13.7	14.2	14.2	13.4	13.4	13.7	14.1
19	13.9	13.4	....	13.7	14.2	14.2	13.2	13.5	13.7	14.0
20	e14.3	....	13.7	13.4	....	13.8	14.3	14.3	13.2	13.4	13.6	14.1
21	13.7	13.5	....	13.7	14.2	14.0	13.2	13.2	13.3	14.1
22	13.7	13.5	e13.0	13.8	14.3	14.0	13.2	13.1	13.2	14.3
23	13.8	13.6	13.0	e13.8	14.4	14.0	13.4	13.1	13.1	14.3
24	e13.8	13.7	13.7	....	....	14.4	14.0	13.5	13.3	13.1	14.4
25	13.7	13.6	....	....	14.4	14.1	13.4	....	13.0	14.3
26	13.6	13.6	....	....	14.3	14.0	13.5	....	13.1	14.2
27	e13.9	....	13.8	13.6	....	....	14.4	14.0	13.4	....	13.2	14.1
28	13.8	13.5	....	....	14.4	13.8	13.3	e13.6	13.1	14.1
29	13.4	13.3	....	14.4	13.8	13.4	13.5	13.2	14.1
30	13.3	....	....	14.4	13.7	13.4	13.5	13.6	14.1
31	14.5	13.5	....	13.5	....	14.0

e Estimated.

Bk-649 (J24b-5665). United States Steel Corp. Fairless Works. Falls Township. Near Morrisville. Lat. 40°10'08" long. 74°45'07". Drilled observation water-table well in sand and gravel of Wisconsin or Recent age, diameter 12 inches, depth 34 feet. Land-surface is about 20 feet above msl. Highest water level 17.05 below lsd, May 15, 1953; lowest 18.8 Feb. 12-14, July 24-25, 31, Aug. 1-3, 6, 8, 1954. Records available: 1953-54. May 15, 1953, 17.05; May 27, 17.14; July 17, 16.03; Aug. 12, 17.94; Aug. 28, 18.06; Sept. 8, 18.20; Sept. 29, 18.48.

Daily lowest water level from recorder graph, 1954

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	e18.5	18.3	e18.0	e17.8	18.0	e18.4	18.8	18.1	17.9	18.3	18.1
2	18.1	18.0	17.8	17.9	18.5	18.8	18.1	18.0	18.3	17.9
3	e18.4	18.1	18.1	17.8	17.9	18.5	18.8	18.1	18.0	18.2	17.9
4	18.3	17.8	18.2	17.8	18.0	18.5	18.7	18.2	18.0	18.3	17.8
5	e18.4	18.3	18.0	18.3	17.8	18.0	18.5	18.7	18.3	18.0	18.3	17.8
6	18.4	18.1	18.2	17.7	18.0	18.5	18.8	18.3	18.1	18.3	17.9
7	18.5	18.1	18.2	....	18.1	18.5	18.7	18.3	18.1	18.1	18.1
8	18.6	18.1	18.3	e17.5	18.2	18.6	18.8	18.3	18.1	18.1	18.0
9	18.6	18.2	18.3	17.6	18.2	18.6	18.7	18.3	18.1	18.1	18.2
10	18.6	18.0	18.3	17.6	18.2	18.6	18.5	18.2	18.1	18.2	18.1
11	18.6	18.1	18.3	e17.6	18.2	18.6	18.5	18.2	18.1	18.2	18.1
12	18.8	18.1	18.4	e17.6	18.2	18.6	18.5	17.9	18.1	18.2	18.2
13	18.8	18.2	....	e17.6	18.2	18.6	18.6	17.8	18.1	18.4	18.2
14	18.8	18.2	....	17.6	18.2	18.6	18.6	17.8	18.1	18.3	18.1
15	18.7	18.1	....	17.7	18.2	18.6	18.6	17.8	18.0	18.3	17.9

Bk-649 (J24b-5665)--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	....	18.7	18.1	....	17.7	....	18.7	18.6	17.7	17.6	18.4	18.1
17	....	18.7	18.3	....	17.7	....	18.7	18.6	17.7	17.8	18.3	18.2
18	....	18.7	18.3	e18.0	17.8	....	18.7	18.6	17.7	18.0	18.3	18.1
19	e18.5	18.6	18.3	17.9	17.8	....	18.6	18.6	17.7	18.0	18.3	17.9
20	e18.6	18.4	18.2	17.9	17.8	....	18.6	18.6	17.7	18.1	18.2	17.9
21	....	18.4	18.1	17.9	17.8	....	18.7	18.6	17.7	18.0	18.1	17.9
22	....	18.3	18.1	17.9	17.8	....	18.7	18.3	17.7	18.1	17.9	18.1
23	....	18.4	18.2	17.9	17.8	e18.2	18.7	18.4	17.8	18.1	e17.9	18.2
24	....	18.3	18.1	18.1	17.8	....	18.8	18.3	17.9	18.3	....	18.1
25	....	18.2	18.1	18.1	17.8	....	18.8	18.4	17.9	18.3	....	18.2
26	....	18.3	18.1	18.0	17.8	....	18.7	18.4	17.8	18.2	e17.7	18.2
27	e18.4	18.4	18.2	18.0	17.9	....	18.7	18.4	17.8	18.2	17.7	18.1
28	18.5	18.4	18.2	17.9	17.9	....	18.7	18.3	....	18.2	17.7	18.2
29	e18.6	....	18.1	e17.8	17.9	....	18.7	18.3	....	18.2	17.7	18.1
30	....	....	18.1	....	17.9	....	18.7	18.3	e17.9	18.2	18.0	18.0
31	....	....	....	....	18.0	....	18.8	18.3	....	18.3	....	18.0

e Estimated.

Bk-666 (J24c-4015). Mack Transportation Co. Andalusia, Bensalem Township. Lat. 40°03'58", long. 74°58'18". Drilled unused water table well in Wissahickon formation, diameter 8 inches, depth 219 feet. Land-surface datum is about 45 feet above msl. Highest water level 8.8 below lsd, May 1-3, 1954; lowest 13.6 below lsd, Nov. 10, 1953. Records available: 1953-54.

Daily lowest water level from recorder graph, 1953*

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	10.8	....	....	....	13.4
2	10.9	....	....	....	13.4
3	10.9	....	....	....	13.3
4	10.9	....	....	....	13.4
5	9.9	11.0	....	....	e13.5	....
6	9.9	11.1	....	....	13.4	....
7	10.1	11.1	....	....	13.5	e13.4
8	10.1	11.1	....	....	....	13.3
9	10.2	11.1	....	....	....	13.2
10	11.2	e12.2	....	e13.6	13.2
11	11.3	....	....	....	13.2
12	11.3	....	....	....	13.1
13	11.3	....	....	....	13.1
14	11.3	....	....	....	13.0
15	11.4	....	....	....	13.0
16	11.4	....	....	....	12.9
17	11.4	....	....	....	12.8
18	11.4	....	....	....	e12.7
19	11.4	....	e13.2	....	e12.6
20	11.5	....	13.2	....	e12.5
21	10.9	11.6	....	13.2	....	e12.5
22	10.9	11.5	....	13.2	13.5	e12.4
23	10.8	11.6	....	13.2	13.5	e12.4
24	10.6	11.6	....	13.3	13.5	e12.4
25	9.0	10.6	11.7	....	13.3	13.5	e12.3
26	9.2	10.5	11.7	....	13.3	13.5	12.1
27	9.2	10.4	11.7	....	13.3	13.4	12.2
28	9.4	10.5	11.7	....	13.3	13.4	12.1
29	9.4	10.6	11.8	12.8	13.4	13.4	12.0
30	10.6	11.8	....	....	13.4	12.0
31	10.7	11.9	....	....	....	12.0

e Estimated.

* No record for January, February, March, April, and May.

Daily lowest water level from recorder graph, 1954

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	11.1	....	11.2	....	8.8	9.9	11.6	....	13.1	12.6	13.1	12.3
2	12.1	....	11.2	....	8.8	10.0	11.7	....	13.1	12.6	13.1	12.2
3	12.0	11.2	11.0	....	e8.8	10.2	11.7	12.7	13.1	12.6	13.1	12.1
4	12.0	11.2	10.7	....	8.9	10.3	11.7	12.7	13.2	12.6	13.1	12.1
5	11.9	11.3	10.4	....	8.9	10.5	11.7	12.7	13.2	12.7	13.1	12.0
6	12.0	11.4	10.2	e9.6	9.0	10.6	11.8	12.8	13.2	12.8	13.1	12.0
7	12.0	11.4	10.1	9.7	9.0	10.6	11.8	12.8	13.2	12.8	13.1	11.9
8	12.1	11.3	10.1	10.0	9.0	10.8	11.9	12.8	13.2	12.8	13.1	11.9
9	12.0	11.2	10.1	10.1	8.9	10.8	11.9	12.8	13.2	12.7	13.1	11.9
10	12.0	11.3	10.1	10.1	9.0	10.8	12.0	12.8	13.2	12.8	13.1	11.8

Bk-666 (J24c-4015)--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
11	11.9	11.4	10.2	9.8	9.0	10.8	12.0	12.8	13.2	12.8	13.1	11.8
12	12.1	11.6	10.3	10.0	9.2	11.0	12.1	12.8	13.2	12.8	13.1	11.8
13	12.2	11.6	10.2	10.0	9.3	10.9	12.1	12.9	13.2	12.9	13.1	11.8
14	12.1	11.5	10.0	10.0	9.3	11.0	....	12.9	13.1	12.9	13.1	11.8
15	12.0	11.5	9.8	10.2	9.2	11.0	....	12.8	12.9	12.9	13.1	11.6
16	11.9	11.5	9.8	10.1	9.3	11.1	....	12.9	12.9	12.9	13.1	11.7
17	12.1	11.4	9.7	9.9	9.5	11.1	....	12.9	13.0	13.0	13.1	11.7
18	12.0	11.6	9.7	9.8	9.6	11.1	....	12.9	12.9	13.0	13.1	11.5
19	11.9	11.6	9.6	9.6	9.7	11.1	....	13.0	12.9	13.0	13.1	11.4
20	11.8	11.6	9.5	9.6	9.7	11.1	....	13.0	12.8	13.0	13.1	11.3
21	11.8	11.5	9.7	9.5	9.6	11.2	....	13.0	12.8	13.0	13.1	11.2
22	11.8	11.5	9.7	9.5	9.4	11.2	....	13.0	12.8	13.0	13.0	11.0
23	11.7	11.5	9.7	9.7	9.3	11.3	....	13.0	12.7	13.1	12.8	11.0
24	....	11.3	9.8	9.7	9.2	11.3	....	13.0	12.7	13.1	12.7	11.2
25	....	11.2	9.7	9.7	9.4	11.3	....	13.0	12.7	13.1	12.7	11.3
26	....	11.3	9.4	9.7	9.5	11.3	....	13.1	12.6	13.1	12.7	11.2
27	....	11.3	9.4	9.5	9.5	11.5	....	13.1	12.6	13.1	12.7	11.1
28	....	11.2	9.2	8.9	9.5	11.5	....	13.1	12.6	13.1	e12.6	11.0
29	....		9.1	8.9	9.8	11.6	....	13.1	12.6	13.1	....	11.0
30	....		9.2	8.9	9.8	11.6	....	13.1	12.6	13.1	....	10.9
31	....		9.5		9.9		....	13.0		13.1		10.9

e Estimated.

Cambria County

Ca-1 (H8c-3343). Johnstown Tribune Publishing Co. Lat. 40°19'38", long. 78°55'06". Drilled unused water-table well in sandstone of Allegheny formation of Pennsylvanian age, diameter 12 to 8 inches, depth 45 feet. Land-surface datum is about 1,160 feet above msl. L. W. Barnes, voluntary observer. Highest water level 19.20 below lsd, Dec. 30, 1954; lowest 26.78 below lsd, July 23, 1953. Records available: 1952-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	24.40	Apr. 8	21.80	July 8	25.30	Oct. 4	23.10
7	24.60	12	21.95	12	23.40	7	23.00
11	23.80	15	22.10	15	23.70	11	23.00
14	23.80	19	21.40	19	24.10	14	24.40
18	23.80	22	22.10	21	24.89	18	21.50
21	23.20	26	21.70	22	26.40	21	22.85
25	22.15	29	21.60	26	25.40	25	22.75
28	22.00	May 3	20.9	29	24.60	28	23.10
Feb. 1	22.50	6	21.4	Aug. 2	25.70	Nov. 1	23.10
4	22.60	10	21.8	5	24.55	4	23.55
8	22.80	13	21.70	9	23.40	8	22.45
11	23.30	17	21.70	12	23.60	11	22.60
15	23.60	20	22.60	16	24.80	15	23.20
18	23.10	24	22.75	19	25.65	18	22.90
22	22.30	27	21.90	23	24.80	22	22.40
25	23.40	31	21.60	26	26.20	25	22.30
Mar. 1	19.90	June 3	23.90	30	24.15	29	22.25
4	22.10	7	22.10	Sept. 2	24.80	Dec. 2	23.10
8	22.50	10	22.60	6	23.65	6	23.10
11	23.15	14	22.35	9	24.30	9	22.60
15	21.90	17	24.90	13	23.95	13	22.15
18	23.00	21	24.90	16	23.65	16	22.25
22	22.60	24	25.20	20	23.35	20	22.15
25	22.90	28	23.60	23	23.75	23	22.15
29	21.80	July 1	23.90	27	23.40	27	22.50
Apr. 1	21.60	5	23.20	30	25.00	30	19.20
5	21.90						

Chester County

Ch-2 (J20d-0709). Lewis R. Shingle. Honeybrook Township. Lat. 40°06'50", long. 75°51'20". Dug unused water-table well in Precambrian granodiorite or quartz monzonite, diameter 36 inches, depth 15 feet, cased with stone. Land-surface datum is about 640 feet above msl. Lewis R. Shingle, voluntary observer. Highest water level 3.50 below lsd, Mar. 11, 1952; lowest 12.78 below lsd, Oct. 30, 1951. Records available: 1951-54. Sept. 14, 12.04; Nov. 12, 12.63.

Ch-3 (J20d-4839). Fred M. Anderson. West Brandywine Township. Lat. 40°03'20", long. 75°48'00". Dug unused water-table well in Precambrian granodiorite, diameter 36 inches, depth 31 feet, cased with stone. Land-surface datum is about 600 feet above msl. Mrs. Fred M. Anderson, voluntary observer. Highest water level 17.88 below lsd, June 5, 1952; lowest 29.75 below lsd, Nov. 18, 1953. Records available: 1951-54. Jan. 27, 26.31; Mar. 5, 25.90; May 5, 24.22; June 4, 23.54.

Ch-4 (J21c-0838). Richland Rebmman, Jr. West Vincent Township. Lat. 40°06'40", long. 75°40'30". Dug unused water-table well in Precambrian quartz monzonite, diameter 4 feet, depth 30 feet, cased with stone. Land-surface datum is about 570 feet above msl. Jesse A. Baxter, voluntary observer. Highest water level 19.45 below lsd, May 2, 1952; lowest 28.03 below lsd, Oct. 23, 1951. Records available: 1951-54. Jan. 27, 24.90; Mar. 5, 24.46; May 5, 24.30; June 4, 24.67; Sept. 14, 28.15; Nov. 12, 28.77.

Ch-5 (J21c-2001). Richard Cadbury. Wallace Township. Lat. 40°05'40", long. 75°44'50". Dug unused water-table well in Precambrian quartz monzonite, diameter 30 inches, depth 12 feet, cased with stone. Land-surface datum is about 560 feet above msl. Richard Cadbury, voluntary observer. Highest water level 1.55 below lsd, Apr. 29, 1952; lowest dry, Nov. 6-Dec. 4, 1954. Records available: 1951-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	5.65	Mar. 13	3.27	June 12	2.63	Sept. 18	8.88
9	5.80	16	3.15	19	2.85	25	9.23
16	5.63	20	2.85	26	3.23	Oct. 2	9.65
19	6.07	27	2.45	July 3	3.65	9	9.95
23	5.80	Apr. 3	2.45	10	4.30	16	10.31
30	5.62	10	2.46	17	4.85	19	10.42
Feb. 6	5.42	17	2.45	24	5.42	23	10.75
10	5.45	24	2.46	31	6.03	30	11.17
13	5.63	May 1	2.46	Aug. 7	6.51	Nov. 6	(f)
20	5.63	8	2.05	14	7.13	13	(f)
27	5.58	15	2.05	21	7.49	20	(f)
Mar. 2	5.03	22	2.10	28	7.82	27	(f)
4	4.47	29	2.24	Sept. 4	8.19	Dec. 4	(f)
6	3.94	June 5	2.40	11	8.61		

f Dry.

Ch-6 (J21c-7630). John J. Englerth. Downingtown. Lat. 40°00'40", long. 75°41'30". Dug unused water-table well in Ledger dolomite, diameter 5 feet, depth 20 feet, cased with stone. Land-surface datum is about 270 feet above msl. John J. Englerth, voluntary observer. Highest water level 12.19 below lsd, Apr. 29, 1952; lowest 18.15 below lsd, Oct. 23, 1953. Records available: 1951-54. Jan. 27, 16.43; Mar. 5, 15.82; May 5, 15.47; June 4, 16.64; Sept. 14, 18.14; Nov. 12, 17.83.

Ch-7 (K20a-7146). D. L. Gibbs. Cochranville. Lat. 39°53'40", long. 75°54'40". Dug unused water-table well in Peters Creek quartzite, diameter 4 feet, depth 40 feet, cased with stone. Land-surface datum is about 560 feet above msl. Highest water level 28.05 below lsd, May 2, 1952; lowest 38.60 below lsd, Nov. 12, 1954. Records available: 1951-54. Mar. 5, 33.74; May 5, 34.04; June 4, 34.40; Sept. 14, 38.08; Nov. 12, 38.60.

Ch-8 (K20b-1001). John Robinson. Valley Township. Lat. 39°59'00", long. 75°52'20". Dug unused water-table well in Baltimore gneiss, diameter 36 inches, depth 20 feet, cased with stone. Land-surface datum is about 660 feet above msl. John Robinson, voluntary observer. Highest water level 6.86 below lsd, Apr. 27, 1952; lowest 19.30 below lsd, Nov. 12, 1954. Records available: 1951-54. Jan. 27, 14.66; Mar. 5, 13.60; May 5, 13.75; June 4, 14.92; Sept. 14, 18.90; Nov. 12, 19.30.

Ch-9 (K20b-3329). C. Raymond Young. Youngsburg. Lat. 39°57'00", long. 75°49'10". Dug unused water-table well in Peters Creek quartzite, diameter 30 inches, depth 25 feet, cased with stone. Land-surface datum is about 510 feet above msl. C. Raymond Young, voluntary observer. Highest water level 10.90 below lsd, June 6, 1952; lowest 23.05 below lsd, Nov. 12, 1954. Records available: 1951-54. Jan. 27, 16.56; Mar. 5, 16.66; May 5, 15.70; June 4, 15.54; Sept. 14, 21.51; Nov. 12, 23.05.

Ch-10 (K20b-5932). Robert J. Kleberg, Jr. Doe Run. Lat. 39°54'40", long. 75°48'50". Drilled unused water-table well in Cockeysville marble, diameter 6 inches, depth 34 feet. Land-surface datum is about 300 feet above msl. Burnett Wilson, voluntary observer. Highest water level 8.46 below lsd, Apr. 29, 1952; lowest 15.73 below lsd, Nov. 12, 1954. Records available: 1951-54. May 5, 12.94; June 4, 13.84; Sept. 14, 15.45; Nov. 12, 15.73.

Ch-11 (K20b-7632). J. E. Ryan. West Marlboro Township. Lat. 39°53'10", long. 75°48'50". Dug unused water-table well in Baltimore gneiss, diameter 24 inches, depth 20 feet, cased with stone. Land-surface datum is about 540 feet above msl. Sam Reyner, voluntary observer. Highest water level 10.24 below lsd, Mar. 20, 1953; lowest 15.16 below lsd, Sept. 14, 1954. Records available: 1950-54. May 5, 12.48; June 4, 12.80; Sept. 14, 15.16; Nov. 12, 14.85.

Ch-12 (K21a-3149). Thomas P. Harney. East Bradford Township. Lat. 39°57'10", long. 75°39'20". Dug unused water-table well in Baltimore gneiss, diameter 30 inches, depth 40 feet, cased with stone. Land-surface datum is about 290 feet above msl. Thomas P. Harney, voluntary observer. Highest water level 29.95 below lsd, Apr. 18, 1953; lowest dry several times, 1951-54. Records available: 1951-54. June 4, 37.12.

Ch-13 (K21a-3512). Everett S. Barr. West Bradford Township. Lat. 39°57'00", long. 75°43'40". Dug unused water-table well in Peters Creek quartzite, diameter 24 inches, depth 18 feet, cased with stone. Land-surface datum is about 360 feet above msl. Highest water level 11.70 below lsd, June 6, 1952; lowest 18.14 below lsd, Nov. 12, 1954. Records available: 1951-54. Jan. 27, 15.50; Mar. 5, 15.18; May 5, 14.65; June 4, 14.73; Sept. 14, 17.35; Nov. 12, 18.14.

Ch-14 (K21a-7841). John T. Crossland. Pocopson Township. Lat. 39°53'10", long. 75°40'20". Dug unused water-table well in gneiss of Wissahickon formation, diameter 36 inches, depth 26 feet, cased with stone. Land-surface datum is about 370 feet above msl. John T. Crossland, voluntary observer. Highest water level 17.30 below lsd, June 6, 1952; lowest dry, Nov. 12, 1954. Records available: 1950-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 18	22.38	Mar. 29	22.96	May 24	22.70	Aug. 16	24.12
Feb. 1	23.46	Apr. 5	22.95	31	22.75	30	24.34
8	23.44	19	22.84	June 4	22.77	Sept. 6	24.45
15	23.52	26	22.85	7	22.85	14	24.60
22	23.55	May 3	22.76	28	23.22	20	24.65
Mar. 8	23.45	5	22.69	July 5	23.38	Oct. 4	24.88
15	23.28	10	22.67	Aug. 2	23.95	Nov. 12	(f)
22	23.16	17	22.71	10	24.02		

f Dry.

Ch-15 (K21b-7407). W. C. Appleton. Chadds Ford. Lat. 39°53'30", long. 75°36'40". Dug unused water-table well in gneiss of Wissahickon formation, diameter 42 inches, depth 38 feet, cased with stone. Land-surface datum is about 220 feet above msl. Miss Appleton, voluntary observer. Highest water level 20.94 below lsd, Feb. 14, 1952; lowest 31.98 below lsd, Oct. 23, 1953. Records available: 1950-54. May 5, 28.05; June 4, 28.72.

Clarion County

Cr-1 (E6a-2560). John G. Meisinger. 614 Wood St., Clarion. Lat. 41°12'40", long. 79°23'00". Dug unused water-table well in sandstone of Allegheny formation, diameter 36 inches, depth 28 feet, cased with stone to 15. Land-surface datum is about 1,480 feet above msl. H. F. Brooks, voluntary observer. Highest water level 11.36 below lsd, Apr. 9, 1938; lowest 21.50 below lsd, Oct. 27, 1953. Records available: 1932-54.

Jan. 8	18.13	Apr. 16	13.58	July 16	18.30	Oct. 8	16.83
15	18.03	23	12.56	21	19.34	15	16.64
22	15.56	30	11.99	23	19.09	22	13.28
29	14.01	May 7	13.70	30	19.26	29	16.32
Feb. 5	14.76	14	15.48	Aug. 6	18.89	Nov. 5	16.25
12	16.73	21	16.82	13	19.48	12	17.31
19	14.42	28	17.23	20	19.40	19	18.07
26	12.68	June 4	15.92	27	19.84	26	16.39
Mar. 5	12.19	11	17.11	Sept. 3	20.03	Dec. 3	14.86
12	13.10	18	16.53	10	20.19	10	15.08
19	14.78	25	16.96	17	20.19	17	12.82
26	12.28	July 2	18.13	24	20.18	24	12.71
Apr. 2	12.68	9	18.10	Oct. 1	20.35	31	11.92
9	14.57						

Cr-3 (D7c-2511). Commonwealth of Pennsylvania. Cook Forest Park. Lat. 41°20'20", long. 79°13'40". Drilled unused water-table well in sandstone of Pottsville or Pocono formation, diameter 6 inches, depth 130 feet, cased to 12. Land-surface datum is about 1,530 feet above msl. Paul R. Beattie, voluntary observer. Highest water level 44.7 below lsd, Mar. 16, May 5, 1951; lowest 92.20 below lsd, Dec. 6, 1952. Records available: 1950-54.

Jan. 2	86.50	Apr. 3	61.70	July 3	57.70	Oct. 2	74.05
9	86.20	10	58.60	10	59.25	9	74.40
16	86.40	17	57.10	17	60.22	16	71.79
23	86.20	24	54.70	24	61.40	23	69.15
30	85.60	May 1	53.00	31	62.40	Nov. 1	63.95
Feb. 6	83.00	8	51.40	Aug. 7	63.70	6	63.20
13	82.00	15	51.00	14	64.40	13	62.10
20	79.40	22	55.60	21	66.30	19	60.90
27	80.30	29	53.50	28	66.82	27	59.30
Mar. 6	69.00	June 5	58.40	Sept. 4	68.30	Dec. 3	61.85
13	68.00	12	55.8	11	68.85	13	61.9
20	63.20	19	51.10	18	69.40	20	59.61
27	64.40	26	60.00	25	73.28	27	58.46

Clearfield County

Cf-4 (F9b-2051). Jared I. McNaul. Curwensville. Lat. 40°58'10", long. 78°31'30". Dug unused water-table well in sandstone of Allegheny formation, diameter 5 feet, depth 30 feet. Land-surface datum is about 1,160 feet above msl. Highest water level 15.57 below lsd, Mar. 5, 1951; lowest 21.30 below lsd, Aug. 31, 1946. Records available: 1946-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	20.88	Apr. 5	19.48	July 5	20.32	Oct. 4	20.84
11	20.91	12	19.70	13	20.34	11	20.74
19	20.97	21	19.41	15	20.36	18	20.28
25	20.77	27	19.71	19	20.38	26	20.44
Feb. 1	20.45	May 3	19.43	26	20.47	Nov. 1	20.41
8	20.60	10	19.47	Aug. 2	20.52	8	20.46
15	20.51	17	19.76	9	20.51	15	20.59
22	20.45	24	19.02	16	20.46	22	20.63
Mar. 2	18.94	June 1	20.17	23	20.58	29	20.51
8	19.38	7	19.88	30	20.62	Dec. 10	20.45
15	20.02	14	20.11	Sept. 6	20.69	15	20.04
23	20.21	21	20.17	13	20.77	20	19.67
29	19.58	27	20.22	20	20.92	27	20.04

Clinton County

Cn-1 (E12b-0653). Commonwealth of Pennsylvania. Sproul State Forest, Renovo. Lat. 41°14'20", long. 77°46'20". Drilled unused water-table well in sandstone of Pottsville formation, diameter 6 inches, depth 78 feet, cased to 38. Land-surface datum is about 2,050 feet above msl. Clarence F. Billotte, voluntary observer. Highest water level 44.0 below lsd, Jan. 13, 1951; lowest 55.72 below lsd, Nov. 14, 1953. Records available: 1950-54.

Jan. 2	53.17	Apr. 10	49.00	July 10	50.89	Oct. 2	53.63
9	53.20	17	49.44	16	51.21	9	54.79
16	52.67	24	49.01	17	51.56	16	54.79
23	52.60	May 1	48.43	24	51.58	23	54.81
30	52.58	8	48.50	31	51.58	30	54.80
Feb. 6	52.10	15	47.91	Aug. 7	52.25	Nov. 6	54.74
13	52.10	22	48.50	14	52.48	13	54.44
20	51.40	29	49.01	21	52.50	20	54.34
27	50.60	June 5	49.00	28	52.99	27	53.84
Mar. 6	50.70	12	49.30	Sept. 4	53.02	Dec. 4	53.83
13	50.61	19	49.29	11	53.65	11	54.00
20	50.59	26	49.27	18	53.62	18	52.58
27	49.30	July 3	49.29	25	53.61	25	52.20
Apr. 3	49.85						

Columbia County

Co-1 (E18c-8318). Fred E. Walters. Fernville. Lat. 41°00'10", long. 76°27'50". Dug unused water-table well in sand of Pleistocene age, diameter 36 inches, depth 19 feet, cased with stone. Land-surface datum is about 490 feet above msl. Highest water level 4.88 below lsd, Sept. 2, 1933; lowest 14.51 below lsd, Dec. 15, 1931. Records available: 1931-54.

Jan. 4	12.20	Apr. 10	11.02	July 10	12.02	Oct. 2	13.39
11	12.70	17	9.15	14	12.12	9	13.42
16	12.97	24	10.30	17	12.12	18	13.28
23	13.14	May 1	10.28	24	12.53	23	13.24
30	11.29	8	9.89	31	12.57	30	13.30
Feb. 6	12.54	15	10.47	Aug. 7	12.82	Nov. 6	12.38
13	12.20	22	10.88	14	13.05	13	12.77
20	10.52	29	11.05	21	13.28	20	12.67
27	10.54	June 5	11.25	28	12.79	27	12.42
Mar. 6	10.18	12	11.43	Sept. 4	12.90	Dec. 4	13.52
13	9.64	19	11.77	11	13.00	11	12.32
20	11.12	26	12.05	18	13.30	18	10.76
27	10.71	July 5	12.27	25	13.24	25	10.72
Apr. 3	11.17						

Cumberland County

Cu-2 (J14d-6335). Commonwealth of Pennsylvania. Michaux State Forest. Lat. 40°02'03", long. 77°18'30". Drilled unused water-table well in sandstone of Loudoun formation of Early Cambrian age, diameter 6 inches, depth 60 feet. Land-surface datum is about 940 feet above msl. Mr. Hockley, voluntary observer. Highest water level 10.50 below lsd, May 1, 1952; lowest 30.44 below lsd, Nov. 18, Dec. 23, 30, 1954. Records available: 1951-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 11	28.50	Apr. 8	27.50	July 1	23.50	Sept. 30	27.50
21	28.50	15	27.50	22	23.50	Oct. 7	27.50
28	29.00	29	26.00	29	23.00	21	29.50
Feb. 4	29.50	May 13	24.50	30	25.01	28	29.50
11	28.50	20	23.50	Aug. 5	23.50	Nov. 4	28.50
18	28.50	27	22.00	11	25.50	18	30.44
Mar. 4	29.50	June 3	21.50	19	25.50	Dec. 2	29.90
11	29.50	10	21.00	26	25.50	23	30.44
18	28.70	17	20.50	Sept. 2	26.50	30	30.44
25	28.00	24	20.50	16	26.50		

Delaware County

De-3 (K21d-2125). Mrs. Hope W. Ebert. Birmingham Township. Lat. 39°50'40", long. 75°34'10". Dug unused water-table well in gneiss of Wissahickon formation, diameter 42 inches, depth 22 feet, cased with stone. Land-surface datum is about 260 feet above msl. Mrs. Hope W. Ebert, voluntary observer. Highest water level 11.29 below lsd, Feb. 11, 1952; lowest 19.04 below lsd, Nov. 22, 1954. Records available: 1950-54.

Jan. 4	13.97	Apr. 12	14.48	July 8	16.07	Oct. 4	18.30
11	14.28	19	14.72	20	16.40	11	18.40
18	14.66	26	14.95	26	16.62	18	18.56
25	14.79	May 3	14.93	Aug. 2	16.82	Nov. 1	18.79
Feb. 1	14.92	10	14.80	9	17.01	8	18.93
8	14.97	17	14.83	12	17.10	12	18.98
15	15.09	24	14.96	24	17.39	15	18.99
22	15.24	31	15.11	30	17.54	22	19.04
Mar. 1	15.30	June 4	15.16	Sept. 6	17.70	29	18.92
8	14.82	7	15.27	13	17.83	Dec. 6	18.94
15	14.51	14	15.43	14	17.96	13	18.90
22	14.37	21	15.60	20	17.99	20	18.47
29	14.25	28	15.78	27	18.15	27	18.08
Apr. 5	14.30	July 5	15.97				

Elk County

Ek-1 (D9d-0909). Mrs. Elizabeth Ernst. Kersey. Lat. 41°21'40", long. 78°36'20". Drilled unused water-table well in shale of Allegheny formation, diameter 4 inches, depth 87 feet. Land-surface datum is about 1,900 feet above msl. Highest water level 6.62 below lsd, June 11, 1943; lowest 13.43 below lsd, Sept. 24, 1954. Records available: 1941-54.

Jan. 1	8.65	Apr. 9	7.88	July 15	12.04	Oct. 8	13.21
8	8.75	16	7.55	16	12.11	15	12.75
15	8.74	23	7.00	23	12.39	22	12.48
22	8.82	30	7.44	30	12.54	29	12.25
29	8.55	May 7	6.90	Aug. 6	12.67	Nov. 5	11.60
Feb. 5	8.54	14	7.10	13	12.84	12	12.44
12	8.80	21	7.58	20	12.94	19	12.46
19	8.78	28	7.65	27	13.08	26	12.30
26	8.00	June 4	7.58	Sept. 3	13.11	Dec. 3	12.25
Mar. 5	7.98	11	7.72	10	13.22	10	12.22
12	7.94	18	8.05	17	13.32	17	12.05
19	7.95	25	8.10	24	13.43	24	12.10
26	7.75	July 2	8.35	Oct. 1	13.41	31	11.82
Apr. 2	7.70	9	11.66				

Erie County

Er-1 (E4b-3203). Mrs. Grace P. Estes. Near Carters Corners. Lat. 41°57'10", long. 79°52'00". Dug unused water-table well in sand of Pleistocene age, diameter 4 feet, depth 19 feet. Land-surface datum is about 1,440 feet above msl. Julius Horvath, voluntary observer. Highest water level 7.22 below lsd, Apr. 20, 1952; lowest dry, Sept. 8-Dec. 1, 1934. Records available: 1931-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	14.20	May 23	14.61	July 25	17.17	Oct. 3	17.26
24	12.91	June 6	16.36	Aug. 16	17.27	24	15.5
Feb. 21	9.81	20	16.98	29	17.35	Nov. 7	9.95
Mar. 14	9.56	July 4	17.13	Sept. 5	17.24	21	13.16
Apr. 11	9.90	21	17.61	19	16.87	Dec. 13	11.31
25	10.15						

Franklin County

Fr-2 (K13a-0047). U. S. Army. Letterkenny Ordnance Depot, Chambersburg. Lat. 39°59'59", long. 77°39'38". Drilled unused artesian well in Stones River limestone, diameter 8 to 6 inches, depth 441 feet, cased to 60. Land-surface datum is about 694 feet above msl. Highest water level 15.7 below lsd, Jan. 26, 1953; lowest 49.3 below lsd, Sept. 28-Oct. 4, Oct. 12-28, 1953. Records available: 1950-54.

Daily noon water level from recorder graph, 1950*

Day	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	25.6	48.0	48.8	48.5	34.9	44.4	24.2
2	....	25.0	48.2	48.8	48.4	37.7	45.7	24.7
3	....	25.0	48.2	48.8	41.0	39.4	45.6	25.2
4	....	25.2	48.4	48.9	43.8	....	41.0	22.9
5	....	25.5	48.5	49.0	47.0	....	30.5	20.0
6	....	26.4	48.6	49.0	47.7	....	29.7	19.2
7	....	27.4	48.7	49.0	48.0	....	29.6	19.0
8	....	28.4	48.8	49.0	48.4	....	29.7	18.7
9	....	29.4	48.8	49.0	48.6	31.7	30.0	18.9
10	....	30.5	45.8	49.0	48.7	29.4	30.8	19.4
11	e42.5	31.8	47.6	49.0	31.2	28.5	32.0	19.6
12	44.6	33.6	43.7	49.0	31.2	28.1	33.5	20.4
13	45.8	35.6	46.6	49.0	31.2	28.1	35.3	21.1
14	46.4	36.4	47.6	48.9	29.2	28.6	37.3	21.9
15	38.8	38.0	....	48.9	28.5	29.4	38.8	22.6
16	30.8	39.0	....	48.9	28.5	29.9	40.0	23.5
17	30.2	40.0	41.8	49.0	29.0	31.1	41.0	24.3
18	28.6	41.2	45.9	49.0	29.9	32.5	42.2	25.7
19	24.3	42.4	46.7	49.0	31.2	34.0	43.8	26.7
20	22.2	43.4	47.3	32.8	33.2	35.9	45.8	27.6
21	21.5	44.6	47.8	32.9	35.6	38.1	44.4	28.6
22	21.4	45.7	48.0	36.8	29.6	39.8	45.9	29.6
23	22.0	45.7	48.2	39.4	28.3	36.9	46.6	30.8
24	22.6	46.4	48.3	43.1	27.9	35.3	46.8	31.5
25	23.2	46.7	47.9	45.8	28.0	35.6	31.7	31.6
26	24.0	47.0	48.2	46.4	28.6	36.5	26.7	32.1
27	25.0	47.4	48.4	46.8	29.4	37.9	24.8	32.7
28	26.1	47.6	48.5	47.4	30.0	39.2	24.0	33.4
29	26.2	47.8	48.6	47.9	31.2	40.3	23.8	34.3
30	25.9	47.8	48.7	48.2	32.9	41.3	23.8	34.8
31	26.1	....	48.6	48.3	....	43.0	....	35.4

e Estimated.

* No record for January, February, March, and April.

Daily noon water level from recorder graph, 1951

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	36.4	26.2	20.3	26.8	30.9	48.3	....	47.4	49.0	49.0	48.5	43.7
2	38.0	26.4	21.2	26.3	31.4	48.3	....	47.6	49.0	48.9	39.6	46.3
3	38.5	26.6	22.3	26.2	32.0	48.4	36.4	47.8	48.9	49.0	41.5	47.6
4	35.6	27.0	22.7	26.4	32.8	47.2	37.8	48.0	49.0	49.0	39.7	47.7
5	30.4	27.8	23.0	26.9	33.8	47.8	38.6	48.1	49.0	49.0	46.9	32.1

Fr-2 (K13a-0047)--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	29.7	28.4	23.5	27.5	34.8	48.0	39.8	48.3	49.0	49.0	47.6	29.3
7	29.4	28.8	23.8	28.4	36.2	48.2	41.2	48.4	46.1	49.0	44.0	28.4
8	29.1	26.5	24.4	29.0	37.4	48.3	42.6	48.5	47.8	48.9	35.6	28.1
9	29.4	25.6	25.1	29.8	38.5	48.4	44.2	48.5	48.6	49.0	37.8	28.2
10	29.6	25.4	25.9	30.7	39.6	35.5	45.5	48.6	48.8	49.0	42.6	e28.3
11	29.8	25.6	26.8	31.5	40.2	29.7	31.6	48.6	48.9	49.0	45.6	....
12	30.4	26.0	27.7	32.7	41.0	30.0	31.3	48.6	48.9	49.0	46.7	....
13	31.2	25.7	28.4	28.5	41.7	30.6	32.1	36.5	48.9	49.0	47.3	....
14	32.1	24.4	28.7	26.4	42.6	24.8	33.2	39.0	49.0	49.0	47.7	....
15	28.6	23.4	28.8	25.5	43.9	21.9	34.8	43.4	48.6	49.1	44.1	....
16	26.8	23.2	29.2	25.3	45.1	21.0	36.9	45.8	48.8	49.1	45.2	....
17	25.8	23.2	29.6	25.5	45.6	21.0	39.0	46.5	48.8	49.1	36.3	e40.8
18	25.4	23.1	30.0	26.0	45.8	....	40.9	47.2	48.9	49.1	36.9	....
19	25.2	22.7	30.9	26.5	46.2	....	42.5	47.6	48.9	49.1	40.1	....
20	25.2	21.7	28.6	27.3	46.6	....	41.8	48.1	48.9	49.1	44.0	....
21	25.5	20.0	27.7	28.3	46.5	....	43.8	48.2	48.9	49.1	46.3	....
22	26.0	16.7	27.2	29.1	46.7	....	45.6	48.4	48.9	49.1	46.9	....
23	26.7	16.0	27.2	28.7	46.9	....	40.3	48.5	48.9	49.1	47.4	....
24	26.5	16.1	27.4	28.7	47.1	....	41.6	48.6	48.9	49.1	47.5	....
25	25.0	16.8	27.8	29.0	47.3	....	43.4	48.7	48.9	49.1	48.0	....
26	24.2	17.5	28.5	29.4	47.5	....	45.5	48.7	48.9	49.1	38.4	e33.0
27	24.1	18.4	29.0	29.8	47.6	....	46.0	48.9	48.9	49.1	36.9	33.0
28	24.4	19.3	29.6	30.5	47.9	....	46.6	48.9	48.9	49.1	37.0	33.8
29	24.6	....	30.2	30.7	48.0	....	46.7	48.9	48.9	49.1	38.0	34.9
30	25.1	....	20.0	30.4	48.1	....	47.0	48.9	49.0	49.1	40.1	35.7
31	25.6	....	28.0	....	48.2	....	47.2	49.0	....	49.1	....	34.9

e Estimated.

Daily noon water level from recorder graph, 1952

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	30.8	....	39.2	23.1	18.2	28.4	36.2	48.6	35.0	48.7	49.1	23.3
2	26.4	....	39.9	23.6	18.8	29.4	39.7	48.6	24.8	48.8	48.6	24.1
3	23.0	....	41.0	24.1	19.7	30.4	44.9	47.9	24.2	48.8	48.0	25.1
4	20.3	18.5	41.0	24.9	20.7	31.6	46.0	48.4	24.4	48.9	48.8	26.2
5	18.7	17.1	37.3	25.6	22.0	33.0	46.6	48.3	24.9	48.9	49.0	26.5
6	17.7	e17.0	34.8	23.6	22.8	34.6	47.3	48.5	25.7	48.9	49.1	25.5
7	17.6	....	35.0	22.9	23.6	36.3	47.8	48.6	26.7	48.9	49.1	25.2
8	18.1	....	35.3	23.0	24.5	37.9	45.0	48.7	28.5	48.9	49.1	25.2
9	18.7	....	35.5	23.4	25.5	40.0	39.7	48.8	29.9	48.9	49.2	25.4
10	19.3	....	35.8	23.8	26.8	41.0	38.9	48.8	31.7	48.9	e49.2	25.8
11	20.2	21.1	27.8	24.4	e28.0	42.2	39.1	48.9	34.1	48.8	....	24.4
12	21.2	22.2	20.8	25.2	26.9	43.4	39.8	48.9	37.1	48.8	....	22.0
13	22.1	23.2	17.8	25.9	26.3	44.6	41.3	48.9	39.5	49.0	....	21.3
14	23.0	24.3	16.4	....	26.3	45.9	34.0	48.9	42.0	49.0	....	21.5
15	23.3	25.4	16.4	....	e26.8	46.4	37.0	49.0	44.5	49.0	....	22.0
16	23.2	26.7	17.0	....	....	46.8	39.5	49.0	46.0	49.0	....	22.5
17	23.4	27.6	18.0	....	....	47.0	37.9	49.0	46.3	49.0	49.0	23.1
18	23.0	28.0	18.9	....	....	47.3	39.5	49.1	46.6	49.0	49.0	23.9
19	22.6	28.5	19.7	....	29.8	47.5	42.6	49.1	43.5	49.0	49.1	24.8
20	22.4	29.0	18.7	....	30.0	47.8	45.4	49.1	....	49.1	35.6	25.8
21	22.8	29.5	18.0	29.8	30.1	48.0	46.0	49.1	....	49.1	28.2	26.9
22	23.1	30.0	18.2	30.6	30.6	48.1	46.8	49.1	45.4	49.1	20.6	27.7
23	23.5	30.9	17.7	31.6	31.3	40.5	46.7	49.1	46.4	49.1	17.7	28.5
24	24.1	32.2	16.3	32.8	32.7	43.7	47.1	49.1	46.8	49.1	17.1	29.4
25	24.9	33.5	16.7	31.2	32.7	46.7	47.4	49.0	47.3	49.1	17.4	30.4
26	25.7	34.8	17.3	27.9	e29.0	47.6	47.6	49.0	47.6	49.1	18.0	31.8
27	22.4	35.8	18.1	34.9	27.5	48.0	47.8	49.0	48.0	49.1	19.0	33.4
28	28.3	37.0	19.0	19.7	26.8	48.3	48.1	49.0	48.2	49.1	20.1	35.6
29	27.4	38.0	20.1	18.2	26.8	48.5	48.2	49.1	48.5	49.1	21.4	38.2
30	27.5	....	21.2	17.9	27.1	41.5	48.4	49.1	48.6	49.1	22.5	39.0
31	....	....	22.3	....	27.7	....	48.5	49.1	....	49.1	....	39.6

e Estimated.

Daily lowest water level from recorder graph, 1953

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	40.5	20.9	26.8	22.5	37.0	30.4	48.0	46.1	49.1	49.3	49.1	47.6
2	41.0	e22.0	27.8	23.2	36.6	27.6	48.1	46.6	49.0	49.3	49.1	48.3
3	41.2	....	28.6	24.0	37.8	26.7	48.2	46.9	48.9	49.3	49.1	48.8
4	40.4	....	28.7	24.9	39.7	26.3	44.5	47.5	48.9	49.3	49.1	48.7
5	40.2	....	28.1	25.9	40.0	e26.9	46.8	47.3	49.1	49.2	49.2	48.0

Fr-2 (K13a-0047)--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	41.3	....	27.6	27.4	39.8	....	47.4	45.9	49.1	49.2	49.2	46.4
7	42.3	....	27.7	27.4	38.7	....	47.7	46.9	e49.0	49.1	49.2	36.1
8	42.8	....	28.0	26.7	30.6	e26.7	48.0	47.2	e49.0	49.2	49.1	29.7
9	42.8	e26.1	28.3	26.1	29.0	26.9	48.2	46.9	49.2	49.2	45.1	30.0
10	e33.3	26.5	28.3	25.9	27.3	27.4	48.3	43.7	49.2	49.2	45.9	30.0
11	e28.8	e26.8	28.3	25.8	26.5	28.2	48.5	45.5	49.2	49.2	47.3	30.2
12	e25.7	e27.1	28.4	25.4	26.2	29.1	48.6	46.5	49.2	49.3	48.0	30.7
13	23.8	e27.3	28.5	25.5	26.5	30.2	48.6	47.3	48.8	49.3	48.5	30.4
14	22.8	e27.6	27.8	25.0	....	31.6	48.7	47.9	48.9	49.3	48.8	29.9
15	22.3	e27.9	27.4	25.2	....	33.3	48.7	48.3	49.0	49.3	48.9	28.4
16	21.8	28.3	26.3	25.4	....	34.9	48.7	48.4	49.0	49.3	49.0	27.9
17	21.9	28.0	24.8	25.8	....	36.4	48.7	48.7	49.1	49.3	49.0	28.2
18	21.9	27.9	24.0	26.4	e27.7	37.5	48.7	48.8	49.1	49.3	49.0	28.9
19	21.4	27.9	23.6	27.0	27.4	38.7	48.8	48.9	49.1	49.3	49.0	30.1
20	21.3	28.0	22.6	27.6	27.3	40.3	48.9	48.9	49.1	49.3	49.0	32.0
21	21.7	28.0	22.1	28.1	27.7	42.2	48.9	49.0	49.1	49.3	49.0	33.4
22	21.7	26.6	22.5	28.8	28.4	43.7	48.9	49.0	49.2	49.3	49.0	34.6
23	22.0	25.4	e23.0	29.6	29.2	44.7	48.9	49.0	49.2	49.3	48.5	36.8
24	22.2	24.9	....	30.6	30.3	45.7	31.4	49.1	49.2	49.3	33.3	39.9
25	20.6	24.7	....	32.1	31.7	46.1	29.1	49.1	49.2	49.3	35.3	43.4
26	15.7	24.9	....	33.3	32.3	46.7	30.3	49.1	49.2	49.3	37.7	45.5
27	16.4	25.3	....	33.5	33.4	46.8	33.3	49.1	49.2	49.3	43.0	45.7
28	17.1	25.9	....	34.1	35.2	47.1	35.7	49.1	49.3	49.3	46.2	46.1
29	17.9	....	....	35.1	37.3	47.6	39.1	49.1	49.3	47.2	46.3	45.7
30	18.9	....	21.3	36.4	38.9	47.8	42.8	49.1	49.3	45.6	46.9	46.1
31	19.9	....	21.9	....	39.1	....	45.6	49.1	....	49.0	....	46.6

e Estimated.

Daily lowest water level from recorder graph, 1954

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	47.8	44.6	26.7	29.5	30.8	47.4	48.8	....	....	48.8	....	32.8
2	48.0	46.0	25.7	30.6	30.9	47.5	48.9	....	....	48.4	e45.6	33.0
3	48.0	45.8	24.9	32.1	30.8	46.2	48.9	....	....	48.5	39.6	33.8
4	48.0	45.2	24.1	34.0	29.7	46.3	48.9	....	....	48.8	48.7	37.2
5	48.7	46.4	23.7	35.8	28.1	45.9	48.9	....	....	48.8	49.0	e35.4
6	48.7	46.5	23.8	37.0	27.2	46.6	48.9	....	....	48.9	46.7	36.0
7	48.7	47.4	24.2	37.0	27.1	47.2	48.5	....	....	49.0	31.7	43.5
8	48.8	48.5	24.8	37.9	27.1	47.6	48.7	....	....	49.0	33.6	39.4
9	48.8	48.7	25.3	39.7	26.6	47.9	48.8	....	....	48.9	36.3	41.5
10	48.8	47.6	26.0	41.5	e26.5	48.1	48.9	....	....	48.8	e40.0	44.7
11	48.9	47.7	26.8	42.4	e26.2	48.1	48.9	....	....	48.9	43.5	46.1
12	48.9	49.0	27.8	44.0	26.4	45.2	48.9	....	....	49.0	45.9	46.2
13	48.8	49.1	28.5	45.6	26.9	46.3	48.8	....	....	49.0	45.8	46.2
14	48.8	49.1	28.3	45.7	27.5	47.1	48.8	....	....	48.9	46.1	....
15	48.8	49.1	27.2	46.4	28.3	47.5	48.8	....	....	49.0	46.1	e46.3
16	48.5	48.0	26.9	45.9	29.6	36.8	46.0	....	....	48.4	31.3	46.5
17	47.7	48.0	27.1	45.0	31.1	36.4	47.6	....	....	47.5	28.8	46.5
18	48.5	35.0	27.4	31.5	32.7	40.3	48.3	....	....	48.0	28.9	46.3
19	48.9	34.1	27.8	31.3	34.4	45.5	48.7	....	....	48.1	29.6	46.1
20	48.8	34.7	27.9	31.9	36.2	46.2	48.7	....	....	e46.6	30.4	46.0
21	48.0	35.0	26.1	32.5	35.9	46.8	48.8	....	....	47.0	32.4	e33.8
22	44.2	29.5	25.4	33.8	36.7	47.3	48.8	....	....	40.0	34.8	33.9
23	36.9	27.1	25.2	35.4	38.9	47.7	....	....	....	37.9	37.8	34.8
24	38.2	26.4	25.5	37.1	41.2	48.0	....	....	....	44.5	e40.0	35.5
25	39.6	26.2	25.6	39.3	42.5	48.2	....	....	....	46.2	43.1	35.5
26	40.5	26.0	25.6	40.9	44.2	48.4	....	....	....	46.1	44.8	35.7
27	37.1	26.2	26.1	41.0	45.6	48.5	....	....	....	....	45.3	36.8
28	33.9	26.5	26.6	37.7	45.7	48.7	....	....	....	e48.3	45.7	e37.6
29	35.1	....	27.3	30.4	45.9	48.8	....	....	....	e48.5	45.7	e33.4
30	36.3	....	28.0	30.1	45.3	48.8	....	....	....	48.7	42.7	32.8
31	39.8	....	28.6	....	e47.0	....	....	....	....	e45.0	....	30.0

e Estimated.

Fulton County

Fu-1 (J11c-4954). Commonwealth of Pennsylvania. Buchanan State Forest. Lat. 40°03'12", long. 78°08'52". Drilled unused water-table well in shale or sandstone of Mauch Chunk formation, diameter 6 inches, depth 116 feet. Land-surface datum is about 1,180 feet above msl. Harrison Horton, voluntary observer. Highest water level 2.50 below lsd, May 5, 1954; lowest 6.80 below lsd, Nov. 4, 11, 18, 1953. Records available: 1951-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	6.40	Apr. 21	4.00	July 21	5.40	Oct. 13	5.40
13	6.30	28	3.60	28	5.80	20	4.00
20	6.30	May 5	2.50	Aug. 4	5.70	27	3.90
23	5.30	12	3.30	11	5.40	Nov. 3	3.60
Feb. 4	5.40	26	3.60	18	5.40	10	3.90
10	5.70	June 2	3.40	25	5.10	17	4.00
24	4.20	9	3.50	Sept. 1	5.40	24	4.00
Mar. 10	3.90	16	3.80	9	5.70	Dec. 1	3.40
17	4.10	23	4.40	15	5.60	8	3.60
24	3.60	30	4.80	22	5.10	15	3.00
31	3.80	July 7	5.20	29	5.60	29	3.00
Apr. 7	4.10	14	5.40	Oct. 6	5.20		

Huntingdon County

Hu-1 (H11c-1559). Fred M. Schell. Near Aitch and Marklesburg. Lat. 40°21'10", long. 78°08'20". Drilled unused water-table well in sandstone of Chemung formation, diameter 6 inches, depth 42 feet. Land-surface datum is about 720 feet above msl. Highest water level at land-surface, Mar. 15, 1941; lowest 26.25 below lsd, Oct. 1, 1932. Records available: 1931-54.

Jan. 2	25.00	Apr. 10	21.12	July 10	21.21	Oct. 2	21.89
9	25.17	17	21.03	17	21.34	9	21.48
16	25.20	24	19.41	24	21.36	16	18.04
23	24.88	May 1	20.20	28	21.46	23	18.34
30	24.69	8	19.41	31	21.54	30	20.05
Feb. 6	23.79	15	20.01	Aug. 7	21.53	Nov. 6	20.62
13	23.86	22	20.86	14	21.52	13	20.89
20	24.06	29	21.14	21	21.60	20	21.19
27	23.73	June 5	21.18	28	21.81	27	20.58
Mar. 6	17.75	12	20.78	Sept. 4	21.68	Dec. 4	20.43
13	19.37	19	20.62	11	21.81	11	20.76
20	20.50	26	21.02	18	21.89	18	19.35
27	20.60	July 3	21.44	25	21.28	25	20.63
Apr. 3	20.32						

Indiana County

In-1 (G7c-0547). Commonwealth of Pennsylvania. Indiana State Teachers College, Indiana. Lat. 40°37'00", long. 79°09'30". Drilled unused artesian well in sandstone of Conemaugh formation, diameter 6 inches, depth 200 feet. Land-surface datum is about 1,300 feet above msl. Highest water level 73.80 below lsd, Apr. 7, 1953; lowest 92.45 below lsd, Sept. 27, 1952. Records available: 1944-54.

Jan. 2	83.45	Apr. 3	77.20	July 3	77.70	Sept. 25	77.60
9	83.1	10	77.29	10	77.45	Oct. 2	77.95
16	82.75	19	76.90	17	77.80	9	76.80
23	82.60	24	76.78	21	77.69	16	76.64
30	81.39	May 1	76.50	24	78.02	23	76.60
Feb. 6	80.96	8	76.10	31	78.40	30	76.50
13	80.90	15	76.11	Aug. 7	77.96	Nov. 6	76.60
20	80.27	22	76.58	14	77.38	13	76.90
27	79.40	29	76.70	21	77.40	20	76.70
Mar. 6	78.50	June 5	76.95	28	77.48	24	76.92
13	78.20	12	77.10	Sept. 4	77.85	Dec. 4	77.00
20	78.75	19	77.20	11	77.85	11	77.50
27	77.89	26	76.70	18	78.16	27	76.69

Lackawanna County

Lk-2 (C22c-4709). Orval J. Ransom. Near Carbondale. Lat. 41°33'20", long. 75°28'50". Dug unused water-table well in sand of Pleistocene age, diameter 24 inches, depth 18 feet, cased with stone. Land-surface datum is about 1,615 feet above msl. Highest water level 1.00 below lsd, Jan. 24, 1953; lowest 13.10 below lsd, Oct. 15, 1943. Records available: 1931-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 1	7.00	Apr. 2	4.86	July 9	8.50	Oct. 15	3.10
8	7.30	10	5.05	13	9.54	22	10.33
15	7.60	17	1.50	22	9.55	28	10.55
21	5.40	23	3.46	30	10.00	Nov. 5	8.90
28	5.72	30	3.00	Aug. 6	10.40	13	5.05
Feb. 5	5.75	May 7	3.90	20	10.98	18	6.71
12	5.98	14	2.29	27	11.20	26	3.6
19	3.50	21	5.01	Sept. 3	10.88	Dec. 3	3.49
26	3.10	28	6.50	10	10.50	9	5.20
Mar. 5	2.70	June 4	6.60	17	10.62	18	3.85
13	4.24	12	7.20	24	10.18	24	4.20
19	4.35	18	7.90	Oct. 1	9.62	31	3.34
26	3.69	25	7.49	8	10.15		

Lehigh County

Le-303 (G22c-6350). Wilson H. Reichard. Near Center Valley. Lat. 40°32'00", long. 75°24'17". Drilled unused artesian well in Tomstown dolomite, diameter 6 inches, depth 163 feet. Land-surface datum is about 480 feet above msl. Highest water level 85.3 below lsd, July 11-12, 1953; lowest 106.5 below lsd, Dec. 29-30, 1954. Records available: 1953-54.

Daily lowest water level from recorder graph, 1953*

Day	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	....	87.5	88.9	89.9	90.8
2	....	....	87.6	89.0	90.0	90.9
3	....	e86.2	87.6	89.0	90.0	90.9
4	....	86.2	87.7	89.0	e90.1	91.0
5	....	86.3	87.7	89.1	e90.1	91.2
6	....	86.4	87.7	89.2	e90.2	91.0
7	....	86.4	87.8	89.2	e90.2	90.8
8	....	86.4	87.9	89.2	e90.2	90.6
9	....	86.4	87.9	89.3	e90.3	90.6
10	....	e86.4	87.9	89.3	e90.3	90.5
11	e85.3	....	....	89.3	e90.4	90.4
12	e85.3	....	....	89.4	e90.4	90.3
13	e85.4	....	....	89.5	e90.4	90.3
14	e85.4	....	....	89.5	e90.4	90.2
15	e85.4	....	88.1	89.5	e90.4	90.0
16	e85.5	....	88.2	89.6	e90.4	89.9
17	85.6	86.8	88.3	89.6	90.5	90.0
18	85.6	86.8	88.3	89.7	90.5	90.0
19	85.7	86.9	88.3	e89.8	90.5	90.0
20	....	86.9	88.3	e89.8	90.6	90.1
21	....	87.0	88.4	89.8	90.6	90.1
22	....	87.0	88.5	89.9	90.7	90.1
23	....	87.0	88.6	89.9	90.6	90.2
24	e85.8	87.1	88.6	90.0	90.5	90.2
25	85.8	87.2	88.6	90.0	90.6	90.3
26	85.8	87.2	88.7	90.1	90.6	90.3
27	85.9	87.3	88.7	90.1	90.6	90.4
28	85.9	87.3	88.7	90.1	90.7	90.4
29	86.0	87.4	88.8	90.0	90.7	90.5
30	86.0	87.4	e88.8	89.8	90.8	90.5
31	....	87.5	....	89.8	....	90.6

e Estimated.

* No record for January, February, March, April, May, and June.

Le-303 (G22c-6350)--Continued.

Daily lowest water level from recorder graph, 1954

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	90.7	91.9	93.1	93.5	e94.4	e95.5	97.1	e98.9	100.6	102.3	104.3	105.5
2	90.7	92.0	93.0	93.5	e94.4	e95.5	97.1	e99.0	100.7	102.4	104.2	105.6
3	90.8	92.0	92.9	93.6	e94.4	e95.6	97.2	e99.1	100.8	102.4	104.2	105.6
4	90.8	92.1	92.8	93.7	e94.4	e95.7	97.2	e99.1	100.8	102.5	104.3	105.6
5	90.8	92.1	92.9	93.7	e94.4	e95.7	97.3	e99.2	100.9	102.6	104.3	105.8
6	90.9	92.2	92.9	93.7	e94.4	e95.8	97.3	e99.2	101.0	102.7	104.4	105.9
7	90.9	92.2	92.9	93.8	e94.4	e95.8	97.4	e99.3	101.0	102.8	104.4	105.9
8	91.0	92.2	93.0	93.9	e94.4	e95.8	96.5	e99.4	101.1	102.8	104.5	105.9
9	91.0	92.3	93.0	93.9	e94.5	e95.9	96.5	e99.4	101.1	102.8	104.6	105.9
10	91.1	92.4	93.1	93.9	e94.5	e95.9	96.6	e99.5	101.2	102.8	104.6	e105.9
11	91.1	92.4	93.2	93.9	e94.5	e96.0	96.6	e99.5	101.3	102.9	104.7	.....
12	91.2	e92.5	93.2	94.0	e94.5	e96.1	96.7	e99.6	101.3	103.0	104.7	.....
13	91.3	e92.5	93.1	94.0	e94.5	e96.1	97.8	99.7	101.4	103.2	104.8	.....
14	91.2	e92.6	93.1	94.1	e94.5	e96.2	97.8	99.7	101.4	103.2	.....	.....
15	91.3	e92.7	93.2	94.1	e94.5	e96.2	97.9	99.8	101.4	103.4	.....	.....
16	91.4	92.7	93.2	94.1	e94.5	96.3	98.0	99.8	101.4	103.4	105.0	106.1
17	91.5	e92.8	93.3	94.1	94.6	96.3	98.0	99.9	101.5	103.5	105.1	106.1
18	91.5	e92.8	93.3	94.1	e94.6	96.4	98.1	99.9	101.5	103.5	105.2	106.1
19	91.6	e92.8	93.3	94.1	e94.7	96.4	98.1	100.0	101.6	103.6	105.2	106.0
20	91.6	e92.8	93.2	94.2	e94.7	96.4	98.2	100.1	101.7	103.6	105.2	106.1
21	91.6	e92.8	93.3	94.2	e94.8	96.5	98.2	100.1	101.7	103.7	105.2	106.1
22	91.6	e92.8	93.3	94.2	e94.9	96.5	98.3	100.2	101.8	103.8	105.1	106.1
23	91.6	92.9	93.3	94.3	e95.0	96.6	98.4	100.2	101.9	103.8	105.1	106.1
24	91.6	92.9	93.4	94.3	e95.0	96.7	e98.4	100.3	101.9	103.8	105.2	106.3
25	91.7	93.0	93.3	94.4	e95.1	96.7	e98.5	100.3	102.0	103.9	105.3	106.3
26	91.7	93.1	93.3	94.4	e95.1	96.8	e98.6	100.4	102.0	103.9	105.4	106.3
27	91.7	93.1	93.3	e94.4	e95.2	96.8	98.6	100.4	102.1	104.0	105.3	106.4
28	91.8	93.1	93.3	e94.4	e95.3	96.9	e98.7	100.5	102.1	104.1	105.4	106.4
29	91.8		93.4	e94.4	e95.3	97.0	e98.7	100.6	102.2	104.1	105.4	106.5
30	91.9		93.5	e94.4	e95.4	97.0	e98.8	100.6	102.2	104.2	105.5	106.5
31	91.9		93.5		e95.4		e98.9	100.6		104.2		106.5

e Estimated.

Luzerne County

Lu-2 (D18d-5152). Commonwealth of Pennsylvania. Ricketts Glen State Park. Lat. 41°18'00", long. 76°16'20". Dug unused water-table well in sandstone or shale of Catskill formation, diameter 18 inches, depth 24 feet. Land-surface datum is about 1,290 feet above msl. Warren A. Cope, voluntary observer. Highest water level 9.29 below lsd, Dec. 31, 1949; lowest dry several times, 1948-54. Records available: 1948-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	(f)	Mar. 19	11.54	Apr. 23	9.99	May 28	9.80
Feb. 5	(f)	26	11.33	30	10.51	June 5	14.20
19	13.99	Apr. 2	11.26	May 10	9.99	11	14.10
Mar. 1	13.94	9	12.78	14	10.36	18	14.80
5	10.50	16	10.09	21	9.60	25	(f)
12	11.76						

f Dry below 16.00.

Lycoming County

Ly-1 (D13b-2229). Commonwealth of Pennsylvania. Tiadaghton State Forest. Lat. 41°28'00", long. 77°33'50". Drilled unused water-table well in sandstone of Pottsville or Pocono formation, diameter 4 inches, depth 74 feet. Land-surface datum is about 2,070 feet above msl. George B. Will, voluntary observer. Highest water level 16.97 below lsd, Dec. 11, 1950; lowest 30.75 below lsd, Nov. 19, 1951. Records available: 1949-54.

Jan. 4	26.73	Apr. 5	23.38	June 22	23.14	Oct. 5	28.97
11	26.90	12	23.60	29	24.36	11	30.14
19	27.10	19	24.00	July 5	25.06	18	29.09
26	27.50	26	23.42	16	26.12	25	29.90
Feb. 1	26.16	May 3	21.98	26	26.85	Nov. 1	29.50
8	25.10	10	21.46	Aug. 2	27.04	8	29.93
22	25.12	19	22.53	23	28.24	15	29.99
Mar. 1	25.13	24	23.48	30	28.18	22	30.08
8	23.14	June 1	22.67	Sept. 9	29.06	Dec. 13	29.93
16	22.47	7	21.10	20	28.28	26	28.38
22	23.90	17	21.88	27	28.80		

Mifflin County

Mf-1 (G13b-3237). Charles C. Naginey. Naginey. Lat. 40°42'10", long. 77°33'10". Dug unused water-table well in limestone of Cambrian or Ordovician age, diameter 36 inches, depth 28 feet, cased with stone. Land-surface datum is about 680 feet above msl. Highest water level 5.88 below lsd, Dec. 4, 1950; lowest 23.77 below lsd, Nov. 16, 1953. Records available: 1941-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	23.29	Apr. 5	18.03	June 28	21.03	Sept. 27	23.36
11	23.50	12	19.24	July 12	21.40	Oct. 4	23.46
18	23.62	19	16.95	15	21.53	11	23.38
22	23.64	27	16.61	19	21.90	18	17.20
Feb. 2	19.40	May 3	16.52	27	22.18	25	21.14
15	22.40	11	15.15	Aug. 3	22.29	Nov. 8	20.30
22	16.77	17	16.77	9	22.26	16	20.26
Mar. 1	15.68	24	18.37	16	22.77	30	19.15
8	15.11	31	18.60	30	23.18	Dec. 6	19.74
16	14.58	June 7	17.90	Sept. 7	23.28	20	16.52
22	17.29	14	19.58	13	22.98	27	18.13
30	16.34	21	20.07				

Montgomery County

Mg-4 (J22a-4018). Collegeville-Trappe Joint Waterworks. West First Ave., Trappe. Lat. 40°11'30", long. 75°27'50". Drilled unused artesian well in Brunswick shale, diameter 8 inches, depth 275 feet. Land-surface datum is about 200 feet above msl. Charles J. Smedley, voluntary observer. Highest water level 12.80 below lsd, Apr. 30, 1952; lowest 88.5 below lsd, Aug. 25, 1954. Records available: 1949-54. Water levels are affected by pumping of other municipal wells.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	e50.2	53.8	31.5	e38.7	43.2	63.3	84.8	87.3	83.2	74.2	42.0
2	54.0	47.4	53.1	35.5	....	46.2	62.1	85.2	85.0	84.3	71.7	43.4
3	54.6	45.8	53.4	36.6	e38.3	46.9	63.7	85.0	84.7	84.6	69.8	43.8
4	50.6	49.8	47.3	32.0	41.9	45.7	64.4	86.1	....	82.9	69.0	39.8
5	....	e50.3	45.3	e31.8	42.4	47.9	60.8	86.4	....	82.0	69.5	41.0
6	....	46.5	....	....	36.6	49.0	64.2	86.7	83.6	82.0	67.4	42.2
7	....	46.4	42.0	....	39.7	44.9	64.7	86.8	83.0	82.6	65.0	40.7
8	....	45.3	....	....	40.0	48.1	61.8	87.0	83.8	80.7	65.4	39.7
9	....	50.0	41.1	....	35.9	50.0	65.3	87.0	84.0	79.4	63.9	40.7
10	53.5	51.6	e39.7	32.9	33.7	45.9	66.2	86.7	82.6	78.7	64.1	37.2
11	52.0	47.7	....	36.6	37.9	49.7	64.5	86.8	82.0	78.7	61.5	37.7
12	52.2	52.0	....	38.2	38.8	51.7	64.0	86.5	82.2	78.1	61.0	39.5
13	52.6	53.2	....	34.9	34.9	51.2	67.4	86.5	82.3	78.2	62.2	35.8
14	53.0	49.0	38.1	39.0	39.0	52.3	68.9	87.4	81.0	77.1	58.8	35.5
15	54.8	52.3	....	40.3	39.5	49.5	67.5	87.5	80.9	77.2	59.2	37.2
16	58.0	e53.5	e37.7	39.1	38.2	48.3	68.3	86.0	80.4	77.4	60.6	33.3
17	54.2	50.2	e38.5	39.0	39.6	52.2	68.4	87.5	80.4	76.6	56.4	31.0
18	58.3	54.5	e40.2	40.2	36.7	e52.9	68.9	87.0	81.6	76.2	58.3	....
19	59.6	55.3	36.9	37.0	35.6	49.2	68.9	87.0	82.0	76.2	59.2	....
20	55.4	51.4	39.4	39.9	40.6	52.6	72.4	88.1	80.6	77.2	55.7	....
21	59.8	....	39.9	e40.8	41.2	53.8	73.4	88.2	81.0	74.6	54.0	....
22	60.2	....	36.0	36.8	37.3	51.2	73.0	87.7	82.1	74.0	52.9	....
23	56.3	....	37.0	40.6	41.8	50.6	73.0	87.8	82.9	75.4	53.8	....
24	55.7	50.4	38.7	41.1	42.6	e53.4	76.2	88.2	83.3	76.1	49.8	....
25	56.3	e51.5	34.6	40.0	39.6	....	76.8	88.5	83.8	72.8	49.1	e30.4
26	52.8	....	36.4	41.3	39.2	e58.7	76.1	87.7	81.9	72.9	50.2	28.6
27	50.2	51.2	36.8	38.6	44.1	....	76.3	87.7	82.0	73.1	46.9	31.4
28	....	53.1	34.2	37.0	44.4	....	79.5	87.9	83.8	74.5	43.9	31.5
29	....	....	35.1	41.7	40.4	e57.3	80.0	88.1	84.3	72.5	45.0	29.1
30	48.0	....	34.7	42.7	45.0	62.3	79.5	86.8	83.5	71.3	46.2	e31.0
31	49.4	....	36.3	....	46.3	....	80.1	87.2	....	73.5	....	e31.0

e Estimated.

Mg-44 (J22d-1630). Pittsburgh Screw and Bolt Co. Near Conshohocken. Lat. 40°06'08", long. 75°18'59". Drilled unused artesian well in Stockton formation, diameter 6 inches, depth 74 feet. Land-surface datum is about 100 feet above msl. Highest water level 32.1 below lsd, Dec. 17, 1953; lowest 41.3 below lsd, Oct. 28, 1954. Records available: 1953-54.

Daily lowest water level from recorder graph, 1953

Day	July	Aug.	Sept.	Nov.	Dec.	Day	July	Aug.	Sept.	Nov.	Dec.
1	33.3	35.4	....	36.3	17	....	34.2	34.6	36.1	32.1
2	33.3	35.4	....	36.4	18	....	34.3	34.8	36.2	32.2
3	33.4	35.4	....	36.5	19	....	34.4	34.8	36.3	32.4
4	33.6	35.4	....	36.5	20	....	....	35.0	36.4	32.6
5	33.7	35.4	36.0	36.5	21	32.8	e34.6	....	36.5	32.7
6	33.8	35.4	36.1	36.4	22	32.8	34.6	....	36.5	32.9
7	33.8	35.2	36.2	36.2	23	32.9	34.6	....	36.6	33.1
8	33.8	34.4	36.2	35.5	24	32.9	34.8	....	36.4	33.2
9	33.9	34.4	35.9	34.9	25	32.9	34.8	....	36.3	33.3
10	33.9	34.4	35.8	34.7	26	32.9	35.0	....	36.2	33.5
11	33.9	34.4	35.7	34.4	27	32.9	35.2	....	36.1	33.6
12	33.9	34.4	35.7	34.2	28	32.9	35.2	....	36.1	33.7
13	33.9	34.4	35.7	34.0	29	32.9	35.2	....	36.2	33.8
14	33.9	34.4	35.8	33.9	30	32.9	35.2	....	36.2	33.9
15	34.0	34.4	35.9	32.4	31	33.1	35.4	....	....	34.0
16	34.0	34.4	36.0	32.2						

e Estimated.

Daily lowest water level from recorder graph, 1954

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	34.2	35.3	36.0	34.3	34.4	36.2	37.6	e38.4	36.6	39.6	40.4	e38.9
2	34.3	35.4	35.8	34.4	34.4	36.3	37.6	38.5	36.6	39.6	40.5	39.0
3	34.5	35.4	35.5	35.5	34.4	36.4	37.7	38.3	36.4	39.7	40.0	39.1
4	34.5	35.4	34.9	35.6	34.4	36.4	37.7	38.0	36.6	39.8	39.9	39.2
5	34.7	35.5	34.4	35.6	34.1	36.5	37.8	37.9	37.0	39.9	39.9	39.4
6	34.8	35.5	34.2	34.7	34.0	36.5	37.8	37.5	37.2	39.9	39.9	39.5
7	34.9	35.6	34.2	34.7	34.0	36.6	37.9	37.4	37.4	39.9	39.9	39.7
8	35.0	35.6	34.2	34.8	34.0	36.6	37.9	37.4	37.6	40.0	40.0	39.8
9	35.1	35.7	34.2	34.8	34.1	36.7	38.0	37.4	37.7	40.1	40.2	39.8
10	35.2	35.8	34.3	34.8	34.1	36.8	38.1	37.2	37.8	40.2	40.3	39.8
11	35.3	35.9	34.4	34.8	34.2	36.9	38.1	36.5	37.6	40.2	40.5	39.8
12	35.4	36.0	34.5	34.9	34.2	36.9	38.2	36.6	37.6	40.2	40.6	39.8
13	35.5	36.2	34.5	34.9	34.3	36.9	38.2	36.8	37.7	40.2	40.7	39.8
14	35.6	36.3	34.5	35.0	34.4	37.0	38.2	37.0	37.8	40.4	40.8	39.8
15	35.7	36.3	34.4	35.1	34.6	37.1	38.2	37.2	38.0	e40.4	40.9	39.8
16	35.7	36.3	34.3	35.2	34.7	36.9	38.2	37.3	38.1	....	41.0	39.7
17	35.7	36.3	34.3	35.2	34.8	36.6	38.2	37.5	38.2	....	41.0	39.7
18	35.7	36.3	34.3	34.9	35.0	36.6	38.3	37.7	38.2	....	41.1	39.7
19	35.7	36.3	34.3	34.7	35.1	36.7	38.3	37.8	38.3	....	41.1	39.4
20	35.7	36.3	34.3	34.6	35.2	36.8	38.4	37.9	38.4	....	41.0	38.9
21	35.3	36.3	34.3	34.5	35.2	36.9	38.4	38.0	38.4	....	40.0	38.8
22	35.2	36.2	34.3	34.5	35.3	36.9	38.5	37.5	38.3	....	38.7	38.9
23	34.9	36.1	34.3	34.6	35.4	37.0	38.6	37.3	38.4	....	38.3	38.9
24	34.9	36.1	34.3	34.7	35.5	37.1	38.6	37.4	38.7	....	38.3	39.0
25	34.9	36.1	34.3	34.7	35.6	37.2	38.6	37.5	38.9	....	38.5	39.2
26	34.9	36.0	34.2	34.8	35.7	37.3	38.3	37.6	39.1	....	38.7	39.5
27	34.9	36.0	34.2	34.8	35.8	37.3	38.3	37.6	39.2	....	38.9	39.6
28	35.0	36.0	32.2	34.6	35.9	37.4	38.3	37.7	39.3	e41.3	39.0	39.6
29	35.0	....	34.2	34.4	36.0	37.5	38.3	37.8	39.4	....	e39.0	39.5
30	35.1	....	34.2	34.4	36.0	37.6	38.3	38.0	39.5	40.7	....	39.2
31	35.2	....	34.3	....	36.1	38.4	37.7	....	....	40.4	....	38.9

e Estimated.

Mg-83 (J22b-0045). Lansdale Forest Products Co., Lansdale. Lat. 40°14'58", long. 75°17'27". Drilled unused artesian well in Brunswick shale, diameter 8 inches, depth 425 feet. Land-surface datum is about 330 feet above msl. Highest water level 71.1 below lsd, July 6, 1954; lowest 118.3 below lsd, Dec. 18, 1953. Records available: 1953-54.

Mg-83 (J22b-0045)--Continued.

Daily lowest water level from recorder graph, 1953*

Day	Feb.	Mar.	Apr.	May	July	Aug.	Sept.	Oct.	Dec.
1	78.3	....	....	85.6	....	88.3	....
2	78.0	....	....	85.4	....	88.5	....
3	77.9	....	....	85.6	....	88.5	....
4	77.6	....	....	85.8	....	88.3	....
5	77.1	e78.3	....	86.2	....	88.3	....
6	77.1	77.2	....	86.4	....	88.4	....
7	77.6	79.2	....	86.5	....	88.7	117.0
8	78.1	79.5	....	86.4	....	88.8	....
9	78.4	77.8	....	86.4	....	89.0	....
10	78.4	80.3	....	86.7	....	88.9	118.1
11	78.0	80.6	....	86.8	....	88.9	....
12	77.7	80.6	....	87.2	....	88.7	115.0
13	77.5	....	....	87.3	....	89.6	....
14	78.4	....	....	87.6	....	89.8	117.6
15	78.8	e80.4	....	87.6	....	90.4	118.1
16	79.2	80.1	....	87.6	....	92.9	118.2
17	79.3	79.2	....	87.8	....	....	118.2
18	79.0	79.1	....	88.0	....	....	118.3
19	78.0	79.0	....	88.2	....	....	117.0
20	78.4	80.3	83.1	88.4	....	....	115.8
21	78.9	80.6	83.5	....	86.7	....	116.9
22	77.7	....	79.2	80.6	84.0	....	87.1	....	117.8
23	76.8	....	....	80.3	84.4	....	87.4	....	118.1
24	76.9	79.0	e79.6	79.7	84.8	....	87.7	....	117.8
25	77.8	79.1	77.1	80.3	84.7	....	87.8	....	115.1
26	79.2	78.3	e81.0	84.3	....	87.8	....	114.7
27	79.2	78.5	....	84.5	....	87.7	....	111.7
28	78.8	79.0	....	85.0	....	87.4	....	113.7
29	78.3	79.4	....	85.2	....	87.8	....	115.0
30	78.1	79.4	....	85.4	....	88.0	....	114.4
31	78.3	....	....	85.6	....	....	....	112.7

e Estimated.

* No record for January, June, and November.

Daily lowest water level from recorder graph, 1954

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	109.0	....	88.1	84.5	76.8	74.0	73.2	81.6	87.7	90.0	89.3	....
2	108.9	103.6	88.1	84.5	76.7	74.6	73.4	82.2	87.8	89.8	89.5	....
3	106.3	103.7	88.0	84.4	76.7	74.9	72.9	82.5	88.1	89.5	89.8	....
4	108.8	103.3	87.9	83.7	77.1	74.7	72.2	83.0	88.0	89.6	90.0	....
5	111.0	102.5	87.8	83.5	77.2	74.5	71.3	83.3	87.7	89.8	....	....
6	113.2	95.6	87.6	83.8	77.4	73.6	71.1	83.6	87.4	90.2	....	....
7	114.9	90.8	86.9	83.7	77.4	73.6	71.5	83.6	87.6	90.6	....	....
8	115.8	90.4	86.5	84.0	77.0	74.0	72.4	83.5	87.7	91.0	....	....
9	114.0	90.5	86.5	83.7	76.0	74.0	73.4	83.6	....	90.5	....	....
10	110.6	90.6	86.5	83.4	75.6	74.6	73.0	84.1	88.1	89.9	....	....
11	111.3	90.9	86.5	82.5	75.7	74.4	72.3	84.6	87.9	90.3	....	....
12	114.2	90.9	86.5	82.5	75.7	74.2	72.8	84.9	87.8	90.4	....	....
13	115.5	90.2	86.3	82.5	76.1	73.3	73.2	85.0	87.8	92.2	....	....
14	116.4	89.5	85.7	82.4	76.2	73.7	74.2	85.0	88.1	95.7	....	....
15	117.0	89.5	85.9	82.4	75.8	74.0	75.0	84.9	88.4	92.4	....	....
16	114.5	89.6	85.9	82.0	74.7	74.3	75.5	e85.0	88.5	90.4	....	....
17	109.5	89.8	85.9	81.2	74.9	74.4	75.5	....	88.7	90.0	....	....
18	....	89.9	85.7	80.2	75.0	74.5	75.5	e84.5	88.5	89.6	....	....
19	....	90.0	85.5	79.5	75.3	73.9	76.1	83.7	88.4	89.6	....	....
20	....	89.6	85.2	79.5	75.3	72.7	76.9	86.4	88.3	89.7	....	....
21	....	89.0	85.0	79.3	75.4	72.6	76.8	86.4	88.8	89.7	....	....
22	....	89.0	84.9	79.2	77.0	72.9	77.6	86.3	89.2	89.8	....	....
23	....	89.0	85.1	78.9	77.0	73.4	78.3	86.5	89.2	89.5	....	....
24	....	89.0	85.0	78.1	74.9	73.9	78.2	86.7	89.4	89.1	....	....
25	....	89.0	84.9	77.0	74.8	73.7	78.0	86.9	89.3	89.3	....	....
26	....	89.0	85.2	77.2	75.3	73.2	78.5	87.0	89.0	89.6	....	....
27	....	88.8	85.0	77.2	75.1	73.0	79.5	87.2	89.0	89.7	....	....
28	....	88.1	84.5	77.6	75.1	73.1	81.9	87.1	89.4	90.0	....	....
29	....	....	84.1	77.8	74.4	73.0	81.8	86.9	89.7	89.7	....	....
30	....	....	84.4	77.6	73.6	73.5	82.2	87.1	89.8	89.8	....	e73.8
31	....	....	84.4	....	73.2	....	82.1	87.3	....	89.6	....	e83.8

e Estimated.

Perry County

Pe-2 (H15a-1461). Bertha Demaree. 29 North Third St., Newport. Lat. 40°28'40", long. 77°08'00". Dug unused water-table well in sandstone of Chemung formation, diameter 36 inches, depth 20 feet, cased with stone. Land-surface datum is about 400 feet above msl. Mrs. Frances K. Fry, voluntary observer. Highest water level 7.18 below lsd, Apr. 27, 1940; lowest 18.19 below lsd, May 28, 1943. Records available: 1931-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	15.92	Apr. 17	13.69	July 15	14.85	Oct. 10	16.08
10	15.94	24	14.28	17	15.14	16	14.78
16	15.93	30	14.57	23	15.35	18	15.74
23	16.18	May 1	14.21	31	15.53	23	16.07
30	16.18	8	13.81	Aug. 7	15.58	29	15.76
Feb. 6	16.32	15	13.85	11	15.17	Nov. 6	15.57
13	16.37	22	13.78	14	15.72	13	15.83
20	16.42	29	14.06	21	15.45	20	15.74
27	15.83	June 2	13.91	28	15.98	27	15.71
Mar. 6	15.38	5	14.10	Sept. 4	16.33	Dec. 4	15.77
13	15.09	12	14.42	11	15.98	10	15.74
20	14.45	19	14.62	16	16.15	19	15.06
23	15.03	26	14.68	18	15.90	20	15.24
27	14.28	July 3	14.93	25	16.02	26	15.58
Apr. 3	14.34	10	15.04	Oct. 1	16.19	31	15.04
10	14.41	14	15.55				

Pe-3 (G15c-4363). I. L. Zeigler. Near Millerstown. Lat. 40°33'40", long. 77°07'40". Dug unused water-table well in weathered shale of Cayuga group, diameter 4 feet, depth 12 feet, cased with stone. Land-surface datum is about 460 feet above msl. Highest water level 0.63 below lsd, May 17, 1943; lowest 8.33 below lsd, Dec. 11, 1939. Records available: 1936-48, 1950-54.

Feb. 15	3.03	June 1	2.18	Sept. 14	4.56	Nov. 16	2.54
Mar. 23	1.94	July 12	1.52	Oct. 18	2.32	Dec. 20	1.21
May 6	1.45						

Philadelphia County

Ph-5 (K23a-7634). U. S. Navy Department, Naval Base. League Island, Philadelphia. Lat. 39°53'20", long. 75°11'00". Drilled standby artesian well in sand and gravel of Cretaceous age ("lower" aquifer), diameter 30 to 12 inches, depth 203 feet (about 15 feet into rock), cased to 148, screen 148-173. Land-surface datum is 14.76 feet above msl. Mean daily range of fluctuation 1.4 feet. Highest water level 31.5 below lsd, Nov. 25, 1950; lowest 52.89 below lsd, Dec. 30, 1953. Records available: 1944-51, 1953-54. Mar. 24, 47.30; Oct. 6, 50.60.

Ph-11. U. S. Navy Department, Naval Base. League Island, Philadelphia. Lat. 39°53'40", long. 75°10'20". Drilled artesian well in sand of Cretaceous age ("middle" aquifer), diameter 8 inches, depth 237 feet (10 feet into rock), cased to 94, screen 94-104. Water levels are affected by pumping of well 1, 800 feet distant. Mean daily range of fluctuation caused by tidal loading, 0.2 foot. Highest water level 24.98 below lsd, June 1, 1952; lowest 37.15 below lsd, Nov. 30, 1954. Records available: 1945-54.

Jan. 6	33.70	Feb. 2	33.60	Mar. 2	34.12	Mar. 29	33.34
12	34.42	9	34.90	9	33.67	Oct. 6	36.30
19	34.53	16	34.70	16	35.40	Nov. 30	37.15
26	33.70	23	33.68	24	35.28		

Ph-12. U. S. Navy Department, Naval Base. League Island, Philadelphia. Lat. 39°53'40", long. 75°10'20". Drilled artesian well in sand of Cretaceous age ("middle" aquifer), diameter 8 inches, depth 110 feet, cased to 94, screen 94-104. Water levels are affected by pumping of well 1, 100 feet distant. Mean daily range of fluctuation caused by tidal loading, 0.2 foot. Highest water level 23.9 below lsd, May 31, 1953; lowest 36.17 below lsd, Mar. 10, 1950. Records available: 1944-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	32.0	31.4	33.1	32.1	31.5	34.0	32.8	34.9	35.1	34.9	35.9
2	31.6	32.3	32.9	30.3	32.9	34.1	34.0	35.2	34.7	34.7	35.8
3	31.6	32.0	32.4	31.4	32.9	33.5	34.6	35.1	32.7	34.7	35.8
4	32.5	32.5	31.3	32.2	32.2	31.6	34.5	34.5	34.2	35.1	35.8
5	e31.4	32.9	32.6	32.7	32.4	32.8	31.3	34.9	33.1	34.3	35.2	35.1

Ph-12--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	31.7	32.5	32.0	32.3	32.3	31.3	32.2	34.2	33.2	34.7	34.9	35.6
7	32.3	32.0	30.8	32.6	32.5	32.5	33.0	33.9	34.0	35.2	33.9	35.8
8	32.7	32.1	31.8	32.4	32.3	33.2	33.7	33.1	34.8	35.1	34.8	35.9
9	32.6	32.5	31.6	33.2	30.2	33.0	34.0	34.3	35.0	34.2	35.2	35.9
10	30.3	32.3	31.7	32.5	32.0	32.7	33.4	35.0	34.9	32.5	35.5	36.0
11	31.4	32.7	32.0	30.6	32.3	32.5	31.8	35.1	34.5	34.1	35.4	36.1
12	32.5	33.5	32.3	32.7	32.6	31.7	33.6	35.8	33.1	34.6	33.6	34.7
13	33.0	33.5	31.7	32.7	33.2	31.2	33.8	35.3	34.1	34.9	33.4	35.1
14	33.0	31.9	30.5	32.8	33.0	32.1	34.1	34.6	35.1	34.9	33.2	35.1
15	32.7	32.4	32.1	33.0	32.5	32.3	34.2	33.1	35.3	34.3	34.0	34.8
16	32.1	32.7	32.9	32.5	30.5	32.6	34.5	34.6	35.2	34.0	34.4	35.6
17	....	32.9	32.9	....	32.4	32.7	34.0	35.3	35.0	33.6	34.6	35.7
18	....	33.6	33.2	....	32.9	32.8	32.6	35.2	34.7	35.0	34.8	35.7
19	e32.6	33.6	33.0	32.6	33.1	32.0	33.7	35.2	32.8	35.2	35.0	34.5
20	42.2	33.2	32.2	32.7	33.0	31.4	34.2	35.4	33.7	35.1	34.4	35.0
21	32.2	31.2	30.7	33.1	32.8	32.6	34.2	35.0	34.3	35.1	32.6	35.2
22	32.4	31.0	32.3	32.9	32.3	32.3	34.6	33.1	34.9	35.5	34.9	35.4
23	32.5	31.8	32.9	33.2	30.9	32.5	34.8	34.4	35.3	34.7	35.1	35.4
24	32.2	31.8	32.9	33.0	32.7	32.8	34.7	34.7	35.4	33.7	35.1	35.1
25	31.8	31.7	32.7	30.6	33.1	32.8	32.6	34.7	34.6	34.8	34.6	34.7
26	31.6	32.0	32.8	32.1	33.6	32.5	34.5	35.0	33.3	34.7	33.5	35.1
27	31.2	31.8	32.2	32.4	33.8	30.9	34.9	35.2	34.4	34.6	33.2	35.3
28	32.0	30.7	31.1	e32.6	33.6	33.3	35.1	34.2	34.3	34.9	33.1	35.2
29	32.0	....	31.4	....	32.2	33.7	35.1	33.5	35.2	34.7	35.2	35.4
30	31.9	....	31.7	e32.6	30.9	33.9	35.2	34.0	35.2	34.2	35.9	35.5
31	31.4	....	32.0	....	32.6	....	34.3	33.9	....	33.6	....	35.6

e Estimated.

Ph-13. U. S. Navy Department, Naval Base. League Island, Philadelphia. Lat. 39°53'30", long. 75°10'20". Drilled observation artesian well in sand and gravel of Pleistocene or Recentage, diameter 8 inches, depth 73 feet, cased to 54, screen 54-63. Mean daily range of fluctuation caused by tidal loading, 0.1 foot. Highest water level 21.3 below lsd, June 1, 1953; lowest 33.8 below lsd, Dec. 15, 24, 1954. Records available: 1945-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	25.1	....	24.7	25.4	25.3	e25.3	27.9	29.4	28.9	30.6	33.0	33.7
2	25.2	....	25.2	25.5	25.1	25.6	28.0	29.3	30.0	30.6	33.0	33.4
3	24.8	....	25.2	25.7	24.7	25.5	28.0	29.4	30.0	30.5	32.8	33.5
4	25.0	....	25.5	25.8	24.8	25.7	27.8	29.5	30.1	30.1	33.0	33.5
5	25.0	e25.3	25.7	25.7	25.0	25.7	27.3	29.5	30.1	30.9	33.1	33.7
6	24.9	25.6	25.7	25.4	25.1	25.7	27.4	29.6	29.8	31.9	33.2	33.7
7	25.4	25.8	25.5	25.2	25.3	25.6	27.5	29.7	29.8	32.2	33.2	33.7
8	24.9	25.7	25.2	25.3	25.3	25.8	27.9	29.7	30.1	32.2	33.1	33.7
9	25.9	25.5	25.2	25.9	25.1	25.9	28.2	29.3	30.2	32.1	33.3	33.5
10	25.3	25.6	24.9	26.0	25.1	25.9	28.2	29.6	30.2	31.9	33.5	33.4
11	25.3	26.2	25.0	25.7	25.3	25.9	28.2	29.9	30.0	31.8	33.5	33.7
12	25.5	e26.5	25.2	25.5	25.6	26.0	28.0	30.1	29.9	32.0	33.2	33.7
13	26.2	....	25.3	25.6	25.8	25.9	28.0	30.2	30.1	32.2	33.2	33.5
14	26.3	....	24.8	25.4	25.8	25.8	28.2	30.2	30.2	32.3	33.0	32.2
15	25.8	....	25.2	25.6	25.7	26.1	28.6	30.1	30.3	32.2	33.0	33.8
16	25.5	25.8	25.5	25.6	25.3	26.4	28.9	29.6	30.2	32.1	32.9	33.5
17	25.9	25.9	25.7	25.0	25.2	26.5	28.9	30.0	30.1	32.4	33.0	33.6
18	25.9	26.2	25.6	25.1	25.5	26.5	28.7	30.1	30.1	32.5	33.0	33.3
19	25.8	26.3	25.6	25.3	25.7	26.5	28.3	30.1	29.8	32.5	32.9	33.0
20	25.8	26.3	24.9	25.4	25.7	26.4	28.6	30.2	29.6	32.5	32.7	33.1
21	25.7	25.9	25.2	25.4	25.8	26.3	28.7	30.3	29.7	32.4	32.9	33.1
22	25.8	25.3	25.3	25.4	25.9	26.6	28.9	30.2	30.2	32.8	33.1	33.2
23	25.9	25.4	25.4	25.4	25.9	26.8	29.1	30.0	30.5	32.8	33.2	33.2
24	25.8	25.4	25.6	25.6	25.7	27.0	29.1	30.0	30.6	32.8	33.0	33.6
25	25.4	25.1	25.6	25.4	25.7	27.1	29.1	29.9	30.5	32.8	33.3	33.8
26	e25.4	25.3	25.4	25.1	26.1	27.0	29.2	30.1	29.9	32.7	33.3	33.7
27	....	25.5	25.7	25.1	26.2	26.8	29.3	30.2	30.1	32.6	33.3	33.6
28	....	25.3	25.7	24.9	26.1	27.2	29.4	30.2	30.3	32.7	33.1	33.4
29	....	....	25.2	25.2	25.9	27.5	29.5	29.9	30.5	32.7	33.4	33.3
30	....	....	25.1	25.3	25.9	27.8	29.6	29.6	30.5	32.7	33.7	33.4
31	....	....	25.3	....	25.8	....	29.6	29.6	....	32.9	....	33.5

e Estimated.

Ph-14. U. S. Navy Department, Naval Base. League Island, Philadelphia. Lat. 39°53'30", long. 75°10'10". Drilled observation artesian well in sand and gravel of Pleistocene or Recent age, diameter 3 inches, depth 70 feet, cased to 46, screen 46-56. Land-surface datum is 11.28 feet above msl. Mean daily range of fluctuation caused by tidal loading, 0.1 foot. Highest water level 24.08 below lsd, June 15, 1953; lowest 34.20 below lsd, Nov. 30, 1954. Records available: 1945-54. Jan. 6, 27.94; Feb. 2, 28.46; Feb. 23, 28.90; Mar. 24, 29.40; Oct. 6, 32.65; Nov. 30, 34.20.

Ph-15. U. S. Navy Department, Naval Base. League Island, Philadelphia. Lat. 39°53'20", long. 75°10'10". Drilled observation artesian well in sand and gravel of Pleistocene or Recent age, diameter 3 inches, depth 82 feet, cased to 59, screen 59-69. Land-surface datum is 11.87 feet above msl. Mean daily range of fluctuation caused by tidal loading, 0.1 foot. Highest water level 23.33 below lsd, June 15, 1953; lowest 34.46 below lsd, Nov. 30, 1954. Records available: 1945-54. Jan. 6, 26.92; Feb. 23, 27.86; Mar. 24, 28.18; Oct. 6, 32.67; Nov. 30, 34.46.

Ph-18. U. S. Navy Department, Naval Base. League Island, Philadelphia. Lat. 39°53'40", long. 75°10'00". Drilled observation artesian well in sand and gravel of Cretaceous age ("lower" aquifer), diameter 8 inches, depth 218 feet (2 feet into rock), cased to 207, screen 207-212. Land-surface datum is about 13 feet above msl. Water levels are affected by pumping of 6 Naval Base water-supply wells and 2 Pennsylvania RR. wells. Mean daily range of fluctuation caused by tidal loading, 0.4 foot. Highest water level 31.3 below lsd, Apr. 27, 1953; lowest 56.0 below lsd, Aug. 12, 1954. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	e41.6	48.5	48.4	51.8	49.5	49.6	52.7	47.5	52.6	52.6	49.2	51.6
2	41.6	48.1	50.9	51.7	44.0	52.1	52.8	51.6	53.9	52.0	49.5	51.6
3	43.6	49.1	50.1	51.5	48.5	51.9	52.1	53.6	53.8	45.4	49.7	51.4
4	48.2	51.6	50.3	46.1	49.6	52.5	44.6	52.3	51.8	50.1	50.1	51.5
5	48.5	52.1	50.2	50.4	49.7	52.1	44.2	53.6	46.2	50.7	50.1	47.1
6	49.1	52.1	49.9	50.4	49.5	45.7	48.3	52.7	45.0	51.2	49.8	50.0
7	49.6	49.2	45.0	50.7	49.5	50.6	50.2	50.4	51.1	51.5	46.9	51.3
8	49.9	50.1	48.5	50.4	49.3	52.1	52.1	47.0	52.9	51.4	49.1	51.2
9	50.0	51.1	49.2	51.2	43.0	51.8	52.5	51.5	53.3	49.4	49.7	51.7
10	43.8	51.1	49.0	49.7	48.4	50.0	51.4	54.3	52.8	44.5	50.0	51.8
11	48.1	50.2	49.5	44.6	49.4	49.6	44.5	54.0	51.3	50.0	49.8	51.7
12	49.6	50.4	50.2	51.2	49.6	47.5	51.3	56.0	46.1	51.3	46.3	47.8
13	50.1	50.4	49.6	51.4	51.8	45.2	52.2	55.9	49.0	51.5	45.7	48.6
14	50.0	47.0	45.3	51.9	51.9	48.5	52.9	51.4	52.8	51.5	45.7	48.6
15	49.7	48.4	50.5	51.6	49.6	49.4	52.9	46.8	53.2	51.5	47.7	49.0
16	49.3	50.3	51.9	51.3	43.5	49.5	53.0	52.3	53.2	50.9	50.0	49.8
17	45.9	51.3	51.7	49.6	50.6	49.6	49.1	53.9	51.8	47.4	49.1	49.9
18	48.8	52.4	51.7	42.7	51.8	50.0	e48.0	54.0	51.8	51.2	50.7	49.6
19	49.4	52.4	51.6	50.7	51.8	48.4	e51.5	54.4	45.2	52.1	52.5	47.2
20	49.4	50.5	51.2	50.5	51.6	45.7	52.6	54.9	49.3	52.1	51.1	48.3
21	48.4	44.9	43.5	51.9	50.8	50.7	52.9	54.1	52.0	52.1	44.0	49.5
22	48.5	44.6	48.7	51.7	50.1	49.4	54.2	46.0	53.1	52.4	50.0	49.8
23	48.6	48.3	51.1	52.1	43.8	50.0	53.6	49.2	53.4	50.8	50.5	49.8
24	46.3	49.1	51.1	52.1	50.9	49.8	52.4	51.3	53.0	46.6	50.8	48.9
25	47.6	49.1	50.7	43.8	52.0	50.2	45.9	51.6	46.4	49.4	50.7	47.1
26	47.9	49.5	50.8	49.2	52.9	50.0	52.8	52.2	47.7	49.5	45.4	46.6
27	49.0	49.5	49.0	51.5	53.5	45.0	53.8	51.7	51.4	49.7	45.5	49.0
28	50.0	45.0	46.2	51.1	53.1	52.1	54.1	49.1	52.1	50.1	45.5	49.4
29	50.0		47.4	49.7	50.2	52.9	54.7	46.7	52.6	50.1	49.6	49.7
30	49.6		48.0	49.9	44.2	52.6	55.3	51.1	52.7	49.9	51.3	49.8
31	46.9		48.6		43.4		53.3	51.1		47.4		49.9

e Estimated.

Ph-19. U. S. Navy Department, Naval Base. League Island, Philadelphia. Lat. 39°53'10", long. 75°10'00". Drilled observation artesian well in sand and gravel of Cretaceous age ("lower" aquifer), diameter 8 to 6 inches, depth 274 feet (15 feet into rock), cased to 242, screen 242-247. Land-surface datum is 17 feet above msl. Water levels are affected by pumping of 6 Naval Base water-supply wells and by Texas Co. wells on New Jersey side of river. Mean daily range of fluctuation caused by tidal loading, 2.1 feet. Highest water level 29.55 below lsd, Nov. 25, 1950; lowest 78.6 below lsd, Sept. 3, 1954. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	62.0	67.9	....	....	69.1	68.6	72.7	71.4	75.9	74.5	72.5	71.6
2	61.4	67.8	e71.7	....	65.8	73.0	....	74.3	77.1	e74.5	e71.9	71.7
3	60.8	68.4	....	....	69.6	72.4	....	76.3	78.6	e73.0	....	71.6
4	66.5	69.6	....	....	70.7	73.3	....	74.9	75.8	....	....	71.9
5	67.0	70.1	....	e69.6	70.7	....	....	75.3	69.7	e71.3	....	64.0

Ph-19--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
6	67.1	....	....	69.6	70.6	....	e68.3	75.7	66.1	72.8	....	....
7	68.1	....	....	70.0	70.6	....	70.2	73.5	73.4	72.8	....	e71.3
8	68.4	....	....	e70.1	70.3	e72.2	71.8	69.0	77.0	73.3	....	71.6
9	....	....	e67.3	....	63.4	72.6	72.6	71.2	78.0	72.7	e72.5	72.9
10	....	....	....	....	68.3	72.8	71.4	e76.1	76.6	e71.6	72.9	72.8
11	68.2	....	....	....	70.3	72.5	64.4	76.1	72.8	e74.4	70.7	71.6
12	69.7	....	....	e71.5	70.5	70.8	71.3	78.4	66.4	73.4	66.4	69.3
13	70.0	....	....	71.7	72.2	67.5	72.8	76.6	69.7	73.6	65.4	71.8
14	69.9	72.4	....	72.8	72.9	70.7	73.2	73.2	77.2	73.3	65.4	e72.2
15	70.2	....	....	71.9	66.0	72.1	73.3	67.6	77.6	72.3	....	....
16	....	e67.6	....	71.0	62.3	71.9	73.3	73.4	76.0	72.3	71.1	....
17	66.7	....	....	....	70.1	72.0	71.2	75.4	74.7	70.2	71.7	e73.4
18	68.2	71.7	....	....	72.0	72.3	67.0	75.7	74.7	73.7	e72.0	....
19	69.8	71.2	....	e71.0	72.1	71.1	71.0	76.3	65.7	75.1	72.0	e70.9
20	....	70.6	....	70.7	71.1	67.9	73.2	76.7	70.2	75.4	....	....
21	....	e61.5	....	72.8	70.6	70.3	73.3	e76.0	74.9	75.5	....	e73.5
22	....	e58.1	....	72.7	70.6	71.7	75.4	....	77.2	76.0	....	74.0
23	....	e66.6	....	73.0	64.3	72.5	74.1	e72.9	77.6	73.5	e69.2	74.1
24	....	e69.5	e66.0	73.2	70.9	72.6	72.0	76.9	77.1	67.7	71.0	....
25	....	e69.6	....	63.9	72.8	73.1	67.2	77.5	....	72.6	71.3	....
26	e68.1	....	....	68.3	74.5	72.1	72.3	77.2	....	73.3	62.4	....
27	68.6	....	....	71.8	75.3	65.2	74.0	76.1	....	73.7	....	e71.8
28	70.0	....	....	71.6	74.2	72.8	75.0	72.2	e74.6	74.1	....	72.9
29	69.7	....	....	71.0	71.0	73.9	77.2	69.6	74.7	73.9	....	73.2
30	e69.3	....	....	71.3	64.4	73.5	77.5	74.1	74.9	72.7	e71.7	73.4
31	....	....	....	....	63.5	....	74.7	74.8	....	70.0	....	73.4

e Estimated.

Ph-20. U. S. Navy Department, Naval Base. League Island, Philadelphia. Lat. 39°53'10", long. 75°10'40". Drilled observation artesian well in sand and gravel of Cretaceous age ("lower" aquifer), diameter 8 inches, depth 269 feet (19 feet into rock), cased to 238, screen 238-243. Land-surface datum is 13 feet above msl. Water levels are affected by tidal loading, 1.7 feet. Highest water level higher than 28.17, Nov. 25, 1950; lowest 62.8 below lsd, Aug. 26, Sept. 2, 1954. Records available: 1946-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	51.9	....	56.1	58.4	56.3	54.0	59.2	55.9	61.2	60.4	57.2	57.0
2	51.0	e56.5	58.6	58.2	53.5	58.9	....	58.2	62.8	58.4	57.5	57.0
3	50.7	57.4	58.0	57.0	56.2	58.6	....	59.7	62.2	52.3	58.0	57.0
4	56.3	59.1	58.6	49.1	57.3	59.4	....	59.0	61.7	55.2	58.4	57.3
5	56.7	59.6	58.3	56.3	57.5	58.3	....	59.0	50.0	57.6	58.6	47.9
6	57.2	58.4	56.1	55.3	57.4	53.2	e55.0	59.3	52.6	58.1	58.1	55.6
7	57.9	55.7	53.7	57.3	57.4	56.5	55.7	57.0	58.2	57.8	52.5	56.9
8	58.3	55.0	56.4	57.0	56.8	58.1	57.7	52.8	61.3	58.3	56.9	55.5
9	....	58.2	56.8	57.3	50.1	58.3	58.5	55.8	62.1	56.6	57.6	57.8
10	....	58.2	56.8	55.3	55.1	58.8	58.2	59.7	61.9	48.8	58.0	57.5
11	56.3	56.6	57.2	52.5	57.1	58.2	50.6	59.8	59.0	55.6	56.9	57.5
12	58.1	56.9	58.0	57.7	57.3	57.6	57.5	61.8	49.8	57.8	52.5	51.9
13	e58.1	56.9	57.6	57.4	58.0	55.7	59.2	60.1	53.8	57.9	51.0	56.6
14	....	50.2	54.7	58.7	58.6	57.1	59.8	58.6	61.3	58.1	47.5	56.7
15	....	53.4	57.4	58.2	50.9	58.3	59.5	51.2	61.9	58.6	55.3	57.4
16	....	57.1	59.2	57.5	46.1	58.4	59.4	57.7	61.0	58.8	58.2	58.0
17	....	56.3	58.1	56.0	56.0	58.4	57.5	59.5	60.9	55.8	56.4	58.2
18	....	59.7	56.4	47.8	58.1	58.4	51.9	59.8	60.8	58.1	56.7	57.8
19	e57.9	59.3	55.7	57.0	58.3	57.5	57.7	59.6	49.0	58.9	57.0	55.9
20	....	53.8	54.3	57.3	57.6	55.8	58.7	59.7	52.3	59.2	56.5	54.5
21	....	47.9	48.9	58.7	56.7	57.2	59.0	59.7	59.8	59.2	47.0	57.6
22	....	50.0	52.7	58.6	56.6	57.9	59.5	47.7	61.8	59.7	52.6	58.1
23	....	56.0	54.9	59.0	48.1	58.5	59.8	57.0	62.3	58.1	53.3	58.1
24	....	57.2	54.4	58.8	56.5	58.5	58.5	60.1	61.6	50.0	56.1	57.2
25	....	57.6	54.5	51.2	58.1	59.0	55.1	62.0	58.9	57.2	56.3	50.0
26	e56.1	57.9	54.5	55.4	59.0	58.3	58.2	62.8	57.4	57.8	43.1	51.8
27	57.3	57.9	54.2	57.7	60.0	52.5	59.7	62.3	58.8	58.0	46.2	56.9
28	e58.6	54.4	50.8	57.7	59.8	58.8	60.4	60.0	59.4	58.5	43.7	57.8
29	....	....	52.1	57.3	57.1	59.6	60.7	56.9	60.7	58.2	54.9	58.1
30	....	....	53.9	57.8	50.5	59.4	61.0	60.0	61.0	56.9	58.9	58.3
31	....	....	57.0	....	50.5	....	58.3	59.3	....	50.8	....	57.6

e Estimated.

Ph-30. City of Philadelphia. Island Ave. at Philadelphia International Airport. Lat. $39^{\circ}52'40''$, long. $75^{\circ}13'40''$. Drilled unused artesian well in sand and gravel of Cretaceous age, diameter 30 to 10 inches, depth 198 feet, cased to 117, screen 117-137. Land-surface datum is about 10 feet above msl. Highest water level 7.5 below lsd, Apr. 29-30, May 1-2, 1954; lowest 14.76 below lsd, Nov. 19, 1948. Records available: 1943-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	e10.6	Apr. 8	10.4	Apr. 25	8.0	June 1	8.4
12	e10.7	9	10.4	26	7.9	2	8.4
19	e10.6	10	10.4	27	7.9	3	8.4
26	e10.3	11	10.2	28	7.6	4	8.3
Feb. 2	e10.4	12	10.0	29	7.5	5	8.3
9	e10.7	13	10.0	30	7.5	6	8.2
16	e10.8	14	9.8	May 1	7.5	Sept. 14	e10.5
23	e10.7	15	9.6	2	7.5	21	e10.7
Mar. 2	e10.3	17	9.4	24	8.5	30	e11.0
9	e10.2	18	8.7	25	8.5	Oct. 6	e10.9
16	e10.2	19	e8.7	26	8.5	12	e11.1
24	e10.4	20	8.6	27	8.5	Nov. 2	e11.2
29	e10.3	21	8.5	28	8.5	9	e11.3
Apr. 2	e10.4	22	8.4	29	8.5	23	e11.7
6	10.4	23	8.3	30	8.5	Dec. 7	e10.9
7	10.4	24	8.2	31	8.3		

e Estimated.

Ph-34 (K23a-7127). Pennsylvania RR. Philadelphia. Lat. $39^{\circ}53'48''$, long. $75^{\circ}11'55''$. Drilled unused artesian well in sand and gravel of Cretaceous age, diameter 6 inches, depth 154 feet, cased to 100. Land-surface datum is about 8 feet above msl. Highest water level 23.6 below lsd, Jan. 6, 1954; lowest 28.1 below lsd, July 31, Sept. 4, 1954. Records available: 1954.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	26.1	25.7	27.1	27.8	27.5	27.2	25.5	25.0	
2	e25.5	e24.5	25.9	25.7	27.4	27.5	27.6	27.0	25.4	25.2
3	26.0	25.3	25.9	27.4	27.3	27.7	26.4	25.7	25.4
4	25.8	25.7	26.2	27.2	27.5	28.1	25.8	26.2	25.4
5	25.1	25.8	e26.5	26.6	27.5	28.0	25.9	26.3	23.4
6	e23.6	....	....	24.9	25.8	26.1	26.3	27.6	....	26.2	26.2	25.3
7	e24.7	25.8	26.0	26.2	27.4	26.5	26.5	26.2	25.2
8	25.0	25.8	26.0	26.4	27.3	26.9	26.3	25.9	25.7
9	e25.2	....	e24.7	25.7	26.0	26.5	26.8	....	26.2	26.1	25.7
10	25.2	25.4	26.3	26.9	27.0	....	25.9	26.3	26.2
11	25.0	25.5	26.4	26.6	27.2	....	25.2	26.3	26.3
12	e24.9	....	....	25.0	25.7	26.4	26.4	e27.8	....	25.4	26.2	26.1
13	24.9	25.7	26.4	26.4	e27.9	....	25.7	25.9	25.7
14	25.2	25.8	26.2	26.7	27.8	27.1	25.8	25.3	25.3
15	25.4	25.8	26.1	27.3	27.5	27.1	25.7	25.2	25.4
16	e25.7	25.4	25.4	26.1	27.5	27.2	27.1	26.3	24.6	26.1
17	25.7	25.2	26.2	....	27.3	27.2	26.2	25.2	26.3
18	25.4	25.3	26.4	....	27.4	27.2	26.1	25.4	25.9
19	e24.9	....	....	25.1	25.6	26.6	e27.0	27.4	27.0	25.9	25.5	25.8
20	25.4	25.8	26.5	27.2	27.5	26.5	26.1	25.5	25.9
21	25.7	25.8	26.3	27.2	27.6	26.4	26.0	25.2	26.0
22	25.8	25.9	26.4	e27.4	27.4	26.8	26.3	25.2	26.2
23	e24.2	....	26.0	25.8	26.4	e27.6	26.9	27.4	26.4	25.2	26.0
24	e24.6	26.0	25.5	26.7	27.8	27.1	27.5	26.4	25.1	26.2
25	25.6	25.4	26.7	27.7	27.4	27.3	26.8	25.4	26.2
26	25.5	26.0	26.7	27.5	27.6	27.0	25.7	25.3	25.8
27	25.4	26.2	26.4	27.5	27.7	26.6	25.7	24.8	25.6
28	25.5	26.3	26.6	27.7	28.0	26.5	26.2	24.5	25.7
29	25.7	26.4	26.7	27.8	27.9	26.7	25.9	23.1	25.8
30	26.0	26.4	27.0	28.0	27.2	26.9	26.0	25.1	26.0
31	26.0	....	28.1	27.0	....	25.9	....	26.1

e Estimated.

Ph-61. City of Philadelphia. League Island Park, Philadelphia. Lat. $39^{\circ}54'00''$, long. $75^{\circ}10'30''$. Drilled unused artesian well in sand and gravel of Cretaceous age, diameter 8 inches, depth 176 feet. Land-surface datum is about 16 feet above msl. Highest water level 21.7 below lsd, June 1, 1952; lowest 42.9 below lsd, July 30, 1954. Records available: 1943-54.

Ph-61--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	36.1	36.1	35.5	38.5	39.1	....	37.5	33.9	35.4
2	e33.6	34.1	36.2	35.3	37.8	38.7	40.3	....	35.9	34.1	35.4
3	34.2	34.5	36.2	34.8	37.8	38.7	41.1	....	32.0	34.4	35.3
4	e36.2	34.8	33.6	35.6	38.4	34.9	40.8	....	35.3	34.6	35.4
5	36.5	34.8	34.7	35.8	38.4	34.5	40.9	....	35.9	34.7	32.8
6	36.5	34.7	34.8	35.8	34.8	36.0	40.9	....	35.9	34.6	34.1
7	35.6	32.6	35.3	35.8	37.0	36.7	40.1	e36.4	35.0	33.2	35.3
8	33.4	35.3	35.6	39.7	37.9	38.5	37.8	35.0	33.9	35.3
9	e35.7	33.6	35.8	32.3	38.8	38.1	39.6	37.8	34.5	34.4	35.5
10	e35.8	33.7	35.8	34.8	e37.2	38.0	....	37.7	31.0	34.6	35.6
11	34.0	31.9	35.6	e37.2	36.5	....	36.7	33.7	34.6	35.5
12	e33.1	....	34.5	35.2	35.7	36.6	37.7	....	34.5	34.7	32.5	34.1
13	34.5	35.3	36.3	35.3	41.6	....	34.9	34.8	32.2	33.6
14	32.9	36.2	36.8	36.1	42.1	....	37.3	34.9	32.2	33.6
15	34.9	36.2	34.9	36.6	42.1	....	37.7	36.3	33.1	33.9
16	e35.3	36.4	35.9	32.3	36.9	42.1	41.2	37.7	36.4	33.9	e34.2
17	35.8	36.4	35.1	35.3	36.9	41.1	42.2	37.3	33.5	33.9	....
18	e35.8	36.2	32.5	36.4	36.9	38.7	42.5	37.3	34.7	34.4	....
19	e34.9	....	36.1	38.7	36.5	36.6	40.8	42.3	34.1	35.1	35.2	....
20	35.7	38.8	36.5	35.6	41.7	42.7	34.9	35.2	35.0	....
21	32.8	36.6	36.2	36.8	41.0	42.0	36.9	35.2	31.0	34.0
22	34.1	36.6	35.7	36.7	41.6	37.2	37.7	35.4	e34.0	34.3
23	e33.4	35.6	36.7	33.1	36.9	42.4	39.6	38.0	35.0	34.5	34.3
24	33.9	35.6	36.7	e34.9	36.6	41.4	40.7	37.5	32.6	34.7	33.9
25	e33.9	35.6	33.0	....	36.7	39.2	41.0	36.6	34.0	34.8	33.0
26	e33.3	....	35.5	35.1	....	36.8	41.7	41.6	35.3	34.2	31.7	32.4
27	34.6	....	35.5	35.8	....	34.9	42.4	41.6	36.7	34.3	31.2	33.7
28	35.6	....	34.5	36.0	....	37.8	42.6	40.6	36.9	35.3	31.2	34.0
29	35.6	....	33.5	35.1	....	38.4	42.6	39.1	37.3	35.4	33.9	34.2
30	34.2	35.9	....	38.5	42.9	40.3	37.5	34.6	35.2	34.3
31	34.7	....	....	....	42.0	40.0	....	33.6	....	34.4

e Estimated.

Ph-77 (K23a-5223). Atlantic Refining Co. Philadelphia. Lat. 39°55'28", long. 75°12'22". Drilled unused artesian well in sand and gravel of Cretaceous age, diameter 20 to 16 inches, depth 83 feet, cased to 83, screen 66-76. Land-surface datum is about 12 feet above msl. Highest water level 13.1 below lsd, Feb. 24, 1954; lowest 18.4 below lsd, Sept. 6, 1954. Records available: 1954.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	14.1	13.7	15.4	16.2	16.5	17.5	....	14.8
2	e13.9	13.6	13.7	15.7	16.2	16.7	17.6	....	14.5
3	14.1	13.5	13.7	15.8	16.0	17.1	17.7	....	14.4
4	14.2	13.6	13.7	15.8	16.1	17.8	17.7	....	14.3
5	14.1	13.6	13.8	15.8	16.0	18.1	17.7	....	14.5
6	13.9	13.5	13.9	15.9	16.1	18.4	17.8	....	14.6
7	14.1	13.5	14.0	15.3	16.1	17.8	17.9	....	14.6
8	14.2	13.4	14.0	16.1	16.2	17.7	17.8	....	14.6
9	14.3	13.4	13.9	15.9	16.2	17.7	17.6	....	14.5
10	14.3	13.4	13.9	15.8	16.2	17.5	17.7	....	14.7
11	14.1	13.5	13.9	15.9	16.2	17.4	17.6	....	14.8
12	14.3	13.5	14.0	15.9	16.3	17.6	17.7	....	14.8
13	14.3	13.5	14.0	15.8	e16.4	17.6	17.8	....	14.7
14	e14.0	13.3	14.0	15.7	....	17.4	17.9	....	14.1
15	13.2	14.1	....	....	17.5	17.6	....	14.0
16	14.0	16.2	16.1	17.2	17.5	14.4	14.6
17	13.8	13.2	14.0	16.3	16.1	17.1	17.7	....	14.7
18	14.1	13.3	14.0	16.2	15.2	17.0	17.8	14.4	14.5
19	14.3	13.4	14.0	16.2	14.9	....	17.8	14.3	14.3
20	14.4	13.3	14.0	15.0	....	....	....	14.1	14.5
21	14.4	13.3	14.0	16.2	....	17.2	....	14.3	14.5
22	14.3	13.4	14.1	16.3	....	17.4	....	14.5	14.7
23	14.3	13.5	14.1	16.2	15.5	17.7	....	14.5	14.6
24	e13.1	e13.7	14.3	13.5	14.3	16.1	15.9	17.7	....	14.3	14.7
25	14.2	13.4	14.3	16.1	....	17.6	....	14.3	14.9

Ph-77 (K23a-5223)--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	14.1	13.7	14.2	16.1	....	17.4	....	14.5	14.8
27	14.0	13.5	14.2	16.2	16.3	17.4	....	14.5	14.6
28	13.8	13.6	14.4	16.1	16.3	17.4	....	14.3	14.6
29	13.9	13.7	14.3	16.1	16.3	17.5	....	14.7	14.4
30	14.1	13.8	15.2	16.3	16.2	17.4	....	15.0	14.5
31	13.8	....	16.3	16.2	....	....	....	14.5

e Estimated.

Ph-85 (K23a-6438). U. S. Navy Department. Naval Hospital, Philadelphia. Lat. 39°54'20", long. 75°10'30". Drilled unused artesian well in sand and gravel of Cretaceous age, diameter 24 to 10 inches, depth 147 feet, cased to 108, screen 108-133. Land-surface datum is about 14 feet above msl. Highest water level 20.55 below lsd, June 15, 1953; lowest 30.70 below lsd, Nov. 9, 1945. Records available: 1944-54. Measurement discontinued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	27.05	Feb. 16	27.00	Sept. 14	29.68	Nov. 2	28.46
12	27.60	23	26.67	21	29.32	9	28.50
19	27.98	Mar. 2	27.00	28	29.50	16	28.50
26	27.34	9	26.74	Oct. 6	28.98	23	28.55
Feb. 2	26.37	16	27.85	12	28.44	30	28.55
9	27.16	24	27.72				

Ph-86 (K23a-6438). U. S. Navy Department. Naval Hospital, Philadelphia. Lat. 39°54'20", long. 75°10'40". Drilled unused artesian well in sand and gravel of Cretaceous age, diameter 24 to 10 inches, depth 151 feet, cased to 101, screen 101-126. Land-surface datum is about 14 feet above msl. Highest water level 19.50 below lsd, June 2, 1953; lowest 28.69 below lsd, Nov. 9, 1945. Records available: 1944-54. Measurement discontinued. Mar. 24, 25.37; Oct. 6, 26.22.

Ph-143 (K23a-6056). General Cold Storage. Philadelphia. Lat. 39°54'48", long. 75°08'57". Drilled unused artesian well in sand and gravel of Cretaceous age, diameter 18 to 10 inches, depth 159 feet, cased to 143, screen 143-158. Land-surface datum is about 12 feet above msl. Highest water level 43.6 below lsd, Feb. 23, 1954; lowest 57.5 below lsd, Aug. 3-4, 1954. Records available: 1954.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	e48.9	50.8	49.7	....	....	55.0	56.2	53.6	51.6
2	e47.2	48.9	48.1	51.8	....	55.1	53.8	52.7	53.5	52.0
3	47.3	50.1	51.1	....	57.5	54.2	50.7	55.0	52.4
4	45.1	52.1	52.7	....	57.5	53.0	52.8	55.2	49.7
5	47.6	52.2	52.7	....	56.7	....	53.0	55.4	45.9
6	e44.1	....	....	47.0	49.7	49.5	....	56.2	....	53.3	53.1	48.7
7	47.6	52.0	51.5	....	56.3	....	53.3	50.5	49.3
8	49.3	51.5	52.7	....	53.3	....	52.8	52.9	50.7
9	e47.9	e50.0	51.5	48.5	52.7	....	53.8	53.9	50.3	53.2	49.8
10	48.7	50.5	52.1	....	55.9	54.1	49.8	54.8	49.7
11	46.8	....	....	....	56.5	52.3	52.7	54.0	48.2
12	e45.4	....	....	50.2	50.6	....	....	55.5	49.7	54.5	52.2	45.7
13	50.5	....	....	....	54.8	52.4	55.1	49.2	....
14	50.8	50.8	....	....	54.2	54.1	55.6	48.0	49.5
15	50.3	....	55.3	55.3	51.1	54.1	55.7	51.3	51.9
16	e45.6	e49.0	49.8	....	55.2	56.2	54.8	54.2	51.5	e52.2	53.1
17	50.4	....	55.2	....	54.8	55.1	51.5	54.2	53.4
18	47.1	50.9	55.6	....	56.5	53.9	53.1	53.5	51.3
19	e45.2	....	....	50.2	51.3	55.3	....	56.6	50.6	54.8	53.9	48.4
20	53.0	51.0	52.0	55.8	56.6	53.6	54.7	50.3	52.5
21	55.0	51.0	54.6	55.7	56.4	53.9	55.3	50.3	53.3
22	54.2	50.9	56.0	55.5	53.1	55.0	54.3	52.1	e54.5
23	e43.6	....	53.3	48.1	56.0	....	54.6	52.8	52.1	52.7	....
24	e51.5	52.7	48.5	53.8	....	55.2	55.1	50.4	51.6	....
25	49.7	49.8	55.2	....	55.0	52.8	53.2	51.1	....
26	e46.8	....	....	53.0	51.6	56.0	....	54.9	49.1	54.5	51.3	....
27	55.1	51.8	52.2	56.1	55.2	54.1	53.8	50.0	....
28	52.5	52.6	53.8	....	55.0	54.6	55.2	47.6	53.9
29	e48.9	51.7	51.8	56.4	....	52.4	53.9	54.2	51.1	54.9
30	50.9	47.7	....	57.2	54.1	55.5	52.0	52.2	53.6
31	48.9	....	....	55.0	....	49.9	....	53.6

e Estimated.

Ph-177 (K23a-3957). Quaker City Cold Storage Co. Philadelphia. Lat. 39°56'40", long. 75°08'38". Drilled unused artesian well in sand and gravel of Cretaceous age, diameter 18 to 12 inches, depth 78 feet, cased to 63, screen 63-78. Land-surface datum is about 15 feet above msl. Highest water level 16.5 below lsd, Aug. 7, 1954; lowest 19.2 below lsd, Aug. 12-13, 1954. Records available: 1954.

Daily lowest water level from recorder graph*

Day	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	....	18.0	17.9	18.0	17.8	17.6	18.3
2	....	18.2	18.0	18.2	17.7	17.3	17.7
3	....	17.9	18.0	18.0	17.3	17.0	17.7
4	....	17.7	17.4	18.2	17.4	17.7	17.7
5	....	17.6	16.9	17.8	17.8	17.9	17.3
6	....	17.9	16.9	17.8	17.8	17.5	17.8
7	e18.3	17.9	16.5	17.5	17.8	17.1	17.9
8	18.4	17.9	17.2	18.0	17.6	17.4	17.8
9	18.1	17.9	16.9	18.2	17.4	17.5	17.9
10	18.1	17.7	17.1	17.8	17.3	17.5	18.0
11	18.1	17.5	17.3	17.9	17.6	17.4	18.3
12	17.9	17.8	19.2	17.9	17.6	17.8	18.0
13	17.6	17.8	19.2	17.9	17.7	17.7	17.7
14	18.0	18.0	18.9	17.9	17.7	17.1	17.5
15	18.1	18.2	17.9	18.1	17.5	17.6	17.4
16	18.2	18.2	17.7	17.7	17.2	17.2	18.1
17	17.9	17.8	18.4	17.8	17.2	17.4	18.5
18	18.1	17.6	18.3	17.8	17.3	17.3	17.3
19	18.1	17.9	18.3	17.4	17.4	17.1	17.4
20	17.8	18.2	17.8	17.5	17.3	17.2	17.6
21	18.1	18.0	17.4	17.4	17.2	16.8	18.0
22	18.4	18.1	18.0	17.8	17.5	17.3	18.2
23	18.4	18.2	17.1	18.0	17.3	17.4	18.1
24	18.5	18.0	17.7	18.0	17.3	16.8	17.9
25	18.4	17.8	18.2	17.6	17.3	16.9	18.2
26	18.0	17.8	18.3	17.6	17.3	17.0	17.8
27	17.8	17.8	17.7	17.6	17.3	17.3	17.6
28	18.4	18.0	17.9	17.6	17.7	17.2	17.9
29	18.2	18.1	18.1	17.8	17.3	17.1	18.0
30	18.2	18.1	17.8	17.7	17.4	18.3	17.8
31		17.9	17.8		17.3		17.8

e Estimated.

* No record for January, February, March, April, and May.

Ph-248. McCahan Sugar Refinery. Philadelphia. Lat. 39°55'30", long. 75°08'40". Drilled unused artesian well in sand and gravel of Cretaceous age, diameter 8 inches, depth 105 feet. Land-surface datum is about 13 feet above msl. Highest water level 29.34 below lsd, Apr. 30, 1952; lowest 61.57 below lsd, Sept. 16, 1944. Records available: 1944-54. Measurement discontinued. Mar. 24, 48.30; Oct. 6, 42.90

Ph-249. Crown Paper Board Co., Inc. Philadelphia. Lat. 39°55'40", long. 75°08'40". Drilled unused artesian well in sand and gravel of Cretaceous age, diameter 8 to 6 inches, depth 156 feet. Land-surface datum is about 13 feet above msl. Highest water level 26.6 below lsd, May 25, 1952; lowest 47.9 below lsd, May 18, 1951. Records available: 1947-54.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	37.7	38.2	37.7	42.4	46.1	41.9	44.3	42.9	45.5	43.6	e41.5	41.7
2	37.5	37.9	38.7	41.4	40.5	43.3	45.8	44.8	45.0	41.3	e41.6	41.9
3	36.5	38.1	38.1	40.1	46.0	43.6	45.8	46.1	46.5	39.2	42.4	42.5
4	37.2	38.1	38.7	40.6	47.2	44.7	40.2	46.0	44.3	39.5	42.5	40.4
5	37.3	39.0	38.9	41.5	47.0	44.7	....	43.9	40.7	39.9	41.7	37.9
6	37.0	38.0	38.4	42.9	45.6	41.3	e39.9	46.1	42.7	39.4	....	40.3
7	37.3	37.6	37.9	44.2	47.1	44.6	40.1	45.3	43.8	40.1	....	41.1
8	37.3	38.4	42.0	44.4	47.1	45.0	38.5	41.6	43.7	39.7	....	37.9
9	37.1	39.3	41.9	44.7	40.6	45.3	40.1	42.6	44.6	39.4	e40.4	37.6
10	37.1	38.8	41.8	43.5	45.1	44.1	40.6	45.0	44.9	38.8	40.7	37.9
11	37.0	38.6	41.9	38.0	46.8	45.7	36.4	44.4	41.8	41.6	40.1	37.2
12	38.0	38.8	40.2	42.9	46.6	46.2	43.6	44.6	40.6	42.1	41.8	35.6
13	38.7	38.4	e38.4	43.7	45.2	41.7	43.7	45.0	42.7	42.5	38.7	40.1
14	38.3	37.5	37.5	45.0	46.4	45.4	43.6	44.4	43.4	42.9	36.7	40.8
15	38.3	39.6	39.7	44.9	44.0	46.5	44.4	41.5	43.3	43.0	39.0	41.2

Ph-249--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
16	37.9	39.9	40.7	45.9	38.9	46.7	46.1	44.6	42.9	39.9	39.6	42.1
17	38.2	40.1	40.2	46.1	41.5	45.1	46.1	46.3	44.2	39.0	40.6	42.7
18	38.5	41.3	40.6	36.1	42.4	46.7	42.3	45.6	42.9	41.1	40.6	41.1
19	38.8	41.2	39.7	45.1	42.6	46.7	45.4	45.9	41.7	42.0	40.4	37.8
20	38.7	40.3	37.3	46.7	44.0	42.3	46.2	46.4	43.5	41.5	37.5	41.0
21	38.0	37.6	37.2	47.1	44.5	46.3	45.2	45.5	42.9	42.5	36.4	42.2
22	38.1	37.7	41.1	46.4	44.0	46.9	44.4	42.5	44.4	42.5	38.8	42.4
23	37.9	39.0	43.6	46.3	40.2	46.7	46.2	45.3	42.1	40.1	40.0	42.1
24	37.2	39.8	45.3	46.2	40.4	44.6	46.2	46.4	42.9	39.0	40.4	43.2
25	38.6	40.3	41.2	40.9	42.9	46.5	44.2	46.0	40.7	41.2	39.7	37.9
26	39.4	39.9	41.1	45.4	44.5	46.8	44.6	46.3	39.1	42.1	41.4	35.1
27	39.2	38.6	40.5	46.3	42.9	40.8	45.3	47.2	42.3	42.2	38.6	41.8
28	39.4	37.6	40.8	45.5	44.2	44.9	45.3	45.6	42.1	42.5	36.5	42.8
29	38.9		41.8	45.3	43.7	46.0	44.7	42.6	42.2	42.3	39.0	42.7
30	37.8		41.2	46.1	40.3	46.2	45.5	44.4	42.5	40.5	41.6	42.4
31	37.8		41.4		40.8		45.6	45.0		39.3		43.4

e Estimated.

Ph-323 (K23b-0629). Liberty Corp. Philadelphia. Lat. 39°58'25", long. 75°04'08". Drilled unused artesian well in sand and gravel of Cretaceous age, diameter 6 inches, depth 110 feet. Land-surface datum is about 10 feet above msl. Highest water level 11.7 below lsd, Mar. 3, 1954; lowest 13.9 below lsd, Nov. 30, Dec. 1, 17, 1954. Records available: 1954.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	12.6	12.4	12.3	12.6	12.8	12.7	12.8	12.8	13.9
2	12.7	12.3	12.4	12.7	12.8	12.7	12.8	12.7	12.8
3	e11.9	e11.7	13.3	12.0	12.4	12.8	12.6	12.7	12.7	12.3	12.8
4	13.2	12.4	12.2	12.6	12.5	13.1	12.6	13.2	12.6
5	13.0	12.4	12.5	12.6	12.6	12.9	12.8	13.1	12.4
6	13.0	12.2	12.6	12.7	12.9	13.1	12.7	12.9	13.2
7	13.1	12.3	12.7	12.4	12.7	12.7	13.2	12.5	13.3
8	13.0	11.8	12.7	12.7	12.7	13.0	12.7	12.5	13.3
9	13.4	12.0	12.3	12.7	12.4	13.0	12.6	12.8	13.3
10	13.2	12.2	....	12.7	12.6	12.6	12.7	12.9	13.3
11	12.7	12.5	....	12.6	12.9	12.7	12.6	12.7	13.7
12	13.4	12.5	....	12.6	13.2	13.1	12.6	13.2	13.5
13	13.3	12.4	....	12.5	13.2	12.8	12.7	13.2	13.2
14	13.0	12.1	....	12.7	13.2	12.7	12.7	12.7	13.2
15	12.8	12.1	12.6	12.9	12.9	12.5	12.3	13.1	12.6
16	12.4	12.0	12.5	13.0	12.8	12.3	12.1	12.9	13.7
17	12.6	12.3	12.3	13.0	13.2	12.4	12.4	12.7	13.9
18	12.6	12.4	12.3	12.7	13.1	12.4	12.5	12.7	13.0
19	12.6	12.2	12.4	12.5	12.9	12.2	12.6	12.6	12.7
20	12.6	12.2	12.4	12.5	13.0	12.2	12.6	12.3	13.0
21	12.7	12.5	12.4	12.4	13.0	12.3	12.2	12.2	13.3
22	12.7	12.5	12.5	12.5	12.9	12.7	12.5	12.8	13.8
23	12.6	12.4	12.4	12.6	12.9	13.1	12.5	12.8	13.4
24	e13.0	12.8	12.4	12.8	12.6	12.8	13.0	12.9	12.4	13.4
25	e12.3	12.5	12.2	12.7	12.5	13.0	12.7	12.8	12.2	13.6
26	12.8	12.7	12.5	12.5	12.6	13.0	12.7	12.5	12.4	13.3
27	13.2	12.5	12.5	12.5	12.7	12.9	12.6	12.3	12.5	13.4
28	13.1	12.3	12.4	12.9	12.7	12.8	12.6	12.9	12.4	13.5
29	12.5	12.1	12.3	12.7	12.7	12.8	12.7	12.6	13.3	13.6
30	12.8	12.3	12.5	12.7	12.8	12.6	12.6	12.8	13.9	13.5
31	12.6		12.4		12.8	12.5		12.8		13.5

e Estimated.

Pike County

Pi-3 (D23b-5615). Commonwealth of Pennsylvania. Delaware State Forest. Lat. 41°25'00", long. 75°05'40". Drilled unused water-table well in shale or sandstone of Catskill formation, diameter 6 inches, depth 43 feet. Land-surface datum is about 1,310 feet above msl. Fred Hatton, voluntary observer. Highest water level 17.17 below lsd, Mar. 28, 1953; lowest 45.76 below lsd, Oct. 23, 1949. Records available: 1948-54.

Pi-3 (D23b-5615)--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 18	23.80	Feb. 22	20.08	Apr. 5	20.51	July 13	26.35
25	24.14	Mar. 8	17.5	12	20.97	19	26.18
Feb. 1	21.94	15	19.47	May 22	18.60	Aug. 28	37.10
8	21.93	30	20.44	June 7	21.35	Sept. 7	32.25
15	21.76						

Schuylkill County

Sc-1 (G18c-5864). Nick C. Donofrio. Pine Grove. Lat. 40°32'20", long. 76°22'40". Dug domestic water-table well in shale of Portage group, diameter 36 inches, depth 31 feet, cased with stone. Land-surface datum is about 560 feet above msl. Highest water level 4.14 below lsd, Aug. 31, 1940; lowest 31.78 below lsd, Nov. 5, 1944. Records available: 1931-54.

Jan. 2	15.17	Apr. 3	15.47	July 3	21.70	Oct. 2	25.58
9	14.00	10	12.80	10	22.70	9	26.40
16	18.70	17	9.00	17	24.00	16	25.80
23	16.00	24	8.58	24	23.00	23	26.00
30	13.80	May 2	12.00	31	23.28	30	25.08
Feb. 6	13.00	8	9.76	Aug. 7	23.60	Nov. 6	25.05
13	12.27	15	17.68	14	22.66	13	26.00
20	12.60	22	16.18	21	21.80	20	25.26
27	12.00	29	17.30	25	22.60	27	24.87
Mar. 6	14.20	June 5	19.00	Sept. 4	25.00	Dec. 4	24.80
13	12.80	12	19.27	11	24.38	11	24.10
20	10.38	19	20.57	18	23.86	18	23.58
27	12.20	26	22.17	25	25.00	25	19.60

Sc-3. John Perla. Near South Tamaqua. Lat. 40°45'20", long. 75°56'00". Dug unused water-table well in shale or sandstone of Chemung formation or Portage group, diameter 4 feet, depth 37 feet. Land-surface datum is about 835 feet above msl. Highest water level 11.41 below lsd, Dec. 12, 1950; lowest 28.56 below lsd, Nov. 10, 1948. Records available: 1948-54. Measurement discontinued. Feb. 9, 22.55; Mar. 30, 18.79; Apr. 21, 19.00; May 17, 17.08.

Sc-4. Paul Fritz. Adamsdale. Lat. 40°38'00", long. 76°07'40". Dug unused water-table well in shale of Portage group or Hamilton formation, diameter 5 feet, depth 19 feet. Land-surface datum is about 500 feet above msl. Highest water level 2.07 below lsd, Oct. 9, 1950; lowest 9.63 below lsd, Sept. 27, 1954. Records available: 1948-54.

Feb. 9	5.17	May 28	5.38	Aug. 26	9.59	Nov. 22	3.09
Mar. 30	3.44	June 17	6.74	Sept. 27	9.63	Dec. 22	3.33
Apr. 20	3.02	July 12	8.65	Oct. 21	8.56		

Sc-5. George Mengle. Near Auburn. Lat. 40°36'20", long. 76°05'30". Dug unused water-table well in Marcellus shale in Hamilton formation of Portage group, diameter 36 inches, depth 34 feet. Land-surface datum is about 490 feet above msl. Highest water level 23.48 below lsd, Feb. 4, 1952; lowest 29.54 below lsd, Nov. 22, 1954. Records available: 1948-54.

Feb. 9	27.10	May 28	25.60	Aug. 26	28.85	Nov. 22	29.54
Mar. 30	25.26	June 17	26.35	Sept. 27	29.20	Dec. 22	29.10
Apr. 20	25.55	July 12	27.29	Oct. 21	29.35		

Somerset County

So-1 (K7c-0912). N. B. Sanner. Markleton. Lat. 39°51'40", long. 79°13'30". Dug unused water-table well in Allegheny formation, diameter 18 inches, depth 19 feet, cased with tile. Land-surface datum is about 1,680 feet above msl. R. E. Carpenter, voluntary observer. Highest water level 11.02 below lsd, Apr. 12, 1948; lowest 17.45 below lsd, Nov. 30, 1953. Records available: 1931-54.

Jan. 4	17.27	Feb. 22	15.68	Apr. 12	14.88	June 1	15.25
11	17.07	Mar. 2	14.35	19	14.50	7	15.35
20	16.74	7	15.12	26	14.86	14	15.27
25	16.44	15	14.30	May 3	14.88	21	15.17
Feb. 1	16.30	22	14.50	10	14.95	27	15.46
8	16.44	28	14.48	17	14.75	July 4	15.72
14	16.36	Apr. 5	14.94	25	14.95	11	15.93

So-1 (K7c-0912)--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
July 18	16.02	Aug. 29	15.30	Oct. 11	14.76	Nov. 22	14.10
20	16.82	Sept. 7	15.52	18	13.84	29	13.93
26	16.22	13	15.72	25	14.30	Dec. 6	14.00
Aug. 2	16.35	20	15.04	Nov. 1	14.02	14	13.95
9	16.15	27	15.14	8	13.90	22	13.60
16	15.67	Oct. 4	15.06	14	14.22	27	13.75
24	15.38						

So-2. Commonwealth of Pennsylvania. Laurel Hill Recreational Area. Bakersville. Lat. 40°00'00", long. 79°14'20". Drilled unused artesian well in sandstone of Pottsville formation, diameter 4 to 6 inches, depth 450 feet, cased to 311. Land-surface datum is 2,040 feet above msl. Ray Martz, voluntary observer. Highest water level 29.35 below lsd, May 3, 1948; lowest 35.97 below lsd, Aug. 21, 1937. Records available: 1937-54.

Jan. 6	32.66	Mar. 19	31.63	June 7	31.05	Aug. 23	31.65
13	32.60	24	31.60	17	31.19	Sept. 4	31.66
20	32.48	Apr. 3	31.50	23	31.15	10	31.67
29	32.36	10	31.64	July 8	31.30	17	31.66
Feb. 4	32.25	20	31.46	16	31.44	24	31.64
9	32.14	28	31.11	20	31.51	Oct. 8	31.67
16	32.14	May 8	31.50	20	31.48	27	31.43
25	31.93	12	31.37	Aug. 6	31.55	Nov. 4	31.31
Mar. 3	31.70	21	31.46	13	31.72	30	31.22
12	31.69	25	31.38	17	31.54	Dec. 21	30.99

Sullivan County

Su-1 (C17d-8117). Carl D. Molyneux. Near Forksville. Lat. 41°30'20", long. 76°35'20". Dug unused water-table well in sand and gravel of Pleistocene age, diameter 4 feet, depth 28 feet, cased with stone. Land-surface datum is about 1,280 feet above msl. Highest water level 18.11 below lsd, Dec. 2, 1950; lowest dry several times, 1935-54. Records available: 1935-54.

Jan. 2	23.14	Apr. 10	25.86	July 10	(f)	Oct. 2	(f)
9	24.08	17	24.39	14	26.77	9	(f)
16	24.92	24	24.92	17	(f)	16	(f)
23	25.04	May 1	24.74	24	(f)	23	(f)
30	24.02	8	23.88	31	(f)	30	(f)
Feb. 6	24.76	15	24.19	Aug. 7	26.38	Nov. 6	24.79
13	25.22	22	24.97	14	26.45	13	25.84
20	25.10	29	25.68	21	(f)	20	25.57
27	22.88	June 5	25.26	28	(f)	27	24.73
Mar. 6	22.74	12	25.88	Sept. 4	24.54	Dec. 4	24.92
13	23.19	19	26.07	11	25.18	11	25.29
20	24.11	26	26.43	18	25.71	18	24.68
27	24.55	July 3	(f)	25	25.93	24	24.96
Apr. 3	25.13						

f Dry.

Susquehanna County

Sq-1 (B20c-2461). Carlton farm. Montrose. Lat. 41°50'20", long. 75°52'50". Dug unused well in drift of Pleistocene age, diameter 36 inches, depth 38 feet, cased with stone. Land-surface datum is about 1,685 feet above msl. Highest water level 0.70 below lsd, Mar. 18, 1936; lowest 9.41 below lsd, Nov. 9, 1953. Records available: 1930-54.

Jan. 5	6.47	Apr. 6	4.58	July 13	8.23	Oct. 4	7.30
13	6.90	13	4.9	14	8.23	12	7.38
19	6.90	20	3.15	20	8.36	19	7.58
26	6.20	27	3.28	27	8.46	26	7.80
Feb. 2	7.41	May 4	3.32	Aug. 3	8.53	Nov. 2	7.90
9	5.9	11	2.9	10	8.42	9	7.32
16	5.31	21	4.25	18	8.46	18	6.14
23	3.01	25	4.9	24	8.52	24	4.55
Mar. 2	2.51	June 1	6.20	30	8.60	30	4.42
9	3.43	8	6.79	Sept. 7	8.56	Dec. 7	4.15
16	3.71	15	7.10	15	8.60	14	3.66
24	3.9	28	7.80	22	7.95	23	3.42
30	4.07	July 6	8.00	28	7.32	28	4.19

Tioga County

Ti-1 (B13d-8436). Lewis Robert Kohler. Gaines. Lat. 41°45'00", long. 77°33'30". Dug unused water-table well in sand of Pleistocene age, diameter 4 feet, depth 23 feet, cased with stone. Land-surface datum is about 1,290 feet above msl. Highest water level 4.65 below lsd, Mar. 21, 1936; lowest 21.18 below lsd, Sept. 16, 1939. Records available: 1935-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	17.55	Apr. 10	8.45	July 10	18.06	Oct. 5	19.00
9	18.09	17	6.38	16	17.96	9	19.19
16	18.67	24	5.85	17	17.90	16	18.02
23	18.30	May 1	5.93	24	18.39	23	18.19
30	16.05	8	6.34	31	18.87	30	18.65
Feb. 6	16.75	15	9.55	Aug. 7	19.05	Nov. 6	18.64
13	17.15	22	12.35	14	19.18	13	19.00
20	16.95	27	10.95	21	19.46	20	19.19
27	14.09	June 5	10.00	28	19.54	27	19.00
Mar. 6	6.40	12	11.14	Sept. 4	19.44	Dec. 4	18.37
13	8.25	19	14.29	11	19.24	11	18.68
20	9.94	26	15.83	18	19.07	18	16.56
27	8.00	July 3	17.49	25	18.64	25	17.35
Apr. 3	7.99						

Union County

Un-1 (F15a-8127). D. R. Pursley. Laurelton. Lat. 40°52'50", long. 77°51'50". Dug unused water-table well in shale or limestone of Cayuga group, diameter 5 feet, depth 13 feet. Land-surface datum is about 655 feet above msl. Highest water level 2.84 below lsd, Mar. 22, 1952; lowest 9.18 below lsd, Oct. 26, 1951. Records available: 1946-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	6.72	Apr. 2	4.48	July 2	5.05	Oct. 1	7.98
8	5.35	8	4.46	9	5.08	9	7.98
15	5.36	16	4.32	16	6.52	15	7.98
22	5.36	23	4.24	16	5.97	22	6.22
30	4.24	30	4.22	23	6.00	29	6.19
Feb. 6	4.25	May 7	4.00	30	6.00	Nov. 5	6.08
13	4.26	14	4.12	Aug. 5	6.01	13	6.09
19	4.36	21	3.99	13	6.01	19	6.08
26	4.35	28	4.00	20	6.13	Dec. 3	4.12
Mar. 5	3.32	June 4	4.13	27	5.14	10	4.22
12	4.32	11	4.14	Sept. 5	7.49	17	4.21
19	4.65	17	5.04	10	7.47	24	4.22
26	4.66	26	5.05	17	7.48	31	4.14

Washington County

Ws-1 (J3c-5924). Albert Mankey. Amity. Lat. 40°02'20", long. 80°12'10". Dug unused water-table well in limestone of Washington formation, diameter 40 inches, depth 36 feet, cased with stone to 4. Land-surface datum is about 1,190 feet above msl. Highest water level 8.39 below lsd, June 22, 1946; lowest 34.14 below lsd, Oct. 1, 1938. Records available: 1936-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	28.91	Mar. 26	22.79	July 16	23.22	Sept. 18	23.56
15	29.61	Apr. 14	21.97	23	22.74	25	23.26
23	29.46	24	16.54	24	22.93	Oct. 8	24.46
28	27.74	May 8	17.41	Aug. 3	23.31	Nov. 6	19.21
Feb. 13	25.70	15	17.89	9	23.03	17	19.81
20	25.75	29	19.26	16	22.99	Dec. 4	20.86
Mar. 6	21.15	June 19	19.24	28	23.21	25	17.53
13	22.43	July 2	19.91	Sept. 10	23.56		

Wayne County

Wn-1 (D23a-0933). Arthur H. Tyce. Near Hawley. Lat. 41°29'10", long. 75°11'10". Dug unused water-table well in sand and gravel of Pleistocene age, diameter 30 inches, depth 17 feet, cased with stone. Land-surface datum is about 920 feet above msl. Highest water level 2.08 below lsd, May 23, 1942; lowest dry several times 1941, Oct. 1953, Oct. 1954. Records available: 1931-42, 1944-54.

Wn-1 (D23a-0933)--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 2	12.18	Apr. 3	9.00	July 3	11.69	Sept. 25	15.45
9	12.80	10	9.34	10	12.15	Oct. 2	16.30
16	12.75	17	8.50	13	12.85	9	16.47
23	12.65	24	8.67	17	12.67	16	15.59
30	11.88	May 1	8.44	24	13.25	23	(f)
Feb. 6	11.83	8	8.15	31	14.20	30	(f)
13	12.22	15	7.08	Aug. 7	14.80	Nov. 6	14.62
20	11.37	22	8.36	14	15.05	13	14.75
27	10.38	29	8.95	21	15.23	20	14.89
Mar. 6	8.26	June 5	7.49	28	15.45	27	12.50
13	8.40	12	10.07	Sept. 4	15.07	Dec. 4	12.00
20	8.10	19	10.45	11	15.47	11	12.12
27	8.60	26	11.11	18	15.43	25	11.42

f Dry.

RHODE ISLAND

By W. B. Allen

Scope of Water-Level Program

The observation-well program was continued in 1954 in cooperation with the Rhode Island Development Council. In December 1954 the observation-well program consisted of 52 wells, in 4 of which water levels were measured daily, in 14 weekly, and in 29 monthly. Continuous records were obtained during 1954 in 5 wells equipped with recording gages. Water-level fluctuations in 21 wells are caused principally by pumping and in the remainder by natural recharge and discharge. Figures 51 and 52 show the location of observation wells. Field work for quadrangle (not quantitative) investigations of ground-water conditions was completed in the Slocum, Wickford, and Kingston quadrangles in central and southern Rhode Island. In July a start was made on a more intensive type of investigation on the basis of which quantitative estimates of ground water available within the State will be made. Monthly sampling of ground water for chloride content in the Woonasquatucket River valley in Providence was continued.

A report by W. H. Bierschenk on the ground-water resources of the Bristol quadrangle, Rhode Island-Massachusetts, was published as Geological Bulletin 7 of the Rhode Island Development Council.

Precipitation

Average statewide precipitation in 1954 was 53.64 inches, or 4.80 inches less than in 1953, and 10.61 inches more than normal. The precipitation at the T. F. Green Airport in Warwick during 1954 was 51.53 inches, or 7.04 inches less than in 1953, but 11.90 inches more than the normal for the period 1921-50. In general, the average temperature at the airport was 1° above normal. Because precipitation was above normal in 1954, recharge to the ground-water reservoirs was more than average.

Pumpage

Pumpage in 1954 was increased about 1 mgd (million gallons per day) so that the average withdrawal of ground water for various purposes is now estimated at about 34 mgd.

Interpretation of Water-Level Fluctuations

Water levels in all water-bearing formations in Rhode Island follow cyclical seasonal trends in response to natural and artificial replenishment and withdrawal. The nongrowing season is the most favorable time for recharge from precipitation because losses by evaporation and transpiration are low and artificial withdrawals are small. As a result, water levels in Rhode Island generally rise during the nongrowing season; the time of start, the rate, and the amount of rise depend on the precipitation pattern and on the soil condition. The rising trend occasionally continues into the growing season, peak levels being reached as late as May or early June. After the start of the growing season, percolation to the water table is reduced appreciably; natural discharge into surface streams through springs and seeps and into the bay and ocean continues for a while at a more or less constant rate. There is then a loss of ground-water storage, and water levels decline until recharge becomes greater than discharge.

Because of above-normal precipitation at the end of the 1953 growing season, the recovery of water levels, which started in November or December 1953, continued into 1954 in the 31 wells remote from heavily pumped areas. In 13 of these wells, the yearly peak levels for 1954 were recorded between January and May. The subsequent decline of water levels during the growing season was interrupted in most wells in August when 9.02 inches of rainfall was recorded; 2.87 inches of this amount fell during hurricane Carol on August 31. The above-normal rains accompanying hurricane Edna on September 11 (4.08 inches) and those in November and December helped water levels to recover appreciably and to reach peak levels for the year by the end of December in 18 of the 31 wells. In all, there was a small net gain in ground-water storage in the State in 1954.

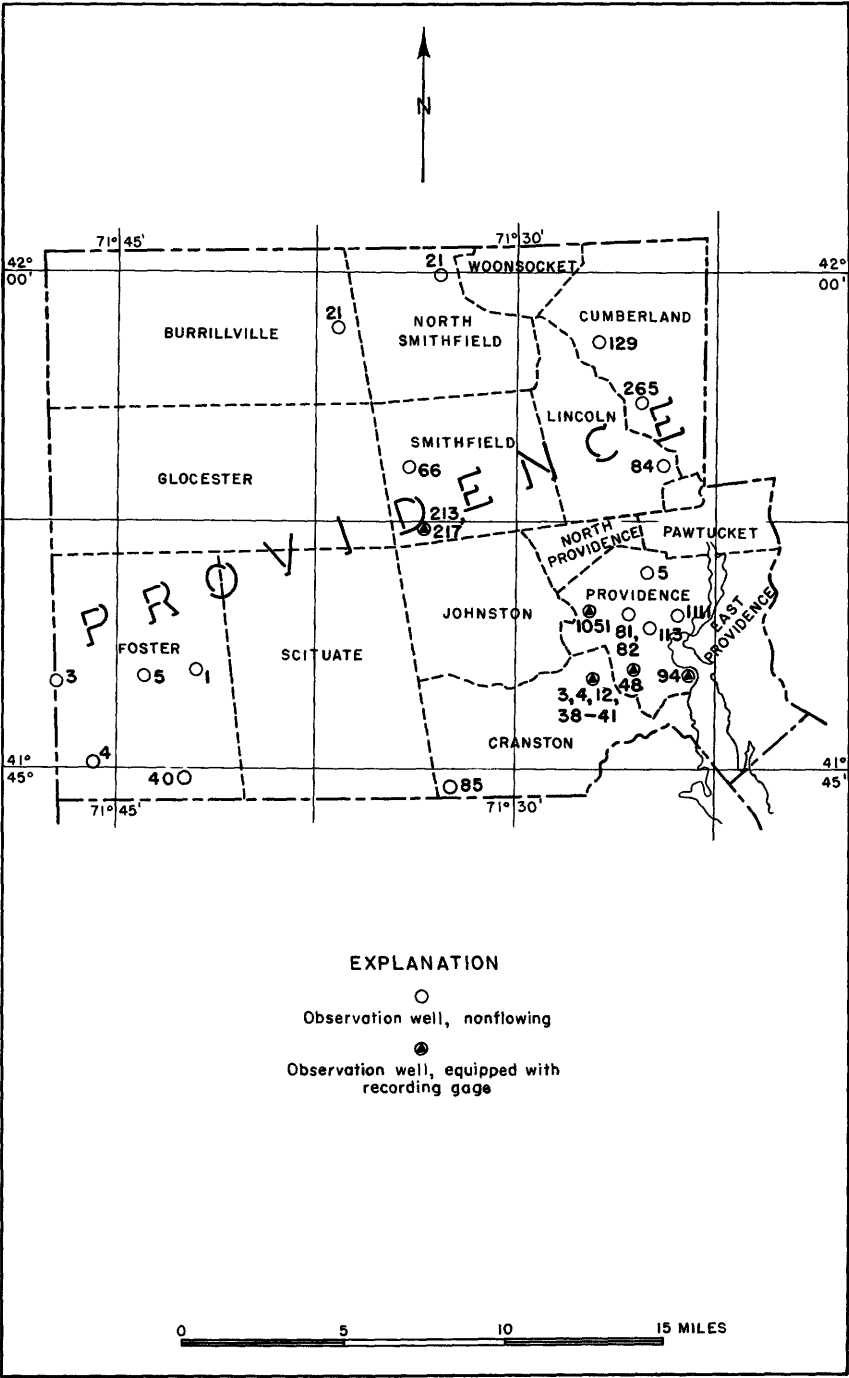


Figure 51. --Location of observation wells in Providence County, R. I., 1954.

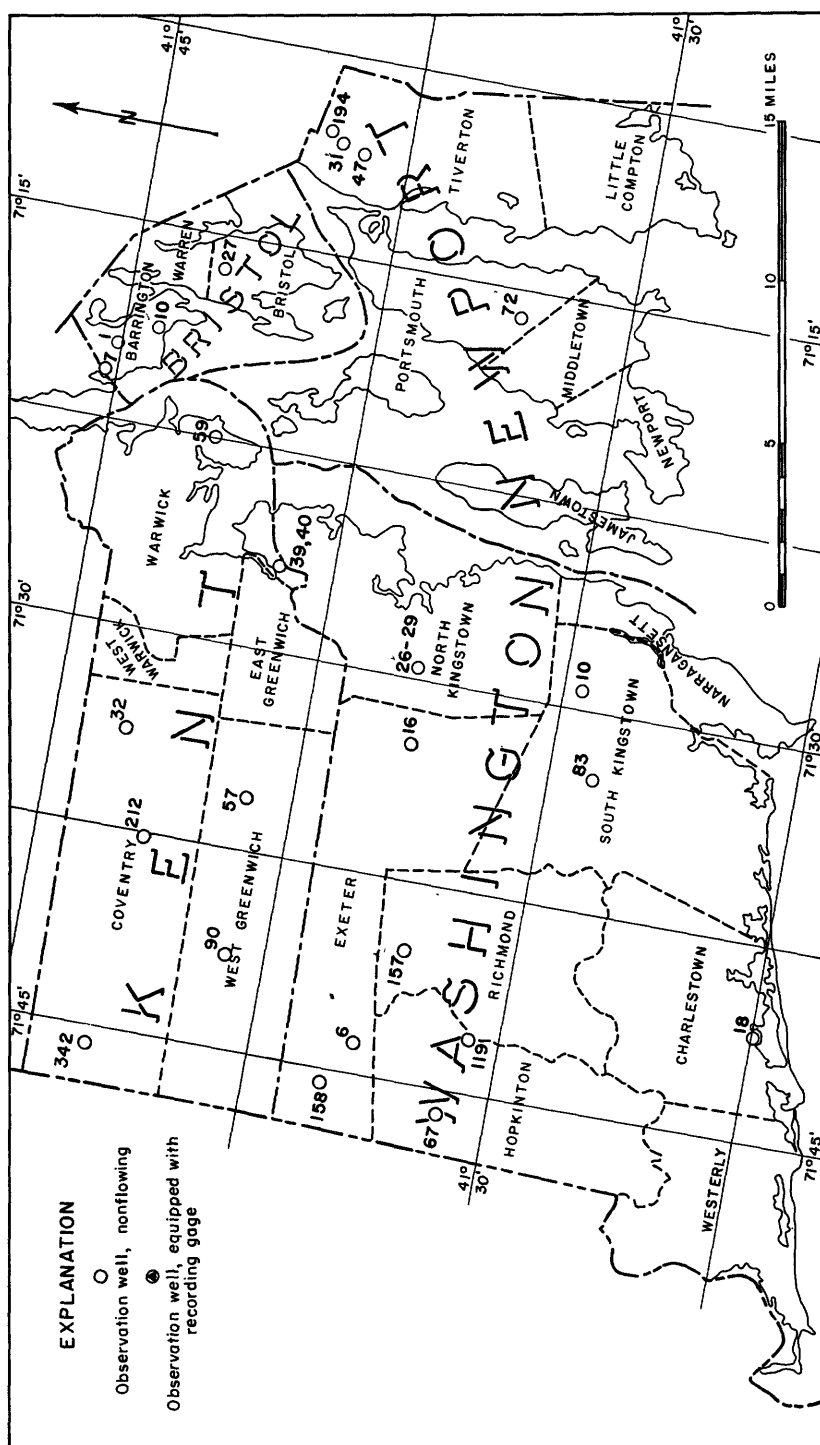


Figure 52. --Location of observation wells in Bristol, Kent, Newport, and Washington Counties, R. I., 1954.

Fluctuations of water levels in observation wells in heavily pumped areas varied greatly with pumping rates. However, the general trend of water levels for the period of record shows that in 1954 recharge was more than sufficient to balance pumpage. Record-high water levels in 4 wells and record-low levels in 2 wells were recorded in the central part of the State in 1954.

Well-Numbering System

The identifying symbols for wells in Rhode Island consist of the name of the town or city followed by a number, wells in each town or city being numbered independently.

Well Descriptions and Water-Level Measurements

(Water levels are in feet below land-surface datum unless otherwise indicated.)

Bristol County

Barrington 1. Barrington. Lat. $41^{\circ}44'35''$, long. $71^{\circ}19'31''$. Drilled unused water-table well in bedrock, diameter 10 inches, depth 232 feet. Land-surface datum is 50.90 feet above msl. Highest water level 42.71 below lsd, May 29, 1948; lowest 46.92 below lsd, Dec. 15, 1945. Records available: 1945-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	44.16	Apr. 27	43.94	Aug. 3	44.62	Oct. 29	44.48
24	44.24	May 28	42.77	Sept. 1	44.58	Nov. 22	44.43
Mar. 31	44.12	June 29	43.75	29	44.06	Dec. 27	43.75

Barrington 7. Rhode Island Lace Works, Inc. Narragansett and Bay Spring Aves. Lat. $41^{\circ}45'00''$, long. $71^{\circ}20'57''$. Dug unused water-table well in sand and gravel, diameter $4\frac{1}{2}$ feet, depth 12 feet. Land-surface datum is about 15 feet above msl. Highest water level 4.99 below lsd, June 1, 1948; lowest 10.91 below lsd, Oct. 31, 1949. Records available: 1947-54. Nearby wells being pumped.

Jan. 4	6.58	Apr. 5	6.76	July 19	7.34	Oct. 13	6.25
11	6.78	12	6.89	26	7.35	18	6.71
18	6.92	19	6.39	Aug. 9	7.64	25	6.93
25	6.60	May 3	6.40	16	7.01	31	6.80
Feb. 1	6.89	10	5.36	23	7.34	Nov. 8	6.74
7	6.82	17	5.33	30	7.54	15	6.91
22	6.90	24	5.58	Sept. 7	6.24	22	6.90
Mar. 1	6.84	June 1	5.88	13	5.27	29	6.83
8	6.79	6	6.04	20	5.64	Dec. 13	6.87
15	6.76	14	6.31	27	5.97	19	6.18
22	6.66	21	6.52	Oct. 4	6.24	27	6.17
29	6.62	July 12	7.01				

Barrington 10. Charles Douglas. Lat. $41^{\circ}43'33''$, long. $71^{\circ}18'57''$. Dug unused water-table well in sand and gravel, diameter 30 inches, depth 38 feet. Land-surface datum is about 40 feet above msl. Highest water level 32.81 below lsd, June 30, 1948; lowest dry, Oct. 31, Nov. 28, Dec. 27, 1952, Oct 2, 30, 1953. Records available: 1947-54.

Feb. 1	36.32	Apr. 29	35.21	Sept. 1	36.66	Nov. 22	37.36
24	36.36	June 29	35.17	29	36.81	Dec. 27	36.85
Mar. 31	36.24	Aug. 3	36.64	Oct. 29	37.23		

Bristol 27. H. T. Sullivan. Hope and Tupelo Sts. Lat. $41^{\circ}42'14''$, long. $71^{\circ}16'53''$. Dug unused water-table well in till, diameter 30 inches, depth 26 feet. Land-surface datum is about 120 feet above msl. Highest water level 9.21 below lsd, Mar. 26, 1950; lowest 18.51 below lsd, Oct. 30, 1951. Records available: 1949-54.

Feb. 1	12.44	Apr. 27	12.03	Aug. 3	15.57	Oct. 29	14.24
24	12.90	May 28	11.52	31	15.19	Nov. 22	13.25
Mar. 31	12.32	June 29	14.97	Sept. 29	12.36	Dec. 27	10.09

Kent County

Coventry 32. Kent County Water Authority. Lat. $41^{\circ}41'15''$, long. $71^{\circ}33'48''$. Driven unused water-table well in sand and gravel, diameter $2\frac{1}{2}$ inches, depth 34 feet. Land-surface datum is about 230 feet above msl. Highest water level 1.86 below lsd, Mar. 26, 1952; lowest 11.65 below lsd, Nov. 15, 1949. Records available: 1948-54. Nearby wells being pumped. Jan. 25, 7.00. Measurement discontinued.

Coventry 212. Victor A. Francis. Lat. $41^{\circ}40'06''$, long. $71^{\circ}37'37''$. Dug unused water-table well in sand, diameter 30 inches, depth 14 feet. Land-surface datum is about 270 feet above msl. Highest water level 4.37 below lsd, Dec. 28, 1954; lowest 10.79 below lsd, Aug. 2, 1954. Records available: 1953-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
June 17, 1953	7.50	Mar. 30, 1954	5.75	Aug. 2, 1954	10.79	Oct. 28, 1954	8.84
Dec. 31	6.37	Apr. 26	5.47	30	10.65	Nov. 23	6.92
Jan. 28, 1954	6.99	May 27	5.23	Sept. 28	6.57	Dec. 28	4.37
Feb. 25	6.67	June 28	8.49				

Coventry 342. Emma G. Inman. Lat. $41^{\circ}42'23''$, long. $71^{\circ}45'37''$. Dug unused water-table well in sand and gravel, diameter 30 inches, depth 13 feet. Land-surface datum is about 380 feet above msl. Water level probably influenced by nearby Moosup River. Highest water level 6.47 below lsd, Dec. 29, 1954; lowest 10.64 below lsd, Aug. 2, 1954. Records available: 1953-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 16, 1953	8.55	Mar. 29, 1954	7.12	Aug. 2, 1954	10.64	Oct. 28, 1954	9.22
Dec. 31	7.95	Apr. 26	6.57	30	10.63	Nov. 23	7.50
Jan. 29, 1954	8.43	May 27	7.86	Sept. 28	8.00	Dec. 29	6.47
Feb. 26	7.65	June 28	9.79				

Warwick 39. U. S. Naval Advance Base Depot. Davisville. Lat. $41^{\circ}38'19''$, long. $71^{\circ}27'54''$. Drilled public-supply water-table well in sand and gravel, diameter 18 inches, depth 61 feet. Land-surface datum is 35.9 feet above msl. Highest water level 9.8 below lsd, Mar. 21, 1948; lowest 39.8 below lsd, Sept. 10, 1944. Records available: 1943-54.

Water level below land-surface datum

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	a25.10	a25.55	a25.45	a22.25	12.20	10.65	14.60	15.00	a14.90	12.10	12.30	12.30
2	a25.25	a25.25	a25.45	a22.25	11.90	10.95	14.60	15.00	a14.20	12.30	12.50	12.25
3	a25.25	a25.45	a25.45	15.00	11.80	10.90	14.25	15.00	.....	12.20	12.40	12.40
4	a25.25	a25.45	a25.55	a22.90	11.80	11.15	14.25	15.00	.....	11.80	12.50	12.20
5	a25.25	a25.45	18.25	a23.55	11.85	10.75	14.25	15.00	.....	a15.50	12.35	12.20
6	a25.45	a25.55	13.30	12.90	11.95	10.75	14.25	15.00	.....	12.30	12.20	12.20
7	a24.45	a25.50	12.70	a20.95	12.15	10.75	14.25	15.25	.....	14.70	12.20	12.20
8	a25.25	a25.50	a21.80	a21.15	11.25	10.75	14.45	14.80	.....	13.60	11.70	a18.30
9	a25.40	a25.50	a22.35	a21.20	11.25	10.75	14.45	14.75	.....	12.40	11.70	a16.55
10	a25.45	a25.50	12.90	12.75	10.25	10.85	15.00	14.20	.....	a18.70	11.90	a15.90
11	a25.45	a25.60	12.95	12.55	10.25	10.85	14.85	.....	.....	a19.20	11.70	a17.15
12	a25.25	a25.60	13.20	12.25	10.25	13.35	15.50	.....	.....	a19.20	12.20	13.40
13	a25.45	a25.45	12.75	12.25	10.25	12.60	15.60	11.70	.....	a20.70	12.45	12.80
14	a25.45	a25.45	12.55	12.25	10.75	11.85	15.80	11.50	.....	a20.40	12.15	13.00
15	a25.45	a25.55	12.55	12.25	11.60	13.50	16.40	11.40	11.90	a19.70	12.00	13.10
16	a25.25	a25.55	12.55	12.25	11.15	11.65	a17.50	11.40	11.80	a20.60	12.40	a15.90
17	a25.25	a25.55	12.55	12.45	11.00	12.55	16.20	11.40	11.70	a21.80	12.40	12.80
18	a25.25	a25.25	12.55	11.50	11.10	11.80	15.65	13.25	12.00	12.90	12.65	12.20
19	a25.25	a25.25	12.55	a20.50	10.55	11.25	15.60	a16.20	11.90	13.15	12.60	12.20
20	a25.25	a25.45	12.55	a23.80	10.75	11.25	15.60	13.70	11.60	13.10	12.40	12.20
21	a25.55	a25.55	12.55	a21.10	10.85	11.25	15.70	14.00	12.00	12.95	12.20	11.70
22	a25.55	a25.55	12.20	a20.85	10.45	11.45	15.70	12.70	12.20	13.25	12.00	11.70
23	a25.45	a25.25	12.30	12.10	10.45	11.55	15.70	13.35	12.20	13.00	12.20	11.70
24	a25.25	a25.60	12.40	12.25	10.25	11.55	15.70	14.35	12.40	12.80	12.40	11.90
25	a25.50	a25.60	12.45	11.55	10.25	11.75	15.50	14.75	12.40	12.70	12.20	12.10
26	a25.45	a25.55	12.30	11.45	10.25	14.95	15.30	14.75	12.40	12.70	12.20	12.00
27	a25.50	a25.55	12.25	11.75	10.55	14.65	15.20	14.80	11.80	12.70	12.20	11.95
28	a25.50	a25.55	12.25	11.75	10.55	14.30	15.45	14.20	12.10	12.70	12.00	a16.20
29	a25.50		12.25	11.75	11.00	14.85	15.45	13.70	12.20	12.70	11.90	a17.50
30	a25.55		12.25	11.75	10.80	14.60	a20.10	13.70	12.10	12.75	12.20	a15.45
31	a25.55		a22.45		10.65		15.20	13.70		12.20		11.70

a Pumping.

Warwick 40. U. S. Naval Advance Base Depot. Davisville. Lat. $41^{\circ}38'16''$, long. $71^{\circ}27'54''$. Drilled public-supply water-table well in sand and gravel, diameter 18 inches, depth 80 feet. Land-surface datum is 31.4 feet above msl. Highest water level 4.5 below lsd, Apr. 2, 1948; lowest 22.6 below lsd, Sept. 6, 1944. Records available: 1943-54. Pumping except when indicated by footnote.

Warwick 40--Continued.

Water level below land-surface datum

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	9.20	9.55	8.55	8.75	8.00	7.85	9.10	6.70	9.20	9.20	8.30	8.35
2	7.25	9.55	8.55	8.75	7.75	8.15	9.25	6.20	10.20	8.30	8.50	8.40
3	7.25	9.55	8.55	10.35	7.85	8.30	9.75	6.20	10.20	8.50	8.30	8.70
4	7.25	9.25	8.85	10.20	7.75	8.30	9.75	6.40	....	7.90	8.20	8.70
5	7.25	9.25	8.85	10.25	7.70	8.25	10.25	6.40	....	8.20	8.20	8.50
6	7.55	9.50	9.15	9.90	7.70	7.75	10.25	6.40	....	8.10	8.20	8.50
7	7.55	9.80	8.60	9.80	8.10	7.75	10.25	6.50	....	7.80	8.00	8.50
8	7.55	8.80	8.15	9.75	8.25	7.75	10.25	6.55	....	8.70	8.20	9.50
9	7.95	9.85	8.70	9.80	8.25	6.85	10.55	6.45	....	8.70	8.20	9.50
10	9.00	9.75	9.10	9.85	7.25	6.85	10.25	6.45	....	6.90	8.40	9.15
11	9.90	9.85	9.00	9.85	6.85	6.85	10.50	6.45	....	7.00	8.60	9.10
12	9.80	9.60	9.40	9.25	6.85	7.00	9.25	6.40	....	7.00	8.20	9.30
13	9.00	9.85	9.45	9.25	7.75	8.25	8.95	6.40	....	8.70	8.50	9.10
14	9.00	9.85	9.45	8.95	7.75	8.65	7.85	6.40	....	8.70	8.15	9.30
15	8.40	9.75	9.55	8.95	7.70	9.85	7.15	6.30	....	7.45	8.25	8.20
16	7.95	9.75	9.45	8.95	7.25	8.65	6.60	6.20	....	8.70	8.35	8.30
17	7.95	9.25	9.45	7.95	7.15	8.25	6.60	6.20	....	7.50	8.35	8.40
18	8.55	9.25	9.45	7.25	7.60	8.20	6.60	6.45	....	8.50	8.45	8.20
19	8.55	9.25	9.45	7.35	7.75	8.25	6.50	6.50	....	9.20	8.50	8.20
20	8.55	9.35	9.40	6.30	7.90	7.95	6.50	6.50	....	9.50	8.50	8.40
21	7.75	9.10	9.20	7.55	7.80	7.95	6.50	6.50	7.60	8.90	8.50	8.40
22	8.65	7.85	9.25	7.50	7.75	7.95	7.00	6.50	7.90	9.45	8.30	8.20
23	7.90	9.10	9.40	7.65	7.75	7.95	7.00	6.40	8.10	9.40	8.50	8.20
24	7.90	9.65	9.45	7.65	7.25	7.75	7.00	6.40	8.10	9.60	8.50	8.21
25	8.85	9.75	9.60	7.65	7.25	7.75	6.80	6.35	7.70	8.70	8.50	8.15
26	9.45	9.60	9.35	7.85	7.75	8.20	6.80	6.40	7.70	8.40	8.50	8.10
27	9.55	9.55	9.35	8.25	7.75	8.20	6.70	6.40	7.80	8.40	8.20	8.30
28	9.70	9.85	9.35	8.25	7.75	8.20	6.70	6.40	8.20	8.20	8.00	8.50
29	10.00		8.75	8.25	7.95	9.30	6.70	6.30	8.10	8.20	8.10	8.65
30	7.75		8.75	8.25	6.50	9.60	6.70	6.20	8.80	8.40	8.20	8.30
31	7.75		8.75		7.70		6.70	6.20		8.00		8.30

j Not pumping.

Warwick 59. Our Lady of Providence Seminary. Warwick Neck and Aldrich Aves. Lat. 41°41'06", long. 71°22'39". Dug unused water-table well in till, diameter 30 inches, depth 27 feet. Land-surface datum is about 125 feet above msl. Highest water level 4.26 below lsd, Apr. 29, 1952; lowest 24.77 below lsd, Oct. 31, 1949. Records available: 1949-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	4.40	Apr. 26	4.54	Aug. 2	11.67	Oct. 28	6.23
Feb. 25	4.41	May 27	4.89	30	9.98	Nov. 22	4.43
Mar. 30	4.71	June 28	7.52	Sept. 28	5.02	Dec. 27	4.54

West Greenwich 57. Frank Altieri. Division St. Lat. 41°38'45", long. 71°35'27". Dug unused water-table well in sand, diameter 30 inches, depth 13 feet. Land-surface datum is about 270 feet above msl. Highest water level 1.62 below lsd, Feb. 25, 1954; lowest 8.71 below lsd, Nov. 1, 1952. Records available: 1952-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	2.67	Apr. 26	2.79	Aug. 2	6.06	Oct. 28	5.40
Feb. 25	1.62	May 27	2.97	30	6.21	Nov. 23	2.97
Mar. 30	3.49	June 28	5.97	Sept. 28	3.95	Dec. 28	1.69

West Greenwich 90. Mrs. H. Clegg. Lat. 41°38'37", long. 71°41'25". Dug unused water-table well in till, diameter 30 inches, depth 31 feet. Land-surface datum is about 540 feet above msl. Highest water level 12.16 below lsd, May 25, 1953; lowest 22.39 below lsd, Aug. 30, 1954. Records available: 1953-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 25, 1953	12.16	Mar. 30, 1954	17.77	Aug. 2, 1954	21.27	Oct. 28, 1954	18.45
Dec. 31	17.00	Apr. 26	16.41	30	22.39	Nov. 23	19.74
Jan. 28, 1954	18.75	May 27	16.22	Sept. 28	17.85	Dec. 28	15.95
Feb. 25	19.39	June 28	18.18				

Newport County

Portsmouth 72. St. Mary's Church. East Main Rd. Lat. 41°32'47", long. 71°15'42". Dug unused water-table well in till, diameter 36 inches, depth 42 feet. Land-surface datum is about 235 feet above msl. Highest water level 6.96 below lsd, Feb. 20, 1948; lowest 29.94 below lsd, Nov. 22, 1949. Records available: 1947-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 6	16.88	Apr. 6	17.37	July 7	20.95	Oct. 6	17.30
13	17.24	14	18.09	16	21.82	13	18.05
20	17.63	21	17.92	21	22.29	20	18.61
25	15.99	28	16.40	28	22.91	27	18.96
Feb. 2	15.67	May 5	16.73	Aug. 4	23.40	Nov. 4	19.17
10	16.29	12	11.58	11	23.48	10	17.89
17	17.40	19	12.94	18	22.16	17	17.40
25	17.22	26	14.66	25	20.98	24	17.90
Mar. 3	15.70	June 2	16.78	Sept. 1	20.41	Dec. 1	17.22
10	16.07	9	18.02	8	19.96	8	16.20
17	17.29	16	18.91	15	12.59	15	15.69
24	16.83	23	19.63	22	14.03	23	10.66
31	16.46	30	20.26	29	16.10	29	12.25

Tiverton 31. North Tiverton Water District. Lat. 41°39'11", long. 71°11'15". Driven unused water-table well in sand and gravel, diameter 8 inches, depth 21 feet. Land-surface datum is about 250 feet above msl. Highest water level flowing, 1948, 1949, 1951, 1954; lowest 12.37 below lsd, Aug. 26, 1950. Records available: 1947-54.

July 3	c-1.78	Aug. 21	+2.38	Oct. 9	+2.57	Nov. 20	+2.16
10	c4.90	28	+2.38	16	2.56	Dec. 4	2.91
24	2.29	Sept. 4	c-3.29	24	2.26	11	3.07
31	1.06	18	(k)	30	2.59	18	(k)
Aug. 7	-1.28	25	(k)	Nov. 6	2.52	24	(k)
13	+2.87	Oct. 2	+2.91	13	2.71	31	(k)

c Nearby wells being pumped.

k Flowing.

Tiverton 47. North Tiverton Water District. Lat. 41°38'08", long. 71°11'08". Driven unused water-table well in sand and gravel, diameter 2½ inches, depth 27 feet. Land-surface datum is about 160 feet above msl. Highest water level flowing, 1948, 1954; lowest 16.88 below lsd, Oct. 16, 1948. Records available: 1947-54.

July 3	c-1.90	Aug. 21	+0.07	Oct. 9	-4.17	Nov. 20	-1.40
10	c5.67	28	+0.7	16	.80	Dec. 4	+4.00
17	c8.83	Sept. 4	c-3.37	24	4.00	11	c-1.00
24	5.08	18	c+1.12	30	1.00	18	(k)
31	3.20	25	c-1.87	Nov. 6	2.25	24	(k)
Aug. 7	c-8.76	Oct. 2	-2.21	13	c.11	31	(k)
13	+.64						

c Nearby wells being pumped.

k Flowing.

Tiverton 194. North Tiverton Water District. Osborn well field, well 27. Lat. 41°39'44", long. 71°10'36". Driven unused water-table well in sand and gravel, diameter 6 inches, depth 21 feet. Land-surface datum is about 175 feet above msl. Highest water level 0.34 below lsd, Sept. 18, 1954; lowest 7.26 below lsd, July 20, 1952. Records available: 1952-54.

July 3	c2.29	Aug. 21	c1.89	Oct. 9	0.36	Nov. 20	2.65
10	c4.00	28	c1.89	16	2.40	Dec. 4	2.08
17	c4.84	Sept. 4	c1.18	24	2.04	11	c1.27
24	c5.31	18	c.34	30	2.75	18	c1.04
31	c4.36	25	c.99	Nov. 6	1.56	24	.89
Aug. 7	c4.77	Oct. 2	1.31	13	.55	31	c1.16
13	c1.80						

c Nearby wells being pumped.

Providence County

Burrillville 21. Cyrille Bruynel. Lat. 41°57'26", long. 71°36'15". Dug unused water-table well in till, diameter 24 inches, depth 15 feet. Land-surface datum is about 400 feet above msl. Highest water level 3.82 below lsd, Mar. 28, 1953; lowest dry, Nov. 1, 28, 1952, Oct. 2, 30, 1953. Records available: 1947-54.

Jan. 29	6.27	Apr. 27	5.57	Aug. 2	10.98	Oct. 29	7.45
Feb. 26	5.51	May 28	6.04	Sept. 1	10.16	Nov. 22	5.73
Mar. 29	5.70	June 29	8.78	30	6.06	Dec. 27	5.13

Cranston 3. Narragansett Brewing Co. Lat. 41°47'59", long. 71°26'36". Drilled industrial water-table well in sand and gravel, diameter 24 inches, depth 56 feet. Land-surface datum is 65.29 feet above msl. Measurements made 30 minutes after pump shut off. Highest water level 24.5 below lsd, Aug. 26, 1938; lowest 36.3 below lsd, Jan. 28, 1951. Records available: 1938-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	29.1	Mar. 28	28.9	July 6	29.8	Oct. 10	29.7
10	29.0	Apr. 4	28.8	11	29.7	17	29.2
17	28.9	11	28.5	18	30.0	24	29.7
24	28.8	18	28.4	Aug. 1	30.5	31	29.5
31	28.8	25	28.5	15	30.4	Nov. 7	29.7
Feb. 7	28.8	May 2	28.9	22	30.3	14	29.8
14	28.9	9	28.8	29	30.0	21	29.8
21	28.8	16	28.9	Sept. 5	30.2	28	29.7
28	28.7	23	28.9	12	29.7	Dec. 5	29.8
Mar. 7	28.7	30	28.8	20	29.5	12	29.7
14	29.1	June 6	29.2	26	29.7	19	29.7
21	29.0	20	29.0	Oct. 3	29.8		

Cranston 4. Narragansett Brewing Co. Lat. 41°47'51", long. 71°26'39". Drilled industrial water-table well in sand and gravel, diameter 24 inches, depth 69 feet. Land-surface datum is 65.57 feet above msl. Measurements made 30 minutes after pump shut off. Highest water level 22.3 below lsd, June 22, 1939; lowest 36.7 below lsd, Jan 2, 9, 16, 23, 1949. Records available: 1939-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	31.2	Apr. 4	31.4	July 6	32.4	Oct. 10	32.0
10	31.2	11	30.6	11	32.6	17	32.7
17	31.2	18	30.6	18	32.4	24	32.3
24	30.5	25	30.6	Aug. 1	33.0	31	32.1
31	30.3	May 2	30.7	15	33.2	Nov. 7	32.3
Feb. 7	30.8	9	31.7	22	33.1	14	31.5
14	30.4	16	31.7	29	32.9	21	31.9
21	30.0	23	31.4	Sept. 5	32.4	28	31.4
28	30.3	30	31.7	12	32.2	Dec. 5	32.2
Mar. 7	31.7	June 6	32.3	20	31.9	12	32.2
14	31.4	13	32.7	26	32.0	19	31.5
21	31.3	20	32.6	Oct. 3	32.1	26	31.7
28	31.4	27	33.0				

Cranston 12. Narragansett Brewing Co. Lat. 41°47'59", long. 71°26'36". Drilled unused water-table well in sand and gravel, diameter 24 inches, depth 56 feet. Land-surface datum is 68.91 feet above msl. Highest water level 28.36 below lsd, May 11, 1953; lowest 34.0 below lsd, Sept. 4, 11, 1949. Records available: 1938-54. Nearby wells being pumped.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	31.24	30.43	31.13	31.66	31.40	30.61	31.79	32.00	31.90	31.72	31.46	31.40
2	30.97	30.74	31.28	31.54	31.11	30.77	31.84	32.10	31.95	31.60	31.46	31.41
3	30.82	30.91	31.35	31.28	31.10	30.85	31.84	32.19	31.96	31.37	31.43	31.42
4	30.96	30.77	31.42	31.22	31.18	30.92	31.56	32.26	31.93	31.25	31.48	31.42
5	31.10	30.58	31.52	31.12	31.30	30.93	31.41	32.31	31.83	31.25	31.49	31.37
6	31.16	30.54	31.56	31.06	31.37	30.65	31.53	32.34	31.76	31.26	31.49	31.33
7	31.20	30.52	31.39	31.01	31.41	30.67	31.69	32.31	31.86	31.28	31.47	31.35
8	31.10	30.46	31.49	31.00	31.30	30.83	31.79	32.10	32.09	31.28	31.46	31.35
9	30.93	30.44	31.61	30.99	31.00	30.93	31.86	32.15	32.21	31.24	31.49	31.33
10	30.81	30.47	31.68	30.96	30.98	31.01	31.86	32.16	32.29	31.18	31.51	31.35
11	30.72	30.50	31.72	30.91	31.12	31.09	31.62	32.14	32.30	31.15	31.51	31.35
12	30.66	30.53	31.79	31.17	31.19	31.15	31.69	32.18	31.62	31.15	31.52	31.32
13	30.62	30.54	31.80	31.37	31.24	31.18	31.79	32.20	31.65	31.16	31.52	31.30
14	30.62	30.48	31.57	31.49	31.24	31.24	31.88	32.16	31.74	31.20	31.46	31.30
15	30.60	30.46	31.50	31.58	30.96	31.29	31.94	31.96	31.76	31.22	31.47	31.25
16	30.61	30.78	31.63	31.50	30.75	31.33	31.99	31.94	31.77	31.25	31.49	31.27
17	30.59	31.01	31.70	31.23	.....	31.37	32.00	32.06	31.77	31.28	31.53	31.27
18	30.57	31.14	31.74	31.07	.....	31.39	31.75	32.10	31.65	31.33	31.55	31.28
19	30.82	31.05	31.78	31.20	31.05	31.31	31.82	32.14	31.39	31.34	31.57	31.26
20	30.96	30.85	31.72	31.36	31.09	31.05	31.98	32.17	31.42	31.37	31.57	31.21
21	31.13	30.78	31.41	31.43	31.10	31.14	32.05	32.13	31.54	31.40	31.53	31.18
22	31.05	30.70	31.26	31.47	31.08	31.31	32.11	31.95	31.62	31.42	31.50	31.16
23	30.82	30.70	31.35	31.52	30.77	31.41	32.14	31.99	31.68	31.41	31.52	31.14
24	30.70	30.69	31.50	31.52	30.75	31.48	32.07	32.08	31.70	31.36	31.52	31.09
25	30.59	30.69	31.55	31.17	30.88	31.53	31.89	32.14	31.70	31.36	31.51	31.07

Cranston 12--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	30.56	30.69	31.46	31.16	30.97	31.56	31.97	32.19	31.38	31.38	31.49	31.02
27	30.50	30.67	31.24	31.29	31.03	31.60	32.10	32.19	31.43	31.41	31.48	30.95
28	30.48	30.81	31.12	31.36	31.03	31.65	32.18	32.12	31.58	31.46	31.42	30.91
29	30.47		31.30	31.41	31.01	31.70	32.23	31.99	31.70	31.46	31.39	30.87
30	30.46		31.50	31.46	30.66	31.74	32.26	32.03	31.69	31.46	31.40	30.85
31	30.45		31.60		30.48		32.23	32.03		31.45		30.83

Cranston 38. Narragansett Brewing Co. Lat. $41^{\circ}47'44''$, long. $71^{\circ}26'43''$. Driven observation water-table well in sand and gravel, diameter $2\frac{1}{2}$ inches, depth 30 feet. Land-surface datum is 52.43 feet above msl. Highest water level 15.1 below lsd, May 7, 1946; lowest 25.5 below lsd, Aug. 29, 1949, Sept. 14, 1953. Records available: 1947-54. Nearby wells being pumped.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	21.5	Apr. 5	21.9	June 28	23.2	Oct. 4	23.0
11	21.3	11	21.6	July 6	23.0	11	23.0
18	21.6	18	21.9	12	23.8	18	23.3
25	21.5	26	21.7	19	23.6	25	23.4
Feb. 1	21.2	May 3	21.7	Aug. 2	23.8	Nov. 1	23.2
8	21.7	10	21.7	16	23.4	8	23.1
15	21.3	17	21.6	23	23.5	15	23.2
22	21.4	24	21.5	30	23.5	22	23.5
Mar. 1	21.6	June 1	21.3	Sept. 7	23.5	29	23.4
8	23.0	7	21.5	13	23.3	Dec. 6	23.4
15	22.6	14	22.0	21	22.8	13	23.0
22	22.4	21	22.2	27	22.9	20	23.2
29	21.9						

Cranston 39. Narragansett Brewing Co. Lat. $41^{\circ}47'44''$, long. $71^{\circ}26'43''$. Driven observation water-table well in sand and gravel, diameter $2\frac{1}{2}$ inches, depth 20 feet. Land-surface datum is 46.03 feet above msl. Highest water level 9.2 below lsd, June 14, 1948; lowest 15.7 below lsd, Aug. 29, 1949. Records available: 1946-54. Nearby wells being pumped. Measurement discontinued.

Jan. 4	12.4	Feb. 1	12.2	Feb. 15	12.0	Mar. 1	12.5
18	12.2	8	12.2	22	12.5	8	13.7
25	12.3						

Cranston 40. Narragansett Brewing Co. Lat. $41^{\circ}47'44''$, long. $71^{\circ}26'43''$. Driven observation water-table well in sand and gravel, diameter $2\frac{1}{2}$ inches, depth 40 feet. Land-surface datum is 54.02 feet above msl. Highest water level 17.3 below lsd, June 14, 1948; lowest 22.3 below lsd, Aug. 29, Sept. 19, 1949. Records available: 1946-54. Nearby wells being pumped. Measurement discontinued.

Jan. 4	19.4	Feb. 1	19.2	Feb. 15	19.4	Mar. 1	19.7
25	19.3	8	19.2	22	19.5	8	20.8

Cranston 41. Narragansett Brewing Co. Lat. $41^{\circ}47'41''$, long. $71^{\circ}26'45''$. Driven observation water-table well in sand and gravel, diameter $2\frac{1}{2}$ inches, depth 33 feet. Land-surface datum is 56.53 feet above msl. Highest water level 17.54 below lsd, May 7, 1946; lowest 24.9 below lsd, Oct. 5, 1953. Records available: 1946-54. Nearby wells being pumped.

Jan. 4	21.4	Apr. 11	21.7	July 6	22.3	Oct. 11	22.6
25	21.2	18	21.7	12	22.8	18	22.7
Feb. 1	21.2	26	21.3	19	22.8	25	22.9
8	21.3	May 3	21.2	Aug. 2	22.9	Nov. 1	22.8
15	21.3	10	21.4	16	22.8	8	22.8
22	21.4	17	21.3	23	22.8	15	22.8
Mar. 1	21.4	24	21.1	30	22.8	22	23.0
8	21.3	June 1	21.1	Sept. 7	22.5	29	22.9
15	21.3	7	21.3	13	22.2	Dec. 6	22.7
22	21.7	14	21.7	21	21.8	13	22.7
29	21.8	21	21.8	27	21.8	20	22.6
Apr. 5	21.8	28	22.2	Oct. 4	21.8		

Cranston 85. E. E. Searle. Hope Road. Lat. $41^{\circ}44'27''$, long. $71^{\circ}32'30''$. Dug domestic water-table well in till, diameter 30 inches, depth 25 feet. Land-surface datum is about 300 feet above msl. Highest water level 8.18 below lsd, May 28, 1953; lowest dry, Nov. 29, Dec. 27, 1952, Oct. 1, 28, 1953. Records available: 1952-54.

Jan. 28	17.73	Apr. 26	14.47	Aug. 3	23.28	Oct. 28	19.99
Feb. 25	18.35	May 27	13.89	30	23.17	Nov. 23	19.00
Mar. 30	16.08	June 28	20.54	Sept. 28	14.34	Dec. 27	11.79

Cumberland 129. Thomas Cooney Estate. Lat. $41^{\circ}58'20''$, long. $71^{\circ}27'14''$. Dug unused water-table well in till, diameter 30 inches, depth 30 feet. Land-surface datum is about 330 feet above msl. Highest water level 5.35 below lsd, Mar. 28, 1953; lowest 17.99 below lsd, Aug. 31, 1949. Records available: 1946-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	7.78	Apr. 27	6.89	Aug. 2	12.63	Oct. 29	10.50
Feb. 25	5.59	May 28	7.41	Sept. 1	11.91	Nov. 22	6.47
Mar. 29	6.93	June 29	11.11	30	8.56	Dec. 27	6.73

Cumberland 265. Clarence Lawton. Lat. $41^{\circ}56'26''$, long. $71^{\circ}25'45''$. Dug unused water-table well in sand and gravel, diameter 30 inches, depth 20 feet. Land-surface datum is about 130 feet above msl. Highest water level 10.67 below lsd, Feb. 26, 1948; lowest 17.20 below lsd, Sept. 29, 1949. Records available: 1946-54.

Jan. 29	12.36	Apr. 27	11.67	Aug. 2	15.62	Oct. 29	14.09
Feb. 25	11.99	May 28	12.09	Sept. 1	14.84	Nov. 22	12.40
Mar. 29	12.01	June 29	14.50	30	12.22	Dec. 27	11.07

Foster 1. Old Staples Farm. Lat. $41^{\circ}48'53''$, long. $71^{\circ}42'18''$. Dug unused water-table well in sand and gravel, diameter 20 inches, depth 15 feet. Land-surface datum is about 380 feet above msl. Highest water level 5.06 below lsd, May 28, 1951; lowest dry, Oct. 28, 1949, Oct. 2, 1953. Records available: 1947-54.

Jan. 29	6.32	Apr. 26	5.90	Aug. 2	11.90	Oct. 28	8.44
Feb. 26	5.74	May 27	6.79	30	12.16	Nov. 23	5.79
Mar. 29	6.24	June 28	10.34	Sept. 28	7.75	Dec. 29	5.77

Foster 3. Clarence S. Cook. Lat. $41^{\circ}47'42''$, long. $71^{\circ}47'33''$. Dug unused water-table well in till, diameter 24 inches, depth 36 feet. Land-surface datum is about 610 feet above msl. Highest water level 13.19 below lsd, Apr. 25, 1953; lowest 34.32 below lsd, Oct. 30, 1953. Records available: 1947-54.

Jan. 29	19.30	Apr. 26	15.71	Aug. 2	24.60	Oct. 28	18.94
Feb. 26	19.06	May 27	16.18	30	26.75	Nov. 23	17.49
Mar. 29	15.83	June 28	19.29	Sept. 28	18.43	Dec. 29	14.69

Foster 4. Cucumber Hill. Lat. $41^{\circ}45'17''$, long. $71^{\circ}46'01''$. Dug unused water-table well in till, diameter 24 inches, depth 17 feet. Land-surface datum is about 605 feet above msl. Highest water level 7.11 below lsd, Mar. 28, 1953; lowest 16.71 below lsd, Oct. 28, 1949. Records available: 1947-54.

Jan. 29	8.95	Apr. 26	7.73	Aug. 2	10.69	Oct. 28	9.39
Feb. 26	7.26	May 27	8.91	30	10.22	Nov. 23	7.78
Mar. 29	8.09	June 28	10.28	Sept. 28	8.97	Dec. 29	8.10

Foster 5. S. J. Chatterson. Lat. $41^{\circ}48'29''$, long. $71^{\circ}43'45''$. Dug unused water-table well in sand and gravel, diameter 30 inches, depth 12 feet. Land-surface datum is about 465 feet above msl. Highest water level 7.39 below lsd, May 28, 1953; lowest 11.48 below lsd, July 29, 1949. Records available: 1947-54.

Jan. 29	9.21	Apr. 26	8.22	Aug. 2	11.05	Oct. 28	9.75
Feb. 26	8.62	May 27	9.14	30	11.14	Nov. 23	8.43
Mar. 29	8.59	June 28	10.57	Sept. 28	9.00	Dec. 29	8.30

Foster 40. E. Bennett. Lat. $41^{\circ}44'20''$, long. $71^{\circ}42'23''$. Dug unused water-table well in till, diameter 30 inches, depth 15 feet. Land-surface datum is about 630 feet above msl. Highest water level 1.29 below lsd, May 27, 1954; lowest 9.65 below lsd, Oct. 2, 1953. Records available: 1953-54.

July 31, 1953	7.81	Dec. 31, 1953	3.62	May 27, 1954	1.29	Sept. 28, 1954	3.90
Aug. 26	7.95	Jan. 29, 1954	3.12	June 28	7.76	Oct. 28	5.20
Oct. 2	9.65	Feb. 26	1.88	Aug. 2	7.72	Nov. 23	2.59
30	9.21	Mar. 29	2.95	30	7.23	Dec. 29	2.40
Nov. 27	2.20	Apr. 26	3.00				

Lincoln 84. Lincoln Bleachery & Dye Works. Lonsdale. Lat. $41^{\circ}54'38''$, long. $71^{\circ}24'24''$. Driven unused water-table well in sand and gravel, diameter 3 inches, depth 107 feet. Land-surface datum is about 60 feet above msl. Highest water level 2.70 below lsd, Mar. 20, 1948, Apr. 17, 1953, Sept. 18, 1954; lowest 7.22 below lsd, Oct. 28, 1950. Records available: 1946-54. Nearby wells being pumped.

Lincoln 84--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 9	5.86	Apr. 9	5.57	July 10	6.24	Oct. 8	5.74
15	5.81	16	5.79	16	6.27	15	5.62
22	5.09	23	4.41	23	6.18	22	5.68
30	5.62	30	4.66	31	6.28	Nov. 1	5.92
Feb. 5	5.39	May 7	4.54	Aug. 6	6.13	5	3.83
12	6.01	14	4.58	13	5.81	12	5.23
22	5.63	21	4.62	20	6.43	20	5.46
26	4.68	28	4.59	27	6.52	27	4.65
Mar. 5	4.30	June 4	5.19	Sept. 3	4.57	Dec. 3	4.90
12	5.47	11	6.04	10	5.44	11	5.12
19	5.51	18	5.71	18	2.70	17	3.44
26	4.84	26	6.04	24	4.20	24	3.99
Apr. 2	5.35	July 2	5.96	Oct. 2	5.32	Dec. 31	2.93

North Smithfield 21. James W. Shaw. Branch Village. Lat. 41°59'48", long. 71°32'53". Dug unused water-table well in sand and gravel, diameter 24 inches, depth 16 feet. Land-surface datum is about 250 feet above msl. Highest water level 5.37 below lsd, Mar. 28, 1953; lowest 11.31 below lsd, Oct. 28, 1949. Records available: 1947-54.

Jan. 29	7.38	Apr. 27	6.42	Aug. 2	9.71	Oct. 29	8.33
Feb. 26	6.53	May 28	6.38	Sept. 1	9.94	Nov. 22	7.02
Mar. 29	6.67	June 29	7.12	30	7.28	Dec. 27	6.28

Providence 5. American Silk Spinning Co. Lat. 41°50'21", long. 71°25'12". Drilled unused water-table well in bedrock, diameter 6 inches, depth 472 feet. Land-surface datum is 28.28 feet above msl. Highest water level 7.55 below lsd, Apr. 24, 1953; lowest 9.52 below lsd, Nov. 22, 1954. Records available: 1944-54.

Feb. 1	8.47	Apr. 27	8.12	Aug. 3	8.74	Oct. 29	8.67
24	8.56	May 28	8.13	31	8.59	Nov. 22	9.52
Mar. 31	8.55	June 29	8.54	Sept. 29	8.37	Dec. 27	8.12

Providence 48. Gorham Manufacturing Co. Lat. 41°47'47", long. 71°25'56". Drilled unused water-table well in sand, diameter 8 inches, depth 121 feet. Land-surface datum is 45.79 feet above msl. Highest water level 5.08 below lsd, May 4, 1953; lowest 10.20 below lsd, Oct. 20, 1947. Records available: 1944-53. Nearby wells being pumped.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.39	6.47	6.49	6.58	6.35	6.12	6.51	6.63	6.41	6.36	6.40	6.51
2	6.34	6.49	6.54	6.57	6.32	6.15	6.53	6.61	6.38	6.35	6.42	6.52
3	6.32	6.48	6.53	6.58	6.31	6.16	6.53	6.68	6.43	6.34	6.39	6.50
4	6.35	6.46	6.52	6.56	6.29	6.16	6.52	6.65	6.43	6.31	6.41	6.50
5	6.36	6.47	6.51	6.57	6.31	6.15	6.54	6.63	6.42	6.33	6.43	6.49
6	6.37	6.47	6.51	6.56	6.36	6.13	6.57	6.65	6.42	6.29	6.44	6.50
7	6.40	6.47	6.48	6.60	6.34	6.18	6.57	6.63	6.42	6.35	6.45	6.50
8	6.43	6.47	6.48	6.61	6.31	6.23	6.58	6.60	6.44	6.36	6.54	6.51
9	6.41	6.51	6.47	6.63	6.17	6.22	6.61	6.60	6.44	6.35	6.59	6.53
10	6.40	6.52	6.49	6.60	6.16	6.24	6.59	6.54	6.46	6.32	6.59	6.51
11	6.38	6.52	6.49	6.57	6.15	6.23	6.56	6.39	6.42	6.31	6.58	6.51
12	6.41	6.56	6.55	6.62	6.18	6.22	6.60	6.35	5.95	6.31	6.62	6.52
13	6.43	6.55	6.53	6.63	6.21	6.20	6.58	6.33	5.70	6.33	6.61	6.58
14	6.43	6.53	6.49	6.63	6.22	6.24	6.63	6.29	5.60	6.38	6.58	6.57
15	6.44	6.52	6.50	6.69	6.21	6.24	6.63	6.22	5.72	6.41	6.59	6.45
16	6.43	6.52	6.53	6.67	6.15	6.27	6.67	6.26	5.78	6.41	6.58	6.46
17	6.46	6.50	6.55	6.56	6.17	6.28	6.65	6.32	5.81	6.41	6.60	6.46
18	6.47	6.55	6.58	6.40	6.19	6.25	6.63	6.33	5.88	6.43	6.60	6.43
19	6.51	6.54	6.59	6.38	6.22	6.25	6.63	6.37	5.89	6.44	6.58	6.33
20	6.49	6.53	6.56	6.39	6.22	6.25	6.68	6.39	6.09	6.43	6.58	6.33
21	6.51	6.51	6.46	6.39	6.16	6.32	6.63	6.41	....	6.44	6.52	6.31
22	6.51	6.47	6.48	....	6.11	6.36	6.60	6.40	6.10	6.46	6.45	6.31
23	6.50	6.48	6.49	....	6.05	6.36	6.63	6.44	6.18	6.46	6.48	6.31
24	6.47	6.48	6.53	....	6.02	6.40	6.61	6.47	6.22	6.47	6.48	6.31
25	6.49	6.47	6.55	....	6.00	6.41	6.56	6.51	6.22	6.54	6.43	6.31
26	6.48	6.49	6.53	....	6.01	6.42	6.57	6.57	6.22	6.55	6.46	6.30
27	6.47	6.48	6.52	....	6.04	6.40	6.60	6.61	6.28	6.55	6.47	6.29
28	6.48	6.48	6.51	6.35	6.04	6.46	6.61	6.60	6.32	6.57	6.47	6.29
29	6.49	....	6.54	6.34	6.03	6.48	6.60	6.60	6.37	6.56	6.45	6.31
30	6.48	....	6.56	6.36	6.00	6.49	6.64	6.68	6.37	6.46	6.48	....
31	6.46	....	6.58	....	6.04	....	6.63	6.66	....	6.43	....	....

Providence 81. Nicholson File Co. well 2. Lat. 41°49'40", long. 71°25'47". Drilled industrial water-table well in sand and gravel, diameter 10 inches, depth 145 feet. Land-surface datum is about 10 feet above msl. Highest water level 13.0 below lsd, May 16, 30, Sept. 12, 19, 27, 1954; lowest 25.0 below lsd, Feb. 2, 1947, Aug. 28, Sept. 23, 25, 1949, June 6, 1951. Records available: 1941, 1944-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	14.0	Apr. 11	15.0	July 6	15.0	Oct. 10	15.0
18	14.0	19	14.0	11	15.0	17	15.0
25	14.0	25	14.0	18	16.0	24	16.0
Feb. 1	15.0	May 3	16.0	25	15.0	Nov. 7	16.0
15	15.0	10	14.0	Aug. 15	19.0	14	15.0
22	15.0	16	13.0	22	15.0	21	17.0
Mar. 1	15.0	23	14.0	29	15.0	28	14.0
8	16.0	30	13.0	Sept. 6	15.0	Dec. 5	15.0
15	15.0	June 6	15.0	12	13.0	12	15.0
22	15.0	13	15.0	19	13.0	19	15.0
29	15.0	20	16.0	27	13.0	26	15.0
Apr. 4	15.0	27	19.0	Oct. 3	18.0		

Providence 82. Nicholson File Co. well 1. Lat. 41°49'40", long. 71°25'47". Drilled industrial water-table well in sand and gravel, diameter 8 inches, depth 150 feet. Land-surface datum is about 8 feet above msl. Highest water level 8.0 below lsd, May 16, 30, Sept. 12, 19, 27, 1954; lowest 22.8 below lsd, Aug. 4, 1946. Records available: 1946-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	9.0	Apr. 11	10.0	July 6	10.0	Oct. 10	10.0
18	9.0	19	9.0	11	10.0	17	10.0
25	9.0	25	9.0	18	11.0	24	11.0
Feb. 1	10.0	May 3	11.0	25	10.0	Nov. 7	12.0
15	11.0	10	11.0	Aug. 15	14.0	14	12.0
22	10.0	16	8.0	22	10.0	21	12.0
Mar. 1	10.0	23	9.0	29	10.0	28	9.0
8	11.0	30	8.0	Sept. 6	10.0	Dec. 5	10.0
15	10.0	June 6	10.0	12	8.0	12	10.0
22	10.0	13	10.0	19	8.0	19	10.0
29	10.0	20	11.0	27	8.0	26	10.0
Apr. 4	10.0	27	14.0	Oct. 3	13.0		

Providence 94. Providence Gas Co. Sassafras Point Plant. Lat. 41°47'58", long. 71°23'33". Drilled unused water-table well in sand, diameter 16 inches, depth 120 feet. Land-surface datum is 12.32 feet above msl. Highest water level 2.60 above lsd, Aug. 31, 1954; lowest 28.34 below lsd, Sept. 1, 1945. Records available: 1944-54. Water level influenced by tides.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	11.21	11.23	10.77	11.34	11.15	10.78	11.14	11.04	10.06	10.81	10.81	10.94
2	11.14	11.03	11.25	11.39	11.22	10.59	11.10	11.08	10.09	10.81	10.94	10.77
3	11.08	11.05	11.05	12.15	11.04	10.60	11.07	10.86	9.80	10.66	10.30	10.57
4	11.09	10.94	11.45	11.96	10.98	10.40	11.15	10.82	9.88	10.54	10.84	10.50
5	11.15	11.05	11.68	11.90	10.80	10.40	10.92	10.77	9.91	10.50	10.85	10.98
6	10.92	11.22	11.75	11.65	10.64	10.58	10.90	10.61	9.90	10.67	10.83	11.05
7	11.27	11.43	11.68	11.58	10.50	10.56	10.67	10.50	9.87	10.87	10.95	11.26
8	11.62	11.37	11.60	11.18	10.39	10.50	10.72	10.59	10.08	11.01	11.23	11.51
9	11.50	10.87	11.52	11.46	9.98	10.48	10.80	10.52	10.38	11.12	11.44	11.32
10	11.38	10.90	11.10	11.19	9.88	10.51	10.86	10.32	10.39	11.19	11.44	11.30
11	11.05	10.69	10.99	11.16	10.04	10.49	10.95	10.35	10.70	11.18	11.31	11.48
12	10.97	11.53	11.20	11.17	10.11	10.59	10.90	10.66	11.16	11.16	11.54	11.42
13	11.44	11.41	11.10	11.29	10.19	10.69	10.89	10.74	10.43	11.30	11.44	11.45
14	11.21	11.41	10.81	11.09	10.31	10.77	10.87	10.90	10.40	11.34	11.11	10.63
15	11.30	11.31	11.00	11.23	10.35	10.84	10.94	10.94	10.56	11.16	11.33	11.20
16	10.95	11.32	11.44	11.15	10.29	10.91	11.13	10.94	10.59	10.65	11.08	10.91
17	11.50	11.26	11.46	11.18	10.26	11.01	11.17	11.10	10.41	10.80	10.86	10.78
18	11.58	11.52	11.52	11.15	10.34	11.03	11.26	11.96	10.34	10.89	10.94	10.52
19	11.58	11.57	11.50	10.95	10.22	10.89	11.12	11.02	10.14	10.83	10.84	10.52
20	11.37	11.54	10.93	10.95	10.20	10.88	11.11	10.87	10.03	10.70	10.60	10.41
21	11.39	11.40	10.87	10.98	9.99	10.89	10.90	10.90	10.20	10.65	11.15	10.75
22	11.47	11.20	11.27	10.89	10.15	10.91	11.05	10.89	10.44	10.88	10.95	10.64
23	11.33	11.16	11.03	10.80	10.22	10.83	10.93	10.87	10.70	11.14	10.88	10.65
24	11.03	10.89	11.10	10.75	10.27	10.86	10.96	10.79	10.81	11.17	10.63	10.64
25	10.97	10.70	11.01	10.59	10.15	10.92	10.91	10.94	10.74	11.22	10.64	10.99

Providence 94--Continued.

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
26	10.82	10.53	10.90	10.60	10.41	10.80	11.03	10.85	10.70	10.98	10.70	10.97
27	10.69	10.57	11.07	10.56	10.65	10.78	11.04	10.96	10.65	10.89	10.73	11.16
28	10.77	10.75	10.90	10.68	10.63	10.86	11.15	11.07	10.65	11.20	10.63	11.13
29	10.72		10.75	10.90	10.70	11.01	11.14	11.02	10.80	10.97	11.36	10.97
30	11.12		11.00	11.03	10.74	11.14	11.09	10.89	10.82	10.78	11.30	10.74
31	11.33		10.96		10.85		11. .	(j)		11.00		10.88

j Hurricane high water level 2.60 feet above lsd.

Providence 113. Providence Young Men's Christian Association. 160 Broad St. Lat. $41^{\circ}49'07''$, long. $71^{\circ}24'55''$. Drilled unused water-table well in bedrock, diameter 12 inches, depth 208 feet. Land-surface datum is 79.89 feet above msl. Highest water level 44.45 below lsd, Dec. 27, 1954; lowest 49.12 below lsd, Nov. 9, 1945. Records available: 1944-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Feb. 1	44.98	Apr. 27	45.14	Aug. 3	45.15	Oct. 29	44.84
24	45.05	May 28	45.05	31	45.05	Nov. 22	44.80
Mar. 31	45.24	June 29	45.01	Sept. 29	44.88	Dec. 27	44.45

Providence 1051. U. S. Rubber Co. Lat. $41^{\circ}49'40''$, long. $71^{\circ}26'08''$. Drilled unused water-table well in sand and gravel, diameter 8 inches, depth 82 feet. Land-surface datum is about 10 feet above msl. Highest water level 3.9 above lsd, Aug. 31, 1954; lowest 16.10 below lsd, Jan. 16, 1948. Records available: 1948-54. Nearby wells being pumped.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	6.85	6.73	6.75	8.72	9.34	5.75	10.23	7.90	....	8.60	7.92	9.01
2	6.51	7.15	7.68	9.17	8.95	7.14	10.44	6.12	1.17	8.74	8.39	9.77
3	6.00	7.60	8.25	9.19	6.90	8.25	10.45	5.45	....	8.70	9.20	10.31
4	5.03	7.90	8.89	8.70	7.61	9.04	9.90	5.24	....	7.46	9.90	10.33
5	6.13	8.01	9.20	7.09	8.37	9.10	7.58	5.04	....	8.64	10.33	9.93
6	7.02	8.01	9.21	7.72	8.96	8.87	6.13	5.01	....	9.52	10.34	7.53
7	7.64	7.35	8.65	8.08	9.29	7.63	7.15	5.05	....	10.06	9.60	8.49
8	8.15	6.52	7.15	....	9.30	8.44	8.04	5.01	2.70	10.38	7.97	9.20
9	8.17	7.36	7.82	....	8.74	9.13	8.76	5.07	3.25	10.38	8.90	9.90
10	7.85	8.19	8.43	....	6.59	9.56	8.90	....	3.58	9.80	9.66	10.45
11	6.93	8.81	8.94	....	7.41	9.86	8.55	5.80	3.58	7.64	9.71	10.45
12	7.31	9.28	9.29	....	8.07	9.89	6.97	6.61	3.32	7.75	9.13	10.04
13	7.76	9.30	9.30	....	8.66	9.51	7.98	7.65	2.65	8.51	9.18	7.62
14	8.07	8.80	8.84	....	9.07	8.03	9.15	7.73	3.67	9.40	9.04	8.46
15	8.22	7.60	6.65	....	9.07	8.70	10.15	7.52	4.20	9.77	7.19	9.06
16	8.22	8.01	7.33	....	8.65	9.25	10.88	7.34	4.64	9.76	8.32	9.59
17	7.70	8.37	7.90	....	6.42	9.80	11.02	....	5.06	7.86	9.35	9.97
18	6.41	8.67	8.45	....	7.30	10.28	10.63	9.81	5.07	....	10.01	9.98
19	6.42	8.94	8.95	....	8.11	10.35	8.46	10.36	5.23	....	10.51	9.22
20	6.93	8.94	8.96	....	8.71	10.07	8.35	10.55	3.62	8.68	10.51	7.18
21	7.53	8.40	8.46	....	9.07	8.78	8.62	10.55	4.91	9.50	10.04	8.05
22	7.84	6.25	6.58	8.77	9.08	9.55	....	9.60	5.90	9.97	7.92	9.05
23	7.84	7.23	7.40	9.20	8.61	10.28	8.85	7.56	6.56	10.00	8.75	9.53
24	7.51	8.00	7.83	9.20	6.64	10.81	8.88	8.66	6.96	9.63	9.32	9.53
25	6.77	8.55	8.73	8.80	7.58	11.25	8.56	9.57	6.97	8.37	9.34	8.85
26	7.17	8.99	9.11	7.81	8.42	11.33	6.40	10.35	6.35	9.24	8.00	6.58
27	7.50	9.00	9.12	8.38	8.99	10.86	6.35	10.75	4.80	9.93	8.15	5.74
28	7.85	8.65	8.80	8.80	9.43	8.89	6.80	10.78	5.82	10.44	7.70	7.40
29	8.08		6.86	9.11	9.44	9.30	7.60	10.20	6.61	10.66	....	8.52
30	8.08		7.58	9.34	8.98	9.75	8.25	7.92	7.62	10.67	7.90	9.30
31	7.65		8.25		6.56		8.46	*		10.17		9.46

* Hurricane high water level 3.90 feet above lsd.

Providence 1111. Brown University. Rhode Island Hall. Lat. $41^{\circ}49'31''$, long. $71^{\circ}24'46''$. Dug unused water-table well in till, diameter 30 inches, depth 24 feet. Land-surface datum is about 120 feet above msl. Highest water level 9.18 below lsd, Jan. 28, 1952; lowest 18.40 below lsd, Nov. 2-3, 1949. Records available: 1946-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 4	10.31	Feb. 8	11.22	Mar. 15	11.26	Apr. 19	11.49
11	10.74	15	11.50	22	11.56	26	10.51
18	11.13	22	11.90	29	11.44	May 3	10.99
26	11.27	Mar. 1	11.49	Apr. 5	11.66	10	9.80
Feb. 1	11.25	9	11.02	12	12.09	17	9.69

Providence 1111--Continued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
May 24	10.67	July 19	14.27	Sept. 13	9.33	Nov. 8	13.79
June 2	11.90	27	14.39	20	9.78	15	13.56
10	12.69	Aug. 2	14.36	27	10.59	22	13.53
14	12.94	9	14.40	Oct. 4	11.49	29	13.19
21	13.28	16	12.85	11	12.31	Dec. 6	12.50
29	13.55	23	12.65	18	12.78	13	12.51
July 6	13.78	30	12.95	25	13.27	21	9.32
11	14.00	Sept. 7	12.97	Nov. 1	13.69	27	9.86

Smithfield 66. E. Sheffield. Lat. 41°54'23", long. 71°34'39". Dug unused water-table well in sand and gravel, diameter 21 inches, depth 17 feet. Land-surface datum is about 415 feet above msl. Highest water level 1.96 below lsd, Mar. 28, 1953; lowest 15.52 below lsd, Oct. 2, 1953. Records available: 1947-54.

Jan. 29	9.27	Apr. 27	6.49	Aug. 2	13.35	Oct. 29	10.68
Feb. 26	8.39	May 28	7.29	Sept. 1	11.78	Nov. 22	8.90
Mar. 29	7.43	June 29	11.68	30	8.82	Dec. 27	5.84

Smithfield 213. Northwestern Water Co. Greenville. Lat. 41°51'47", long. 71°33'07". Drilled unused water-table well in sand and gravel, diameter 6 inches, depth 28 feet. Land-surface datum is about 285 feet above msl. Highest water level 10.67 below lsd, Apr. 19, 1953; lowest 16.48 below lsd, Nov. 29, 1949. Records available: 1945, 1949-54. Nearby wells being pumped.

Daily lowest water level from recorder graph

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	12.62	12.13	11.56	11.45	.....	11.44	11.99	.....	12.36	11.49	11.69	11.42
2	12.61	12.13	11.53	11.46	.....	11.47	12.01	.....	12.13	11.52	11.67	11.43
3	12.61	12.13	11.53	11.48	.....	11.50	12.03	.....	12.13	11.55	11.62	11.47
4	12.60	12.06	11.48	11.50	.....	11.53	12.04	12.46	12.14	11.55	11.54	11.51
5	12.59	12.05	11.44	11.52	11.23	11.56	12.08	12.46	12.16	11.57	11.48	11.54
6	12.56	12.02	11.44	11.52	11.24	11.59	12.11	12.45	12.20	11.57	11.47	11.58
7	12.51	12.01	11.44	11.56	11.24	11.63	12.11	12.45	12.21	11.59	11.48	11.61
8	12.49	12.00	11.45	11.56	.....	11.67	12.13	12.48	12.21	11.62	11.52	11.62
9	12.49	11.98	11.47	11.57	.....	11.69	12.17	12.48	12.21	11.64	11.54	11.67
10	12.47	11.97	11.47	11.57	.....	11.72	12.24	12.46	12.22	11.66	11.56	11.67
11	12.47	11.96	11.49	11.57	.....	11.73	12.27	12.34	12.22	11.68	11.59	11.66
12	12.45	11.95	11.52	11.58	11.03	11.80	12.35	12.30	11.04	11.70	11.61	11.65
13	12.43	11.94	11.54	11.59	11.05	11.80	12.40	12.31	11.00	11.71	11.65	11.66
14	12.42	11.94	11.54	11.59	11.10	11.80	12.45	12.35	11.04	11.71	11.68	11.66
15	12.42	11.95	11.51	11.61	11.14	11.79	12.46	12.37	11.07	11.71	11.71	11.54
16	12.41	11.94	11.51	11.61	11.14	11.76	12.49	12.41	11.11	11.71	11.73	11.29
17	12.41	11.94	11.51	11.58	11.15	11.75	12.56	12.43	11.11	11.68	11.73	11.16
18	12.41	11.87	11.52	11.39	11.18	11.81	12.61	12.44	11.13	11.71	11.74	11.14
19	12.41	11.87	11.54	11.24	11.20	11.89	12.61	12.48	11.15	11.73	11.74	11.09
20	12.41	11.86	11.54	11.13	11.22	11.97	12.63	12.51	11.18	11.74	11.74	10.97
21	12.39	11.85	11.46	11.09	11.23	12.02	12.63	12.52	11.22	11.76	11.73	10.94
22	12.36	11.78	11.44	11.11	11.21	12.05	.....	12.55	11.25	11.78	11.60	10.96
23	12.32	11.78	11.43	11.13	11.18	12.05	.....	12.59	11.30	11.79	11.56	11.02
24	12.31	11.70	11.43	11.11	11.18	12.05	.....	12.62	11.34	11.79	11.54	11.09
25	12.31	11.67	11.43	11.13	11.20	12.04	.....	12.65	11.37	11.81	11.52	11.17
26	12.30	11.58	11.42	11.16	11.23	12.05	.....	12.66	11.40	11.81	11.50	11.23
27	12.30	11.58	11.42	11.18	11.25	12.05	.....	12.68	11.43	11.79	11.47	11.25
28	12.22	11.57	11.42	11.18	11.30	12.05	12.46	12.71	11.45	11.79	11.47	11.32
29	12.20	11.43	11.21	11.34	12.05	12.46	12.74	11.46	11.79	11.47	11.32	
30	12.17	11.44	11.25	11.36	12.02	12.46	12.75	11.48	11.77	11.44	11.32	
31	12.15	11.44	11.41	11.41	12.51	12.75			11.71	11.30	11.30	

Smithfield 217. Northwestern Water Co. Greenville. Lat. 41°51'47", long. 71°33'07". Drilled unused water-table well in sand and gravel, diameter 6 inches, depth 57 feet. Land-surface datum is about 300 feet above msl. Highest water level 17.19 below lsd, Mar. 28, 1952; lowest 24.29 below lsd, Nov. 29, 1949. Records available: 1945, 1949-54. Nearby wells being pumped.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 29	18.73	Apr. 27	18.00	Aug. 3	19.40	Oct. 29	18.68
Feb. 26	18.38	May 28	18.14	Sept. 1	19.02	Nov. 22	19.35
Mar. 29	18.23	June 29	18.69	30	18.41	Dec. 27	18.22

Washington County

Charlestown 18. U. S. Navy Dept. Naval Auxiliary Air Station. Lat. 41°22'21", long. 71°39'43". Drilled unused water-table well in sand and clay, diameter 8 inches, depth 32 feet. Land-surface datum is 26.4 feet above msl. Highest water level 12.79 below lsd, Apr. 25, 1953; lowest 21.43 below lsd, Oct. 28, Nov. 30, 1949. Records available: 1946-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 28	17.28	Apr. 26	16.46	Aug. 2	18.92	Oct. 28	17.45
Feb. 25	17.50	May 27	16.04	30	18.60	Nov. 23	17.96
Mar. 30	16.81	June 28	17.50	Sept. 28	15.79	Dec. 28	16.24

Exeter 6. Wood River Picnic Area. Lat. 41°34'23", long. 71°43'19". Dug unused water-table well in sand and gravel, diameter 30 inches, depth 10 feet. Land-surface datum is about 130 feet above msl. Highest water level 3.92 below lsd, Mar. 28, 1953; lowest 7.49 below lsd, Sept. 6, 1949. Records available: 1946, 1948-54. Water level probably influenced by nearby Wood River.

Jan. 28	5.50	May 27	5.48	Aug. 30	6.93	Nov. 4	4.96
Feb. 25	5.38	June 28	6.35	Sept. 28	5.35	23	5.27
Mar. 30	5.31	Aug. 2	6.79	Oct. 28	6.00	Dec. 28	4.83
Apr. 26	5.07						

Exeter 16. State of Rhode Island, Exeter School. Lat. 41°33'07", long. 71°32'37". Driven unused water-table well in sand and gravel, diameter 2½ inches, depth 27 feet. Land-surface datum is about 100 feet above msl. Highest water level 7.38 below lsd, Apr. 15, 1953; lowest 14.86 below lsd, Dec. 29, 1948. Records available: 1946-54. Nearby wells being pumped.

Jan. 6	9.82	Apr. 7	9.78	July 7	10.50	Oct. 6	9.16
13	10.35	14	9.88	14	10.84	13	9.34
20	10.46	21	9.47	21	11.08	20	9.70
27	9.96	28	9.45	28	11.14	27	10.01
Feb. 3	9.98	May 5	9.40	Aug. 11	9.87	Nov. 3	9.86
10	10.04	12	8.83	18	10.60	10	10.00
17	9.92	19	9.02	25	10.79	24	10.02
24	10.33	26	9.15	Sept. 1	10.39	Dec. 1	9.73
Mar. 3	10.38	June 2	9.39	8	10.68	8	9.72
10	10.28	9	9.84	15	9.05	15	9.31
17	10.00	16	9.80	22	8.87	22	8.67
24	9.79	23	10.05	29	9.10	29	8.57
31	9.75	30	10.30				

Exeter 158. State of Rhode Island. Lat. 41°35'05", long. 71°45'28". Dug unused water-table well in till, diameter 36 inches, depth 18 feet. Land-surface datum is about 310 feet above msl. Highest water level 4.90 below lsd, Nov. 30, 1953; lowest 16.05 below lsd, Sept. 14, 1953. Records available: 1953-54.

Sept. 14, 1953	16.05	Feb. 25, 1954	6.31	June 28, 1954	12.19	Oct. 28, 1954	9.37
Nov. 30	4.90	Mar. 30	5.82	Aug. 2	14.77	Nov. 23	7.45
Dec. 30	6.02	Apr. 26	5.38	30	10.86	Dec. 28	5.78
Jan. 28, 1954	6.93	May 27	7.16	Sept. 28	6.63		

Hopkinton 67. Boy Scouts of America. Lat. 41°31'26", long. 71°45'55". Dug unused water-table well in till, diameter 30 inches, depth 22 feet. Land-surface datum is about 335 feet above msl. Highest water level 11.08 below lsd, Dec. 28, 1954; lowest 21.09 below lsd, Aug. 2, 1954. Records available: 1953-54.

Sept. 22, 1953	16.24	Feb. 25, 1954	14.89	June 28, 1954	16.64	Oct. 28, 1954	16.10
Nov. 30	15.43	Mar. 30	12.64	Aug. 2	21.09	Nov. 23	14.72
Dec. 30	14.11	Apr. 26	12.83	30	20.37	Dec. 28	11.08
Jan. 28, 1954	15.47	May 27	13.27	Sept. 28	16.00		

Hopkinton 119. Alice Clark. Lat. 41°30'51", long. 71°42'34". Dug unused water-table well in outwash, diameter 30 inches, depth 18 feet. Land-surface datum is about 100 feet above msl. Highest water level 11.42 below lsd, Dec. 28, 1954; lowest 14.94 below lsd, Aug. 2, 1954. Records available: 1953-54.

Oct. 1, 1953	14.63	Feb. 25, 1954	13.31	June 28, 1954	12.56	Oct. 28, 1954	13.66
Nov. 30	12.96	Mar. 30	12.48	Aug. 2	14.94	Nov. 23	13.29
Dec. 30	12.45	Apr. 26	11.72	30	14.38	Dec. 28	11.42
Jan. 28, 1954	13.36	May 27	12.18	Sept. 28	12.14		

North Kingstown 26. North Kingstown Water Commission pumping station. Lat. $41^{\circ}33'25''$, long. $71^{\circ}29'01''$. Drilled public-supply water-table well in sand and gravel, diameter 12 inches, depth 50 feet. Land-surface datum is about 56 feet above msl. Highest water level 9.40 below lsd, June 1, 1948; lowest 14.75 below lsd, June 22, 1954. Records available: 1947-54. Measurements made about 10 hours after pump shut off.

Water level below land-surface datum

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	13.0	13.17	13.17	13.83	13.17	13.58	12.17	13.08	.....	11.75	11.50	11.50
2	13.17	13.17	13.17	13.42	13.17	13.67	12.08	12.58	10.42	11.75	11.75	12.08
3	13.08	13.17	13.33	13.33	13.08	13.58	12.58	12.50	11.58	11.92	11.58	11.75
4	13.08	13.0	13.25	13.42	13.0	13.58	12.42	12.17	11.75	11.75	11.17	11.50
5	13.08	13.08	13.08	13.42	13.0	13.58	12.25	12.42	12.0	12.0	11.25	11.67
6	13.0	13.08	13.33	13.25	13.08	13.67	12.67	12.33	11.83	12.0	11.42	11.67
7	13.08	13.08	13.17	13.25	13.08	13.50	12.67	12.42	12.42	11.83	11.50	11.67
8	13.17	13.17	13.17	13.33	13.17	13.92	12.50	12.42	11.92	11.83	11.42	11.75
9	13.17	13.17	13.25	13.25	12.33	13.75	12.58	12.42	11.83	12.08	11.58	11.58
10	13.08	13.17	13.25	13.33	12.67	13.83	13.17	11.33	12.0	11.83	11.67	11.67
11	13.17	13.25	13.33	13.42	12.17	13.83	13.50	10.33	12.33	11.83	11.58	11.42
12	13.17	13.25	13.33	13.33	12.33	13.67	13.50	10.58	9.42	12.0	11.67	11.42
13	13.25	13.33	13.33	13.42	12.50	14.17	13.75	10.75	10.17	12.08	11.67	11.50
14	13.33	13.25	13.17	13.42	12.58	13.83	14.0	11.42	10.58	12.17	11.67	11.50
15	13.25	13.33	13.08	13.58	12.67	13.75	14.42	11.83	10.83	12.08	11.67	11.25
16	13.33	13.42	13.17	13.42	12.50	13.50	13.42	11.58	11.0	12.08	11.75	11.17
17	13.42	13.42	13.17	13.67	12.50	13.50	13.50	12.0	11.0	12.0	11.50	11.17
18	13.42	13.25	13.17	12.67	12.67	13.58	14.0	12.0	11.08	11.75	11.75	11.42
19	13.42	13.25	13.17	12.42	13.0	13.83	13.42	12.25	11.42	12.0	11.75	11.0
20	13.42	13.25	13.08	12.58	13.0	14.50	13.08	12.25	11.08	12.0	11.75	10.83
21	13.25	13.33	13.0	12.67	12.92	14.58	14.25	12.33	11.42	11.83	11.42	11.0
22	13.17	13.17	13.08	13.0	12.67	14.75	12.75	12.33	11.58	.....	11.33	11.08
23	13.0	13.08	13.08	13.0	12.58	13.33	12.67	12.42	11.58	.....	11.50	11.25
24	13.0	13.17	13.0	13.0	13.0	12.58	12.42	12.67	11.67	11.67	11.58	11.17
25	13.08	13.08	13.25	13.0	13.0	13.08	12.50	12.83	11.58	11.08	11.50	11.25
26	13.08	13.0	13.17	13.0	13.0	13.17	12.17	12.92	11.58	11.58	11.25	11.17
27	13.0	13.17	13.17	13.08	13.08	13.17	12.17	12.50	11.58	11.75	11.42	11.17
28	13.08	13.17	13.25	13.08	13.17	13.17	12.33	12.67	11.67	11.67	11.42	11.33
29	13.08		13.25	13.0	13.17	12.50	12.42	12.75	11.75	12.0	11.50	11.42
30	13.17		13.25	13.08	13.17	12.25	12.25	12.67	11.75	11.42	12.50	11.33
31	13.08		13.25		13.42		12.58	12.67		11.33		11.25

North Kingstown 27. North Kingstown Water Commission observation well 1. Lat. $41^{\circ}33'25''$, long. $71^{\circ}29'01''$. Driven observation water-table well in sand and gravel, diameter $2\frac{1}{2}$ inches, depth 15 feet. Land-surface datum is about 55 feet above msl. Highest water level 4.98 below lsd, June 15, 1949; lowest 8.94 below lsd, July 31, 1952. Records available: 1947-53. Nearby well being pumped. Measurement discontinued.

North Kingstown 28. North Kingstown Water Commission observation well 2. Lat. $41^{\circ}33'25''$, long. $71^{\circ}29'01''$. Driven observation water-table well in sand and gravel, diameter $2\frac{1}{2}$ inches, depth 15 feet. Land-surface datum is about 55 feet above msl. Highest water level 6.39 below lsd, Mar. 13, 1953; lowest 9.77 below lsd, June 20, 1953. Records available: 1947, 1949-53. Nearby well being pumped. Measurement discontinued.

North Kingstown 29. North Kingstown Water Commission observation well 3. Lat. $41^{\circ}33'25''$, long. $71^{\circ}29'01''$. Driven observation water-table well in sand and gravel, diameter $2\frac{1}{2}$ inches, depth 13 feet. Land-surface datum is about 55 feet above msl. Highest water level 6.50 below lsd, Dec. 4, 1950; lowest 11.40 below lsd, June 28, 1953. Records available: 1947-53. Measurement discontinued.

Richmond 157. Walter Beck. Lat. $41^{\circ}33'17''$, long. $71^{\circ}40'04''$. Dug unused water-table well in till, diameter 30 inches, depth 38 feet. Land-surface datum is about 480 feet above msl. Highest water level 8.20 below lsd, Dec. 28, 1954; lowest 24.15 below lsd, Oct. 29, 1953. Records available: 1953-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Oct. 29, 1953	24.15	Feb. 25, 1954	11.37	June 28, 1954	13.53	Oct. 28, 1954	14.66
Nov. 30	15.66	Mar. 30	10.73	Aug. 2	18.59	Nov. 23	12.82
Dec. 30	10.66	Apr. 26	10.12	30	18.64	Dec. 28	8.20
Jan. 28, 1954	11.98	May 27	9.31	Sept. 28	11.65		

South Kingstown 10. Village of Kingston. South and Kingston Rds. Lat. 41°28'48", long. 71°28'24". Dug unused water-table well in till, diameter 36 inches, depth 18 feet. Land-surface datum is about 240 feet above msl. Highest water level 2.88 below lsd, Mar. 28, 1953; lowest 14.45 below lsd, Dec. 1, 1949. Records available: 1947-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 27	3.10	Apr. 26	3.37	Aug. 4	9.73	Oct. 29	6.47
Feb. 25	3.22	May 27	3.82	30	8.99	Nov. 23	4.29
Mar. 30	3.53	June 28	6.91	Sept. 28	4.43	Dec. 28	3.28

South Kingstown 83. Wakefield Water Co. Lat. 41°26'04", long. 71°32'11". Drilled unused water-table well in sand and gravel, diameter 8 inches, depth 26 feet. Land-surface datum is 92.77 feet above msl. Highest water level 0.47 above lsd, May 1, 1953; lowest 14.75 below lsd, Aug. 28, 1949. Records available: 1944, 1948-54. Nearby wells being pumped.

Tape measurements

Day	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1	j0.65	8.85	8.74	8.90	8.50	j1.03	9.29	11.70	12.48	j3.49	j2.22	9.04
2	j1.36	9.15	8.65	8.81	2.25	8.14	j.87	j5.00	8.95	9.41	9.39	9.08
3	j1.54	8.91	8.75	9.00	8.82	8.74	9.65	12.69	9.05	9.39	j3.18	9.10
4	8.64	8.67	8.88	9.04	8.60	8.60	10.10	j4.40	j3.81	7.93	8.85	9.14
5	8.31	8.90	8.88	9.13	8.82	8.86	.54	12.52	4.43	9.50	8.55	9.20
6	j.85	8.78	8.65	9.05	j1.38	8.25	10.82	j4.39	j4.30	9.50	7.91	9.44
7	8.45	8.44	8.46	9.05	7.36	8.83	10.63	12.32	j4.39	9.47	j1.10	j1.95
8	8.67	j1.05	8.98	9.19	j.77	8.86	9.11	j3.93	j4.37	9.89	9.23	9.27
9	8.64	8.51	8.90	9.15	6.40	8.76	10.69	j3.78	j3.25	9.19	9.12	9.07
10	8.25	8.65	8.95	9.06	8.42	8.81	j3.04	11.00	j4.25	9.45	9.53	9.42
11	j.95	8.68	8.93	9.20	8.46	8.94	11.09	j3.69	j4.28	j2.29	j2.07	8.93
12	9.02	8.67	8.98	9.04	8.56	8.62	10.34	11.10	j4.02	9.25	9.47	8.90
13	8.84	8.84	8.59	9.20	8.47	j1.15	10.39	12.12	j1.55	9.45	8.90	9.13
14	8.73	j1.15	8.64	9.16	8.47	9.15	11.50	11.63	j2.94	j2.17	9.60	9.44
15	j.85	j1.10	8.93	9.25	8.18	9.31	11.54	j4.35	j2.17	j1.93	9.34	9.20
16	8.45	9.17	8.97	j.35	7.64	8.90	11.85	j4.12	j2.52	9.45	j1.79	8.71
17	8.80	9.01	9.00	j.30	j.40	8.89	12.22	j3.39	j2.71	8.85	9.43	8.90
18	8.63	8.80	8.93	9.07	7.72	9.10	12.45	11.71	8.75	j1.68	9.41	9.02
19	8.55	8.95	8.60	8.87	8.62	9.23	j5.01	12.06	9.88	9.38	9.45	8.65
20	8.69	8.84	8.65	8.84	8.52	9.03	j4.95	11.75	j2.58	9.45	9.44	j.65
21	8.60	8.89	8.73	9.12	8.51	9.29	10.99	10.34	j1.72	9.48	j1.56	8.65
22	8.46	8.85	8.95	9.00	j.58	9.99	11.15	j4.30	10.06	8.80	10.22	8.70
23	7.89	8.90	8.93	8.75	8.64	9.50	11.73	12.18	9.74	8.62	9.27	8.75
24	8.89	8.88	j1.25	j3.01	8.41	10.18	j3.51	12.05	j2.53	j1.99	9.12	8.80
25	8.93	8.75	8.82	9.01	8.42	10.11	11.73	12.11	j2.39	j1.69	8.91	j1.48
26	8.87	8.78	9.04	8.88	8.65	9.65	11.55	11.99	j3.10	j2.62	7.55	8.93
27	8.90	8.64	8.74	8.93	8.45	9.55	11.83	12.16	j2.78	9.50	9.27	8.94
28	8.91	8.44	8.74	8.98	8.43	10.45	11.74	12.10	9.48	j2.54	9.27	8.83
29	8.83		9.00	j1.11	j.57	10.74	11.13	j4.05	9.63	9.23	j.75	8.45
30	8.93		8.89	8.84	j.53	10.63	10.20	j4.45	10.21	j1.79	9.13	8.43
31	8.97		8.90		8.49		11.25	j4.91		9.09		8.56

j Not pumping.

VERMONT

By John A. Baker

Scope of Water-Level Program

The observation-well program in Vermont, begun in 1942, was continued in 1954. Weekly water-level measurements were made in two wells until April, when measurements were discontinued in one well. Figure 53 shows the location of observation wells in Vermont.

Precipitation

Records of the U. S. Weather Bureau show that the precipitation at a station in Middlesex, near well Middlesex 1, was 44.09 inches in 1954, 12.40 inches above the 1953 total. The average precipitation for Vermont in 1954 was 47.05 inches, 8.61 inches above normal and 8.47 inches above the 1953 average. At Middlesex, the wettest month, September, had 6.05 inches; the driest month, August, had 2.38 inches.

Interpretation of Water-Level Fluctuations

On January 3, 1954, the water level in Middlesex 1, although the lowest recorded for the year, was recovering rapidly from lower levels (the well had been dry since July 1953). The water level continued to rise from January through April in response to above-normal precipitation and melting snow. The peak for the year was recorded in mid-April. The water level declined from April to September as evapotranspiration losses increased, although precipitation was above normal. The water level rose during August and September, owing to above-normal precipitation and decreasing evapotranspiration losses. The water level remained nearly stationary in November and December because frozen ground prevented much recharge, and discharge was at a minimum; precipitation was above normal.

Well-Numbering System

Each well in Vermont is designated by the name of the town or city in which the well is located, followed by a numeral assigned within each town or city in the order in which the well was inventoried.

Well Descriptions and Water-Level Measurements

(Water levels are in feet below land-surface datum.)

Washington County

Middlesex 1. Lynford Roy. Lat. 44°18'08", long. 72°35'12". Dug unused water-table well in sandy glacial till, diameter 24 inches, depth 12 feet. Land-surface datum is about 760 feet above msl. Highest water level 4.34 below lsd, May 3, 1953; lowest dry several times, 1944, 1947-49, 1952-53. Records available: 1942-54.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 3	10.67	Mar. 22	6.66	May 24	5.89	Aug. 16	7.88
17	10.50	30	6.06	June 1	7.08	Sept. 19	6.40
26	10.42	Apr. 5	6.31	8	7.02	26	5.80
Feb. 3	10.40	11	4.42	14	7.08	Oct. 4	4.90
7	10.08	19	4.87	24	7.82	10	5.67
22	9.67	27	4.96	27	7.89	27	6.60
Mar. 1	9.46	May 3	6.15	July 25	8.06	Dec. 19	5.49
7	7.63	10	4.57	Aug. 1	7.50	26	6.53
15	7.12	15	6.27	8	7.63		

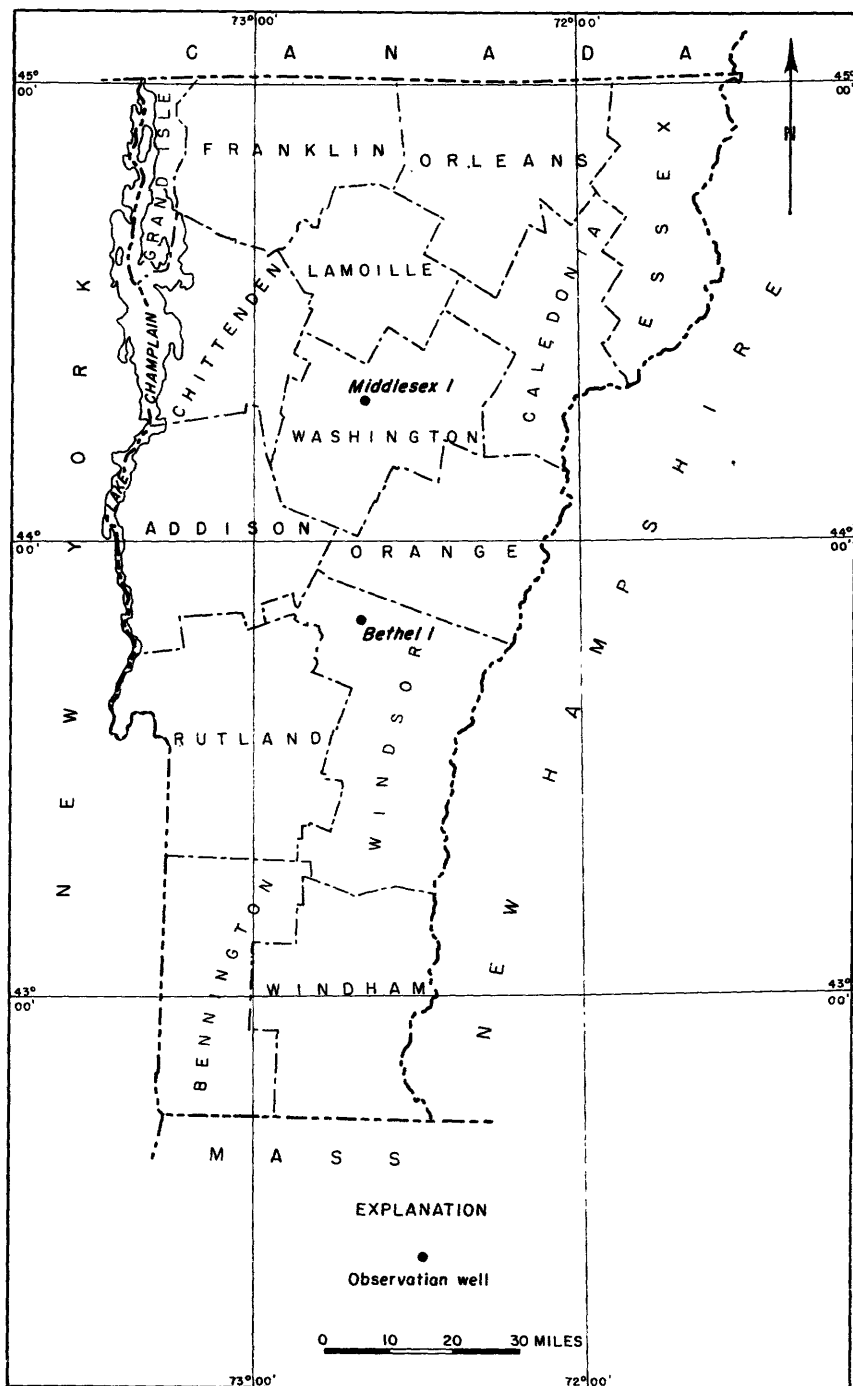


Figure 53.--Location of observation wells in Vermont, 1954.

Windsor County

Bethel 1. Tyler & Rice Veneer Mill. Lat. 43°49'46", long. 72°37'55". Dug unused water-table well in glacial drift, diameter 6 feet, depth 16 feet. Land-surface datum is about 550 feet above msl. Highest water level 6.70 below lsd, Mar. 30, 1954; lowest 14.20 below lsd, Nov. 17, 24, 1953. Records available: 1951-54. Measurement discontinued.

Date	Water level	Date	Water level	Date	Water level	Date	Water level
Jan. 5	12.90	Feb. 2	12.20	Feb. 23	7.90	Mar. 16	8.00
12	13.00	9	12.10	Mar. 2	8.40	23	7.80
19	12.20	16	11.40	9	7.80	30	6.70
26	12.40						

