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STATE OF ILLINOIS
DEPARTMENT OF REGISTRATION AND EDUCATION

Water-Level Decline and Pumpage During 1961 in Deep Wells in the Chicago Region, Illinois

by R.T. SASMAN, W. H. BAKER, JR., and W. P. PATZER

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SUMMARY

The water-level decline during 1961 in deep wells penetrating the Cambrian-Ordovician Aquifer, the most highly developed aquifer for large ground-water supplies in the Chicago region, is considered in this report. The Cambrian-Ordovician Aquifer is encountered at an average depth of about 500 feet below the land surface at Chicago; it has an average thickness of 1000 feet and is composed chiefly of sandstones and dolomites.

Pumpage from deep wells has increased from 200,000 gallons per day (gpd) in 1864 to 91.7 million gallons per day (mgd) in 1960. As a result, artesian pressure in the Cambrian-Ordovician Aquifer at Chicago has declined about 670 feet. Pumpage from deep wells is concentrated in six centers: Chicago area, Joliet area, Elmhurst area, Des Plaines area, Aurora area, and Elgin area.

In 1961, pumpage from deep wells was 96.5 mgd or 4.8 mgd more than in 1960. This annual increase in pumpage has resulted in excessive declines in water levels in some deep wells. Water-level declines during 1961 ranged from 8 feet in the Aurora area to 15 feet in the Des Plaines and Elmhurst areas and averaged about 11 feet. The 1961 average decline is less than the average decline during 1960 (13 feet), but greater than the average annual rate of decline (10 feet) for the period 1945-1960.

Withdrawals in 1961 exceed the practical sustained yield of the Cambrian-Ordovician Aquifer as they did in 1959 and 1960, with the result that ground-water users in the Chicago region continue to mine water and to borrow water from future generations. If the distribution of pumpage remains the same as in 1961 and pumpage from the Cambrian-Ordovician Aquifer continues to increase in the future, the upper units of the aquifer will be partially dewatered in many areas much sooner than previously anticipated. Pumping levels exceeding 1000 feet below the surface will be common within 20 years.

INTRODUCTION

In May 1959 the State Water Survey and State Geological Survey issued Cooperative Ground-Water Report 1 1/ which discussed the geology and hydrology of the ground-water resources of the Chicago region, the yields of aquifers, and the possible consequences of future ground-water development. Special emphasis was placed on the deep water-yielding aquifers which have been most widely used for large ground-water supplies. Studies described in Cooperative Report 1 indicated that pumpage from deep wells during 1958 approached the amount that could be continuously withdrawn without eventually dewatering the lowermost and most productive formation of the deep aquifer. Future (1958-1980) water-level declines, ranging from 190 feet at Elgin to 300 feet at Chicago and Des Plaines, were predicted. It was recognized that actual water-level declines will vary from predicted declines given in the report if future distribution and rates of pumpage deviate from extrapolations of past ground-water use. As a result of the findings of Cooperative Report 1, the program of collecting and reporting water-level and pumpage data for deep wells in the Chicago region, which is one of the functions of the State Water Survey, was accelerated in 1959.

The objectives of the program are 1) to provide a year to year evaluation of trends in water levels and pumpage, 2) to delineate problem areas, 3) to provide long-term continuous records of fluctuations of water levels and pumpage, and 4) to collect and report all hydrologic information which will facilitate the planning and development of the water resources of the deep aquifer in the Chicago region. The program is particularly urgent at this time due to the progressively increasing demands for water supplies and the continuing decline of water levels.

Two reports on water levels and pumpage have been issued by the State Water Survey subsequent to Cooperative Report 1. These were Circulars 79 and 83 2,3/ which summarized the trends in water levels and pumpage from deep wells during 1959 and 1960.

Pumpage from deep wells increased from 78.3 mgd in 1958 to 88.0 mgd in 1959 and 91.7 mgd in 1960; the average rate of increase during the two years was 6.7 mgd per year. The annual increase during 1959 (9.7 mgd) was record high, exceeded the practical sustained yield (46 mgd) of the deep aquifer, and resulted in excessive declines in water levels in deep wells. Average annual water-level declines for the period October 1958 to October 1960 ranged from 10 feet in the Joliet area to 26 feet in the Elmhurst area and averaged about 16 feet in the Chicago region. The 1959-1960 average decline was considerably greater than the average annual rate of decline (10 feet) for the period 1945-1958.

This report summarizes trends in water levels and pumpage from deep wells during 1961. A summary of the essential findings of Cooperative Report 1 and Circulars 79 and 83 regarding the deep aquifers is presented to serve as a background for interpretation of the records.

GEOLOGY AND HYDROLOGY OF AQUIFER

Ground-water resources in the Chicago region are developed from four aquifer systems: 1) sand and gravel deposits of the glacial drift; 2) shallow dolomite formations, mainly of Silurian age; 3) the Cambrian-Ordovician Aquifer; and 4) the Mt. Simon Aquifer. This report is concerned with the Cambrian-Ordovician Aquifer.

The Cambrian-Ordovician Aquifer consists in downward order of the Galena-Platteville Dolomite, Glenwood-St. Peter Sandstone, and Prairie du Chien Series of Ordovician age; Trempealeau Dolomite, Franconia Formation, and Ironton-Galesville Sandstone of Cambrian age. The sequence, structure, and general characteristics of these rocks are shown in figure 1. The Cambrian-Ordovician Aquifer is separated from the Mt. Simon Aquifer by shale beds of the Eau Claire Formation. The Maquoketa Formation above the Galena-Platteville Dolomite acts as a barrier between the shallow dolomite and deeper aquifers and confines the water in the deeper aquifers under artesian pressure. Available data indicate that on a regional basis the entire sequence of strata, from the top of the Galena-Platteville to the top of the shale beds of the Eau Claire Formation, behaves hydraulically as one aquifer.

The Ironton-Galesville Sandstone is the most productive formation of the Cambrian-Ordovician Aquifer. The Galena-Platteville Dolomite and Prairie du Chien Series generally are not well creviced; the Trempealeau Dolomite is locally well creviced. The Glenwood-St. Peter Sandstone and Franconia Formation yield small to moderate amounts of water.

The Cambrian-Ordovician Aquifer receives water from overlying glacial deposits mostly in areas of Kane, McHenry, Kendall, Boone, and DeKalb Counties where the Galena-Platteville Dolomite is the uppermost bedrock formation below the glacial deposits. This is west of the border of the Maquoketa Formation. Recharge of the glacial deposits occurs from precipitation that falls locally. Vertical leakage of water through the Maquoketa Formation into the Cambrian-Ordovician Aquifer is appreciable under the influence of large differentials in head between shallow deposits and the Cambrian-Ordovician Aquifer.

PUMPAGE FROM DEEP WELLS

The first deep well in Chicago, drilled at the corner of Chicago and Western Avenues in 1864. had an artesian flow estimated at about 150 gallons per minute (gpm) or about 200,000 gpd. The estimated pumpage from deep wells in the Chicago region increased gradually from 200,000 gpd in 1864 to more than 91 mgd in 1960 as shown in figure 2.

Many deep wells in the Chicago region are either uncased or faultily cased in the Silurian age dolomite and allow leakage. The Mt. Simon Aquifer also is penetrated by a large number of deep wells, particularly along the Fox River in Kane County. The artesian pressure of the Cambrian-Ordovician Aquifer is lower than that in the Silurian age dolomite and Mt. Simon Aquifer. Ground water, therefore, moves downward from the dolomite and upward from the Mt. Simon into the Cambrian-Ordovician Aquifer through wells that are open in all three aquifers. Thus, water pumped from deep wells does not come from the Cambrian-Ordovician Aquifer alone. It is estimated that of the 91.7 mgd pumped from deep wells in 1960, 52.3 mgd came from the Cambrian-Ordovician Aquifer, 24.8 mgd came from the Silurian age dolomite, and 14.6 mgd came from the Mt. Simon Aquifer.

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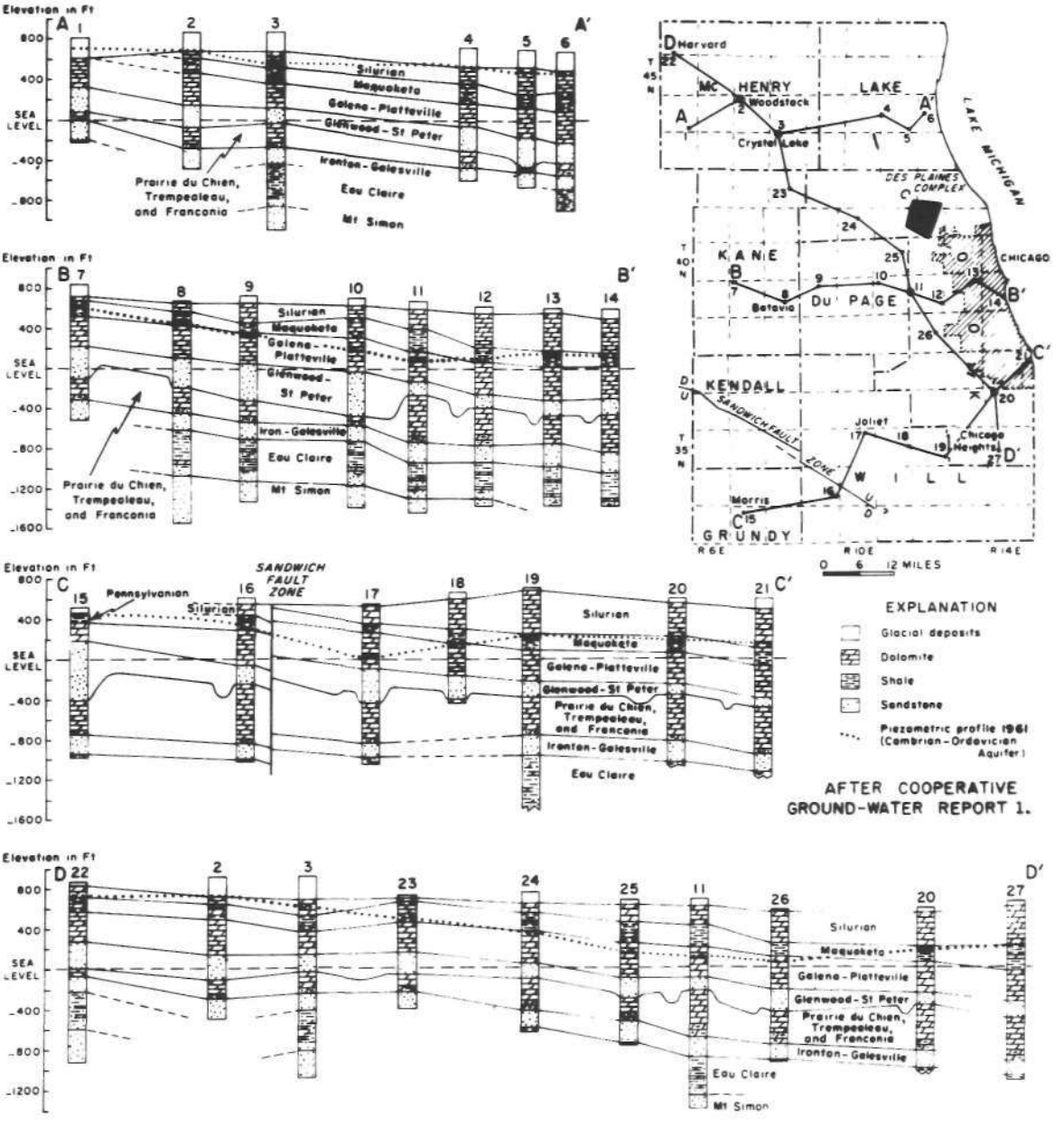

FIGURE 1. CROSS SECTIONS OF THE STRUCTURE AND STRATIGRAPHY OF THE BEDROCK AND PIEZOMETRIC PROFILES OF THE CAMBRIAN-ORDOVICIAN AQUIFER IN THE CHICAGO REGION

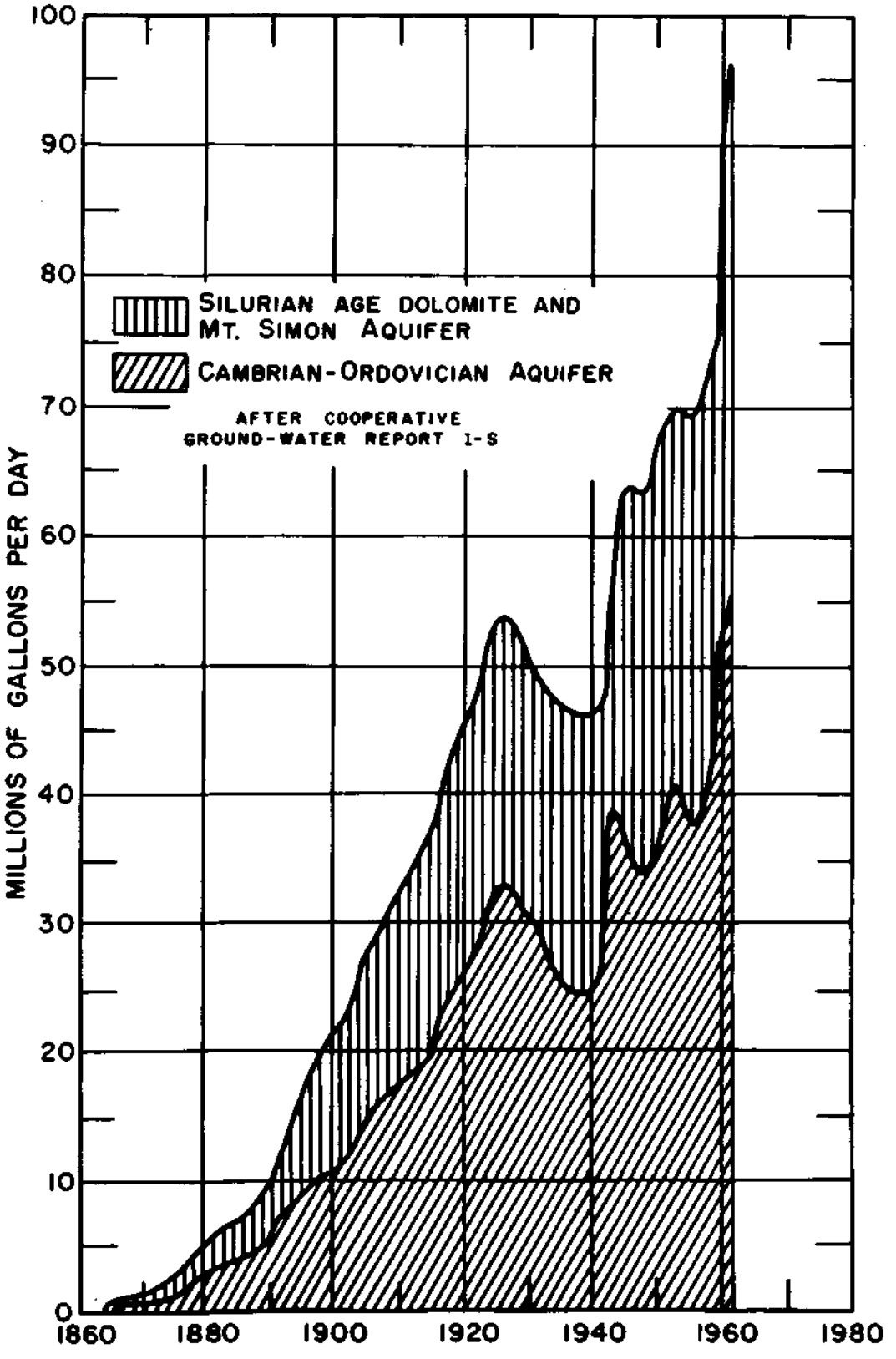

Figure 2. PUMPAGE FROM DEEP WELLS, 1864 THROUGH 1961 SUBDIVIDED BY SOURCE

Pumpage in 1961

During 1961, pumpage from deep wells increased from 91.7 mgd to 96.5 mgd, an increase of 4.8 mgd. This increase is about 1.3 times the increase during 1960 but considerably less than the 9.7 mgd increase during 1959. Total pumpage in 1961 was about 5 per cent greater than total pumpage in 1960. It is estimated that of the 96.5 mgd pumped from deep wells during 1961, 55.0 mgd came from the Cambrian-Ordovician Aquifer, and 41.5 mgd came from the Silurian age dolomite and Mt. Simon Aquifer.

Pumpage is concentrated in six centers: the Chicago, Joliet, Elmhurst, Des Plaines, Aurora, and Elgin areas. Distribution of pumpage from deep wells in 1959, 1960, and 1961 is shown in table 1. The greatest quantities of water were withdrawn from deep wells in the Chicago, Joliet, and Aurora areas.

The greatest increase in pumpage for 1960-1961, 2.4 mgd, occurred in the Joliet area. This increase was nearly double the increase for 1959-1960 and was 50 per cent of the total increase in the Chicago region. As shown in table 1, pumpage increases of 1960-1961 in the Elmhurst, Des Plaines, and Elgin areas also were slightly greater than pumpage increases of 1959-1960. The 1960-1961 pumpage increase in the Aurora area was considerably less than the 1959-1960 pumpage increase; pumpage in 1961 in the Chicago area was less than pumpage in 1960. The 1960-1961 rate of pumpage increase for the Chicago region is 5 times the average annual rate of increase for 1864-1959.

During 1961, 19 new deep wells were placed in operation. Of these wells, 11 were drilled to augment existing municipal wells or to develop new municipal or subdivision water-supply systems. A number of deep wells and deep well pumps were rehabilitated to meet increased demands. Two municipalities and two industries discontinued use of deep wells during 1961.

Table 1 - Distribution of Pumpage from Deep Wells in 1959, 1960, and 1961

Pumping center	Total pumpage (mgd)			Pumpage increase or decrease (-) (mgd)	
	1959	1960	1961	1959-1960	1960-1961
Chicago area	24.9	24.9	24.7	negligible	-0.2
Joliet area	18.9	20.2	22.6	1.3	2.4
Elmhurst area	10.7	10.7	11.5	negligible	0.8
Des Plaines area	10.9	12.1	13.4	1.2	1.3
Elgin area	7.5	7.7	8.0	0.2	0.3
Aurora area	15.1	16.1	16.3	1.0	0.2
Total	88.0	91.7	96.5	3.7	4.8

The distribution of pumpage in 1960 and 1961, subdivided by use, is shown in table 2; the distribution of pumpage in 1961 is shown in figure 3. Public use includes municipal and institutional pumpage. No attempt has been made to determine the final use of water within categories. Any water pumped by a municipality is called a public supply, regardless of the use of the water.

Table 2 - Distribution of Pumpage from Deep Wells in 1960 and 1961, Subdivided by Use

Pumping center	Public pumpage (mgd) 1960	1961	Industrial pumpage (mgd) 1960	1961
Chicago area	5.3	5.7	19.6	19.0
Joliet area	7.6	9.0	12.6	13.6
Elmhurst area	8.9	10.1	1.8	1.4
Des Plaines area	11.4	12.8	0.7	0.6
Elgin area	6.5	6.9	1.2	1.1
Aurora area	13.8	14.1	2.3	2.2
Total	53.5	58.6	38.2	37.9

In 1961 withdrawals for public water-supply systems amounted to about 61 per cent of the total pumpage; industrial pumpage was about 39 per cent of the total. Municipal pumpage was 53.6 mgd or about 92 per cent of the total public pumpage. Municipal pumpage continues to be by far the greatest use in the Elmhurst, Des Plaines, Elgin, and Aurora areas. Most industrial pumpage is concentrated in the Chicago and Joliet areas. Public pumpage in 1961 was about 9.5 per cent greater than in 1960; industrial pumpage in 1961 was about 0.8 per cent less than in 1960.

Public pumpage increases for 1960-1961 were greatest in the Joliet and Des Plaines areas (1.4 mgd) and in the Elmhurst area (1.2 mgd). Increases in public pumpage of 0.4 mgd in the Chicago and Elgin areas, and 0.3 mgd in the Aurora area were reported. In all areas except the Chicago and Aurora areas, public pumpage increases for 1960-1961 were greater than increases during the previous year. Much of the increase in public pumpage was recorded for deep wells owned by large municipalities, such as Des Plaines, Elmhurst, Joliet, Lombard, Mt. Prospect, and St. Charles. A number of subdivisions also reported a considerable increase in pumpage. Arlington Heights and Aurora were the only municipalities with pumpage more than 1.0 mgd which reported decreases (0.3 and 0.1 mgd, respectively). Municipal pumpage at Elgin in 1961 was about the same as it was in 1960. Ten municipalities which pumped more than 1.0 mgd during 1961 recorded an average increase of 0.3 mgd.

Industrial pumpage increased 1.0 mgd in the Joliet area where several industries increased their use of ground water. In all other areas, industrial pumpage decreased from that reported for the previous year. Industrial pumpage decreased 0.6 mgd in the Chicago area and 0.4 mgd in the Elmhurst area. In the Chicago region, nine industries reported pumpage of more than 1.0 mgd in 1961; two reported an average increase of 0.6 mgd, four reported an average decrease of 0.3 mgd, and three reported negligible change in pumpage during 1961. Data on industrial pumpage were obtained at 118 plants. As in previous years, a few industries abandoned their deep wells and converted either to shallow wells or municipal systems, and a few industries developed new deep well supplies. Total industrial pumpage decreased 0.3 mgd. This is the first time in recent years that there has been a decline in the total industrial pumpage in the region.

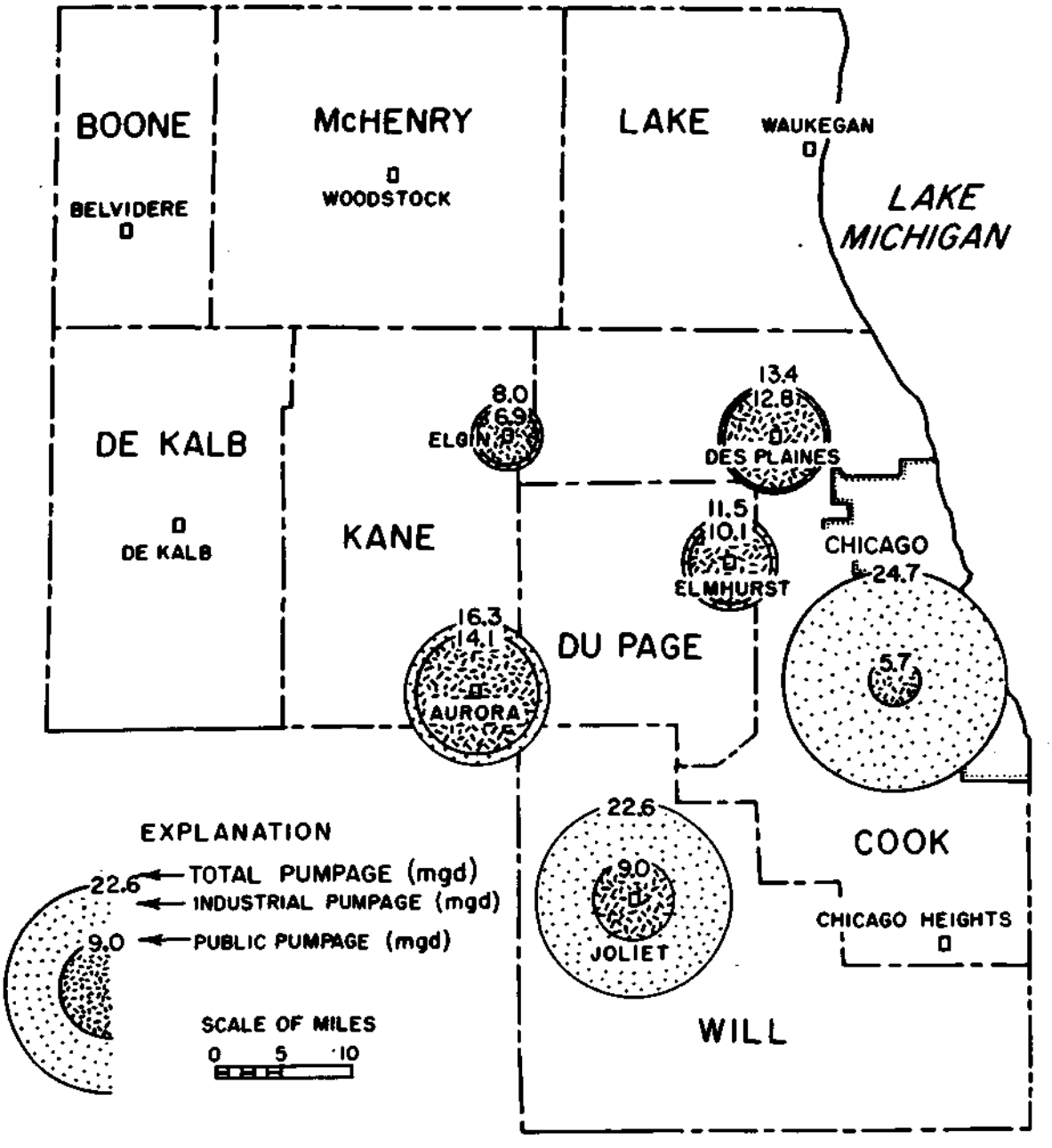

Figure 3. DISTRIBUTION OF ESTIMATED PUMPAGE FROM DEEP WELLS IN 1961

Pumpage Related to Practical Sustained Yield, 1961

In Cooperative Report 1 it was estimated that the practical sustained yield of the Cambrian-Ordovician Aquifer is about 46 mgd and would be developed when the total pumpage from deep wells is about 81 mgd. The practical sustained yield of the aquifer is the maximum amount of water that can be withdrawn without eventually dewatering the most productive water-yielding formation, the Ironton-Galesville Sandstone. The practical sustained yield is largely limited by the rate at which water can move from recharge areas eastward through the aquifer to pumping centers.

Based on past records of pumpage and water levels, it was estimated in Cooperative Report 1 that the practical sustained yield would be exceeded by 1965. However, total pumpage from deep wells in 1959, 1960, and 1961 actually exceeded the withdrawal rate anticipated for 1965. Thus, the practical sustained yield of the aquifer was exceeded in 1959, 1960, and 1961. Sustained pumping at the 1961 rate will result in the dewatering of the Ironton-Galesville Sandstone in many parts of the Chicago region much sooner than anticipated in Cooperative Report 1, with a great and continual reduction in yields of wells.

WATER LEVELS IN DEEP WELLS

In 1864 the artesian pressure in the Cambrian-Ordovician Aquifer was sufficient to cause wells to flow in many parts of the Chicago region. The average elevation of water levels in deep wells at Chicago and at Joliet was probably about 700 feet. As a result of continued heavy pumping, the nonpumping water levels in deep wells declined in 1960 to elevations of 34 feet at Summit southwest of Chicago and 23 feet at Joliet. From 1864-1960 the artesian pressure at Chicago declined about 670 feet. The average rate of decline, 1864-1960, was about 7 feet per year. The greatest water-level declines in the Chicago region, amounting to more than 650 feet, have occurred in areas of heavy pumpage at Summit and at Joliet. The total decline has been 10 feet or less in recharge areas in Boone and DeKalb Counties.

Examples of long-term fluctuations in water levels in the Chicago region are shown in figures 4 and 5. Hydrographs of observation wells in the Cambrian-Ordovician Aquifer show a steady decline of water levels, largely as a result of the continued increase of withdrawals by municipalities, industries, and commercial establishments as shown in figure 2. The locations of observation wells for which hydrographs are available are shown in figure 6.

The average annual rates of decline for the period 1945 through 1960 in pumping centers are given in table 3.

Table 3 - Decline in Nonpumping Water Levels

Pumping center	Average decline 1945-1960 (feet per year)	Average decline (feet) Oct. 1959-Oct. 1960	Oct. 1960-Oct. 1961
Chicago area	8	13	9
Joliet area	7	12	11
Elmhurst area	14	12	15
Des Plaines area	13	18	15
Elgin area	11	11	11
Aurora area	9	13	8

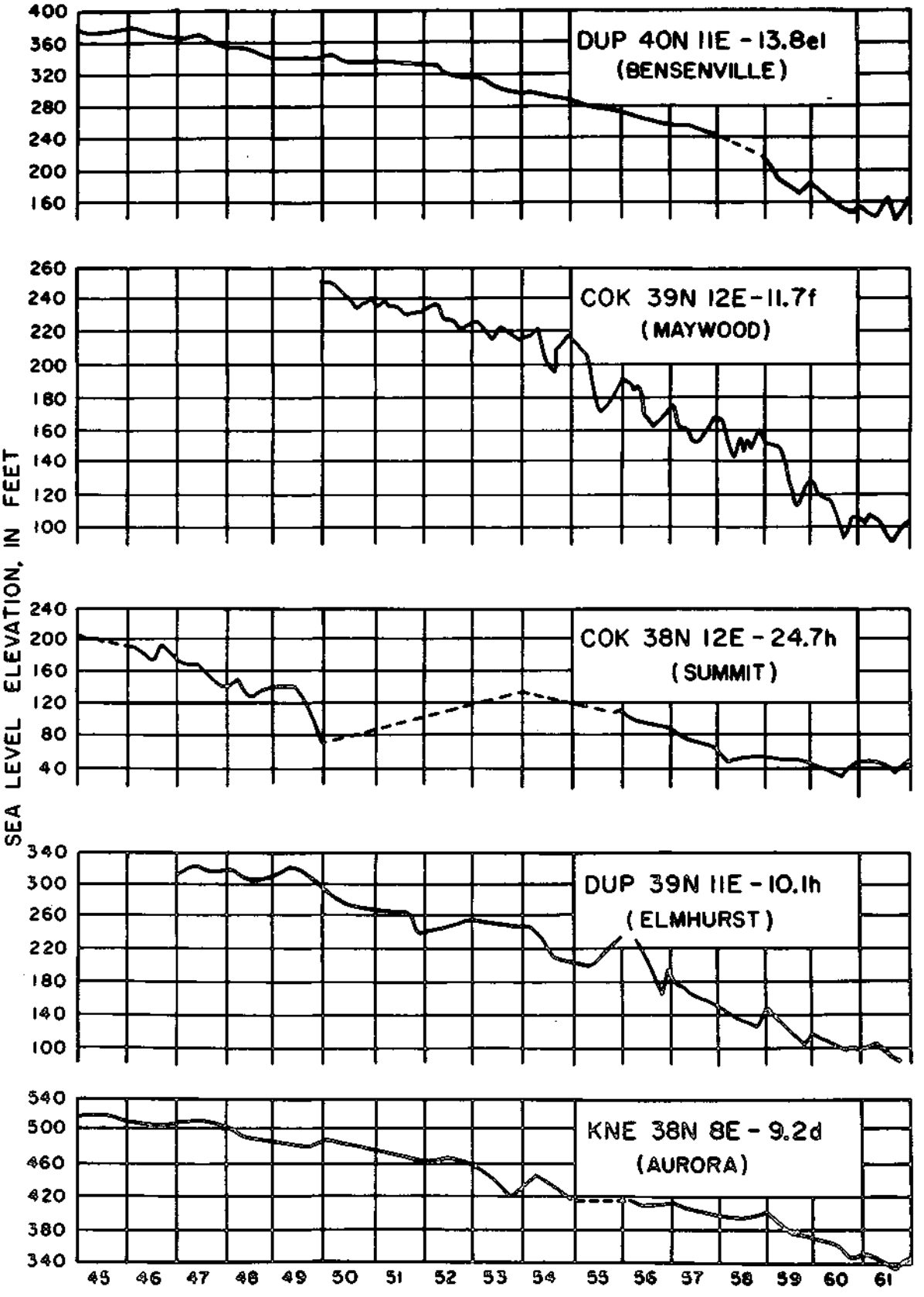

Figure 4. WATER LEVELS IN DEEP WELLS IN THE CHICAGO, DES PLAINES, ELMHURST, AND AURORA PUMPING CENTERS, 1945 — 1961

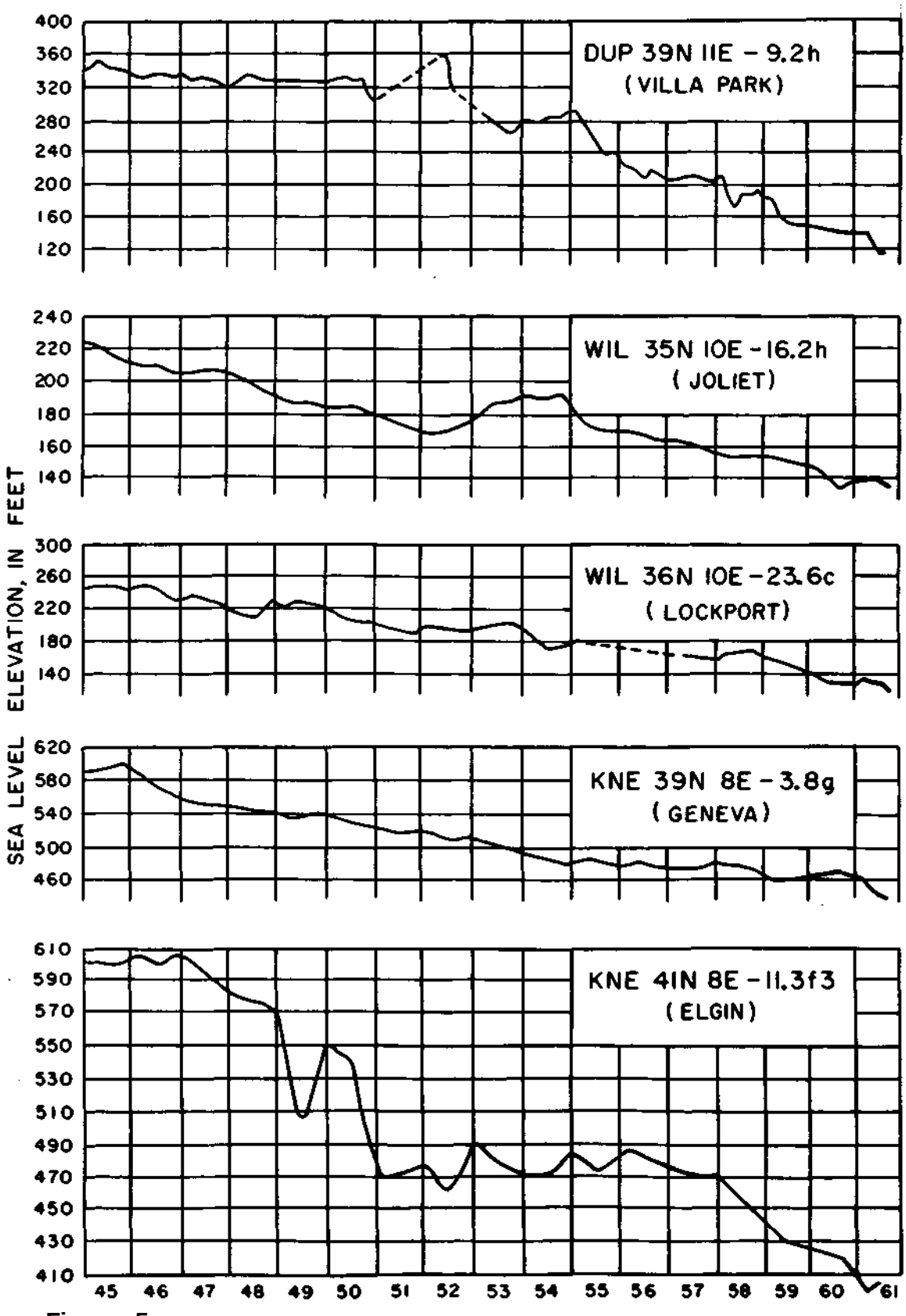

Figure 5. WATER LEVELS IN DEEP WELLS IN THE JOLIET, ELGIN, AND ELMHURST PUMPING CENTERS, 1945 — 1961

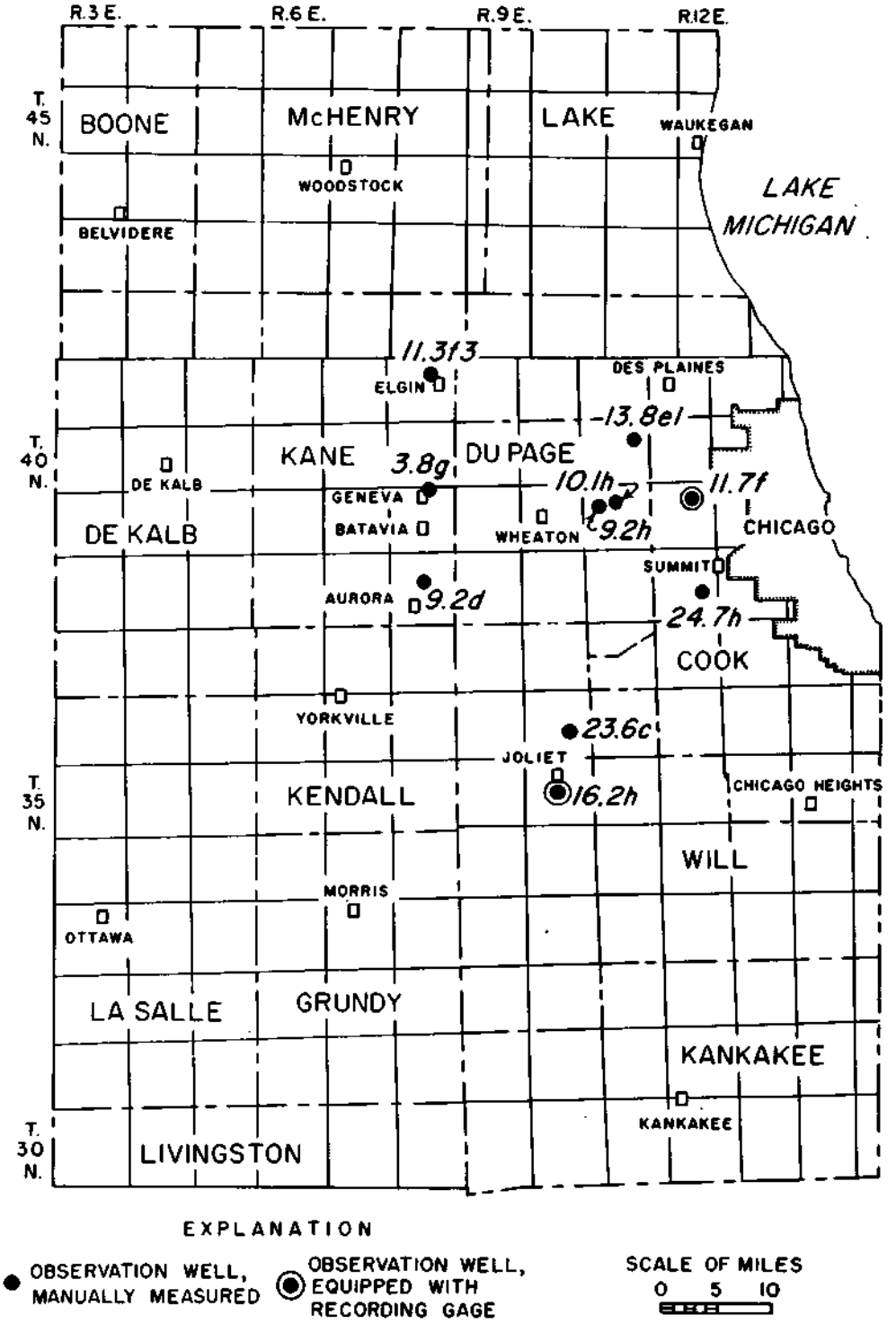

Figure 6. MAP SHOWING LOCATION OF SELECTED OBSERVATION WELLS

From 1945 through 1960, the average annual decline in water levels ranged from 14 feet in wells in the Elmhurst area to 7 feet in wells near the center of Joliet. The average annual decline exceeded 10 feet in the Elmhurst, Des Plaines, and Elgin areas.

Water-Level Decline, October 1960 to October 1961

The water levels in 246 deep wells in the Chicago region were measured during the last week in October and the first week in November, 1961. Data for the wells are given in table 4 in the appendix. Water levels for 178 of these wells were measured during the same period in 1960. Water-level data for 1960 were compared with data for 1961; computed declines and rises are given in table 5 (see appendix). Computed declines and rises and the piezometric surface maps for 1960 and 1961 were used to construct figure 7. Data were not sufficient to accurately describe water-level changes in the southern parts of Will and LaSalle Counties and in Grundy, Kankakee, and Livingston Counties. The average declines in nonpumping water levels, October 1960 to October 1961, for each pumping center based on figure 7 are given in table 3.

As shown by figure 7 the water-level decline varies from place to place within pumping centers. For example, water levels in deep wells in some places in the Chicago area pumping center recovered; however, on an average water levels declined about 9 feet. The greatest average decline occurred in the Elmhurst area and Des Plaines area pumping centers; the least average decline was recorded for the Aurora area pumping center. Average declines exceeding 10 feet were computed for all pumping centers except Chicago and Aurora.

The increase in pumpage in 1961 (4.8 mgd) was greater than the increase in pumping during 1960 (3.7 mgd) but was considerably less than the increase during 1959 (9.7 mgd). As a result, the average annual rate of water-level decline, which decreased in 1960, continued to decrease in 1961. Average declines during 1961 were less than average declines during 1960 in the Chicago, Joliet, Des Plaines, and Aurora areas. However, the declines in water levels, October 1960 to October 1961, in the Chicago, Joliet, Elmhurst, and Des Plaines areas are greater than the average annual rate of water-level decline for the period 1945-1960. The average decline, October 1960-October 1961, in the Aurora area pumping center is less than the average decline., 1945-1960.

Superimposed upon the long-term trend of water-level fluctuations in deep wells are seasonal fluctuations caused chiefly by changes in the rate of pumping from nearby wells. Water levels in deep wells in many parts of the Chicago region generally recede during the summer and early fall months, when pumpage is greatest. Water levels start to recover during the late fall when pumpage is reduced. Minimum annual water levels are usually recorded during September and October; maximum annual water levels occur duing the late winter and spring months. Short-term fluctuations reflect intermittent pumping, day-to-day variations in nearby pumping, or changes in atmospheric pressure.

Piezometric Surface of Aquifer, 1961

The piezometric surface is an imaginary surface to which water will rise in artesian wells. Figure 8 shows the piezometric surface of the Cambrian-Ordovician Aquifer in October 1961. Data on nonpumping water levels in table 4 were used to prepare the map. The general features of the piezometric surface map in 1961 differ but little from those of the piezometric surface map for 1960 as shown in Circular 83.

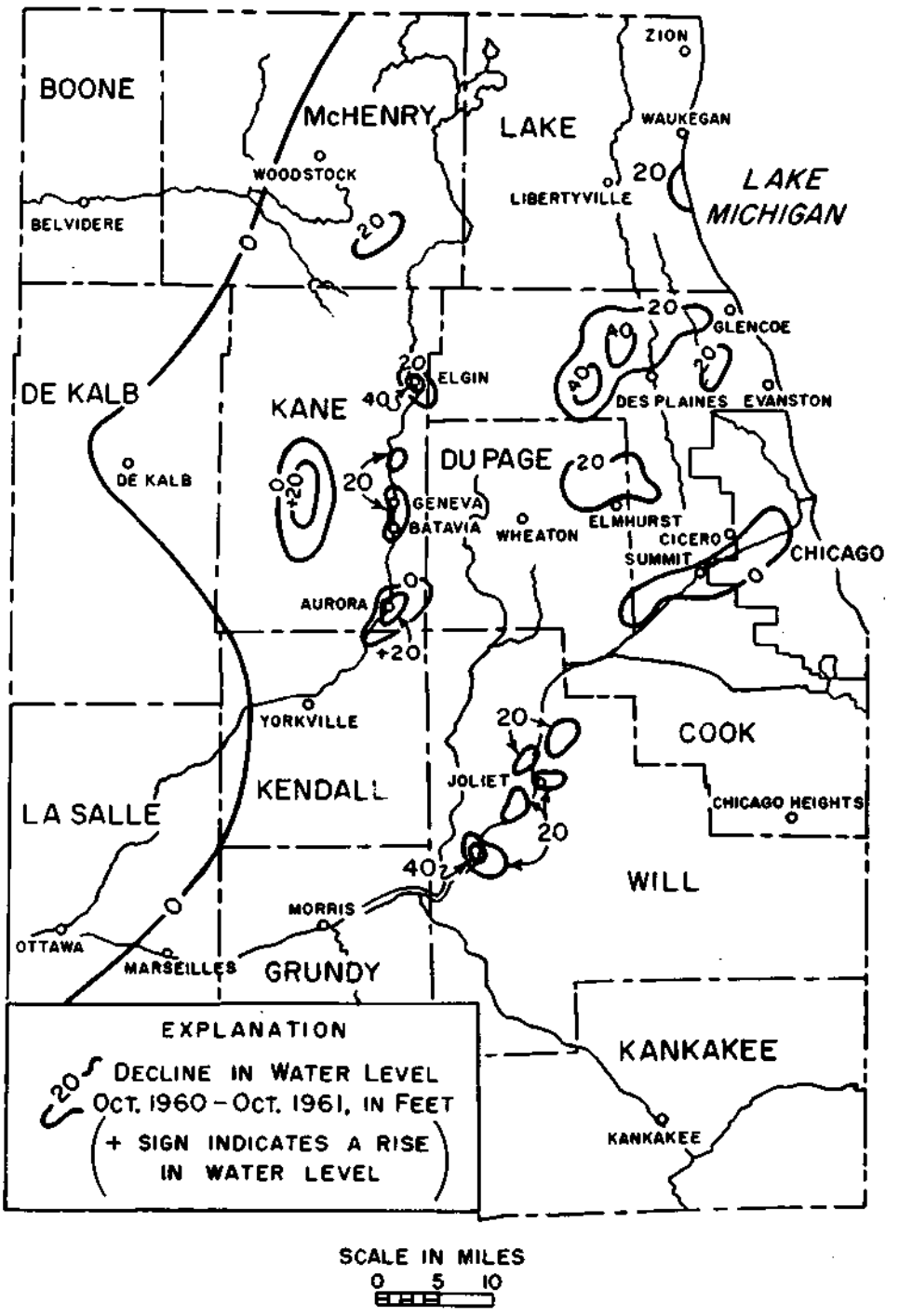

Figure 7. MAP SHOWING CHANGES IN WATER LEVELS IN DEEP WELLS DURING 1961

During 1961 the area of lowest water levels in the Chicago area continued to advance in a northwesterly direction from Summit towards the Elmhurst and Des Plaines areas. The 200-foot piezometric surface contour migrated in a northwesterly direction about four miles, from its estimated position in 1960, to surround the Des Plaines cone of depression. The 150-foot contour also continued to migrate in the northwesterly direction as it did in 1960. In 1961 the deepest cone of depression in Cook County (about 36 feet above sea level) was in the vicinity of Summit.

A pronounced cone of depression is centered in the southwest part of Joliet where large quantities of water are pumped for industrial use. In 1961 the 150-foot piezometric surface contour migrated about four miles in a southwesterly direction and the area enclosed by the 100-foot contour increased appreciably. The average elevation of water levels in deep wells within the corporate limits of Joliet was about 100 feet above sea level in 1961.

Depressions in the piezometric surface are apparent at Summit, Joliet, Elgin, Geneva, Batavia, Elmhurst, Des Plaines, DeKalb, and Aurora. The piezometric surface was below the top of the Galena-Platteville Dolomite in the deepest parts of the cones of depression at Chicago, Elmhurst, Des Plaines, and Joliet.

The general pattern of flow of water in the Cambrian-Ordovician Aquifer in 1961 was slow movement from all directions toward deep cones of depression centered west of Chicago at Summit and at Joliet. Some of the water flowing toward Chicago and Joliet is intercepted by cones of depression in the Aurora, Elgin, Des Plaines, and Elmhurst areas.

The lowering of the water levels accompanying the withdrawals of ground water has established steep hydraulic gradients west and north of Chicago and southwest of Joliet, and large quantities of water are at present being transmitted from recharge areas in northern Illinois and minor quantities from southern Wisconsin toward centers of pumping. Large amounts of water derived from storage within the Cambrian-Ordovician Aquifer and from vertical leakage of water through the Maquoketa Formation move toward Chicago and Joliet from the east in Indiana, from the south in Illinois, from the west in Illinois, and from the northeast beneath Lake Michigan.

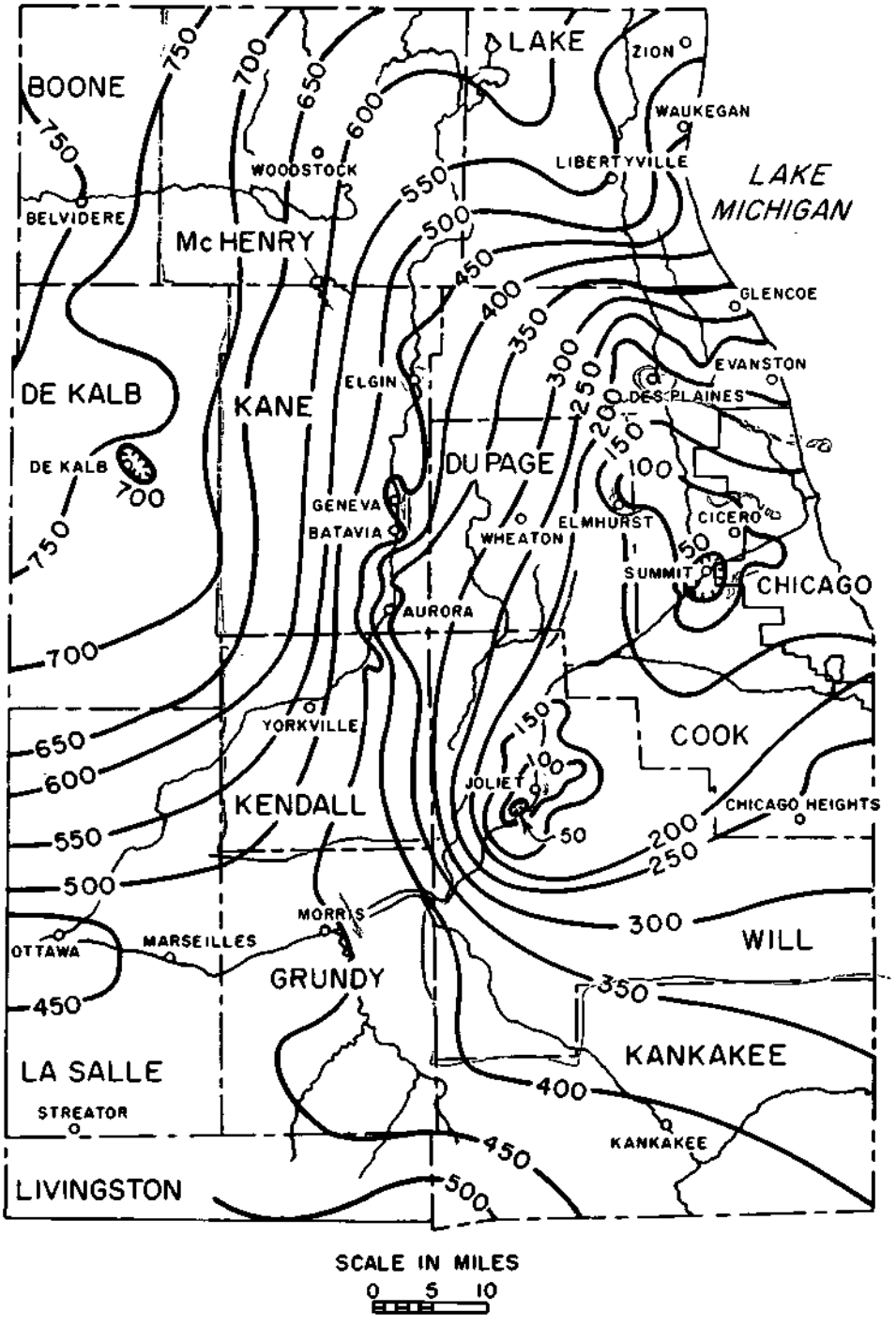

Figure 8. ELEVATION OF PIEZOMETRIC SURFACE OF CAMBRIAN-ORDOVICIAN AQUIFER IN OCTOBER, 1961

Future Water-Level Decline

Estimates of future water-level decline, 1958-1980, based on reasonable extrapolation of past pumpage data, were given in Cooperative Report 1. Average declines ranged from about 14 feet per year in the Chicago and Des Plaines areas to about 9 feet per year in the Elgin area. The measured declines during 1959 and 1960 exceeded the predicted declines partly because of the record high rate of increase in pumpage in 1959. Although the rates of increase in pumpage during 1960 and 1961 were above average, they were considerably less than the rate of increase in pumpage during 1959. As a result the rate of water-level decline during 1961 decreased in several areas of the Chicago region.

Pumpage increases vary from year to year in an erratic and unpredictable manner. Judging from past records, it is unlikely that pumpage will increase indefinitely at the rates observed during the past three years. By the same token, it is also unlikely that water-level declines will persist indefinitely at the rates observed during recent years. However, declines during the last three years are so much in excess of predicted declines that, barring appreciable reductions in pumpage in future years, water-level declines will exceed predicted declines given in Cooperative Report 1. It is important that collection of data be continued so that potential ground-water development and its effects can be reevaluated within five years.

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2. Walton, W. C., R. T. Sasman, and R. R. Russell. 1960. Water-level decline and pumpage during 1959 in deep wells in the Chicago region, Illinois. State Water Survey Circular 79.

3. Sasman, R. T., T. A. Prickett, and R. R. Russell. 1961. Water-level decline and pumpage during 1960 in deep wells in the Chicago region, Illinois. State Water Survey Circular 83.

APPENDIX

Table 4 - Water Levels in Deep Wells in Northeastern Illinois, 1961
(Elevations in feet above mean sea level)

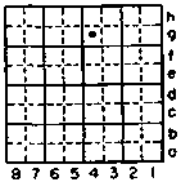
Well number*	Owner	Depth of well (feet)	Surface elevation	Depth to water (feet)	Water level elevation	Date, 1961
BNE-						
44N3E-24.8a	City of Belvidere	870	780	52	728	10/26
44N3E-25.8b2	City of Belvidere	1803	765	17	748	10/26
44N3E-26.1e	City of Belvidere	1800	778	58	720	10/26
44N3E-35.1e	City of Belvidere	610	800	63	737	10/27
C0K-						
42N12E-14.2cl	Sunset Ridge Country Club	1385	655	378	277	11/6
42N12E-14.7f	St. Marys Mission House	1686	668	360	308	12/1
42N12E-23.5f3	Holy Ghost Convent	1451	648	372	276	11/6
42N12E-28.7e	Signode Steel Strapping Co.	1452	670	402	268	11/6
42N12E-29.1a	Ill. Municipal Water Co.	1405	677	398	279	11/6
42N12E-33.2c	Ill. Municipal Water Co.	917	670	389	281	11/8
42N11E-11.6e	Village of Wheeling	1370	645	380	265	11/3
42N11E-11.8b2	Ekco Alcoa Containers Inc.	1320	650	380	270	11/3
42N11E-16.7a	Arlington Vista Utility Co.	900	687	459	228	11/3
42NllE-26.7d	Citizens Utilities Co. of Illinois	1468	661	450	211	11/8
42NllE-27.3a	Village of Mt. Prospect	1382	670	459	211	10/14
42NllE-30.1g	Village of Arlington Hgts.	1345	724	458	239	10/23
42NllE-33.3b	Village of Mt. Prospect	1370	693	520	173	10/14
42NllE-34.4g	Village of Mt. Prospect	1822	673	438	235	10/14
42NllE-35.3d	Fairview Gardens Subd.	1328	652	424	228	10/26

* The well numbering system used in this report is based on the location of the well, and uses the township, range, and section for identification.

The well number consists of five parts: county abbreviation, township, range, section, and coordinate within the section. Sections are divided into rows of one-eighth mile squares. Each one-eighth mile square contains 10 acres and corresponds to a quarter of a quarter of a quarter section. A normal section of one square mile contains eight rows of eighth-mile squares; an odd-size section contains more or fewer rows. Rows are numbered from east to west and lettered from south to north as shown below.

The number of the well shown in sec. 25 at right is as follows:

C0K 41NllE-25.4g



Cook County
T.41N., R.11E.
sec. 25

Where there is more than one well in a 10-acre square they are identified by arabic numbers after the lower case letter in the well number.

Table 4 - Continued

Well number*	Owner	Depth of well (feet)	Surface elevation	Depth to water (feet)	Water level elevation	Date, 1961
COK-						
42N11E-36.3bl	Maryville Academy	1604	651	401	250	10/23
42N11E-36.3b2	Maryville Academy	1529	651	421	230	10/23
42N10E-24.8al	Arlington Hgts. Jockey Club	1825	730	445	285	10/23
42N10E-25.1b	City of Rolling Meadows	1530	720	465	255	9/10
42N10E-25.6b	City of Rolling Meadows	1537	714	428	286	9/10
41N13E-8.6d	Glenview Club	1546	643	402	241	10/27
41N13E-18.5g	Avon Products, Inc.	1525	644	363	281	10/27
41N13E-20.7e	Baxter Laboratory	1414	627	416	211	10/23
41N13E-21.2b	G. D. Searle & Co.	1470	614	370	244	10/27
41N13E-29.8d	Croname, Inc.	1465	624	435	189	11/27
41N12E-12.8b	Eugenia Subdivision	1414	666	435	231	10/27
41N12E-18.6a	City of Des Plaines	1735	652	460	192	10/5
41N11E-9.1h	Village of Arlington Hgts.	1455	706	507	199	9/16
41N11E-12.8h2	Village of Mt. Prospect	1369	670	530	140	9/25
41N11E-14.5b	Citizens Utilities Co. of Illinois	1382	672	495	177	11/8
41N11E-21.3b	Village of Elk Grove	1415	717	560	157	10/26
41N11E-24.1g2	Citizens Utilities Co. of Illinois	1652	660	474	186	11/15
41N11E-26.8a	Village of Elk Grove	1395	682	520	162	11/16
41N11E-36.8d	Material Service Corp.	1440	668	509	159	10/26
41N10E-15.1f2	Citizens Utilities Co. of Illinois	1391	750	470	280	11/8
40N13E-34.7d4	Nor'west'n Malt & Grain Co.	1548	612	455	157	10/11
40N12E-18.6c	J. B. Clow & Sons, Inc.	1457	663	526	137	l0/27
40N12E-31.4c	Automatic Electric Co.	1468	655	593	62	10/20
40N12E-31.4d	Automatic Electric Co.	1410	655	549	106	10/20
39N14E-21.7bl	Joanna Western Mills Co.	1610	593	492	101	ll/6
39N14E-21.7b2	Joanna Western Mills Co.	1603	593	480	113	ll/6
39N13E-13.3c	Superior Sleeprite Corp.	1607	590	488	102	10/31
39N13E-21.6g	Kropp Forge Co.	1340	608	512	96	10/31
39N13E-24.1a	Van Merritt Brewery	1600	593	477	116	10/2
39N13E-25.2g	Ideal Roller & Mfg. Co.	1127	598	528	70	8/4
39N13E-35.1h	Liquid Carbonic Corp.	1512	594	465	129	10/23
39N12E-4.2b2	Richardson Co.	1557	638	592	46	10/2
39N12E-11.7f	Village of Maywood	1640	630	534	96	10/23
39N12E-11.8f	American Can Co.	1806	630	550	80	10/4
39N12E-13.7g	Altenheim-German Home	1661	626	532	94	10/27

Table 4 - Continued

Well number*	Owner	Depth of well (feet)	Surface elevation	Depth to water (feet)	Water level elevation	Date, 1961
COK-						
39N12E-22.7b	Amphenol-Borg Electronics	1550	628	558	70	10/30
39N12E-25.5d	Village of Riverside	1980	620	537	83	9/30
39N12E-36.8d	Village of Riverside	2047	618	531	87	9/30
38N13E-ll.lh	Bradshaw-Praeger & Co.	1224	597	501	96	10/26
38N13E-19.4e2	Visking Corp.	1601	621	585	36	10/1
38N13E-21.1f	Cracker Jack Co.	1585	620	500	120	9/27
38N12E-18.8f3	Suburban Cook Co. T.B.San.	1540	689	558	131	10/26
38N12E-24.7h	Corn Products Co.	1481	597	561	36	9/30
38N12E-28.7d	Fisher Body Co.	1542	605	485	120	6/2
38N12E-29.1d	Fisher Body Co.	1517	605	490	115	6/2
37N15E-8.1b2	Columbia Malting Co.	1683	589	470	119	10/25
37N15E-8.1c2	Falstaff Brewing Corp.	1680	593	483	110	10/25
37N13E-12.7h	Evergreen Park Com. K.S.	1637	623	474	149	12/4
37N13E-26.1g2	Oak Hill Cemetery	1637	617	442	175	10/25
37N13E-32.5h2	Ridgeland Service Water Co.	1580	617	458	159	10/10
37N11E-14.8c	N. American Car Corp.	1501	585	428	157	10/27
37N11E-20.4d	Village of Lemont	1665	596	418	178	10/27
36N14E-3.1g	Metro Glass Co.	1704	592	398	194	10/25
36N14E-34.5g	Village of Thornton	1724	612	356	256	10/10
36N13E-1.2c	Miller Pre-Pared Potato Co.	1651	600	423	177	10/30
36N13E-1.2g	Libby, McNeil & Libby	1618	597	420	177	10/27
36N13E-9.8b2	Village of Oak Forest	1701	672	495	177	10/30
DEK-						
42N5E-19.4b	City of Genoa	732	830	91	739	10/25
42N3E-26.3h2	Village of Kirkland	636	775	34	741	10/25
41N5E-32.3e2	City of Sycamore	907	870	88	782	10/25
40N4E-15.7a	City of DeKalb	1291	855	181	674	10/6
40N4E-22.2d	City of DeKalb	1331	870	183	687	10/7
40N4E-22.3el	City of DeKalb	1306	860	178	682	10/7
40N4E-23.2e	City of DeKalb	1330	890	183	707	10/9
40N4E-23.4d	City of DeKalb	1178	885	197	688	10/7
40N4E-23.8e	City of DeKalb	949	875	199	676	10/6
40N4E-25.7d	City of DeKalb	1328	885	223	662	10/18
40N3E-23.6e	Village of Malta	1254	915	157	758	9/27
40N3E-23.7e	Village of Malta	853	915	137	778	9/27
40N3E-23.8el	C & NW Railroad	1007	910	125	785	10/25
38N5E-15.2d	Village of Hinckley	708	740	13	727	10/30
37N5E-32.1cl	Village of Somonauk	190	685	17	668	10/24
37N5E-32.1c2	Village of Somonauk	502	685	15	670	10/24
37N5E-36.7hl	Village of Sandwich	600	661	18	643	10/24
37N5E-36.7h2	Village of Sandwich	600	667	20	647	10/24

Table 4 - Continued

Well number*	Owner	Depth of well (feet)	Surface elevation	Depth to water (feet)	Water level elevation	Date, 1961
DUP-						
40N11E-13.8e1	Village of Bensenville	1445	677	505	169	10/23
40N11E-13.8e2	Village of Bensenville	1442	676	510	166	11/22
40N11E-14.4e	Village of Bensenville	1445	670	526	144	10/24
40N11E-31.5b	Village of Lombard	1793	736	560	17S	10/24
40N11E-35.5e	City of Elmhurst	1475	703	621	82	10/24
39N11E-4.1f	Village of Villa Park	1395	703	557	116	10/1
39N11E-6.3a	Village of Lombard	2062	700	533	167	10/24
39N11E-9.1h	Village of Villa Park	1475	695	585	110	10/23
39N11E-9.2h	Village of Villa Park	2125	699	554	115	10/26
39N11E-10.1h	City of Elmhurst	1360	669	596	73	10/24
39N11E-10.3g3	Ovaltine Food Products	1920	675	571	104	10/24
39N11E-10.4g6	Ovaltine Food Products	1999	675	572	103	10/24
39N11E-10.4gS	Ovaltine Food Products	2002	670	564	106	10/24
39N11E-26.5h	Oakbrook Utility Co.	1521	665	535	150	10/6
39N11E-26.&h	Oakbrook Utility Co.	1540	690	566	124	10/6
39N10E-1.4d	Public Service Co. of X. Illinois	1464	740	519	221	10/24
39N9E-15.7h	City of West Chicago	1465	746	425	321	10/25
3SN9E-13.2b3	City of Xaperville	1445	660	421	259	10/25
37NllE-3.6al	Argonne Xational Lab.	1595	670	495	175	10/27
GRY-						
34N8E-35.1e	Dresden Nuclear Power Sta.	1500	515	113	402	10/16
34N8E-35.1g	Dresden Nuclear Power Sta.	785	519	154	365	10/16
33N8E-36.5a	Village of Diamond	723	565	141	424	11/6
33N7E-4.2a	City of Morris	665	523	45	478	11/6
33N7E-4.4a	Brown Milling Co.	613	522	54	468	10/23
33N7E-4.4c	City of Morris	1462	506	63	443	11/6
33N7E-9.3h	City of Morris	1501	519	67	452	10/6
31N8E-11.6bl	Village of S. Wilmington	920	586	153	433	9/8
KNE-						
42N8E-22.4g	Village of Carpentersville	1140	728	258	470	10/24
42NSE-22.7f	D. Hill Nursery Co.	1227	790	322	468	10/24
42N8E-27.1e	Village of W. Dundee	1200	725	277	448	11/24
42N6E-3.1e	Ill. Toll Hwy. Comm. M-6	962	910	255	655	10/30
41N8E-11.3f2	City of Elgin	1935	743	335	408	10/22
41N8E-11.3f3	City of Elgin	1793	745	345	400	10/22
41N8E-11.3f4	City of Elgin	1880	740	325	415	10/22
41N8E-11.3f5	City of Elgin	1255	740	325	415	10/22
41N8E-12.3e	Simpson Co.	998	805	390	415	10/30
41N8E-24.3b3	City of Elgin	1255	728	313	415	11/15

Table 4 - Continued

Well number*	Owner	Depth of well (feet)	Surface elevation	Depth to water (feet)	Water level elevation	Date, 1961
KNE-						
41N8E-24.6hl	Elgin National Watch Co.	1240	735	293	442	10/24
41N8E-24.6h2	Elgin National Watch Co.	1240	734	297	437	10/14
41N8E-35.8g	Village-of South Elgin	1400	761	285	476	11/24
41N6E-9.1g2	Village of Burlington	1105	920	276	644	10/25
40N8E-27.6b	City of St. Charles	2200	692	221	471	10/24
40N8E-31.6h	Ill. State Training School for Boys	1322	790	267	523	10/24
40N8E-34.5g2	Howell Co.	1268	688	250	438	10/24
40N8E-34.6e2	City of St. Charles	2249	755	280	475	10/24
39N8E-2.4c	City of Geneva	2292	753	290	463	10/23
39N8E-3.1b2	City of Geneva	2217	678	227	451	10/23
39N8E-35.5e	Burgess Norton Co.	1340	760	340	420	10/20
39N8E-3.8g	City of Geneva	1578	759	320	439	10/23
39N8E-22.3e2	City of Batavia	2200	667	210	457	10/25
39N8E-23.8f	City of Batavia	1357	721	290	431	11/1
39N8E-33.4g	Mooseheart	2200	694	254	440	10/25
39N7E-5.8f	Village of Elburn	1350	850	245	605	10/24
38N8E-4.3g	Village of North Aurora	1305	675	300	375	10/25
38N8E-4.4b	Aurora Downs Racetrack	689	705	292	413	10/25
38N8E-9.2d	Mercyville Sanitarium	1411	697	363	334	10/25
38N8E-13.8b	Aurora Paperboard Co.	1391	696	361	335	10/17
38N8E-15.4gl	City of Aurora	2250	646	318	328	10/26
38N8E-15.6f	Oberweiss Dairy	740	660	352	308	11/6
38N8E-15.6h	Alba Mfg. Co.	1543	645	319	326	11/6
38N8E-21.5h	City of Aurora	2299	673	355	315	10/26
38N8E-22.7c	City of Aurora	1500	628	278	350	10/26
38N8E-32.4f	Village of Montgomery	1353	640	324	316	10/20
38N8E-33.8c	Village of Montgomery	1336	633	300	333	10/20
KNK-						
30N9E-6.8a	Village of Reddick	1188	612	158	454	10/23
KEN-						
37N8E-5.9f	Caterpillar Tractor Co.	1384	661	300	361	9/7
37N8E-6.2d	Caterpillar Tractor Co.	1352	661	254	407	.11/13
37N8E-6.2f	Caterpillar Tractor Co.	1346	660	298	362	10/9
37N8E-17.6b	Village of Oswego	728	654	203	451	11/6
37N8E-20.8h	Village of Oswego	1378	640	231	409	11/6
37N7E-32.1el	Village of Yorkville	590	584	76	508	11/6
37N7E-32.1e2	Village of Yorkville	1335	584	102	482	11/6

Table 4 - Continued

Well number*	Owner	Depth of well (feet)	Surface elevation	Depth to water (feet)	Water level elevation	Date, 1961
LKE-						
46N12E-21.3d	City of Zion, Shiloh Park	1575	642	99	543	ll/2
46N11E-27.3a	Central Fur-Food Coop.	1230	672	140	532	9/26
45N11E-15.8f	Ill. Toll Hwy. Comm. M-4	1045	740	221	519	9/26
45N10E-26.7b	Village of Grays Lake	1323	785	236	549	11/22
44N12E-18.3f2	Goodyear Tire & Rubber Co.	1600	680	230	450	ll/2
44N12E-21.6g	Methodist Childrens Home	900	660	220	440	11/2
43N12E-31.5f	Ill. Toll Hwy. Comm. TP-8	1055	680	292	388	ll/6
43N11E-23.5g	Village of Lincolnshire	1305	645	195	450	ll/8
LAS-						
36N4E-8.5hl	Village of Leland	230	701	53	648	10/24
36N4E-8.5h2	Village of Leland	220	700	18	682	10/24
36N3E-18.4d3	City of Earlville	625	703	26	677	10/30
36N3E-18.10a	Marathon Electric Mfg. Corp.	150	700	35	665	10/24
36N1E-32.1a	City of Mendota	1450	740	88	652	10/25
36NlE-33.3h	City of Mendota	534	740	161	579	10/24
35N5E-8.6b	Ill. State Industrial Sch.	885	590	11	579	10/26
33N5E-25.4e	U.S. Govt. (Civil Defense)	654	505	43	462	9/8
33N5E-25.4gl	U.S. Govt. (Civil Defense)	451	505	40	465	9/8
33N4E-13.3c	City of Marseilles	850	498	28	470	10/24
33N2E-21.2g	Starved Rock State Park	475	470	25	445	10/24
33N2E-21.3g	Starved Rock State Park	401	470	27	443	10/24
LEE-						
37N2E-10.2b	Village of Paw Paw	1018	928	195	733	10/24
LIV-						
30N8E-26.8h	Cardiff	1785	633	120	513	10/23
30N6E-l.la	Ill. State Reformatory for Women	1201	648	164	484	10/24
30N6E-1.2a	Ill. State Reformatory for Women	1203	645	166	479	10/23
MCH-						
45N8E-10.8d	Morton Chemical Co.	1161	850	265	585	10/27
44N5E-35.3g	City of Marengo	1028	817	106	711	10/26
44N5E-35.5h	Arnold Engineering Co.	846	818	106	712	10/11
43N8E-5.4g	City of Crystal Lake	1218	917	388	529	10/27
0GL-						
40N2E-23.1f	Village of Creston	737	905	128	777	10/25
40NlE-24.7a	City of Rochelle	1484	793	55	738	10/25
40NlE-25.3f	City of Rochelle	867	800	70	730	10/25

Table 4 - Continued

Well number*	Owner	Depth of well (feet)	Surface elevation	Depth to water (feet)	Water level elevation	Date, 1961
WIL-						
37N10E-33.2h	Hampton Park Subdivision	1520	640	450	190	10/28
36N10E-2.8f	Public Service Co. of N. Illinois, Sta. 18	1507	590	423	167	10/26
36N10E-16.4d	Revere Copper & Brass Co.	1523	666	500	166	9/7
36N10E-23.2f	City of Lockport	1572	650	525	125	10/14
36N10E-23.5a	City of Lockport	1571	662	499	163	10/13
36N10E-23.6c	City of Lockport	1446	589	459	130	10/14
36N10E-27.6b	U.S. Army Lockport Locks	815	581	445	136	11/8
36N10E-28.6f2	Ill. State Penitentiary, Stateville	2007	642	535	107	11/1
36N10E-29.2g	Ill. State Penitentiary, Stateville	1665	646	514	132	ll/l
36N10E-32.1a	Lidice Subdivision	1652	659	546	113	10/12
36N10E-33.5c	Chaney School	952	630	493	137	10/12
36N10E-33.6h	Public Service Co. of N. Illinois, Sta. 55	1558	593	469	124	11/16
36N10E-34.8a	Ruberoid Co.	776	551	482	69	10/8
36N9E-10.8d	Village of Plainfield	1481	622	360	262	10/26
35N11E-5.7hl	City of Joliet (Hadley Valley)	1660	648	555	93	11/14
35NllE-8.8hl	City of Joliet (Hadley Valley)	1701	674	536	138	10/30
35N10E-3.4e	Ill. State Penitentiary	1518	560	512	48	ll/l
35N10E-3.5e	Ill. State Penitentiary	1660	549	464	85	ll/3
35N10E-4.2h	Phoenix Mfg. Co.	1595	553	459	94	ll/3
35N10E-9.1d	City of Joliet	1621	536	443	93	10/9
35N10E-10.1a	Wm. E. Pratt Mfg. Co.	1505	551	505	46	11/18
35N10E-10.6a	Joliet Twp. High School	881	535	448	87	11/13
35N10E-11.6g	E. J. & E. Railroad	1589	560	490	70	10/15
35N10E-16.2h	City of Joliet	1575	531	397	134	11/16
35N10E-16.5c	City of Joliet	1568	537	438	99	11/7
35N10E-20.6a	Public Service Co. of N. Illinois, Sta. 9	1487	536	446	90	9/30
35N10E-20.7g	Village of Rockdale	1586	556	463	93	11/13
35N10E-21.4b	American Cyanamid Co.	1612	583	467	116	11/10
35N10E-22.3f	Will Co. Sanitarium	864	622	467	155	11/13
35N10E-22.7g	American Institute of Laundering	1608	569	402	167	11/13
35N10E-30.6e	Caterpillar Tractor Co.	1543	546	428	118	10/3
35N10E-30.7f	Caterpillar Tractor Co.	1510	544	448	96	10/5
34N9E-10.1h	American Oil Co.	1405	568	425	143	10/23
34N9E-11.2d	Stephen Chemical Co.	1402	520	403	117	10/7
34N9E-11.2e	Stephen Chemical Co.	1407	525	398	127	11/5

Table 4 - Concluded

Well number*	Owner	Depth of well (feet)	Surface elevation	Depth to water (feet)	Water level elevation	Date, 1961
WIL-						
34N9E-11.7g	American Oil Co.	1422	569	399	170	10/23
33N10E-9.1f	Joliet Arsenal-Elwood	1672	646	301	345	11/2
33N10E-9.4h	Joliet Arsenal-Elwood	1614	641	301	340	11/1
33N9E-1.5el	Joliet Arsenal-Kankakee	935	570	235	335	10/18
33N9E-22.1f	State of Ill., Des Plaines Game Farm	813	550	178	372	11/7
32N9E-8.5c	City of Braidwood	1050	575	208	367	10/6
WIN-						
46N2E-15.5b	Yates American Co.	301	820	41	779	6/19
44N2E-18.6b	City of Rockford	1312	780	127	653	10/26
44N2E-23.1c	Ill. Toll Hwy. Comm.	371	770	36	734	10/26
44N2E-31.7f	City of Rockford	1372	784	87	697	10/27
44NlE-21.8e	City of Rockford	1355	810	120	690	10/26
44NlE-23.7e	City of Rockford	1530	721	27	694	10/26
44N1E-28.5C	City of Rockford	1380	822	179	643	10/17
44NlE-36.7fl	City of Rockford	1503	732	92	640	10/26

APPENDIX (Continued)

Table 5 - Decline or Rise in Water Levels in Deep Wells During 1961

Well number	Owner	Water level elevation 1960	1961	Date of measurements	Change in water level elevation (feet)
BNE					
44N3E-24.8a	City of Belvidere	730	728	11/60-10/61	2
44N3E-25.8b	City of Belvidere	753	748	11/60-10/61	5
44N3E-26.1el	City of Belvidere	713	720	11/60-10/61	+7*
44N3E-35.1e	City of Belvidere	739	737	11/60-10/61	2
COK-					
42N12E-14.2cl	Sunset Ridge Country Club	303	277	10/61-11/61	26
42N12E-23.5f3	Holy Ghost Convent	308	276	11/60-11/61	32
42N12E-29.1a	Ill. Municipal Water Co.	292	279	11/60-11/61	13
42N12E-33.2C	Ill. Municipal Water Co.	295	281	11/60-11/61	14
42N11E-11.6e	Village of Wheeling	288	265	10/60-11/61	23
42N11E-11.8b2	Ekco Alcoa Containers Inc.	298	270	10/60-11/61	28
42N11E-26.7d	Citizens Utilities Co. of Illinois	256	211	11/60-11/61	45
42N11E-27.3a	Village of Mt. Prospect	260	211	6/60-10/61	49
42N11E-33.3b	Village of Mt. Prospect	193	173	11/60-10/61	20
42N11E-34.4g	Village of Mt. Prospect	243	235	11/60-10/61	8
42N11E-36.3b2	Maryville Academy	266	230	9/60-10/61	36
42N10E-24.8al	Arlington Hgts. Jockey Club	304	285	10/60-10/61	19
42N10E-25.1b	City of Rolling Meadows	272	255	10/60- 9/61	17
41N13E-8.6d	Glenview Club	261	241	11/60-10/61	20
41N13E-20.7e	Baxter Laboratory	233	211	10/60-10/61	22
41N13E-21.2b	G.D. Searle & Co.	253	244	11/60-10/61	9
41N12E-12.8b	Eugenia Subdivision	246	231	11/60-10/61	15
41N11E-12.8h2	Village of Mt. Prospect	185	140	11/60- 9/61	45
41NllE-21.3b	Village of Elk Grove	213	157	10/60-10/61	56
41NllE-24.1g2	Citizens Utilities Co.	208	195	11/60-11/61	13
40N12E-18.6c	J.B. Clow & Sons, Inc.	152	137	10/60-10/61	15
40N12E-31.4d	Automatic Electric Co.	138	106	10/60-10/61	32
39N13E-13.3c	Superior Sleeprite Corp.	100	102	11/60-10/61	+2
39N13E-21.6g	Kropp Forge Co.	112	96	3/60-10/61	16
39N13E-35.1h	Liquid Carbonic Corp.	124	129	10/60-10/61	+5
C0K-					
39N12E-4.2b2	Richardson Co.	84	46	5/60-10/61	38
39N12E-11.7f	Village of Maywood	97	96	10/60-10/61	1
39N12E-13.7g	Altenhein German Home	100	94	11/60-10/61	6
39N12E-25.5d	Village of Riverside	93	83	10/60- 9/61	10
39N12E-36.8d	Village of Riverside	93	87	10/60- 9/61	6
38N13E-ll.lh	Bradshaw Praeger & Co.	95	96	11/60-10/61	+1
		35	36	10/60-10/61	+1

* + indicates rise in water level

Table 5 - Continued

Well number	Owner	Water level elevation 1960	Water level elevation 1961	Date of measurements	Change in water level elevation (feet)
COK-					
38N13E-21.1f	Cracker Jack Co.	120	120	10/60- 9/61	0
38N12E-18.8f3	Suburban Cook Co. TB Sanitarium	135	131	11/60-10/61	4
38N12E-24.7h	Corn Products Co.	34	36	9/60- 9/61	+2
38N12E-28.7d	Fisher Body Co.	125	120	11/60- 6/61	5
38Nl2E-29.1d	Fisher Body Co.	105	115	11/60- 6/61	+10
37N15E-8.1b2	Columbia Malting Co.	122	119	10/60-10/61	3
37N11E-20.4d	Village of Lemont	191	178	10/60-10/61	13
36N14E-3.1g	Metro Glass Co.	211	194	8/60-10/61	17
36N14E-34.5g	Village of Thornton	262	256	10/60-10/61	6
36N13E-1.2c	Miller Pre-Pared Potato Co.	185	177	10/60-10/61	8
36N13E-9.8b2	Village of Oak Forest	186	177	10/60-10/61	9
DEK-					
42N5E-19.4b	City of Genoa	737	739	10/60-10/61	+2
42N3E-26.3h2	Village of Kirkland	755	741	10/60-10/61	14
41N5E-32.3e2	City of Sycamore	795	782	10/60-10/61	13
40N4E-15.7a	City of DeKalb	674	674	10/60-10/61	0
40N4E-22.3el	City of DeKalb	690	682	10/60-10/61	8
40N4E-23.2e	City of DeKalb	706	707	10/60-10/61	+1
40N4E-23.4d	City of DeKalb	691	688	10/60-10/61	3
40N3E-23.6e	Village of Malta	754	758	10/60- 9/61	+4
40N3E-23.7e	Village of Malta	782	778	10/60- 9/61	4
40N3E-23.8el	C & NW Railroad	788	785	10/60-10/61	3
38N5E-15.2d	Village of Hinckley	719	727	10/60-10/61	+8
37N5E-32.1cl	Village of Somonauk	669	668	10/60-10/61	1
37N5E-32.1c2	Village of Somonauk	670	670	10/60-10/61	0
37N5E-36.7hl	Village of Sandwich	644	643	10/60-10/61	1
37N5E-36.7h2	Village of Sandwich	650	647	10/60-10/61	3
DUP-					
40N11E-13.8el	Village of Bensenville	157	169	10/60-10/61	+12
40N11E-14.4e	Village of Bensenville	156	144	10/60-10/61	12
40NllE-31.5b	Village of Lombard	210	178	11/60-10/61	32
40NllE-35.5e	City of Elmhurst	109	82	11/60-10/61	27
39NllE-9.1h	Village of Villa Park	137	110	10/60-10/61	27
39NllE-9.2h	Village of Villa Park	139	115	6/60-10/61	24
39N11E-10.1h	City of Elmhurst	95	73	10/60-10/61	22
39N11E-10.4g6	Ovaltine Food Products	123	103	9/60-10/61	20
39N10E-1.4d	Public Service Co. of Illinois	228	221	10/60-10/61	7
38N9E-13.2b3	City of Naperville	250	259	9/60-10/61	+9
39N9E-15.7h	City of West Chicago	334	321	10/60-10/61	13
37NllE-3.8al	Argonne National Laboratory	180	175	11/60-10/61	5

Table 5 - Continued

Well number	Owner	Water level elevation 1960	1961	Date of measurements	Change in water level elevation (feet)
GRY-					
34N8E-35.1e	Dresden Nuclear Power Station	409	403	8/60-10/61	6
33N8E-36.5a	Village of Diamond	429	424	11/60-11/61	5
33N7E-4.4a	Brown Milling Co.	460	468	10/60-10/61	+8
33N7E-9.3h	City of Morris	456	452	10/60-10/61	4
KNE-					
42N8E-22.4g	Village of Carpentersville	471	470	11/60-10/61	1
42N8E-22.7f	D. Hill Nursery Co.	473	468	11/60-10/61	5
42N8E-27.1e	Village of West Dundee	449	448	11/60-11/61	1
42N6E-3.1e	Ill. Toll Hwy. Comm. M-6	656	655	11/60-10/61	1
41N8E-11.3f2	City of Elgin	418	408	10/60-10/61	10
41N8E-11.3f5	City of Elgin	428	415	10/60-10/61	13
41N8E-12.3e	Simpson Co.	416	415	11/60-10/61	1
41N8E-24.3b3	City of Elgin	443	415	5/60-11/61	28
41N8E-24.6hl	Elgin National Watch Co.	480	442	11/60-10/61	38
41N8E-24.6h2	Elgin National Watch Co.	479	437	11/60-10/61	42
41N6E-9.1g2	Village of Burlington	651	644	10/60-10/61	7
40N8E-27.6b	City of St. Charles	495	471	11/60-10/61	24
40N8E-31.6h	Ill. State Training School for Bovs	525	523	11/60-10/61	2
40N8E-34.5g2	Howell Co.	440	438	11/60-10/61	2
40N8E-34.6e2	City of St. Charles	472	475	11/60-10/61	+3
39N8E-2.4c	City of Geneva	473	463	10/60-10/61	10
39N8E-3.1b2	City of Geneva	465	451	10/60-10/61	14
39N8E-3.5e	Burgess Norton Co.	440	420	11/60-10/61	20
39N8E-3.8g	City of Geneva	454	439	10/60-10/61	15
39N8E-22.3c2	City of Batavia	477	457	10/60-10/61	20
39N8E-23.8f	City of Batavia	451	431	10/60- 9/61	20
39N8E-33.4g	Mooseheart	446	440	10/60-10/61	6
39N7E-5.8f	Village of Elburn	568	605	11/60-10/61	+37
38N8E-4.3g	Village of N. Aurora	400	375	7/60-10/61	25
38N8E-4.4b	Aurora Downs Racetrack	419	413	10/60-10/61	6
38N8E-9.2d	Mercyville Institute	343	334	10/60-10/61	9
38N8E-13.8b	Aurora Paperboard Co.	332	335	10/60-10/61	+3
38N8E-15.4gl	City of Aurora	332	328	10/60-10/61	4
38N8E-15.6h	Alba Mfg. Co.	332	326	10/60-11/61	6
38N8E-21.5h	City of Aurora	328	318	10/60-10/61	10
38N8E-22.7c	City of Aurora	323	350	10/60-10/61	+27
38N8E-32.4f	Village of Montgomery	342	316	10/60-10/61	26
38N8E-33.8c	Village of Montgomery	325	333	10/60-10/61	+8

Table 5 - Continued

Well number	Owner	Water level elevation 1960	1961	Date of measure-ments	Change in water level elevation (feet)
KNK-					
30N9E-6.8a	Village of Reddick	462	454	10/60-10/61	8.
KEN-					
37N8E-6.2d	Caterpillar Tractor Co.	405	407	11/60-11/61	+2
37N8E-6.2f	Caterpillar Tractor Co..	374	362	11/60-10/61	12
37N8E-17.6b	Village of Oswego	456	451	11/60-11/61	5
37N8E-20.8h	Village of Oswego	412	409	10/60-11/61	3
37N7E-32.1e2	Village of Yorkville	512	482	11/60-11/61	30
37N7E-32.1el	Village of Yorkville	526	508	11/60-11/61	18
LKE-					
46Nl2E-2l.3d	City of Zion, Shiloh Pk.	545	543	10/60-11/61	2
46N11E-27.3a	Central Fur-Food Coop.	537	532	10/60- 9/61	5
45N11E-15.8f	Ill.Toll Hwy. Comm. M-4	524	519	10/60- 9/61	5
45N10E-26.7b	Village of Grays Lake	551	549	10/60-11/61	2
44N12E-18.3f2	Goodyear Tire & Rubber	442	450	10/60-11/61	+8
44N12E-2l.6g	Methodist Childrens Home	465	440	10/60-11/61	25
LAS-					
36N4E-8.5hl	Village of Leland	649	648	10/60-10/61	1
36N4E-8.5h2	Village of Leland	686	682	10/60-10/61	4
36N3E-lS.4d3	City of Earlville	680	677	10/60-10/61	3
36N3E-18.10a	Marathon Electric Mfg.	665	665	10/60-10/61	0
36NlE-32.1a	City of Mendota	646	652	10/60-10/61	+6
35N5E-8.6b	Ill. State Industrial School	580	579	11/60-10/61	1
33N5E-25.4gl	U.S. Government (Civil Defense Agency)	463	465	10/60- 9/61	+2
33N4E-13.3c	City of Marseilles	470	470	10/60-10/61	0
33N2E-21.2g	Starved Rock State Park	450	445	11/60-10/61	5
33N2E-2l.3g	Starved Rock State Park	450	443	11/60-10/61	7
LEE-					
37N2E-10.2b	Village of Paw Paw	736	733	10/60-10/61	3
LIV-					
30N8E-26.8h	Cardiff	509	512	10/60-10/61	+3
30N6E-1.2a	Ill. State Reformatory for Women	446	479	10/60-10/61	+33
MCH-					
45NSE-10.8d	Morton Chemical Co.	600	585	10/60-10/61	15
44N5E-35.3g	City of Marengo	712	711	10/60-10/61	1
44N5E-35.5h	Arnold Engineering Co.	726	712	10/60-10/61	14
43N8E-5.4g	City of Crystal Lake .'	557	529	10/60-10/61	28

Table 5 - Concluded

Well number	Owner	Water level elevation 1960	Water level elevation 1961	Date of measure-ments	Change in water level elevation (feet)
0GL-					
40N2E-23.1f	Village of Creston	780	777	10/60-10/61	3
40N1E-24.7al	City of Rochelle	733	738	10/60-10/61	+5
40N1E-25.3f	City of Rochelle	723	730	10/60-10/61	+7
WIL-					
36N10E-2.8f	Public Service Co. of N. Illinois, Sta. 18	178	167	10/60-10/61	11
36N10E-16.4d	Revere Copper & Brass	179	166	11/60- 9/61	13
36N10E-23.2f	City of Lockport	147	125	10/60-10/61	22
36N10E-23.5a	City of Lockport	172	163	10/60-10/61	9
36N10E-23.6c	City of Lockport	130	130	10/60-10/61	0
36N10E-27.6b	U.S. Army Lockport Locks	144	136	11/60-11/61	8
36N10E-28.6f2	Ill. State Penitentiary, Stateville	135	107	11/60-11/61	28
36N10E-29.2g	Ill. State Penitentiary, Stateville	148	132	10/60-11/61	16
36N10E-32.1a	Lidice Subdivision	128	113	9/60-10/61	15
36N10E-33.6h	Public Service Co. of N. Illinois, Sta. 55	134	124	10/60-11/61	10
36N10E-34.8a	Ruberoid Co.	67	69	11/60-10/61	+2
36N9E-10.8d	Village of Plainfield	280	262	10/60-10/61	18
35N10E-3.4e	Ill. State Penitentiary	68	48	11/60-11/61	20
35N10E-3.5e	Ill. State Penitentiary	123	85	11/60-11/61	38
35N10E-4.2h	Phoenix Mfg. Co.	104	94	10/60-11/61	10
35N10E-9.1d	City of Joliet	105	93	11/60-10/61	12
35N10E-10.1a	Wm. E. Pratt Mfg. Co.	64	46	11/60-11/61	18
35N10E-10.6a	Joliet Twp. High School	95	87	10/60-11/61	8
35N10E-16.2h	City of Joliet	141	134	10/60-11/61	7
35N10E-20.6a	Public Service Co. of N. Illinois, Sta. 9	104	90	10/60- 9/61	14
35N10E-20.7g	Village of Rockdale	113	93	11/60-11/61	20
35N10E-2l.4b	American Cyanamid Co.	127	116	10/60-11/61	11
35N10E-22.3f	Will County Sanitarium	190	170	10/60-10/61	20
35N10E-22.7g	American Institute of Laundering	171	167	10/60-11/61	4
35N10E-30.6e	Caterpillar Tractor Co.	134	118	9/60-10/61	16
35N10E-30.7f	Caterpillar Tractor Co.	108	96	9/60-10/61	12
34N9E-10.1h	American Oil Co.	188	143	10/60-10/61	45
34N9E-11.7g	American Oil Co.	190	170	10/60-10/61	20
33N9E-1.5el	Joliet Arsenal, Kankakee	340	335	10/60-10/61	5
WIN-					
44N2E-18.6b	City of Rockford	678	653	7/60-10/61	25
44N2E-31.7f	City of Rockford	688	697	7/60-10/61	+9
44NlE-21.8e	City of Rockford	683	690	10/60-10/61	+7
44NlE-23.7e	City of Rockford	696	694	10/60-10/61	2
44NlE-36.7fl	City of Rockford	651	640	10/60-10/61	11