

ISWS-73-CIR113

*Circular 113*

STATE OF ILLINOIS

DEPARTMENT OF REGISTRATION AND EDUCATION

Geology Dept.  
Reserve Room



*Water-Level Decline and Pumpage  
in Deep Wells in Northern Illinois,  
1966-1971*

by R. T. SASMAN, C. R. BENSON, G. L. DZURISIN, and N. E. RISK

ILLINOIS STATE WATER SURVEY

URBANA

1973

## CONTENTS

	Page
Summary. . . . .	.1
Introduction. . . . .	.2
Geology and hydrology. . . . .	.4
Pumpage from deep wells. . . . .	.7
Pumpage, 1966 through 1971. . . . .	.7
Public pumpage. . . . .	.10
Industrial pumpage. . . . .	.13
Domestic pumpage. . . . .	.14
Pumpage related to practical sustained yield, 1971 . . . . .	.14
Water levels in deep wells. . . . .	.15
Water-level decline, October 1966 to October 1971. . . . .	.15
Piezometric surface of aquifer, 1971. . . . .	.20
References. . . . .	.24
Appendix. . . . .	.25

## ILLUSTRATIONS

Figure	Page
1 Cross sections of the structure and stratigraphy of the bedrock and piezometric profiles of the Cambrian-Ordovician aquifer in the Chicago region. . . . .	.5
2 Cross sections of the structure and stratigraphy of the bedrock in northwestern Illinois. . . . .	.6
3 Pumpage from deep wells in northern Illinois, 1900 through 1971, subdivided by use. . . . .	.7
4 Pumpage from deep wells in the Chicago region, 1900 through 1971, subdivided by use. . . . .	.7
5 Distribution of pumpage from deep wells in the Chicago region, 1966. . . . .	.11
6 Distribution of pumpage from deep wells in the Chicago region, 1971. . . . .	.12
7 Water levels in selected observation wells, 1966-1971 . . . . .	.16
8 Map showing location of selected observation wells. . . . .	.18
9 Map showing changes in water levels in deep wells, 1966-1971. . . . .	.19
10 Elevation of piezometric surface of Cambrian-Ordovician aquifer in October 1971. . . . .	.21

TABLES

Table	Page
1 Distribution of pumpage from sandstone wells, northern Illinois 1966-1971, subdivided by use . . . . .	.8
2 Rates of change in pumpage from deep wells in the Chicago region . . . . .	.10
3 Decline in nonpumping water levels in the Chicago region .	17
4 Fluctuations in nonpumping water levels in selected observation wells. . . . .	.18

WATER-LEVEL DECLINE AND PUMPAGE IN DEEP WELLS  
IN NORTHERN ILLINOIS, 1966-1971

by R. T. Sasman, C. R. Benson, G. L. Dzurisin, and N. E. Risk

SUMMARY

This report considers water-level declines from the end of 1966 through 1971 in deep sandstone wells penetrating the Cambrian-Ordovician aquifer, the most highly developed aquifer for large groundwater supplies in northern Illinois. Twenty northern counties are included with emphasis being placed on the 8-county Chicago region in northeastern Illinois. The Cambrian-Ordovician aquifer is encountered at depths ranging from less than 100 feet in areas of northwestern Illinois to an average of about 500 feet below land surface at Chicago; it has an average thickness of 1000 feet and is composed chiefly of sandstones and dolomites.

Pumpage from deep wells in northern Illinois increased from 200,000 gallons per day (gpd) in 1864 to 215.4 million gallons per day (mgd) in 1966; 62 percent of the 1966 pumpage was from wells in the Chicago region. As a result, artesian pressure in the Cambrian-Ordovician aquifer in Chicago has declined about 750 feet. Pumpage from deep wells in the Chicago region is concentrated in seven general areas: Chicago, Joliet, Elmhurst, Des Plaines, Aurora, Mundelein, and Elgin. Heavy pumpage from deep wells outside the Chicago region occurs at Rockford, Freeport, Belvidere, Sterling, Dixon, De Kalb-Sycamore, Rochelle, and Ottawa-Peru. Numerous other municipalities and industries throughout northern Illinois pump small to moderate quantities of water from deep wells.

During the period from 1966 through 1971, pumpage from deep wells in northern Illinois increased to 239.0 mgd, an increase of 23.6 mgd or 11 percent more than the 1966 pumpage. Pumpage in the Chicago region increased to 150.7 mgd, an increase of 12.5 percent since 1966. This increase has resulted in excessive water-level declines in some deep wells. For the Chicago region, average annual water-level declines during the 5-year period ranged from 4 feet in Grundy County to 14 feet in Lake County and averaged about 9 feet. Water levels in 11 selected observation wells outside the Chicago region declined an average of 1 foot per year during the same period.

Withdrawals since 1966 within the Chicago region exceeded the practical sustained yield of the Cambrian-Ordovician aquifer, as they have each year since 1958, with the result that groundwater users continue to mine water and to borrow water from future generations. By the end of 1966, the upper units of the aquifer were already being dewatered in many areas. If the distribution of pumpage remains the same and pumpage continues to increase as indicated by recent trends, the principal water-yielding units of the aquifer will be partially dewatered in many areas much sooner than previously anticipated. Pumping levels exceeded 1000 feet below the surface in a few wells in 1971; such levels will be common within the next 5 years.

## INTRODUCTION

In May 1959 the State Water Survey and State Geological Survey issued a Cooperative Groundwater Report<sup>1</sup> which discussed the geology and hydrology of the groundwater resources of the Chicago region, the yields of aquifers, and the possible consequences of future groundwater development. Special emphasis was placed on the deep water-yielding aquifers which have been most widely used for large groundwater supplies. 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 would vary from the predicted declines if future distribution and rates of pumpage deviated from extrapolations of past groundwater use. As a result of the findings of Cooperative Report 1, the program of collecting and reporting water-level and pumpage data, which is one of the functions of the State Water Survey, was accelerated for deep wells in the Chicago region in 1959 and has been conducted on a continuing basis since.

The objectives of this program are 1) to provide a continuous 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 continues to be urgent because of the progressively increasing demands for water supplies and the continuing decline of water levels.

Four reports on water levels and pumpage have been issued by the State Water Survey subsequent to Cooperative Report 1. These were Circulars 79, 83, 85, and 9A<sup>2,3,4,5</sup> which summarized trends in water levels and pumpage from deep wells during 1959, 1960, 1961, and 1962-1966, respectively. In addition, Reports of Investigation 50 and 52<sup>6,7</sup> summarized trends in groundwater pumpage in 17 counties of northern Illinois through 1962 and 1963, respectively, with specific sections describing pumpage from deep wells.

Because of increasing expansion of urban development, the outward migration of deepening water levels, and increasing interest in regional water resources development, this report covers a 20-county area of northern Illinois, from Lake Michigan to the Mississippi River and from the Wisconsin border to a line generally east-west across the southern borders of Kankakee, La Salle, and Whiteside Counties. Pumpage

and water-level data are related to counties and townships rather than general pumping centers, as was done in previous reports, in order to permit better use of the data. This report includes the first detailed investigation of deep well water levels in northwestern Illinois and in Kankakee County.

The eight counties of the Chicago region, with the abbreviations used in this report, are:

Cook	COK	Kendall	KEN
Du Page	DUP	Lake	LKE
Grundy	GRY	McHenry	MCH
Kane	KNE	Will	WIL

The 12 counties outside the Chicago area included in this report are:

Boone	BNE	Lee	LEE
Carroll	CAR	Ogle	OGL
De Kalb	DEK	Rock Island	RIS
Jo Daviess	JDV	Stephenson	STE
Kankakee	KNK	Whiteside	WTS
La Salle	LAS	Winnebago	WIN

Pumpage from deep wells in northern Illinois increased from 123.3 mgd in 1950 to 154.1 mgd in 1960, an average rate of increase of 3.1 mgd per year. Pumpage increased to 215.4 mgd by 1966, an average rate of increase of 10.2 mgd. Corresponding average annual rates of pumpage increase for the Chicago region are 2.7 and 5.9 mgd, respectively. The annual rate of increase in the Chicago region reached a record high of 11.0 mgd in 1959. Pumpage in the Chicago region has exceeded the sustained yield of the Cambrian-Ordovician aquifer every year since 1958.

As a result of this rapid rate of pumpage growth, water levels have declined drastically in many areas of the Chicago region. Average annual water-level declines for the period October 1958 to October 1966 ranged from 9 feet per year in the Aurora area to 19 feet per year in the Elmhurst area and averaged about 14 feet per year in the Chicago region. The 1958-1966 average decline was considerably greater than the average annual decline (10 feet) for the period 1945-1958. Water-level declines in northern Illinois outside the Chicago region varied from less than 1 foot to about 4 feet per year.

This report summarizes trends in water levels and pumpage from deep wells from the end of 1966 through 1971. A summary of the essential findings of previous publications regarding the deep aquifers is presented to serve as a background for interpretation of the records.

## GEOLOGY AND HYDROLOGY

Groundwater resources in northern Illinois are developed from four aquifer systems: 1) sand and gravel deposits of the glacial drift, 2) shallow dolomite aquifers of Silurian and Ordovician age, 3) sandstone aquifers of Cambrian and Ordovician age, of which the Ironton-Galesville and Glenwood-St. Peter sandstones are the most productive formations, and 4) the Mt. Simon aquifer, consisting of sandstones of the Mt. Simon and lower Eau Claire Formations of Cambrian age. The sequence, structure, and general characteristics of these rocks are shown in figures 1 and 2.

The Glenwood-St. Peter sandstone is present throughout northern Illinois, except in an area including southern Ogle and De Kalb Counties, and eastern Lee County. In some sections of the central part of the area, this sandstone is immediately below the glacial drift. The sandstone frequently exceeds 200 feet in thickness, and some wells in the sandstone yield several hundred gallons per minute (gpm). The Glenwood-St. Peter sandstone is the primary source of groundwater for many municipal and industrial supplies in the central and northwestern parts of the area.

The Ironton-Galesville sandstone overlies the Eau Claire Formation and underlies the Franconia Formation. It occurs throughout northern Illinois, and on a regional basis is the most consistently permeable and productive unit of the Cambrian and Ordovician rocks. Many of the high capacity municipal and industrial wells in northern Illinois obtain a major part of their yields from this formation.

Moderate to high yields are obtained from wells penetrating the Mt. Simon aquifer, particularly in Kane, Lee, Ogle, Whiteside, and Winnebago Counties. Water below an elevation of about 1300 feet below sea level in the Mt. Simon aquifer is commonly too salty for municipal use.

The sandstone aquifers receive water from overlying glacial deposits in the central and western parts of northern Illinois, west of the border of the Maquoketa Formation. Recharge of the glacial drift occurs from precipitation that falls locally. In northeastern Illinois, the sandstone aquifers receive water both from vertical leakage through the overlying Maquoketa Formation and from horizontal movement of water east and south from recharge areas in north-central Illinois and southern Wisconsin. Vertical leakage is appreciable under the influence of large differentials in head between the shallow deposits and the deep sandstone aquifers.<sup>8</sup> The primary area of recharge to the deep sandstone aquifers of northeastern Illinois is in areas of Boone, De Kalb, Kane, Kendall, and McHenry Counties, Illinois, and in southeastern Wisconsin.

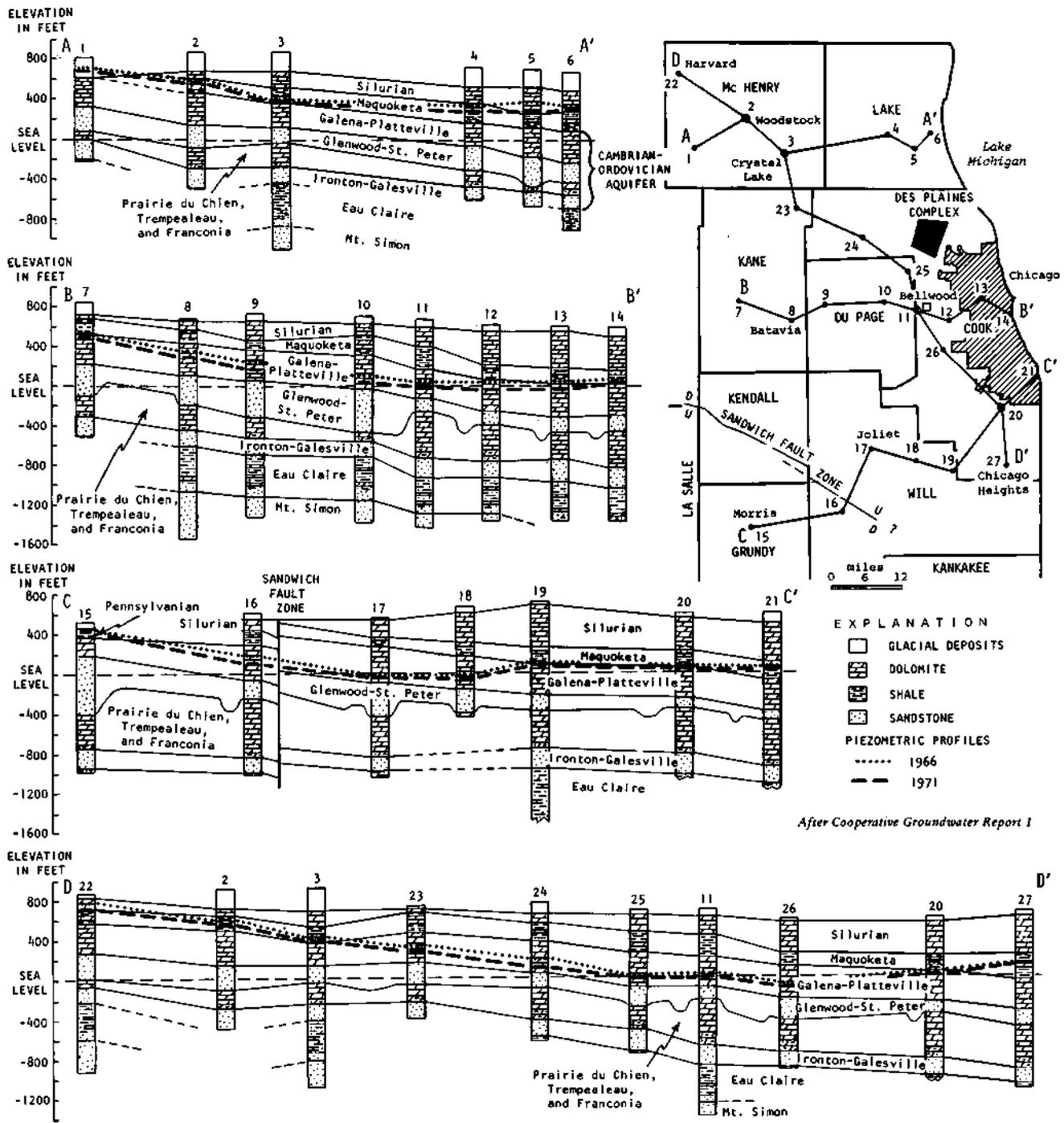


Figure 1. Cross sections of the structure and stratigraphy of the bedrock and piezometric profiles of the Cambrian-Ordovician aquifer in the Chicago region

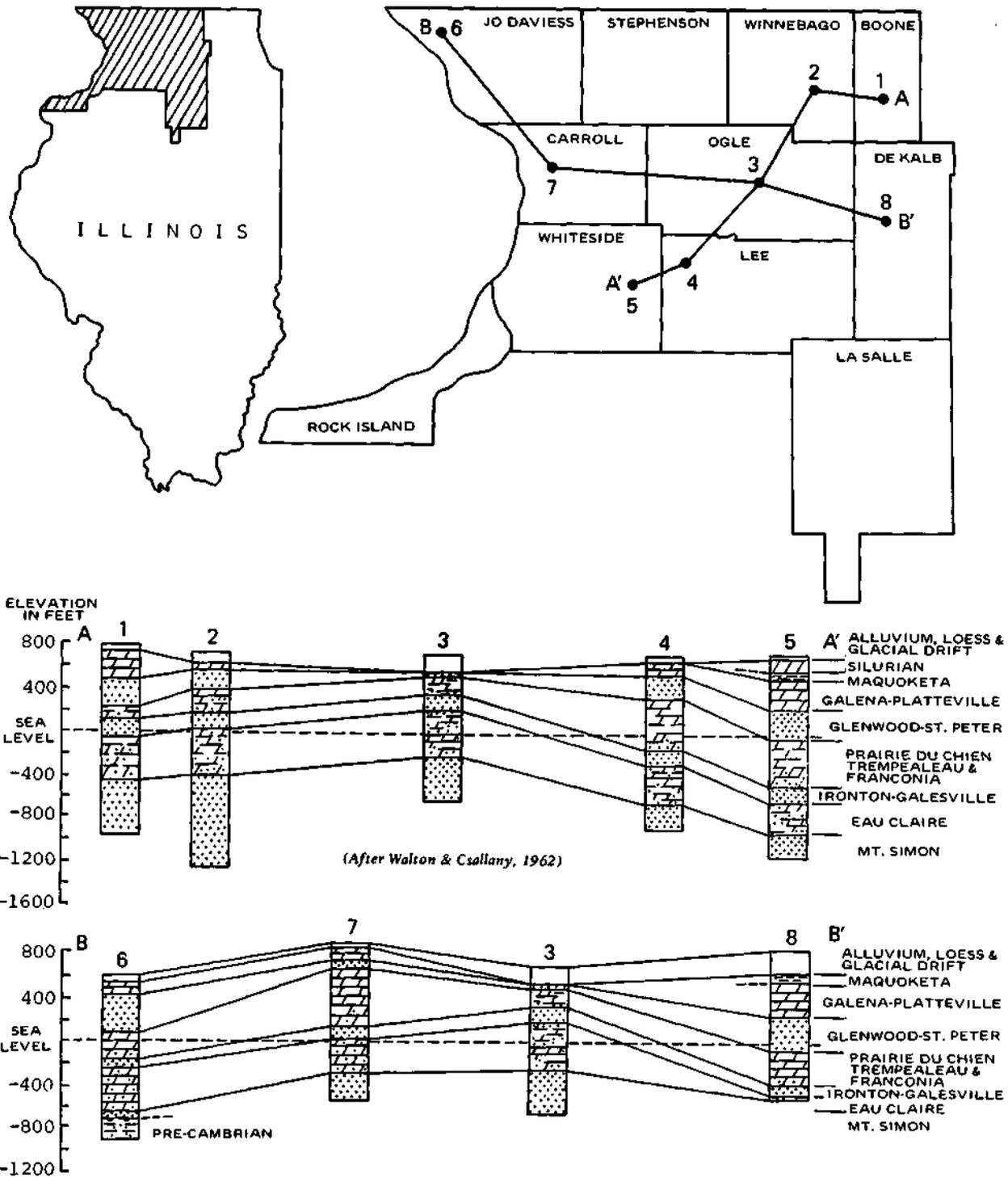


Figure 2. Cross sections of the structure and stratigraphy of the bedrock in northwestern Illinois

PUMPAGE FROM DEEP WELLS

The first deep well in northern Illinois was drilled in Chicago in 1864 and had an artesian flow estimated at about 150 gpm, or about 200,000 gpd. A considerable number of deep wells were in operation by 1900, and pumpage was estimated at 30 mgd. Pumpage increased gradually at an average rate of 1.5 mgd per year during the first 40 years of this century and was 91.5 mgd in 1940. During the next 20 years, pumpage increased at an average rate of 3.1 mgd per year and was 154.1 mgd in 1960, as shown in figure 3. Pumpage increased at a very rapid rate of 10.2 mgd per year during the next 6 years and was 215.4 mgd in 1966.

Pumpage from deep wells in the 8-county area of the Chicago region increased at a rather irregular rate from 23.2 mgd in 1900 to 75.6 mgd in 1955, as shown in figure 4. During the next 11 years, pumpage increased 77 percent, at an average rate of 5.3 mgd per year, and was 133.9 mgd in 1966.

Pumpage, 1966 through 1971

During the 5-year period from 1966 through 1971, pumpage from sandstone wells in northern Illinois increased from 215.4 mgd to 239.0 mgd, an average increase of 4.7 mgd per year. The greatest annual pumpage increase, 13.3 mgd, occurred in 1968, but that was after a 4.7 mgd decrease in 1967. Total pumpage in 1971 was 11 percent greater than total pumpage in 1966. The distribution of pumpage from deep wells from 1966 through 1971 is shown in table 1.

Pumpage in each of four counties, Cook, Kane, Will, and Winnebago, was more than 28 mgd in 1971 and totaled 146.2 mgd, or 61 percent of the deep

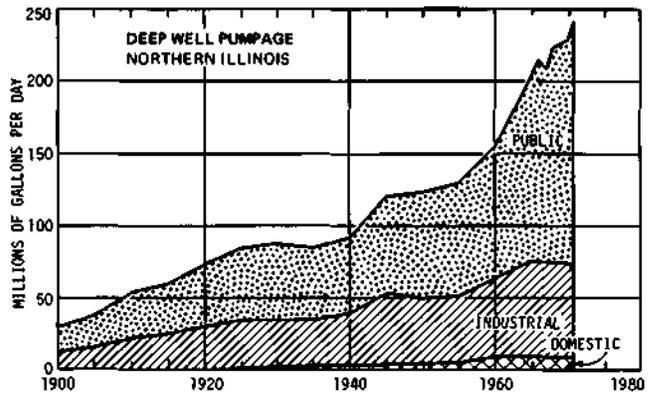


Figure 3. Pumpage from deep wells in northern Illinois, 1900 through 1971, subdivided by use

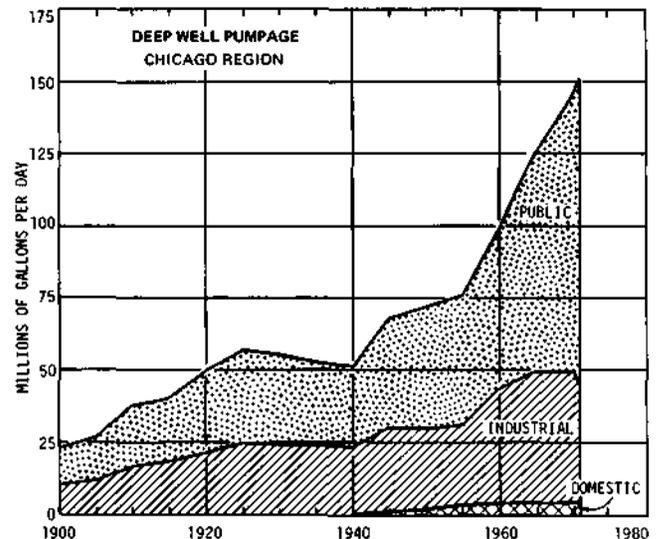


Figure 4. Pumpage from deep wells in the Chicago region, 1900 through 1971, subdivided by use

Table 1. Distribution of Pumpage from Sandstone Wells, Northern Illinois 1966-1971, Subdivided by Use

(Pumpage in million gallons per day)

County	1966				1967				1968				
	Public	Indus-trial	Domes-tic	Total	Public	Indus-trial	Domes-tic	Total	Public	Indus-trial	Domes-tic	Total	
COK	30.51	24.33	0.29	55.13	29.13	22.15	0.28	51.56	33.96	22.28	0.26	56.50	
DUP	11.37	0.66	0.08	12.11	11.44	0.65	0.08	12.17	12.12	0.75	0.08	12.95	
GRY	1.23	2.31	0.38	3.92	1.10	2.41	0.37	3.88	1.25	1.99	0.37	3.61	
KNE	22.80	2.65	1.34	26.79	21.65	2.70	1.33	25.68	23.03	2.60	1.31	26.94	
KEN	0.23	0.58	0.65	1.46	0.26	0.50	0.68	1.44	0.26	0.86	0.71	1.83	
LKE	1.89	0.96	0.70	3.55	2.14	1.24	0.70	4.08	2.41	1.67	0.70	4.78	
MCH	2.02	1.18	0.20	3.40	2.24	1.27	0.20	3.71	2.00	1.29	0.20	3.49	
WIL	11.81	15.47	0.24	27.52	11.08	16.41	0.24	27.73	12.11	15.82	0.23	28.16	
Subtotal, Chicago Region	81.86	48.14	3.88	133.88	79.04	47.33	3.88	130.25	87.14	47.26	3.86	138.26	
BNE	3.46	0.90	0.57	4.93	3.52	0.75	0.54	4.81	4.34	0.92	0.53	5.79	
CAR	1.35	0.18	0.12	1.65	1.26	0.17	0.12	1.55	1.28	0.34	0.12	1.74	
DEK	6.67	0.33	1.21	8.21	6.23	0.33	1.16	7.72	6.69	0.29	1.12	8.10	
JDV	1.62	0.08	0.12	1.82	1.57	0.07	0.13	1.77	1.67	0.06	0.12	1.85	
KNK	0.09			0.09	0.10			0.10	0.11			0.11	
LAS	6.00	6.79	0.48	13.27	6.14	6.02	0.47	12.63	6.43	5.04	0.46	11.93	
LEE	2.65	1.74	0.61	5.00	2.70	1.65	0.58	4.93	2.75	1.16	0.56	4.47	
OGL	5.73	1.38	0.56	7.67	5.69	1.39	0.56	7.64	5.58	1.52	0.54	7.64	
RIS	0.42	0.78	0.08	1.28	0.44	0.78	0.09	1.31	0.52	2.51	0.09	3.12	
STE	4.04	3.81	0.18	8.03	4.23	3.73	0.18	8.14	3.98	4.00	0.18	8.16	
WTS	1.95	2.28	0.68	4.91	1.86	2.11	0.67	4.64	2.13	2.01	0.67	4.81	
WIN	20.05	4.22	0.41	24.68	20.65	4.22	0.40	25.27	22.06	5.64	0.40	28.10	
Subtotal, Other	54.03	22.49	5.02	81.54	54.39	21.22	4.90	80.51	57.54	23.49	4.79	85.82	
Total	135.89	70.63	8.90	215.42	133.43	68.55	8.78	210.76	144.68	70.75	8.65	224.08	
		1969				1970				1971			
COK	35.04	23.27	0.25	58.56	36.76	21.16	0.24	58.16	41.79	16.63	0.24	58.66	
DUP	13.19	0.97	0.08	14.24	14.35	1.07	0.08	15.50	15.46	1.22	0.08	16.76	
GRY	1.61	1.99	0.35	3.95	1.42	2.59	0.36	4.37	1.54	2.52	0.36	4.42	
KNE	24.52	2.43	1.29	28.24	24.47	2.16	1.28	27.91	25.65	2.28	1.28	29.21	
KEN	0.35	0.73	0.73	1.81	0.33	1.00	0.75	2.08	0.38	0.72	0.75	1.85	
LKE	3.03	2.03	0.70	5.76	3.41	1.86	0.70	5.97	5.02	2.18	0.70	7.90	
MCH	1.92	0.91	0.21	3.04	1.89	0.90	0.21	3.00	1.97	1.17	0.21	3.35	
WIL	12.59	14.54	0.23	27.36	11.90	14.98	0.23	27.11	14.29	14.07	0.23	28.59	
Subtotal, Chicago Region	92.25	46.87	3.84	142.96	94.53	45.72	3.85	144.10	106.10	40.79	3.85	150.74	
BNE	4.20	0.62	0.54	5.36	4.42	0.62	0.53	5.57	4.20	0.52	0.53	5.25	
CAR	1.33	0.32	0.12	1.77	1.42	0.29	0.12	1.83	1.69	0.16	0.12	1.97	
DEK	6.62	0.33	1.11	8.06	6.94	0.24	1.02	8.20	7.16	0.29	1.02	8.47	
JDV	1.60	0.06	0.13	1.79	1.75	0.08	0.13	1.96	1.98	0.05	0.13	2.16	
KNK	0.11			0.11	0.09			0.09	0.10			0.10	
LAS	6.42	4.67	0.46	11.55	6.44	4.56	0.45	11.45	6.59	5.44	0.45	12.48	
LEE	3.15	0.61	0.58	4.34	3.15	0.75	0.57	4.47	3.16	0.71	0.57	4.44	
OGL	5.54	1.10	0.54	7.18	5.57	1.09	0.53	7.19	5.35	1.11	0.53	6.99	
RIS	0.49	2.52	0.09	3.10	0.36	2.40	0.09	2.85	0.35	2.23	0.09	2.67	
STE	3.96	4.71	0.18	8.85	4.11	4.21	0.18	8.50	3.93	4.92	0.18	9.03	
WTS	2.32	2.03	0.68	5.03	2.26	2.18	0.66	5.10	2.11	2.24	0.66	5.01	
WIN	21.05	5.59	0.40	27.04	22.25	5.11	0.39	27.75	25.65	3.68	0.39	29.72	
Subtotal, Other	56.79	22.56	4.83	84.18	58.76	21.53	4.67	84.96	62.27	21.35	4.67	88.29	
Total	149.04	69.43	8.67	227.14	153.29	67.25	8.52	229.06	168.37	62.14	8.52	239.03	

well pumpage in northern Illinois. Pumpage in Cook County, the highest of the 20 counties, was almost double that of Winnebago, which had the second highest pumpage. In addition to these four counties, the 1971 pumpage exceeded 12 mgd in Du Page and La Salle Counties. Pumpage from deep wells was least in Kankakee County, with less than 1.0 mgd in 1971.

Pumpage increased in 16 counties during the period, with the increases ranging from less than 10,000 gpd to 5.0 mgd or from 2 to 122 percent. Winnebago County had the greatest increase, followed by Du Page and Lake Counties, all of which had increases greater than 4.0 mgd. Increases of more than 1.0 mgd also occurred in Cook, Kane, Rock Island, and Will Counties. Lake County had the greatest percentage increase in pumpage, 126 percent, and Rock Island County was the only other county that had an increase of more than 100 percent. The next highest pumpage increases, of 20 to 40 percent, occurred in Du Page, Kendall, Jo Daviess, and Winnebago Counties. Pumpage in La Salle, Lee, McHenry, and Ogle Counties decreased between 1966 and 1971 in amounts ranging from 50,000 gpd in McHenry County to 0.79 mgd in La Salle County. The decreases in these four counties varied up to 11 percent.

The distribution of pumpage subdivided by use is shown for 1900-1971 in figures 3 and 4 and for 1966-1971 in table 1. In 1971, withdrawals from public water-supply systems in northern Illinois amounted to 70 percent of the total deep well pumpage, industrial pumpage amounted to 26 percent, and domestic pumpage 4 percent.

During the 5-year period since 1966, there were 147 new deep wells drilled in northern Illinois. Of these wells, 61 were drilled to augment existing municipal water-supply systems or to develop new ones, 26 were for other public supplies, and 60 were for industrial and commercial purposes; 95 of these new wells were located in the Chicago region. Many of the existing deep wells and deep well pumps were rehabilitated to meet increased demands. Eleven public supply systems and 15 industries discontinued withdrawing water from the deep sandstone during the 5-year period.

Deep well pumpage in the 8-county Chicago region increased from 133.9 mgd in 1966 to 150.7 mgd in 1971, at an average rate of 3.4 mgd per year. Pumpage increased 8.0 mgd in 1968 and 6.6 mgd in 1971. The 1968 increase was preceded by a 3.6 mgd decrease in 1967. Pumpage in 1971 was 13 percent more than in 1966.

During the 5-year period from 1961 through 1966, pumpage in this same area increased 29 percent. Table 2 compares the changes during the two 5-year periods for each of the counties of the metropolitan area. Rates of pumpage growth during 1966-1971 were less than during the preceding period in Cook, Grundy, Kane, Lake, McHenry, and Will Counties.

Table 2. Rates of Change in Pumpage from Deep Wells in the Chicago Region

County	Rate of change in percent					
	Public	Industrial	Total*	Public	Industrial	Total*
Cook	43	19	31	37	-31	6
Du Page	32	17	32	36	71	38
Grundy	20	64	46	25	9	14
Kane	22	13	21	12	-12	10
Kendall	100	<1	14	100	17	38
Lake	533	50	211	163	144	157
McHenry	67	50	60	<1	<1	<1
Will	28	15	20	21	-9	4
Chicago Region	35	20	29	30	-15	13

\*Exclusive of domestic pumpage

Previous reports on deep well pumpage in northeastern Illinois grouped the pumpage into pumping centers for comparative purposes. With increased capabilities for data analysis, public and industrial pumpage in the Chicago region was tabulated by township for 1966 and 1971 and is shown in figures 5 and 6. The approximate boundaries of the six primary pumping centers identified in earlier reports are also shown.

Of the 134 full or partial townships in the Chicago region, records indicate that 1971 deep well pumpage of more than 10,000 gpd occurred in 86, and more than 1.0 mgd in 33 townships. Nine townships had pumpage of more than 5.0 mgd and *k* had more than 10.0 mgd. Pumpage continues to be concentrated in northern and western Cook County, eastern Du Page and Kane Counties, and around Joliet in Will County.

In the 33 townships with more than 1.0 mgd pumpage in 1971, pumpage increased in 24 and decreased in 9 since 1966. Increases occurred in 5 of the 9 townships that pumped more than 5.0 mgd in 1971. Pumpage increases of 2.1 to 4.1 mgd occurred in 5 townships, COK35N14E, COK41N11E, COK42N11E, DUP39N11E, and LKE44N11E. Decreases of 2.6 and 3.2 mgd occurred in COK41N12E and COK38N14E, respectively. Des Plaines started purchasing a major portion of its water supply from Chicago in 1967, which accounts for the decrease in COK41N12E. The decrease in COK38N14E is primarily the result of moving the stock yards out of Chicago.

**Public Pumpage.** Public pumpage in northern Illinois in 1971 was 168.k mgd, an increase of 2k percent over the 1966 pumpage. The increase averaged 6.5 mgd per year. The greatest increases occurred in Cook, Du Page, Lake, Kane, Will, and Winnebago Counties, ranging from 11.3 mgd in Cook County to 2.5 mgd in Will County. Increases of 0.7 mgd to less than 10,000 gpd occurred in 10 counties. Decreases in

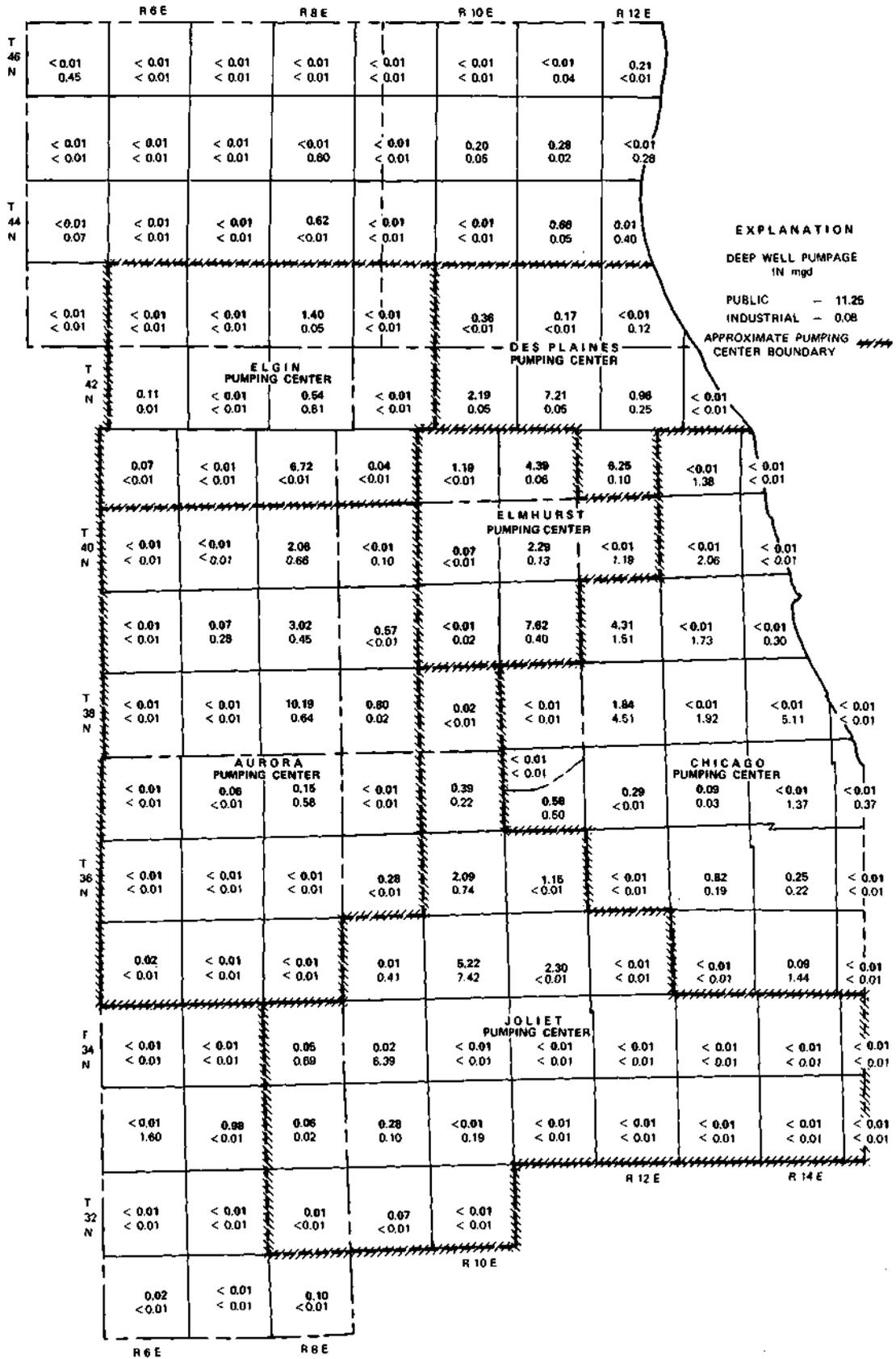


Figure 5. Distribution of pumpage from deep wells in the Chicago region, 1966



public pumpage, of 0.4 to 0.05 mgd, occurred in McHenry, Ogle, Rock Island, and Stephenson Counties.

Public use includes municipal, subdivision, and institutional pumpage. No attempt has been made to determine the final use of water within these categories. Available records indicate that the public supplies in northern Illinois that obtained water from deep wells in 1971 included 158 municipalities, 49 subdivisions, and 81 institutions. Fifty-two percent of these systems are located in the Chicago region.

Forty-two public supply systems pumped more than 1.0 mgd from their deep wells during 1971 and had a combined pumpage of 132.5 mgd. The pumpage for these 42 systems increased nearly 21 percent since 1966 and accounted for 79 percent of the deep well pumpage for all public water supplies. Thirty-nine of these systems were for municipalities, two were for subdivisions, and one was for an institution. Thirty-one of these systems are located in the Chicago region.

Municipal pumpage in northern Illinois increased from 127.5 mgd in 1966 to 156.8 mgd in 1971 at an average rate of 5.9 mgd per year. The 1971 municipal pumpage was 93 percent of the total public pumpage.

Public pumpage in the Chicago region increased from 81.9 mgd in 1966 to 106.1 mgd in 1971, an increase of nearly 30 percent. Ninety-one percent of the 1971 public pumpage was for municipal supplies. Twenty-eight municipalities, two subdivisions, and one institution pumped more than 1.0 mgd in 1971; nine of these municipalities pumped more than 3.0 mgd and four pumped more than 6.0 mgd.

In the Chicago region, the greatest increases in pumpage for public supplies were for Arlington Heights, East Chicago Heights, Elk Grove Village, Elmhurst, Joliet, and Mundelein, where increases of more than 1.0 mgd were recorded for the 5-year period. Pumpage at Arlington Heights increased more than 2.0 mgd and pumpage at Mundelein increased almost 2.0 mgd. Seven other municipalities recorded increases of 0.5 to 1.0 mgd, including three in Cook County and two each in Du Page and Kane Counties. Bellwood had a slight decrease in pumpage and Des Plaines had a decrease of more than 3.0 mgd. Des Plaines has purchased increasing amounts of water from Chicago since 1967.

**Industrial Pumpage.** In northern Illinois industrial pumpage was 62.1 mgd in 1971, a decrease of 12 percent from the 1966 industrial pumpage. Pumpage was at a high of 70.7 mgd in 1968 and has declined at an increasing rate since then. The rate of decline averaged 1.9 mgd per year during the past three years.

Between 1966 and 1971, industrial pumpage increased in only six counties, in amounts ranging from 0.1 to 1.5 mgd. Increases of more than 1.0 mgd occurred in

Lake, Rock Island, and Stephenson Counties. In the other 14 counties of northern Illinois, pumpage decreased in amounts ranging from 7.7 mgd to less than 10,000 gpd. Greatest decreases were 7.7 mgd in Cook County, 1.4 mgd in La Salle County, 1.4 mgd in Will County, and 1.0 mgd in Lee County.

The number of industries that reported pumpage greater than 1.0 mgd decreased from 18 in 1966 to 11 in 1971. The pumpage of these major industries represented 47 percent of the industrial pumpage in 1966 and 39 percent in 1971. Seven of the 11 industries reported a decrease in pumpage and 3 reported an increase; one industry was new since 1966. Of the other 7 industries that pumped more than 1.0 mgd in 1966, 5 reduced their pumpage to amounts ranging from 0.4 to 1.0 mgd by 1971, one closed completely, and one discontinued the use of its groundwater supply. Eight of the largest water-using industries are located in the Chicago region and their combined pumpage was 19.3 mgd in 1971.

Industrial pumpage in the Chicago region decreased 15 percent since 1966 and was 40.8 mgd in 1971. Pumpage in this area decreased each year during the 5-year period, varying from 70,000 gpd in 1968 to 4.9 mgd in 1971. Pumpage declined in Cook, Kane, and Will Counties, and increased in four counties in amounts ranging from 0.1 mgd in Kendall County to 1.2 mgd in Lake County. Industrial pumpage in McHenry County remained about constant.

Table 2 compares the rate of change in industrial pumpage growth for the periods 1961-1966 and 1966-1971. Slight increases in the rate of growth occurred in Du Page, Kendall, and Lake Counties. Decreases in the growth rate occurred in Cook, Grundy, McHenry, and Will Counties, and for the region as a whole.

**Domestic Pumpage.** In 1971, domestic pumpage from deep wells was 8.5 mgd, less than 4 percent of the total pumpage in northern Illinois. This pumpage is primarily for individual residences remote from public water supplies and for farms, including water for livestock. Pumpage was estimated from the 1960 and 1970 rural population as reported by the U. S. Bureau of Census and from the livestock population as reported by the Illinois Cooperative Crop Reporting Service. Consideration was given to the relative importance of sandstone aquifers to other aquifers throughout northern Illinois. Domestic pumpage has remained fairly steady in recent years.

#### Pumpage Related to Practical Sustained Yield, 1971

In Cooperative Report 1 it was estimated that the practical sustained yield of the Cambrian-Ordovician aquifer in the Chicago region (46 mgd) would be developed when the total pumpage from deep wells was 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.

Estimates in Cooperative Report 1, based on past records of pumpage and water levels, indicated that the practical sustained yield would be exceeded by 1965. However, total pumpage from deep wells in every year since 1958 actually exceeded the withdrawal rate anticipated for 1965. Thus, the practical sustained yield of the aquifer has been exceeded each year since 1958. Sustained pumping at these excessive rates has already resulted in dewatering the St. Peter sandstone in some parts of the Chicago region and will result in dewatering the Ironton-Galesville sandstone in many areas 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 above the ground surface in many parts of the Chicago region. The average elevation of water levels in deep wells at Chicago and at Joliet was about 700 feet above mean sea level (msl). As a result of continued heavy pumping, the nonpumping water levels in deep wells had declined by 1966 to elevations of 98 feet *below* mean sea level at Bellwood and Joliet. From 1864 to 1966, the artesian pressure at Chicago declined about 750 feet; the average rate of decline of artesian pressure was more than 7 feet per year.

#### Water-Level Decline, October 1966 to October 1971

The water levels in 621 deep wells in northern Illinois were measured during October and November 1971. Data for the wells are given in the appendix. Water levels for 373 of these wells, including 236 in the Chicago region, had been measured during the same period in 1966, and these data were compared with that for 1971. Computed declines and rises are given in the appendix.

Examples of fluctuations in nonpumping water levels in northern Illinois from 1966 through 1971 are shown in figure 7. Hydrographs of observation wells reflect

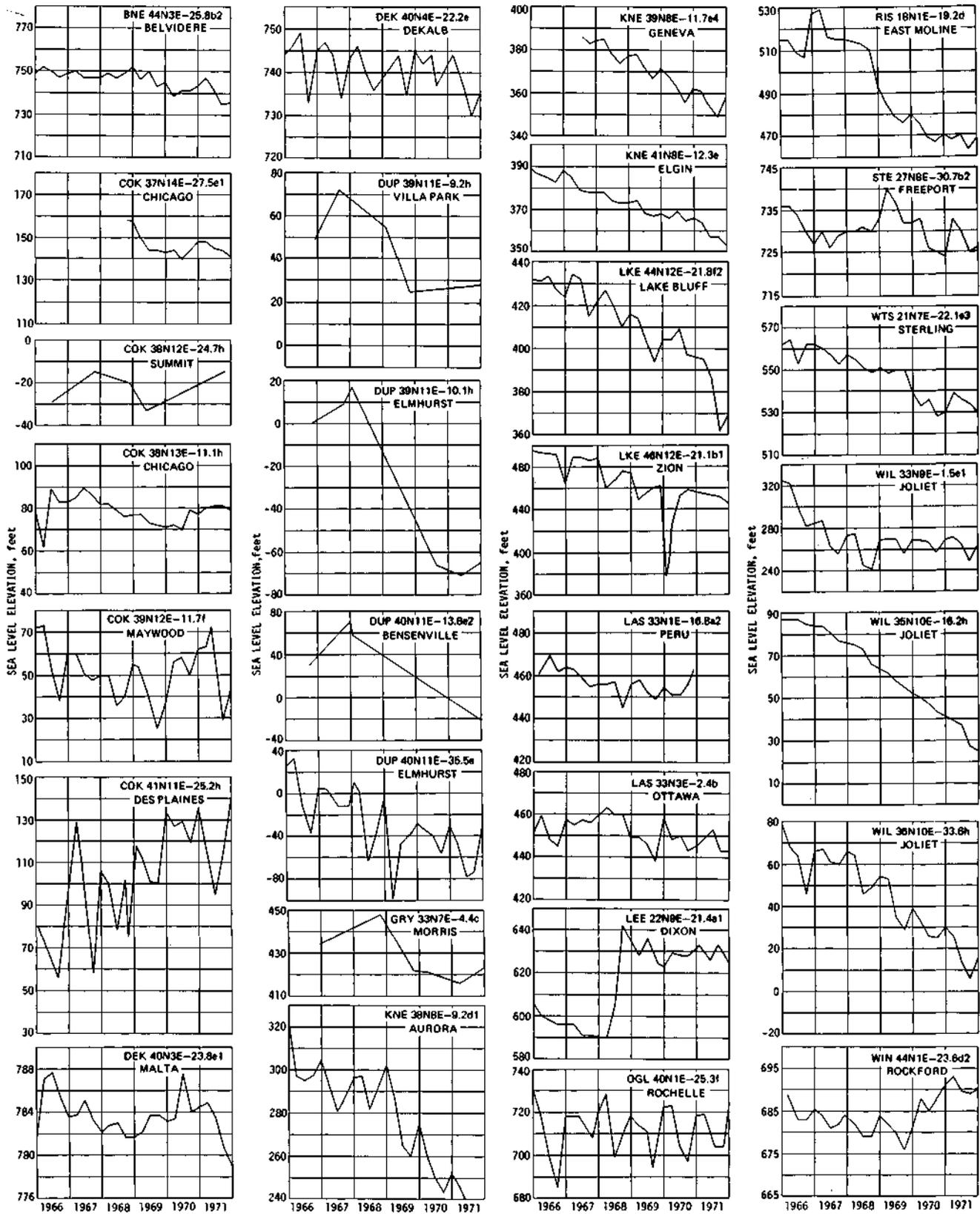


Figure 7. Water levels in selected observation wells, 1966-1971

seasonal and long-time pumping trends. Steady declines of water levels generally are indicative of increasing rates of concentrated and regional pumpage. The locations of observation wells for which hydrographs are available are shown in figure 8.

The computed changes for the wells measured in both 1966 and 1971 and the piezometric surface maps for 1966 and 1971 were used to construct figure 9. The average declines in nonpumping water levels, October 1966 to October 1971, for each county of the Chicago region are given in table 3, along with comparable data for the 1961-1966 period.

As shown in figure 9, the water-level change from 1966 to 1971 varies considerably from place to place, even within areas of heavy pumpage. The average water-level decline in the Chicago region was about 9 feet per year (table 3). The greatest average declines occurred in Lake and Kendall Counties; the least average decline was recorded in Grundy County. Average declines of 10 feet or more were computed for Du Page, Kane, Kendall, and Lake Counties.

Table 3 shows that average water-level declines in the Chicago region were less during the period 1966-1971 than during the period 1961-1966 in Cook, Du Page, Lake, and Will Counties. Of the 373 wells measured in both 1966 and 1971, only 58 had water-level rises. Only 17 of the 236 wells measured in the Chicago region had water-level rises.

Water levels declined more than 50 feet between 1966 and 1971 in large areas in Cook, Du Page, and Lake Counties, eastern Kane and Kendall Counties, and northern Will County (figure 9). In large areas of Cook County as well as in smaller areas of northeastern Du Page County, southeastern Kane County, northeastern Kendall County, southeastern Lake County, and west-central Will County, water levels declined more than 100 feet. Water-level declines in excess of 150 feet were measured

Table 3. Decline in Nonpumping Water Levels in the Chicago Region

<u>County</u>	Average decline (feet per year)	
	<u>1961-1966</u>	<u>1966-1971</u>
Cook	15	9
Du Page	16	10
Grundy	3	4
Kane	9	10
Kendall	9	12
Lake	17	14
McHenry	1	5
Will	13	8
Average	13	9

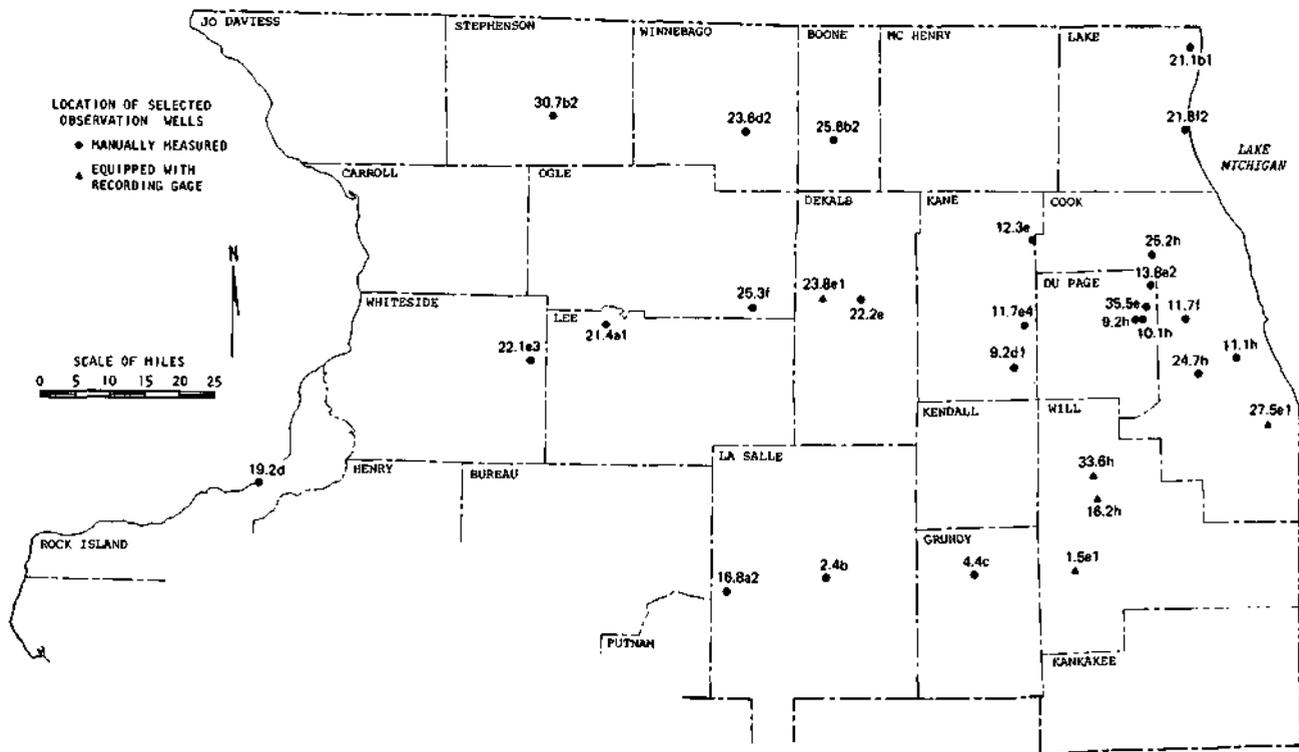


Figure 8. Map showing location of selected observation wells

Table 4. Fluctuations in Nonpumping Water Levels in Selected Observation Wells

Well number	Average fluctuation (feet per year)	
	Prior to 1966	1966-1971
BNE 44N3E-25.8b2 (Belvidere)	-0.1	-2.6
DEK 40N3E-23.8e1 (Malta)	-0.1	-1.0
DEK 40N4E-22.2e (De Kalb)	-4.0	-1.2
LAS 33N1E-16.8a2 (Peru)	0.0	-0.2
LAS 33N3E-2.4b (Ottawa)	-1.9	-1.2
LEE 22N9E-21.4a1 (Dixon)	-1.6	+5.6
OGL 40N1E-25.3f (Rochelle)	-1.9	+1.4
RIS 18N1E-19.2d (East Moline)	-2.9	-7.2
STE 27N8E-30.7b2 (Freeport)	-0.3	-0.4
WTS 21N7E-22.1e3 (Sterling)	-2.3	-4.4
WIN 44N1E-23.6d2 (Rockford)	-0.7	+1.2
Average	-1.4	-0.9

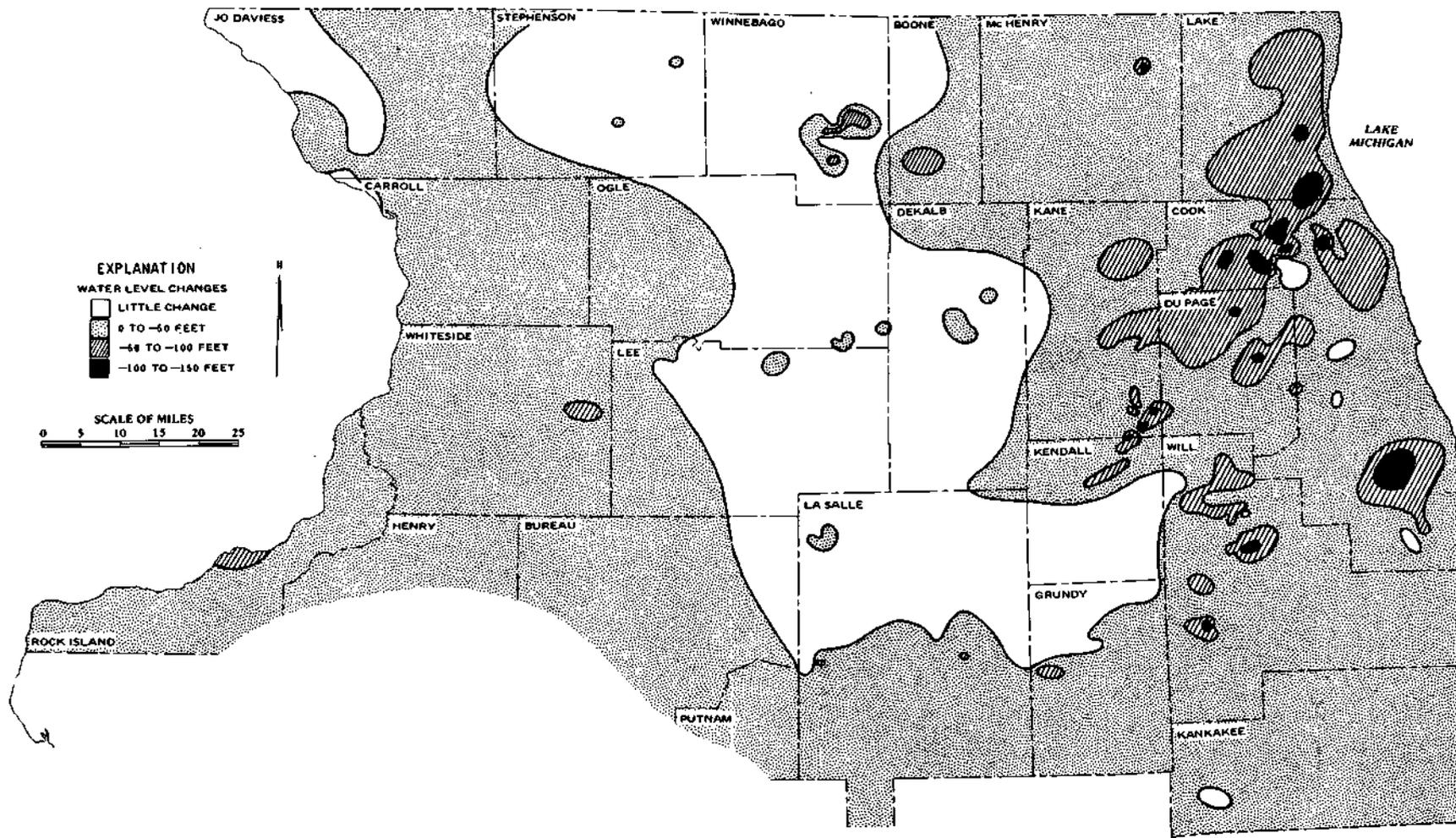


Figure 9. Map showing changes in water levels in deep wells, 1966-1971

in isolated wells in east-central Kane County and west-central Will County.

Regional water-level trends in areas of northern Illinois outside the Chicago region are less well defined. Prior to 1966, water-level fluctuations for periods of 4 to 71 years in 11 selected observation wells ranged from 0 to 4.0 feet per year, as shown in table 4. For 1966-1971, average annual water-level changes in these observation wells ranged from a rise of 5.6 feet to a decline of 7.2 feet, and averaged -0.9 feet.

Water levels in some wells did not reflect the regional trends. Water-level fluctuations in these wells ranged from rises of more than 35 feet in some wells in De Kalb, Kankakee, La Salle, and Ogle Counties, to declines of more than 60 feet in some wells in Boone, Carroll, La Salle, Rock Island, Whiteside, and Winnebago Counties. Water-level declines of more than 50 feet were recorded in wells in 14 counties of northern Illinois; declines of more than 20 feet occurred in all but Stephenson County. Declines in excess of 100 feet were recorded in all counties of the Chicago region except Grundy County. Water-level rises ranging from 2 to 65 feet were recorded in wells in 14 counties, including 5 in the Chicago region.

Superimposed on the long-term trend of water-level fluctuations in deep wells are seasonal fluctuations caused chiefly by changes in rates of pumping from nearby wells. Water levels in deep wells generally recede during the summer and early fall when pumpage is greatest. Water levels may 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 during 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, 1971

The piezometric surface is an imaginary surface to which water will, rise in artesian wells. Figure 10 shows the piezometric surface of the Cambrian-Ordovician aquifer in October 1971. Data on water levels in the appendix were used to prepare the map. The general features of the 1971 piezometric surface map for the Chicago region differ very little from those of the piezometric surface map for 1966 in Circular 94.<sup>5</sup>

During 1967 through 1971 the extent of the lowest water levels in the Chicago region advanced in all directions from the areas of Bellwood and Joliet where the deepest water levels were recorded in 1966. In Cook and Du Page Counties, the 100-foot piezometric surface contour migrated in westerly and northwesterly directions

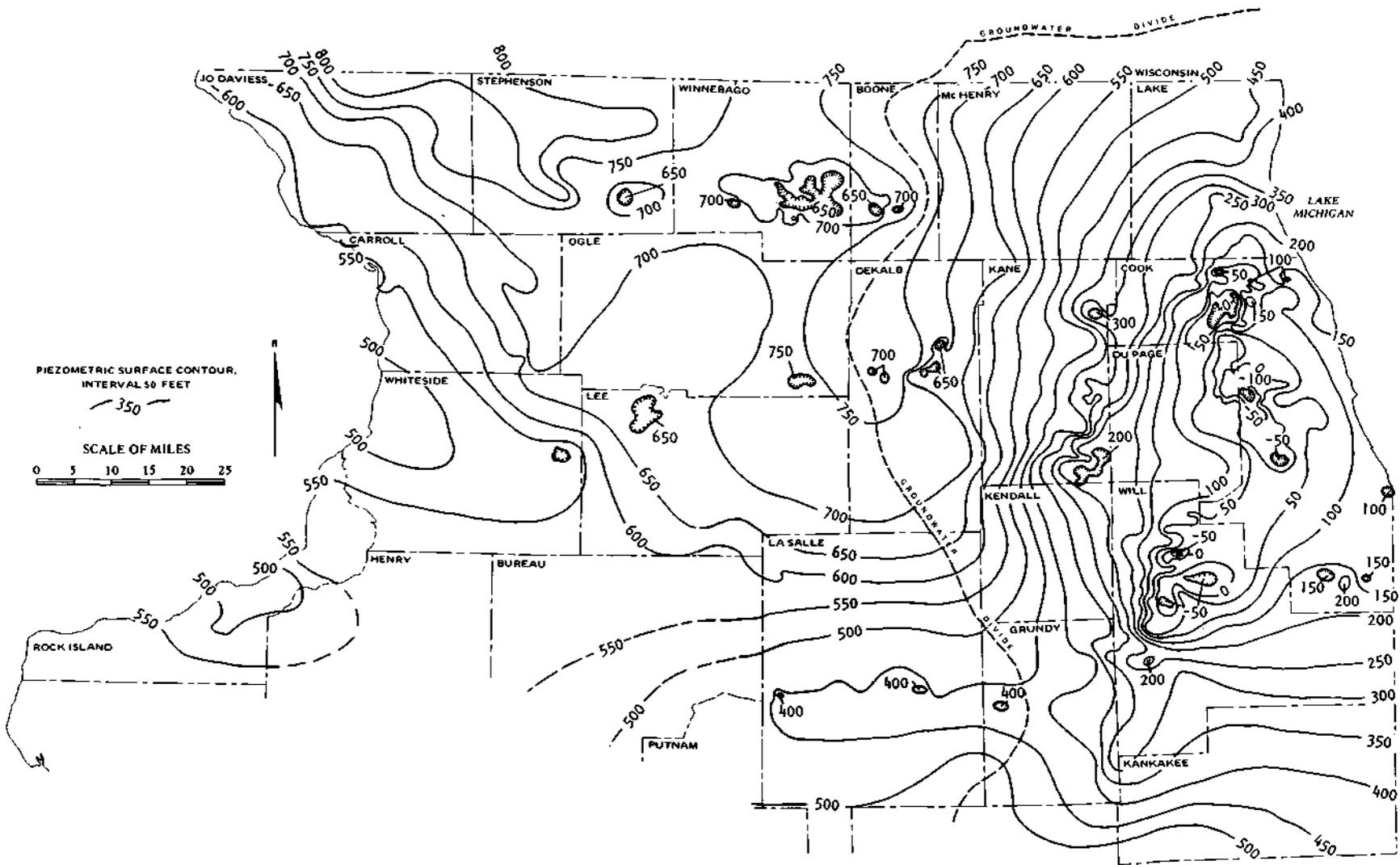


Figure 10. Elevation of piezometric surface of Cambrian-Ordovician aquifer in October 1971

nearly 6 miles from its position in 1966 to include nearly all of eastern Du Page and north-central Cook Counties.

The deepest cone of depression in the Chicago region in both 1966 and 1971 was in the vicinity of Bellwood where levels were 97 and 149 feet below msl, respectively. Pronounced cones of depression that were apparent in 1966 at Joliet, Elmhurst, Des Plaines, Aurora, and Elgin deepened and enlarged considerably since that time. The 50-foot piezometric surface contour migrated several miles in all directions from Joliet and Bellwood to include most of western Cook, eastern Du Page, and northwestern Will Counties, as well as a large but separate area in north-central Cook County. Zero contours enclosed large areas of western Cook, northeastern Du Page, and western Will Counties. More than half of the deep wells within the city of Joliet and in western Cook County had water-level elevations below msl in 1971. Other depressions in the piezometric surface in the Chicago region are also apparent in southern and northern Cook County, and at Geneva, Batavia, and Morris. The piezometric surface was well below the top of the Galena-Platteville dolomite in large areas of the Chicago region, even as far west as eastern Kane County, and below the top of the St. Peter sandstone in the deepest cones of depression near Bellwood and Joliet.

An earlier piezometric surface map of northern Illinois showed a relatively uniform surface west of Chicago and Joliet, with highest elevations in parts of north-central, northwestern, and extreme northern Illinois.<sup>9</sup> There was evidence of some discharge into the Rock River.

The 1971 piezometric surface map shows the areas of highest elevation in Boone and De Kalb Counties in north-central Illinois and in Stephenson and Jo Daviess Counties in northwestern Illinois. A major depression in the piezometric surface is apparent at Rockford, with other significant depressions at Belvidere, Freeport, Sterling, Dixon, Rochelle, De Kalb-Sycamore, and Ottawa.

The general pattern of flow of water in the deep sandstone wells in 1971 was from all directions toward the deep cones of depression, primarily centered at Des Plaines, Elmhurst, Bellwood, and Joliet. Some of the water flowing toward these areas is intercepted by cones of depression at Elgin and Aurora. In addition, water from the recharge areas west of the Chicago region is being diverted into enlarging cones of depression at Belvidere, Rockford, Rochelle, and De Kalb. The lowering of water levels accompanying the withdrawals of groundwater has established steep hydraulic gradients north, west, and southwest of Chicago and Joliet, so that large quantities of water from recharge areas in northern Illinois, and minor quantities from southern Wisconsin, are at present being transmitted

toward centers of pumping. The approximate limits of diversion for the Cambrian-Ordovician aquifer north and west of the Chicago region are shown by the groundwater divide in figure 10. Large amounts of water derived from storage within the aquifer and from vertical leakage of water through the Maquoketa Formation move toward cones of depression from the east in Indiana, from the south and west in Illinois, and from the northeast beneath Lake Michigan.

The Sandwich Fault Zone (see figure 1), previously described in Cooperative Report 1, extends southeast-northwest from Sandwich, De Kalb County, into Will County south of Joliet. Sufficient water level and other hydrologic data in the vicinity of the fault zone are not currently available to permit a detailed interpretation of its effect on water levels.

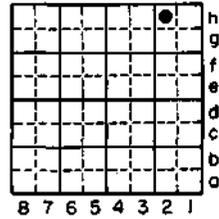
#### REFERENCES

- 1 Suter, Max, R. E. Bergstrom, H. F. Smith, G. H. Emrich, W. C. Walton, and T. E. Larson. 1959. *Preliminary report on ground water resources of the Chicago region, Illinois.* Illinois State Water Survey and Geological Survey Cooperative Ground Water Report 1.
- 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.* 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.* Illinois State Water Survey Circular 83.
- 4 Sasman, R. T., W. H. Baker, Jr., and W. P. Patzer. 1962. *Water-level decline and pumpage during 1961 in deep wells in the Chicago region, Illinois.* Illinois State Water Survey Circular 85.
- 5 Sasman, R. T., C. K. McDonald, and W. R. Randall. 1967. *Water-level decline and pumpage in deep wells in northeastern Illinois, 1962-1966.* Illinois State Water Survey Circular 94.
- 6 Sasman, R. T. 1965. *Ground-water pumpage in northeastern Illinois through 1962.* Illinois State Water Survey Report of Investigation 50.
- 7 Sasman, R. T., and W. H. Baker, Jr. 1966. *Ground-water pumpage in northwestern Illinois through 1963.* Illinois State Water Survey Report of Investigation 52.
- 8 Walton, W. C. 1960. *Leaky artesian aquifer conditions in Illinois.* Illinois State Water Survey Report of Investigation 39.
- 9 Foley, Frank C, and Harmon F. Smith. 1954. *Groundwater recharge of a deeply buried artesian aquifer in Illinois and Wisconsin, U. S. A.* International Association Scientific Hydrology, Assembly of Rome, (Gentlerugge) Belgium, Publication 37, Book II.
- 10 Walton, W. C, and Sandor Csallany. 1962. *Yields of deep sandstone wells in Illinois.* Illinois State Water Survey Report of Investigation 43.

APPENDIX

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 1/8-mile squares. Each 1/8-mile square contains 10 acres and corresponds to a quarter of a quarter of a quarter section. A normal section of 1 square mile contains eight rows of 1/8-mile squares; an odd-sized 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 the right is as follows:  
COK 41N11E-25.2h



Cook County  
T41N, R11E  
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.

Any number assigned to the well by the owner is shown in parentheses after the location well number. For example, the third well listed in the table on the next page is owned by the Midwest Plating Company and is known as Well No. 2, which is indicated by (2) in the well number BNE 43N4E-33.5b2 (2).

Well data are presented by counties in alphabetical order as follows:

Boone	BNE	Grundy	GRY	Lake	LKE	Rock Island	RIS
Carroll	CAR	Jo Daviess	JDV	La Salle	LAS	Stephenson	STE
Cook	COK	Kane	KNE	Lee	LEE	Whiteside	WTS
De Kalb	DEK	Kankakee	KNK	McHenry	MCH	Will	WIL
Du Page	DUP	Kendall	KEN	Ogle	OGL	Winnebago	WIN

Municipal ownership is indicated by (V) for village owned and (C) for city owned after the place name. Subdivision is abbreviated as Sbd.

Water Levels in Deep Wells in Northern Illinois, 1966-1971

(Elevations in feet above mean sea level)

Well number	Owner	Depth of well (ft)	Surface elevation	Water-level elevations						Water level change, 1966-1971 (ft)
				1966	1967	1968	1969	1970	1971	
BNE--										
43N3E-										
2.6h	Four Seasons Trailer Pk.	600	800							
2.7e	Ill. Toll Highway Comm.	400	800				704		762	
43N4E-										
33.5b2 (2)	Midwest Plating Co.	700	870					695		
44N3E-										
24.8a (6)	Belvidere (C)	870	784	724				703		
25.6d (2)	Dean Milk Co.	865	770	718	723					
25.7c (2)	Belvidere (C)	1861	763							
25.8b2 (3)	Belvidere (C)	1803	765	750	747	751	744	744	737	-13
26.1e (4)	Belvidere (C)	1800	778	724					694	-30
34.2a (8)	Belvidere (C)	1393	780	670					603	-67
35.1e (5)	Belvidere (C)	610	800	775					715	-60
36.2g (7)	Belvidere (C)	969	840						680	
CAR--										
23N5E-										
2.5f4 (3)	Chadwick (V)	1210	790		668	675			607	
23N6E-										
23.2a2 (2)	Kraft Cheese Co.	400	740		667				710	
23.6b3 (3)	Milledgeville (V)	654	760		632	620			683	
23.6b4 (4)	Milledgeville (V)	1146	762	631	625	624		632	628	-3
24N3E-										
4.2c (5)	Savanna (C)	1804	602	590					522	-68
9.1f (3)	Savanna (C)	1852	583	571					559	-12
10.3e (4)	Savanna (C)	1308	612	574					556	-18
11.1a (6)	Savanna (C)	1300	627	562					544	-18
24N4E-										
12.2h (3)	Mt. Carroll (C)	1453	742						608	
12.3h2 (2)	Mt. Carroll (C)	1457	720						613	
24N6E-										
5.5e (3)	Lanark (C)	1300	882	682					666	-16
5.6c (4)	Lanark (C)	1082	860						708	
25N2E-										
2.3d (12)	Savanna Army Depot	1114	609	609					603	-6
3.4d (2)	Savanna Army Depot	1200	640	582		584	590	587	587	+5
11.5h (1)	Savanna Army Depot	1201	601	603	603	606			605	+2
25N6E-										
16.8a (1)	Agrico Chemical Co.	720	925						694	
25N7E-										
19.6e2 (2)	Shannon (V)	704	947				797	762	744	
COK--										
35N13E-										
2.3a2 (6a)	Flossmoor (V)	1784	705					155	129	
12.3b3 (7a)	Flossmoor (V)	1722	653						143	
35N14E-										
3.3b (3)	Glenwood (V)	1776	618	202			170		138	-64
8.5e (32)	Chicago Heights (C)	1777	652	204	237	207	222	217	217	+13
10.1g (5)	Glenwood (V)	1785	623				178		82	
21.2h2 (2)	Stauffer Chemical Co.	1800	640	157		170			160	+3
21.3h (2)	Borg Warner Corp. (Calumet Steel Div.)	1805	638		130		105	105	177	
36N12E-										
13.1d2 (2)	Silver Lake Gardens	1809	732					118		
36N13E-										
1.2g (1)	R.E.S.C.O.	1618	597	107	97					
9.8b2 (1)	Oak Forest (V)	1701	672	156	164	157	147	102	92	-64
36.6b (12)	Homewood (V)	1713	660			153			150	
36N14E-										
2.8e (1)	Kaiser Aluminum & Chemical Corp.	1730	584	132			160			

Water Levels (Continued)  
(Elevations in feet above mean sea level)

Well number	Owner	Depth of well (ft)	Surface elevation	Water-level elevations						Water level change, 1966-1971 (ft)
				1966	1967	1968	1969	1970	1971	
COK 36N14E- (Continued)										
3.1g	Metro Glass Co.	1683	592	137		92				
9.5d	Met. San. Dist.	937	590			159				
31.f (11)	Homewood (V)	1735	627			177			137	
34.5d2 (4)	Thornton (V)	1785	617						142	
34.5g1 (5)	Thornton (V)	1724	612	181				152	130	-51
37N11E-										
14.8c (3)	North American Car Corp.	1464	585	85		80	93		58	-27
21.3c3 (3)	Franciscan Sisters Training Center	1633	705				89	95	80	
28.3b (3)	DeAndreis Seminary	1690	740	78	73	69	125	64	48	-30
29.4b (3)	Lemont (V)	1723	746	90				76	54	-36
37N12E-										
2.8h2 (2)	Hickory Hills (V)	1608	685	61				52		
37N13E-										
12.7d	Evergreen Park Community High School	1637	622	83		82			78	-5
32.5h2 (2)	Palos Heights (V)	1580	617	107	106				91	-16
37N14E-										
22.1b (2)	Sherwin-Williams Co.	1648	591			129			119	
27.5e1 (TWI)	Met. San. Dist. (Calumet Trmt. Wks.)	1683	590			156	160	140	148	141
37N15E-										
8.1b2 (C)	Falstaff Brewing Corp.	1683	589	139		144		90	90	-49
8.1c1 (A)	Falstaff Brewing Corp.	1400	593	128			113			
8.1c2 (B)	Falstaff Brewing Corp.	1680	592						107	
38N12E-										
1.8g2 (2)	Lyons (V)	1750	621	51	76	13				
5.8d2 (3)	Western Springs (V)	1256	678	26	34		-47		-10	-36
6.6b (4)	Western Springs (V)	1913	642	58	56		-46		-19	-77
12.1f	Met. San. Dist. 81B	826	588						27	
18.8f3 (3)	Suburban Cook Co. TB San.	1540	689	94	90	72	81	81	72	-18
23.1h (11)	CPC International, Inc.	1543	596	-51	-41	-27	-57	-66		
23.2g (13)	CPC International, Inc.	1525	600	-35	-48	-35	-64	-70	-70	-35
24.1g (12)	CPC International, Inc.	1507	597	-43	-37		-45	-72	-73	-30
24.7h (14)	CPC International, Inc.	1481	597	-29	-15	-20	-33	-26	-15	+14
28.7d (2)	Fisher Body Division (GMC)	1542	605	45		62	41	44	26	-19
28.8d (3)	Fisher Body Division (GMC)	1527	605			38	0			
29.1d (1)	Fisher Body Division (GMC)	1517	605		56	33	49		27	
38N13E-										
8.1f (4)	Rose Packing Co.	1590	591						43	
11.1h	Bradshaw-Praeger & Co.	1224	597	83	82	76	70	78	78	-5
19.4e1 (2)	Union Carbide Corp.	1550	619			-31		-46		
19.4e2 (3)	Union Carbide Corp.	1660	621			-15		-29	-39	
21.1f2 (2)	Cracker Jack Co.	1585	620	58		93	51		51	-7
38N14E-										
5.2h (1)	Produce Terminal Corp.	1523	590			115				
5.3b (2)	Produce Terminal Corp.	1446	595			66				
7.6c (1)	Fleischmann Malting Co.	1925	594		74	46		56	61	
7.6d (2)	Fleischmann Malting Co.	1964	594	61	59	43		49	53	-8
7.7g2 (2)	Standard Brands, Inc.	1791	602		68					
39N12E-										
8.5g (4)	Bellwood (C)	1960	645	-97		-97	-84	-99	-149	-52
9.3g (1)	Bellwood (C)	1952	636			46		-31	-9	
9.5a (3)	Bellwood (C)	1951	624	-14		-14	-51	-16	-61	-47
9.5f (2)	Bellwood (C)	1954	632	-30		+40	+4	-84	-63	-33
11.7f (3)	Maywood (V)	1640	630	61	50	48	37	60	39	-22
11.8f (1)	American Can Co.	1806	630		26	26	34			
13.7g (2)	Altenheim-German Old Folks Home	1661	626	38		81			76	+38
16.2f (5)	Bellwood (C)	1845	627						17	
17.2h (1)	Alcoa (Aluminum Co. of America)	1476	654	57	61	52	6	-46		
22.7b1 (1)	Bunker Ramo	1424	628	-25	-70		-22	-92	-52	-27
25.5d (4)	Riverside (V)	2050	620	58	58	54		20	27	-31
36.8d (3)	Riverside (V)	2047	618	26	-4	-4	6	-34	-19	-45
39N13E-										
21.6g (1)	Kropp Forge Co.	1636	608	45					38	-7

Water Levels (Continued)

(Elevations in feet above mean sea level)

Well number	Owner	Depth of well (ft)	Surface elevation	Water-level elevations						Water level change, 1966-1971 (ft)
				1966	1967	1968	1969	1970	1971	
COK 39N13E- (Continued)										
21.8f2 (2)	Chicago Vitreous Enamel Co.	1607	608		58			5		
21.8f3 (3)	Chicago Vitreous Enamel Co.	1515	608	48					33	-15
27.7g (3)	Western Electric Co.	1574	604			41		64		
33.4a (1)	Incinerator, Inc.	1650	589	23		-36				
39N14E-										
9.5c	Met. San. Dist. 54c	1400	588						114	
16.6h (1)	Illinois Bell Telephone	1689	595					70	73	
21.7b1 (1)	Joanna Western Mills Co.	1610	593	85		63				
30.1d	Met. San. Dist. 71B	878	593						83	
32.5a	Met. San. Dist. 72B	890	592						73	
40N12E-										
18.6c1 (1)	Clow Corp.	1457	663	23	58	51	55	37	1	-22
18.6c2 (2)	Clow Corp.	1456	663		58	51	63	57	9	
31.4d1 (1)	Automatic Electric Co.	1410	655	55	29	28	-10	11	-41	-96
31.4d2 (3)	Automatic Electric Co.	1487	655		31	10	-7	14	-19	
40N13E-										
31.4e1 (1)	Mars, Inc.	1975	651			7	20		-14	
31.4e2 (2)	Mars, Inc.	1978	653						22	
34.7d3 (3)	Northwestern Malt & Grain Co.	1650	610					105		
34.7d4 (4)	Northwestern Malt & Grain Co.	1500	612	107	107		104		64	-43
41N9E-										
23.5g3 (3)	Streamwood (V)	1410	820	363					327	-36
36.3f2 (2)	Hanover Park (V)	1429	828	264	321				212	-52
36.6b (4)	Hanover Park (V)	1434	820			322			231	
41N10E-										
6.5b (10)	Hoffman Estates (V)	1357	810						285	
9.7g (7)	Hoffman Estates (V)	1398	690	197	100	110				
15.1f2 (2)	Hoffman Estates (V)	1391	750	225	242	228			145	-80
15.4h1 (4)	Hoffman Estates (V)	1382	774	242	219	216			127	-115
31.3e (3)	Hanover Park (V)	1952	798	270	321				209	-61
36.4g (7)	Elk Grove (V)	1365	730				190		30	
41N11E-										
7.1c (4)	Rolling Meadows (C)	1603	710	212	204	160	141		107	-105
9.1h (8)	Arlington Heights (V)	1455	706	10		100		20	-44	-54
10.3f2 (8)	Mt. Prospect (V)	1765	680	90	80	58		-30	10	-80
11.6c (11)	Mt. Prospect (V)	1446	655			103		-37	-52	
12.8h2 (3)	Mt. Prospect (V)	1935	670	110	92	55	-5		-20	-130
13.4a (5)	Des Plaines (C)	1800	655	-8	42	55	40		4	+12
14.5b (3)	Waycinden Park Sbd.	1368	672	4			44		34	+30
16.2h (12)	Arlington Heights (V)	1780	713					168	-9	
21.3b (1)	Elk Grove (V)	1415	717	108		53	-17		-6	-114
25.2h (7)	Des Plaines (C)	1815	655	65	100	108	126	130	135	+65
25.6g1	Met. San. Dist. F9B	800	657						129	
25.6g2	Met. San. Dist. F9C	1220	657						49	
26.8a (2)	Elk Grove (V)	1395	682	32		52			21	-11
27.3f (9)	Elk Grove (V)	1403	682						64	
27.6a (4)	Elk Grove (V)	1416	698	58		53	-22		13	-45
32.5g (3)	Elk Grove (V)	1408	705			-2			43	
33.7b (5)	Elk Grove (V)	1403	680		57	52	-8		67	
35.8f (6)	Elk Grove (V)	1396	675			30			-40	
41N12E-										
12.7b (3)	Domestic Utilities Co. (Eugenia Sbd.)	1423	661			166			86	
12.7d (2)	Domestic Utilities Co. (Eugenia Sbd.)	1390	658	123	130	122			85	-38
12.8b (1)	Domestic Utilities Co. (Eugenia Sbd.)	1342	666	136		106	104		81	-55
18.5d (6)	Des Plaines (C)	1840	644		-13		47		77	
18.6a (1)	Des Plaines (C)	1735	652			67		42	102	
18.7a (2)	Des Plaines (C)	1750	652		75	15	27	5	23	
19.5d (3)	Des Plaines (C)	1821	652		81	63	61	33	70	
19.5g (4)	Des Plaines (C)	1232	650		83		-9			
26.6c (1)	Park Ridge Country Club	1355	643	129		108			79	-50
41N13E-										
8.6d (2)	Glen View Club	1546	649	159	148		143	127	90	-69

Water Levels (Continued)

(Elevations in feet above mean sea level)

Well number		Owner	Depth of well (ft)	Surface elevation	Water-level elevations						Water level change, 1966-1971 (ft)
					1966	1967	1968	1969	1970	1971	
COK 41N13E- (Continued)											
18.5g	(1)	Avon Products, Inc.	1410	644	144	156		119	139	124	-20
19.6f		Met. San. Dist. 7B	856	621						115	
20.7e	(1)	Baxter Laboratories, Inc.	1414	627	182	184		135	107	97	-85
23.1a		Met. San. Dist. 38B	906	597						169	
26.1e		Met. San. Dist. 39B	896	605						172	
26.4f		Met. San. Dist. 28B	883	602						164	
26.4f		Met. San. Dist. 28C	1290	602						154	
42N10E-											
1.8d	(3)	Ferndale Heights Utility Co.	1350	740					210	230	
11.3h	(2)	Ferndale Heights Utility Co.	1550	755		287			290	285	
14.2c	(1)	Palatine (V)	1380	738	183		188	198			
15.3f	(7)	Palatine (V)	1350	750				227			
22.2a2	(8)	Palatine (V)	1950	737							212
24.3h	(2)	Palatine (V)	1350	732	222		172				161
24.8a1	(1)	Arlington Park Jockey Club	1825	730	232				134	205	-27
25.1b	(1)	Rolling Meadows (C)	1530	720	168		185	175		145	-23
25.6b	(2)	Rolling Meadows (C)	1537	714	170		194	139		114	-56
26.4h	(5)	Rolling Meadows (C)	1555	733					187		
29.7e	(9)	Hoffman Estates (V)	1392	820						220	
36.4d	(3)	Rolling Meadows (C)	1593	717	193		197	187		139	-54
42N11E-											
4.7a2	(5)	Buffalo Grove (V)	1355	685					149	105	
5.1g	(3)	Buffalo Grove (V)	1340	686	232		165		236		
5.8e	(1)	Buffalo Grove (V)	1335	725		213		199			
6.5c	(13)	Arlington Heights (V)	1790	730						167	
8.1a	(11)	Arlington Heights (V)	1647	688					116	48	
11.8b2	(2)	Ekco Containers, Inc.	1320	650	170		155	140		82	-88
16.7a2	(10)	Arlington Heights (V)	1778	687		180			172	142	
17.7e	(9)	Arlington Heights (V)	1532	692	165		165		175	115	-50
23.2e	(6)	Wheeling (V)	1345	650		168					
24.1g2	(2)	Waycinder Park (Citizens Util.)	1652	660	23				-15	-20	-43
24.3g	(5)	Brickman Manor (Citizens Util.)	1320	638						88	
24.4d	(4)	Brickman Manor (Chicago Sub. Util.)	1323	642		165			122	104	
24.5f	(6)	Brickman Manor (Chicago Sub. Util.)	1323	643						98	
25.2h	(3)	Brickman Manor (Chicago Sub. Util.)	955	640	130		100	90	260	90	-40
26.7d	(2)	Brickman Manor (Chicago Sub. Util.)	1468	661	115				-14	98	-17
27.3a	(6)	Mt. Prospect (V)	1468	670	95	90	72		45	-3	-98
29.4h	(7)	Arlington Heights (V)	1525	687	182		187		47	54	-128
29.5a	(5)	Arlington Heights (V)	1525	689	141		91		21	59	-82
30.3b	(6)	Arlington Heights (V)	1490	707	122		57		57	42	-80
30.5b	(4)	Arlington Heights (V)	1292	709	79		34				
33.3b	(4)	Mt. Prospect (V)	1370	693	69	131	54		18	11	-58
33.5d	(7)	Mt. Prospect (V)	1950	677	115	40	25		-2	5	-110
34.4g	(5)	Mt. Prospect (V)	1822	673	133	71	43	83	123	43	-90
35.2a	(13)	Mt. Prospect (V)	1337	655	99	95			30		
36.3b1	(1)	Maryville Academy	1604	651	165					158	-7
36.3b2	(2)	Maryville Academy	1529	651	161					153	-8
42N12E-											
14.2a	(4)	Sunset Ridge Country Club	1410	655	175					100	-75
14.2c1	(1)	Sunset Ridge Country Club	1385	655	167					128	-39
14.8e	(1)	St. Ann's Home	1190	665	209		232				
18.3a	(1)	Culligan, Inc.	1380	652				117		114	
19.1b	(3)	Allstate Insurance Co.	1401	662			127	122	108	84	
19.1c	(1)	Allstate Insurance Co.	1400	663	155			133	69	137	-18
19.1d	(2)	Allstate Insurance Co.	1404	663	177		145	120	55	90	-87
19.2h	(2)	Culligan, Inc.	1400	655				118		107	
19.3f	(1)	Nielson Co.	1400	655						85	
23.5f3	(3)	Convent of the Holy Spirit	1451	648	191		219			166	-25
23.6b	(2)	Cook Co. Mobile Homes	1415	626	163					98	-65
28.7e		Signode Steel Strapping Co.	1452	670	150		150	155	140	113	-56
28.8c	(5)	Glenview Countryside (Ill. Mun. Water Co.)	1405	672	115		71	60	60	5	-145

Water Levels (Continued)

(Elevations in feet above mean sea level)

Well number		Owner	Depth of well (ft)	Surface elevation	Water-level elevations						Water level change, 1966-1971 (ft)
					1966	1967	1968	1969	1970	1971	
COK 42N12E- (Continued)											
29.1a	(4)	Glenview Countryside (Ill. Mun. Water Co.)	1405	677	156	130	151	127	103	19	-140
29.3d	(3)	Northfield Woods Utility Co.	1394	682		140			103	102	
30.1b	(2)	Northfield Woods Utility Co.	1360	652				150	108		
32.4f		Moore Business Forms	1450	670					140		
33.1c	(3)	Glenview Countryside (Ill. Mun. Water Co.)	917	670	190						
36.7e2	(2)	North Shore Country Club	2017	645	251						
42N13E-											
35.5g		Met. San. Dist. 31B	939	599						215	
35.5g		Met. San. Dist. 31C	1330	599						191	
35.6c		Met. San. Dist. 32B	898	602						195	
DEK--											
37N5E-											
32.1c1		Somonauk (V)	190	685	669					667	-2
32.1c2		Somonauk (V)	502	685	671					669	-2
36.7h1		Sandwich (C)	600	667		648					
36.7h2		Sandwich (C)	600	667	653					644	-9
38N5E-											
14.4d		Hinckley (V)	605	740	713					700	-13
15.2d		Hinckley (V)	708	740	721	724	722	726		725	+4
40N3E-											
15.7c	(2)	Kishwaukee College	920	910					754	741	
23.6e	(2)	Malta (V)	1254	915	752		750	751		743	-9
23.7e	(1)	Malta (V)	853	915	767			783		775	+8
23.8e1		C. & NW. Railroad	1007	910	784	782	782	783	784	779	-5
40N4E-											
13.2h	(11)	De Kalb (C)	1312	885			677		648	640	
15.7a	(6)	De Kalb (C)	1291	855	650		651				
16.1g	(1)	De Kalb Univ. Dev. Corp.	803	880	782			792		779	-3
16.2g	(2)	De Kalb Univ. Dev. Corp.	701	883	784					763	-21
21.5f	(10)	De Kalb (C)	1310	880	675		672	678	677	659	-16
22.2d	(1)	De Kalb (C)	1331	870			683	667	667	662	
22.2e		De Kalb Retread & Vulcan. Co.	775	870	731	738	736	740	737	725	-6
22.3e1	(2)	De Kalb (C)	1306	860	662			668		649	-13
23.1g	(9)	De Kalb (C)	1330	885	719		729	735	746	735	+16
23.2e	(5)	De Kalb (C)	1330	890	646		647	647	651	641	-5
23.4d	(4)	De Kalb (C)	1178	885	702		720	716	711	652	-50
23.8e	(8)	De Kalb (C)	949	875	653		667			643	-10
26.3g1	(1)	Del Monte (Plant III)	1324	890		688		660	660	668	
26.3g2	(2)	Del Monte (Plant III)	1345	890	702	680		650	650	658	-44
26.7d	(7)	De Kalb (C)	1315	885	689	660	684	668	672	659	-26
40N5E-											
5.5e	(5)	Sycamore (C)	1227	872	623						
41N5E-											
32.6c	(4)	Sycamore (C)	1290	855	717					701	-16
32.7g	(6)	Sycamore (C)	1213	840				655		628	
42N3E-											
26.3h2	(2)	Kirkland (V)	636	775	760					758	-2
42N4E-											
22.7a2	(2)	Kingston (V)	311	825	750		745			741	-9
42N5E-											
19.4b	(3)	Genoa (C)	732	830	722			722		717	-5
19.6b2	(2)	Genoa (C)	730	820	728			726		710	-18
20.7a	(4)	Genoa (C)	770	847					682	676	
DUP--											
37N11E-											
2.7d	(1)	Ramblin Rose South	1610	710		118				68	
3.8a1	(1A)	Argonne National Lab.	1595	670	145		152			117	-28

Water Levels (Continued)

(Elevations in feet above mean sea level)

Well number	Owner	Depth of well (ft)	Surface elevation	Water-level elevations						Water level change, 1966-1971 (ft)
				1966	1967	1968	1969	1970	1971	
DUP-- (Continued)										
38N9E-										
13.2b3 (7)	Naperville (C)	1445	680	190	185	188			158	-32
15.7d	J. S. Plastics Co.	1000	704						220	
38N10E-										
30.4d2 (16)	Naperville (C)	1478	690					155	145	
38N11E-										
28.1c2 (4)	Brookhaven Manor Water Co.	1612	760			134			132	
39N9E-										
5.5d (5)	West Chicago (C)	1376	751		366		361	351	343	
15.7d (4)	West Chicago (C)	1465	746	274		258	231	236	218	-56
19.6c (4)	National Accelerator Lab.	1432	756						241	
39N10E-										
1.4d	Commonwealth Edison Co.	1465	740	130					84	-46
39N11E-										
1.8f1 (1)	Elmhurst (C)	1475	678	8	-32	-32			-91	-99
4.1f (7)	Villa Park (V)	1418	702	42	-6		-5		-6	-48
6.3a (4)	Lombard (V)	1560	700	115	101	101	85	55	56	-59
9.1h (1)	Villa Park (V)	1475	694	40	35	25	5	5	-10	-50
9.2h (2)	Villa Park (V)	2125	699	49	72		25		28	-21
10.1h (4)	Elmhurst (C)	1390	669	0	9	17		-66	-71	-71
10.4g6 (7)	Ovaltine Food Products	1936	675	-6				6	5	+11
10.4g8 (9)	Ovaltine Food Products	2002	670	20				-24	-50	-70
12.8e (5)	Elmhurst (C)	1480	677	-3	-63	12	3		-31	-28
13.3g2 (10)	Elmhurst (C)	1567	705			75	-40	20	25	
16.1b (8)	Villa Park (V)	1485	705	69	63		41		17	-52
17.8d (7)	Lombard (V)	1520	730	132	132	111	113		25	-107
20.7a (8)	Lombard (V)	1630	775			80	62	37	35	
26.5h (1)	Oakbrook Utility Co.	1521	685	51	50				32	-19
26.8h (2)	Oakbrook Utility Co.	1405	690		60				35	
40N10E-										
14.8c2 (2)	Bloomingtondale (V)	1395	750	198			131	149	97	-101
40N11E-										
13.4b (6)	C. M. ST. P. & P. Railroad	1440	671	151		107		103	107	-44
13.8e2 (2)	Bensenville (V)	1442	676	31	71	58			-24	-55
14.4e (3)	Bensenville (V)	1445	670	2	42	50	0	9	-15	-17
26.1d (9)	Elmhurst (C)	1479	675			0			-80	
31.5a (5)	Lombard (V)	1793	738	110	110	83	65	49	63	-47
35.5e (6)	Elmhurst (C)	1471	703	-4	12	-17	-37	-40	-52	-48
GRY--										
31N6E-										
6.2a3 (3)	Kinsman (V)	710	658						510	
31N8E-										
4.1a2 (4)	Gardner (V)	1933	588			423			419	
11.6a (4)	South Wilmington (V)	970	585	473	334			337		
11.6b3 (3)	South Wilmington (V)	970	586	320				344	308	-12
32N8E-										
3.1e (4)	Coal City (V)	793	567				377		352	
26.1f (1)	Braceville (V)	868	585	355						
33N6E-										
29.3e (6)	E. I. DuPont	1530	610				351	443	410	
29.3d (2)	E. I. DuPont	1428	501	439		439	326	373	371	-68
29.4e (3)	E. I. DuPont	1545	606				419			
29.5e (1)	E. I. DuPont	1515	606			396	426	381	446	
33N7E-										
4.2a3 (3)	Morris (C)	865	523	449		428		448	445	-4
4.4c (5)	Morris (C)	1442	506	434		448	422	421	416	-18
6.3g	Heatherfield Subdivision	520	549	478					488	+10
9.3h (4)	Morris (C)	1492	519	419				429	429	+10
33N8E-										
35.4e (1)	DeMert & Dougherty Inc.	805	560	405					380	-25
36.5a (1)	Diamond (V)	723	565	400					370	-30

Water Levels (Continued)

(Elevations in feet above mean sea level)

Well number	Owner	Depth of well (ft)	Surface elevation	Water-level elevations						Water level change, 1966-1971 (ft)
				1966	1967	1968	1969	1970	1971	
GRY-- (Continued)										
34N8E-										
1.3e (3)	Minooka (V)	1508	610	365	360	355	350		337	-28
1.5e (2)	Minooka (V)	620	613	368				355	388	+20
20.2e (1)	Northern Petrochemical Co.	1453	524			477	420	412	350	
21.3f (2)	Amax Aluminum Co.	1515	525						335	
21.3g (1)	Amax Aluminum Co.	1540	525		463			430	385	
21.9a (3)	Northern Petrochemical Co.	1463	523					408	378	
21.9c (2)	Northern Petrochemical Co.	1470	523					403	360	
28.1d2 (7)	Northern Petrochemical Co.	1492	490		384	385			400	
28.5f (5)	Northern Petrochemical Co.	1455	503					433		
34.5h	Reichold Chemical Co.	706	510				447			
35.1e (2)	Dresden Nuclear Power Sta.	1500	515	372	368	356	356	339	346	-26
35.1g (1)	Dresden Nuclear Power Sta.	1499	519			347	270	258	258	
35.1g (1)	Dresden Nuclear Power Sta.	788	519	374	361	335				
35.4d (2)	General Electric Co.	788	533			397				
JDV--										
26N1E-										
10.5g (7)	Savanna Army Depot	1078	594	622	622				599	-23
26N2E-										
9.4e (1)	Hanover (V)	950	625	597			615		615	+18
9.5c (2)	Hanover (V)	1180	660	614			615		612	-2
19.3c (b)	Savanna Army Depot	1180	631	645	645	636	659		621	-24
27N4E-										
11.4e (6)	Stockton (V)	1019	1010	765					764	-1
28N1W-										
13.7g (5)	Galena (C)	1593	843	608	610	610			624	+16
28N1E-										
20.1g3 (3)	Galena (C)	1575	610	620	620				630	+10
20.1g4 (4)	Galena (C)	1516	610	620	620				635	+15
28N3E-										
15.1h (2)	Apple Canyon Lake Sbd.	1825	920					682	702	
29N2E-										
26.3b2 (2)	Scales Mound (V)	374	943	909					893	-16
26.3b3 (3)	Scales Mound (V)	451	948						895	
29N4E-										
19.3g (1)	Apple River (V)	380	1005			961				
24.2e2 (2)	Warren (V)	963	1010	842					832	-10
24.2e3 (3)	Warren (V)	1000	1008					780	765	
KNE--										
38N7E-										
5.2d (1)	Waubensee Comm. College	1323	703				499	490	484	
38N8E-										
1.2c (20)	Aurora (C)	1400	715		285	358			225	
4.1f (2)	North Aurora (V)	1272	635	300					225	-45
4.3g (3)	North Aurora (V)	1305	675	335					271	-64
4.8d (4)	North Aurora (V)	1325	689				318			
9.2d1 (1)	Mercyville Sanitarium	1411	697	301	302	289	274	239	240	-61
13.7b1 (2)	Aurora Paper Board Co.	1787	696				266		180	
13.8b (2)	Aurora Paper Board Co.	1397	696	282			264		181	-101
15.4g2 (12)	Aurora (C)	2253	644	226				234	199	-27
15.4h (11)	Aurora (C)		635					435	200	
15.5e	Aurora Bleachery	1276	648				248	240	248	
15.6f	Oberweiss Dairy	875	660			286				
15.6h	Alba Mfg. Co.	1543	645	281		268			208	-73
16.4d (17)	Aurora (C)	2152	685	275					295	+20
19.5a (19)	Aurora (C) Before Plugged	2150		317			315			
19.5a (19)	Aurora (C) After Plugged	1424	685				408			
22.7b (8)	Aurora (C)	1396	628	204	143			218		
24.7c (18)	Aurora (C)	2150	715	270			242		202	-68
27.5a (6)	Aurora (C)	2185	662	312	292			171	197	-115
29.2h (15)	Aurora (C) Before Plugged	2150	665	259	329					

Water Levels (Continued)

(Elevations in feet above mean sea level)

Well number	Owner	Depth of well (ft)	Surface elevation	Water-level elevations						Water level change, 1966-1971 (ft)
				1966	1967	1968	1969	1970	1971	
KNE 38N8E- (Continued)										
29.2h (15)	Aurora (C) After Plugged	1600	665					226	150	
32.4f (4)	Montgomery (V)	1333	640		246	255	235	170	203	
33.8c1 (3)	Montgomery (V)	1331	633	292		268		152	193	-99
34.8g (16)	Aurora (C)	2150	660	240	323			215	217	-23
39N7E-										
5.8f (1)	Elburn (V)	1350	850	540		529	524	520	516	-24
6.3f1 (3)	Elburn Packing Co.	905	840	524				504		
39N8E-										
2.4c (5)	Geneva (C)	2292	753	379	373	453			353	-26
3.1b2 (2)	Geneva (C)	2172	678	413	408	408			393	-20
3.2b (4)	Geneva (C)	2267	719	404	399	394		359	339	-65
3.5e (1)	Burgess Norton Mfg. Co.	1340	760	323	316	278	251	240	230	-93
3.8g (3)	Geneva (C)	1578	759	394				357	359	-35
9.8h2 (6)	Geneva (C)	1350	755		393	373			358	
11.7e4 (4)	Ill. State Training School	2001	730		383	375	368	363	347	
15.6g (2)	Campana	1352	706	392		386				
23.8f (4)	Batavia (C)	1357	721	376	375	361	363	356	341	-35
33.4g (1)	Mooseheart	2248	694	441		434	444	434	420	-21
33.5g (2)	Mooseheart	1485	708	384		327	327		406	+22
40N7E-										
16.6e (1)	Windings of Ferson Creek	1409	950				533			
18.3e	G. Pruitt	800	945						548	
23.4g	Wasco School	670	820						459	
32.8b (3)	Elburn (V)	1393	900						538	
40N8E-										
26.2d (1)	Coca-Cola Bottling Co.	1333	760			355		355	354	
27.5a1 (3)	St. Charles (C)	2198	690	416		406				
27.6b (4)	St. Charles (C)	2200	692	422				349	329	-93
31.6f (5)	Ill. St. Training School	1292	763				434	445	422	
31.6h (4)	Ill. St. Training School	1322	790	509			443		420	-89
34.5g2 (2)	Howell Co.	1268	685	391		362	377		328	-63
34.6e1 (5)	St. Charles (C)	1856	764	394	386		374		352	-42
34.6e2 (6)	St. Charles (C)	2249	755	448			415	439	395	-53
41N6E-										
9.1g2 (2)	Burlington (C)	1105	920	622		598			585	-37
41N7E-										
19.3d (2)	Central High Sch. 2	1022	1037					545	540	
41N8E-										
11.3f1 (1)	Elgin (C)	1945	741	332	362	362	351		266	-66
11.3f2 (2)	Elgin (C)	1935	743	348	353	383	323		273	-75
11.3f3 (3)	Elgin (C)	1793	745	327	335	385	325		285	-42
11.3f4 (4)	Elgin (C)	1880	740	360	368	280	320		270	-90
11.3f5 (5)	Elgin (C)	1255	740	335	358	260	300		290	-45
11.3f6 (6)	Elgin (C)	1300	740	350	355	260	290		260	-90
12.3e (1)	Simpson Co.	998	805	381	378	372	369	365	356	-25
16.4c (1a)	Elgin (C)	1268	840	451	361		391		377	-74
16.4d1 (2a)	Elgin (C)	1353	860	472	372		402		382	-90
16.4d2 (3a)	Elgin (C)	1378	860		413		403		383	
23.6b (2)	Elgin State Hospital	2000	760	430		446				
24.1a	Elgin (C)	1978	733	377	373		343		358	-19
24.3b3	Elgin (C)	1255	728	365	357		328		353	-12
35.8g (1)	South Elgin (V)	1400	761	479					476	-3
42N6E-										
3.1e	Ill. Toll Highway Comm.	962	910						665	
21.4b (3)	Hampshire (V)	818	878			753				
42N8E-										
22.7f	D. Hill Nursery	1227	790	430		435	370		405	-25
27.1e (1)	West Dundee (V)	1200	725	381	408	388		371	361	-20
KNK--										
30N9E-										
6.8a (1)	Reddick (V)	1188	612	439					402	-37

Water Levels (Continued)

(Elevations in feet above mean sea level)

Well number		Owner	Depth of well (ft)	Surface elevation	Water-level elevations						Water level change, 1966-1971 (ft)
					1966	1967	1968	1969	1970	1971	
KNK-- (Continued)											
30N10E-											
28.8h	(6)	Hersher (V)	773	645	470	462	430	423	435		
29.2h	(5)	Hersher (V)	789	650	463				490	515	+52
KEN--											
37N7E-											
32.1e2	(3)	Yorkville	1335	584	476	463	462		447	410	-66
37N8E-											
5.5i	(1)	Western Electric Co.	1332	640	317					196	-121
5.6e2	(2)	Aurora Sanitary Dist.	1325	628	320					251	-69
5.9f	(1E)	Caterpillar Tractor Co.	1384	661	299		301		240	255	-44
6.2d	(3)	Caterpillar Tractor Co.	1352	661	319		339	294		263	-56
6.2f	(2)	Caterpillar Tractor Co.	1346	660	306	338		312	270	262	-44
17.2e	(4)	Oswego (V)	1344	658	292	299	307		302	277	-15
20.8h	(3)	Oswego (V)	1378	640	365	368	373	358	330	305	-60
LKE--											
43N10E-											
14.7d	(1)	Lumbermans Mutual	1400	796					296		
15.2d	(2)	Lumbermans Mutual	1402	796					268		
18.4h	(5)	Lake Zurich (V)	1345	822	307		352		264	254	-53
21.5e	(7)	Lake Zurich (V)	1333	846						276	
43N11E-											
22.6d	(3)	Lincolnshire (V)	1300	667						167	
23.5g	(1)	Lincolnshire (V)	1305	645	240				185	155	-85
32.8f	(2)	Buffalo Grove (V)	1355	703			208			160	
43N12E-											
30.7e	(1)	Riverwoods Sewer & Water Co.	1367	677	269					134	-135
31.3c	(1)	Baxter Travenol Lab.	1465	680				170		125	
31.5f		Ill. Toll Highway Comm.	1055	680				178			
33.5c	(1)	Kitchens of Sara Lee	1350	690	210	284					
44N10E-											
12.8a	(9)	Mundelein (V)	1380	830				380	326	305	
44N11E-											
19.3c	(6a)	Mundelein (V)	1405	743		313	303	253	263	248	
21.7f2	(11)	Libertyville (V)	1490	703				343		263	
24.3a	(1)	Knollwood Country Club	1566	680	412					305	-107
31.4h	(8)	Mundelein (V)	1383	730	330	300	250	230	260	260	-70
33.3g		Hawthorne Melody Farms	1290	690		334				235	
44N12E-											
21.8f2	(4)	Lake Bluff (V)	1804	680	423	417	414	399	394	365	-58
32.2c	(1)	Owentsia Golf Club	1023	660	280					220	-40
45N10E-											
26.7c2	(2)	Grayslake Gelatin Co.	1040	785				422	437		
45N11E-											
14.4d	(1)	Midwest Molding & Mfg.	1481	665						478	
14.5a	(1)	Gurnee (V)	1517	665	473				499	401	-72
29.8a	(2)	Wildwood (V)	1845	785	453					422	-13
30.4g	(4)	Wildwood (V)	1320	795					418		
36.7d	(1)	American Hosp. & Supply Co.	1421	710				403	402		
45N12E-											
15.8e1	(1)	Griess-Pfleger Tanning Co.	1670	588						368	
30.6c	(1)	Gene's Mobile Home Park	990	699					394		
30.8e	(3)	Midway Mobile Homes	1450	693				352			
46N12E-											
8.1d	(6)	Winthrop Harbor (V)	1500	690				480	487	430	
46N12E-											
21.1b1	(1)	Zion (C)	1100	633	494	482	478	461	456	448	-46
LAS--											
31N1E-											
24.6e2	(4)	Lostant (V)	1881	698					474	476	

Water Levels (Continued)

(Elevations in feet above mean sea level)

Well number	Owner	Depth of well (ft)	Surface elevation	Water-level elevations						Water level change, 1966-1971 (ft)	
				1966	1967	1968	1969	1970	1971		
LAS-- (Continued)											
31N3E- 22.8h (1)	Kangley (V)	542	632							477	
32N1E- 4.7b (1)	Cedar Point Light & Power Co.	1749	653		499						
33N1E- 15.1h1 (1)	M & H Zinc Co.	2000	585							475	
15.1h2 (1)	Carus Chemical	1617	580			475				480	
16.8a2 (4)	Peru (C)	1505	460	462	456	453	452	463		461	-1
16.8a3 (6)	Peru (C)	2665	540	454						423	-31
20.2h2 (5)	Peru (C)	2601	465	391				438		412	+21
20.8h (1)	American Nickeloid Co.	1632	600							489	
21.8h (7)	Peru (C)	2591	460	464				418		366	-98
36.6g2 (3)	Oglesby (C)	2812	590					423			
36.6g3 (4)	Oglesby (C)	2747	630				454	463		445	
33N2E- 9.4b (1)	American Silica Co.	542	460					430		437	
9.6b (1)	Philadelphia Quartz Co.	200	480	480						464	-16
9.8b (1)	Utica (V)	618	480		480			480		480	
9.8f (1)	Bell Rose Silica Co.	345	540		466						
21.3g (2)	Starved Rock State Park	401	470	442				442			
33N3E- 1.6b (7)	Ottawa (C)	1180	489	439						439	0
1.8a (8)	Ottawa (C)	1180	489							431	
2.4b (9)	Ottawa (C)	1220	495	450	457	446	438	443		444	-6
3.2b (1)	Union Carbide	1225	490	444	425		418	419			
3.5a (2)	Union Carbide	1255	490	434	411		386	421		413	-21
10.8d	Ottawa Silica Co.	1060	480							430	
16.1d (5)	Libbey-Owens-Ford Glass Co.	1255	470		445					440	
16.1g (1)	Naplate (V)	420	488				443	428		431	
17.6c2 (2)	Buffalo Rock State Park	480	542							455	
33N4E- 13.2a (2)	National Biscuit Co.	546	483							454	
13.3c (2)	Marseilles (C)	850	498	483						470	-13
15.7e (2)	Marbon Chemical Co.	1292	480	467				390		393	-74
15.7f (1)	Marbon Chemical Co.	1253	480	472		440		460		432	-40
24.8g (1)	Illini State Park	500	500							477	
33N5E- 24.8c1 (1)	Seneca (V)	700	510		450					425	
24.8c2 (2)	Seneca (V)	700	510					457			
25.4e (3)	Ringo Farms Inc.	654	505	438						439	+1
25.4g1 (1)	Ringo Farms Inc.	451	505	434						447	+13
25.4g2 (2)	Ringo Farms Inc.	1447	505							439	
34N3E- 26.7b (1)	La Salle County Farm Bureau	470	625		480					476	
35.5a2 (2)	Oak Lane Development Corp.	504	605					459		456	
34N4E- 9.4a (1)	Wedron Silica Co.	261	545	493						495	+2
16.3f (2)	St. Joseph's Sanitarium	338	535							495	
34N5E- 2.2i (1)	Amer. Tel. & Telegraph Co.	1348	770	475						511	+36
2.3h (2)	Amer. Tel. & Telegraph Co.	1353	770							507	
35N5E- 8.6b (1)	Ill. State Industrial Sch.	885	591	569		574	574	574	574	574	+5
17.7h (3)	Ill. State Industrial Sch.	900	592				567	567	561		
36N1E- 27.4a1 (1)	Del Monte Packing Corp.	1384	730	637			621	610	601		-36
27.5b (2)	Del Monte Packing Corp.	1385	740				642	630	630		
32.1a (4)	Mendota (C)	1450	740	648	648	641	633	630	604		-44
33.3h (3)	Mendota (C)	1377	740	540	548	568	542	568	594		+54
36N3E- 18.4d3 (1)	Earlville (C)	625	703	668	668	661				668	0
18.10a3 (3)	Marathon Electric Mfg. Corp.	887	699				669			668	

Water Levels (Continued)

(Elevations in feet above mean sea level)

Well number	Owner	Depth of well (ft)	Surface elevation	Water-level elevations					Water level change, 1966-1971 (ft)	
				1966	1967	1968	1969	1970		1971
LAS-- (Continued)										
36N4E-										
8.5h1 (1)	Leland (V)	230	701	671				671	0	
8.5h2 (2)	Leland (V)	220	700	680				682	+2	
LEE--										
19N10E-										
1.3f (1)	Woodhaven Lakes	1463	855					685		
19N11E-										
9.1a2 (2)	Sublette (V)	771	920		644	619	619	674	619	
20N10E-										
22.1g (3)	Amboy (C)	1105	750						676	
22.2g1 (1)	Amboy (C)	2012	750					720		
21N8E-										
8.3a (1)	Sauk Valley Jr. College	1400	655			615			618	
21N9E-										
3.7c (8)	Dixon (C)	1872	790					657		
5.5a (7)	Dixon (C)	1870	740		646	638	640	634	630	
22N9E-										
21.4a1 (1)	Dixon State School	1922	680	596	591	642	624	634	624	+28
21.4a2 (2)	Dixon State School	1780	680	606	601				629	+23
21.7a (3)	Dixon State School	1965	780	649	648				633	-16
27.7b2 (1)	Medusa Portland Cement Co.	400	660	640		642	642	642	642	+2
27.7b1 (2)	Medusa Portland Cement Co.	200	660	650		650	642	650	650	0
27.8a1 (3)	Medusa Portland Cement Co.	250	660	635		640	640	640	637	+2
27.8a2 (4)	Medusa Portland Cement Co.	250	660	635			645	645	642	+7
29.3b (6)	Dixon (C)	1720	775	620	630	610	642	621	622	+2
31.1a4 (4)	Borden Co.	189	680						657	
31.1b (6)	Borden Co.	202	670	643		646	646	655	652	+9
32.1a (5)	Dixon (C)	1472	660		630	630	630			
33.8a1 (3)	Dixon (C)	1700	656		626	626	636	626	622	
22N11E-										
27.7c1 (1)	Ashton (V)	545	810	765	738		735	740	740	-25
37N1E-										
8.8e3 (3)	West Brooklyn (V)	650	945			695		695		
37N2E-										
10.2b (3)	Paw Paw (V)	1055	940						715	
10.2b1 (1)	Paw Paw (V)	1018	928			678	721	778		
MCH--										
43N5E-										
25.1b	Ill. Toll Highway Comm.	625	858				672			
43N8E-										
6.4a (6)	Crystal Lake (C)	1295	892	468		435	455		457	-11
12.3d (4)	Gary (V)	1350	855	455					440	-15
44N5E-										
35.3g (3)	Marengo (C)	1028	817	713					698	-15
35.5h	Arnold Engineering Co.	846	818	721		721	712	714	704	-17
44N8E-										
33.5a2 (7)	Crystal Lake (C)	1400	930	508					465	-43
45N6E-										
19.3f (1)	Plum Tree National Golf Club	925	984			732				
45N8E-										
10.8a (2)	Modine Mfg. Co.	1200	843	585		553			540	-45
10.8d (7)	Morton Chemical Co.	1133	850	555	545	540	535	540	534	-21
15.8h (3)	Modine Mfg. Co.	1220	835			546				
46N5E-										
33.8a (2)	Dean Milk Co.	1775	880			682			688	
OGL--										
23N8E-										
9.4c1 (1)	Polo (C)	2100	830						676	

Water Levels (Continued)

(Elevations in feet above mean sea level)

Well number	Owner	Depth of well (ft)	Surface elevation	Water-level elevations						Water level change, 1966-1971 (ft)
				1966	1967	1968	1969	1970	1971	
OGL 23N8E- (Continued)										
9.4c2 (2)	Polo (C)	1165	830			652				
9.4c3 (3)	Polo (C)	1260	830			651			672	
23N9E-										
9.7e (1)	White Pines State Park	300	740						716	
23N10E-										
3.3d (1)	Oregon Ready Mix	193	685		662					
3.6g (2)	Oregon (C)	1200	707	661		674	662	662	657	-4
3.6j (1)	Oregon (C)	1690	672	650	642	637	637	640	652	+2
3.7g (3)	Oregon (C)	1200	710	660	654	637	641	638	655	-5
24N9E-										
27.1a (4)	Mt. Morris (V)	1442	905	648	669	640			627	-21
27.1f1 (3)	Mt. Morris (V)	1807	900	640	635	645			635	-5
27.1f2 (1-S)	Kable Printing Co.	1435	895			635	625	578		
27.1g (2-N)	Kable Printing Co.	1353	895	670		678	677	676	640	-30
24N11E-										
1.2b (1)	Stillman Valley (V)	300	725						690	
25N8E-										
33.5e (2)	Forreston (V)	1000	940	746		746		748	721	-25
25N9E-										
36.5d (2)	Leaf River (V)	325	765						659	
25N11E-										
32.6g (3)	Byron (C)	715	720				660		666	
32.8e2 (2)	Byron (C)	673	720	659	661	661				
40N1E-										
12.6b (1)	Hillcrest (C)	387	825		797		792			
23.2a2 (2)	Del Monte Corp.	465	790						674	
23.4c2 (3)	Del Monte Corp.	494	793			725			640	
24.7a1 (3)	Rochelle (C)	1484	793	720					718	-2
24.7a2 (4)	Rochelle (C)	1450	793	693					730	+37
25.2i (9)	Rochelle (C)	888	785	664					649	-15
25.3f (6)	Rochelle (C)	867	800	697	708	713	718	699	704	+7
36.2h (10)	Rochelle (C)	920	785	744					713	-31
40N2E-										
21.1e (1)	Del Monte Corp.	452	840					779	782	
23.1f (2)	Creston (V)	737	905	777		777			772	-5
30.4c (8)	Rochelle (C)	935	793						700	
RIS--										
16N3W-										
36.3b (1)	Reynolds (V)	650	790						565	
17N2W-										
23.2f1 (2)	Milan (V)	1157	562						514	
35.1d (4)	Suburban Heights Sbd.	428	685						541	
36.8h (4)	Milan (V)	1729	680					507	500	
17N1W-										
26.4c (2)	Coal Valley (V)	555	712	544	544				544	0
17N1E-										
4.5f1 (1)	Carbon Cliff (V)	1150	575						479	
7.5d (2)	Deere Company	1651	595		498			488	487	
18N2W-										
25.1b (1)	Rock Island Arsenal	411	583	548	523	515	506	512	486	-62
18N1W-										
30.8c (51)	Rock Island Arsenal	1603	581					484	479	
18N1E-										
2.4c (1)	Rapids City (C)	532	700						585	
19.2d (5)	East Moline State Hospital	1904	670	501	514	485	478	470	465	-36
30.3b (2)	Deere & Co.	1640	585		505					
32.7g2 (2)	Silvis (C)	1985	595						455	

Water Levels (Continued)

(Elevations in feet above mean sea level)

Well number	Owner	Depth of well (ft)	Surface elevation	Water-level elevations						Water level change, 1966-1971 (ft)
				1966	1967	1968	1969	1970	1971	
STE--										
26N6E-										
8.2f (4)	Pearl City (V)	668	843			723	733		723	
9.8f5 (3)	Pearl City (V)	625	820		808		752		746	
26N7E-										
3.2e3 (3)	Freeport College	509	879						823	
26N8E-										
2.2b (2)	Kelly-Springfield Tire Co.	459	775		692	637	645	622	648	
2.3b2 (4)	Kelly-Springfield Tire Co.	1405	776					704	636	
2.4b (3)	Kelly-Springfield Tire Co.	400	780		755		683	618	653	
26N9E-										
32.8g (1)	German Valley (V)	560	900						730	
27N7E-										
26.8f	Commonwealth Edison Co.	375	828						744	
35.5e (2)	Park Crest Water Co.	407	865						767	
27N8E-										
28.6a (2)	Structo Toy Mfg. Co.	423	755						733	
30.3a4 (3)	Burgess Battery Co.	512	760						722	
30.4a (1)	Oak Brand Dairy	498	764				725			
30.7b2 (3)	Freeport (C)	502	764	730	732	730	733	724	728	-2
30.8b1 (2)	Freeport (C)	415	763	714		734			726	+12
30.8b2 (4)	Freeport (C)	425	764	730	730	724	724	728	727	-3
30.8c2 (6)	Freeport (C)	472	764	726	732	732	738	727	728	+2
31.2g (1)	W. T. Rawleigh Co.	957	772				737		722	
32.7h2 (2)	Modern Plating Co.	405	750						720	
28N6E-										
33.8e2 (2)	Lena (V)	998	965						754	
28N7E-										
36.1b (1)	Cedarville (V)	401	860		797				794	
36.3c (2)	Cedarville (V)	243	845						781	
28N8E-										
36.5h (1)	Dakota (V)	516	940						800	
28N9E-										
21.5f (1)	Rock City (V)	432	918	820	815				814	-6
29N6E-										
22.2b (1)	Winslow (V)	355	780	780+		796			780+	0
29N7E-										
36.3e (1)	Orangeville (V)	320	879				797		791	
WTS--										
21N5E-										
18.1g (4)	Morrison (C)	1769	710			525		590		
18.8c2 (2)	Morrison (C)	2048	623						468	
18.8c3 (3)	Morrison (C)	1625	640		483			498	496	
21N6E-										
25.6f (2)	Armour & Co.	1077	635	545						
25.7c (1)	Armour & Co.	1686	635				551			
21N7E-										
22.1e1 (1)	Sterling (C)(N.III.Water Corp.)	1434	645	559		544	544		533	-26
22.1e2 (2)	Sterling (C)(N.III.Water Corp.)	1655	645	573		554	540		541	-32
22.1e3 (3)	Sterling (C)(N.III.Water Corp.)	1830	645	559	551	548	545	522	537	-22
22.1e4 (4)	Sterling (C)(N.III.Water Corp.)	1630	645	561		551	544		549	-12
28.1g (2)	Russell, Burdsall & Ward	1500	625	525	520		380		425	-100
28.5e (1)	Northwestern Steel & Wire Co.	813	630	590				561	479	-111
28.5g (E-2)	Northwestern Steel & Wire Co.	1580	625						475	
28.5h (E-1)	Northwestern Steel & Wire Co.	760	630						500	
29.1h (W-1)	Northwestern Steel & Wire Co.	1636	630						520	
22N3E-										
28.7d2 (2)	Fulton (C)	1260	600	484					441	-43
28.7d3 (3)	Fulton (C)	1943	600	501					480	-21

Water Levels (Continued)

(Elevations in feet above mean sea level)

Well number	Owner	Depth of well (ft)	Surface elevation	Water-level elevations						Water level change, 1966-1971 (ft)
				1966	1967	1968	1969	1970	1971	
WTS-- (Continued)										
21N5E-18.6f1 (2)	General Electric Co.	1101	680						525	
WIL--										
32N9E-8.5c (1)	Braidwood (V)	1050	575	315					293	-22
8.5d (2)	Braidwood (V)	846	572		353				320	
32N10E-36.2d (2)	Kankakee State Boys Camp	751	610	401					382	-19
33N9E-										
1.5e1 (5)	Joliet Army Ammunition Plant	935	570	286	258	255	265	262	253	-33
12.1g (11)	Joliet Army Ammunition Plant	1644	578	328	307					
25.4g	Cel-Fibe Co.	708	565		316	290		285	270	
25.6b2 (2)	Wilmington (V)	1566	546	326		295			289	-37
36.7h (3)	Wilmington (V)	1578	530	330		309			295	-35
33N10E-										
9.1f (2)	Joliet Army Ammunition Plant	1672	646	336	313	304	302	305	310	-26
9.4h (1)	Joliet Army Ammunition Plant	1614	641	331	305	301	297	296	296	-35
34N9E-										
10.1h (2)	Amoco Chemical Corp.	1405	568	-35	-52			-72		
11.2d (2)	Stepan Chemical Co.	1402	520			52	32		37	
11.2e (1)	Stepan Chemical Co.	1407	525	94		53	35		35	-59
11.7g (1)	Amoco Chemical Corp.	1422	569	49	14	-11			-3	-52
21.2d	Rexall Chemical Co.	1573	545	291	184				294	-4
21.8b	Glidden Durkee	1555	530					320	270	
22.7d	Mobil Oil Corp.	1578	555					298		
25.5a (8)	Joliet Army Ammunition Plant	1639	606	268	253		218	250	228	-40
25.5d (9)	Joliet Army Ammunition Plant	1602	590	276	241	151				
25.5h (10)	Joliet Army Ammunition Plant	1569	591	268	255	255	243	253	243	-25
34.3a (3)	Joliet Army Ammunition Plant	1593	528		264		204	164	204	
35.5a (1)	Joliet Army Ammunition Plant	1597	539	223	227			210	160	-63
35.8a1 (2)	Joliet Army Ammunition Plant	1612	532	428	421	402	411	228		
36.5a (6)	Joliet Army Ammunition Plant	1648	578	342	271	223		203	213	-129
36.5e (7)	Joliet Army Ammunition Plant	1649	601	262	253	276	258			
34N10E-										
31.6a (12)	Joliet Army Ammunition Plant	1670	625	267	269		261	278	251	-16
35N9E-										
3.2a	Du Page River Farm	1520	587						159	
9.3c (2)	Will County Water Co.	1499	605			290			208	
10.3a1 (1)	Holiday Inn Motel	1458	570	194					150	-44
11.1b (10D)	Joliet (C)	1572	610					100		
15.2h (1)	Howard Johnson Motel	1460	570	187		165			165	-22
35N9E-										
25.1e (3)	Caterpillar Tractor Co.	1556	547	26	19	6		3	7	-19
35N10E-										
2.8b (4D)	Joliet (C)	1563	558	-40	24					
3.4e (3)	Ill. State Penitentiary	1518	560	10	34				-38	-48
3.5e (2)	Ill. State Penitentiary	1660	549					-31	-43	
4.2h	Phoenix Manufacturing Co.	1595	553	29	27	14			31	+2
7.4b (9D)	Joliet (C)	1671	647	0	0			-24	-25	-25
9.1d (1D)	Joliet (C)	1525	536	26	50		44	-10	-12	-38
11.6g	E J & E Railroad	1589	560	6	10	8	-24	-64	-50	-56
14.5d (1)	Prairie State Paper Mills	1639	593	123	1	-47	-7	-55	-2	-125
14.6h1 (5D)	Joliet (C)	1609	564	-38	-16		-30		-36	+2
16.2h	Joliet (C) (Des Plaines St.)	1575	531	84	77	65	53	42	26	-58
16.5c1 (3D)	Joliet (C)	1565	537	47	-21					
19.2b (4)	Commonwealth Edison Co.	1525	523	-46	-58	-62	-56	-72	-63	-17
20.6a (2)	Commonwealth Edison Co.	1487	536	-49	-43	-68	-78	-16	-64	-15
20.7g (2)	Rockdale (V)	1586	556	2	20	-33		-24	-24	-26
21.4b (2)	American Cyanamid Co.	1612	583	53	72	11	-29		4	-49
22.8g (1)	American Inst. of Laundering	1608	569	125		113			85	-40
29.8c (5)	Blockson Chemical Co.	1535	567			-141	-191			
30.1c (4)	Blockson Chemical Co.	1555	583				-175			
30.1e1 (1)	Blockson Chemical Co.	1520	548	-211	-213		-179			

Water Levels (Continued)

(Elevations in feet above mean sea level)

Well number	Owner	Depth of well (ft)	Surface elevation	Water-level elevations						Water level change, 1966-1971 (ft)
				1966	1967	1968	1969	1970	1971	
WIL 35N10E- (Continued)										
30.1e2 (2)	Blockson Chemical Co.	1495	550	-190		-195	-177	-189		
30.2h (3)	Commonwealth Edison Co.	1525	510	-71	-55	-83	-76	-83	-76	-5
30.3c (6)	Blockson Chemical Co.	1500	543	-98			-187			
30.6e (2)	Caterpillar Tractor Co.	1543	546	-19	-28	-26		-34	-32	-13
30.7f (1)	Caterpillar Tractor Co.	1560	544	-46	-31	-47			-52	-6
35N11E-										
5.7h1 (80)	Joliet (C)	1660	648	26	-27					
8.8h1 (70)	Joliet (C)	1701	674	12	10				-64	-76
36N9E-										
4.4a (4)	Plainfield (V)	1443	620	219					233	+14
10.8d (3)	Plainfield (V)	1481	612	216	207			162	162	-54
36N10E-										
2.7f (1)	Commonwealth Edison Co.	1500	587	93	80	75	55		40	-53
2.8f (3)	Commonwealth Edison Co.	1507	590	103	89	76	56	41	39	-64
2.8h (2)	Commonwealth Edison Co.	1536	590	106	89	86	56		37	-69
4.7g (4)	Romeoville (V)	1524	672	122		122	122	72	50	-72
16.4d3 (3)	Lewis College	1523	666	108	110	98			96	-12
21.4a (6)	Illinois State Penitentiary	1611	642	87	-45		-75	-75	-3	-90
23.2f (4)	Lockport (C)	1572	650	68	45	25	25	20	15	-53
23.5a (3)	Lockport (C)	1544	662	11	42	17	22	22	22	+11
23.6d (2)	Lockport (C)	1446	589	52	54				-13	-65
27.6b	U.S. Army	812	581					26	24	
27.7a	Metropolitan Sanitary Dist.	852	547	97				52	36	-61
28.6f2 (4)	Ill. State Penitentiary	1566	642	62	62		32	32	34	-28
28.6h (3)	Ill. State Penitentiary	1532	645	47	16		59	35		
29.2g (5)	Ill. State Penitentiary	1665	646	62	71		66	41	-4	-66
33.5c	Chaney School	909	909	101					54	-47
33.6h	Nash Bros.	1558	593	64	67	53	37	29	15	-49
34.8a	G.A.F. Corp.	776	551	41					37	-4
37N10E-										
25.3f2 (2)	Lemont Mfg. Co.	1500	580	106		94		79	82	-24
25.7a (3)	Union Oil Co. (North)	1501	600				120		50	
25.7c (2)	Union Oil Co. (North)	1456	590	102		80	40		40	
33.1h2 (2)	Romeoville (V)	1520	640	133		113	103	73	70	-63
35.3c1 (1)	Union Oil Co. (South)	1460	585			60			55	
35.3c2 (2)	Union Oil Co. (South)	1460	585			71			60	
WIN--										
26N11E-										
9.7g (3)	Winnebago (V)	835	885			725			696	
9.8c2 (2)	Winnebago (V)	810	870	748					751	+3
23.7g (2)	Dr. Quendt	425	850		802					
27N10E-										
28.8c2 (1)	Pecatonica (V)	660	760		716	713	713	713	731	
29.1d (2)	Pecatonica (V)	750	785		731	740	728	728	735	
32.2d	Northern Illinois Gas Co.	946	825						703	
28N10E-										
7.1g (1)	Lake Summerset	277	789				789 (flowing)		789 (flowing)	
10.8b (2)	Durand (V)	385	798						772	
43N1E-										
3.2f1 (1)	Central Ill. Gas & Electric	354	700	686					687	+1
3.2f2 (2)	Central Ill. Gas & Electric	825	710	652					619	-33
44N1E-										
2.3 (3)	Rockford (C)	1127	760					676	643	
9.1f	Winnebago County Home	435	780	730					722	-8
9.8c (20)	Rockford (C)	1200	735					643	644	
11.1c (2)	Atwood Vacuum Machine Co.	709	745		690		690	690	695	
11.1d	Essex Wire Co.	1150	740	690					692	+7
11.2c2 (3)	Atwood Vacuum Machine Co.	710	743		688		687	687	688	
12.7b (2)	Ingersoll Milling Machine Co.	1204	745	681	686	686			683	+2
13.6e1 (Unit B)	Rockford (C)	1500	724	644				634	584	-60
15.3c	Dean Milk Co.	1125	725	692	699		705	709	618	-74
17.3d (Unit 22)	Rockford (C)	1380	760					669	686	
20.7f (21)	Rockford (C)	1205	820	680				670	672	-8

Water Levels (Concluded)

(Elevations in feet above mean sea level)

Well number	Owner	Depth of well (ft)	Surface elevation	Water-level elevations						Water level change, 1966-1971 (ft)
				1966	1967	1968	1969	1970	1971	
WIN 44N1E- (Continued)										
21.3b2	Rockford (C) (J. I. Case Co.)	426	730	653					651	-2
21.3b4	Rockford (C) (J. I. Case Co.)	1200	730	652					670	+18
21.8e(Unit 15)	Rockford (C)	1355	810	670				645	655	-15
22.5c2(Group 3)	Rockford (C)	1600	730	630				637	637	+7
23.6d2(Group 4)	Rockford (C)	1300	708	685	684	681	681	688	691	+6
23.7e1(Unit 1)	Rockford (C)	1530	711	691				686	674	-17
27.1e2 (2)	Barber-Coleman	450	705	625	644	639	635	629	628	+3
28.5c (18)	Rockford (C)	1380	820	673				626	643	-30
32.4a1(Unit 16)	Rockford (C)	1310	840	668				641	670	+2
33.8f1 (1)	Mullers Pinehurst Dairy	482	760	726			721	735	723	-3
33.8f2 (2)	Mullers Pinehurst Dairy	465	759	727			722	724	714	-13
34.2b1 (3)	Quaker Oats Co.	450	736	671	701					
34.6h(Unit 4)	Rockford (C)	1219	730						661	
35.1a2 (2)	Rockford Products Corp. (Plant #1)	454	730	695					702	
35.5a2 (2)	Rockford Products Corp. (Plant #2)	1060	730	697					690	-7
36.6d (1)	Greenlee Brothers & Co.	743	735			650	660	660	660	
36.7f1(Unit 7)	Rockford (C)	1503	732					648	648	
44N2E-										
3.4c (30)	Rockford (C)	1325	905					685	642	
7.8e1 (2)	Woodward Governor Co. (basement well)	1227	725	664				667	603	-61
9.2a (25)	Rockford (C)	1290	878	683				693	631	-52
16.2a (27)	Rockford (C)	1280	840				645		612	
17.6g3 (17)	Rockford (C) (Edgebrook #3)	1195	785					675	667	
18.6a(Unit 5)	Rockford (C)	1312	792	651				638	639	-12
19.6b1(Unit 9)	Rockford (C)	1600	809	689				681	685	-4
20.3e(Unit 13)	Rockford (C)	1457	835					643	642	
21.5g	Guilford's Country Club Estates Sbd.	557	860	674	715					
28.5g (26)	Rockford (C)	1326	835		703			620	620	
29.3a(Unit 10)	Rockford (C)	1426	865					620	639	
31.7f(Unit 6)	Rockford (C)	1372	790					681	691	
45N2E-										
34.7g (3)	Loves Park (C)	865	840		798	815				
46N1E-										
24.6h4 (4)	Rockton (V)	429	738						720	
24.8a (6)	Rockton (V)	728	828				728			
46N2E-										
5.7d (3)	Wisconsin Power & Light Co.	1200	745	735		735			735	0
15.5b	Yates American Co.	301	820	764					779	+15

Geology Dept.  
Reserve Room