



In cooperation with the Illinois State Water Survey

Estimated Water Withdrawals and Use in Illinois, 1992

Open-File Report 99-97

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By Charles Avery

Open-File Report 99–97

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CONVERSION FACTORS

Multiply	By	To obtain
Length		
inch (in.)	25.4	millimeter
Area		
acre	0.4047	hectare
Flow rate		
gallon per day (gal/d)	0.003785	cubic meter per day
million gallons per day (Mgal/d)	3,785	cubic meter per day

Estimated Water Withdrawals and Use in Illinois, 1992

By Charles Avery

Abstract

The total amount of water withdrawn in Illinois during 1992 was about 19,076 (Mgal/d) million gallons per day. About 16,101 Mgal/d, or about 84 percent of this total, was withdrawn for thermoelectric-power generation, and about 1,877 Mgal/d was withdrawn by and delivered from public-supply facilities. About 1,910 Mgal/d of surface water was withdrawn, excluding withdrawals for thermoelectric-power generation. Public-supply facilities in Illinois withdrew about 1,210 Mgal/d from Lake Michigan in 1992. The next largest withdrawal of surface water was that by self-supplied industrial users. About 1,068 Mgal/d of the total water withdrawn was ground water; about 25 Mgal/d of this ground water was saline. Public-supply facilities withdrew about 36 percent of the total ground water withdrawn; the second largest withdrawal of ground water was for irrigation.

INTRODUCTION

Water-use information aids in the planning and management of water resources in Illinois. Water-use data serve the needs of governmental agencies, public-water supply operators, water-resource managers, and researchers for assessing current water-use patterns and anticipating future water demands. This report, prepared by the U.S. Geological Survey (USGS) in cooperation with the Illinois State Water Survey (ISWS), provides statewide water-use data for 1992. The last comprehensive water-use report for Illinois (Avery, 1996) provides data for 1990.

The State of Illinois has an abundant but finite supply of *surface water*¹ and *ground water*. The State is bounded by major surface-water resources: the Mississippi River on the western border, the Ohio and Wabash Rivers on the south and southeast, and Lake Michigan on the northeast (fig. 1). Major tributaries to the rivers bounding the State are the Illinois, Kaskaskia, Rock,

Big Muddy, Embarras, and Kankakee Rivers. No saline surface-water sources are found in Illinois. Ground water also is a widely available *freshwater* resource in Illinois. Major *aquifers* underlying Illinois include the saturated unconsolidated sand-and-gravel deposits, the Pennsylvanian-Mississippian aquifer, Silurian aquifer, and the Cambrian-Ordovician aquifer (U.S. Geological Survey, 1985).

Definition of terms is critical in understanding water-use data. Water-use terms utilized in this report are presented in the glossary (at the back of the report). Definitions of water-use terms in the glossary are from Solley and others (1993). This report deals primarily with water *withdrawals*. Some withdrawal data are documented quantities, obtained from questionnaires sent to water users by the ISWS, of water withdrawn for *public supply*, *commercial* establishments, *industrial* and *mining* activities, and *thermoelectric-power* generation. Other withdrawal values are estimated quantities of water, determined by extrapolating from related known data for the categories of *domestic*, *irrigation*, and *livestock* use. Water withdrawn in a county or hydrologic unit (drainage basin) may or may not be used in the same county or hydrologic unit; when water-withdrawal values are estimated, it is assumed that the water was withdrawn in the same county or hydrologic unit as its use, which may or may not be the case, however.

Data bases of water-use information are maintained by the ISWS and the USGS. The data base maintained by the USGS includes water-withdrawal data collected and aggregated by the ISWS, water-returns data collected by the Illinois Environmental Protection Agency, and water-use data estimated by the USGS. This USGS data base contains a site-specific water-use data system (SWUDS) and an aggregated water-use data system (AWUDS).

Purpose and Scope

This report presents aggregated data on water withdrawals during 1992 in Illinois. Water-withdrawal data were collected from public-supply facilities, mining companies, thermoelectric-power generating

¹Italicized terms are defined in the Glossary.



Figure 1. Counties and major surface-water bodies in Illinois.

plants, and *self-supplied* commercial and industrial establishments. Withdrawals for self-supplied domestic, irrigation, and livestock purposes were estimated by means of methods discussed later in the report. The data for the entire State were aggregated by county (fig. 1) and hydrologic unit (fig. 2).

Acknowledgments

The author thanks John Blomberg and Kay Charles of the Illinois State Water Survey for the time and effort expended to collect and compile the water-withdrawal data for 1992.

METHODOLOGY

Water-withdrawal data are collected or estimated using various methods. Data provided by the water users are generally more accurate than estimates because they are measured values, in most cases.

Collection of Water-Withdrawal Data

Every year, water-withdrawal data (primarily site-specific metered usage) for public-supply facilities, mining companies, thermoelectric-power generating plants, and self-supplied commercial and industrial establishments are obtained from questionnaires sent to about 4,000 water users by the ISWS. The water users are asked to return the forms to the ISWS where the data are checked and digitized. If a water user does not respond to the questionnaire, a second questionnaire is sent, and a follow-up telephone call is made as a final recourse. If it is determined that a water user cannot provide the data, an amount is estimated either by extrapolating data from previous years or obtaining information on the capacity of the pump and duration of operation. If no previous data are available to make an estimate, no withdrawal data for that water user are entered into the data base. These data are aggregated by county and hydrologic unit by the ISWS and released to the USGS.

Estimation of Water Withdrawals

Self-supplied withdrawals for domestic, irrigation, and livestock water use are estimated by the USGS from other related data available by county. The estimated withdrawal data are subsequently aggregated by hydrologic unit by multiplying the proportion of each

hydrologic unit within a county by the water-use estimate for the county. It is assumed that all unmetered self-supplied water use for domestic purposes, irrigation, and livestock in Illinois is obtained from ground-water sources. The estimated withdrawal data are entered directly into AWUDS. The amount of water delivered from public-supply facilities to domestic, commercial, industrial, and thermoelectric-power generation water users is estimated for most facilities.

Self-Supplied Withdrawals for Domestic Use

Self-supplied domestic water use is estimated by multiplying an estimated rural domestic *per capita water use* for each county by the self-supplied population for each county. The self-supplied population is the difference between the total county population and the population served by public-supply facilities in the county. The average rural domestic per capita water use is estimated to be 90 gal/d.

Withdrawals for Irrigation

Irrigation water withdrawals are estimated by multiplying the irrigated crop acreage by the rainfall deficit during the crop growing season (Kirk, 1987). The irrigated crop acreage in each county was obtained from Bowman and Kimpel (1991). Estimated acreage of golf courses were included as irrigated acreage for the first time in this biennial water-use compilation. The rainfall deficit between May 1 and August 31, 1992, was determined as a weekly cumulative computation for each county by the following procedure.

1. If more than 1.25 in. of rain falls during the first week of the growing season, one-half the amount of rain exceeding 1.25 in. is added to the rain amount during the following week. If less than 1.25 in. of rain falls during the first week, the difference between the actual rainfall and 1.25 in. is the rainfall deficit and is estimated to be the quantity of water, in inches, applied by irrigation that week.
2. For each subsequent week during the growing season, one-half of the cumulative rainfall during the previous week in excess of 1.25 in. is added to the rainfall amount for the week. If the cumulative rainfall amount for a week is less than 1.25 in., then the difference is the rainfall deficit and is estimated to be the quantity of water, in inches, applied by irrigation that week. The rainfall deficits for each week then are added to determine the total irrigation water use for the year.

EXPLANATION	HYDROLOGIC UNIT CODE	DRAINAGE BASIN NAME
04040001	Little Calumet-Galien	
04040002	Pike-Root	
04060200	Lake Michigan (not shown)	
05120108	Middle Wabash-Little Vermilion	
05120109	Vermilion (Wabash River drainage)	
05120111	Middle Wabash-Busseron	
05120112	Embaras	
05120113	Lower Wabash	
05120114	Little Wabash	
05120115	Skillet	
05140203	Lower Ohio-Bay	
05140204	Saline	
05140206	Lower Ohio	
07060005	Apple-Plum	
07080101	Copperas-Duck	
07080104	Flint-Henderson	
07090001	Upper Rock	
07090003	Pecatonica	
07090004	Sugar	
07090005	Lower Rock	
07090006	Kishwaukee	
07090007	Green	
07110001	Bear-Wyaconda	
07110004	The Sny	
07110009	Peruque-Piasa	
07120001	Kankakee	
07120002	Iroquois	
07120003	Chicago	
07120004	Des Plaines	
07120005	Upper Illinois	
07120006	Upper Fox	
07120007	Lower Fox	
07130001	Lower Illinois-Senachwine Lake	
07130002	Vermilion (Illinois River drainage)	
07130003	Lower Illinois-Lake Chautauqua	
07130004	Mackinaw	
07130005	Spoon	
07130006	Upper Sangamon	
07130007	South Fork Sangamon	
07130008	Lower Sangamon	
07130009	Salt	
07130010	La Moine	
07130011	Lower Illinois	
07130012	Macoupin	
07140101	Cahokia-Joachim	
07140105	Upper Mississippi-Cape Girardeau	
07140106	Big Muddy	
07140108	Cache	
07140201	Upper Kaskaskia	
07140202	Middle Kaskaskia	
07140203	Shoal	
07140204	Lower Kaskaskia	

(modified from Seaber and others, 1987)

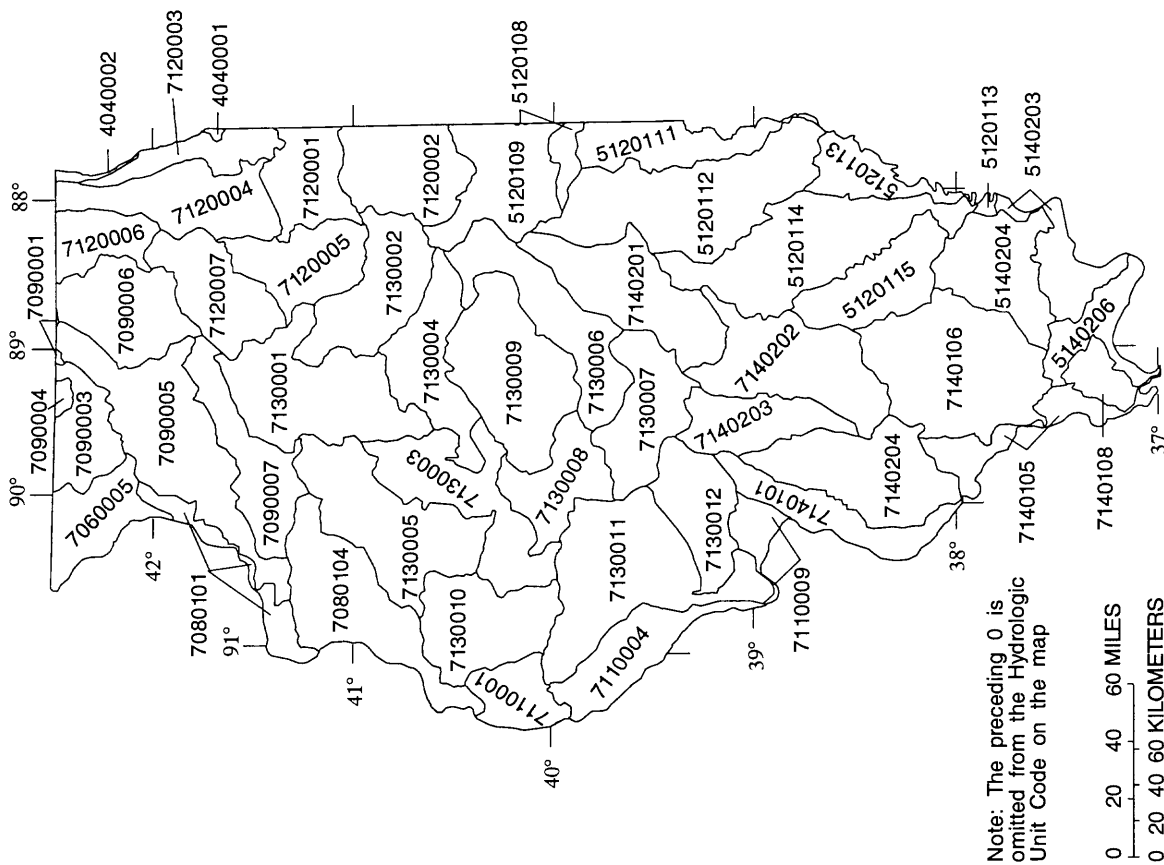


Figure 2. Hydrologic-unit boundaries in Illinois.

The average weekly rainfall and the rainfall deficits were determined for each county for the 1992 crop growing season. The total irrigation water use in each county was calculated by multiplying the total rainfall deficit, in inches, by the irrigated acreage for the county. No differentiation of irrigated acreage by crop type was made. The total irrigation water use was divided by 365 days to obtain a daily rate for the year.

Withdrawals for Livestock

Water use for livestock purposes is determined by multiplying the county population of each major type of farm animal by the estimated water directly consumed by the animal and other water used in association with the animal, such as barn cleaning (Kirk, 1987). The major animal populations for each county were obtained from the U.S. Department of Commerce, Bureau of Census (1989). The estimated amount of water used from direct consumption by and uses associated with each animal type are as follows:

Animal type	Estimated water use (gallons per day)
Dairy cows	35.0
Beef cattle	12.0
Horses and mules	12.0
Hogs	4.0
Goats	3.0
Sheep	2.0
Turkeys	.12
Chickens	.06
Rabbits	.05
Mink	.03

ESTIMATED WATER WITHDRAWALS AND USE IN ILLINOIS, 1992

Only *offstream uses* of water in Illinois are presented in this report; *instream uses*, such as those for hydroelectric-power generation, are not considered. Data are aggregated by county and hydrologic unit. Surface-water and ground-water withdrawals are aggregated by major categories of water use.

Water Withdrawals by Public Suppliers

Water withdrawn and *delivered* from public-supply facilities in Illinois during 1992 totaled about 1,877 Mgal/d (tables 1 and 2; all tables at end of report), a slight decrease from the 1,859 Mgal/d withdrawn in 1990 (Avery, 1996). Surface water and ground water

were the sources for about 1,485 and 392 Mgal/d, respectively, of the withdrawals for public supply; about 1,415 and 444 Mgal/d of surface water and ground water, respectively, were used in 1990 (Avery, 1996).

Withdrawals from ground water and surface water for public supply are subsequently delivered to water users connected to the water-distribution system. Water from public-supply facilities is delivered to households for domestic purposes, to commercial establishments, to industrial concerns, and for thermoelectric-power generation. In 1992, public-supply facilities delivered 87, 61, and 25 percent of the water used for domestic, commercial, and industrial purposes, respectively. A minimal amount (less than 2.5 Mgal/d) of water was delivered by public-supply facilities to thermoelectric-power generators.

Public-supply facilities serve 87 percent of the population of Illinois. The largest withdrawals of ground water for public supply were in Champaign, Cook, Du Page, Kane, Lake, La Salle, McHenry, Madison, Peoria, Tazewell, Will, and Winnebago Counties (fig. 3). Counties with large withdrawals from surface-water sources for public supply were Cook, Lake, Macon, Madison, and Sangamon (fig. 4). The largest amounts of surface water withdrawn for public supply were from Lake Michigan and the Mississippi and Sangamon Rivers. About 1,210 Mgal/d, or 81 percent of the surface water withdrawn and used in Illinois for public supply, is obtained from Lake Michigan (hydrologic unit 04060200) (table 2).

Estimated Water Withdrawals for Domestic Use

Self-supplied water for domestic use includes the relatively small amounts of water used for individual households. All self-supplied domestic water in Illinois is reported to be ground water obtained from a water well or spring (Kirk, 1987). About 136 Mgal/d is estimated to have been withdrawn for self-supplied domestic purposes in 1992 (tables 1 and 2); about 115 Mgal/d was estimated to have been used in 1990 (Avery, 1996).

About 13 percent of the total water used for domestic use in Illinois was self supplied. The largest withdrawals of self-supplied domestic water were in Lake, McHenry, Madison, St. Clair, Will, and Winnebago Counties (fig. 5).

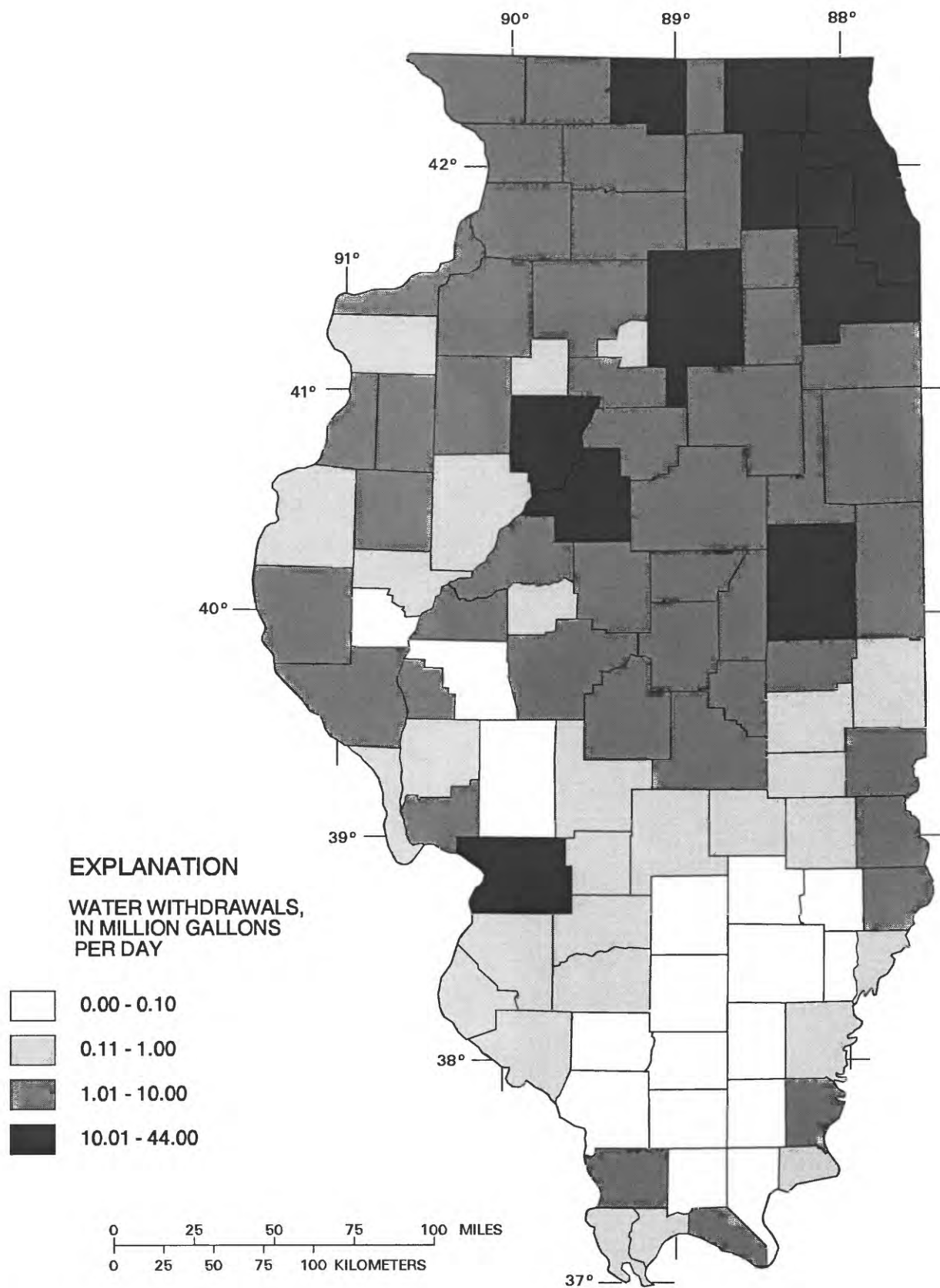


Figure 3. Public-supply withdrawals of ground water in Illinois, by county, 1992.

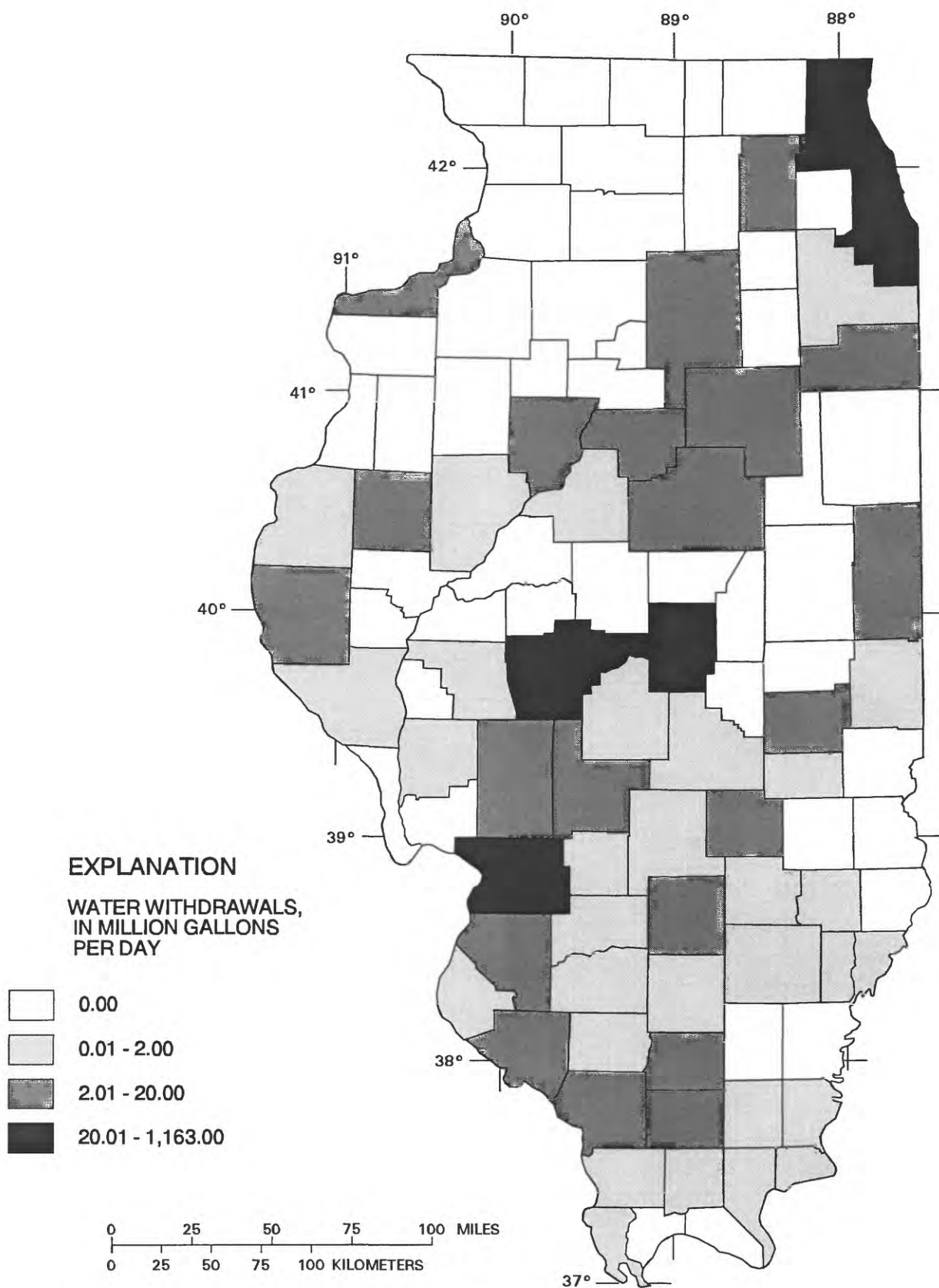


Figure 4. Public-supply withdrawals of surface water in Illinois, by county, 1992.

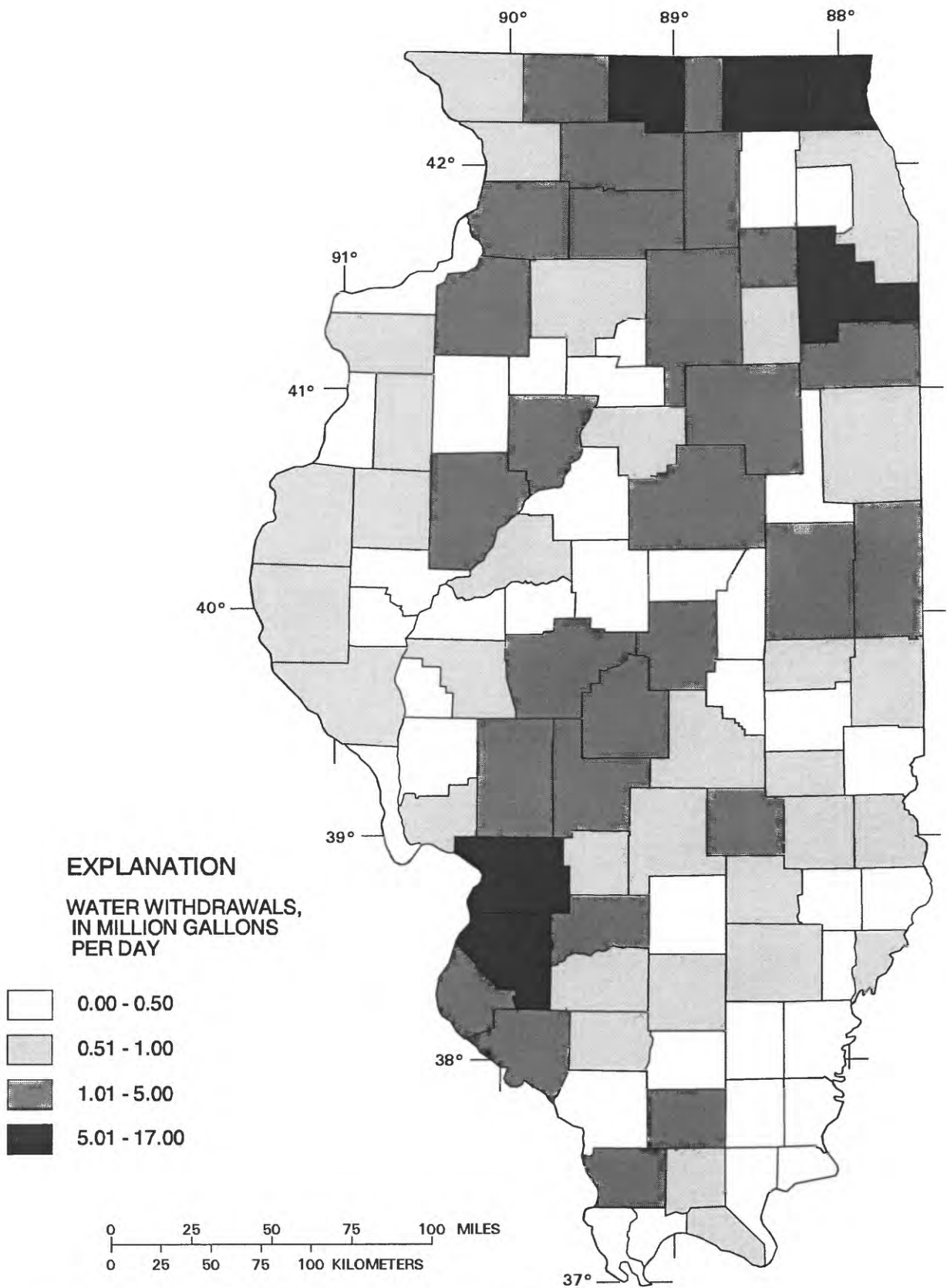


Figure 5. Estimated self-supplied domestic withdrawals of water in Illinois, by county, 1992.

Water Withdrawals for Commercial Use

Total self-supplied withdrawals and deliveries from public-supply facilities for commercial use were about 295 Mgal/d (tables 3 and 4). About 115 Mgal/d was self supplied by the commercial establishments. More surface water than ground water was withdrawn for self-supplied commercial use. The largest self-supplied commercial withdrawals of ground water were in Champaign, Cook, Du Page, Jackson, McHenry, Mason, Massac, and Union Counties (fig. 6). The largest self-supplied commercial withdrawals of surface water were in Calhoun, Cook, Jefferson, Jersey, and Williamson Counties (fig. 7).

Estimated Self-Supplied Water Withdrawals for Irrigation Use

Total irrigation withdrawals were estimated to have been about 270 Mgal/d (tables 5 and 6); about 78 Mgal/d was withdrawn in 1990 (Avery, 1996). Irrigated acreage has increased from 286,540 in 1990 (Avery, 1996) to 358,730 acres in 1992. The large increase in irrigated acreage for this year's compilation is a result of the inclusion of golf course acreage as irrigated acreage.

Irrigation water generally is applied during the growing season of May–August, but the total water used is averaged over the entire year (as presented in this report). The source of most irrigation water is ground water, except for unaccounted small amounts (less than 1 Mgal/d) of surface water applied in numerous counties throughout the State. All water for irrigation was applied by spray methods; thus, it is assumed no *conveyance losses* resulted during the process of irrigation. Most of the irrigation water was used in Cass, Gallatin, Henderson, Kankakee, Lawrence, Lee, McHenry, Mason, Tazewell, and Whiteside Counties (fig. 8).

Estimated Self-Supplied Water Withdrawals for Livestock Use

Total withdrawals for livestock and *animal specialties* use were about 63 Mgal/d (tables 5 and 6); about 63 Mgal/d was used for livestock in 1990 (Avery, 1996). It is assumed that the source of water for livestock uses is ground water, either wells or springs. About 9 Mgal/d of ground water and about 2 Mgal/d of surface water was used for animal specialties. The largest use for

livestock and animal specialties was in Henry, Jo Daviess, Mason, and Stephenson Counties (fig. 9).

Water Withdrawals for Industrial Use

Self-supplied withdrawals and deliveries from public-supply facilities for industrial use were about 585 Mgal/d (tables 7 and 8); about 728 Mgal/d was used in 1990 (Avery, 1996). The industries included in this category are the 20 major Division D Manufacturing groups from the Standard Industrial Classification Manual (Office of Management and Budget, 1987). About 441 Mgal/d was self-supplied withdrawals by industrial facilities; 35 percent of the self-supplied water was from ground-water sources. The largest self-supplied withdrawals of ground water for industrial use were in Adams, Cook, Grundy, Jo Daviess, La Salle, Madison, Massac, Morgan, Peoria, Rock Island, St. Clair, Tazewell, Whiteside, Will, and Winnebago Counties (fig. 10). The largest self-supplied withdrawals of surface water for industrial use were in Cook, Madison, Peoria, Tazewell, and Will Counties (fig. 11). No saline ground water or surface water is withdrawn for industrial use.

Water Withdrawals for Mining Use

A total of about 74 Mgal/d was withdrawn during mining activities in 1992; about 94 Mgal/d was withdrawn in 1990 (Avery, 1996). Fresh and saline ground water are withdrawn during mining (tables 9 and 10). Only fresh surface water occurs in Illinois; thus, only fresh surface water is used during mining. A total of about 33 Mgal/d of mining withdrawals was from ground-water sources; about 25 Mgal/d of the ground water was saline. About 41 Mgal/d of mining withdrawals was from surface-water sources.

Most of the ground water withdrawn during mining was in the southern Illinois counties of Crawford, Fayette, Gallatin, Hardin, Jasper, Lawrence, Wabash, Wayne, and White (fig. 12). Most of the surface water withdrawn during mining was in Champaign, De Kalb, Douglas, La Salle, McHenry, Macoupin, Perry, and Saline Counties (fig. 13).

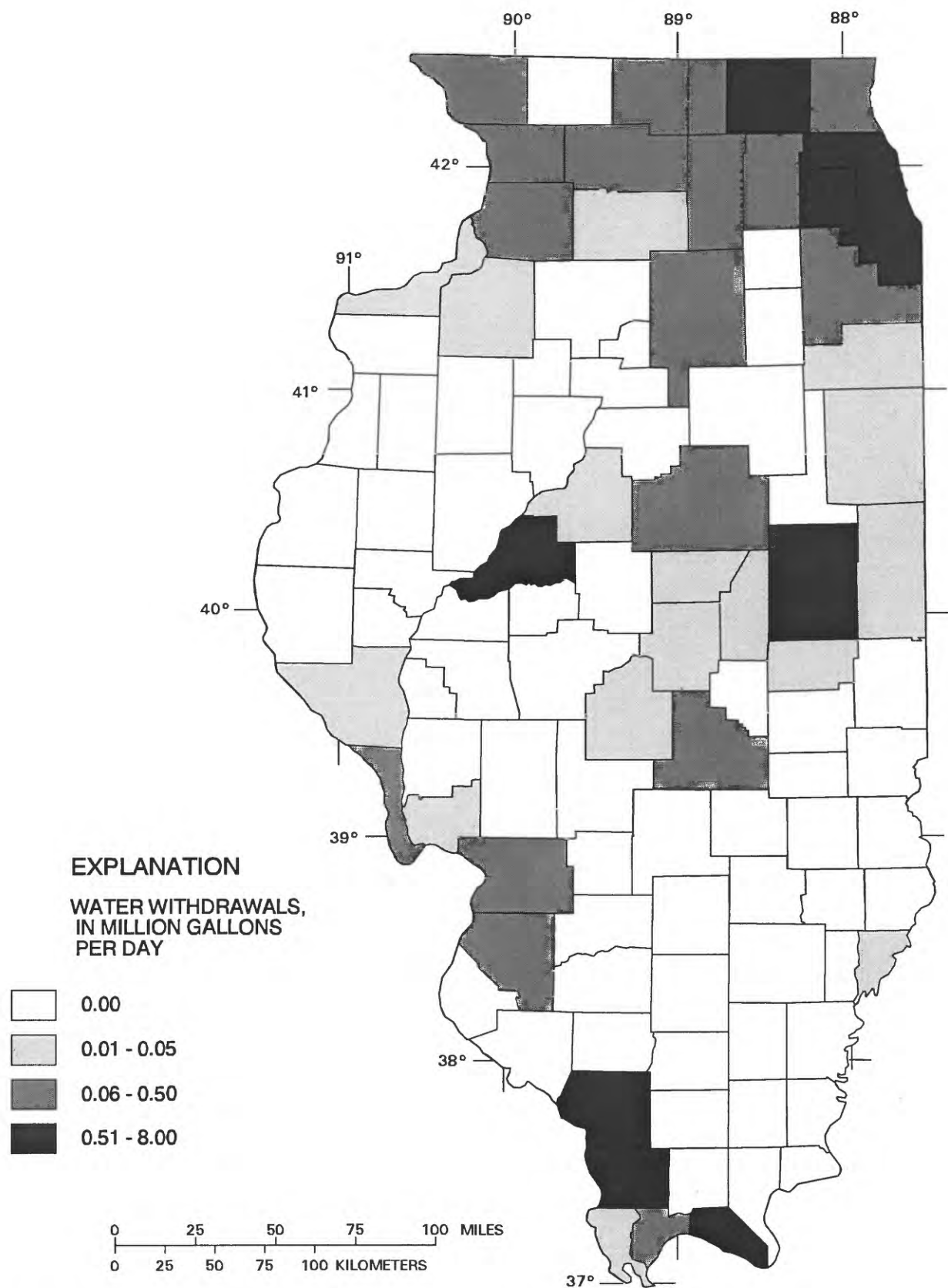


Figure 6. Self-supplied commercial withdrawals of ground water in Illinois, by county, 1992.

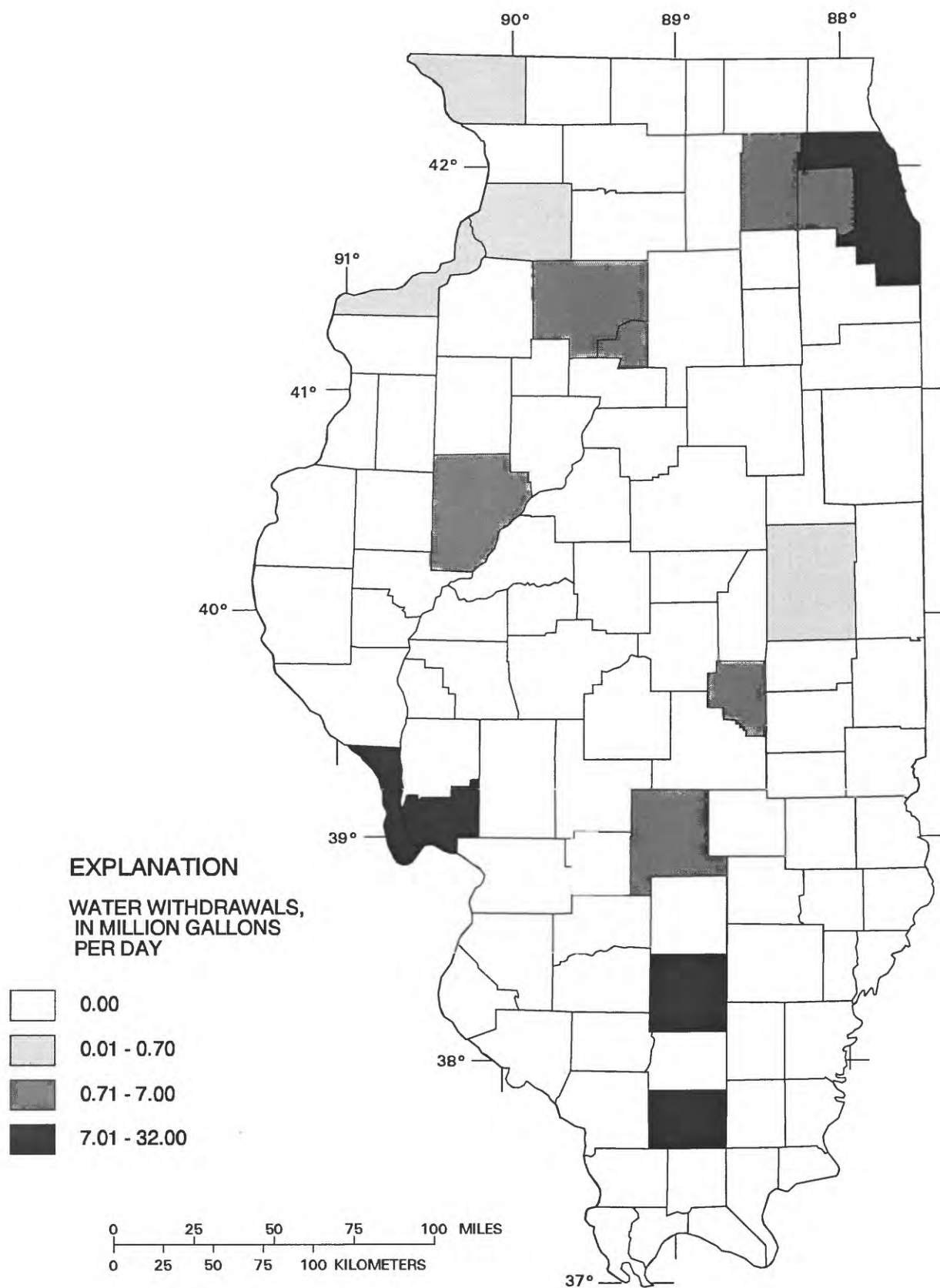


Figure 7. Self-supplied commercial withdrawals of surface water in Illinois, by county, 1992.

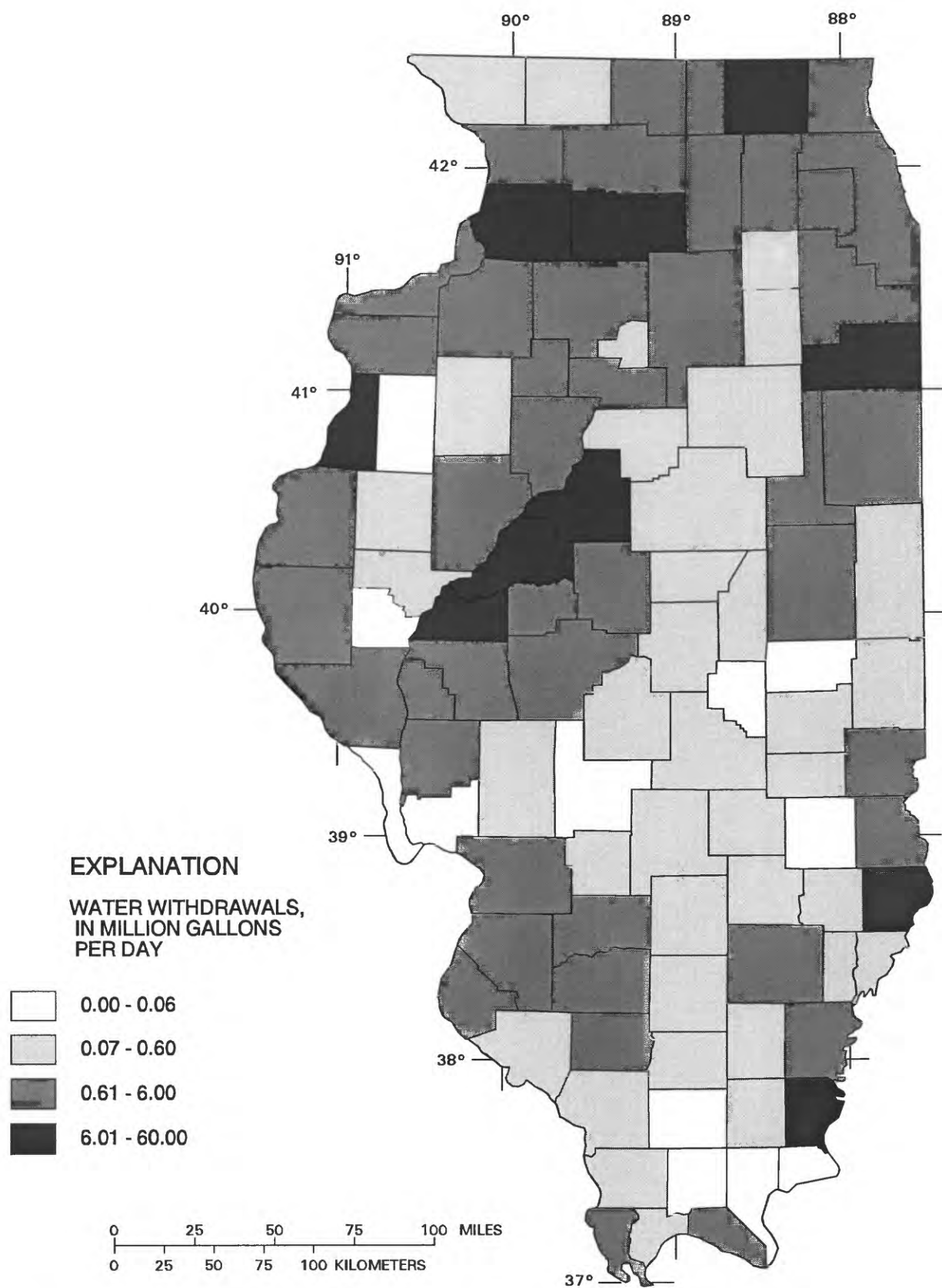


Figure 8. Estimated irrigation withdrawals of water in Illinois, by county, 1992.

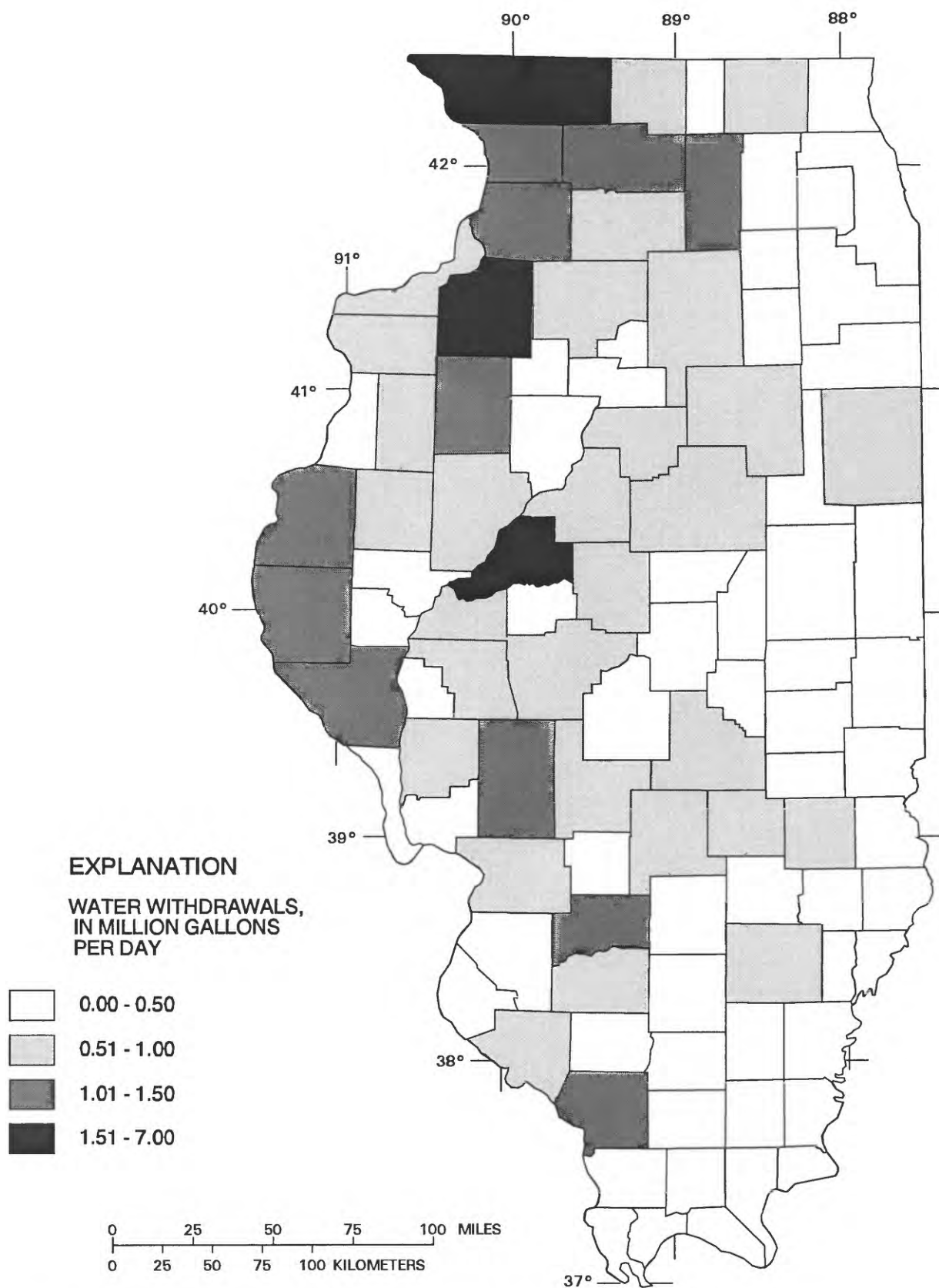


Figure 9. Estimated livestock and animal specialties withdrawals of water in Illinois, by county, 1992.

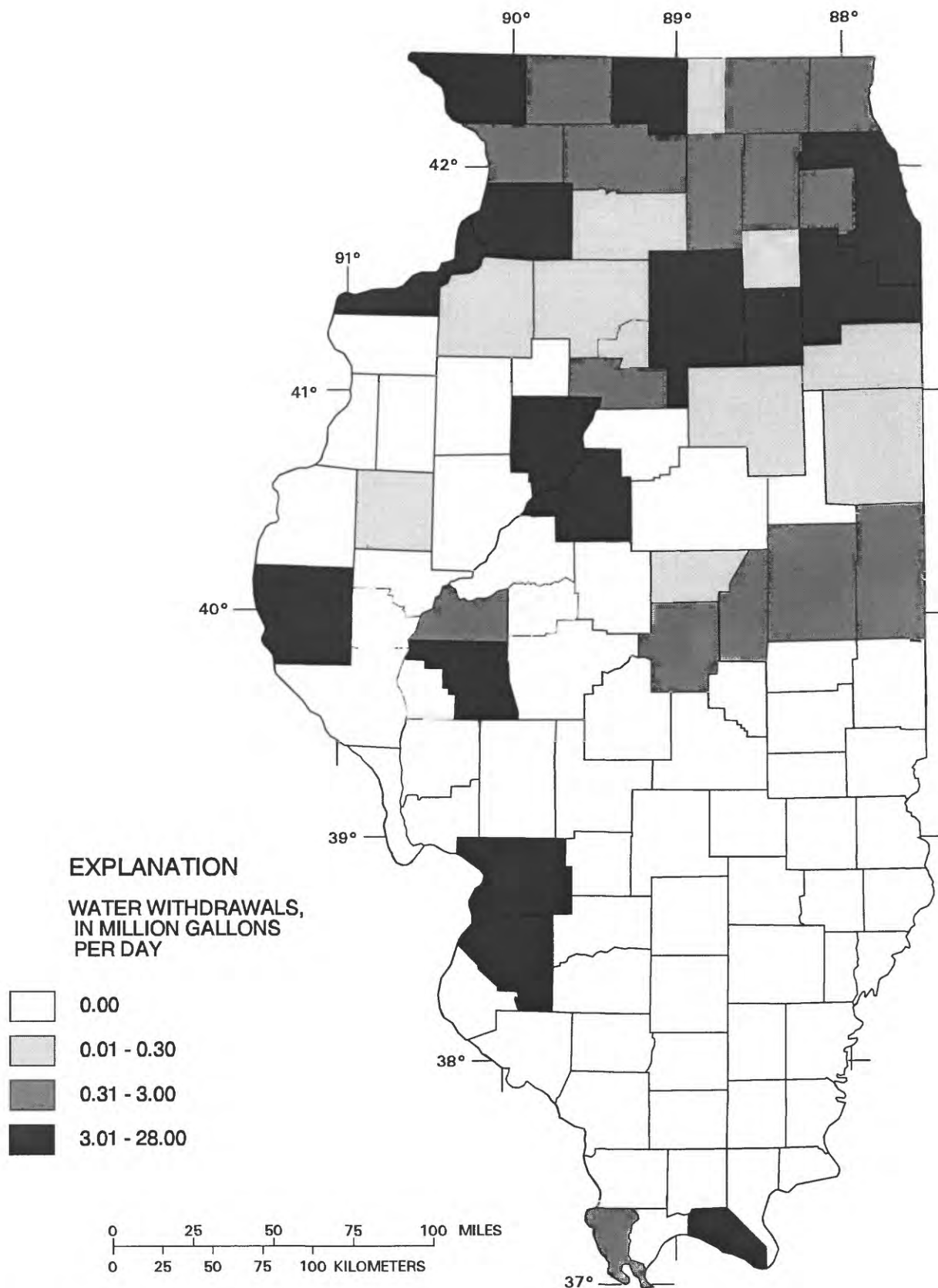


Figure 10. Self-supplied industrial withdrawals of ground water in Illinois, by county, 1992.

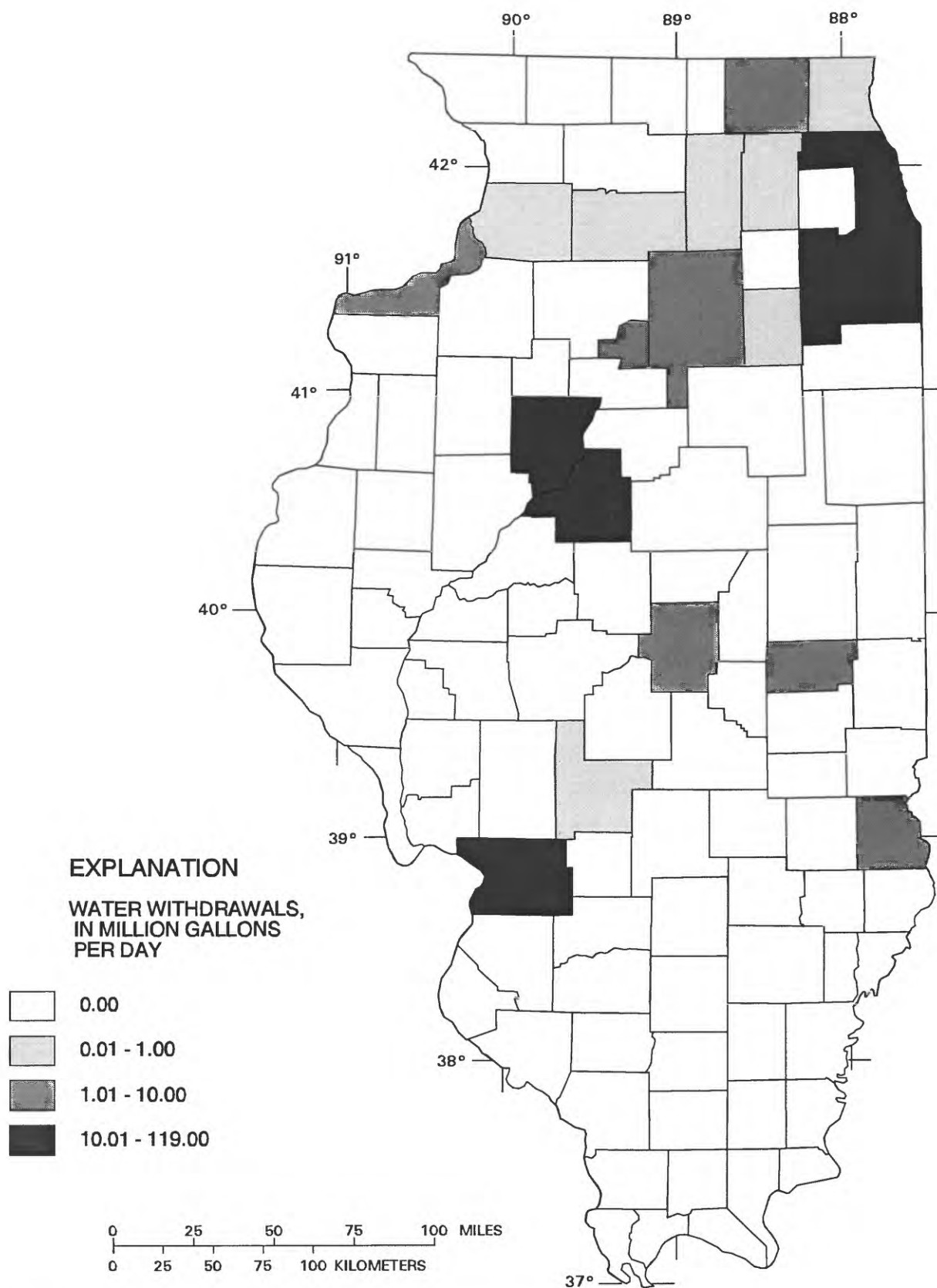


Figure 11. Self-supplied industrial withdrawals of surface water in Illinois, by county, 1992.

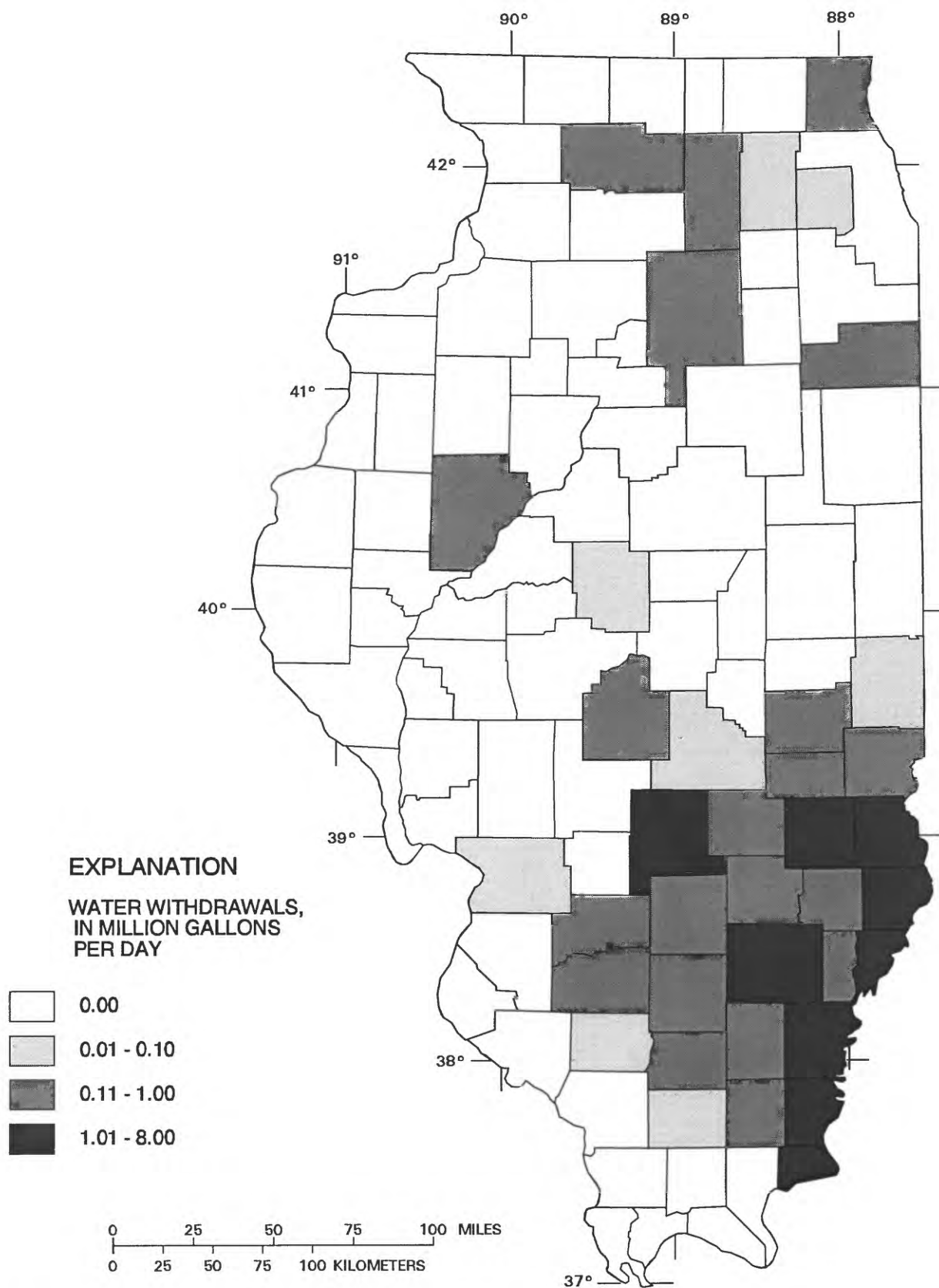


Figure 12. Mining withdrawals of ground water in Illinois, by county, 1992.

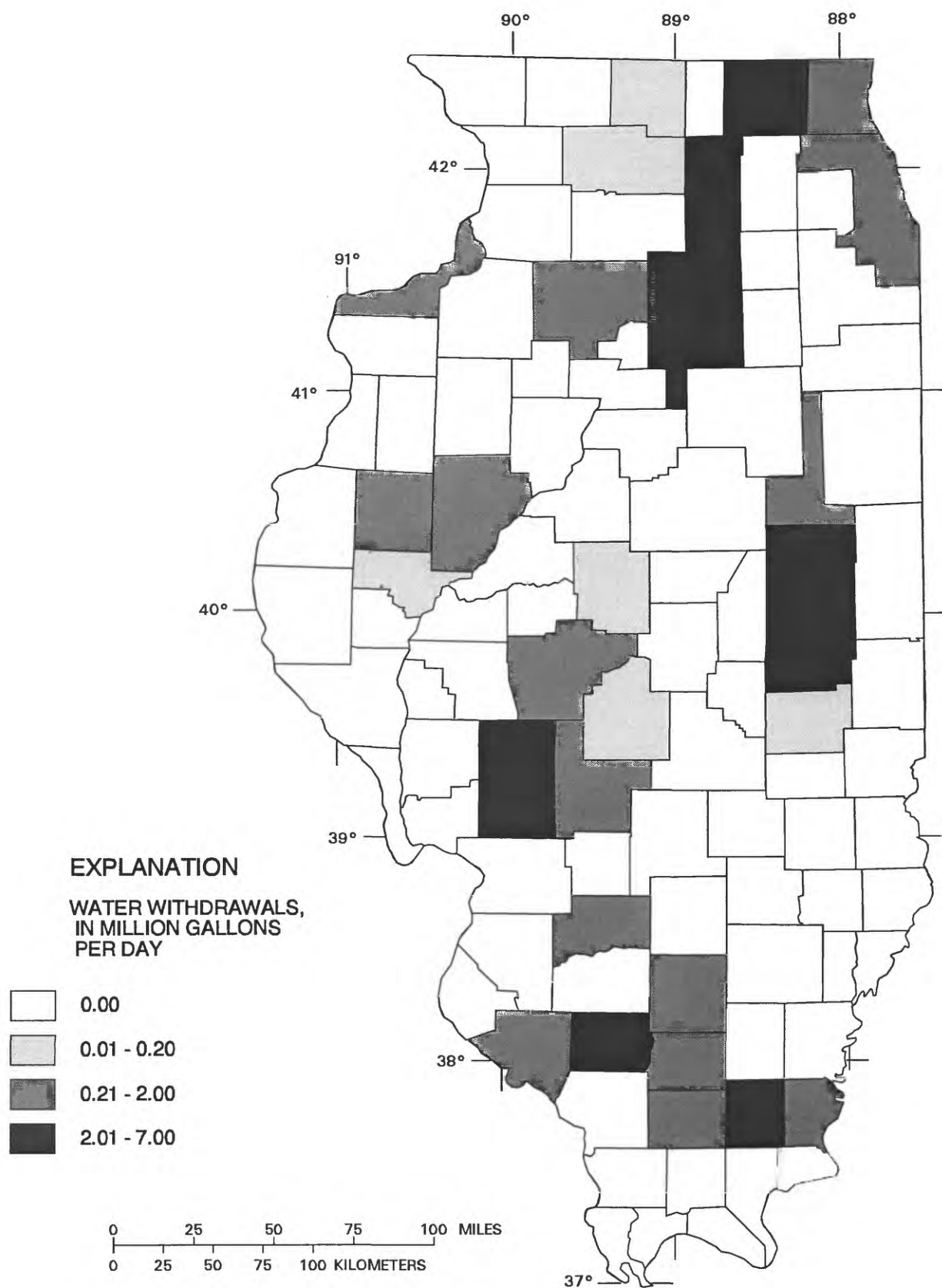


Figure 13. Mining withdrawals of surface water in Illinois, by county, 1992.

Water Withdrawals for Thermoelectric-Power Generation

Self-supplied withdrawals and deliveries from public supplies for thermoelectric-power generation were about 16,101 Mgal/d (tables 11 and 12); about 15,170 Mgal/d was withdrawn in 1990 (Avery, 1996). Fossil-fuel and nuclear-fuel thermoelectric-power generators are included in this category.

Most of the water withdrawn for thermoelectric-power generation is from surface-water sources and is withdrawn at or near the power-generating stations, although a small amount of water is obtained from self-supplied ground water and deliveries from public-supply facilities. Most of the ground water withdrawn for thermoelectric-power generation was in Massac, Tazewell, and Will Counties (fig. 14). Most of the surface water withdrawn for thermoelectric-power generation was in Grundy, Lake, Randolph, and Will Counties (fig. 15).

Total Water Withdrawals and Use

The total amount of water withdrawn in Illinois during 1992 was about 19,076 Mgal/d (tables 13 and 14). This amount is about 1,060 Mgal/d larger than withdrawn in 1990. The total withdrawal of fresh ground water, surface water, and saline ground water (excluding self-supplied thermoelectric-power withdrawals) was about 2,977 Mgal/d. About 1,068 Mgal/d, or 36 percent, of the total water withdrawn in Illinois, excluding the self-supplied withdrawals for thermoelectric-power generation, was ground water; about 1,910 Mgal/d of surface water was withdrawn, excluding the large self-supplied withdrawals for thermoelectric-power generation. About 25 Mgal/d of the total ground water withdrawn and used in Illinois was saline.

Most of the ground water withdrawn in 1992 was in Champaign, Cook, Du Page, Kane, Kankakee, Lake, McHenry, Madison, Mason, Peoria, Rock Island, Tazewell, Whiteside, Will, and Winnebago Counties (fig. 16). Most of the surface water was withdrawn and used in 1992 in Christian, Cook, De Witt, Grundy, La Salle, Lake, Rock Island, Randolph, Tazewell, and Will Counties (fig. 17).

Surface-water, ground-water, and total water withdrawals by water-use category for Illinois during 1992 are shown in figure 18. Seventy-eight percent of the total surface water, excluding withdrawals for thermoelectric-power generation, was withdrawn by

public-supply facilities. Self-supplied industrial withdrawals was the next largest use of surface water. Thirty-six percent of the total ground water was withdrawn by public-supply facilities. Irrigation was the next largest use of ground water. Sixty-three percent of the total water withdrawn in Illinois during 1992, excluding withdrawals for thermoelectric-power generation, was by public-supply facilities. Self-supplied industrial withdrawals and irrigation were the next largest uses of water in Illinois during 1992.

SUMMARY

The total amount of water withdrawn in Illinois during 1992 was about 19,076 million gallons per day (Mgal/d). The total water withdrawn for thermoelectric-power generation was about 16,101 Mgal/d. Water withdrawn and delivered from public-supply facilities in Illinois during 1992 totaled about 1,877 Mgal/d. About 1,068 Mgal/d, or 36 percent, of the total water withdrawn in Illinois, excluding withdrawals for thermoelectric-power generation, was ground water; about 1,910 Mgal/d of surface water was withdrawn and used, excluding withdrawals for thermoelectric-power generation. The total water withdrawn from Lake Michigan for public-water supply was about 1,210 Mgal/d. About 25 Mgal/d of the total ground water withdrawn was saline.

Seventy-eight percent of the total surface water, excluding withdrawals for thermoelectric-power generation, was withdrawn by public-supply facilities. The next largest withdrawal of surface water was by self-supplied industrial water users. Thirty-six percent of the total ground water was withdrawn by public-supply facilities. The next largest withdrawal of ground water was for irrigation. Sixty-three percent of the total water withdrawn, excluding thermoelectric withdrawals, in Illinois during 1992 was for public-supply facilities. The next largest withdrawals of water in Illinois during 1992 were by self-supplied industrial water users and for irrigation.

Total water use for domestic purposes obtained by self-supplied withdrawals and deliveries from public-supply facilities was about 1,043 Mgal/d; about 136 Mgal/d was self supplied. Total water use by commercial establishments obtained by self-supplied withdrawals and deliveries from public-supply facilities was about 295 Mgal/d; about 115 Mgal/d was self supplied. Estimated total irrigation water use from self-supplied withdrawals were about 270 Mgal/d. Estimated total estimated livestock withdrawals were about 63 Mgal/d. Total water use by industrial concerns

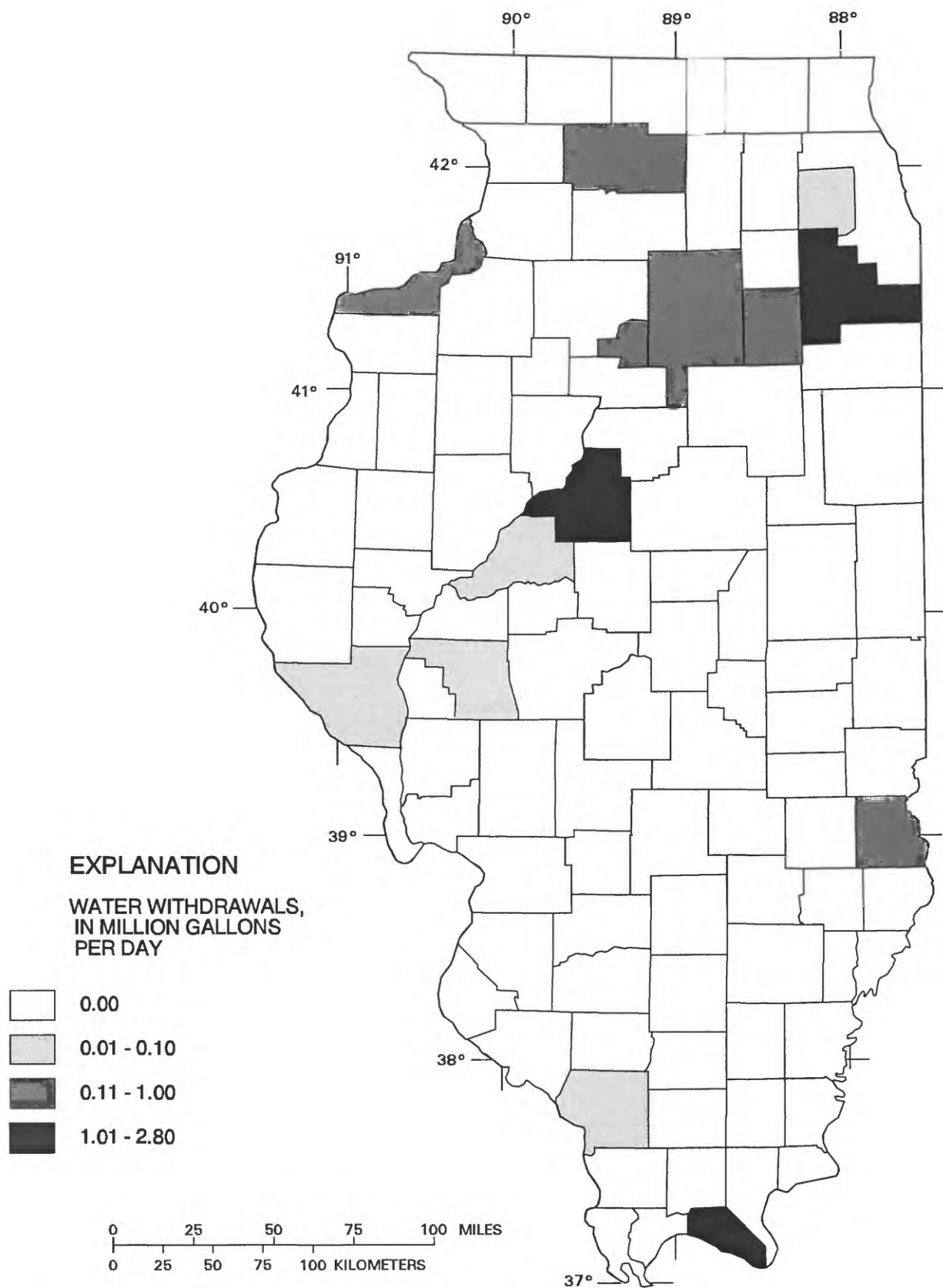


Figure 14. Self-supplied thermoelectric-power withdrawals of ground water in Illinois, by county, 1992.

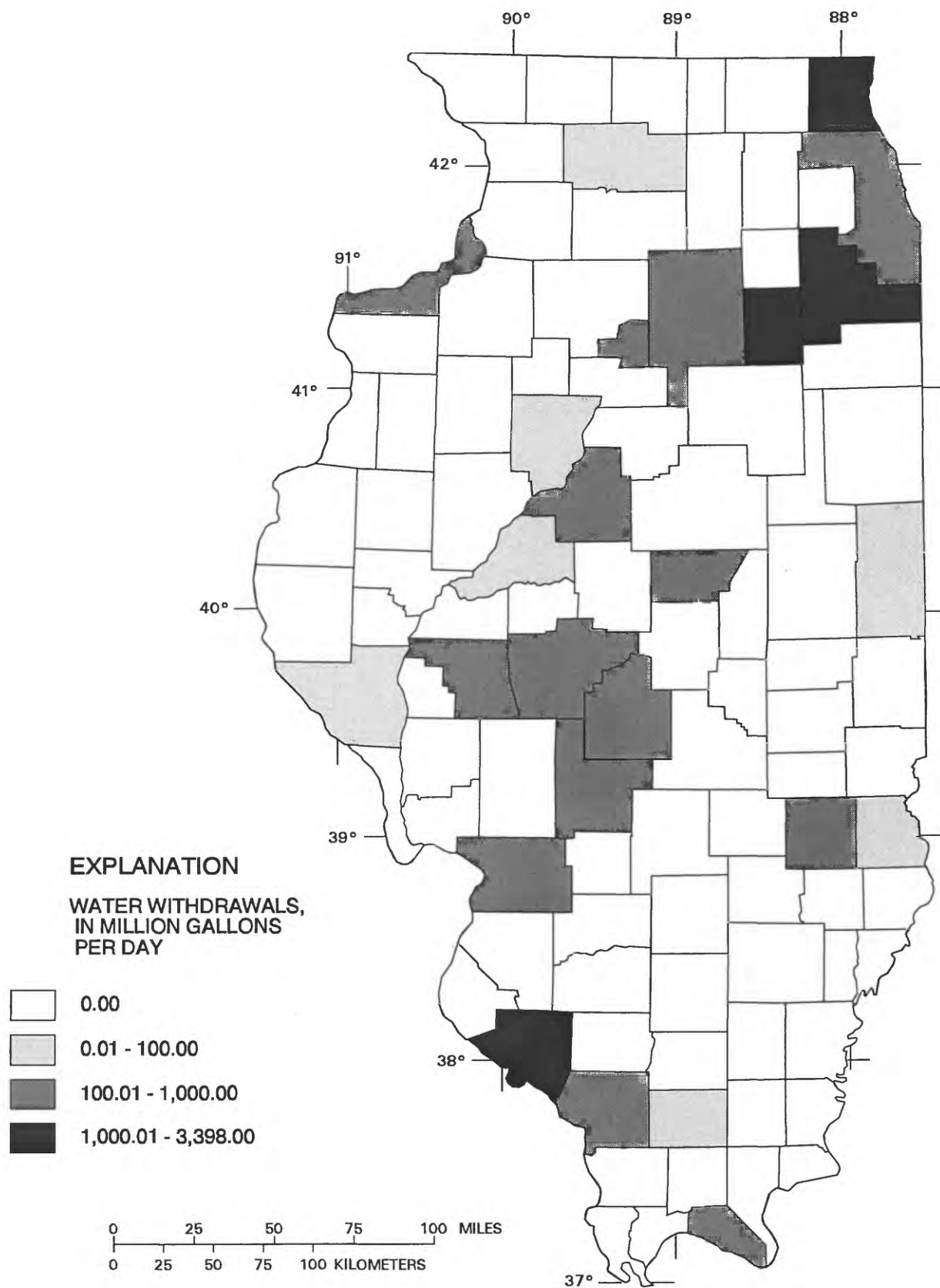


Figure 15. Self-supplied thermoelectric-power withdrawals of surface water in Illinois, by county, 1992.

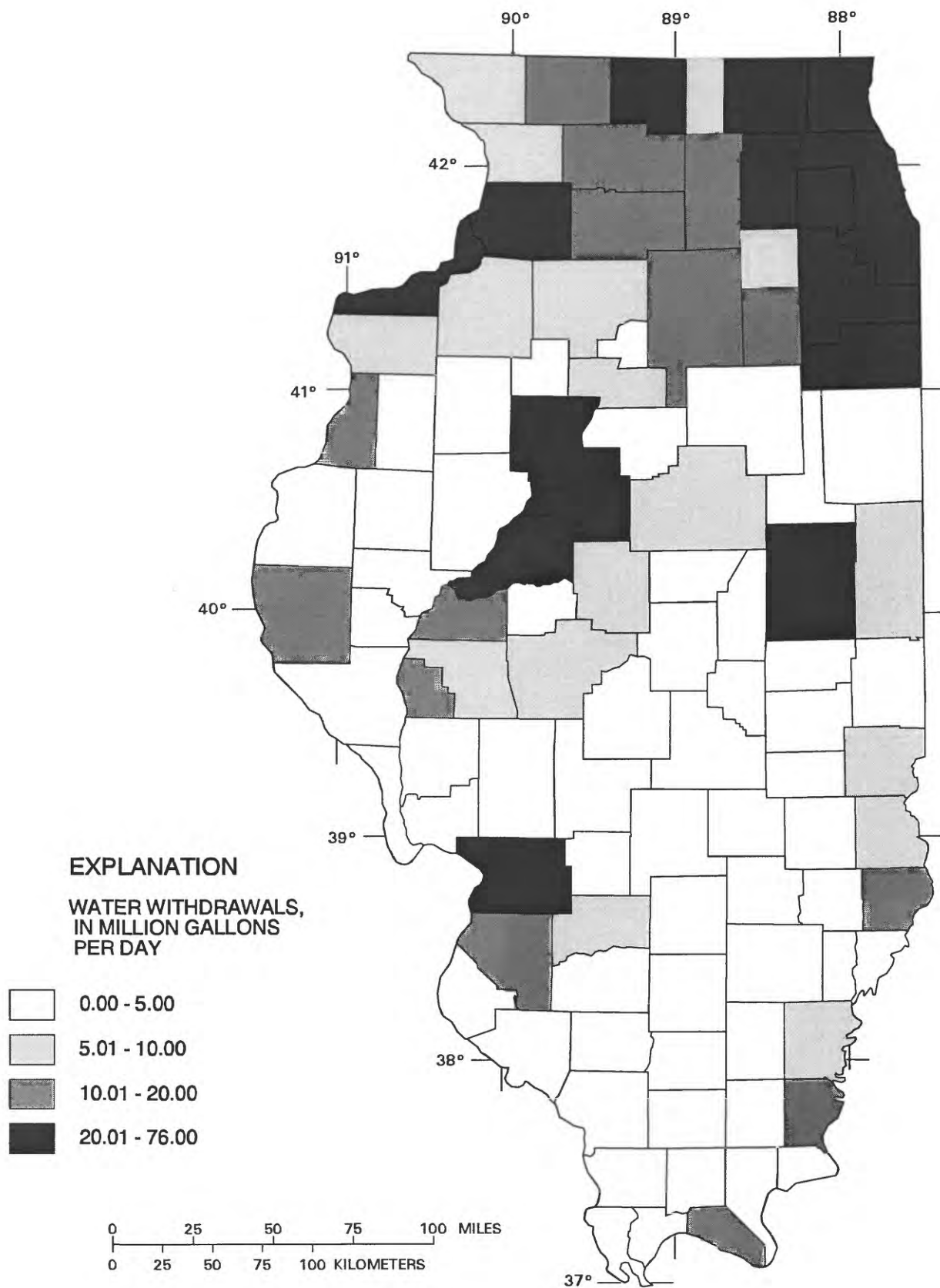


Figure 16. Total withdrawals of ground water in Illinois, by county, 1992.

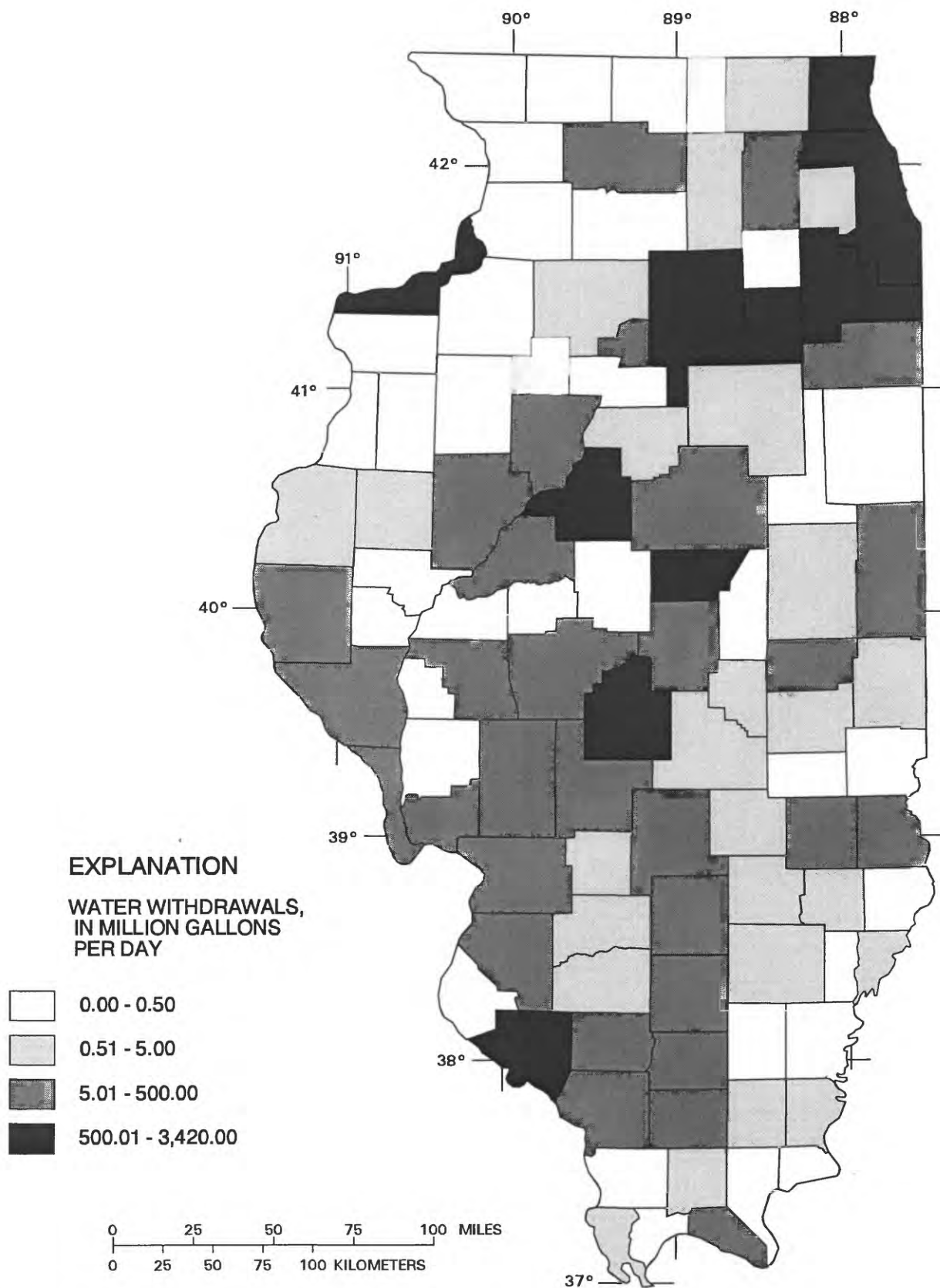
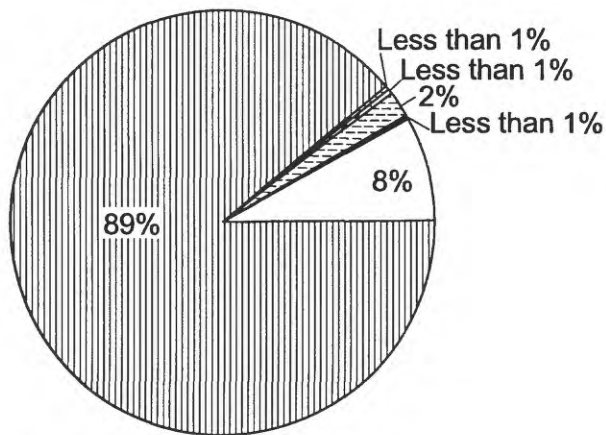


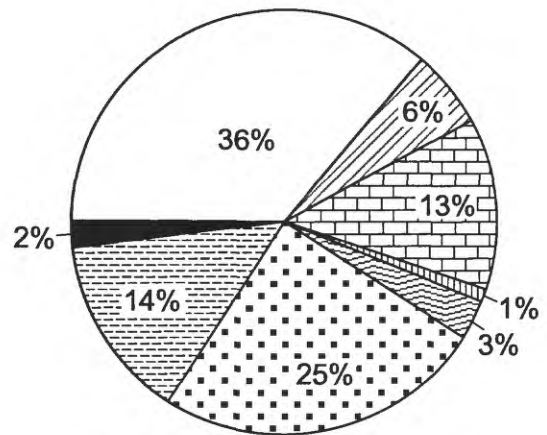
Figure 17. Total withdrawals of surface water in Illinois, by county, 1992.

SURFACE-WATER WITHDRAWALS



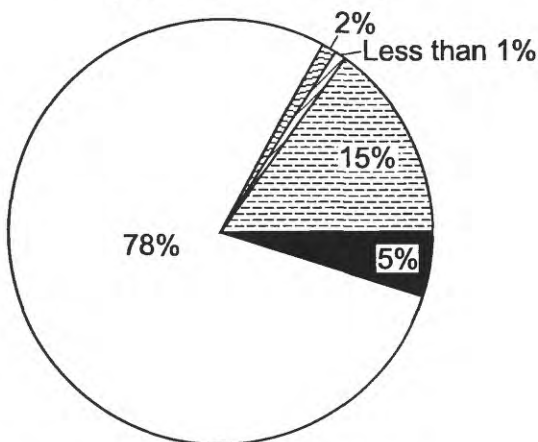
Total = 17,999 million gallons per day

GROUND-WATER WITHDRAWALS



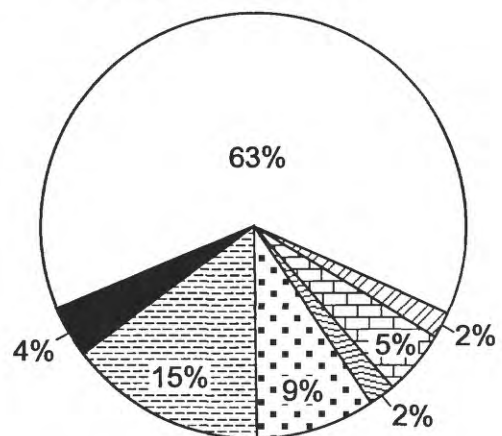
Total = 1,077 million gallons per day

SURFACE-WATER WITHDRAWALS (excluding self-supplied thermoelectric-power withdrawals)



Total = 1,910 million gallons per day

TOTAL WATER WITHDRAWALS (excluding self-supplied thermoelectric-power withdrawals)



Total = 2,977 million gallons per day

EXPLANATION

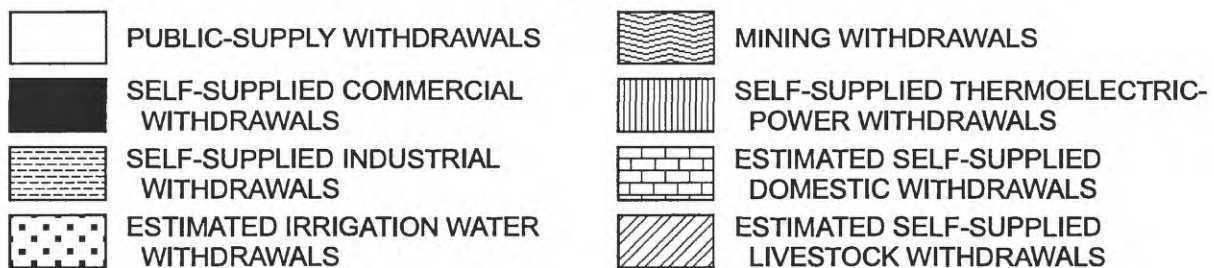


Figure 18. Surface-water, ground-water, and total water withdrawals by water-use category in Illinois, 1992.

obtained from self-supplied withdrawals and deliveries from public-supply facilities was about 585 Mgal/d; about 441 Mgal/d was self supplied.

REFERENCES CITED

- Avery, Charles, 1996, Estimated water withdrawals and use in Illinois, 1990: U.S. Geological Survey Open-File Report 96-396, 55 p.
- Bowman, J.A., and Kimpel, B.C., 1991, Irrigation practices in Illinois, Champaign, Ill.: Illinois State Water Survey Research Report 118, 50 p.
- Kirk, J.R., 1987, Water withdrawals in Illinois: Illinois State Water Survey Circular 167, 43 p.
- Office of Management and Budget, 1987, Standard industrial classification manual 1987: Washington, D.C., U.S. Government Printing Office, 705 p.
- Seaber, P.R., Kapinos, F.P., and Knapp, G.L., 1987, Hydrologic unit maps: U.S. Geological Survey Water-Supply Paper 2294, 63 p.
- Solley, W.B., Pierce, R.R., and Perlman, H.A., 1993, Estimated use of water in the United States in 1990: U.S. Geological Survey Circular 1081, 76 p.
- U.S. Department of Commerce, Bureau of the Census, 1989, Census of Agriculture 1987, Volume 1—Geographic areas series, Part 13—Illinois, State and county data: Washington D.C., U.S. Government Printing Office, 478 p.
- U.S. Geological Survey, 1985, National water summary 1984—Hydrologic events, selected water-quality trends, and ground-water resources: U.S. Geological Survey Water-Supply Paper 2275, 467 p.

GLOSSARY

TERMS USED IN THIS REPORT (from Solley and others, 1993):

- Animal specialties.** Water use associated with the production of fish in captivity except fish hatcheries, fur-bearing animals in captivity, horses, rabbits, and pets.
- Aquifer.** A geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.
- Commercial water use.** Water for motels, hotels, restaurants, office buildings, other commercial facilities, and institutions. The water may be obtained from a public supply or may be self supplied.
- Conveyance loss.** Water that is lost in transit from a pipe, canal, conduit, or ditch by leakage or evaporation. Generally, the water is not available for further use; however, leakage from an irrigation ditch, for example, may percolate to a ground-water source and be available for further use.
- Delivery.** The amount of water delivered to the point of use.
- Domestic water use.** Water for household purposes, such as drinking, food preparation, bathing, washing clothes and dishes, flushing toilets, and watering lawns and gardens. Also called residential water use.
- Freshwater.** Water that contains less than 1,000 mg/L (milligrams per liter) of dissolved solids; generally, more than 500 mg/L of dissolved solids is undesirable for drinking and many industrial uses.
- Ground water.** Generally all subsurface water as distinct from surface water; specifically, that part of the subsurface water in the saturated zone (a zone in which all voids are filled with water) where the water is under pressure greater than atmospheric.
- Industrial water use.** Water used for industrial purposes such as fabrication, processing, washing, and cooling, and includes such industries as steel, chemical and allied products, paper and allied products, mining, and petroleum refining. The water may be obtained from a public supply or may be self supplied.
- Instream use.** Water use that is used, but not withdrawn, from a ground- or surface-water source for such purposes as hydroelectric-power generation, navigation, water-quality improvement, fish propagation, and recreation. Sometimes called nonwithdrawal use or in-channel use.
- Irrigation water use.** Artificial application of water on lands to assist in the growing of crops and pastures or to

maintain vegetative growth in recreational lands, such as parks and golf courses.

Livestock water use. Water for livestock watering, feed lots, dairy operations, fish farming, and other on-farm needs. Livestock as used here includes cattle, sheep, goats, hogs, and poultry. Also includes such animal specialties as horses, rabbits, bees, pets, fur-bearing animals in captivity, and fish in captivity.

Million gallons per day (Mgal/d). A rate of flow of water.

Mining water use. Water use for the extraction of minerals occurring naturally including solids, such as coal and ores; liquids, such as crude petroleum; and gases, such as natural gas. Also includes uses associated with quarrying, well operations, milling (crushing, screening, washing, floatation, and so forth), and other preparations customarily done at the mine site or as part of a mining activity.

Offstream use. Water withdrawn or diverted from a ground- or surface-water source for public-water supply, industry, irrigation, livestock, thermoelectric-power generation, and other uses. Sometimes called off-channel use or withdrawal use.

Per capita use. The average amount of water used per person during a standard time period, generally per day.

Public supply. Water withdrawn by public and private water suppliers and delivered to groups of users. Public suppliers provide water for a variety of uses, such as domestic, commercial, thermoelectric-power generation, industrial, and public water use.

Public-supply deliveries. Water provided to users through a public-supply distribution system.

Saline water. Water that contains more than 1,000 milligrams per liter of dissolved solids.

Self-supplied water. Water withdrawn from a surface- or ground-water source by a user rather than being obtained from a public supply.

Surface water. An open body of water, such as a stream or a lake.

Thermoelectric-power water use. Water used in the process of the generation of thermoelectric power. The water may be obtained from a public supply or may be self supplied.

Withdrawal. Water removed from the ground or diverted from a surface-water source for use.

TABLES 1–14

Table 1. Public-supply withdrawals and domestic water use in Illinois, by county, 1992
[All values are in million gallons per day]

County	Public-supply withdrawals			Domestic water use		
	Ground water	Surface water	Total	Public-supplied deliveries	Self-supplied withdrawals	Total
Adams	1.78	6.25	8.03	5.34	0.68	6.02
Alexander	.35	.93	1.28	.92	.02	.94
Bond	.14	.94	1.08	.67	.71	1.38
Boone	3.18	.00	3.18	1.84	1.13	2.97
Brown	.10	.00	.10	.40	.14	.54
Bureau	3.37	.00	3.37	2.38	.84	3.22
Calhoun	.38	.00	.38	.16	.30	.46
Carroll	1.47	.00	1.47	.91	.60	1.51
Cass	1.33	.00	1.33	.89	.31	1.20
Champaign	20.91	.00	20.91	13.73	1.70	15.43
Christian	1.99	1.62	3.61	1.90	1.21	3.11
Clark	1.21	.00	1.21	1.00	.44	1.44
Clay	.00	.84	.84	.64	.66	1.30
Clinton	.28	1.91	2.19	1.59	1.52	3.11
Coles	.51	4.66	5.17	4.36	.32	4.68
Cook	17.32	1,162.03	1,179.35	460.06	.54	460.60
Crawford	2.07	.00	2.07	.93	.84	1.77
Cumberland	.29	.29	.58	.42	.55	.97
De Kalb	7.65	.00	7.65	5.77	1.44	7.21
De Witt	2.65	.00	2.65	1.13	.37	1.50
Douglas	1.50	.00	1.50	1.25	.52	1.77
Du Page	43.64	.00	43.64	72.48	.45	72.93
Edgar	.29	1.33	1.62	1.09	.68	1.77
Edwards	.03	.10	.13	.37	.30	.67
Effingham	.27	2.18	2.45	.91	1.99	2.90
Fayette	.13	1.09	1.22	.93	.96	1.89
Ford	1.50	.00	1.50	1.00	.28	1.28
Franklin	.00	13.19	13.19	3.59	.06	3.65
Fulton	.97	1.90	2.87	2.42	1.03	3.45
Gallatin	2.52	.04	2.56	.56	.06	.62
Greene	.37	.30	.67	.99	.40	1.39
Grundy	2.66	.00	2.66	2.14	.88	3.02
Hamilton	.01	.00	.01	.68	.09	.77
Hancock	.20	.98	1.18	1.39	.53	1.92
Hardin	.14	.18	.32	.36	.10	.46
Henderson	5.65	.00	5.65	.28	.47	.75
Henry	4.12	.00	4.12	3.53	1.09	4.62
Iroquois	2.13	.00	2.13	1.85	.95	2.80
Jackson	.09	7.10	7.19	5.34	.17	5.51
Jasper	.51	.00	.51	.36	.60	.96
Jefferson	.00	1.26	1.26	2.79	.61	3.40
Jersey	1.12	.00	1.12	.91	.97	1.88
Jo Daviess	2.23	.00	2.23	1.34	.63	1.97
Johnson	.02	.65	.67	.22	.84	1.06
Kane	25.02	17.62	42.64	29.60	.50	30.10
Kankakee	2.21	12.07	14.28	5.96	2.92	8.88
Kendall	2.09	.00	2.09	1.60	2.17	3.77
Knox	1.16	.00	1.16	4.68	.39	5.07
Lake	13.29	48.10	61.39	31.53	16.96	48.49
La Salle	11.66	3.42	15.08	7.22	2.51	9.73

Table 1. Public-supply withdrawals and domestic water use in Illinois, by county, 1992—Continued

County	Public-supply withdrawals			Domestic water use		
	Ground water	Surface water	Total	Public-supplied deliveries	Self-supplied withdrawals	Total
Lawrence	1.64	0.00	1.64	1.22	0.22	1.44
Lee	4.49	.00	4.49	2.12	1.03	3.15
Livingston	2.11	2.06	4.17	1.98	1.59	3.57
Logan	5.72	.00	5.72	2.37	.42	2.79
McDonough	1.19	2.67	3.86	2.57	.61	3.18
McHenry	14.08	.00	14.08	9.94	8.04	17.98
McLean	5.58	5.96	11.54	10.43	1.56	11.99
Macon	1.45	33.43	34.88	9.08	1.44	10.52
Macoupin	.02	4.28	4.30	2.15	2.17	4.32
Madison	13.56	43.33	56.89	14.32	8.38	22.70
Marion	.03	5.10	5.13	3.68	.07	3.75
Marshall	1.68	.00	1.68	.86	.30	1.16
Mason	1.12	.00	1.12	.48	1.00	1.48
Massac	2.34	.00	2.34	.79	.56	1.35
Menard	.59	.00	.59	.82	.23	1.05
Mercer	.90	.00	.90	.94	.62	1.56
Monroe	.13	.06	.19	.58	1.52	2.10
Montgomery	.52	2.02	2.54	1.34	1.44	2.78
Morgan	.07	.22	.29	2.75	.52	3.27
Moultrie	1.01	.00	1.01	.89	.37	1.26
Ogle	5.62	.00	5.62	2.44	1.82	4.26
Peoria	16.60	9.66	26.26	15.40	1.07	16.47
Perry	.04	.60	.64	.94	.98	1.92
Piatt	1.23	.00	1.23	.99	.43	1.42
Pike	1.04	.53	1.57	.96	.61	1.57
Pope	.00	.10	.10	.11	.30	.41
Pulaski	.54	.00	.54	.37	.31	.68
Putnam	.44	.00	.44	.39	.13	.52
Randolph	.82	2.90	3.72	1.90	1.21	3.11
Richland	.06	1.53	1.59	1.07	.43	1.50
Rock Island	2.76	14.51	17.27	13.03	.39	13.42
St Clair	.19	15.57	15.76	18.37	5.38	23.75
Saline	.00	.73	.73	2.39	.00	2.39
Sangamon	2.35	25.10	27.45	12.57	3.72	16.29
Schuyler	.94	.00	.94	.43	.26	.69
Scott	5.06	.00	5.06	.23	.27	.50
Shelby	1.10	1.41	2.51	1.19	.82	2.01
Stark	.41	.00	.41	.21	.37	.58
Stephenson	5.41	.00	5.41	2.95	1.40	4.35
Tazewell	13.59	.69	14.28	11.01	.27	11.28
Union	1.23	.12	1.35	.28	1.32	1.60
Vermilion	1.58	10.44	12.02	5.62	2.26	7.88
Wabash	.75	1.16	1.91	.38	.79	1.17
Warren	2.44	.00	2.44	1.18	.54	1.72
Washington	.11	.72	.83	.48	.88	1.36
Wayne	.09	1.04	1.13	.88	.67	1.55
White	.32	.00	.32	1.05	.41	1.46
Whiteside	6.45	.00	6.45	3.35	2.07	5.42
Will	33.76	.60	34.36	22.09	12.09	34.18
Williamson	.00	2.60	2.60	2.89	2.38	5.27
Winnebago	34.89	.00	34.89	17.94	5.26	23.20
Woodford	1.55	4.54	6.09	2.03	.98	3.01
Total	392.11	1,484.66	1,876.77	906.84	136.34	1,043.18

Table 2. Public-supply withdrawals and domestic water use in Illinois, by hydrologic unit, 1992
[All values are in million gallons per day]

Hydrologic unit	Public-water withdrawals			Domestic water use		
	Ground water	Surface water	Total	Public-supplied deliveries	Self-supplied withdrawals	Total
04040001	0.00	0.00	0.00	6.66	0.07	6.73
04040002	.07	.00	.07	11.02	5.04	16.06
04060200	.00	1,210.13	1,210.13	.00	.00	.00
05120108	.06	.39	.45	.53	.22	.75
05120109	3.99	10.04	14.03	12.30	2.99	15.29
05120111	2.80	1.33	4.13	2.77	2.11	4.88
05120112	4.58	1.99	6.57	9.16	1.95	11.11
05120113	1.09	1.26	2.35	1.10	1.12	2.22
05120114	1.15	8.52	9.67	4.38	4.06	8.44
05120115	.09	.16	.25	1.27	.42	1.69
05140203	.27	.27	.54	.90	.82	1.72
05140204	2.22	1.65	3.87	3.79	.69	4.48
05140206	2.90	1.58	4.48	1.40	1.31	2.71
07060005	3.41	.00	3.41	1.94	1.03	2.97
07080101	1.07	14.51	15.58	6.51	.47	6.98
07080104	9.40	.57	9.97	5.74	2.04	7.78
07090001	.50	.00	.50	.38	.11	.49
07090003	5.73	.00	5.73	3.42	1.56	4.98
07090004	.34	.00	.34	.22	.07	.29
07090005	46.91	.00	46.91	29.28	9.16	38.44
07090006	16.46	.00	16.46	11.04	4.32	15.36
07090007	3.37	.00	3.37	2.84	.97	3.81
07110001	1.38	6.36	7.74	4.26	.61	4.87
07110004	1.20	.00	1.20	1.75	.68	2.43
07110009	5.17	9.68	14.85	5.33	3.37	8.70
07120001	2.67	12.63	15.30	7.22	3.77	10.99
07120002	2.49	.00	2.49	2.36	1.18	3.54
07120003	9.97	.00	9.97	328.20	3.91	332.11
07120004	87.57	.00	87.57	219.56	16.79	236.35
07120005	4.68	.05	4.73	3.69	1.64	5.33
07120006	25.09	.00	25.09	34.50	10.22	44.72
07120007	27.75	17.62	45.37	25.94	3.16	29.10
07130001	23.89	9.57	33.46	15.44	2.91	18.35
07130002	2.21	5.48	7.69	3.78	2.01	5.79
07130003	18.36	2.06	20.42	17.39	2.26	19.65
07130004	4.42	11.20	15.62	4.43	.87	5.30
07130005	4.22	.00	4.22	4.97	1.47	6.44
07130006	6.39	33.43	39.82	11.48	2.15	13.63
07130007	2.02	26.66	28.68	7.41	2.85	10.26
07130008	1.58	.06	1.64	7.43	2.28	9.71
07130009	13.95	.00	13.95	13.20	2.40	15.60
07130010	1.35	2.89	4.24	3.40	.96	4.36
07130011	7.18	.98	8.16	5.16	1.87	7.03
07130012	.23	3.53	3.76	1.56	1.45	3.01
07140101	8.51	46.22	54.73	18.50	9.11	27.61
07140105	1.55	2.26	3.81	1.48	1.06	2.54
07140106	.07	24.68	24.75	15.01	4.25	19.26
07140108	.45	.08	.53	.49	.53	1.02
07140201	19.47	1.29	20.76	6.38	1.94	8.32
07140202	.32	7.60	7.92	5.42	2.40	7.82
07140203	.62	3.49	4.11	2.13	2.23	4.36
07140204	.94	4.44	5.38	12.32	5.48	17.80
Total	392.11	1,484.66	1,876.77	906.84	136.34	1,043.18

Table 3. Commercial self-supplied withdrawals and deliveries from public-supply facilities for commercial use in Illinois, by county, 1992
[All values are in million gallons per day]

County	Self-supplied withdrawals			Deliveries from public-supply facilities	Total self-supplied withdrawals and public-supply deliveries
	Ground water	Surface water	Total		
Adams	0.00	0.00	0.00	1.77	1.77
Alexander	.04	.00	.04	.10	.14
Bond	.00	.00	.00	.01	.01
Boone	.07	.00	.07	.01	.08
Brown	.00	.00	.00	.00	.00
Bureau	.00	2.58	2.58	.61	3.19
Calhoun	.26	11.31	11.57	.04	11.61
Carroll	.11	.00	.11	.10	.21
Cass	.00	.00	.00	.34	.34
Champaign	1.48	.04	1.52	3.32	4.84
Christian	.01	.00	.01	.07	.08
Clark	.00	.00	.00	.12	.12
Clay	.00	.00	.00	.13	.13
Clinton	.00	.00	.00	.15	.15
Coles	.00	.00	.00	2.35	2.35
Cook	1.24	31.79	33.03	83.86	116.89
Crawford	.00	.00	.00	.13	.13
Cumberland	.00	.00	.00	.04	.04
De Kalb	.07	.00	.07	.35	.42
De Witt	.02	.00	.02	.02	.04
Douglas	.03	.00	.03	.16	.19
Du Page	1.52	4.75	6.27	16.52	22.79
Edgar	.00	.00	.00	.11	.11
Edwards	.00	.00	.00	.10	.10
Effingham	.00	.00	.00	.46	.46
Fayette	.00	4.48	4.48	.09	4.57
Ford	.00	.00	.00	.12	.12
Franklin	.00	.00	.00	.00	.00
Fulton	.00	5.35	5.35	.35	5.70
Gallatin	.00	.00	.00	.05	.05
Greene	.00	.00	.00	.18	.18
Grundy	.00	.00	.00	.35	.35
Hamilton	.00	.00	.00	.00	.00
Hancock	.00	.00	.00	.13	.13
Hardin	.00	.00	.00	.02	.02
Henderson	.00	.00	.00	.01	.01
Henry	.04	.00	.04	.30	.34
Iroquois	.01	.00	.01	.19	.20
Jackson	1.96	.00	1.96	.36	2.32
Jasper	.00	.00	.00	.00	.00
Jefferson	.00	16.65	16.65	.00	16.65
Jersey	.04	7.02	7.06	.04	7.10
Jo Daviess	.24	.08	.32	.15	.47
Johnson	.00	.00	.00	.00	.00
Kane	.15	.91	1.06	6.07	7.13
Kankakee	.01	.00	.01	5.76	5.77
Kendall	.00	.00	.00	.22	.22
Knox	.00	.00	.00	1.88	1.88
Lake	.48	.00	.48	7.08	7.56
La Salle	.07	.00	.07	1.22	1.29

Table 3. Commercial self-supplied withdrawals and deliveries from public-supply facilities for commercial use in Illinois, by county, 1992—Continued

County	Self-supplied withdrawals			Deliveries from public-supply facilities	Total self-supplied withdrawals and public-supply deliveries
	Ground water	Surface water	Total		
Lawrence	0.00	0.00	0.00	0.60	0.60
Lee	.04	.00	.04	.41	.45
Livingston	.00	.00	.00	.39	.39
Logan	.00	.00	.00	.43	.43
McDonough	.00	.00	.00	1.22	1.22
McHenry	.81	.00	.81	1.02	1.83
McLean	.11	.00	.11	1.34	1.45
Macon	.01	.00	.01	.14	.15
Macoupin	.00	.00	.00	.04	.04
Madison	.25	.00	.25	2.55	2.80
Marion	.00	.00	.00	1.14	1.14
Marshall	.00	.00	.00	.11	.11
Mason	7.13	.00	7.13	.05	7.18
Massac	1.18	.00	1.18	.02	1.20
Menard	.00	.00	.00	.06	.06
Mercer	.00	.00	.00	.11	.11
Monroe	.00	.00	.00	.01	.01
Montgomery	.00	.00	.00	.47	.47
Morgan	.00	.00	.00	.01	.01
Moultrie	.00	.88	.88	.06	.94
Ogle	.21	.00	.21	.72	.93
Peoria	.00	.00	.00	5.82	5.82
Perry	.00	.00	.00	.00	.00
Piatt	.02	.00	.02	.11	.13
Pike	.03	.00	.03	.11	.14
Pope	.00	.00	.00	.02	.02
Pulaski	.16	.00	.16	.07	.23
Putnam	.00	.84	.84	.02	.86
Randolph	.00	.00	.00	.19	.19
Richland	.00	.00	.00	.27	.27
Rock Island	.04	.02	.06	2.51	2.57
St Clair	.27	.00	.27	4.44	4.71
Saline	.00	.00	.00	1.30	1.30
Sangamon	.00	.00	.00	7.57	7.57
Schuyler	.00	.00	.00	.07	.07
Scott	.00	.00	.00	.02	.02
Shelby	.29	.00	.29	.08	.37
Stark	.00	.00	.00	.00	.00
Stephenson	.00	.00	.00	.62	.62
Tazewell	.01	.00	.01	1.45	1.46
Union	.75	.00	.75	.02	.77
Vermilion	.01	.00	.01	1.81	1.82
Wabash	.01	.00	.01	.18	.19
Warren	.00	.00	.00	.18	.18
Washington	.00	.00	.00	.18	.18
Wayne	.00	.00	.00	.06	.06
White	.00	.00	.00	.30	.30
Whiteside	.14	.34	.48	.51	.99
Will	.43	.00	.43	3.95	4.38
Williamson	.00	8.02	8.02	.75	8.77
Winnebago	.30	.00	.30	.69	.99
Woodford	.00	.00	.00	.24	.24
Total	20.05	95.06	115.11	179.88	294.99

Table 4. Commercial self-supplied withdrawals and deliveries from public-supply facilities for commercial use in Illinois, by hydrologic unit, 1992
[All values are in millions of gallons per day]

Hydrologic unit	Self-supplied withdrawals			Deliveries from public-supply facilities	Total self-supplied withdrawals and public-supply deliveries
	Ground water	Surface water	Total		
04040001	0.00	0.00	0.00	1.22	1.22
04040002	.00	14.27	14.27	2.40	16.67
04060200	.00	.84	.84	.00	.84
05120108	.00	.00	.00	.17	.17
05120109	1.48	.05	1.53	3.32	4.85
05120111	.00	.00	.00	.33	.33
05120112	.04	.00	.04	3.36	3.40
05120113	.01	.00	.01	.41	.42
05120114	.00	.00	.00	1.24	1.24
05120115	.00	.00	.00	.17	.17
05140203	.00	.00	.00	.10	.10
05140204	.00	.00	.00	1.46	1.46
05140206	1.18	.00	1.18	.07	1.25
07060005	.35	.08	.43	.22	.65
07080101	.01	.02	.03	1.23	1.26
07080104	.00	.00	.00	1.39	1.39
07090001	.10	.00	.10	.01	.11
07090003	.00	.00	.00	.63	.63
07090004	.00	.00	.00	.01	.01
07090005	.58	.34	.92	3.38	4.30
07090006	.15	.00	.15	.77	.92
07090007	.04	.00	.04	.35	.39
07110001	.00	.00	.00	1.34	1.34
07110004	.26	2.70	2.96	.42	3.38
07110009	.17	.00	.17	.87	1.04
07120001	.02	.00	.02	5.67	5.69
07120002	.01	.00	.01	.59	.60
07120003	.12	16.55	16.67	60.03	76.70
07120004	3.01	.42	3.43	43.63	47.06
07120005	.01	.00	.01	.62	.63
07120006	1.33	.00	1.33	6.13	7.46
07120007	.16	5.36	5.52	5.05	10.57
07130001	.06	3.42	3.48	3.51	6.99
07130002	.00	.00	.00	.66	.66
07130003	7.14	5.35	12.49	4.98	17.47
07130004	.00	.00	.00	.56	.56
07130005	.02	.00	.02	1.30	1.32
07130006	.03	.00	.03	.78	.81
07130007	.01	.00	.01	3.41	3.42
07130008	.00	.00	.00	4.07	4.07
07130009	.13	.00	.13	1.67	1.80
07130010	.00	.00	.00	1.23	1.23
07130011	.08	15.63	15.71	.48	16.19
07130012	.00	.00	.00	.10	.10
07140101	.35	.00	.35	3.71	4.06
07140105	.75	.00	.75	.14	.89
07140106	1.96	24.67	26.63	1.08	27.71
07140108	.20	.00	.20	.06	.26
07140201	.29	.88	1.17	1.13	2.30
07140202	.00	4.48	4.48	1.34	5.82
07140203	.00	.00	.00	.46	.46
07140204	.00	.00	.00	2.62	2.62
Total	20.05	95.06	115.11	179.88	294.99

Table 5. Estimated irrigation water withdrawals, irrigated land, and estimated water withdrawals for livestock and animal specialties in Illinois, by county, 1992
[Mgal/d, million gallons per day]

County	Estimated irrigation water withdrawals, in Mgal/d	Irrigated land, in acres	Estimated withdrawals for animal specialties, in Mgal/d		Estimated livestock water withdrawals, in Mgal/d	Total withdrawals for livestock and animal specialties, in Mgal/d		
			Ground water	Surface water		Ground water	Surface water	Total
Adams	2.10	2,300	0.02	0.00	1.24	1.26	0.00	1.26
Alexander	2.13	2,730	.01	.00	.07	.08	.00	.08
Bond	.08	80	.01	.00	.35	.36	.00	.36
Boone	1.17	1,030	.02	.00	.44	.46	.00	.46
Brown	.02	20	.01	.00	.31	.32	.00	.32
Bureau	2.69	4,110	.02	.00	.88	.90	.00	.90
Calhoun	.03	30	.01	.03	.30	.31	.03	.34
Carroll	3.98	5,100	.01	.02	1.08	1.09	.02	1.11
Cass	7.61	7,810	.00	.02	.72	.72	.02	.74
Champaign	5.00	8,510	.02	.00	.17	.19	.00	.19
Christian	.28	320	.01	.00	.29	.30	.00	.30
Clark	3.13	3,830	.01	.00	.28	.29	.00	.29
Clay	.13	120	.01	.02	.27	.28	.02	.30
Clinton	1.89	1,870	.01	.00	1.40	1.41	.00	1.41
Coles	.12	130	.01	.00	.22	.23	.00	.23
Cook	4.02	3,740	.05	.00	.04	.09	.00	.09
Crawford	2.28	3,200	.01	.00	.26	.27	.00	.27
Cumberland	.08	100	.01	.02	.32	.33	.02	.35
De Kalb	.93	940	.02	.00	1.08	1.10	.00	1.10
De Witt	.46	630	.01	.19	.11	.12	.19	.31
Douglas	.03	40	.05	.03	.20	.25	.03	.28
Du Page	1.28	1,330	.02	.00	.03	.05	.00	.05
Edgar	.12	170	.01	.00	.36	.37	.00	.37
Edwards	.10	120	.02	.01	.31	.33	.01	.34
Effingham	.34	320	.02	.00	.89	.91	.00	.91
Fayette	.22	200	.30	.00	.36	.66	.00	.66
Ford	1.03	1,530	.00	.01	.24	.24	.01	.25
Franklin	.16	180	.01	.00	.15	.16	.00	.16
Fulton	.74	9,820	.02	.03	.69	.71	.03	.74
Gallatin	10.11	14,160	.01	.03	.11	.12	.03	.15
Greene	2.46	2,300	.01	.00	.62	.63	.00	.63
Grundy	.34	400	.01	.00	.15	.16	.00	.16
Hamilton	.14	160	.01	.03	.16	.17	.03	.20
Hancock	1.39	1,640	.02	.00	.99	1.01	.00	1.01
Hardin	.03	40	.01	.03	.09	.10	.03	.13
Henderson	10.71	12,300	.01	.00	.48	.49	.00	.49
Henry	2.40	3,510	.02	.00	2.20	2.22	.00	2.22
Iroquois	.87	1,270	.02	.00	.63	.65	.00	.65
Jackson	.57	610	.04	.85	.36	.40	.85	1.25
Jasper	.04	50	.01	.00	.59	.60	.00	.60
Jefferson	.47	470	.02	.00	.30	.32	.00	.32
Jersey	.04	40	.00	.00	.38	.38	.00	.38
Jo Daviess	.31	330	.02	.00	1.86	1.88	.00	1.88
Johnson	.05	70	.02	.02	.30	.32	.02	.34
Kane	2.37	2,470	.05	.01	.44	.49	.01	.50
Kankakee	16.06	17,560	.01	.00	.26	.27	.00	.27
Kendall	.53	590	.01	.00	.27	.28	.00	.28
Knox	.30	320	.02	.00	1.42	1.44	.00	1.44
Lake	1.91	2,070	.05	.03	.09	.14	.03	.17
La Salle	.83	1,050	.02	.00	.61	.63	.00	.63

Table 5. Estimated irrigation water withdrawals, irrigated land, and estimated water withdrawals for livestock and animal specialties in Illinois, by county, 1992—Continued

County	Estimated irrigation water withdrawals, in Mgal/d	Irrigated land, in acres	Estimated withdrawals for animal specialties, in Mgal/d		Estimated livestock water withdrawals, in Mgal/d	Total withdrawals for livestock and animal specialties in Mgal/d		
			Ground water	Surface water		Ground water	Surface water	Total
Lawrence	7.92	11,570	0.00	0.00	0.17	0.17	0.00	0.17
Lee	10.39	12,040	.01	.00	.59	.60	.00	.60
Livingston	.41	510	.01	.01	.71	.72	.01	.73
Logan	.81	1,430	.00	.00	.57	.57	.00	.57
McDonough	.22	220	.01	.00	.62	.63	.00	.63
McHenry	7.67	10,100	.08	.01	.57	.65	.01	.66
McLean	.40	50	.07	.03	.59	.66	.03	.69
Macon	.16	330	.05	.00	.14	.19	.00	.19
Macoupin	.42	430	.02	.02	1.01	1.03	.02	1.05
Madison	1.50	16,800	.03	.03	.67	.70	.03	.73
Marion	.16	170	.02	.03	.32	.34	.03	.37
Marshall	1.66	2,480	.01	.00	.26	.27	.00	.27
Mason	59.84	75,890	6.63	.00	.19	6.82	.00	6.82
Massac	3.27	4,310	.01	.02	.24	.25	.02	.27
Menard	.76	960	.01	.00	.32	.33	.00	.33
Mercer	2.95	3,540	.02	.00	.74	.76	.00	.76
Monroe	1.71	1,500	.01	.02	.37	.38	.02	.40
Montgomery	.05	50	.03	.02	.72	.75	.02	.77
Morgan	2.30	2,240	.01	.00	.64	.65	.00	.65
Moultrie	.03	40	.02	.00	.19	.21	.00	.21
Ogle	2.65	3,820	.03	.00	1.40	1.43	.00	1.43
Peoria	2.52	3,080	.02	.00	.40	.42	.00	.42
Perry	1.50	1,410	.01	.03	.30	.31	.03	.34
Piatt	.12	240	.00	.00	.15	.15	.00	.15
Pike	1.58	1,500	.01	.00	1.44	1.45	.00	1.45
Pope	.00	0	.01	.00	.13	.14	.00	.14
Pulaski	.45	610	.07	.00	.12	.19	.00	.19
Putnam	.44	340	.00	.00	.20	.20	.00	.20
Randolph	.35	380	.01	.23	.50	.51	.23	.74
Richland	.07	80	.01	.00	.33	.34	.00	.34
Rock Island	3.12	3,950	.02	.00	.58	.60	.00	.60
St Clair	1.50	1,750	.04	.02	.39	.43	.02	.45
Saline	.10	190	.01	.00	.15	.16	.00	.16
Sangamon	.67	690	.03	.00	.58	.61	.00	.61
Schuyler	.18	180	.01	.02	.35	.36	.02	.38
Scott	4.51	4,300	.00	.02	.28	.28	.02	.30
Shelby	.30	370	.20	.00	.58	.78	.00	.78
Stark	.62	930	.00	.00	.21	.21	.00	.21
Stephenson	.41	510	.01	.00	2.34	2.35	.00	2.35
Tazewell	18.78	22,950	.02	.00	.71	.73	.00	.73
Union	.29	280	.01	.00	.27	.28	.00	.28
Vermilion	.28	440	.02	.01	.31	.33	.01	.34
Wabash	.23	390	.00	.00	.11	.11	.00	.11
Warren	.06	60	.01	.00	.73	.74	.00	.74
Washington	.84	1,070	.00	.00	.93	.93	.00	.93
Wayne	.87	1,030	.09	.15	.47	.56	.15	.71
White	3.74	5,390	.02	.00	.19	.21	.00	.21
Whiteside	21.21	29,400	.02	.02	1.15	1.17	.02	1.19
Will	3.96	4,430	.05	.06	.24	.29	.06	.35
Williamson	.06	70	.02	.03	.19	.21	.03	.24
Winnebago	1.94	2,010	.02	.00	.81	.83	.00	.83
Woodford	.40	500	.01	.00	.69	.70	.00	.70
Total	270.46	358,730	8.95	2.16	52.23	61.18	2.16	63.34

Table 6. Estimated irrigation water withdrawals, irrigated land, and estimated water withdrawals for livestock and animal specialties in Illinois, by hydrologic unit, 1992

[Mgal/d, million gallons per day]

Hydrologic unit	Estimated irrigation water withdrawals, in Mgal/d	Irrigated land, in acres	Estimated withdrawals for animal specialties, in Mgal/d		Estimated livestock water withdrawals, in Mgal/d	Total withdrawals for livestock and animal specialties, in Mgal/d		
			Ground water	Surface water		Ground water	Surface water	Total
04040001	0.06	50	0.00	0.00	0.00	0.00	0.00	0.00
04040002	.58	630	.01	.00	.03	.04	.00	.04
04060200	.00	0	.00	.00	.00	.00	.00	.00
05120108	.03	40	.00	.00	.03	.03	.00	.03
05120109	3.23	5,360	.03	.01	.48	.51	.01	.52
05120111	4.21	5,600	.02	.00	.98	1.00	.00	1.00
05120112	9.08	13,080	.07	.04	1.17	1.24	.04	1.28
05120113	2.88	4,180	.01	.00	.41	.42	.00	.42
05120114	3.27	4,290	.16	.11	2.21	2.37	.11	2.48
05120115	.95	1,250	.06	.09	.30	.36	.09	.45
05140203	3.62	5,060	.02	.03	.40	.42	.03	.45
05140204	6.82	9,600	.05	.06	.48	.53	.06	.59
05140206	4.40	5,730	.05	.03	.47	.52	.03	.55
07060005	2.95	3,710	.03	.01	2.56	2.59	.01	2.60
07080101	4.11	5,470	.00	.00	.50	.50	.00	.50
07080104	14.51	16,920	.05	.00	3.24	3.29	.00	3.29
07090001	.04	40	.00	.00	.02	.02	.00	.02
07090003	.73	920	.02	.00	2.39	2.41	.00	2.41
07090004	.02	30	.00	.00	.04	.04	.00	.04
07090005	33.29	43,620	.05	.03	4.12	4.17	.03	4.19
07090006	3.65	4,050	.08	.01	1.60	1.68	.01	1.69
07090007	3.99	5,220	.04	.00	1.52	1.56	.00	1.56
07110001	1.85	2,050	.02	.00	1.13	1.15	.00	1.15
07110004	1.59	1,570	.01	.02	1.42	1.43	.02	1.45
07110009	.56	5,660	.01	.02	.47	.48	.02	.50
07120001	15.36	16,810	.03	.02	.29	.32	.02	.34
07120002	1.97	2,490	.02	.00	.66	.68	.00	.68
07120003	3.44	3,310	.02	.00	.06	.08	.00	.08
07120004	6.29	6,720	.09	.04	.28	.37	.04	.41
07120005	.59	720	.01	.00	.38	.39	.00	.39
07120006	7.56	9,630	.07	.01	.63	.70	.01	.71
07120007	2.76	2,980	.06	.01	.90	.96	.01	.97
07130001	12.53	16,240	.03	.00	2.07	2.10	.00	2.09
07130002	.67	850	.02	.01	.80	.82	.01	.83
07130003	48.50	64,760	3.16	.02	1.59	4.75	.02	4.77
07130004	11.82	14,780	.38	.01	.61	.99	.01	1.00
07130005	1.78	6,800	.04	.02	1.89	1.93	.02	1.95
07130006	.98	1,640	.04	.01	.38	.42	.01	.43
07130007	.58	630	.05	.00	.64	.69	.00	.69
07130008	8.29	10,210	2.34	.01	.67	3.01	.01	3.02
07130009	12.98	16,500	1.00	.19	1.29	2.29	.19	2.48
07130010	.90	1,010	.03	.01	1.29	1.32	.01	1.33
07130011	12.46	12,150	.03	.03	2.55	2.58	.03	2.60
07130012	.80	770	.01	.02	.76	.77	.02	.79
07140101	2.78	11,200	.03	.05	1.18	1.21	.05	1.26
07140105	.86	1,020	.02	.21	.39	.41	.21	.62
07140106	2.86	2,900	.07	.84	1.48	1.55	.84	2.39
07140108	.85	1,070	.04	.00	.15	.19	.00	.19
07140201	1.61	2,600	.21	.01	.83	1.04	.01	1.05
07140202	1.69	1,810	.28	.02	1.91	2.19	.02	2.21
07140203	.56	580	.03	.01	1.26	1.29	.01	1.30
07140204	2.57	4,420	.05	.15	1.32	1.37	.15	1.52
Total	270.46	358,730	8.95	2.16	52.23	61.18	2.16	63.34

Table 7. Industrial self-supplied withdrawals and deliveries from public-supply facilities for industrial use in Illinois, by county, 1992
[All values are in million gallons per day]

County	Self-supplied withdrawals			Deliveries from public-supply facilities	Total self-supplied withdrawals and public-supply deliveries
	Ground water	Surface water	Total		
Adams	10.32	0.00	10.32	1.77	12.09
Alexander	.72	.00	.72	.40	1.12
Bond	.00	.00	.00	.00	.00
Boone	.18	.00	.18	.06	.24
Brown	.00	.00	.00	.00	.00
Bureau	.02	.00	.02	.38	.40
Calhoun	.00	.00	.00	.00	.00
Carroll	2.19	.00	2.19	.12	2.31
Cass	2.00	.00	2.00	.01	2.01
Champaign	1.88	.00	1.88	2.39	4.27
Christian	.00	.00	.00	1.13	1.13
Clark	.00	.00	.00	.00	.00
Clay	.00	.00	.00	.19	.19
Clinton	.00	.00	.00	.02	.02
Coles	.00	.00	.00	.07	.07
Cook	12.24	118.60	130.84	38.36	169.20
Crawford	.00	4.20	4.20	.39	4.59
Cumberland	.00	.00	.00	.01	.01
De Kalb	.48	.16	.64	.10	.74
De Witt	.01	.00	.01	.02	.03
Douglas	.00	4.63	4.63	.02	4.65
Du Page	.32	.00	.32	6.38	6.70
Edgar	.00	.00	.00	.10	.10
Edwards	.00	.00	.00	.03	.03
Effingham	.00	.00	.00	.01	.01
Fayette	.00	.00	.00	.05	.05
Ford	.00	.00	.00	.28	.28
Franklin	.00	.00	.00	.00	.00
Fulton	.00	.00	.00	.03	.03
Gallatin	.00	.00	.00	.00	.00
Greene	.00	.00	.00	.01	.01
Grundy	7.74	.06	7.80	.16	7.96
Hamilton	.00	.00	.00	.00	.00
Hancock	.00	.00	.00	.04	.04
Hardin	.00	.00	.00	.00	.00
Henderson	.00	.00	.00	.00	.00
Henry	.03	.00	.03	.07	.10
Iroquois	.05	.00	.05	.06	.11
Jackson	.00	.00	.00	.10	.10
Jasper	.00	.00	.00	.00	.00
Jefferson	.00	.00	.00	.00	.00
Jersey	.00	.00	.00	.00	.00
Jo Daviess	3.38	.00	3.38	.05	3.43
Johnson	.00	.00	.00	.00	.00
Kane	1.68	.04	1.72	4.72	6.44
Kankakee	.12	.00	.12	3.46	3.58
Kendall	.30	.00	.30	.21	.51
Knox	.00	.00	.00	.95	.95
Lake	.77	.95	1.72	1.14	2.86
La Salle	3.71	3.29	7.00	1.31	8.31

Table 7. Industrial self-supplied withdrawals and deliveries from public-supply facilities for industrial use in Illinois, by county, 1992—Continued

County	Self-supplied withdrawals			Deliveries from public-supply facilities	Total self-supplied withdrawals and public-supply deliveries
	Ground water	Surface water	Total		
Lawrence	0.00	0.00	0.00	0.04	0.04
Lee	.05	.02	.07	.88	.95
Livingston	.10	.00	.10	.24	.34
Logan	.00	.00	.00	.33	.33
McDonough	.02	.00	.02	.07	.09
McHenry	2.87	1.21	4.08	.62	4.70
McLean	.00	.00	.00	.03	.03
Macon	.48	8.38	8.86	25.42	34.28
Macoupin	.00	.00	.00	.02	.02
Madison	27.16	24.26	51.42	3.14	54.56
Marion	.00	.00	.00	.36	.36
Marshall	1.20	.00	1.20	.00	1.20
Mason	.00	.00	.00	.03	.03
Massac	3.28	.00	3.28	.00	3.28
Menard	.00	.00	.00	.00	.00
Mercer	.00	.00	.00	.00	.00
Monroe	.00	.00	.00	.00	.00
Montgomery	.00	.42	.42	.10	.52
Morgan	5.83	.00	5.83	1.27	7.10
Moultrie	.00	.00	.00	.01	.01
Ogle	.39	.00	.39	1.33	1.72
Peoria	12.86	67.96	80.82	.81	81.63
Perry	.00	.00	.00	.00	.00
Piatt	.68	.00	.68	.02	.70
Pike	.00	.00	.00	.03	.03
Pope	.00	.00	.00	.00	.00
Pulaski	.00	.00	.00	.02	.02
Putnam	.13	3.86	3.99	.08	4.07
Randolph	.00	.00	.00	.17	.17
Richland	.00	.00	.00	.56	.56
Rock Island	12.52	7.58	20.10	2.96	23.06
St Clair	10.08	.00	10.08	12.59	22.67
Saline	.00	.00	.00	.40	.40
Sangamon	.00	.00	.00	6.55	6.55
Schuyler	.00	.00	.00	.00	.00
Scott	.00	.00	.00	.00	.00
Shelby	.00	.00	.00	.01	.01
Stark	.00	.00	.00	.00	.00
Stephenson	2.82	.00	2.82	.96	3.78
Tazewell	8.87	19.69	28.56	1.69	30.25
Union	.00	.00	.00	.00	.00
Vermilion	2.72	.00	2.72	2.58	5.30
Wabash	.00	.00	.00	.06	.06
Warren	.00	.00	.00	.02	.02
Washington	.00	.00	.00	.12	.12
Wayne	.00	.00	.00	.05	.05
White	.00	.00	.00	.01	.01
Whiteside	5.40	.04	5.44	.48	5.92
Will	5.85	20.89	26.74	1.35	28.09
Williamson	.00	.00	.00	.00	.00
Winnebago	3.30	.00	3.30	13.67	16.97
Woodford	.00	.00	.00	.05	.05
Total	154.75	286.24	440.99	143.73	584.72

Table 8. Industrial self-supplied withdrawals and deliveries from public-supply facilities for industrial use in Illinois, by hydrologic unit, 1992

[All values are in million gallons per day]

Hydrologic unit	Self-supplied withdrawals			Deliveries from public-supply facilities	Total self-supplied withdrawals and public-supply deliveries
	Ground water	Surface water	Total		
04040001	0.00	38.70	38.70	0.56	39.26
04040002	.00	24.08	24.08	.48	24.56
04060200	.00	.95	.95	.00	.95
05120108	.00	.00	.00	.25	.25
05120109	2.77	.00	2.77	3.62	6.39
05120111	.00	4.24	4.24	.48	4.72
05120112	.00	.00	.00	.57	.57
05120113	.00	.00	.00	.13	.13
05120114	.00	.00	.00	.75	.75
05120115	.00	.00	.00	.06	.06
05140203	.00	.00	.00	.01	.01
05140204	.00	.00	.00	.40	.40
05140206	3.28	.00	3.28	.19	3.47
07060005	5.57	.00	5.57	.14	5.71
07080101	10.94	7.58	18.52	1.43	19.95
07080104	.00	.00	.00	.57	.57
07090001	.28	.00	.28	.29	.57
07090003	2.82	.00	2.82	1.31	4.13
07090004	.00	.00	.00	.15	.15
07090005	10.17	.05	10.22	15.34	25.56
07090006	1.35	1.37	2.72	1.94	4.66
07090007	.03	.00	.03	.28	.31
07110001	8.85	.00	8.85	1.32	10.17
07110004	.00	.00	.00	.34	.34
07110009	8.51	4.41	12.92	1.05	13.97
07120001	.12	.00	.12	3.35	3.47
07120002	.05	.00	.05	.33	.38
07120003	3.52	13.01	16.53	27.10	43.63
07120004	15.50	63.68	79.18	17.69	96.87
07120005	10.84	3.35	14.19	.40	14.59
07120006	2.62	.04	2.66	3.10	5.76
07120007	1.96	.00	1.96	3.86	5.82
07130001	6.37	6.84	13.21	1.78	14.99
07130002	.10	.00	.10	.54	.64
07130003	20.71	84.66	105.37	1.32	106.69
07130004	.08	.00	.08	.39	.47
07130005	.00	.00	.00	.48	.48
07130006	1.16	8.38	9.54	24.86	34.40
07130007	.00	.00	.00	4.11	4.11
07130008	.00	.00	.00	3.44	3.44
07130009	.01	.00	.01	1.16	1.17
07130010	.02	.00	.02	.11	.13
07130011	5.83	.00	5.83	1.39	7.22
07130012	.00	.00	.00	.02	.02
07140101	28.73	19.85	48.58	8.20	56.78
07140105	.00	.00	.00	.20	.20
07140106	.00	.00	.00	.13	.13
07140108	.72	.00	.72	.12	.84
07140201	1.84	4.63	6.47	.85	7.32
07140202	.00	.00	.00	.46	.46
07140203	.00	.42	.42	.10	.52
07140204	.00	.00	.00	6.58	6.58
Total	154.75	286.24	440.99	143.73	584.72

Table 9. Mining withdrawals in Illinois, by county, 1992

[All values are in million gallons per day]

County	Withdrawals						
	Ground water			Surface water	Total		
	Fresh	Saline	Total		Fresh	Saline	Total
Adams	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Alexander	.00	.00	.00	.00	.00	.00	.00
Bond	.00	.00	.00	.00	.00	.00	.00
Boone	.00	.00	.00	.00	.00	.00	.00
Brown	.00	.00	.00	.00	.00	.00	.00
Bureau	.00	.00	.00	.43	.43	.00	.43
Calhoun	.00	.00	.00	.00	.00	.00	.00
Carroll	.00	.00	.00	.00	.00	.00	.00
Cass	.00	.00	.00	.00	.00	.00	.00
Champaign	.00	.00	.00	4.65	4.65	.00	4.65
Christian	.00	.46	.46	.10	.10	.46	.56
Clark	.00	.11	.11	.00	.00	.11	.11
Clay	.00	.72	.72	.00	.00	.72	.72
Clinton	.46	.31	.77	1.61	2.07	.31	2.38
Coles	.00	.12	.12	.01	.01	.12	.13
Cook	.00	.00	.00	.49	.49	.00	.49
Crawford	.00	3.60	3.60	.00	.00	3.60	3.60
Cumberland	.00	.11	.11	.00	.00	.11	.11
De Kalb	.82	.00	.82	2.70	3.52	.00	3.52
De Witt	.00	.00	.00	.00	.00	.00	.00
Douglas	.00	.00	.00	2.03	2.03	.00	2.03
Du Page	.05	.00	.05	.00	.05	.00	.05
Edgar	.00	.09	.09	.00	.00	.09	.09
Edwards	.00	.49	.49	.00	.00	.49	.49
Effingham	.00	.22	.22	.00	.00	.22	.22
Fayette	.00	1.28	1.28	.00	.00	1.28	1.28
Ford	.00	.00	.00	.27	.27	.00	.27
Franklin	.00	.23	.23	1.26	1.26	.23	1.49
Fulton	.28	.00	.28	.92	1.20	.00	1.20
Gallatin	1.20	.27	1.47	1.29	2.49	.27	2.76
Greene	.00	.00	.00	.00	.00	.00	.00
Grundy	.00	.00	.00	.00	.00	.00	.00
Hamilton	.00	.51	.51	.00	.00	.51	.51
Hancock	.00	.00	.00	.00	.00	.00	.00
Hardin	2.33	.00	2.33	.00	2.33	.00	2.33
Henderson	.00	.00	.00	.00	.00	.00	.00
Henry	.00	.00	.00	.00	.00	.00	.00
Iroquois	.00	.00	.00	.00	.00	.00	.00
Jackson	.00	.00	.00	.00	.00	.00	.00
Jasper	.00	1.10	1.10	.00	.00	1.10	1.10
Jefferson	.00	.77	.77	.95	.95	.77	1.72
Jersey	.00	.00	.00	.00	.00	.00	.00
Jo Daviess	.00	.00	.00	.00	.00	.00	.00
Johnson	.00	.00	.00	.00	.00	.00	.00
Kane	.06	.00	.06	.00	.06	.00	.06
Kankakee	.99	.00	.99	.00	.99	.00	.99
Kendall	.00	.00	.00	.00	.00	.00	.00
Knox	.00	.00	.00	.00	.00	.00	.00
Lake	.44	.00	.44	.66	1.10	.00	1.10
La Salle	.20	.00	.20	6.02	6.22	.00	6.22
Lawrence	.00	7.22	7.22	.00	.00	7.22	7.22
Lee	.00	.00	.00	.00	.00	.00	.00
Livingston	.00	.00	.00	.00	.00	.00	.00
Logan	.02	.00	.02	.06	.08	.00	.08
McDonough	.00	.00	.00	.54	.54	.00	.54

Table 9. Mining withdrawals in Illinois, by county, 1992—Continued

County	Withdrawals						
	Ground water			Surface water	Total		
	Fresh	Saline	Total		Fresh	Saline	Total
McHenry	0.00	0.00	0.00	2.80	2.80	0.00	2.80
McLean	.00	.00	.00	.00	.00	.00	.00
Macon	.00	.00	.00	.00	.00	.00	.00
Macoupin	.00	.00	.00	2.57	2.57	.00	2.57
Madison	.00	.09	.09	.00	.00	.09	.09
Marion	.00	.65	.65	.00	.00	.65	.65
Marshall	.00	.00	.00	.00	.00	.00	.00
Mason	.00	.00	.00	.00	.00	.00	.00
Massac	.00	.00	.00	.00	.00	.00	.00
Menard	.00	.00	.00	.00	.00	.00	.00
Mercer	.00	.00	.00	.00	.00	.00	.00
Monroe	.00	.00	.00	.00	.00	.00	.00
Montgomery	.00	.00	.00	.25	.25	.00	.25
Morgan	.00	.00	.00	.00	.00	.00	.00
Moultrie	.00	.00	.00	.00	.00	.00	.00
Ogle	.20	.00	.20	.18	.38	.00	.38
Peoria	.00	.00	.00	.00	.00	.00	.00
Perry	.01	.01	.02	4.72	4.73	.01	4.74
Piatt	.00	.00	.00	.00	.00	.00	.00
Pike	.00	.00	.00	.00	.00	.00	.00
Pope	.00	.00	.00	.00	.00	.00	.00
Pulaski	.00	.00	.00	.00	.00	.00	.00
Putnam	.00	.00	.00	.00	.00	.00	.00
Randolph	.00	.00	.00	.58	.58	.00	.58
Richland	.00	.91	.91	.00	.00	.91	.91
Rock Island	.00	.00	.00	.34	.34	.00	.34
St Clair	.00	.00	.00	.00	.00	.00	.00
Saline	.00	.35	.35	3.46	3.46	.35	3.81
Sangamon	.00	.00	.00	1.06	1.06	.00	1.06
Schuyler	.00	.00	.00	.02	.02	.00	.02
Scott	.00	.00	.00	.00	.00	.00	.00
Shelby	.00	.04	.04	.00	.00	.04	.04
Stark	.00	.00	.00	.00	.00	.00	.00
Stephenson	.00	.00	.00	.00	.00	.00	.00
Tazewell	.00	.00	.00	.00	.00	.00	.00
Union	.00	.00	.00	.00	.00	.00	.00
Vermilion	.00	.00	.00	.00	.00	.00	.00
Wabash	.13	1.23	1.36	.00	.13	1.23	1.36
Warren	.00	.00	.00	.00	.00	.00	.00
Washington	.00	.35	.35	.00	.00	.35	.35
Wayne	.00	1.71	1.71	.00	.00	1.71	1.71
White	.09	2.49	2.58	.00	.09	2.49	2.58
Whiteside	.00	.00	.00	.00	.00	.00	.00
Will	.00	.00	.00	.00	.00	.00	.00
Williamson	.00	.03	.03	1.50	1.50	.03	1.53
Winnebago	.00	.00	.00	.01	.01	.00	.01
Woodford	.00	.00	.00	.00	.00	.00	.00
Total	7.28	25.47	32.75	41.48	48.76	25.47	74.23

Table 10. Mining withdrawals in Illinois, by hydrologic unit, 1992
[All values are in million gallons per day]

Hydrologic unit	Withdrawals						
	Ground water			Surface water	Total		
	Fresh	Saline	Total		Fresh	Saline	Total
04040001	0.00	0.00	0.00	0.00	0.00	0.00	0.00
04040002	.00	.00	.00	.00	.00	.00	.00
04060200	.00	.00	.00	.00	.00	.00	.00
05120108	.00	.00	.00	.00	.00	.00	.00
05120109	.00	.00	.00	.27	.27	.00	.27
05120111	.00	.05	.05	.00	.00	.05	.05
05120112	.00	10.66	10.66	2.03	2.03	10.66	12.69
05120113	.22	2.55	2.77	.00	.22	2.55	2.77
05120114	.00	5.32	5.32	.00	.00	5.32	5.32
05120115	.00	1.14	1.14	.00	.00	1.14	1.14
05140203	1.18	.00	1.18	.00	1.18	.00	1.18
05140204	2.34	1.55	3.89	6.26	8.60	1.55	10.15
05140206	.00	.00	.00	.00	.00	.00	.00
07060005	.00	.00	.00	.00	.00	.00	.00
07080101	.00	.00	.00	.33	.33	.00	.33
07080104	.00	.00	.00	.00	.00	.00	.00
07090001	.00	.00	.00	.01	.01	.00	.01
07090003	.00	.00	.00	.00	.00	.00	.00
07090004	.00	.00	.00	.00	.00	.00	.00
07090005	.20	.00	.20	.19	.39	.00	.39
07090006	.82	.00	.82	2.70	3.52	.00	3.52
07090007	.00	.00	.00	.43	.43	.00	.43
07110001	.00	.00	.00	.00	.00	.00	.00
07110004	.00	.00	.00	.00	.00	.00	.00
07110009	.00	.00	.00	.00	.00	.00	.00
07120001	.99	.00	.99	.00	.99	.00	.99
07120002	.00	.00	.00	.00	.00	.00	.00
07120003	.00	.00	.00	.00	.00	.00	.00
07120004	.00	.00	.00	.01	.01	.00	.01
07120005	.00	.00	.00	.00	.00	.00	.00
07120006	.50	.00	.50	3.45	3.95	.00	3.95
07120007	.05	.00	.05	1.26	1.31	.00	1.31
07130001	.20	.00	.20	5.26	5.46	.00	5.46
07130002	.00	.00	.00	.00	.00	.00	.00
07130003	.00	.00	.00	.00	.00	.00	.00
07130004	.00	.00	.00	.00	.00	.00	.00
07130005	.28	.00	.28	.92	1.20	.00	1.20
07130006	.00	.01	.01	4.68	4.68	.01	4.69
07130007	.00	.45	.45	1.13	1.13	.45	1.58
07130008	.00	.00	.00	.00	.00	.00	.00
07130009	.02	.00	.02	.06	.08	.00	.08
07130010	.00	.00	.00	.57	.57	.00	.57
07130011	.00	.00	.00	.00	.00	.00	.00
07130012	.00	.00	.00	2.76	2.76	.00	2.76
07140101	.00	.00	.00	.00	.00	.00	.00
07140105	.00	.00	.00	.58	.58	.00	.58
07140106	.01	1.20	1.21	6.93	6.94	1.20	8.14
07140108	.00	.00	.00	.00	.00	.00	.00
07140201	.00	.04	.04	.00	.00	.04	.04
07140202	.00	2.32	2.32	.00	.00	2.32	2.32
07140203	.00	.03	.03	.06	.06	.03	.09
07140204	.47	.15	.62	1.59	2.06	.15	2.21
Total	7.28	25.47	32.75	41.48	48.76	25.47	74.23

Table 11. Thermoelectric-power self-supplied withdrawals and deliveries from public-supply facilities for thermoelectric-power generation in Illinois, by county, 1992

[All values are in million gallons per day]

County	Self-supplied withdrawals			Deliveries from public-supply facilities	Total self-supplied withdrawals and deliveries
	Ground water	Surface water	Total		
Adams	0.00	0.00	0.00	0.00	0.00
Alexander	.00	.00	.00	.00	.00
Bond	.00	.00	.00	.00	.00
Boone	.00	.00	.00	.00	.00
Brown	.00	.00	.00	.00	.00
Bureau	.00	.00	.00	.00	.00
Calhoun	.00	.00	.00	.00	.00
Carroll	.00	.00	.00	.00	.00
Cass	.00	.00	.00	.00	.00
Champaign	.00	.00	.00	.00	.00
Christian	.00	719.23	719.23	.00	719.23
Clark	.00	.00	.00	.00	.00
Clay	.00	.00	.00	.00	.00
Clinton	.00	.00	.00	.00	.00
Coles	.00	.00	.00	.00	.00
Cook	.00	567.71	567.71	.68	568.39
Crawford	.73	59.12	59.85	.00	59.85
Cumberland	.00	.00	.00	.00	.00
De Kalb	.00	.00	.00	.00	.00
De Witt	.00	605.48	605.48	.00	605.48
Douglas	.00	.00	.00	.00	.00
Du Page	.01	.00	.01	.00	.01
Edgar	.00	.00	.00	.00	.00
Edwards	.00	.00	.00	.00	.00
Effingham	.00	.00	.00	.00	.00
Fayette	.00	.00	.00	.00	.00
Ford	.00	.00	.00	.00	.00
Franklin	.00	.00	.00	.00	.00
Fulton	.00	.00	.00	.00	.00
Gallatin	.00	.00	.00	.00	.00
Greene	.00	.00	.00	.00	.00
Grundy	.90	2,335.43	2,336.33	.00	2,336.33
Hamilton	.00	.00	.00	.00	.00
Hancock	.00	.00	.00	.00	.00
Hardin	.00	.00	.00	.00	.00
Henderson	.00	.00	.00	.00	.00
Henry	.00	.00	.00	.00	.00
Iroquois	.00	.00	.00	.00	.00
Jackson	.08	133.07	133.15	.00	133.15
Jasper	.00	347.96	347.96	.00	347.96
Jefferson	.00	.00	.00	.00	.00
Jersey	.00	.00	.00	.00	.00
Jo Daviess	.00	.00	.00	.00	.00
Johnson	.00	.00	.00	.00	.00
Kane	.00	.00	.00	.00	.00
Kankakee	.00	.00	.00	.00	.00
Kendall	.00	.00	.00	.00	.00
Knox	.00	.00	.00	.00	.00
Lake	.00	2,392.21	2,392.21	.08	2,392.29
La Salle	.19	766.58	766.77	.00	766.77

Table 11. Thermoelectric-power self-supplied withdrawals and deliveries from public-supply facilities for thermoelectric-power generation in Illinois, by county, 1992—Continued

County	Self-supplied withdrawals			Deliveries from public-supply facilities	Total self-supplied withdrawals and deliveries
	Ground water	Surface water	Total		
Lawrence	0.00	0.00	0.00	0.00	0.00
Lee	.00	.00	.00	.00	.00
Livingston	.00	.00	.00	.00	.00
Logan	.00	.00	.00	.00	.00
McDonough	.00	.00	.00	.00	.00
McHenry	.00	.00	.00	.00	.00
McLean	.00	.00	.00	.00	.00
Macon	.00	.00	.00	.00	.00
Macoupin	.00	.00	.00	.00	.00
Madison	.00	151.96	151.96	.01	151.97
Marion	.00	.00	.00	.00	.00
Marshall	.00	.00	.00	.00	.00
Mason	.08	59.73	59.81	.00	59.81
Massac	1.15	467.40	468.55	.02	468.57
Menard	.00	.00	.00	.00	.00
Mercer	.00	.00	.00	.00	.00
Monroe	.00	.00	.00	.00	.00
Montgomery	.00	417.26	417.26	.02	417.28
Morgan	.06	157.26	157.32	.00	157.32
Moultrie	.00	.00	.00	.00	.00
Ogle	.55	49.59	50.14	.00	50.14
Peoria	.00	.93	.93	.01	.94
Perry	.00	.00	.00	.00	.00
Piatt	.00	.00	.00	.00	.00
Pike	.05	21.35	21.40	.00	21.40
Pope	.00	.00	.00	.00	.00
Pulaski	.00	.00	.00	.00	.00
Putnam	.71	160.00	160.71	.00	160.71
Randolph	.00	1,185.32	1,185.32	.01	1,185.33
Richland	.00	.00	.00	.00	.00
Rock Island	.65	1,000.00	1,000.65	.00	1,000.65
St Clair	.00	.00	.00	.00	.00
Saline	.00	.00	.00	.00	.00
Sangamon	.00	268.27	268.27	.69	268.96
Schuyler	.00	.00	.00	.00	.00
Scott	.00	.00	.00	.00	.00
Shelby	.00	.00	.00	.00	.00
Stark	.00	.00	.00	.00	.00
Stephenson	.00	.00	.00	.00	.00
Tazewell	2.75	733.45	736.20	.00	736.20
Union	.00	.00	.00	.00	.00
Vermilion	.00	2.59	2.59	.00	2.59
Wabash	.00	.00	.00	.00	.00
Warren	.00	.00	.00	.00	.00
Washington	.00	.00	.00	.00	.00
Wayne	.00	.00	.00	.00	.00
White	.00	.00	.00	.00	.00
Whiteside	.00	.00	.00	.00	.00
Will	1.20	3,397.73	3,398.93	.01	3,398.94
Williamson	.00	90.25	90.25	.83	91.08
Winnebago	.00	.00	.00	.00	.00
Woodford	.00	.00	.00	.00	.00
Total	9.11	16,089.88	16,098.99	2.36	16,101.35

Table 12. Thermoelectric-power self-supplied withdrawals and deliveries from public-supply facilities for thermoelectric-power generation in Illinois, by hydrologic unit, 1992

[All values are in million gallons per day]

Hydrologic unit	Self-supplied withdrawals			Deliveries from public-supply facilities	Total self-supplied withdrawals and deliveries
	Ground water	Surface water	Total		
04040001	0.00	0.00	0.00	0.01	0.01
04040002	.00	.00	.00	.03	.03
04060200	.00	2,392.21	2,392.21	.00	2,392.21
05120108	.00	.00	.00	.00	.00
05120109	.00	2.59	2.59	.00	2.59
05120111	.73	59.12	59.85	.00	59.85
05120112	.00	.00	.00	.00	.00
05120113	.00	.00	.00	.00	.00
05120114	.00	347.96	347.96	.00	347.96
05120115	.00	.00	.00	.00	.00
05140203	.00	.00	.00	.00	.00
05140204	.00	90.25	90.25	.09	90.34
05140206	1.15	467.40	468.55	.02	468.57
07060005	.00	.00	.00	.00	.00
07080101	.65	1,000.00	1,000.65	.00	1,000.65
07080104	.00	.00	.00	.00	.00
07090001	.00	.00	.00	.00	.00
07090003	.00	.00	.00	.00	.00
07090004	.00	.00	.00	.00	.00
07090005	.55	49.59	50.14	.00	50.14
07090006	.00	.00	.00	.00	.00
07090007	.00	.00	.00	.00	.00
07110001	.00	.00	.00	.00	.00
07110004	.00	.00	.00	.00	.00
07110009	.00	128.77	128.77	.00	128.77
07120001	.09	1,570.84	1,570.93	.00	1,570.93
07120002	.00	.00	.00	.00	.00
07120003	.00	1,170.78	1,170.78	.49	1,171.27
07120004	1.20	1,773.87	1,775.07	.22	1,775.29
07120005	1.01	2,551.95	2,552.96	.00	2,552.96
07120006	.00	.00	.00	.03	.03
07120007	.00	.00	.00	.00	.00
07130001	.71	160.00	160.71	.00	160.71
07130002	.00	.00	.00	.00	.00
07130003	2.83	794.11	796.94	.01	796.95
07130004	.00	.00	.00	.00	.00
07130005	.00	.00	.00	.00	.00
07130006	.00	.00	.00	.02	.02
07130007	.00	987.50	987.50	.30	987.80
07130008	.00	.00	.00	.36	.36
07130009	.00	605.48	605.48	.00	605.48
07130010	.00	.00	.00	.00	.00
07130011	.11	178.61	178.72	.00	178.72
07130012	.00	.00	.00	.00	.00
07140101	.00	23.20	23.20	.01	23.21
07140105	.08	133.07	133.15	.01	133.16
07140106	.00	.00	.00	.73	.73
07140108	.00	.00	.00	.00	.00
07140201	.00	.00	.00	.00	.00
07140202	.00	.00	.00	.00	.00
07140203	.00	417.26	417.26	.02	417.28
07140204	.00	1,185.32	1,185.32	.01	1,185.33
Total	9.11	16,089.88	16,098.99	2.36	16,101.35

Table 13. Total withdrawals in Illinois, by county, 1992
[All values are in million gallons per day]

County	Withdrawals						
	Ground water			Surface water	Total		
	Fresh	Saline	Total		Fresh	Saline	Total
Adams	16.14	0.00	16.14	6.25	22.39	0.00	22.39
Alexander	3.34	.00	3.34	.93	4.27	.00	4.27
Bond	1.29	.00	1.29	.94	2.23	.00	2.23
Boone	6.19	.00	6.19	.00	6.19	.00	6.19
Brown	.58	.00	.58	.00	.58	.00	.58
Bureau	7.82	.00	7.82	3.01	10.83	.00	10.83
Calhoun	1.28	.00	1.28	11.34	12.62	.00	12.62
Carroll	9.44	.00	9.44	.02	9.46	.00	9.46
Cass	11.97	.00	11.97	.02	11.99	.00	11.99
Champaign	31.16	.00	31.16	4.69	35.85	.00	35.85
Christian	3.79	.46	4.25	720.95	724.74	.46	725.20
Clark	5.07	.11	5.18	.00	5.07	.11	5.18
Clay	1.07	.72	1.79	.86	1.93	.72	2.65
Clinton	5.56	.31	5.87	3.52	9.08	.31	9.39
Coles	1.18	.12	1.30	4.67	5.85	.12	5.97
Cook	35.45	.00	35.45	1,880.62	1,916.07	.00	1,916.07
Crawford	6.19	3.60	9.79	63.32	69.51	3.60	73.11
Cumberland	1.25	.11	1.36	.31	1.56	.11	1.67
De Kalb	12.49	.00	12.49	2.86	15.35	.00	15.35
De Witt	3.63	.00	3.63	605.67	609.30	.00	609.30
Douglas	2.33	.00	2.33	6.69	9.02	.00	9.02
Du Page	47.32	.00	47.32	4.75	52.07	.00	52.07
Edgar	1.46	.09	1.55	1.33	2.79	.09	2.88
Edwards	.76	.49	1.25	.11	.87	.49	1.36
Effingham	3.51	.22	3.73	2.18	5.69	.22	5.91
Fayette	1.97	1.28	3.25	5.57	7.54	1.28	8.82
Ford	3.05	.00	3.05	.28	3.33	.00	3.33
Franklin	.38	.23	.61	14.45	14.83	.23	15.06
Fulton	3.73	.00	3.73	8.20	11.93	.00	11.93
Gallatin	14.01	.27	14.28	1.36	15.37	.27	15.64
Greene	3.86	.00	3.86	.30	4.16	.00	4.16
Grundy	12.68	.00	12.68	2,335.49	2,348.17	.00	2,348.17
Hamilton	.41	.51	.92	.03	.44	.51	.95
Hancock	3.13	.00	3.13	.98	4.11	.00	4.11
Hardin	2.70	.00	2.70	.21	2.91	.00	2.91
Henderson	17.32	.00	17.32	.00	17.32	.00	17.32
Henry	9.90	.00	9.90	.00	9.90	.00	9.90
Iroquois	4.66	.00	4.66	.00	4.66	.00	4.66
Jackson	3.27	.00	3.27	141.02	144.29	.00	144.29
Jasper	1.75	1.10	2.85	347.96	349.71	1.10	350.81
Jefferson	1.40	.77	2.17	18.86	20.26	.77	21.03
Jersey	2.55	.00	2.55	7.02	9.57	.00	9.57
Jo Daviess	8.67	.00	8.67	.08	8.75	.00	8.75
Johnson	1.23	.00	1.23	.67	1.90	.00	1.90
Kane	30.27	.00	30.27	18.58	48.85	.00	48.85
Kankakee	22.58	.00	22.58	12.07	34.65	.00	34.65
Kendall	5.37	.00	5.37	.00	5.37	.00	5.37
Knox	3.29	.00	3.29	.00	3.29	.00	3.29
Lake	33.99	.00	33.99	2,441.95	2,475.94	.00	2,475.94
La Salle	19.80	.00	19.80	779.31	799.11	.00	799.11
Lawrence	9.95	7.22	17.17	.00	9.95	7.22	17.17
Lee	16.60	.00	16.60	.02	16.62	.00	16.62
Livingston	4.93	.00	4.93	2.07	7.00	.00	7.00
Logan	7.54	.00	7.54	.06	7.60	.00	7.60
McDonough	2.67	.00	2.67	3.21	5.88	.00	5.88

Table 13. Total withdrawals in Illinois, by county, 1992—Continued

County	Withdrawals						
	Ground water			Surface water	Total		
	Fresh	Saline	Total		Fresh	Saline	Total
McHenry	34.12	0.00	34.12	4.02	38.14	0.00	38.14
McLean	8.31	.00	8.31	5.99	14.30	.00	14.30
Macon	3.73	.00	3.73	41.81	45.54	.00	45.54
Macoupin	3.64	.00	3.64	6.87	10.51	.00	10.51
Madison	51.55	.09	51.64	219.58	271.13	.09	271.22
Marion	.60	.65	1.25	5.13	5.73	.65	6.38
Marshall	5.11	.00	5.11	.00	5.11	.00	5.11
Mason	75.99	.00	75.99	59.73	135.72	.00	135.72
Massac	12.03	.00	12.03	467.42	479.45	.00	479.45
Menard	1.91	.00	1.91	.00	1.91	.00	1.91
Mercer	5.23	.00	5.23	.00	5.23	.00	5.23
Monroe	3.74	.00	3.74	.08	3.82	.00	3.82
Montgomery	2.76	.00	2.76	419.97	422.73	.00	422.73
Morgan	9.43	.00	9.43	157.48	166.91	.00	166.91
Moultrie	1.62	.00	1.62	.88	2.50	.00	2.50
Ogle	12.87	.00	12.87	49.77	62.64	.00	62.64
Peoria	33.47	.00	33.47	78.55	112.02	.00	112.02
Perry	2.84	.01	2.85	5.35	8.19	.01	8.20
Piatt	2.63	.00	2.63	.00	2.63	.00	2.63
Pike	4.76	.00	4.76	21.88	26.64	.00	26.64
Pope	.44	.00	.44	.10	.54	.00	.54
Pulaski	1.65	.00	1.65	.00	1.65	.00	1.65
Putnam	2.05	.00	2.05	164.70	166.75	.00	166.75
Randolph	2.89	.00	2.89	1,189.03	1,191.92	.00	1,191.92
Richland	.90	.91	1.81	1.53	2.43	.91	3.34
Rock Island	20.08	.00	20.08	1,022.45	1,042.53	.00	1,042.53
St Clair	17.85	.00	17.85	15.59	33.44	.00	33.44
Saline	.26	.35	.61	4.19	4.45	.35	4.80
Sangamon	7.35	.00	7.35	294.43	301.78	.00	301.78
Schuyler	1.74	.00	1.74	.04	1.78	.00	1.78
Scott	10.12	.00	10.12	.02	10.14	.00	10.14
Shelby	3.29	.04	3.33	1.41	4.70	.04	4.74
Stark	1.61	.00	1.61	.00	1.61	.00	1.61
Stephenson	12.39	.00	12.39	.00	12.39	.00	12.39
Tazewell	45.00	.00	45.00	753.83	798.83	.00	798.83
Union	3.87	.00	3.87	.12	3.99	.00	3.99
Vermilion	7.18	.00	7.18	13.04	20.22	.00	20.22
Wabash	2.02	1.23	3.25	1.16	3.18	1.23	4.41
Warren	3.78	.00	3.78	.00	3.78	.00	3.78
Washington	2.76	.35	3.11	.72	3.48	.35	3.83
Wayne	2.19	1.71	3.90	1.19	3.38	1.71	5.09
White	4.77	2.49	7.26	.00	4.77	2.49	7.26
Whiteside	36.44	.00	36.44	.40	36.84	.00	36.84
Will	57.58	.00	57.58	3,419.28	3,476.86	.00	3,476.86
Williamson	2.65	.03	2.68	102.40	105.05	.03	105.08
Winnebago	46.52	.00	46.52	.01	46.53	.00	46.53
Woodford	3.63	.00	3.63	4.54	8.17	.00	8.17
Total	1,051.28	25.47	1,076.75	17,999.48	19,050.76	25.47	19,076.23

Table 14. Total withdrawals in Illinois, by hydrologic unit, 1992
[All values are in million gallons per day]

Hydrologic unit	Withdrawals						
	Ground water			Surface water	Total		
	Fresh	Saline	Total		Fresh	Saline	Total
04040001	0.13	0.00	0.13	38.71	38.84	0.00	38.84
04040002	5.74	.00	5.74	38.35	44.09	.00	44.09
04060200	.00	.00	.00	3,604.12	3,604.12	.00	3,604.12
05120108	.34	.00	.34	.39	.73	.00	.73
05120109	14.98	.00	14.98	12.96	27.94	.00	27.94
05120111	10.86	.05	10.91	64.71	75.57	.05	75.62
05120112	16.89	10.66	27.55	4.06	20.95	10.66	31.61
05120113	5.75	2.55	8.30	1.26	7.01	2.55	9.56
05120114	10.85	5.32	16.17	356.59	367.44	5.32	372.76
05120115	1.82	1.14	2.96	.25	2.07	1.14	3.21
05140203	6.31	.00	6.31	.30	6.61	.00	6.61
05140204	12.60	1.55	14.15	98.22	110.82	1.55	112.37
05140206	14.74	.00	14.74	469.01	483.75	.00	483.75
07060005	15.90	.00	15.90	.09	15.99	.00	15.99
07080101	17.77	.00	17.77	1,022.45	1,040.22	.00	1,040.22
07080104	29.25	.00	29.25	.57	29.82	.00	29.82
07090001	1.04	.00	1.04	.01	1.05	.00	1.05
07090003	13.25	.00	13.25	.00	13.25	.00	13.25
07090004	.47	.00	0.47	.00	.47	.00	.47
07090005	105.02	.00	105.02	50.19	155.21	.00	155.21
07090006	28.42	.00	28.42	4.08	32.50	.00	32.50
07090007	9.96	.00	9.96	.43	10.39	.00	10.39
07110001	13.84	.00	13.84	6.36	20.20	.00	20.20
07110004	5.16	.00	5.16	2.72	7.88	.00	7.88
07110009	18.27	.00	18.27	142.87	161.14	.00	161.14
07120001	23.34	.00	23.34	1,583.48	1,606.82	.00	1,606.82
07120002	6.38	.00	6.38	.00	6.38	.00	6.38
07120003	21.04	.00	21.04	1,200.34	1,221.38	.00	1,221.38
07120004	130.73	.00	130.73	1,838.03	1,968.76	.00	1,968.76
07120005	19.15	.00	19.15	2,555.35	2,574.50	.00	2,574.50
07120006	48.01	.00	48.01	3.50	51.51	.00	51.51
07120007	36.79	.00	36.79	24.25	61.05	.00	61.05
07130001	48.77	.00	48.77	185.09	233.86	.00	233.86
07130002	5.81	.00	5.81	5.49	11.30	.00	11.30
07130003	104.55	.00	104.55	886.20	990.75	.00	990.75
07130004	18.18	.00	18.18	11.21	29.39	.00	29.39
07130005	9.71	.00	9.71	.94	10.65	.00	10.65
07130006	11.13	.01	11.14	46.50	57.63	.01	57.64
07130007	6.15	.45	6.60	1,015.29	1,021.44	.45	1,021.89
07130008	15.16	.00	15.16	.07	15.23	.00	15.23
07130009	31.77	.00	31.77	605.73	637.50	.00	637.50
07130010	4.55	.00	4.55	3.47	8.02	.00	8.02
07130011	30.11	.00	30.11	195.25	225.36	.00	225.36
07130012	3.25	.00	3.25	6.31	9.56	.00	9.56
07140101	50.67	.00	50.67	89.32	139.99	.00	139.99
07140105	4.71	.00	4.71	136.12	140.83	.00	140.83
07140106	10.70	1.20	11.90	57.12	67.82	1.20	69.02
07140108	2.94	.00	2.94	.08	3.02	.00	3.02
07140201	26.19	.04	26.24	6.81	33.00	.04	33.04
07140202	6.60	2.32	8.92	12.10	18.70	2.32	21.02
07140203	4.70	.03	4.73	421.23	425.93	.03	425.96
07140204	10.83	.15	10.98	1,191.50	1,202.33	.15	1,202.48
Total	1,051.28	25.47	1,076.75	17,999.48	19,050.76	25.47	19,076.23



Avery—ESTIMATED WATER WITHDRAWALS AND USE IN ILLINOIS, 1992—U.S. Geological Survey Open-File Report 99-97

**U.S. Geological Survey, WRD
221 North Broadway Avenue
Urbana, IL 61801**