FLOODS OF JUNE 13-14, 1981, AND DECEMBER 2-12, 1982, IN ILLINOIS

By A.L. Ishii

U.S. GEOLOGICAL SURVEY

Water-Resources Investigations Report 91-4062

Prepared in cooperation with

ILLINOIS DEPARTMENT OF TRANSPORTATION,

DIVISION OF WATER RESOURCES

Urbana, Illinois

1991

U.S. DEPARTMENT OF THE INTERIOR

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CONTENTS

ILLUSTRATIONS

Figures

ILLUSTRATIONS

ILLUSTRATIONS

TABLES

CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
inch (in.)	25.4	millimeter
foot (ft)	0.3048	meter
mile (mi)	1.609	kilometer
square mile (mi^2)	2.590	square kilometer
cubic foot per second (ft^3/s)	0.02832	cubic meter per second

Temperature may be converted from degrees Fahrenheit (°F) to degrees Celsius (°C) as follows:

$$°C = 5/9 \times (°F-32)$$

Sea level: In this report, "sea level" refers to the National Geodetic Vertical Datum of 1929--a geodetic datum derived from a general adjustment of the first-order level nets of the United States and Canada, formerly called Sea Level Datum of 1929.

GLOSSARY

Anticyclone. Center of high pressure around which winds blow clockwise in the Northern Hemisphere.

Backwater. The rise in elevation of the water surface upstream from an obstruction to flow.

Crest. See flood peak.

Cubic foot per second (ft^3/s). The rate of discharge representing a volume of 1 cubic foot of water passing a given point during 1 second; equivalent to 7.48 gallons per second or 448.8 gallons per minute.

Cyclone. Center of low pressure around which winds blow counter-clockwise in the Northern Hemisphere.

Dewpoint depression. The difference between the air temperature and the temperature to which the air must be cooled (at constant pressure and water vapor content) for saturation to occur.

Discharge. The volume of water, in cubic feet per second, that passes a given point in a given time. (Also see peak discharge.)

Discharge hydrograph. A graphical representation of stream discharge at a given point as a function of time.

Drainage area. Contributing area, in square miles, from which surface runoff is carried away by a single drainage system.

Drainage basin. Area drained by a given stream and its tributaries.

Dry dam. A reservoir that is normally dry.

Flood. A relatively high flow, as measured either by stage or discharge, which usually overtops the natural banks along some reaches of a stream.

Flood peak. The maximum value of the stage or discharge attained by a flood; hence, peak stage, flood crest, or peak discharge.

Flood profile. A graph of the highest water-surface elevations reached at points along a stream in flood, plotted as distance (as ordinate) against elevation (as abscissa).

Flood stage. The approximate elevation of the stream when overbank flooding begins.

Freezing level. The elevation above which the air temprature is below freezing (0° Celsius). Rain is formed above the freezing level.

GLOSSARY

Frequency analysis. The determination of the average interval of time within which a given flood peak will be exceeded once. (Also see recurrence interval.)

Front. The transition zone between two distinct air masses.

Gage height. Elevation, in feet, of the water surface referred to the arbitrary gage datum.

National Geodetic Vertical Datum of 1929 (NGVD of 1929). Formerly called Sea Level Datum of 1929. A geodetic datum derived from a general adjustment of the first-order level nets of the United States and Canada.

Occlusion. A complex frontal system that develops when one front overtakes another front.

Rainfall-gaging station. A location where rainfall is collected and measured in a systematic fashion.

Recurrence interval. The average interval of time within which a given hydrologic phenomenon will occur once. Also called the return period.

Stage. See gage height.

Streamflow-gaging station. A particular site on a stream where stream elevation and streamflow are systematically observed and recorded.

Surface weather. Weather data collected at or close to ground level.

Water year. The 12-month period from October 1 through September 30 during which water data are collected, compiled, and reported. The water year is designated by the calendar year in which it ends.

FLOODS OF JUNE 13-14, 1981, AND DECEMBER 2-12, 1982, IN ILLINOIS

By A.L. Ishii

ABSTRACT

The storms of June 12-13, 1981, and December 2-5, 1982, in Illinois produced record floods and, in places, stream discharges with recurrence intervals greater than 100 years. Both storms are referenced by water-resources planners for design and evaluation purposes. This report includes descriptions and analyses of the conditions preceding the storms, the areal and temporal distributions of rainfall during the storms, and the resulting stage and discharge data available for affected streams in Illinois.

The storms that caused the floods were of contrasting types. The storms of June 1981 were characterized by intense and localized convective cells preceding an east-west warm front. The storms of December 1982 were widespread and of longer duration, and they formed a squall line preceding a north-south cold front. Five record discharges were observed in Illinois during the June 1981 floods, and 17 were observed during the early December 1982 floods. Floods with discharges of greater than 100-year recurrence intervals occurred in two widely separated locations in June 1981. In December 1982, flooding was largely confined to the Illinois River basin, particularly small streams at the upstream end and large streams at the downstream end. Five discharges had greater than 100-year recurrence intervals. The extent of the areas affected was much greater in the December 1982 storms, but the damage caused by flooding was comparable to that of the June 1981 storms because of the urban development of the areas flooded in June 1981. Both sets of storms followed periods of greater-than-average rainfall; hence, antecedent moisture may have contributed to the resulting floods.

INTRODUCTION

The storms of June 12-13, 1981, and December 2-5, 1982, in Illinois resulted in record floods and stream discharges with recurrence intervals greater than 100 years. The floods of June 13-14, 1981, which were limited to the northern third of the State, were due to intense and localized thunderstorms of short duration preceding an east-west warm front. The floods of December 2-12, 1982, were statewide in extent, although the most severe flooding occurred in the Illinois River basin. They were due to a long period of rain followed by storms preceding a cold front along the Mississippi River valley.

These two sets of storms and consequent floods are referenced by water-resources planners for the management and design of hydraulic structures including roads, bridges, and dams. Documentation of the storm characteristics and stream responses is a necessary prerequisite for the application of data from

these storms to planning activities. This study was conducted by the U.S. Geological Survey in cooperation with the Illinois Department of Transportation, Division of Water Resources.

Purpose and Scope

This report summarizes the antecedent rainfall conditions for storms, describes the temporal and spatial distributions of rainfall during the storms, and provides hydrologic data and analyses of the resulting floods. Meteorological data presented in this report include synoptic summaries, antecedent-rainfall isohyetal maps, storm-rainfall isohyetal maps, and plots of cumulative rainfall. Hydrologic data and analyses include discharge hydrographs, streamflow-gaging-station data, recurrence intervals and comparison of measured peak discharges to historic flooding, and a December 1982 flood profile of the Illinois River.

Sources and Presentation of the Data

Precipitation data was provided by the Rosemont, Illinois, office of the National Weather Service and by the Metropolitan Water Reclamation District of Greater Chicago. The network of precipitation stations used in this report is shown in figure 1. Storms and damages data were provided by the U.S. Federal Emergency Management Administration; the Emergency Services and Disaster Agency; the Illinois Department of Transportation, Division of Water Resources; and the Illinois Department of Natural Resources, State Water Survey. Figures 2 and 3 show the locations of U.S. Geological Survey (USGS) streamflow-gaging stations referred to in this report. The station-identification number is assigned according to downstream order. For further information regarding streamflow records and computation, refer to an annual Water Resources Data report for Illinois.

Twenty-four hour central standard time is used throughout the report. For example, 1800 hours is 6:00 p.m. central standard time.

FLOODS OF JUNE 13-14, 1981

During June 12-13, 1981, intense and localized thunderstorms caused severe flooding in northeastern Illinois with scattered flooding in northwestern Illinois. Damage was most severe in the counties of Cook, Will, and Grundy in northeastern Illinois, and Carroll in northwestern Illinois, all of which were declared disaster areas by the State. Will, Cook, and Carroll Counties were declared Federal disaster areas. More than 700 residents had to be evacuated. Two lives were lost as a direct result of the floods, and another person was killed in the aftermath of the flooding. Direct damage was estimated by the State Emergency Services and Disaster Agency to exceed $84 million.

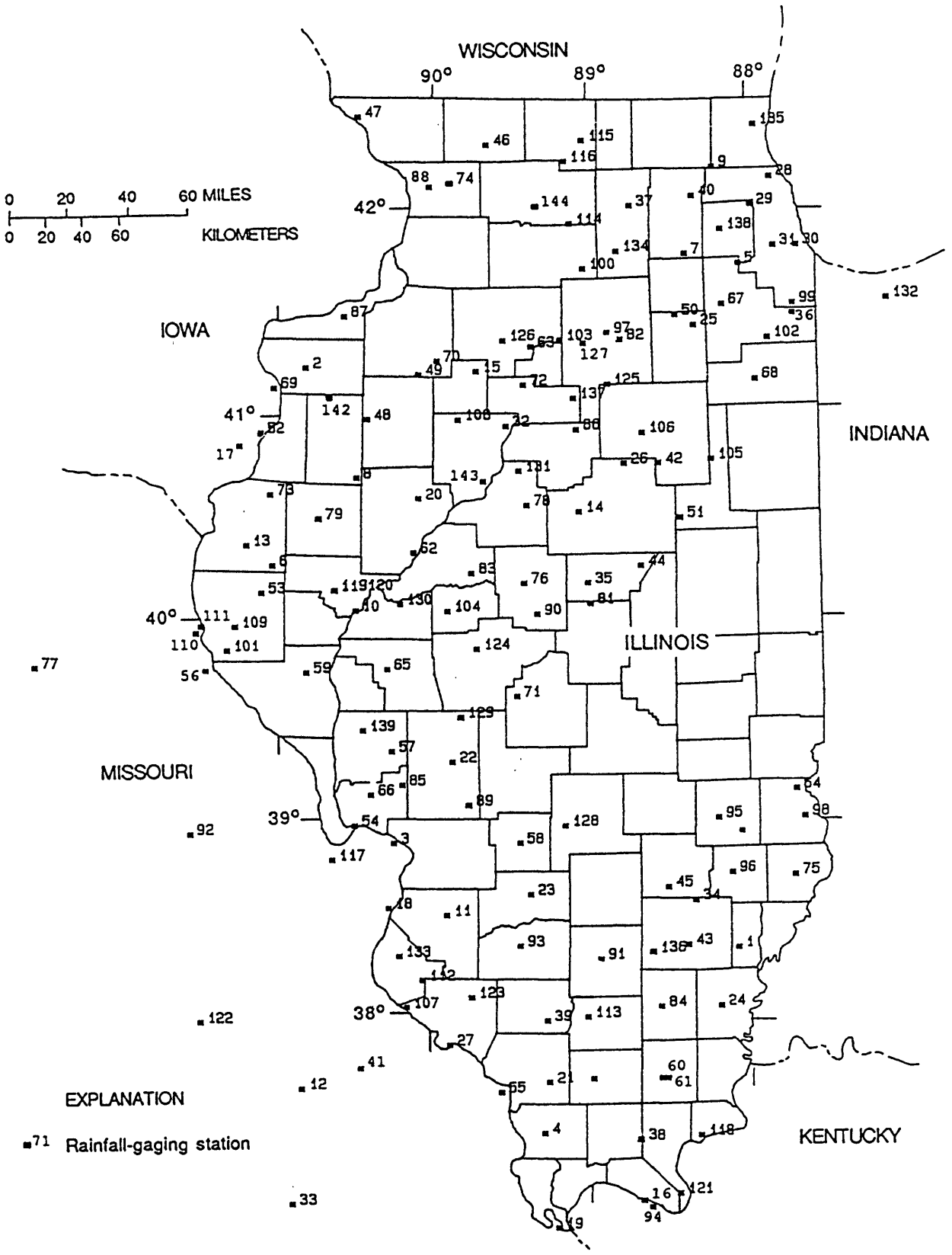
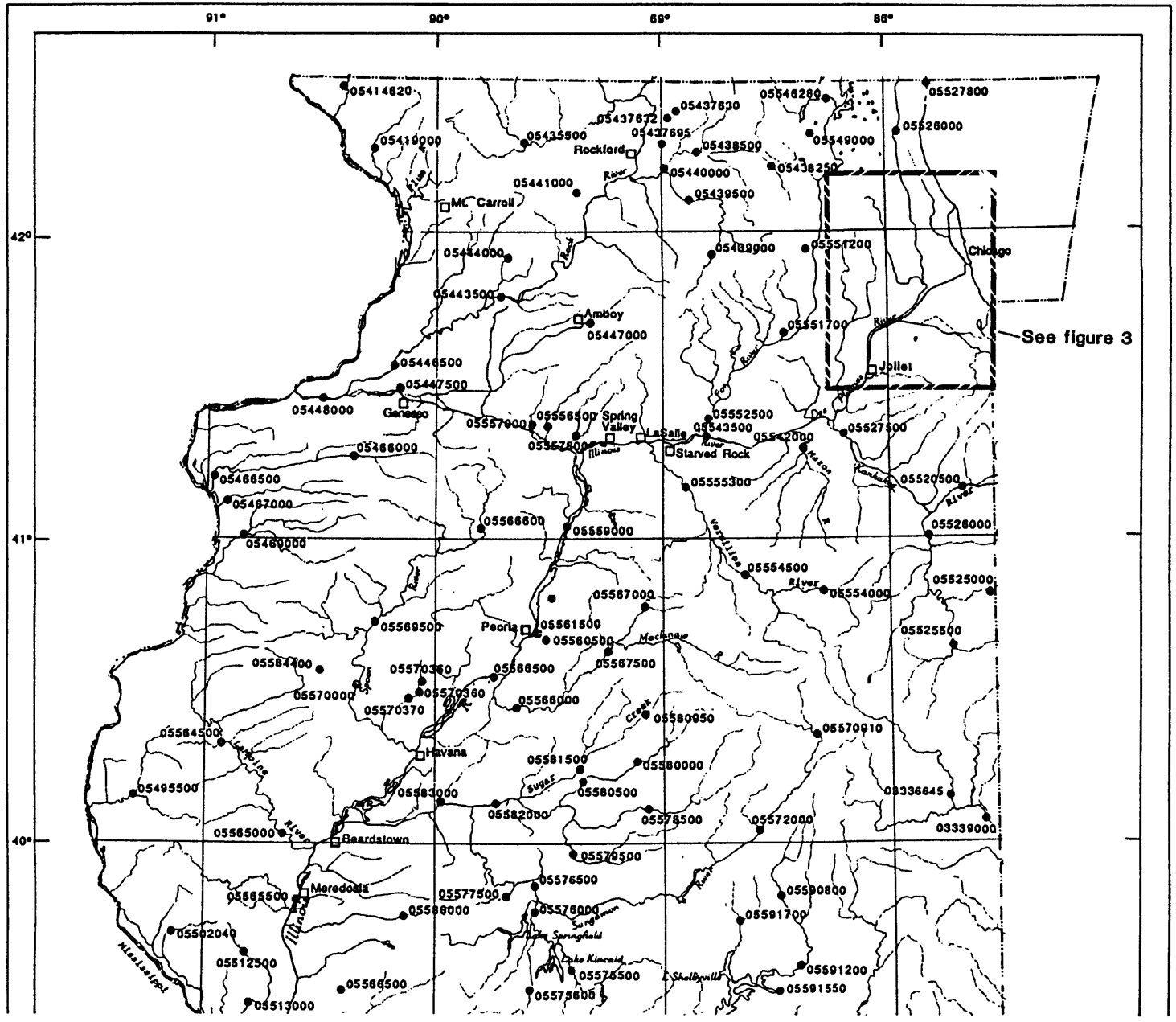


Figure 1.--Location of rainfall-gaging stations. (Numbers are referenced to tables 1 and 5 and figs. 8 and 22.)


91°
90°
89°
88°
42°
41°
40°
05414820
05419000
05435500
05437630
05437672
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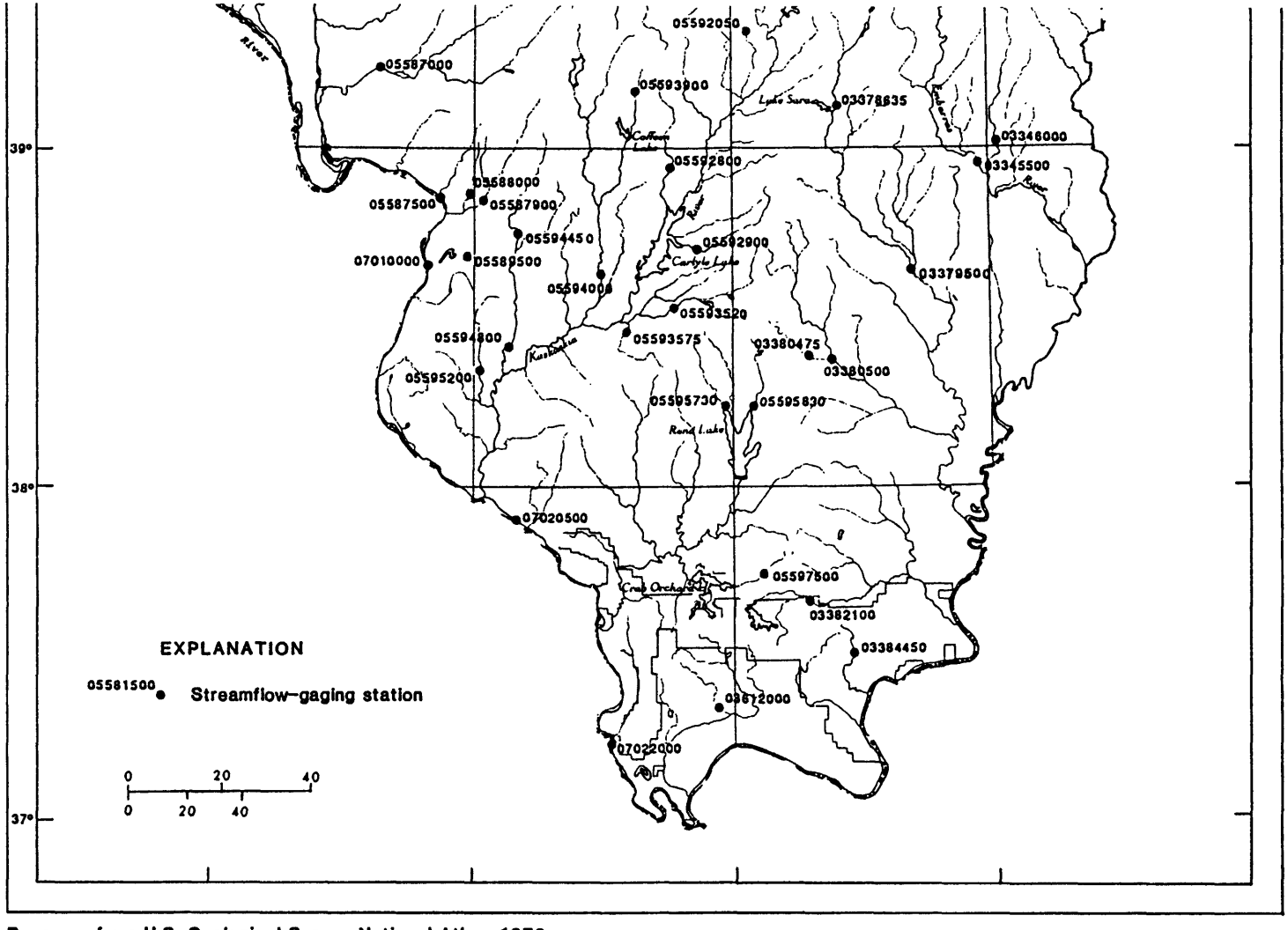
Rockford
Mt. Carroll
Amboy
Genesco
Spring Valley
LaSalle
Starved Rock
Peoria
Havana
Beardstown
Meredosia
Chicago
Joliet
See figure 3



Basemap from U.S. Geological Survey National Atlas, 1972

Figure 2.--Location and downstream-order number of streamflow-gaging stations in Illinois from which data were used in this report.

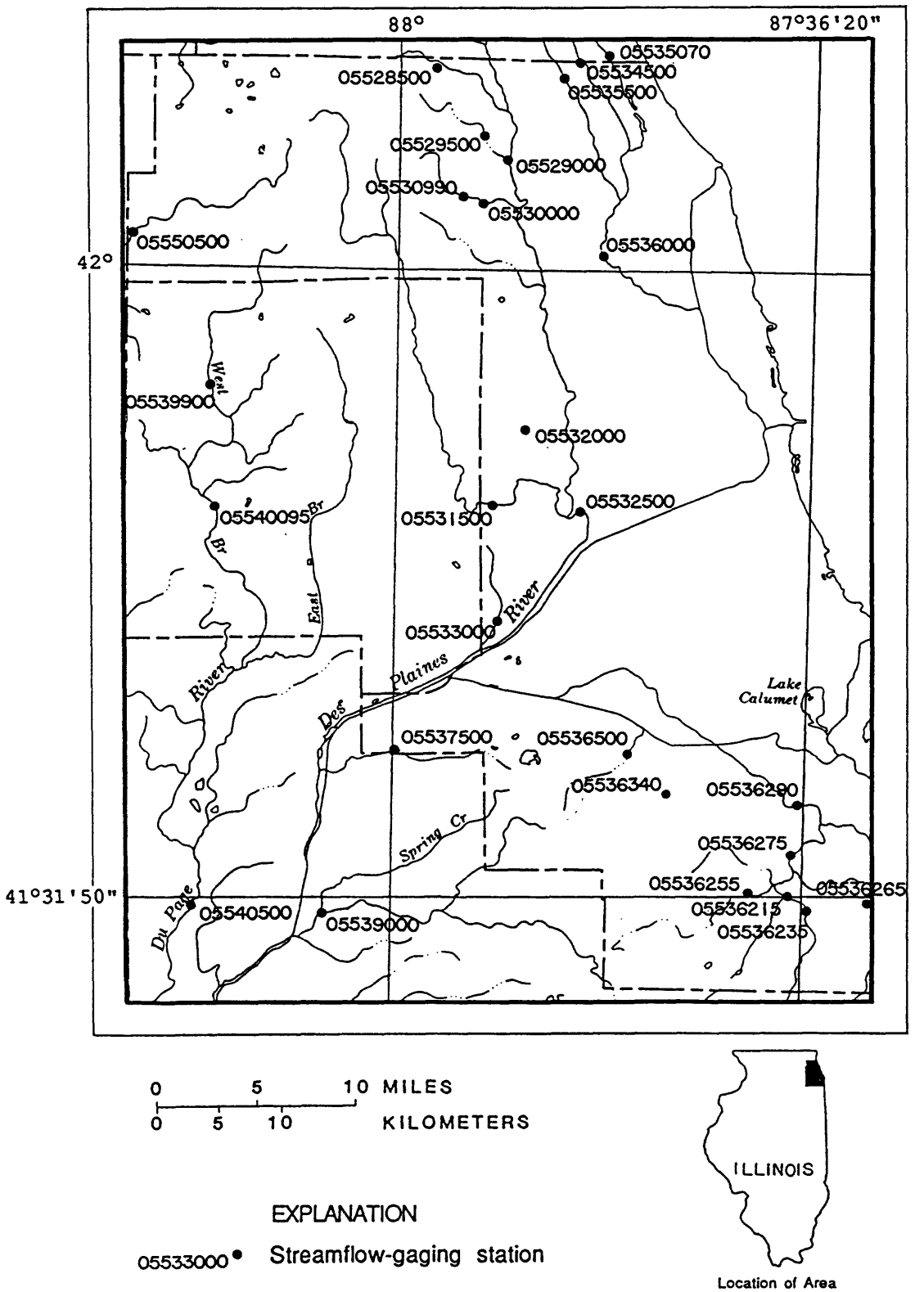


Figure 3.--Location and downstream-order number of streamflow-gaging stations in northeastern Illinois from which data were used in this report.

Record flooding occurred at Hickory Creek at Joliet (05539000); the peak discharge at this streamflow-gaging station exceeded the previous maximum discharge of 37 years of record by 1,200 ft^3/s. Almost 8 in. of rain fell in and near Joliet.

The scattered nature of the flooding is indicated by the fact that recurrence intervals of recorded peak discharges were either less than 30 years or greater than 100 years. Recurrence intervals of peak discharges at two stations in widely separated drainage basins--Green River at Amboy (05447000) in the Rock River basin and Hickory Creek at Joliet (05539000) in the Illinois River basin--were greater than 100 years.

Meteorological Setting

The surface weather map for 2400 hours, June 11, shows an east-west warm front that extends from Colorado through South Carolina, across the southern boundary of Illinois (fig. 4). Skies were overcast ahead of the front. Scattered thunderstorms that formed in the western part of the State preceding the front produced from 1 to 2 in. of rainfall. By 1200 hours, June 12, the front had advanced northward and extended from Wyoming through Virginia, across north-central Illinois (fig. 5). The dewpoint was 66°F north of the front and 70 to 75°F south of it.

The front stalled across north-central Illinois from 2400 hours, June 12, to 0600 hours, June 13. Thunderstorms were reported along and preceding the front. Rain was heaviest in the northeastern part of the State. At 0600 hours, June 13, the jetstream began moving northward from northern Illinois and the stalled front once again became a warm front moving northward. By 0900 hours, a weak cold front near the Canadian border dissipated, and the warm front moved northward out of Illinois.

Characteristics of Rainfall Distribution

Antecedent Rainfall

May 1981 was the second wettest May on record for large parts of Illinois. Northeastern Illinois received 140 percent of its normal May rainfall, which caused streamflows, lake levels, and ground-water levels to be average or above average in the area. In contrast, northwestern Illinois was in the midst of a mild 2-year drought and received only 44 percent of its normal rainfall in May.

Total rainfall for the respective 10- and 5-day periods preceding the storms of June 12-13 is shown in figures 6 and 7. Antecedent precipitation may help assess the ability of the soils to receive rainfall as infiltration. Long-term antecedent precipitation aids in the assessment of streamflows. As much as 2.25 in. of rain fell in the western part of the State during the period June 7-11, whereas 0.5 to 1.0 in. fell in areas in the northeastern part of the State that

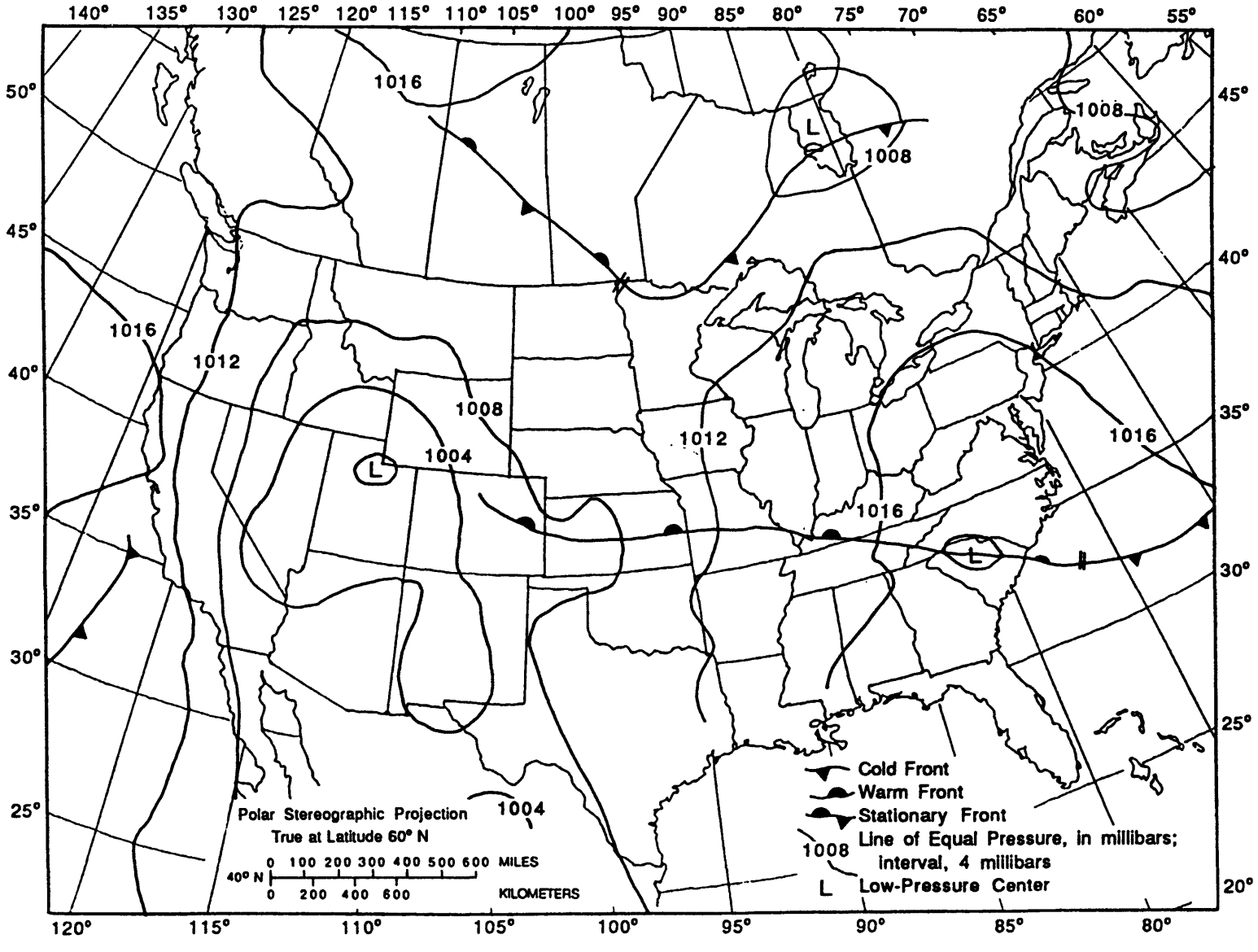


Figure 4.--Surface weather over the United States at 2400 hours, June 11, 1981. (Data from National Weather Service, Asheville, North Carolina, written commun., 1988.)

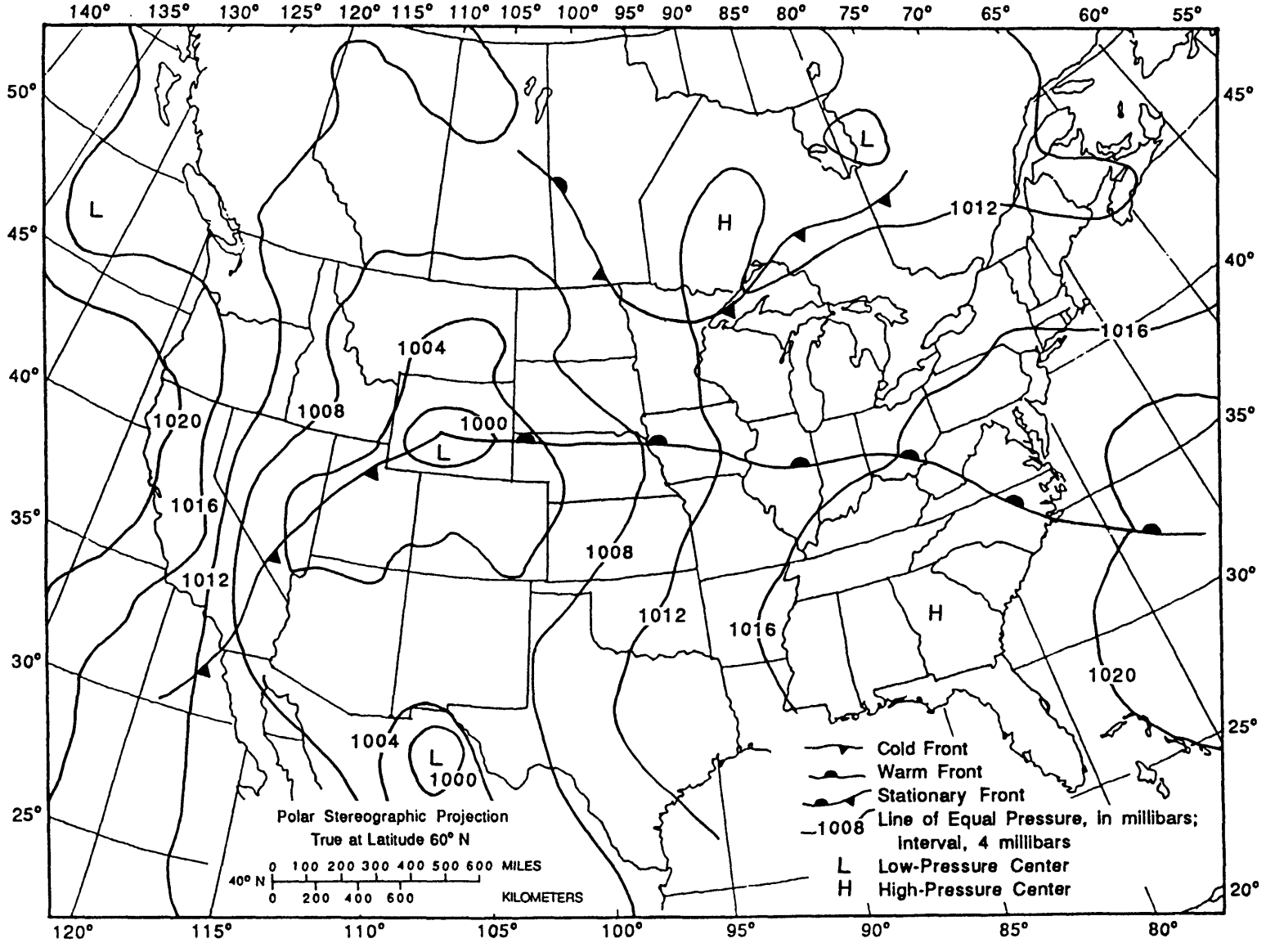


Figure 5.--Surface weather over the United States at 1200 hours, June 12, 1981. (Data from National Weather Service, Asheville, North Carolina, written commun., 1988.)

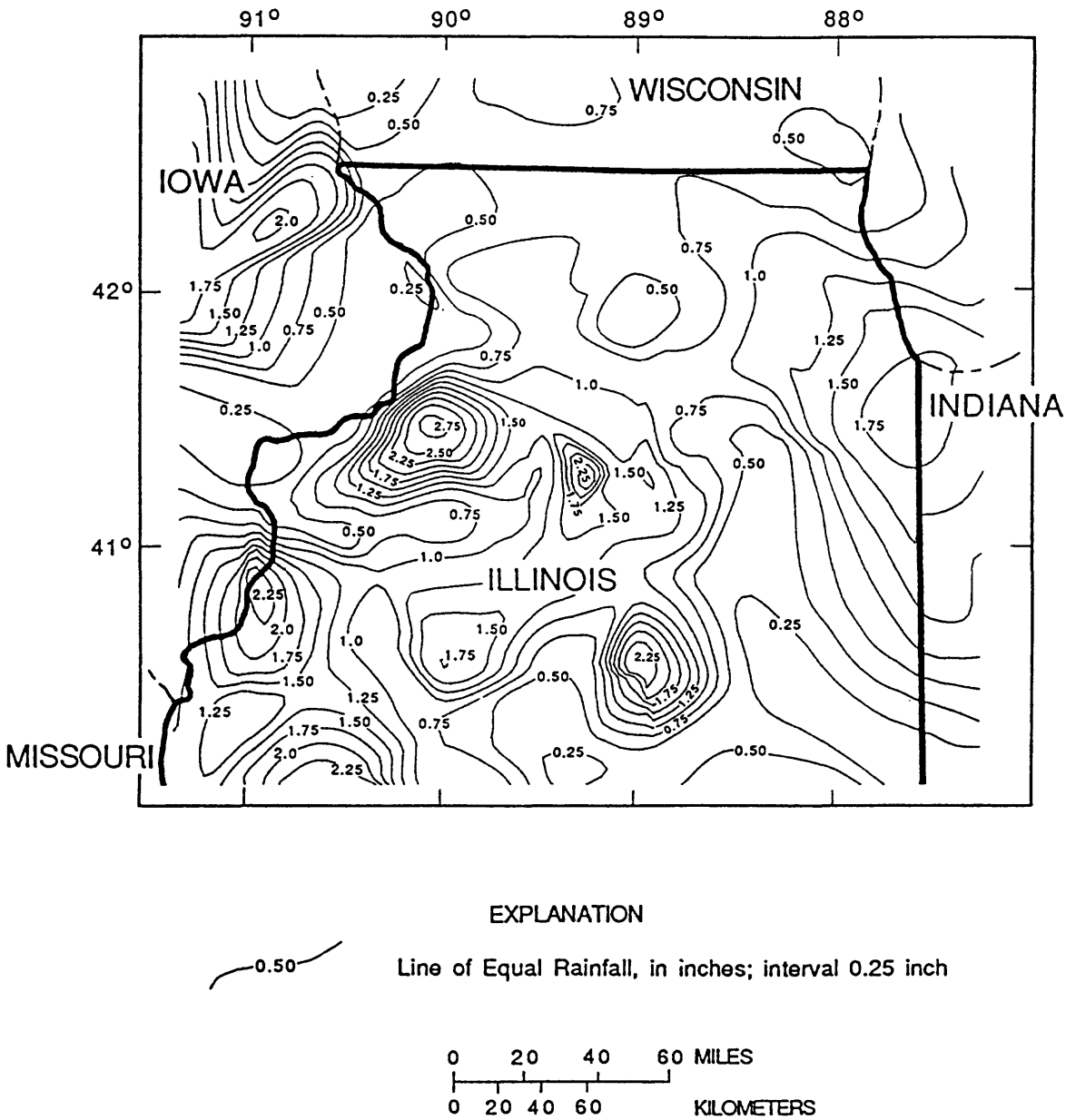


Figure 6.--Total rainfall for June 2-11, 1981. (Data from National Oceanic and Atmospheric Administration, 1981a-k, m.)

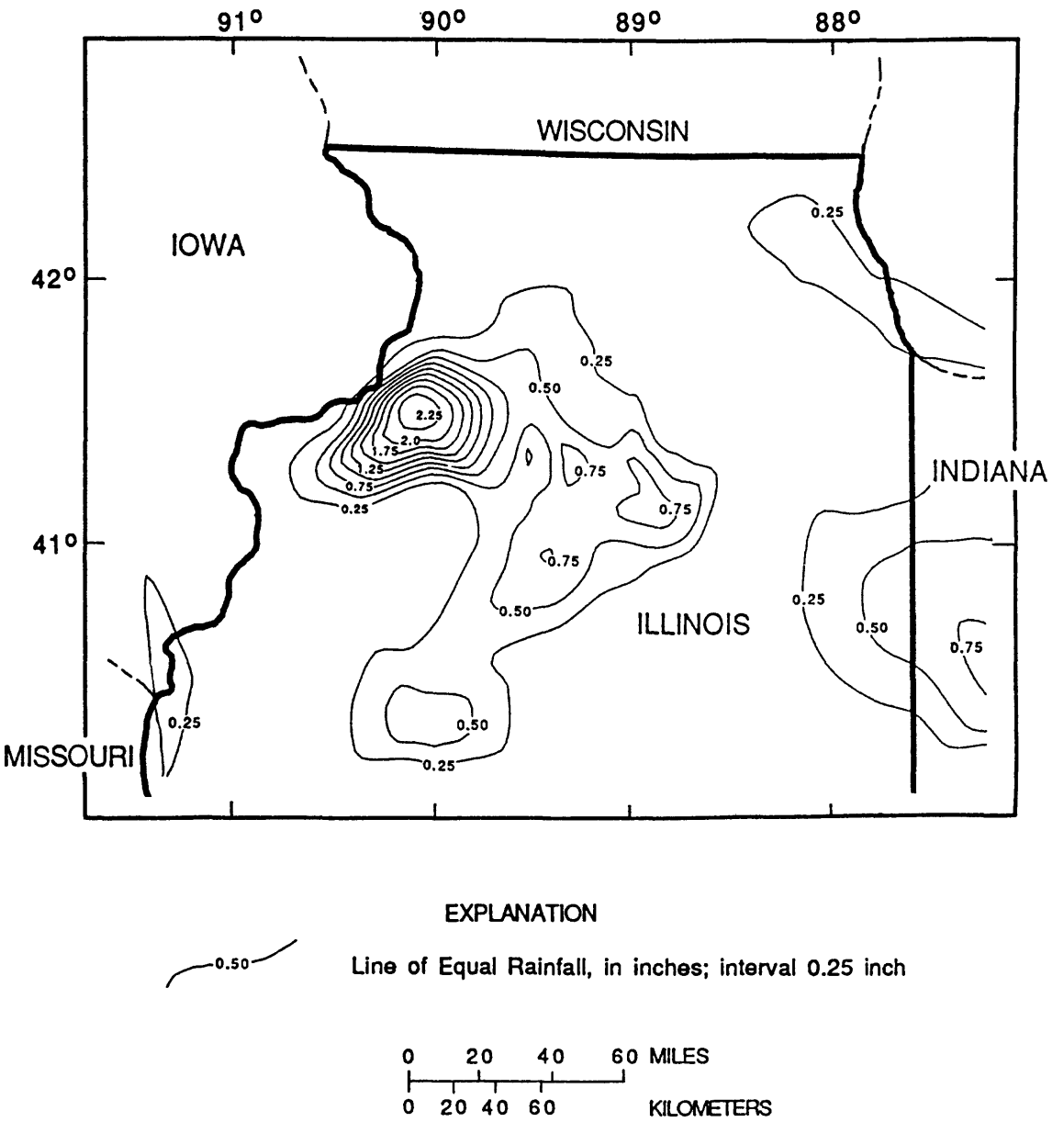


Figure 7.--Total rainfall for June 7-11, 1981. (Data from National Oceanic and Atmospheric Administration, 1981a-k, m.)

were subsequently affected by the storms of June 12-13. Consequently, immediate antecedent rainfall does not appear to have been a major factor in the floods resulting from this storm, though the streamflow resulting from record May rainfall may have been.

Temporal and Spatial Storm-Rainfall Distribution

The first showers of the storm period were concentrated in the northwestern and north-central parts of the State. Plots of cumulative rainfall (fig. 8) indicate that the early, scattered rainfall of June 12 was of low intensity. At about midnight, intense rainfall occurred in northwestern Illinois. By 0300 hours, rain was falling in the central and northeastern parts of Illinois. Rainfall in the northeast was of somewhat less intensity than in other parts of the State but was of longer duration. Rainfall in central Illinois was intense but of very short duration. Total rainfall and point-rainfall recurrence intervals for the 48-hour period of heaviest rainfall are listed for selected rainfall-gaging stations in table 1 (at back of report).

The spatial distribution of the 2-day total storm rainfall is shown in figure 9. The heaviest rains were in or near Joliet, Mount Carroll, and Geneseo. Record streamflows were measured near Joliet and Amboy, whereas flood damages were greatest in Joliet and Mount Carroll.

Description and Analyses of Floods

Flooding was most severe in the upstream tributaries of the Des Plaines and Rock Rivers. Flooding of the upstream part of the Illinois River was also significant; the discharge of 88,500 ft^3/s at Marseilles corresponds to a recurrence interval of 30 years. Farther downstream, the flow at Meredosia was not significantly affected by the storms. Other basins that were slightly affected by the storms include the Fox River, the Vermilion River, and the Kaskaskia River basins. The peak stages and discharges that were determined at gaging stations and miscellaneous sites are listed in table 2 (at back of report). The recurrence intervals of the floods were determined by the methods recommended by the Interagency Advisory Committee on Water Data, Hydrology Subcommittee (1982), and by regional relations, as reported in Curtis (1987). Recurrence intervals of the floods at the gaging stations affected by the storms are shown in figures 10 and 11.

Upper Mississippi River Basin Above the Illinois River

No streamflow data were available for Carroll Creek and the Plum River in Mount Carroll, but local reports indicated that stage and discharge were very likely at record levels. Carroll County was declared a disaster area by Governor Thompson; damages were estimated at $2.7 million, including $2.2 million in agricultural losses.

In the Rock River basin, the storm affected the flow of the Green River at Amboy (05447000), where the discharge of 7,600 ft^3/s from the drainage basin of 201 mi^2 exceeded the previous 41-year record discharge of 6,120 ft^3/s. Farther downstream, however, the flow at Geneseo (05447500) (drainage area, 1,003 mi^2) did not exceed the 2-year recurrence interval. In spite of the record discharge at Amboy, damage was of limited extent because of the rural nature of the area.

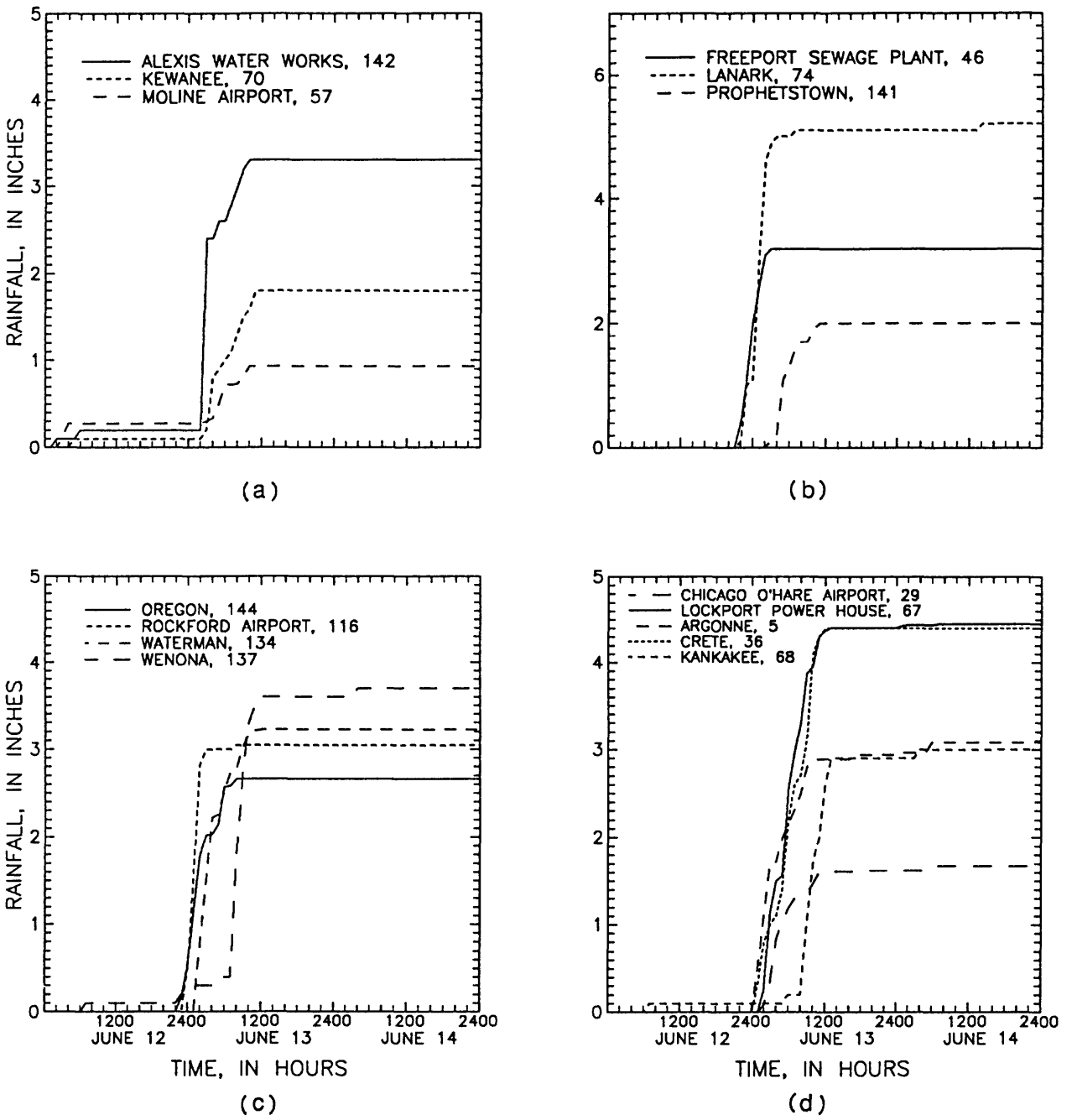
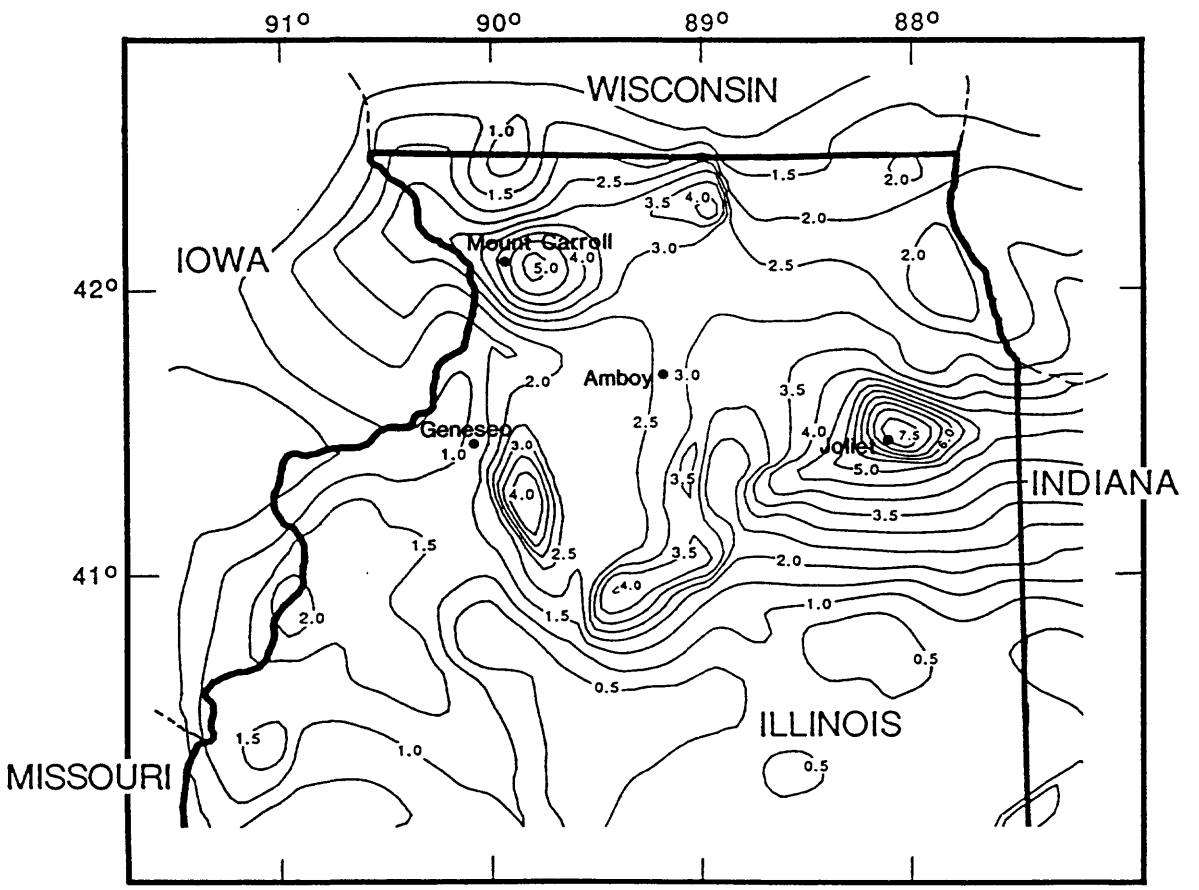


Figure 8.--Cumulative precipitation at hourly rainfall-gaging stations in (a) and (b) northwestern, (c) north-central, and (d) north-eastern Illinois, June 12-14, 1981. (Numbers refer to sites in fig. 1. Data for Lockport Powerhouse from Metropolitan Water Reclamation District of Greater Chicago, written commun., 1988. All other data from National Oceanic and Atmospheric Administration, 1981a-k, m.)



EXPLANATION

0.5 Line of Equal Rainfall, in Inches; interval 0.5 inch

0 20 40 60 MILES

0 20 40 60 KILOMETERS

Figure 9.--Total storm rainfall for June 12-13, 1981. (Data from National Oceanic and Atmospheric Administration, 1981a-k, m.)

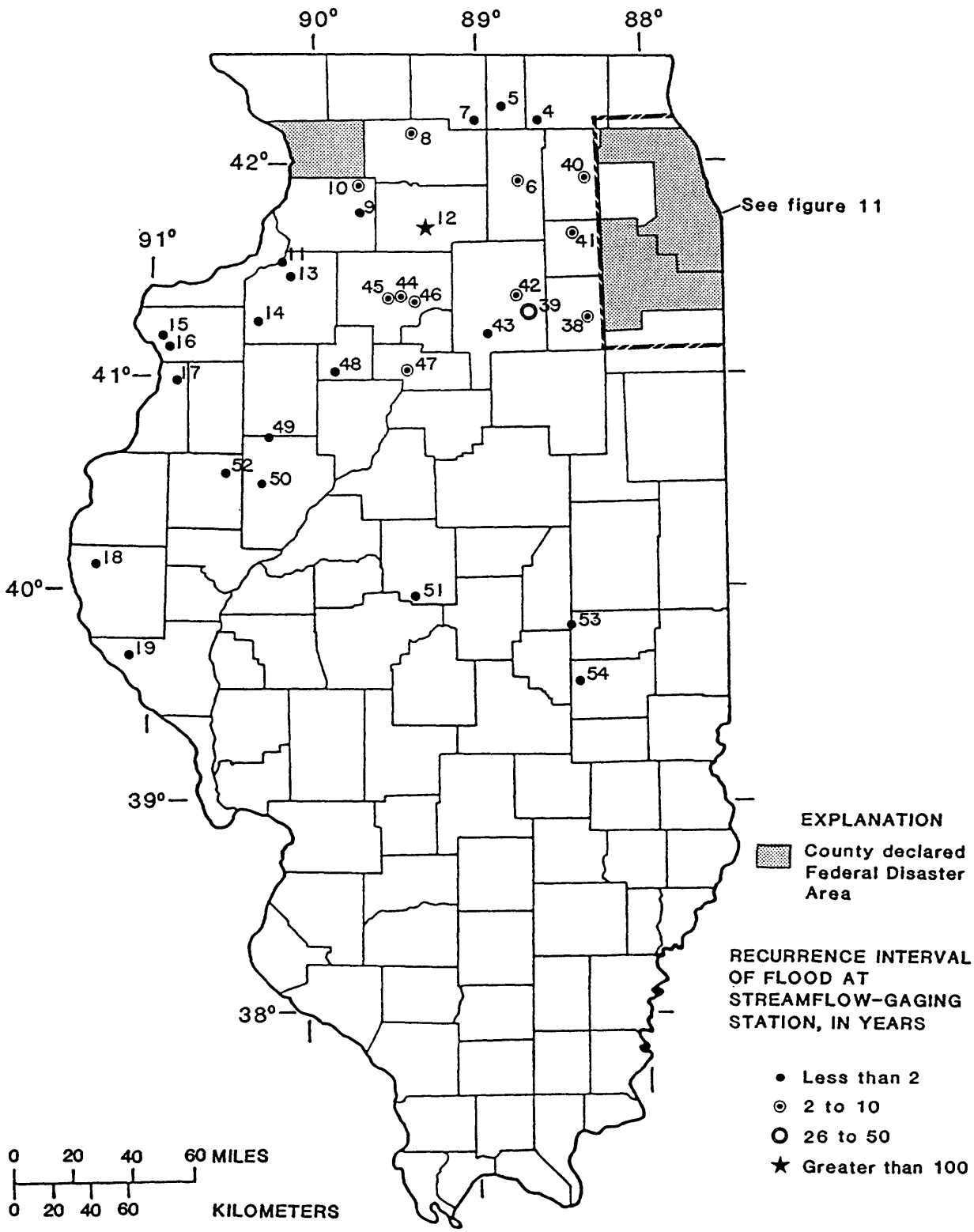


Figure 10.--Recurrence intervals for the floods of June 13-14, 1981, at selected streamflow-gaging stations and counties designated as disaster areas by the Federal government. (Numbers are referenced to table 2.)

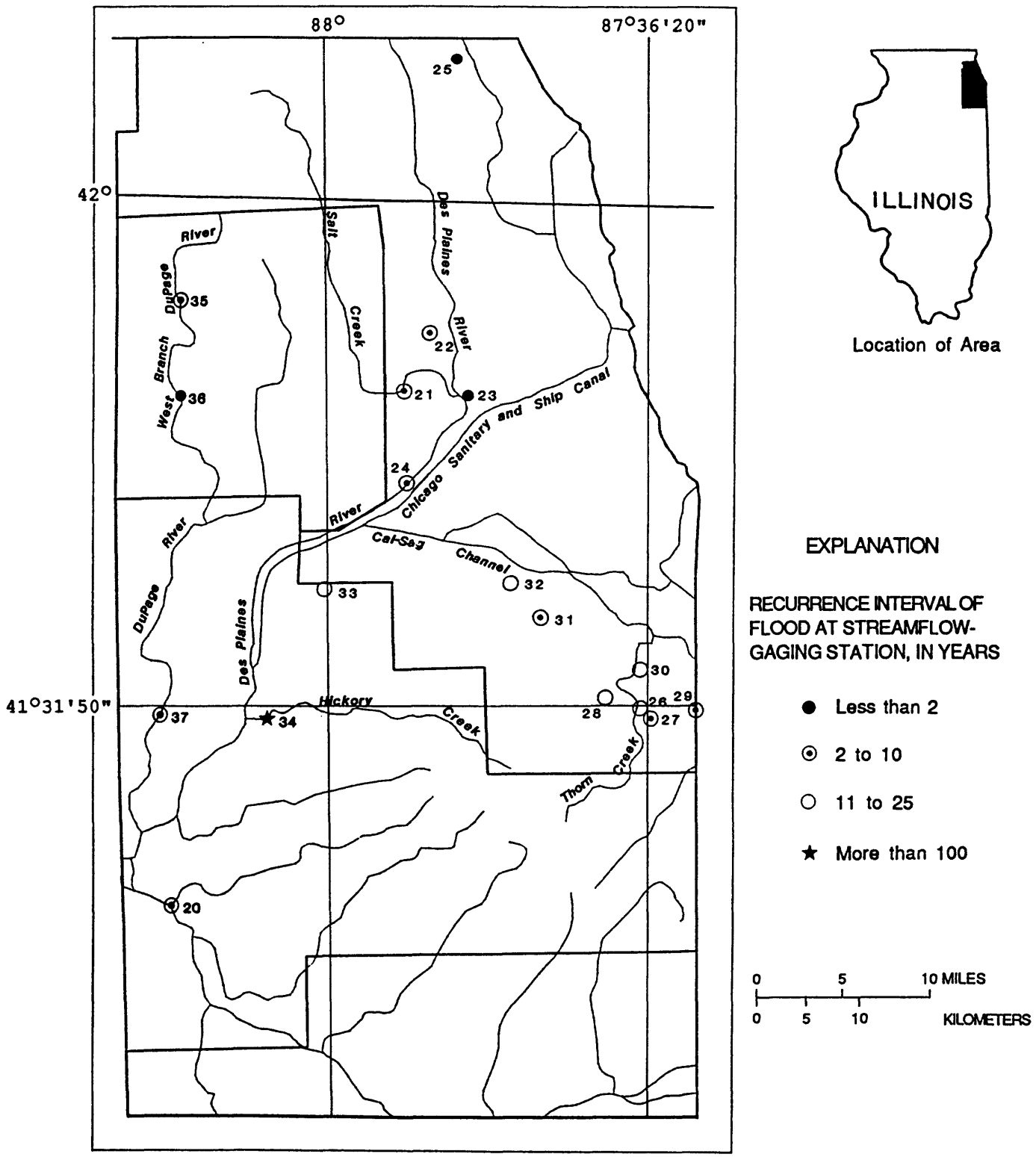


Figure 11.--Recurrence intervals for the floods of June 13-14, 1981, at selected streamflow-gaging stations in northeastern Illinois. (Numbers are referenced to table 2.)

Spot flooding occurred throughout Rockford, especially along Spring Creek. Dry dams in parks on Rockford's east and west sides retained sufficient water to prevent flood damage in those areas. Rainfall at the Rockford Airport was intense but of very short duration. In Dixon, damage was mostly confined to agricultural losses and to the White Pines State Park.

Illinois River Basin

The creeks in the western suburbs of Chicago--tributaries of the Des Plaines River--were the most upstream tributaries of the Illinois River to be affected by the storm system. The Des Plaines River at Riverside (05532500) rose substantially. Below Riverside, Thorn Creek, Deer Creek, and Butterfield Creek had discharges with 10- to 25-year recurrence intervals. Although the discharges did not exceed the previous recorded maximums, they were the highest since the storm of July 12-13, 1957, at the gaging stations for Thorn Creek at Thornton (05536275) and Butterfield Creek at Flossmoor (05536255). The stage of Thorn Creek at Thornton reached a record of 17.06 ft. Station data and flood elevations for Thorn Creek at Glenwood (05536215), Deer Creek near Chicago Heights (05536235), Butterfield Creek at Flossmoor (05536255), Thorn Creek at Thornton (05536275), and Hickory Creek at Joliet (05539000) are listed in table 3 (at back of report).

Flood elevations along these four streams in the Des Plaines River basin are listed in table 4 (at back of report). These were obtained by leveling to high-water marks set shortly after--or in some cases, during--the flooding (Illinois Department of Transportation, written commun., 1988). Information for comparison with the floods of July 1957 is given in Allen and Wyerman (1964) and U.S. Geological Survey (1960).

The most severe flooding in the Des Plaines River basin was at Joliet. The record discharge at Hickory Creek at Joliet (05539000) had a recurrence interval greater than 100 years. The previous record, 15,200 ft^3/s, occurred during the July 13, 1957, storm at a gage height of 13.77 ft. An estimated discharge of 16,700 ft^3/s in 1902 was exceeded by 600 ft^3/s during the 1981 storm (table 2). Flood elevations on Hickory Creek for the 1981 storm are listed in table 3. Although the gage height at the station in Joliet (05539000) exceeded that of the 1957 storm by more than 1 ft, the flood profile does not appear to have been appreciably higher farther upstream. (See Allen and Wyerman, 1964.) Photographs of the flooding in Joliet are shown in figures 12 and 13.

The Illinois River was flooded from the junction of the Kankakee River and the Des Plaines River downstream to Henry. The peak discharge at the streamflow-gaging station on the Illinois River at Marseilles (05543500), 88,500 ft^3/s, has a 30-year recurrence interval. The river was above flood stage on June 14 at La Salle and Henry and on June 15 at Spring Valley. The river stage peaked for the year on June 14 at Marseilles; on June 15 at Starved Rock, La Salle, and Spring Valley; and on June 17 at Henry.

The Kankakee River basin was not greatly affected by the storms. Most of the flooding along the Illinois River was due to discharge from the other two-thirds of the basin--the Des Plaines River basin from Riverside south, and the

Figure 12.--Hickory Creek at the Miller Avenue bridge in Joliet, Illinois, June 15, 1981. (Joliet Herald-News photograph.)

Figure 13.--Flooding at the intersection of Chicago Street and Doris Avenue, Joliet, Illinois, June 13, 1981. (Joliet Herald-News photograph.)

Fox River, Mazon River, and Vermilion River basins. Discharge hydrographs for the Illinois River at Marseilles and six upstream tributaries are shown in figure 14. Discharge hydrographs for other selected streams are shown in figure 15.

FLOODS OF DECEMBER 2-12, 1982

The floods of early December 1982 were the result of a long period of rainfall in November and early December. No snowmelt was associated with the floods; the record high temperatures and frequent thundershowers during the first week of December resembled spring weather. November was the wettest November on record for the northern half of the State, which received double the usual precipitation for the month. The stream stages had been rising for some time prior to the crests during the first week of December. Flooding was most severe along small streams in northeastern Illinois and along large rivers in central and southern Illinois. Peak discharges at 5 streamflow-gaging stations had recurrence intervals exceeding 100 years; overall, record peak discharges occurred at 17 stations. The distribution of affected streams was statewide, although floods with the greatest recurrence intervals were primarily on streams tributary to the Wabash and the Illinois Rivers.

Nonagricultural damages due to the flooding were estimated at $32 million statewide by the State of Illinois Emergency Services and Disaster Agency. Total damages were estimated to exceed $100 million. The early December flooding contributed to later flooding after additional precipitation on December 24 and 25. The areal extent of the storms and flooding encompassed the upper Mississippi River valley, including Missouri and Arkansas (Stone and Bingham, 1991).

Meteorological Setting

During the first week of December 1982, a series of warm and cold fronts passed through Illinois and created persistent rain and thundershowers. The fronts were related to deep low pressure in the southwestern States and a high-pressure system over the Atlantic Ocean that prevented the fronts from moving out and dissipating eastward. Throughout the duration of the storm, moisture from the Gulf of Mexico was pumped into the Mississippi River valley region by the counter-clockwise movement of air masses around the lows and clockwise movement around the highs. The low-level winds blew directly from the Gulf until 1800 hours on December 5, at which time the temperature, relative humidity, and freezing level dropped precipitously, signaling the end of the storm.

On November 29 at 0900 hours, a warm front that formed in the Gulf of Mexico began moving northward. Temperatures in Illinois rose steadily from between 40 and 50°F to between 60 and 70°F by the time the front reached Illinois at about 0300 hours on December 1. Rain showers, drizzle, and fog occurred across the State.

On December 2, a cold front preceded by severe thunderstorms and heavy rains advanced eastward. The front stalled at the Mississippi River valley at about 1200 hours on December 2 (fig. 16) and caused heavy rains on the eastern

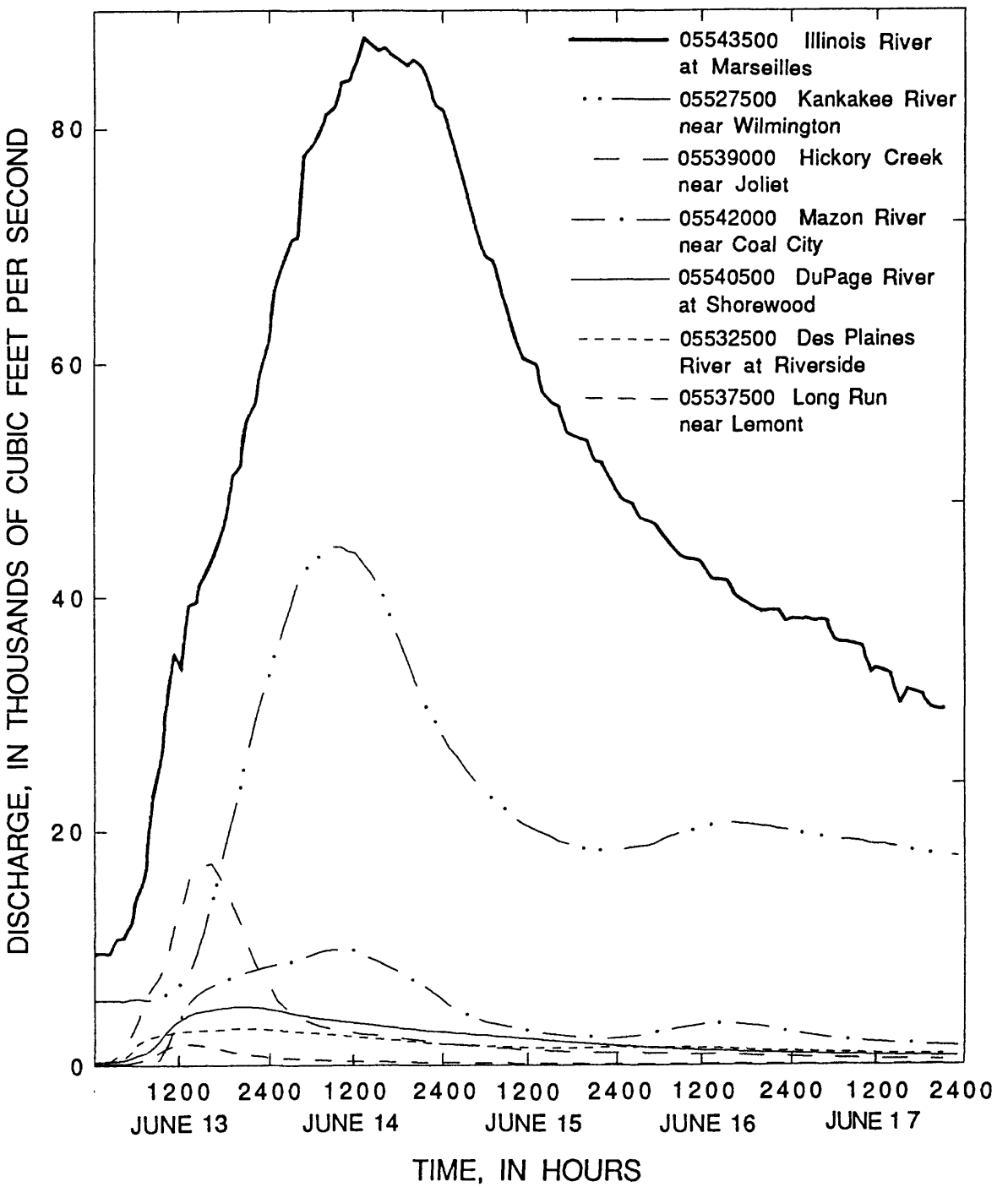


Figure 14.--Discharge hydrographs for the Illinois River and six tributaries, June 13-17, 1981. (Numbers are downstream-order numbers.)

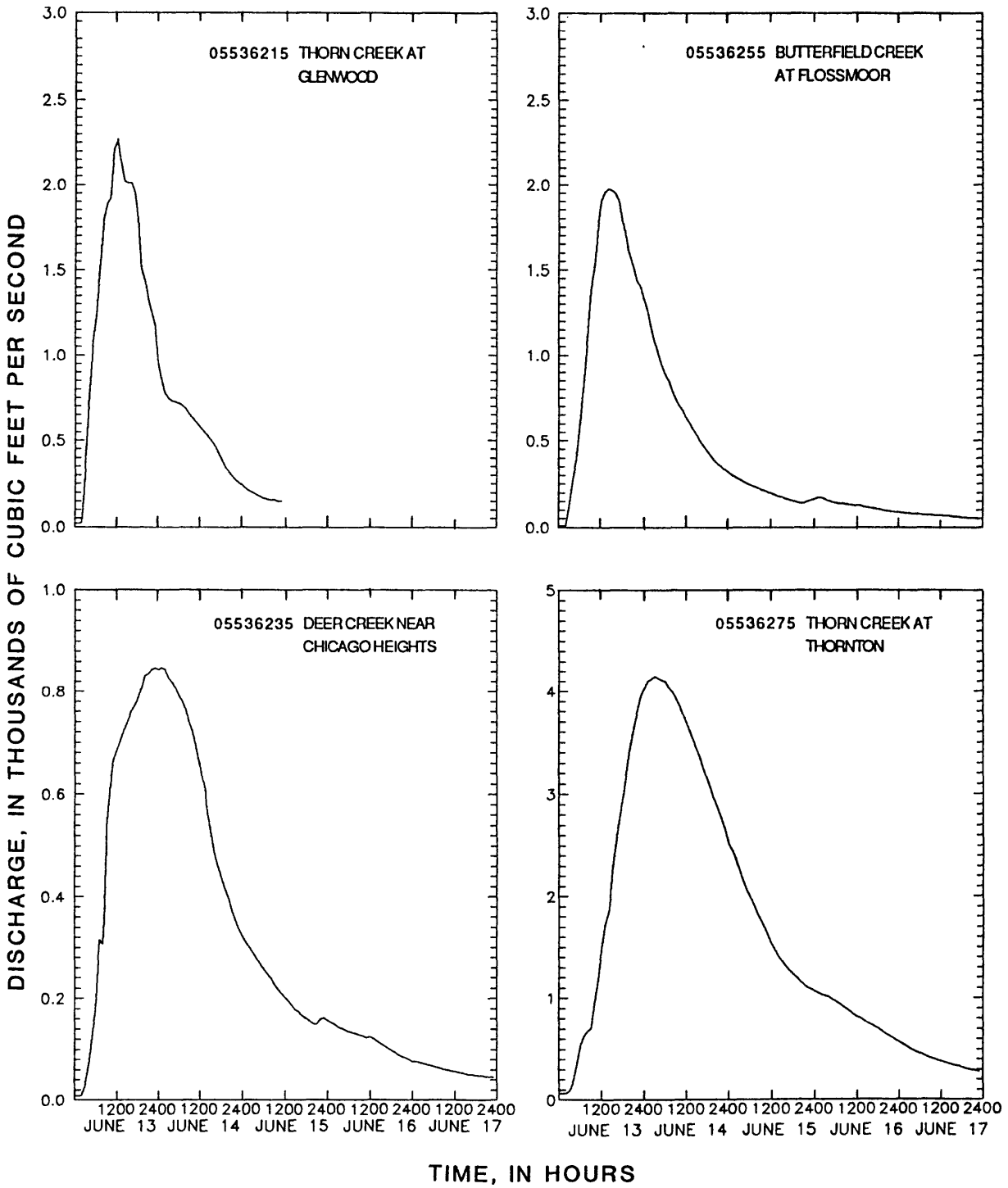


Figure 15.--Discharge hydrographs for selected tributaries of the Des Plaines River, June 13-17, 1981. (Numbers are downstream-order numbers.)

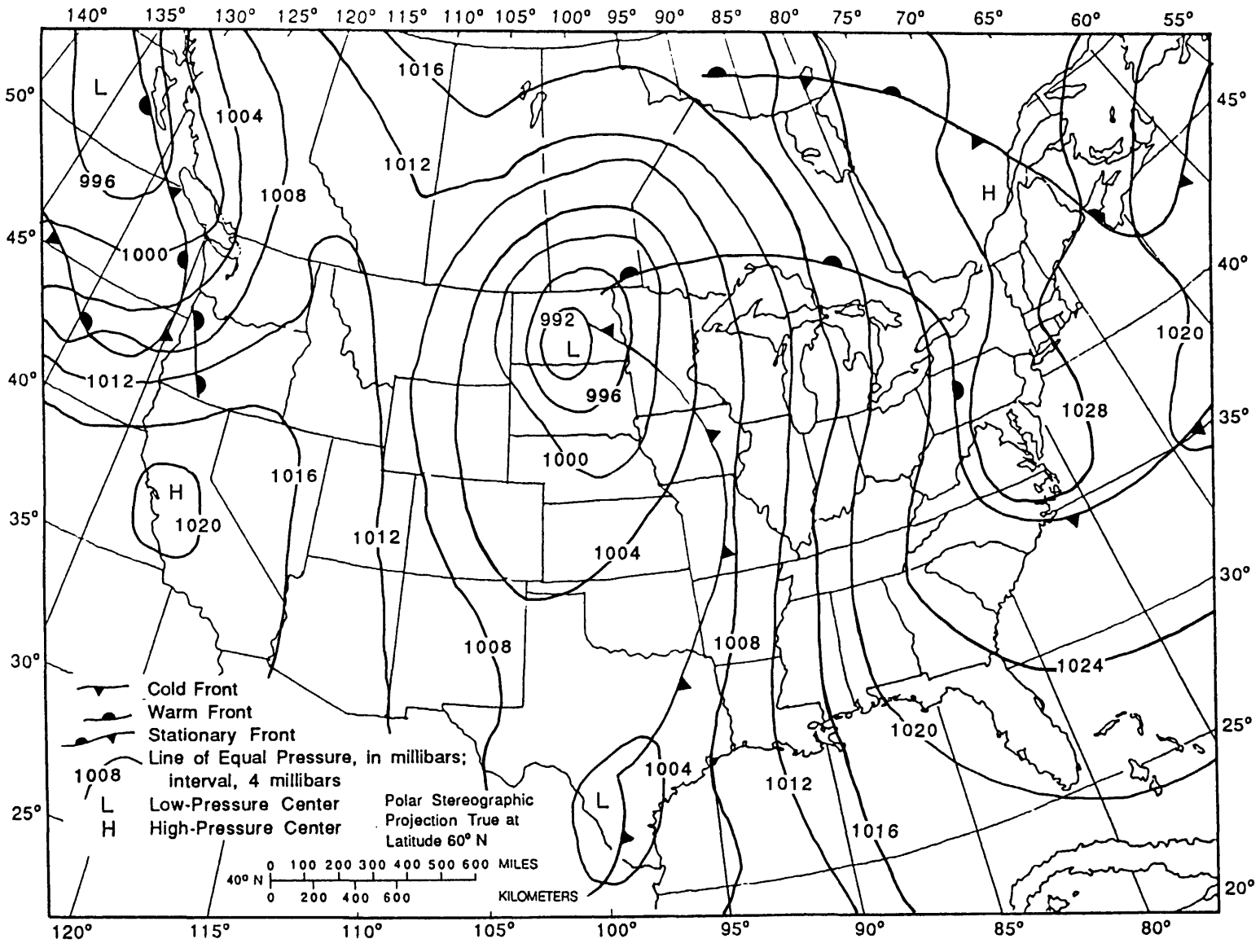


Figure 16.--Surface weather over the United States at 1200 hours, December 2, 1982. (Data from National Weather Service, Asheville, North Carolina, written commun., 1988.)

side of the river. From 1800 hours on December 2 to 0600 hours on December 3, the temperature was between 58 and 62°F, the relative humidity was 80 to 90 percent, and the freezing level was 10,000 to 12,800 feet across the State. These conditions are typical of a heavy late-spring storm rather than a winter storm. The heaviest 24-hour rainfall of the early December storm fell from about 1600 hours on December 2 to 1500 hours on December 3.

On December 3, the northern part of the front crossed into northeastern Illinois while the rest of the front remained to the west of the Mississippi River below the Illinois River (fig. 17). Temperatures had climbed as high as the low 70's (°F) across the State. Temperatures dropped and rain diminished during the afternoon of December 3 as the cold front moved into and finally through Illinois. At 1800 hours on December 3, the eastern warm-air mass in Illinois began to move west in a counter-clockwise rotation. Rainfall decreased dramatically behind the warm front. As the warm front moved north, rain began to fall again ahead of it. The precipitation consisted of light and steady rainfall. The location of the front at 2100 hours on December 4 is shown in figure 18.

At 1200 hours on December 5, rains were scattered and light throughout Illinois. A high-pressure system that had developed over the southwestern United States moved north, covered the eastern midwestern States by the evening of December 6, and brought clear skies and freezing temperatures to the region.

Characteristics of Rainfall Distribution

Antecedent Rainfall

November 1982 was the wettest November on record for parts of northern Illinois, including the Chicago area. The northern half of the State received double the normal amount of rainfall, which caused saturated soils; however, rivers remained below flood stage throughout the State. Total rainfall for the 10- and 5-day periods preceding the storms of December 2-3 is shown in figures 19 and 20.

Temporal and Spatial Storm Rainfall Distribution

Rain began falling across the northern part of the State early in the morning of December 2. The rain began in western Illinois and spread to the central and eastern parts of the State. By the afternoon of December 2, the southwestern and south-central parts of the State also were receiving rain. Rainfall was heaviest southeast of the Illinois River; this heavy rain correlates with record floods for the streams entering the Illinois River from the southeast (the Mazon, Vermilion, and Mackinaw Rivers, and Spring, Kickapoo, and Sugar Creeks). The cumulative-rainfall plots in figures 21 and 22 show the abrupt and intense temporal distribution of rainfall preceding a cold front.

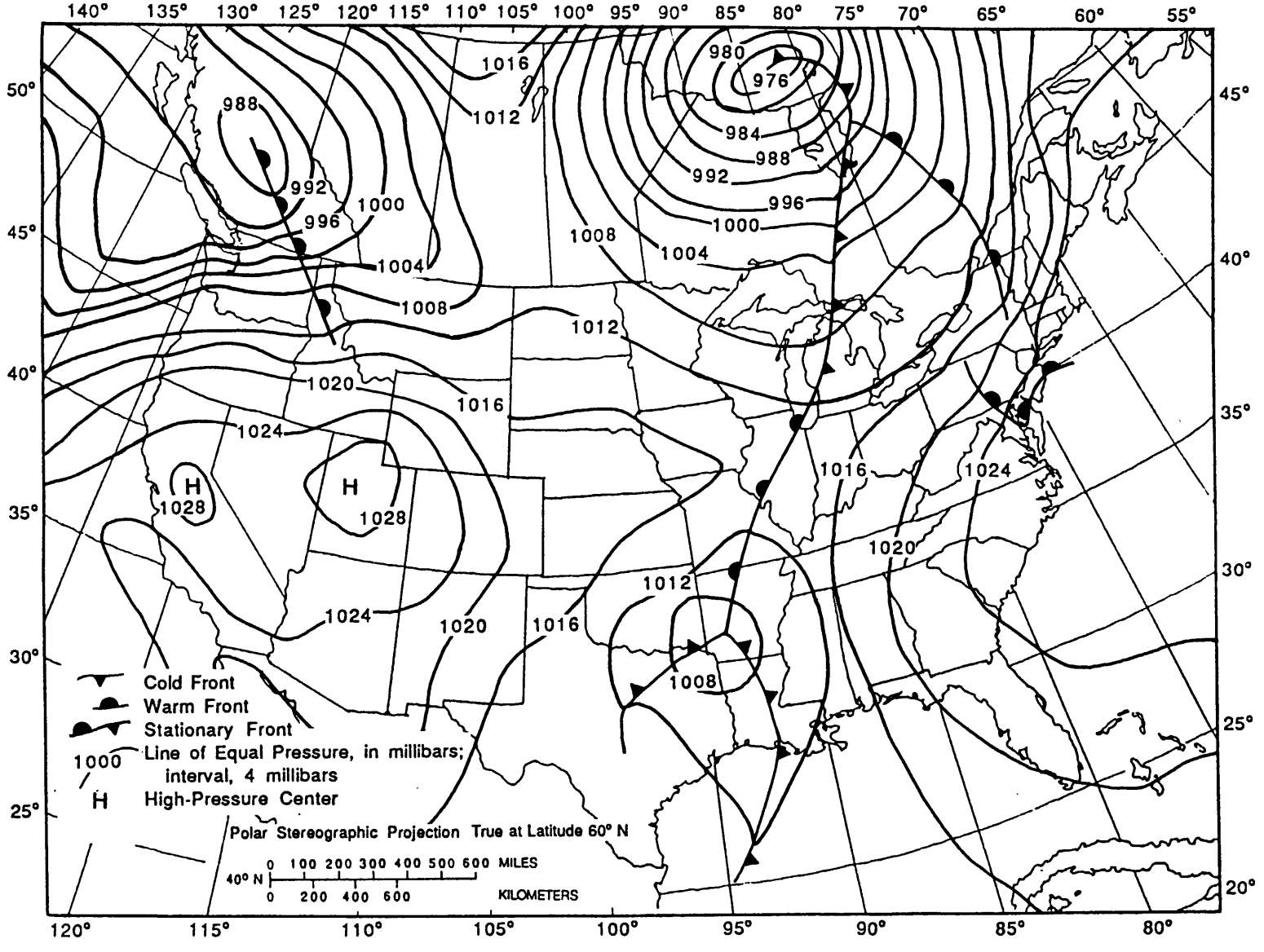


Figure 17.--Surface weather over the United States at 1200 hours, December 3, 1982. (Data from National Weather Service, Asheville, North Carolina, written commun., 1988.)

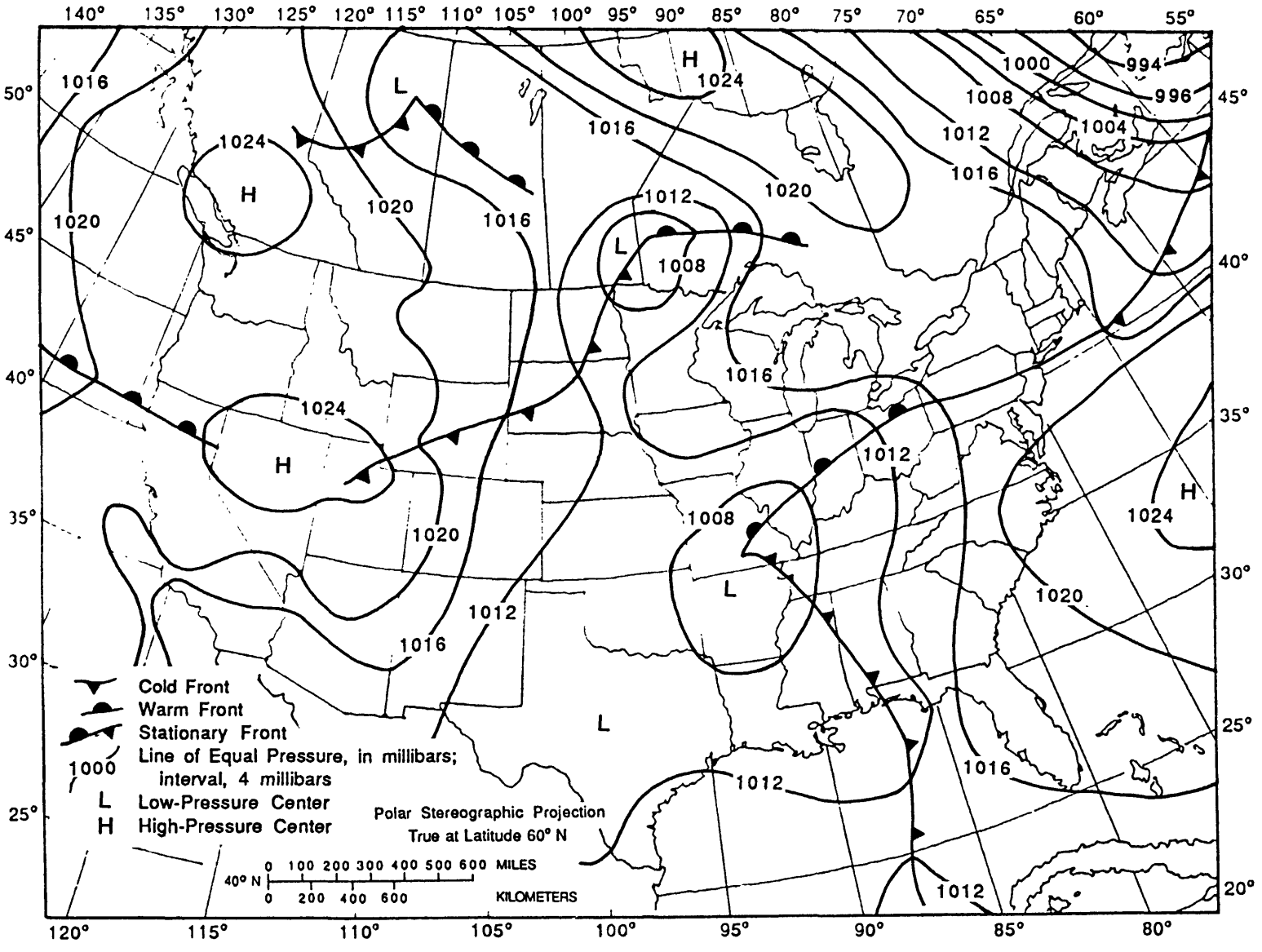


Figure 18.--Surface weather over the United States at 2100 hours, December 4, 1982. (Data from National Weather Service, Asheville, North Carolina, written commun., 1988.)

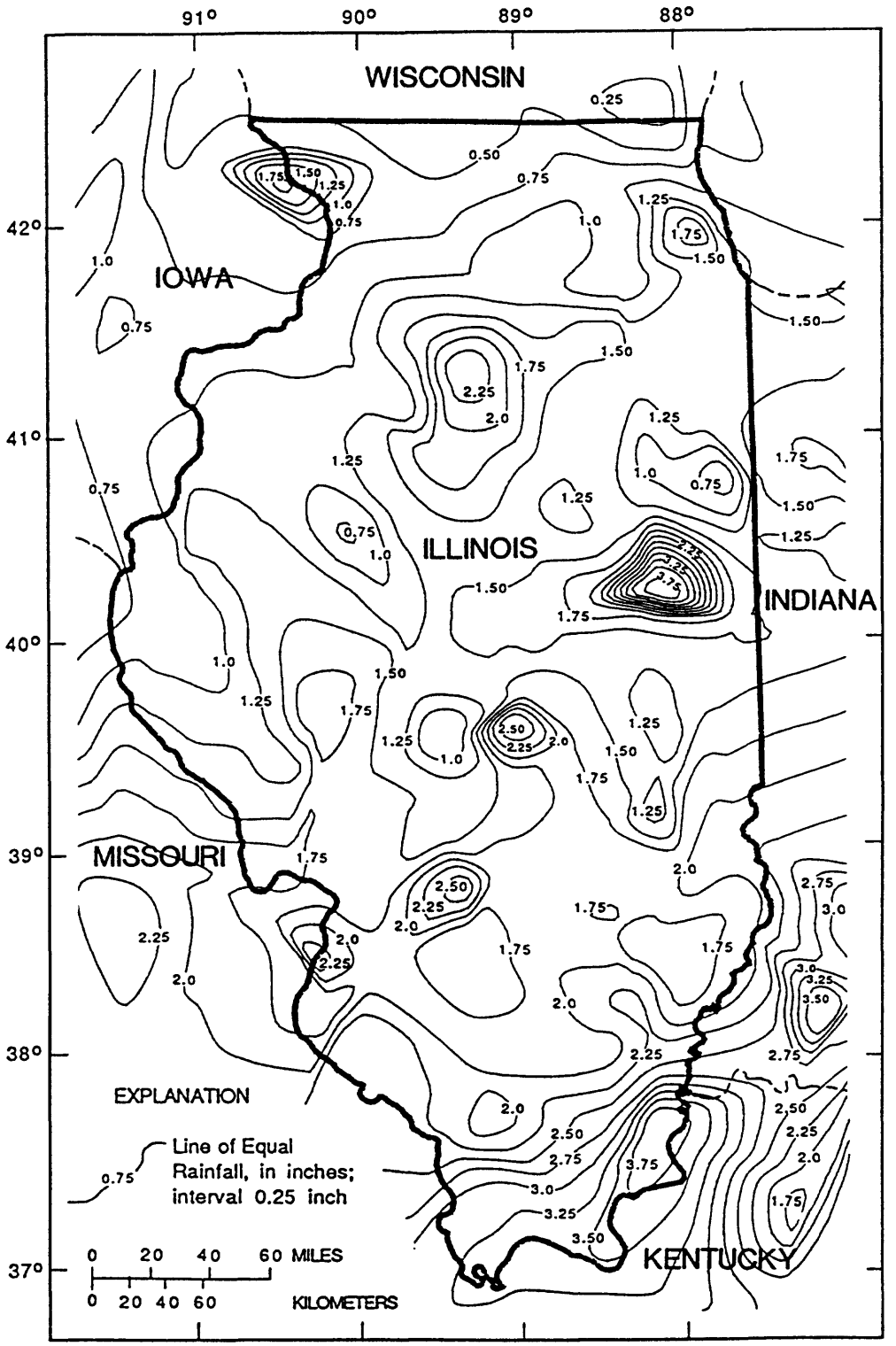


Figure 19.--Total rainfall for November 22 through December 1, 1982. (Data from National Oceanic and Atmospheric Administration, 1982a-k, m.)

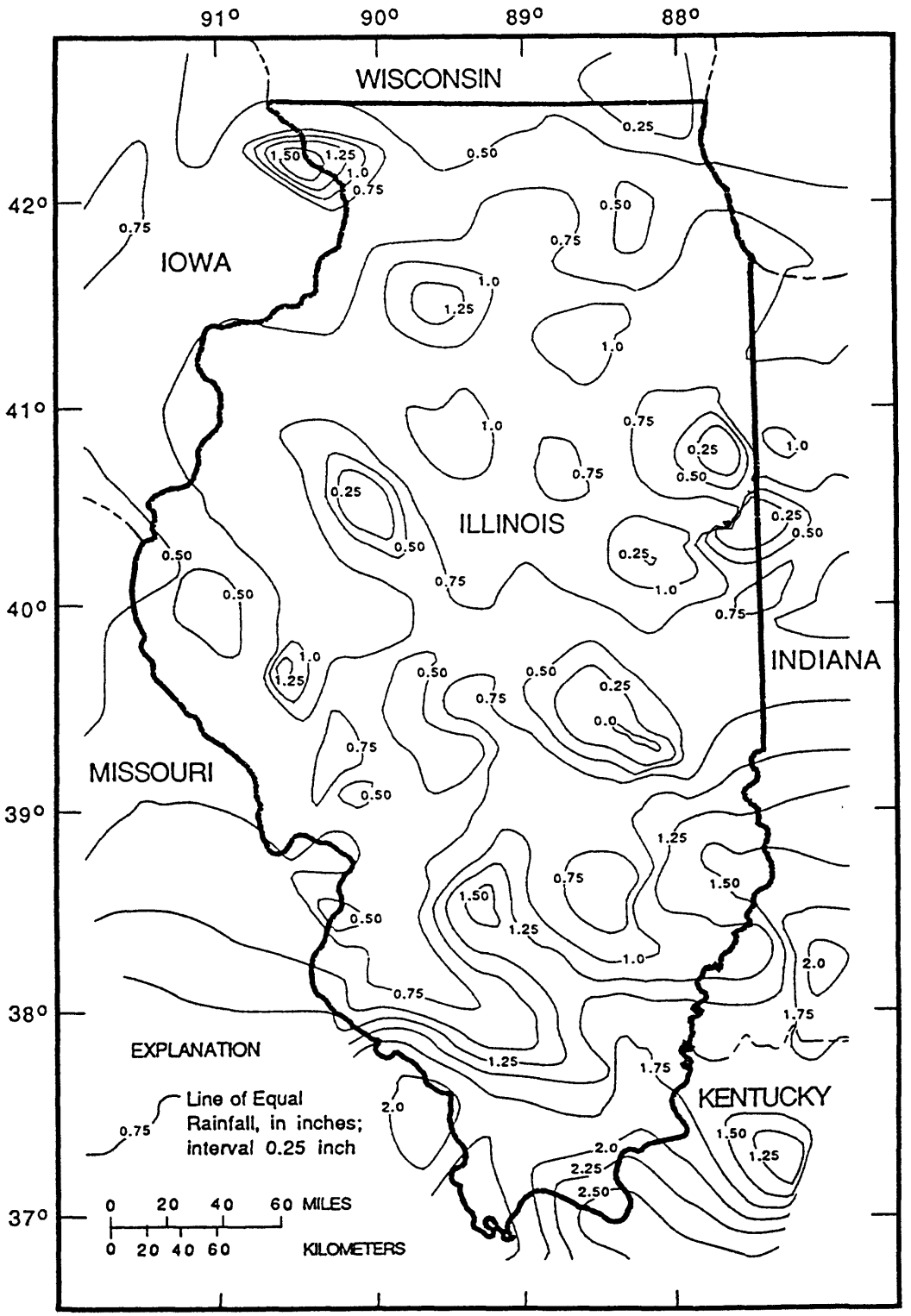


Figure 20.--Total rainfall for November 27 through December 1, 1982. (Data from National Oceanic and Atmospheric Administration, 1982a-k, m.)

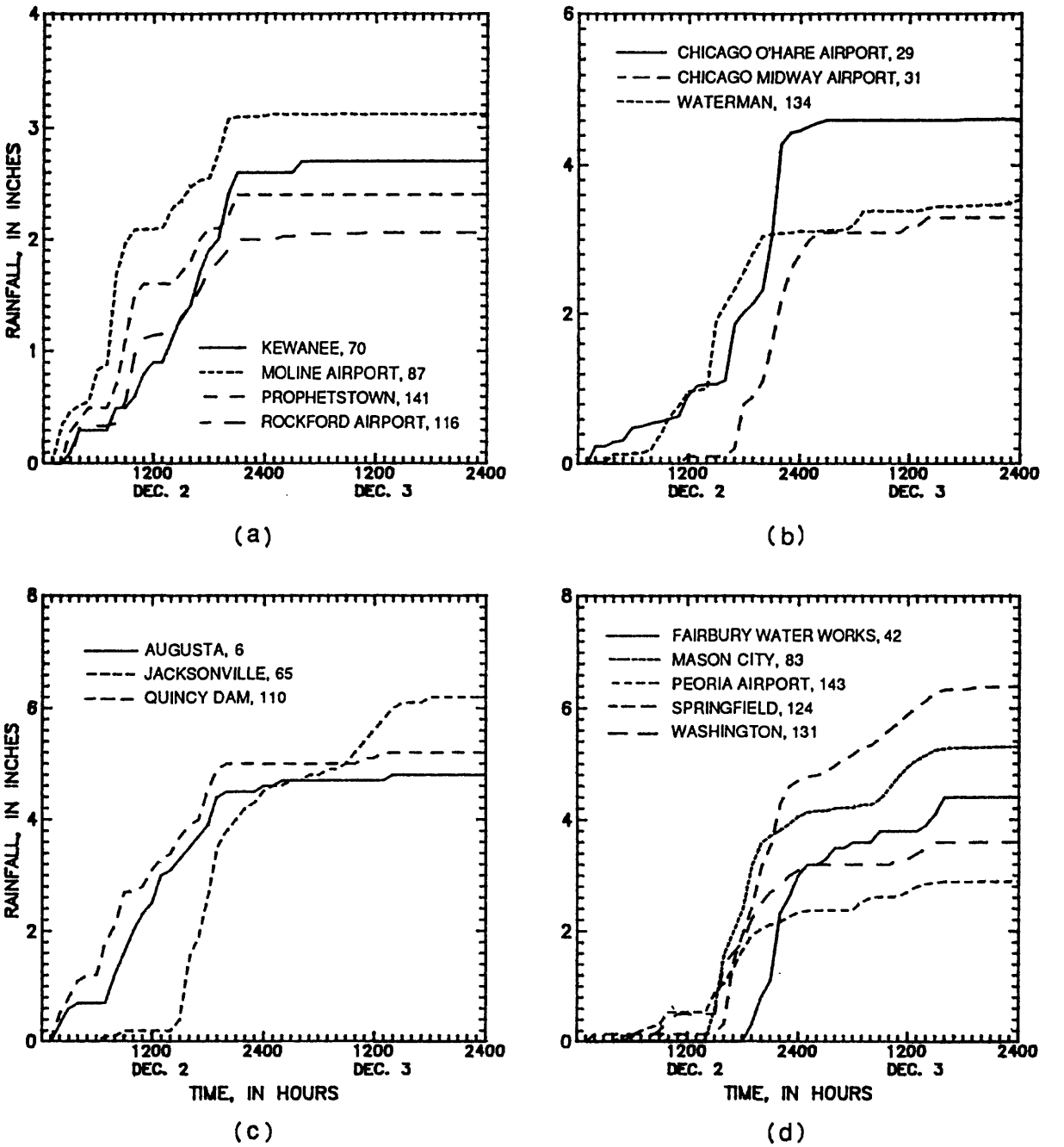


Figure 21.--Cumulative precipitation at hourly rainfall-gaging stations in (a) northwestern, (b) northeastern, (c) west-central, and (d) central Illinois, December 2-3, 1982. (Numbers refer to sites in fig. 1. Data from National Oceanic and Atmospheric Administration, 1982a-k, m.)

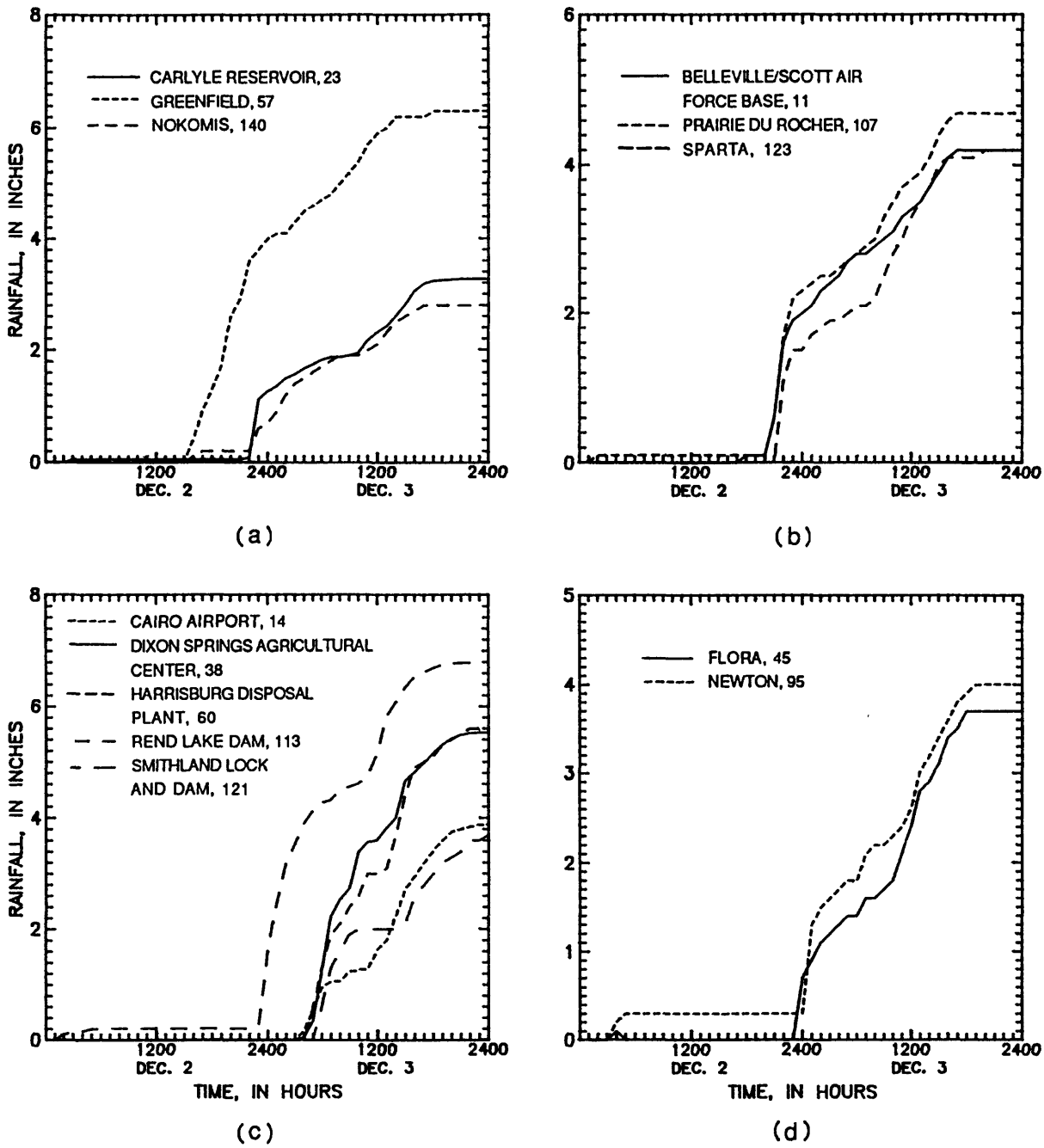


Figure 22.--Cumulative precipitation at hourly rainfall-gaging stations in (a) and (b) southwestern, (c) southern, and (d) southeastern Illinois, December 2-3, 1982. (Numbers refer to sites shown in fig. 1. Data from National Oceanic and Atmospheric Administration, 1982a-k, m.)

The total rainfall for the 2 days of intense storm activity (December 2-3) is shown in figure 23. The heaviest rainfall was concentrated in two bands with a southwest-northeast orientation. The recurrence intervals of point rainfalls are shown in table 5 (at back of report). Rainfall also was heavy in the southern tip of the State, however, average rainfall is higher in the south than in other parts of Illinois, and the recurrence interval of the rainfall during December 2-3 in this area was not as great as that in the Illinois River basin.

Descriptions and Analyses of Floods

Flooding was most severe in small drainage basins in northeastern Illinois and along the Illinois River farther downstream. North of the Illinois River, record floods occurred on Salt Creek, the Skokie River, and the West Branch of the Du Page River. Tributaries entering the Illinois River from the southeast on which record floods occurred include the Mazon, Vermilion, and Mackinaw Rivers and Spring, Kickapoo, and Sugar Creeks. Along the Illinois River, stage was at the highest levels ever recorded at Marseilles, Kingston Mines, Starved Rock, and La Salle. The peak stages and discharges that were determined at streamflow-gaging stations and miscellaneous sites are listed in table 6 (at back of report). The recurrence intervals of the floods were determined by the methods recommended by the Interagency Advisory Committee on Water Data, Hydrology Subcommittee (1982) and regional relations as reported in Curtis (1987). Recurrence intervals of the floods at the streamflow-gaging stations that were affected by the storm are shown in figures 24 and 25. The severest flooding was restricted to the Illinois River basin because of the distribution of rainfall and antecedent-moisture patterns. Major damage in the Illinois River basin was due to flooding caused by rainfall in the band just south of the Illinois River. All the counties adjacent to the Illinois River were declared Federal disaster areas. The flooding in the southern tip of the State caused much less damage due to the lack of urban development in that area.

A comparison of the point-rainfall recurrence intervals shown in table 5 and figure 4 with the flood recurrence intervals shown in figures 24 and 25 indicates that the severity of the flooding is not adequately reflected in the quantity of point rainfall summed over a 2-day period. In southern Illinois and other areas just east of the Illinois River, heavy rainfall occurred in pockets and the recurrence intervals for the rainfall were greater than those for the floods in several locations. This effect may be due to the scattered distribution of the rainfall and the relatively few streamflow-gaging stations in the area available to record resulting high flows. In the Mackinaw and Sangamon River basins southeast of the Illinois River in central Illinois, flood recurrence intervals generally were greater than point-rainfall recurrence intervals but were fairly close in value. In this area, no recorded point rainfall had a recurrence interval greater than 100 years but five streamflow-gaging stations did. West of the Illinois River, floods generally had greater recurrence intervals than point rainfalls. In northeastern Illinois, point rainfall and streamflow both had low recurrence intervals, although point-rainfall recurrence intervals were somewhat lower than flood peak recurrence intervals.

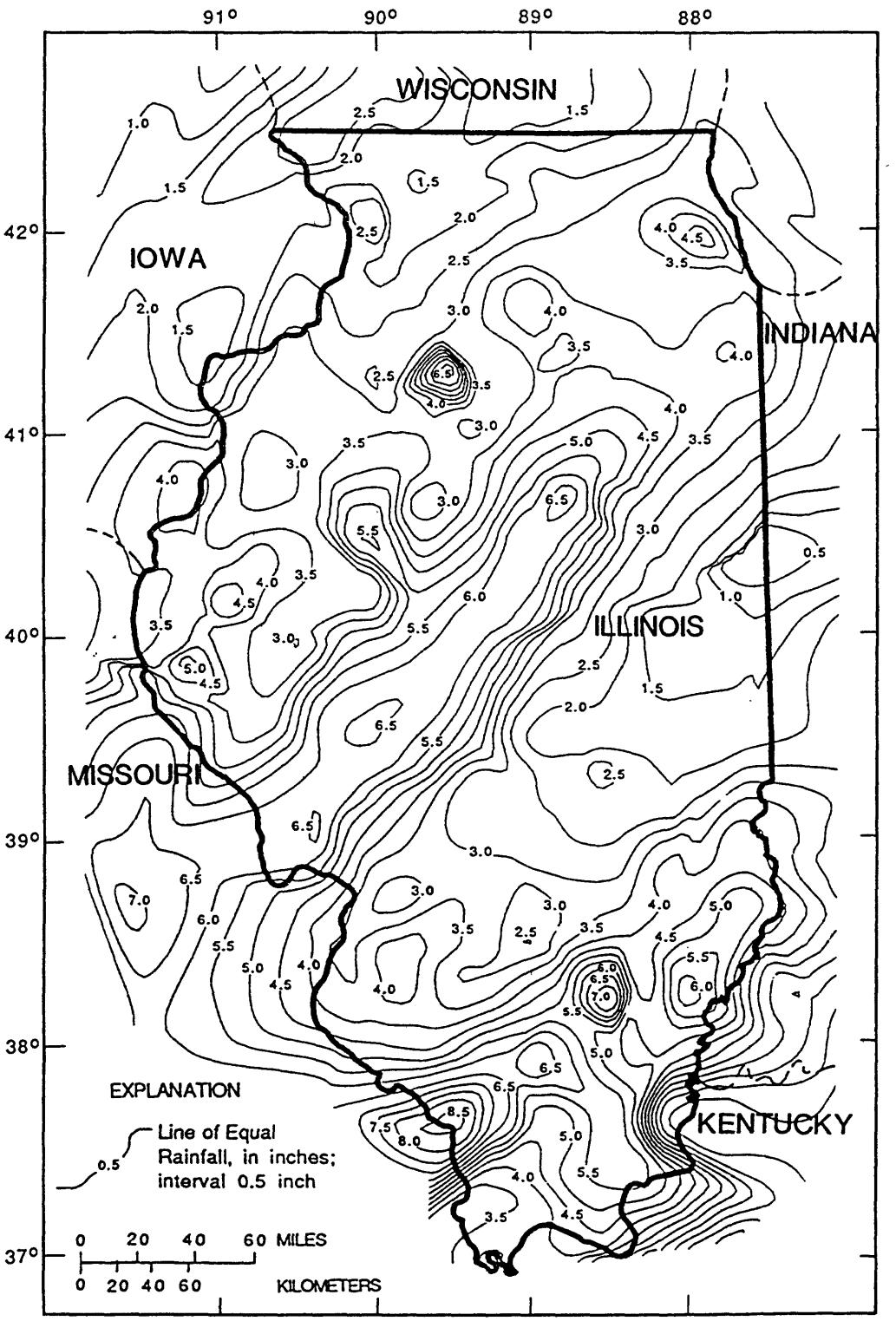


Figure 23.--Total storm rainfall for December 2-3, 1982. (Data from National Oceanic and Atmospheric Administration, 1982a-k, m.)

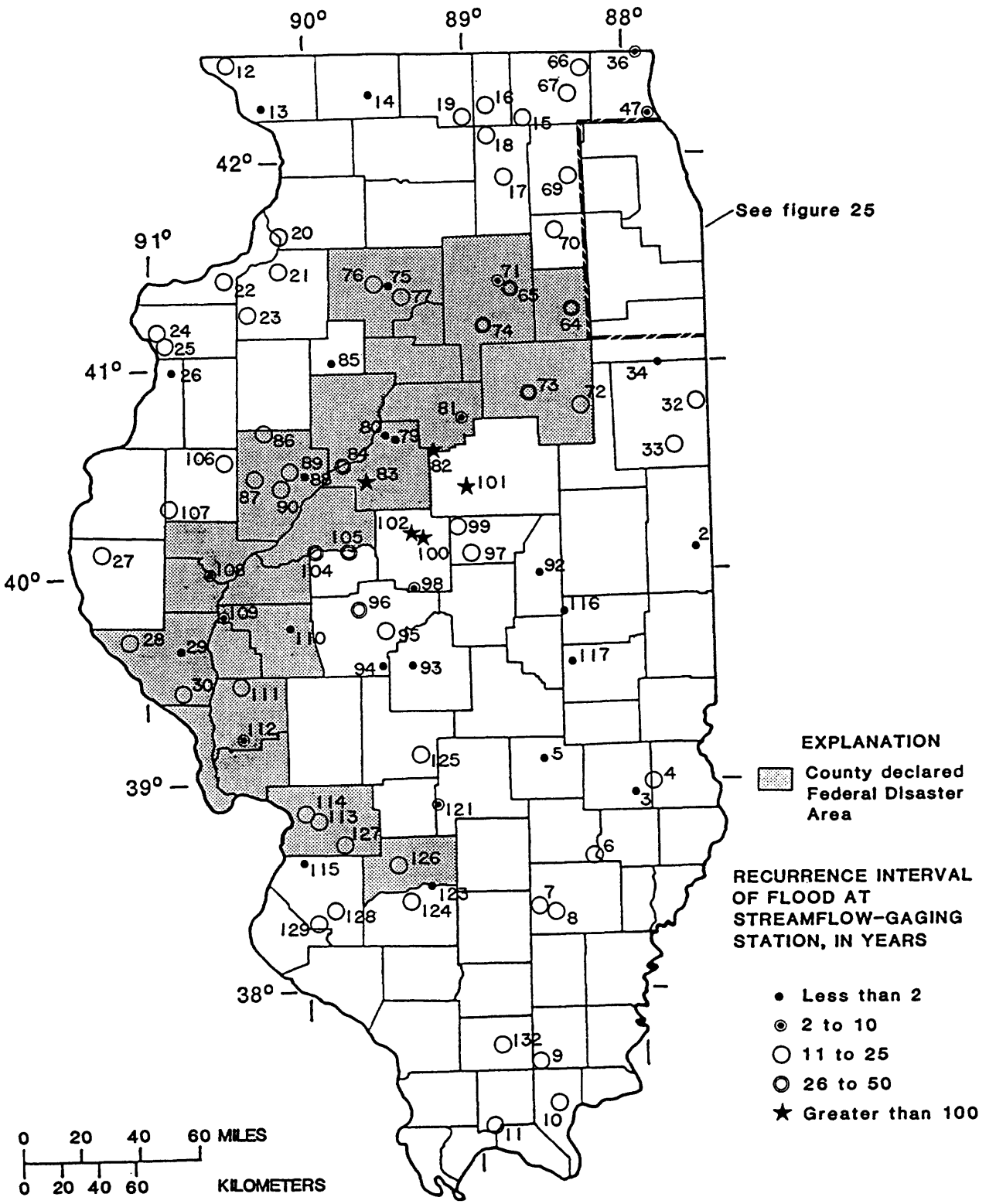


Figure 24.--Recurrence intervals for the floods of December 2-12, 1982, at selected streamflow-gaging stations and counties designated as flood-disaster areas by the Federal government. (Numbers are referenced to table 6.)

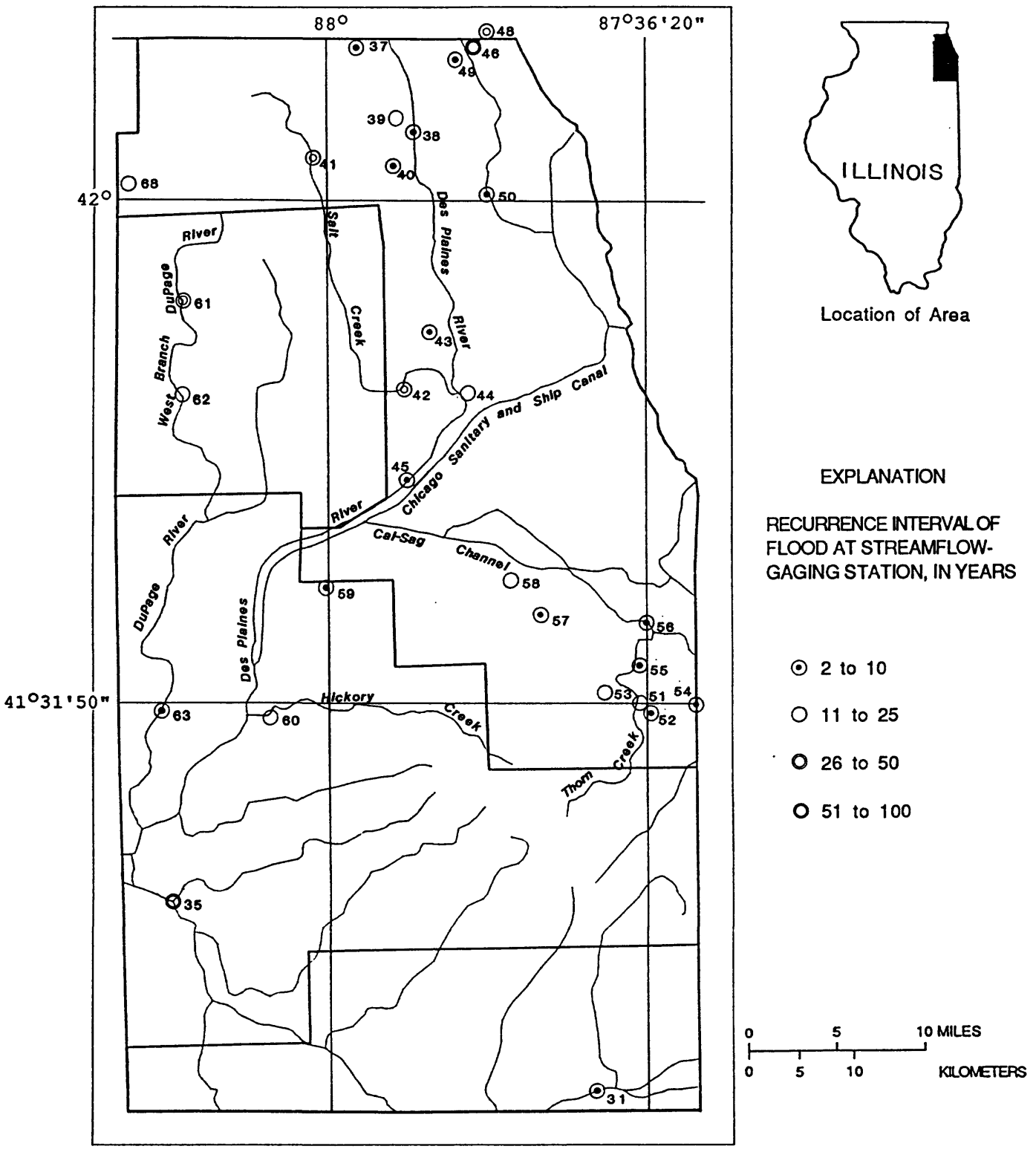


Figure 25.--Recurrence intervals for the floods of December 2-12, 1982, at streamflow-gaging stations in northeastern Illinois. (Numbers are referenced to table 6.)

Illinois River Basin

Discharge and stage records were recorded for 75 stations in the Illinois River basin in Illinois during the 1983 water year. Of these stations, 17 had record discharges during the 5 days after the start of the storms. Except for those in the Des Plaines River basin, all streams on which record flows occurred enter the Illinois River from the southeast.

Record floods occurred on the West Branch DuPage River near West Chicago (05539900) and near Warrenville (05540095), but on the Du Page River at Shorewood (05540500), the maximum December stream discharge was only 44 percent of the recorded maximum discharge. Because the lengths of record at the three stations are unequal, a better estimate of the relative flooding is the recurrence interval for the flood at each site. Near West Chicago, the recurrence interval of the discharge was 45 years; near Warrenville, 25 years; and at Shorewood, 4 years. The peak discharges occurred on the same day at all three stations (fig. 26). Discharge hydrographs for other streams in the Des Plaines River basin are shown in figure 27. The pattern of large floods on small upstream tributaries and small floods on the main stem of the river downstream was consistent in the Des Plaines River basin. On other rivers, including the Kankakee and Vermilion Rivers, the pattern was reversed; large floods occurred downstream on the main stem and small floods occurred on small upstream tributaries. Station data for stations affected by the storm are listed in table 7 (at back of report).

The tributaries to the Illinois River upstream from Marseilles, in descending order of their drainage areas, crested at the stations nearest the Illinois River on the following dates: Kankakee River near Wilmington (05527500) and Fox River at Dayton (05552500) on December 3, Des Plaines River at Riverside (05532500) on December 5, and Mazon River near Coal City (05542000) on December 4. The Illinois River at Marseilles (05543500) crested on December 4 at a record gage height of 16.78 ft. Downstream from Marseilles, Big Bureau Creek at Princeton (05556500) crested on December 3, and Vermilion River near Leonore (05555300) crested on December 4. The crest along the Illinois River continued to build, and the peak stage at La Salle was reached on December 5. At Henry (05558300), the peak stage of 30.70 ft was reached on December 8. Discharge hydrographs of the Illinois River at Marseilles and four of its upstream tributaries are shown in figure 28. The station data and flood elevations for McDonald Creek near Mount Prospect (05529500), Deer Creek near Chicago Heights (05536235), Butterfield Creek at Flossmoor (05536255), Poplar Creek at Elgin (05550500), Vermilion River near Leonore (05555300), Salt Creek near Rowell (05578500), and Lake Fork near Cornland (05579500) are listed in table 7. Plots of the tabulated discharge data are shown in figure 29.

Downstream from the Illinois River at Henry (05558300) and upstream from Kingston Mines (05568500), the Mackinaw River near Green Valley (05568000) crested on December 5 at a record stage of 16.13 ft and a record discharge of 51,000 ft^3/s. The recurrence interval was greater than 100 years. The relatively late timing of this peak coincided with the movement of the crest on the Illinois River and contributed to the record peak discharge at Kingston Mines reached on December 7. The peak stage was not reached at Henry until December 8 and at Kingston Mines until December 9. Below Kingston Mines, Sangamon River near Oakford (05583000), Spoon River at Seville (05570000), and La Moine River at

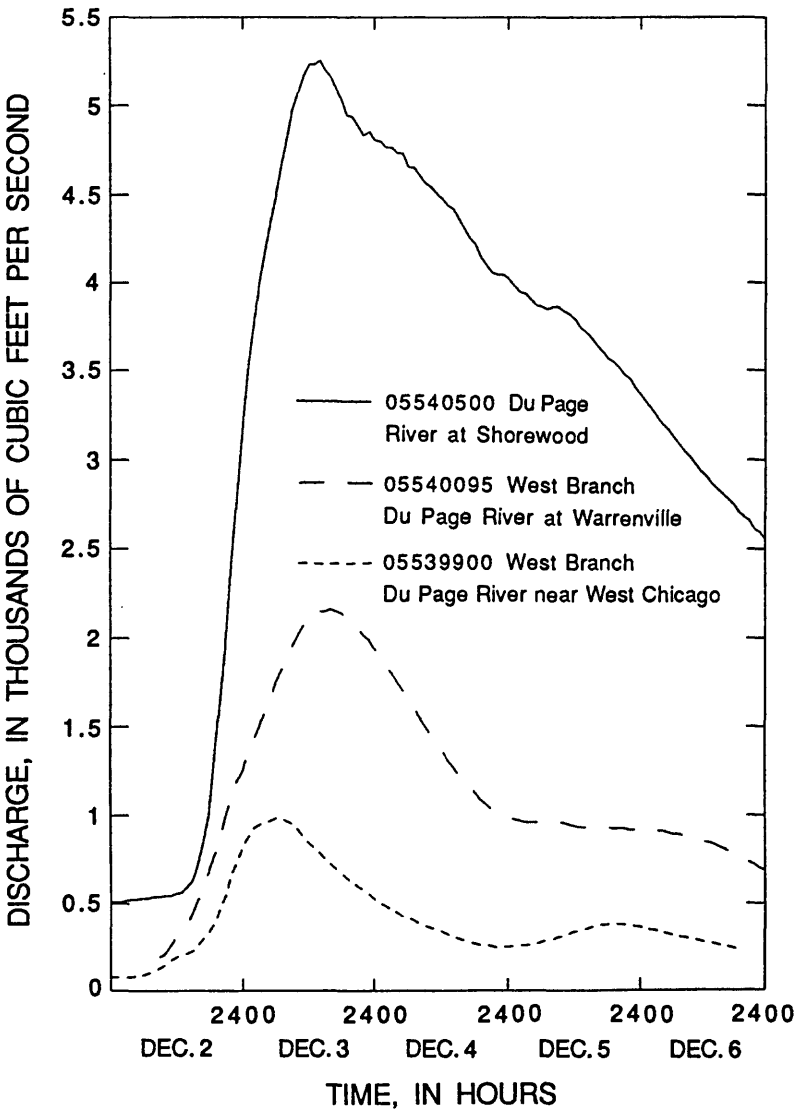


Figure 26.--Discharge hydrographs for the Du Page River, December 2-6, 1982. (Numbers are downstream-order numbers.)

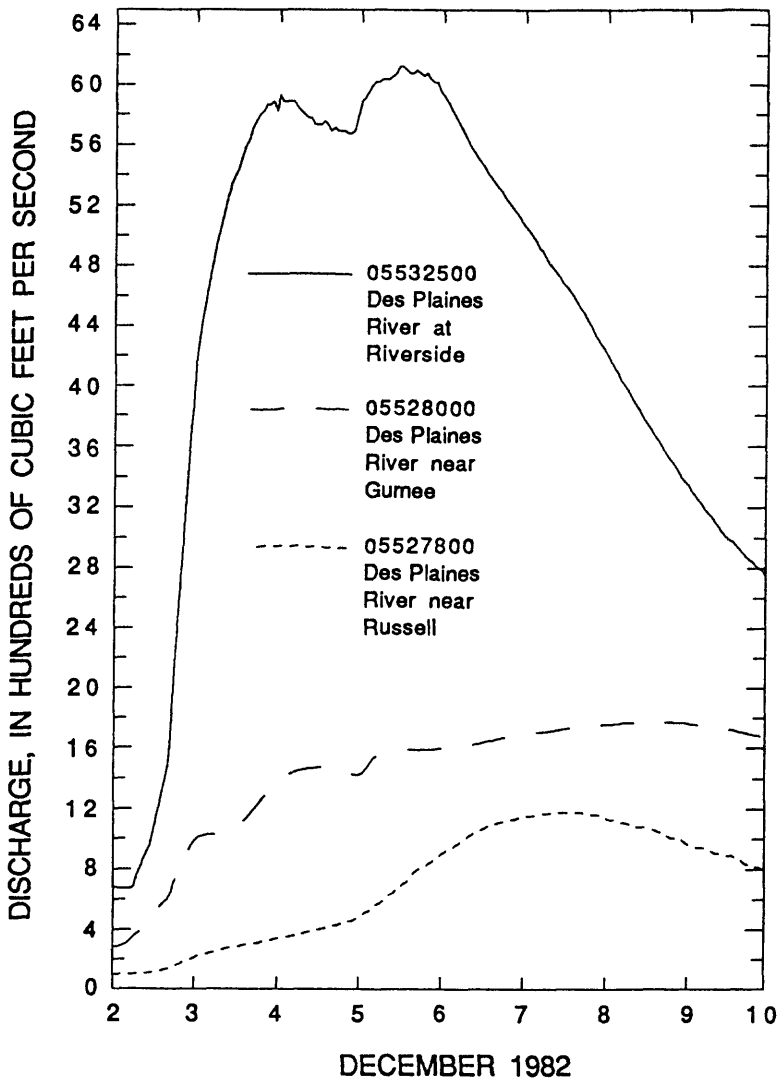


Figure 27.--Discharge hydrographs for the Des Plaines River, December 2-10, 1982. (Numbers are downstream-order numbers.)

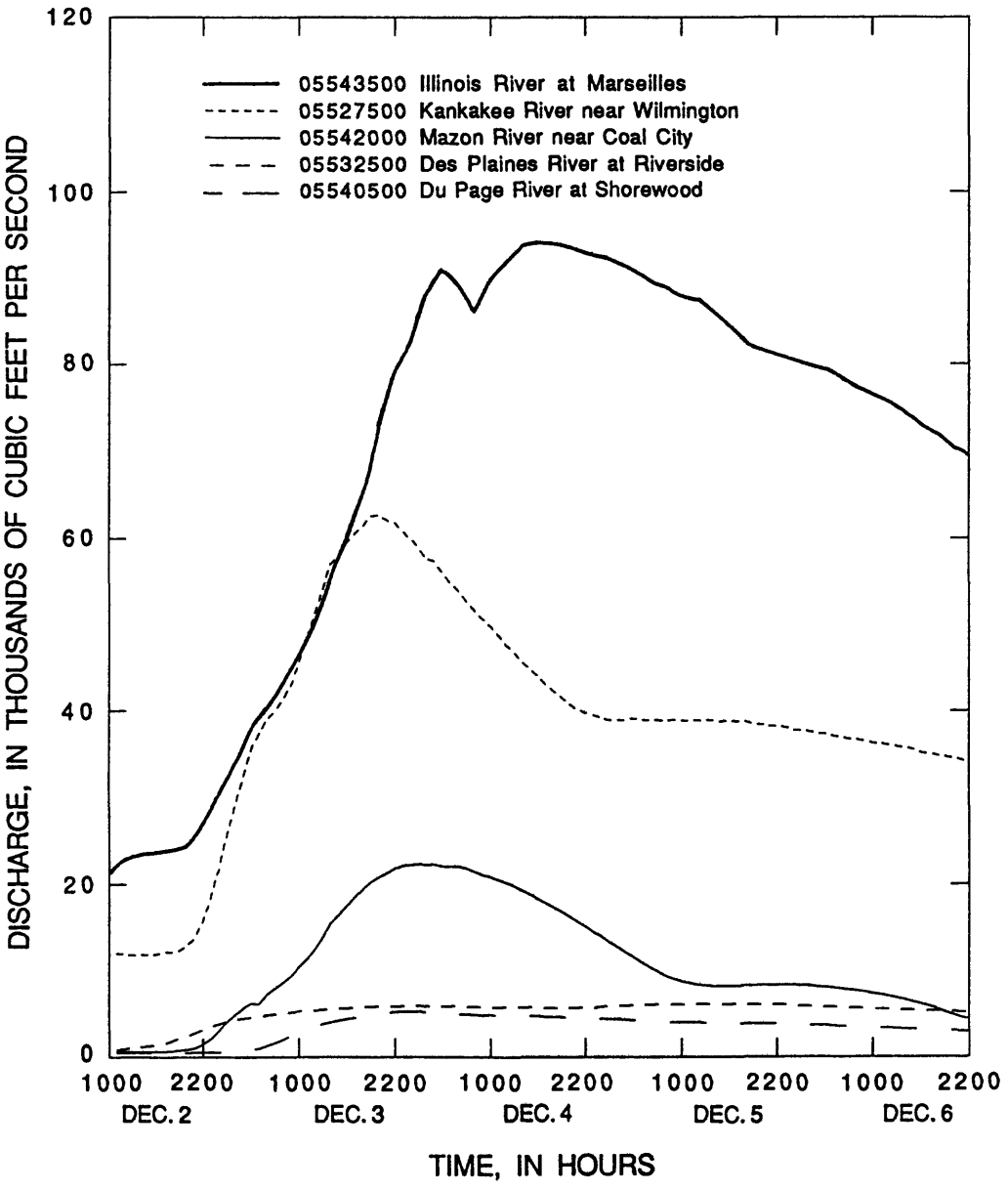


Figure 28.--Discharge hydrographs for the Illinois River and four tributaries, December 2-6, 1982. (Numbers are downstream-order numbers.)

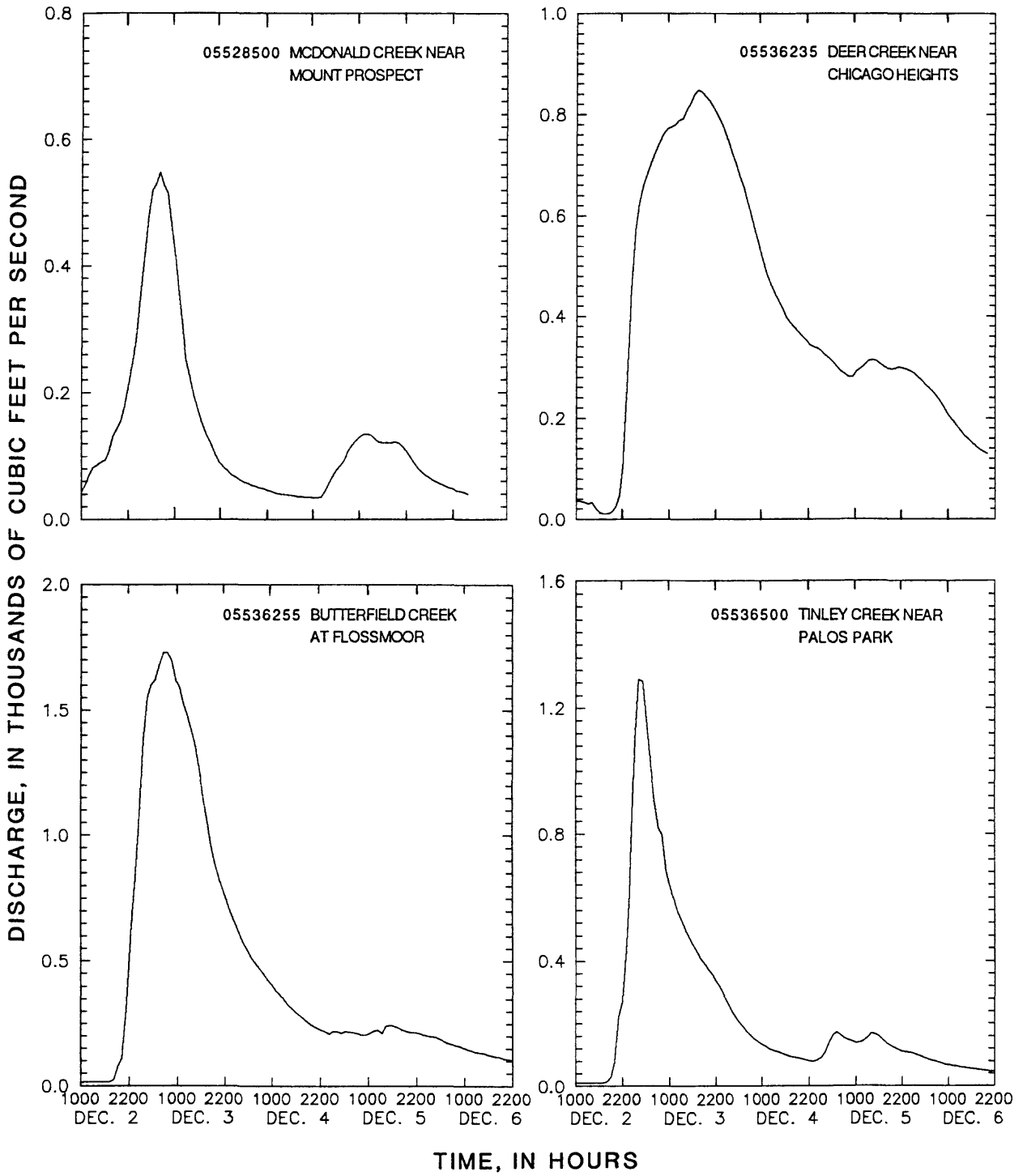


Figure 29.--Discharge hydrographs for selected streams in Illinois, December 2-6, 1982. (Numbers are downstream-order numbers.)

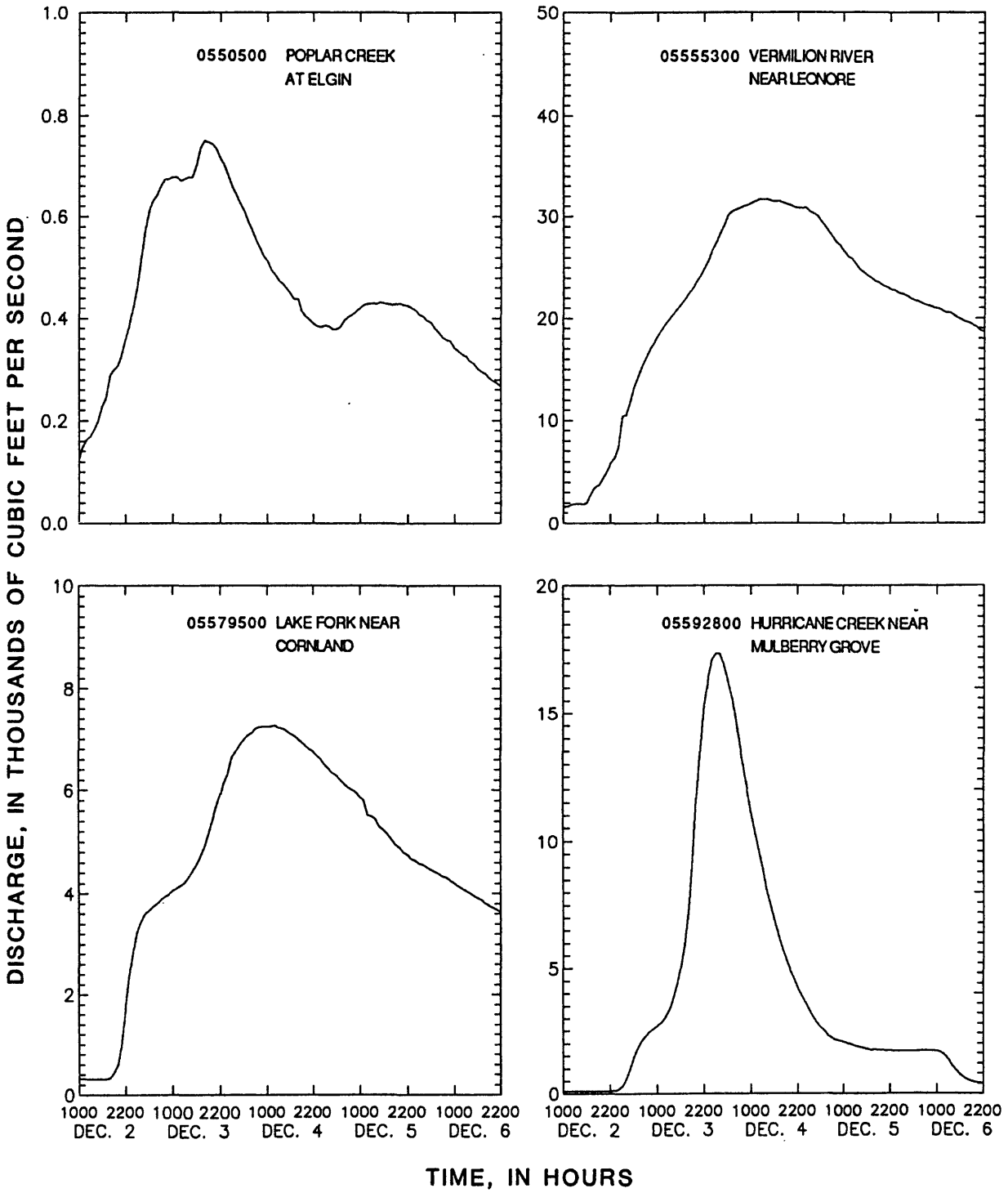


Figure 29.--Continued.

Ripley (05585000) crested on December 5. The Illinois River crested at Havana on December 11 and at Beardstown and at Meredosia (05585500) on December 12. At Meredosia, the peak discharge also was reached on December 12. The recurrence interval of the flood at Meredosia was 20 years. A flood profile for the Illinois River is shown in figure 30, and the surveyed flood-crest elevations are listed in table 8 (at back of report).

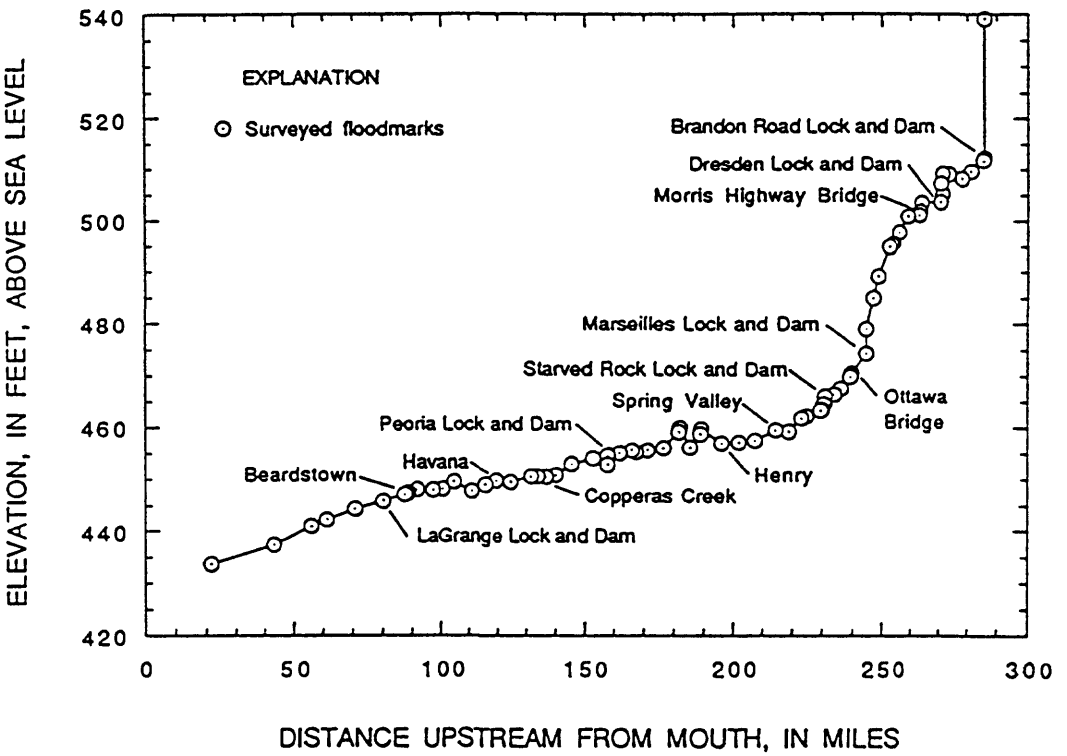


Figure 30.--Flood profile for the Illinois River waterway, early December 1982.

In the Illinois River basin, 20 of the 46 counties with substantial area in the basin were declared Federal disaster areas. All 19 counties directly along the Illinois River were included in the declaration. The Des Plaines River and Kankakee River basins were not included in the declaration, although the Vermilion River basin was included because of record flooding in Pontiac. Flood-damage estimates for the State exceeded $100 million.

Upper Mississippi River Basin Excluding the Illinois River Basin

Record discharge was recorded at two streamflow-gaging stations outside of the Illinois River basin--Hurricane Creek near Mulberry Grove (05592800) and Rayse Creek near Waltonville (05595730). These stations had only 13 and 4 years of record, respectively. Recurrence intervals of the peak discharges cannot be reliably computed for such short periods of record.

SUMMARY

The storms of June 1981 were convective thunderstorms preceding a warm front and were of limited duration and areal extent. The storms of December 1982 were cold-front thunderstorms. The floods resulted from the thundershowers in combination with already high rivers and saturated ground due to intermittent rainfall over an extended period. The areal extent of the December flooding was large. In addition to Illinois, Missouri and Arkansas were severely affected. Both storms occurred after months that were significantly wetter than average. Record rainfall, stage, and discharge occurred during both floods at certain locations in Illinois.

Meteorological and hydrological analyses of the storms are compiled in this report for the future reference of water-resources planners. The meteorological analyses include surface-weather maps showing the location and movement of the fronts. The temporal and spatial distribution of rainfall is indicated by plots of cumulative rainfall and isohyetal maps drawn from hourly and daily rainfall data. Antecedent moisture is summarized with the aid of 10- and 5-day antecedent-rainfall maps. Hydrologic data and analyses include discharge hydrographs, streamflow-gaging station data, frequency analyses of the peak discharge, a flood profile of the Illinois River, and a comparison of measured peak stages and discharges to previous maximums of record.

The frequency analyses of the stream discharge and point rainfall allow comparison of the recurrence intervals of the floods and the rainfall for the two storms. For the June 1981 storm, the point-rainfall recurrence intervals were lower than flood recurrence intervals. For the early December 1982 storms, the flood recurrence intervals and the point-rainfall recurrence intervals were in closer agreement.

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TABLES 1-6

Table 1.--Total storm rainfall and recurrence intervals for point rainfall during the storms of June 12-13, 1981

[<, less than; map numbers refer to sites in figure 1; --, station records are on an hourly basis with totals summed for the 48 hours from 0800 hours June 12 to 0700 hours June 14; recurrence intervals are determined according to the techniques of Huff and Angel (1989); out-of-state recurrence intervals may be less reliable (see Huff and Angel, 1989, p. 16)]

Map number	Station name (National Weather Service)	Time of reading at daily stations	Total storm rainfall (inches)	Recurrence intervals (years)
5	Argonne National Laboratory	--	3.08	<2
7	Aurora College	0700	3.78	3
25	Channahon Dresden Island	0700	5.41	18
32	Chillicothe	0700	3.95	4
36	Crete	--	4.40	7
46	Freeport Sewage Plant	--	3.20	<2
50	Gebhard Woods	0700	4.76	8
67	Joliet Brandon Road Dam	0700	7.79	85
68	Kankakee Sewage Plant	--	3.00	<2
70	Kewanee	--	4.40	7
74	Lanark	--	5.10	10
82	Marseilles Lock and Dam	0700	3.85	4
88	Mount Carroll	0800	4.54	7
99	Park Forest	0800	4.82	9
100	Paw Paw	0700	3.17	<2
102	Peotone	0700	4.15	4
103	La Salle Peru	1700	3.55	4
115	Rockford 6 ENE	0800	4.13	6
116	Rockford CAA Airport	--	3.04	2
132	Valparaiso Waterworks IN	1700	4.70	6
134	Waterman 1 ESE	--	3.22	2
137	Wenona	--	3.60	3

Table 2.--Summary of flood stages and discharges at selected stations for the floods of June 1981

[mi^2, square mile; ft, feet; ft^3/s, cubic feet per second; <, less than; >, greater than; dashes (--) indicate no data available; footnotes are at end of table. Map numbers refer to sites in figures 10 and 11]

Map number	Station number	Station name	Contributing drainage area (mi^2)	Period of record (water years)	Maximum flood previously known			Maxmimum flood during June 1981			
					Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)	Recurrence interval (years)
		UPPER MISSISSIPPI RIVER BASIN ABOVE THE ILLINOIS RIVER									
		Rock River basin									
1	05437630	Spring Creek at McFarland Road near Rockford, Ill.	2.44	1979-81	02-22-81	14.10	87	13	17.11	521	--
2	05437632	Spring Creek at Rock Valley College at Rockford, Ill.	2.81	1979-81	02-22-81	7.73	99	13	10.92	623	--
3	05437695	Keith Creek at Eighth Street at Rockford, Ill.	13.4	1980-	06-07-80	7.93	921	13	9.51	1,320	--
4	05438250	Coon Creek at Riley, Ill.	85.1	1961-	07-02-78	9.73	5,090	13	4.90	479	<2
5	05438500	Kishwaukee River at Belvidere, Ill.	538	1940-	03-16-43	13.10	10,300	14	4.44	1,480	<2
6	05439000	South Branch Kishwaukee River at De Kalb, Ill.	77.7	1925-34, 1980-	09-09-80	8.32	1,510	14	6.61	1,050	3
7	05440000	Kishwaukee River near Perryville, Ill.	1,099	1940-	03-21-79	20.48	16,700	14	10.14	3,760	<2
8	05441000	Leaf River at Leaf River, Ill.	103	1940-	09-13-72	15.07	7,950	13	14.58	6,970	10
9	05443500	Rock River at Como, Ill.	8,753	1905-06, 1915-	04-21-73	15.66	59,700	13	7.35	16,800	<2
10	05444000	Elkhorn Creek near Penrose, Ill.	146	1940-	05-17-74	16.53	6,770	13	13.86	3,120	2
11	05446500	Rock River near Joslin, Ill.	9,549	1940-	03-22-48	14.46	46,200	15	11.05	16,200	<2
12	05447000	Green River at Amboy, Ill.	201	1940-	10-10-54	12.26	6,120	13	11.79	7,600	>100
13	05447500	Green River near Geneseo, Ill.	1,003	1936-	06-22-74	16.75	12,100	14	10.98	4,930	<2
		Edwards River basin									
14	05466000	Edwards River near Orion, Ill.	155	1941-	02-19-51	13.41	8,910	13	10.04	2,760	<2
15	05466500	Edwards River near New Boston, Ill.	445	1935-	04-22-73	23.33	18,000	15	18.40	1,940	<2
		Pope Creek basin									
16	05467000	Pope Creek near Keithsburg, Ill.	174	1935-	04-22-73	27.88	8,900	13	23.44	1,180	<2
		Henderson Creek basin									
17	05469000	Henderson Creek near Oquawka, Ill.	432	1935-	04-25-50	28.17	16,500	14	24.38	3,200	<2

Table 2.--Summary of flood stages and discharges at selected stations for the floods of June 1981--Continued

Map number	Station number	Station name	Contributing drainage area (mi^2)	Period of record (water years)	Maximum flood previously known: Date	Gage height (ft)	Discharge (ft^3/s)	Maxmimum flood during June 1981: Date	Gage height (ft)	Discharge (ft^3/s)	Recurrence interval (years)
		UPPER MISSISSIPPI RIVER BASIN ABOVE THE ILLINOIS RIVER--Continued									
		Bear Creek basin									
18	05495500	Bear Creek near Marcelline, Ill.	349	1944-	07-22-51	26.07	21,200	12	12.15	4,140	<2
		Hadley Creek basin									
19	05502040	Hadley Creek at Kinderhook, Ill.	72.7	1940-	04-23-44	13.91	15,000	15	7.18	2,730	<2
		ILLINOIS RIVER BASIN									
		Kankakee River basin									
20	05527500	Kankakee River near Wilmington, Ill.	5,150	1934-	07-13-57	11.40	75,900	14	6.66	44,300	5
		Des Plaines River basin									
21	05531500	Salt Creek at Western Springs, Ill.	115	1946-	03-04-79	8.48	1,930	13	7.63	1,450	4
22	05532000	Addison Creek at Bellwood, Ill.	17.9	1950-	09-17-72	7.97	706	13	6.83	488	3
23	05532500	Des Plaines River at Riverside, Ill.	630	1944-	03-20-48	8.28	6,510	13	5.96	3,160	<2
24	05533000	Flag Creek near Willow Springs, Ill.	16.5	1951-	09-14-61	13.71	2,680	13	7.64	823	2
25	05535500	West Fork of North Branch Chicago River at Northbrook, Ill.	11.5	1952-	07-13-57	9.65	930	13	4.94	265	<2
26	05536215	Thorn Creek at Glenwood, Ill.	24.7	1949-	08-17-68	11.26	2,600	13	11.07	2,310	20
27	05536235	Deer Creek near Chicago Heights, Ill.	23.1	1948-	07-13-57	11.75	1,380	13	11.49	848	10
28	05536255	Butterfield Creek at Flossmoor, Ill.	23.5	1948-	07-13-57	11.78	2,000	13	11.76	1,980	25
29	05536265	Lansing Ditch near Lansing, Ill.	8.84	1948-	05-10-48	9.24	461	13	9.35	204	2
30	05536275	Thorn Creek at Thornton, Ill.	104	1948-	07-13-57	16.00	4,700	14	17.06	4,140	20
31	05536340	Midlothian Creek at Oak Forest, Ill.	12.6	1951-	04-22-73	7.67	627	13	5.73	370	7
32	05536500	Tinley Creek near Palos Park, Ill.	11.2	1951-	10-10-54	10.30	1,930	13	9.79	1,560	25
33	05537500	Long Run near Lemont, Ill.	20.9	1951-	10-10-54	9.91	3,160	13	9.01	1,820	20
34	05539000	Hickory Creek at Joliet, Ill.	107	1945-	07-13-57	13.77	15,200	13	14.90	17,300	>100
35	05539900	West Branch Du Page River near West Chicago, Ill.	28.5	1961-	06-10-67	10.36	805	14	8.69	466	2
36	05540095	West Branch Du Page River near Warrenville, Ill.	90.4	1969-	08-26-72	4.70	1,980	13	3.58	970	<2
37	05540500	Du Page River at Shorewood, Ill.	324	1941-	10-11-54	11.06	12,000	13	6.87	5,050	4

Table 2.--Summary of flood stages and discharges at selected stations for the floods of June 1981--Continued

Map number	Station number	Station name	Contributing drainage area (mi^2)	Period of record (water years)	Maximum flood previously known: Date	Maximum flood previously known: Gage height (ft)	Maximum flood previously known: Discharge (ft^3/s)	Maxmimum flood during June 1981: Date	Maxmimum flood during June 1981: Gage height (ft)	Maxmimum flood during June 1981: Discharge (ft^3/s)	Recurrence interval (years)
		ILLINOIS RIVER BASIN--Continued									
		Mazon River basin									
38	05542000	Mazon River near Coal City, Ill.	455	1940-	07-15-58	19.70	17,600	14	13.64	9,970	3
39	05543500	Illinois River at Marseilles, Ill.	8,259	1920-	07-14-57	15.20	93,900	14	14.73	88,500	30
		Fox River basin									
40	05551200	Ferson Creek near St. Charles, Ill.	51.7	1961-	02-20-71	7.64	1,970	13	6.04	967	2
41	05551700	Blackberry Creek near Yorkville, Ill.	70.2	1961-	05-17-74	8.58	1,320	14	8.12	1,140	5
42	05552500	Fox River at Dayton, Ill.	2,642	1915-	10-11-54	24.63	47,100	14	15.49	21,400	8
		Vermilion River basin									
43	05555300	Vermilion River near Leonore, Ill.	1,251	1931-	07-15-58	[a]15.30	33,500	13	14.43	8,420	<2
		Big Bureau Creek basin									
44	05556500	Big Bureau Creek at Princeton, Ill.	196	1936-	05-17-74	16.01	12,500	14	10.97	6,070	4
45	05557000	West Bureau Creek at Wyanet, Ill.	86.7	1936-	05-17-74	16.14	20,100	13	11.37	4,800	5
46	05557500	East Bureau Creek near Bureau, Ill.	99.0	1936-	05-17-74	17.15	7,500	13	14.32	2,900	3
		Gimlet Creek basin									
47	05559000	Gimlet Creek at Sparland, Ill.	5.66	1946-47, 1950-	06-21-74	10.03	1,940	14	7.01	1,350	5
		Spoon River basin									
48	05568800	Indian Creek near Wyoming, Ill.	62.7	1960-	06-22-74	13.81	6,540	13	9.61	1,280	<2
49	05569500	Spoon River at London Mills, Ill.	1,062	1943-	06-23-74	28.03	41,000	14	17.29	6,060	<2
50	05570000	Spoon River at Seville, Ill.	1,636	1914-	08-22-24	30.77	37,300	14	17.90	6,550	<2
		Sangamon River basin									
51	05579500	Lake Fork near Cornland, Ill.	214	1948-	04-12-79	23.11	8,930	13	12.74	1,070	<2

Table 2.--Summary of flood stages and discharges at selected stations for the floods of June 1981--Continued

Map number	Station number	Station name	Contributing drainage area (mi^2)	Period of record (water years)	Maximum flood previously known			Maxmimum flood during June 1981			
					Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)	Recurrence interval (years)
		ILLINOIS RIVER BASIN--Continued									
		La Moine River basin									
52	05584400	Drowning Fork at Bushnell, Ill.	26.3	1960-	06-02-80	12.92	3,500	13	9.72	310	<2
		UPPER MISSISSIPPI RIVER BASIN BELOW THE ILLINOIS RIVER									
		Kaskaskia River basin									
53	05590800	Lake Fork at Atwood, Ill.	149	1973-	03-05-79	14.03	4,030	13	10.49	1,190	<2
54	05591200	Kaskaskia River at Cooks Mills, Ill.	473	1971-	03-05-79	16.53	8,910	15	9.68	1,610	<2
55	05591700	West Okaw River near Lovington, Ill.	112	1980-	05-18-81	11.92	2,660	13	9.36	1,210	-

[a] At former site and datum.

Table 3.--Data for selected streamflow-gaging stations for the floods of June 1981

[ft, feet; ft^3/s, cubic feet per second]

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05527500 Kankakee River near Wilmington				
June 12	2400	2.48	5,600	June 14	1500	7.96	41,100
				(Cont.)	1600	7.80	39,700
June 13	0100	2.48	5,600		1700	7.59	37,900
	0200	2.48	5,600		1800	7.40	36,300
	0300	2.48	5,600		1900	7.22	34,800
	0400	2.47	5,550		2000	7.01	33,100
	0500	2.50	5,700		2100	6.82	31,600
	0600	2.51	5,750		2200	6.68	30,500
	0700	2.49	5,650		2300	6.50	29,100
	0800	2.49	5,650		2400	6.37	28,100
	0900	2.49	5,650				
	1000	2.53	5,850	June 15	0100	6.23	27,000
	1100	2.59	6,150		0200	6.13	26,300
	1200	2.71	6,740		0300	6.01	25,500
	1300	2.93	7,840		0400	5.89	24,600
	1400	3.27	9,540		0500	5.79	23,900
	1500	3.66	11,500		0600	5.71	23,400
	1600	4.15	14,000		0700	5.62	22,800
	1700	4.60	16,600		0800	5.53	22,200
	1800	5.01	19,000		0900	5.43	21,500
	1900	5.39	21,300		1000	5.36	21,100
	2000	5.77	23,800		1100	5.29	20,700
	2100	6.17	26,600		1200	5.24	20,400
	2200	6.52	29,200		1300	5.19	20,100
	2300	6.82	31,600		1400	5.15	19,800
	2400	7.05	33,400		1500	5.10	19,500
					1600	5.04	19,200
June 14	0100	7.28	35,300		1700	5.01	19,000
	0200	7.55	37,600		1800	4.97	18,800
	0300	7.74	39,200		1900	4.95	18,600
	0400	7.98	41,300		2000	4.94	18,600
	0500	8.14	42,700		2100	4.94	18,600
	0600	8.19	43,200		2200	4.91	18,400
	0700	8.26	43,800		2300	4.89	18,300
	0800	8.31	44,300		2400	4.92	18,500
	0900	8.31	44,300				
	1000	8.31	44,300	June 16	0100	4.92	18,500
	1100	8.27	43,900		0200	4.94	18,600
	1200	8.25	43,700		0300	4.96	18,700
	1300	8.16	42,900		0400	4.97	18,800
	1400	8.07	42,100		0500	5.00	18,900

Table 3.--Data for selected streamflow-gaging stations for the floods of June 1981--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
05527500 Kankakee River near Wilmington--Continued							
June 16 (Cont.)	0600	5.05	19,200	June 17 (Cont.)	0300	5.12	19,700
	0700	5.10	19,500		0400	5.12	19,700
	0800	5.13	19,700		0500	5.10	19,500
	0900	5.18	20,000		0600	5.08	19,400
	1000	5.18	20,000		0700	5.05	19,200
	1100	5.25	20,400		0800	5.05	19,200
	1200	5.29	20,700		0900	5.04	19,200
	1300	5.32	20,900		1000	5.03	19,100
	1400	5.32	20,900		1100	5.00	18,900
	1500	5.30	20,700		1200	4.99	18,900
	1600	5.29	20,700		1300	4.99	18,900
	1700	5.28	20,600		1400	4.96	18,700
	1800	5.28	20,600		1500	4.95	18,600
	1900	5.26	20,500		1600	4.93	18,500
	2000	5.25	20,400		1700	4.91	18,400
	2100	5.24	20,400		1800	4.90	18,400
	2200	5.21	20,200		1900	4.87	18,200
	2300	5.20	20,100		2000	4.85	18,100
	2400	5.18	20,000		2100	4.85	18,100
					2200	4.82	17,900
June 17	0100	5.15	19,800		2300	4.81	17,800
	0200	5.14	19,800				

Table 3.--Data for selected streamflow-gaging stations for the floods of June 1981--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05536215 Thorn Creek at Glenwood				
June 12	2400	3.20	21	June 14	0500	9.04	724
				(Cont.)	0600	9.01	715
June 13	0100	3.18	20		0700	8.97	703
	0200	3.24	24		0800	8.90	682
	0300	6.52	387		0900	8.81	655
	0400	8.46	759		1000	8.71	629
	0500	9.44	1,080		1100	8.60	605
	0600	9.79	1,220		1200	8.48	581
	0700	10.31	1,510		1300	8.36	559
	0800	10.65	1,790		1400	8.22	534
	0900	10.75	1,890		1500	8.05	506
	1000	10.77	1,920		1600	7.87	480
	1100	11.03	2,210		1700	7.64	448
	1200	11.08	2,270		1800	7.27	401
	1230	11.11	2,310		1900	6.95	361
	1300	10.95	2,120		2000	6.67	326
	1400	10.87	2,020		2100	6.45	300
	1500	10.86	2,010		2200	6.24	275
	1600	10.86	2,010		2300	6.07	256
	1700	10.80	1,950		2400	5.94	241
	1800	10.64	1,800				
	1900	10.42	1,510	June 15	0100	5.78	223
	2000	10.21	1,440		0200	5.64	208
	2100	10.03	1,320		0300	5.55	198
	2200	9.86	1,250		0400	5.44	187
	2300	9.66	1,170		0500	5.35	177
	2400	9.50	940		0600	5.27	169
					0700	5.20	162
June 14	0100	9.35	856		0800	5.14	156
	0200	9.18	774		0900	5.13	159
	0300	9.11	746		1000	5.08	149
	0400	9.05	727		1100	5.07	148

Table 3.--Data for selected streamflow-gaging stations for the floods of June 1981--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05536235 Deer Creek near Chicago Heights				
June 12	2400	3.67	7.9	June 14	1700	10.36	464
				(Cont.)	1800	10.23	441
June 13	0100	3.67	7.9		1900	10.10	419
	0200	3.70	8.3		2000	9.98	399
	0300	4.77	29		2100	9.85	376
	0400	6.11	70		2200	9.72	355
	0500	7.52	132		2300	9.61	337
	0600	8.25	180		2400	9.51	323
	0700	9.45	315				
	0800	10.39	307	June 15	0100	9.42	311
	0900	10.66	538		0200	9.33	301
	1000	10.88	610		0300	9.24	289
	1100	11.04	666		0400	9.15	278
	1200	11.09	685		0500	9.07	268
	1300	11.14	704		0600	8.98	258
	1400	11.19	723		0700	8.90	248
	1500	11.23	739		0800	8.82	239
	1600	11.28	759		0900	8.73	228
	1700	11.31	771		1000	8.64	218
	1800	11.34	784		1100	8.56	209
	1900	11.39	805		1200	8.48	201
	2000	11.45	831		1300	8.41	195
	2100	11.46	835		1400	8.33	187
	2200	11.48	844		1500	8.25	178
	2300	11.49	848		1600	8.18	174
	2400	11.48	844		1700	8.10	167
					1800	8.02	161
June 14	0100	11.49	848		1900	7.94	156
	0200	11.48	844		2000	7.86	150
	0300	11.44	826		2100	7.86	150
	0400	11.42	818		2200	7.98	158
	0500	11.40	809		2300	8.03	162
	0600	11.36	792		2400	7.96	157
	0700	11.33	780				
	0800	11.29	763	June 16	0100	7.90	153
	0900	11.23	739		0200	7.85	150
	1000	11.18	719		0300	7.76	144
	1100	11.10	689		0400	7.70	141
	1200	11.01	655		0500	7.64	138
	1300	10.90	616		0600	7.59	135
	1400	10.77	573		0700	7.54	133
	1500	10.65	535		0800	7.50	131
	1600	10.49	488		0900	7.46	129

Table 3.--Data for selected streamflow-gaging stations for the floods of June 1981--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05536235 Deer Creek near Chicago Heights--Continued				
June 16	1000	7.41	126	June 17	1100	5.79	58
(Cont.)	1100	7.35	123	(Cont.)	1200	5.75	57
	1200	7.36	124		1300	5.71	56
	1300	7.31	121		1400	5.67	54
	1400	7.20	116		1500	5.63	53
	1500	7.10	111		1600	5.59	51
	1600	7.01	107		1700	5.56	51
	1700	6.91	103		1800	5.54	50
	1800	6.82	99		1900	5.51	49
	1900	6.73	95		2000	5.48	48
	2000	6.63	90		2100	5.45	47
	2100	6.55	87		2200	5.42	46
	2200	6.48	84		2300	5.39	45
	2300	6.41	81		2400	5.37	45
	2400	6.36	76				
				June 18	0100	5.34	44
June 17	0100	6.30	77		0200	5.31	43
	0200	6.25	75		0300	5.29	42
	0300	6.19	73		0400	5.28	42
	0400	6.14	71		0500	5.27	42
	0500	6.08	69		0600	5.26	42
	0600	6.03	67		0700	5.23	41
	0700	5.98	65		0800	5.22	40
	0800	5.92	63		0900	5.19	40
	0900	5.88	61		1000	5.16	39
	1000	5.84	60		1100	5.14	38

Table 3.--Data for selected streamflow-gaging stations for the floods of June 1981--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05536255 Butterfield Creek at Flossmoor				
June 12	2400	4.04	6.9	June 14 (Cont.)	1600	8.26	498
					1700	8.09	465
June 13	0100	4.03	6.6		1800	7.95	439
	0200	4.10	8.4		1900	7.80	611
	0300	6.08	143		2000	7.65	385
	0400	7.14	275		2100	7.54	366
	0500	7.87	392		2200	7.43	348
	0600	8.99	613		2300	7.33	332
	0700	9.82	829		2400	7.24	317
	0800	10.37	1,060				
	0900	10.92	1,380	June 15	0100	7.13	301
	1000	11.12	1,510		0200	7.04	287
	1100	11.47	1,760		0300	6.86	275
	1200	11.66	1,900		0400	6.89	265
	1300	11.73	1,960		0500	6.81	254
	1400	11.75	1,980		0600	6.74	244
	1430	11.76	1,980		0700	6.67	235
	1500	11.74	1,970		0800	6.62	228
	1600	11.73	1,950		0900	6.54	218
	1700	11.66	1,900		1000	6.48	210
	1800	11.50	1,780		1100	6.42	202
	1900	11.37	1,680		1200	6.36	195
	2000	11.24	1,590		1300	6.29	186
	2100	11.14	1,520		1400	6.22	178
	2200	11.05	1,440		1500	6.18	173
	2300	10.95	1,400		1600	6.10	164
	2400	10.66	1,330		1700	6.04	158
					1800	5.98	151
June 14	0100	10.55	1,260		1900	5.93	146
	0200	10.38	1,160		2000	5.89	141
	0300	10.22	1,080		2100	5.89	141
	0400	10.09	1,010		2200	5.97	150
	0500	9.95	944		2300	6.01	154
	0600	9.81	888		2400	6.07	161
	0700	9.71	852				
	0800	9.54	796	June 16	0100	6.16	170
	0900	9.37	745		0200	6.17	172
	1000	9.22	706		0300	6.08	162
	1100	9.07	671		0400	5.99	152
	1200	8.92	637		0500	5.92	145
	1300	8.76	602		0600	5.88	140
	1400	8.59	566		0700	5.86	138
	1500	8.43	532		0800	5.84	136

Table 3.--Data for selected streamflow-gaging stations for the floods of June 1981--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
		05536255 Butterfield Creek at Flossmoor--Continued					
June 16	0900	5.81	133	June 17	0400	5.22	80
(Cont.)	1000	5.79	131	(Cont.)	0500	5.19	77
	1100	5.77	129		0600	5.17	76
	1200	5.74	126		0700	5.15	74
	1300	5.71	123		0800	5.14	73
	1400	5.67	119		0900	5.12	72
	1500	5.64	117		1000	5.10	70
	1600	5.60	113		1100	5.09	69
	1700	5.56	109		1200	5.07	68
	1800	5.52	105		1300	5.05	66
	1900	5.48	102		1400	5.03	65
	2000	5.44	98		1500	5.01	63
	2100	5.40	95		1600	4.98	61
	2200	5.37	92		1700	4.97	60
	2300	5.32	88		1800	4.94	58
	2400	5.31	87		1900	4.92	57
					2000	4.90	55
June 17	0100	5.27	85		2100	4.89	54
	0200	5.26	83		2200	4.87	53
	0300	5.24	81		2300	4.85	52

Table 3.--Data for selected streamflow-gaging stations for the floods of June 1981--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05536275 Thorn Creek at Thornton				
June 12	2400	2.47	61	June 14	1700	15.80	3,240
				(Cont.)	1800	15.65	3,140
June 13	0100	2.47	61		1900	15.48	3,040
	0200	2.47	61		2000	15.32	2,950
	0300	2.73	92		2100	15.15	2,860
	0400	3.24	171		2200	14.97	2,760
	0500	4.57	334		2300	14.78	2,660
	0600	6.19	536		2400	14.59	2,520
	0700	7.00	635				
	0800	7.32	675	June 15	0100	14.39	2,460
	0900	7.57	706		0200	14.19	2,360
	1000	9.14	947		0300	13.98	2,260
	1100	10.54	1,180		0400	13.78	2,160
	1200	11.75	1,460		0500	13.57	2,070
	1300	12.62	1,720		0600	13.36	1,990
	1400	13.00	1,850		0700	13.15	1,910
	1500	13.96	2,250		0800	12.94	1,830
	1600	14.45	2,500		0900	12.73	1,760
	1700	14.92	2,730		1000	12.52	1,690
	1800	15.35	2,970		1100	12.25	1,600
	1900	15.75	3,210		1200	12.00	1,530
	2000	16.09	3,430		1300	11.78	1,470
	2100	16.36	3,620		1400	11.52	1,400
	2200	16.59	3,790		1500	11.38	1,360
	2300	16.80	3,950		1600	11.17	1,310
	2400	16.91	4,030		1700	10.98	1,270
					1800	10.77	1,230
June 14	0100	17.00	4,100		1900	10.60	1,200
	0200	17.03	4,120		2000	10.39	1,160
	0300	17.06	4,140		2100	10.22	1,130
	0400	17.04	4,130		2200	10.06	1,100
	0500	17.01	4,110		2300	9.97	1,090
	0600	17.00	4,100		2400	9.84	1,070
	0700	16.93	4,040				
	0800	16.86	4,000	June 16	0100	9.75	1,050
	0900	16.79	3,940		0200	9.64	1,030
	1000	16.70	3,870		0300	9.54	1,020
	1100	16.56	3,770		0400	9.47	1,010
	1200	16.46	3,700		0500	9.37	987
	1300	16.34	3,610		0600	9.26	968
	1400	16.22	3,520		0700	9.13	946
	1500	16.08	3,430		0800	8.98	920
	1600	15.97	3,350		0900	8.83	895

Table 3.--Data for selected streamflow-gaging stations for the floods of June 1981--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05536275 Thorn Creek at Thornton--Continued				
June 16	1000	8.67	868	June 17	0500	5.66	474
(Cont.)	1100	8.51	842	(Cont.)	0600	5.52	457
	1200	8.37	819		0700	5.37	440
	1300	8.28	804		0800	5.25	426
	1400	8.09	774		0900	5.15	413
	1500	7.95	756		1000	5.07	402
	1600	7.81	738		1100	4.99	391
	1700	7.65	717		1200	4.91	380
	1800	7.50	698		1300	4.84	371
	1900	7.34	678		1400	4.77	361
	2000	7.16	655		1500	4.69	350
	2100	6.98	633		1600	4.63	342
	2200	6.81	612		1700	4.56	333
	2300	6.65	592		1800	4.47	321
	2400	6.47	570		1900	4.39	311
					2000	4.30	299
June 17	0100	6.30	550		2100	4.24	292
	0200	6.12	528		2200	4.19	286
	0300	5.97	510		2300	4.12	277
	0400	5.81	491				

Table 3.--Data for selected streamflow-gaging stations for the floods of June 1981--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05536500 Tinley Creek near Palos Park				
June 12	2400	2.26	6.8	June 14	1700	4.47	186
				(Cont.)	1800	4.37	175
June 13	0100	2.25	6.5		1900	4.29	166
	0200	2.25	6.5		2000	4.20	156
	0300	2.28	7.4		2100	4.13	149
	0400	2.44	14		2200	4.06	142
	0500	2.69	27		2300	4.00	136
	0600	3.10	51		2400	3.94	130
	0700	7.58	647				
	0800	8.92	1,040	June 15	0100	3.88	124
	0900	9.46	1,340		0200	3.84	120
	1000	9.70	1,500		0300	3.78	114
	1100	9.74	1,520		0400	3.74	111
	1200	9.72	1,510		0500	3.70	107
	1300	9.79	1,560		0600	3.65	102
	1400	9.71	1,500		0700	3.61	99
	1500	9.48	1,360		0800	3.57	95
	1600	9.09	1,130		0900	3.52	91
	1700	8.62	899		1000	3.48	88
	1800	8.21	772		1100	3.44	84
	1900	7.87	700		1200	3.39	80
	2000	7.57	645		1300	3.35	77
	2100	7.30	597		1400	3.31	74
	2200	7.06	556		1500	3.28	72
	2300	6.83	517		1600	3.25	69
	2400	6.65	488		1700	3.22	67
					1800	3.19	65
June 14	0100	6.50	464		1900	3.16	63
	0200	6.36	442		2000	3.13	60
	0300	6.23	436		2100	3.12	60
	0400	6.07	398		2200	3.10	58
	0500	5.90	373		2300	3.10	58
	0600	5.75	351		2400	3.11	59
	0700	5.60	330				
	0800	5.46	310	June 16	0100	3.11	59
	0900	5.34	294		0200	3.15	62
	1000	5.24	281		0300	3.19	65
	1100	5.14	268		0400	3.18	64
	1200	5.03	254		0500	3.14	61
	1300	4.90	237		0600	3.11	59
	1400	4.78	223		0700	3.09	57
	1500	4.67	209		0800	3.06	55
	1600	4.56	196		0900	3.04	53

Table 3.--Data for selected streamflow-gaging stations for the floods of June 1981--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
05536500 Tinley Creek near Palos Park--Continued							
June 16	1000	3.01	51	June 16	1700	2.85	38
(Cont.)	1100	2.98	48	(Cont.)	1800	2.83	36
	1200	2.96	47		1900	2.81	35
	1300	2.94	45		2000	2.80	34
	1400	2.92	43		2100	2.78	33
	1500	2.89	41		2200	2.77	32
	1600	2.87	39		2300	2.75	31

Table 3.--Data for selected streamflow-gaging stations for the floods of June 1981--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05537500 Long Run near Lemont				
June 12	2400	1.56	12	June 14	1700	5.56	310
				(Cont.)	1800	5.56	293
June 13	0100	1.56	12		1900	5.55	279
	0200	1.63	13		2000	5.55	271
	0300	2.17	26		2100	5.56	261
	0400	4.16	114		2200	5.56	255
	0500	4.90	189		2300	5.24	246
	0600	5.65	330		2400	5.21	240
	0700	6.43	527				
	0800	7.18	777	June 15	0100	5.16	232
	0900	7.93	1,140		0200	5.12	225
	1000	8.48	1,470		0300	5.08	218
	1100	8.84	1,700		0400	5.03	209
	1200	8.96	1,790		0500	4.99	203
	1300	9.01	1,820		0600	4.95	197
	1400	8.95	1,780		0700	4.91	191
	1500	8.81	1,680		0800	4.86	183
	1600	8.62	1,560		0900	4.82	178
	1700	8.39	1,410		1000	4.78	173
	1800	8.17	1,280		1100	4.74	168
	1900	7.93	1,140		1200	4.69	162
	2000	7.71	1,020		1300	4.65	158
	2100	7.50	913		1400	4.60	152
	2200	7.32	834		1500	4.56	148
	2300	7.16	769		1600	4.51	142
	2400	7.02	711		1700	4.47	138
					1800	4.44	135
June 14	0100	6.89	679		1900	4.41	132
	0200	6.77	627		2000	4.37	128
	0300	6.65	594		2100	4.34	125
	0400	6.54	557		2200	4.33	124
	0500	6.44	534		2300	4.30	123
	0600	6.35	499		2400	4.28	121
	0700	6.26	478				
	0800	6.18	457	June 16	0100	4.21	117
	0900	6.08	434		0200	4.19	116
	1000	5.98	404		0300	4.16	114
	1100	5.92	391		0400	4.13	112
	1200	5.84	371		0500	4.10	111
	1300	5.74	354		0600	4.08	109
	1400	5.69	340		0700	4.06	108
	1500	5.63	326		0800	4.04	107
	1600	5.58	315		0900	4.01	105

Table 3.--Data for selected streamflow-gaging stations for the floods of June 1981--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05537500 Long Run near Lemont--Continued				
June 16	1000	3.99	104	June 17	0400	3.33	70
(Cont.)	1100	3.96	103	(Cont.)	0500	3.30	68
	1200	3.93	101		0600	3.28	68
	1300	3.90	99		0700	3.26	67
	1400	3.87	98		0800	3.24	66
	1500	3.82	95		0900	3.22	65
	1600	3.78	93		1000	3.20	64
	1700	3.74	91		1100	3.17	63
	1800	3.70	88		1200	3.15	62
	1900	3.66	86		1300	3.13	61
	2000	3.62	84		1400	3.11	60
	2100	3.57	82		1500	3.09	59
	2200	3.53	80		1600	3.06	58
	2300	3.49	78		1700	3.04	57
	2400	3.45	76		1800	3.02	56
					1900	2.99	55
June 17	0100	3.41	74		2000	2.98	54
	0200	3.38	72		2100	2.97	54
	0300	3.35	71				

Table 3.--Data for selected streamflow-gaging stations for the floods of June 1981--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05539000 Hickory Creek at Joliet				
June 12	2400	1.60	68	June 14	1700	5.93	2,430
				(Cont.)	1800	5.82	2,330
June 13	0100	1.72	90		1900	5.74	2,270
	0200	2.45	302		2000	5.64	2,190
	0300	3.29	690		2100	5.55	2,110
	0400	4.83	1,680		2200	5.45	2,040
	0500	5.78	2,440		2300	5.35	1,960
	0600	7.26	3,860		2400	5.26	1,890
	0700	8.97	5,780				
	0800	9.79	6,770	June 15	0100	5.17	1,820
	0900	10.33	7,580		0200	5.09	1,760
	1000	11.26	9,160		0300	5.02	1,710
	1100	12.68	12,000		0400	4.94	1,660
	1200	13.34	13,500		0500	4.87	1,610
	1300	([1])	16,000		0600	4.80	1,560
	1400	([1])	17,000		0700	4.74	1,520
	1500	([1])	17,100		0800	4.66	1,470
	1600	([1])	17,300		0900	4.61	1,440
	1700	([1])	16,300		1000	4.55	1,400
	1800	13.38	15,200		1100	4.49	1,360
	1900	12.73	13,600		1200	4.43	1,320
	2000	11.92	12,100		1300	4.37	1,280
	2100	11.04	10,400		1400	4.32	1,250
	2200	10.40	8,750		1500	4.27	1,220
	2300	9.95	7,690		1600	4.22	1,190
	2400	9.90	6,930		1700	4.18	1,170
					1800	4.14	1,150
June 14	0100	8.95	5,630		1900	4.10	1,120
	0200	8.49	5,040		2000	4.06	1,100
	0300	8.11	4,580		2100	4.04	1,090
	0400	7.76	4,180		2200	4.03	1,080
	0500	7.47	3,870		2300	4.02	1,080
	0600	7.21	3,600		2400	4.00	1,070
	0700	7.01	3,400				
	0800	6.86	3,260	June 16	0100	3.99	1,060
	0900	6.73	3,130		0200	3.99	1,060
	1000	6.54	2,960		0300	3.98	1,050
	1100	6.46	2,890		0400	3.96	1,040
	1200	6.35	2,790		0500	3.95	1,040
	1300	6.25	2,700		0600	3.93	1,020
	1400	6.19	2,650		0700	3.91	1,010
	1500	6.11	2,580		0800	3.88	997
	1600	6.03	2,510		0900	3.85	980

Table 3.--Data for selected streamflow-gaging stations for the floods of June 1981--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
05539000 Hickory Creek at Joliet--Continued							
June 16 (Cont.)	1000	3.82	964	June 17 (Cont.)	0500	3.18	620
	1100	3.79	947		0600	3.15	604
	1200	3.76	931		0700	3.11	584
	1300	3.73	915		0800	3.08	569
	1400	3.70	899		0900	3.04	550
	1500	3.66	877		1000	3.01	536
	1600	3.63	862		1100	2.98	521
	1700	3.59	841		1200	2.95	508
	1800	3.56	825		1300	2.92	494
	1900	3.53	810		1400	2.90	485
	2000	3.49	789		1500	2.87	471
	2100	3.46	772		1600	2.85	463
	2200	3.43	755		1700	2.83	454
	2300	3.40	738		1800	2.80	441
	2400	3.36	715		1900	2.78	432
					2000	2.77	428
June 17	0100	3.33	699		2100	2.75	420
	0200	3.29	677		2200	2.73	412
	0300	3.26	661		2300	2.71	403
	0400	3.22	640				

[1] No gage-height record; discharge based on high-water mark of 14.90 ft.

Table 3.--Data for selected streamflow-gaging stations for the floods of June 1981--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05543500 Illinois River at Marseilles				
June 12	2400	2.88	9,690	June 14 (Cont.)	1600	14.58	86,800
					1700	14.54	86,300
June 13	0100	2.87	9,650		1800	14.60	86,900
	0200	2.87	9,650		1900	14.54	86,300
	0300	3.10	10,700		2000	14.50	85,900
	0400	3.15	11,000		2100	14.45	85,300
	0500	3.35	12,000		2200	14.50	85,900
	0600	3.89	14,800		2300	14.45	85,300
	0700	4.12	16,100		2400	14.32	83,900
	0800	5.30	22,400				
	0900	5.78	25,100	June 15	0100	14.15	82,000
	1000	6.82	30,800		0200	14.11	81,600
	1100	7.65	35,300		0300	13.94	79,700
	1200	7.35	33,700		0400	13.75	77,700
	1300	8.36	39,200		0500	13.51	75,200
	1400	8.44	39,700		0600	13.26	72,700
	1500	8.84	41,900		0700	13.03	70,600
	1600	9.07	43,200		0800	12.84	68,900
	1700	9.33	44,700		0900	12.81	68,600
	1800	9.63	46,400		1000	12.55	66,300
	1900	10.30	50,200		1100	12.34	64,500
	2000	10.46	51,100		1200	12.12	62,600
	2100	11.07	55,000		1300	11.86	60,400
	2200	11.33	56,700		1400	11.83	60,100
	2300	11.80	59,900		1500	11.80	59,900
	2400	12.09	62,300		1600	11.43	57,400
					1700	11.31	56,600
June 14	0100	12.59	66,700		1800	11.26	56,300
	0200	12.83	68,800		1900	10.92	54,100
	0300	13.01	70,400		2000	10.88	53,800
	0400	13.30	70,600		2100	10.84	53,600
	0500	13.75	77,700		2200	10.80	53,300
	0600	13.83	78,500		2300	10.54	51,600
	0700	13.91	79,400		2400	10.51	51,500
	0800	14.08	81,300				
	0900	14.12	81,700	June 16	0100	10.33	50,300
	1000	14.32	83,900		0200	10.13	49,200
	1100	14.33	84,000		0300	9.98	48,300
	1200	14.48	85,700		0400	9.91	47,900
	1300	14.66	87,700		0500	9.71	46,800
	1400	14.61	87,100		0600	9.66	46,500
	1500	14.56	86,600		0700	9.61	46,200
	1530	14.73	88,500		0800	9.44	45,300

Table 3.--Data for selected streamflow-gaging stations for the floods of June 1981--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05543500 Illinois River at Marseilles--Continued				
June 16	0900	9.29	44,500	June 17	0500	8.14	38,000
(Cont.)	1000	9.20	44,000	(Cont.)	0600	8.16	38,100
	1100	9.10	43,400		0700	8.12	37,900
	1200	9.09	43,300		0800	7.82	36,300
	1300	9.07	43,200		0900	7.78	36,100
	1400	8.92	42,400		1000	7.79	36,100
	1500	8.77	41,500		1100	7.76	35,900
	1600	8.76	41,500		1200	7.74	35,800
	1700	8.72	41,300		1300	7.31	33,500
	1800	8.53	40,200		1400	7.41	34,000
	1900	8.42	39,600		1500	7.37	33,800
	2000	8.39	39,400		1600	7.27	33,300
	2100	8.33	39,100		1700	6.82	30,800
	2200	8.28	38,800		1800	7.03	32,000
	2300	8.29	38,900		1900	7.01	31,900
	2400	8.30	38,900		2000	6.98	31,700
					2100	6.77	30,600
June 17	0100	8.12	37,900		2200	6.75	30,400
	0200	8.16	38,100		2300	6.74	30,400
	0300	8.15	38,100		2400	6.62	29,700
	0400	8.18	38,200				

Table 4.--Flood-crest elevations for selected streams for the floods of June 1981

[Data furnished by the Illinois Department of Transportation]

Stream and location	Distance upstream from mouth (miles)	Elevation above National Geodetic Vertical Datum of 1929 (feet)
Spring Creek	5.44	636.28
Gougar Road	5.21	635.50
	4.77	632.00
Farrell Road	4.37	626.57
	3.79	614.20
	3.60	609.40
	3.38	602.00
	3.21	598.00
	3.00	596.00
	2.89	593.50
	2.63	584.00
	2.34	580.00
	1.82	566.29
	1.77	563.20
	1.60	560.50
	1.43	557.80
	1.42	555.30
	1.13	550.00
	.84	547.88
Jackson Street Bridge	.71	546.68
Wilson Street	.36	544.56
	.00	542.83
Hickory Creek	14.20	664.00
Wolf Road	13.26	657.60
	12.69	654.20
	12.17	650.80
	11.60	645.50
	9.80	631.80
	9.04	630.80
	8.71	628.50
	7.77	623.80
Gougar Road	7.01	614.30
	6.02	607.50
	4.45	590.50
	4.44	586.00
	2.84	557.50
	2.56	552.80
	2.27	543.40

Table 4.--Flood-crest elevations for selected streams for the floods of June 1981

[Data furnished by the Illinois Department of Transportation]

Stream and location	Distance upstream from mouth (miles)	Elevation above National Geodetic Vertical Datum of 1929 (feet)
Hickory Creek--Continued		
USGS streamflow-gaging station 05539000	2.05	542.80
	1.90	540.90
	1.89	541.00
	1.85	540.40
	1.70	539.80
	1.44	538.60
	1.40	535.30
	1.14	535.20
	.95	532.30
	.76	528.40
	.66	526.50
	.47	524.80
	.38	523.50
	.28	522.78
	.24	521.78
	.19	521.78
Thorn Creek		
	13.00	683.80
	12.00	649.69
	11.90	648.20
	11.40	637.30
	9.90	627.35
USGS streamflow-gaging station 05536215	9.20	622.04
	7.30	614.22
USGS streamflow-gaging station 05536275	4.20	603.49
Butterfield Creek	8.10	683.60
Olympian Way Bridge	7.10	677.81
	4.10	647.32
Halstead Road and Dixie Highway	2.70	636.22
USGS streamflow-gaging station 05536255	1.20	628.56
	.90	616.40
Glenwood Road	.20	612.90

Table 5.--Total storm rainfall and recurrence intervals for point rainfall during the storms of early December 1982

[<, less than; >, greater than; map numbers refer to sites on figure 1; --, station records are on an hourly basis with totals summed for the 48 hours from 0100 hours December 2 to 2400 hours December 3; recurrence intervals are determined according to the techniques of Huff and Angel (1989); out-of-state recurrence intervals may be less reliable (see Huff and Angel, 1989, p. 16)]

Map number	Station name (National Weather Service)	Time of reading at daily stations	Total storm rainfall (inches)	Recurrence interval (years)
1	Albion	1800	6.10	20
2	Aledo	1800	3.15	<2
3	Alton Dam 26	0700	4.19	4
4	Anna 1 NW	1800	3.77	<2
6	Augusta	--	4.80	5
7	Aurora College	0700	3.16	<2
8	Avon	0700	3.29	3
9	Barrington 1 NW	0800	3.46	2
10	Beardstown	0700	3.16	<2
11	Belleville Scott AF Base	1600	4.20	4
12	Belleview, MO	0700	5.08	5
13	Bentley	1800	3.79	3
14	Bloomington Waterworks	0700	6.45	20
15	Bradford 1 W	0700	3.54	3
16	Brookport Dam 52	0600	4.35	3
17	Burlington Radio KBUR, IA	--	4.27	4
18	Cahokia	0800	3.43	<2
19	Cairo WB City	2400	3.84	<2
20	Canton	1800	5.50	15
21	Carbondale Airport	0700	6.55	18
22	Carlinville 4 E	1800	4.30	5
23	Carlyle Reservoir	0800	3.27	<2
24	Carmi	0700	4.49	5
25	Channahon Dresden Island	0700	3.72	3
26	Chenoa	1800	6.54	40
27	Chester	0700	6.26	22
28	Chicago Botanical Garden	0800	3.25	<2
29	Chicago O'Hare Airport	2400	4.62	8
30	Chicago University	1200	3.46	2
31	Chicago WB Airport	2400	3.30	<2

Table 5.--Total storm rainfall and recurrence intervals for point rainfall during the storms of early December 1982--Continued

Map number	Station name (National Weather Service)	Time of reading at daily stations	Total storm rainfall (inches)	Recurrence interval (years)
32	Chillicothe	0700	3.28	2
33	Clearwater Dam, MO	--	10.10	>100
34	Clay City 6 SSE	0700	4.27	4
35	Clinton	0700	5.31	20
37	Dekalb	1700	3.14	<2
38	Dixon Springs Agricultural Center	1600	5.52	7
39	Du Quoin	2400	6.18	21
40	Elgin	0700	3.52	2
41	Farmington, MO	0700	6.52	25
42	Fairbury Water Works	0700	4.40	7
43	Fairfield	1700	4.35	4
44	Farmer City	0700	3.13	<2
45	Flora	1800	3.80	2
47	Galena	0800	2.99	<2
48	Galesburg	0700	3.29	<2
49	Galva	0700	3.18	<2
50	Gebhard Woods	0700	3.80	3
51	Gibson City	0700	3.02	<2
52	Gladstone Dam 18	0700	3.81	2
53	Golden	1800	3.98	3
54	Grafton	0700	6.00	20
55	Grand Tower 2 N	0700	8.46	80
56	Hannibal Water Works, MO	--	5.41	15
57	Greenfield	0700	6.30	26
58	Greenville	0700	3.38	<2
59	Griggsville	0700	3.62	2
60	Harrisburg	1800	5.88	10
61	Harrisburg Highway 13 BR	0700	5.60	8
62	Havana 2	0700	3.07	<2
63	Hennepin Power Plant	0800	3.34	2
64	Hutsonville Power Plant	0600	4.05	4
65	Jacksonville	0700	6.20	24
66	Jerseyville	--	6.45	29
67	Joliet Brandon Road Dam	--	3.41	2
68	Kankakee Sewage Plant	0700	3.65	2

Table 5.--Total storm rainfall and recurrence intervals for point rainfall during the storms of early December 1982--Continued

Map number	Station name (National Weather Service)	Time of reading at daily stations	Total storm rainfall (inches)	Recurrence interval (years)
69	Keithsburg	--	3.28	2
71	Kincaid	0700	4.70	6
72	Henry	--	3.00	<2
73	La Harpe 1 SW	0700	3.30	<2
75	Lawrenceville	0700	5.14	9
76	Lincoln	0700	6.26	35
77	Macon, MO	--	3.18	<2
78	Mackinaw	--	4.72	8
79	Macomb	0700	4.09	3
80	Marion 2 W	--	4.75	4
81	Maroa 1 W	--	3.60	3
82	Marseilles Lock	0700	4.04	4
83	Mason City	1800	5.30	15
84	McLeansboro	0700	4.61	5
85	Medora	1700	5.00	8
86	Minonk	--	4.86	9
87	Moline WB Airport	--	3.12	<2
89	Mount Olive	--	3.34	<2
90	Mount Pulaski	--	5.60	20
91	Mount Vernon	0700	4.83	6
92	New Florence, MO	1900	6.84	37
93	Nashville 3 NW	--	3.09	<2
94	Paducah Sewage Plant, KY	--	3.72	<2
95	Newton	--	4.00	4
96	Olney	--	4.35	4
97	Ottawa	--	3.34	<2
98	Palestine	--	4.09	5
99	Park Forest	--	3.89	4
100	Paw Paw	0600	4.46	6
101	Payson	--	4.40	4
102	Peotone	--	3.89	4
103	La Salle Peru	--	3.12	<2
104	Petersburg	0700	5.52	15
105	Piper city	0700	3.25	2
106	Pontiac	--	5.62	25

Table 5.--Total storm rainfall and recurrence intervals for point rainfall during the storms of early December 1982--Continued

Map number	Station name (National Weather Service)	Time of reading at daily stations	Total storm rainfall (inches)	Recurrence interval (years)
107	Prairie du Rocher	--	4.70	6
108	Princeville 2 NW	--	3.81	3
109	Quincy FAA AP	2400	5.06	7
110	Quincy Dam 21	--	5.20	8
111	Quincy Memorial Bridge	0700	3.78	2
112	Red Bud	0700	4.00	4
113	Rend Lake Dam	--	6.78	30
114	Rochelle	0700	3.24	<2
117	St. Louis WSFO AP, MO	0700	4.86	7
118	Rosiclare	--	5.31	8
119	Rushville	--	3.21	2
120	Ste Marie Mission House	0700	3.93	4
121	Smithland Lock & Dam	--	3.60	<2
122	Steelville 2 N, MO	0700	6.26	22
123	Sparta	--	4.20	4
124	Springfield WB AP	2400	6.39	28
125	Streator	--	4.25	5
126	Tiskilwa 1 N	--	6.58	35
127	Utica Starved Rock Dam	--	3.47	2
128	Vandalia	0700	3.02	<2
129	Virden	0700	5.81	18
130	Virginia	--	4.74	6
131	Washington 1 WSW	--	3.60	3
133	Waterloo	0700	3.62	2
134	Waterman 1 ESE	--	3.45	2
135	Waukegan	--	3.33	2
136	Wayne City	0700	7.24	40
138	Wheaton College	--	3.49	3
139	White Hall 1E	1700	5.99	20

Table 6.--Summary of flood stages and discharges for the floods of early December 1982

[mi^2, square mile; ft, feet; ft^3/s, cubic feet per second; <, less than; >, greater than; dashes (--) indicate no data available. Footnotes are at end of table. Map numbers refer to sites in figures 24 and 25]

Map number	Station number	Station name	Contributing drainage area (mi^2)	Period of record (water year)	Maximum flood previously known			Maximum flood during early December 1982			
					Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)	Recurrence interval (years)
		OHIO RIVER BASIN									
		Wabash River basin									
1	03336645	Middle Fork Vermilion River above Oakwood, Ill.	432	1979-	02-21-82	15.79	10,600	5	8.16	4,310	--
2	03339000	Vermilion River near Danville, Ill.	1,290	1915-21, 1928-	03-13-39	28.59	48,700	6	13.03	9,180	<2
3	03345500	Embarras River at Ste. Marie, Ill.	1,516	1910-	01-04-50	25.95	44,800	6	19.95	12,100	<2
4	03346000	North Fork Embarras River near Oblong, Ill.	318	1941-	01-04-50	24.38	27,100	4	19.43	8,250	3
5	03378635	Little Wabash River near Effingham, Ill.	240	1967-	04-20-70	19.95	10,300	4	17.35	4,910	<2
6	03379500	Little Wabash River below Clay City, Ill.	1,131	1914-	01-05-50	26.67	47,000	6	--	14,500	2
7	03380475	Horse Creek near Keenes, Ill.	97.2	1959-	05-08-61	[d]26.98	17,100	4	21.17	6,330	9
8	03380500	Skillet Fork at Wayne City, Ill.	464	1908-21, 1928-	05-09-61	[d]26.68	51,000	4	21.09	14,700	6
		Saline River basin									
9	03382100	South Fork Saline River near Carrier Mills, Ill.	147	1966-	01-31-82	16.32	5,160	5	15.89	4,290	6
		Lusk Creek basin									
10	03384450	Lusk Creek near Eddyville, Ill.	42.9	1968-	05-27-73	23.45	11,200	3	19.44	7,440	5
		Cache River basin									
11	03612000	Cache River at Forman, Ill.	244	1923-	03-12-35	[a]17.99	9,630	6	24.99	6,490	6
		UPPER MISSISSIPPI RIVER BASIN ABOVE THE ILLINOIS RIVER									
		Sinsinawa River basin									
12	05414820	Sinsinawa River near Menominee, Ill.	39.6	1968-	06-29-69	13.34	11,600	2	9.39	3,130	5

Table 6.--Summary of flood stages and discharges for the floods of early December 1982--Continued

Map number	Station number	Station name	Contributing drainage area (mi^2)	Period of record (water year)	Maximum flood previously known: Date	Maximum flood previously known: Gage height (ft)	Maximum flood previously known: Discharge (ft^3/s)	Maximum flood during early December 1982: Date	Maximum flood during early December 1982: Gage height (ft)	Maximum flood during early December 1982: Discharge (ft^3/s)	Recurrence interval (years)
		UPPER MISSISSIPPI RIVER BASIN ABOVE THE ILLINOIS RIVER--Continued									
		Apple River basin									
13	05419000	Apple River near Hanover, Ill.	247	1935-	01-05-46	[b]26.12	12,000	2	15.31	4,320	<2
		Rock River basin									
14	05435500	Pecatonica River at Freeport, Ill.	1,326	1914-	03-16-29	[a]19.76	18,400	7	12.53	3,140	<2
15	05438250	Coon Creek at Riley, Ill.	85.1	1961-	07-02-78	9.73	5,090	3	8.42	2,520	7
16	05438500	Kishwaukee River at Belvidere, Ill.	538	1940-	03-16-43	13.10	10,300	3	10.92	6,470	5
17	05439000	South Branch Kishwaukee River at De Kalb, Ill.	77.7	1925-34, 1980-	09-09-80	8.32	1,510	3	6.35	1,010	3
18	05439500	South Branch Kishwaukee River near Fairdale, Ill.	387	1940-	04-22-73	10.22	8,460	3	9.54	5,500	4
19	05440000	Kishwaukee River near Perryville, Ill.	1,099	1940-	03-21-79	20.48	16,700	4	16.60	11,300	4
20	05446500	Rock River near Joslin, Ill.	9,549	1940-	03-22-48	14.46	46,200	7	14.09	25,500	3
21	05447500	Green River near Geneseo, Ill.	1,003	1936-	06-22-74	16.75	12,100	3	12.82	6,800	3
22	05448000	Mill Creek near Milan, Ill.	62.4	1940-	04-22-73	11.65	9,300	2	6.45	3,670	3
		Edwards River basin									
23	05466000	Edwards River near Orion, Ill.	155	1941-	02-19-51	13.41	8,910	3	12.82	3,490	2
24	05466500	Edwards River near New Boston, Ill.	445	1935-	04-22-73	23.33	18,000	5	21.38	5,440	4
		Pope Creek basin									
25	05467000	Pope Creek near Keithsburg, Ill.	174	1935-	04-22-73	27.88	8,900	3	26.94	3,680	5
		Henderson Creek basin									
26	05469000	Henderson Creek near Oquawka, Ill.	432	1935-	07-08-82	31.05	34,600	3	25.57	4,520	<2
		Bear Creek basin									
27	05495500	Bear Creek near Marcelline, Ill.	349	1944-	07-22-51	26.07	21,200	3	23.00	17,500	9
		Hadley Creek basin									
28	05502040	Hadley Creek at Kinderhook, Ill.	72.7	1940-	04-23-44	13.91	15,000	2	11.42	10,400	6

Table 6.--Summary of flood stages and discharges for the floods of early December 1982--Continued

Map number	Station number	Station name	Contributing drainage area (mi^2)	Period of record (water year)	Maximum flood previously known: Date	Gage height (ft)	Discharge (ft^3/s)	Maximum flood during early December 1982: Date	Gage height (ft)	Discharge (ft^3/s)	Recurrence interval (years)
		UPPER MISSISSIPPI RIVER BASIN ABOVE THE ILLINOIS RIVER--Continued									
		Bay Creek basin									
29	05512500	Bay Creek at Pittsfield, Ill.	39.4	1940-	09-16-65	14.77	12,600	2	11.09	3,410	<2
30	05513000	Bay Creek at Nebo, Ill.	161	1940-	08-16-46	19.31	23,500	3	14.60	10,700	4
		ILLINOIS RIVER BASIN									
		Kankakee River basin									
31	05520500	Kankakee River at Momence, Ill.	2,294	1905-06, 1915-	03-06-79	[b]10.51	16,000	3	5.79	9,450	8
32	05525000	Iroquois River at Iroquois, Ill.	686	1945-	06-13-58	26.31	10,400	7	17.86	3,500	<2
33	05525500	Sugar Creek at Milford, Ill.	446	1948-	02-21-51	[d]20.90	22,900	4	16.34	4,640	<2
34	05526000	Iroquois River near Chebanse, Ill.	2,091	1923-	05-13-33 03-07-79	[d]20.10 [d]21.68	27,000 27,000	6	14.78	15,100	3
35	05527500	Kankakee River near Wilmington, Ill.	5,150	1934-	07-13-57	11.40	75,900	3	8.53	62,700	60
		Des Plaines River basin									
36	05527800	Des Plaines River near Russell, Ill.	123	1967-	03-21-79	9.69	2,120	7	9.37	1,180	4
	05528000	Des Plaines River near Gurnee, Ill.	232	1946-58, 1960-	04-03-60	10.64	3,070	8	8.60	1,780	4
37	05528500	Buffalo Creek near Wheeling, Ill.	19.6	1952-	07-22-82	7.94	887	2	6.94	610	7
38	05529000	Des Plaines River near Des Plaines, Ill.	360	1941-	04-02-60	8.56	4,670	3	7.54	3,550	9
39	05529500	McDonald Creek near Mount Prospect, Ill.	7.93	1952-	06-20-72	7.58	664	3	7.46	548	15
40	05530000	Weller Creek at Des Plaines, Ill.	13.2	1951-	06-10-67	15.09	1,590	2	8.63	792	3
41	05530990	Salt Creek at Rolling Meadows, Ill.	30.5	1974-	04-18-75	10.82	910	3	12.56	1,060	35
42	05531500	Salt Creek at Western Springs, Ill.	115	1946-	03-04-79	8.48	1,930	5	8.71	2,070	40
43	05532000	Addison Creek at Bellwood, Ill.	17.9	1950-	08-07-82	10.68	839	3	8.94	639	7
44	05532500	Des Plaines River at Riverside, Ill.	630	1944-	03-20-48	8.28	6,510	5	8.01	6,130	15
45	05533000	Flag Creek near Willow Springs, Ill.	16.5	1951-	09-14-61	13.71	2,680	3	8.68	1,280	5

Table 6.--Summary of flood stages and discharges for the floods of early December 1982--Continued

Map number	Station number	Station name	Contributing drainage area (mi^2)	Period of record (water year)	Maximum flood previously known: Date	Maximum flood previously known: Gage height (ft)	Maximum flood previously known: Discharge (ft^3/s)	Maximum flood during early December 1982: Date	Maximum flood during early December 1982: Gage height (ft)	Maximum flood during early December 1982: Discharge (ft^3/s)	Recurrence interval (years)
		ILLINOIS RIVER BASIN--Continued									
		Des Plaines River basin--Continued									
46	05534500	North Branch Chicago River at Deerfield, Ill.	19.7	1952-	07-22-82	10.93	756	3	10.78	702	50
47	05535000	Skokie River at Lake Forest, Ill.	13.0	1952-	07-22-82	8.35	435	3	7.94	394	20
48	05535070	Skokie River near Highland Park, Ill.	21.1	1967-	07-22-82	8.44	716	3	8.46	724	40
49	05535500	West Fork of North Branch Chicago River at Northbrook, Ill.	11.5	1952-	07-22-82	9.66	1,070	2	8.29	744	8
50	05536000	North Branch Chicago River at Niles, Ill.	100	1951-	06-11-67	9.83	2,210	3	8.99	1,480	6
51	05536215	Thorn Creek at Glenwood, Ill.	24.7	1949-	08-17-68	11.26	2,600	3	10.98	2,210	20
52	05536235	Deer Creek near Chicago Heights, Ill.	23.1	1948-	07-13-57	11.75	1,380	3	11.49	848	10
53	05536255	Butterfield Creek at Flossmoor, Ill.	23.5	1948-	05-22-82	11.97	2,160	3	11.40	1,700	15
54	05536265	Lansing Ditch near Lansing, Ill.	8.84	1948-	05-10-48	9.24	461	3	9.11	200	2
55	05536275	Thorn Creek at Thornton, Ill.	104	1948-	07-13-57	16.00	4,700	3	15.95	3,370	8
56	05536290	Little Calumet River at South Holland, Ill.	208	1948-	07-14-57	[a]20.11	4,440	4	19.46	3,520	7
57	05536340	Midlothian Creek at Oak Forest, Ill.	12.6	1951-	04-22-73	7.67	627	3	4.42	259	2
58	05536500	Tinley Creek near Palos Park, Ill.	11.2	1951-	10-10-54	10.30	1,930	3	9.39	1,310	15
59	05537500	Long Run near Lemont, Ill.	20.9	1951-	10-10-54	9.91	3,160	3	6.94	676	3
60	05539000	Hickory Creek at Joliet, Ill.	107	1945-	06-13-81	14.90	20,500	3	9.92	8,360	15
61	05539900	West Branch Du Page River near West Chicago, Ill.	28.5	1961-	06-10-67	10.36	805	3	10.44	984	45
62	05540095	West Branch Du Page River near Warrenville, Ill.	90.4	1969-	08-26-72	4.70	1,980	3	4.88	2,160	25
63	05540500	Du Page River at Shorewood, Ill.	324	1941-	10-11-54	11.06	12,000	3	7.61	5,260	4
		Mazon River basin									
64	05542000	Mazon River near Coal City, Ill.	455	1940-	07-15-58	19.70	17,600	4	19.51	22,400	50
65	05543500	Illinois River at Marseilles, Ill.	8,259	1920-	07-14-57	15.20	93,900	4	16.78	94,100	45

Table 6.--Summary of flood stages and discharges for the floods of early December 1982--Continued

Map number	Station number	Station name	Contributing drainage area (mi^2)	Period of record (water year)	Maximum flood previously known: Date	Maximum flood previously known: Gage height (ft)	Maximum flood previously known: Discharge (ft^3/s)	Maximum flood during early December 1982: Date	Maximum flood during early December 1982: Gage height (ft)	Maximum flood during early December 1982: Discharge (ft^3/s)	Recurrence interval (years)
		ILLINOIS RIVER BASIN--Continued									
		Fox River basin									
66	05548280	Nippersink Creek near Spring Grove, Ill.	192	1966-	02-20-71	13.03	2,430	4	11.01	1,640	4
67	05549000	Boone Creek near McHenry, Ill.	15.5	1948-	06-02-70	4.87	276	3	4.02	190	5
68	05550500	Poplar Creek at Elgin, Ill.	35.2	1951-	04-22-73	5.45	896	3	5.67	761	20
69	05551200	Ferson Creek near St. Charles, Ill.	51.7	1961-	02-20-71	7.64	1,970	3	7.05	1,560	7
70	05551700	Blackberry Creek near Yorkville, Ill.	70.2	1961-	05-17-74	8.58	1,320	4	7.61	924	4
71	05552500	Fox River at Dayton, Ill.	2,642	1915-	10-11-54	24.63	47,100	3	17.17	26,000	15
		Vermilion River basin									
72	05554000	North Fork Vermilion River near Charlotte, Ill.	186	1943-	05-14-70	16.13	4,550	4	15.31	4,260	9
73	05554500	Vermilion River at Pontiac, Ill.	579	1943-	06-03-80	18.12	11,300	4	19.16	13,100	35
74	05555300	Vermilion River near Leonore, Ill.	1,251	1931-	07-15-58	[a]15.30	33,500	4	27.13	31,800	35
		Big Bureau Creek basin									
75	05556500	Big Bureau Creek at Princeton, Ill.	196	1936-	05-17-74	16.01	12,500	3	9.17	4,170	<2
76	05557000	West Bureau Creek at Wyanet, Ill.	86.7	1936-	05-17-74	16.14	20,100	3	8.80	2,770	2
77	05557500	East Bureau Creek near Bureau, Ill.	99.0	1936-	05-17-74	17.15	7,500	3	13.10	3,550	4
78	05558300	Illinois River at Henry, Ill.	13,543	1982-	03-22-82	[d]30.75	104,000	7	[d]30.70	108,000	--
		Farm Creek basin									
79	05560500	Farm Creek at Farmdale, Ill.	27.4	1949-	04-24-50	7.58	--	3	3.59	511	<2
		Fondulac Creek basin									
80	05561500	Fondulac Creek near East Peoria, Ill.	5.54	1948-	03-03-79	4.66	560	2	2.87	131	<2

Table 6.--Summary of flood stages and discharges for the floods of early December 1982--Continued

Map number	Station number	Station name	Contributing drainage area (mi^2)	Period of record (water year)	Maximum flood previously known: Date	Gage height (ft)	Discharge (ft^3/s)	Maximum flood during early December 1982: Date	Gage height (ft)	Discharge (ft^3/s)	Recurrence interval (years)
		ILLINOIS RIVER BASIN--Continued									
		Mackinaw River basin									
81	05567000	Panther Creek near El Paso, Ill.	93.9	1950-	07-09-51	15.15	10,900	4	12.80	6,860	25
82	05567500	Mackinaw River near Congerville, Ill.	767	1945-	07-09-51	19.41	36,000	5	20.21	44,800	>100
83	05568000	Mackinaw River near Green Valley, Ill.	1,089	1921-	06-03-80	15.98	46,700	5	16.13	51,100	>100
84	05568500	Illinois River at Kingston Mines, Ill.	15,818	1940-	05-23-43	25.74	83,100	7	[d]24.37	88,800	40
		Spoon River basin									
85	05568800	Indian Creek near Wyoming, Ill.	62.7	1960-	06-22-74	13.81	6,540	3	10.32	1,450	<2
86	05569500	Spoon River at London Mills, Ill.	1,062	1943-	06-23-74	28.03	41,000	3	23.39	14,200	4
87	05570000	Spoon River at Seville, Ill.	1,636	1914-	08-22-24	30.77	37,300	5	27.00	20,900	7
88	05570350	Big Creek at St. David, Ill.	28.0	1972-	06-23-74	10.25	2,080	3	9.07	842	<2
89	05570360	Evelyn Branch near Bryant, Ill.	5.78	1972-	06-03-80	--	127	2	3.09	151	10
90	05570370	Big Creek near Bryant, Ill.	41.2	1972-	06-23-74	12.90	1,220	3	12.92	1,050	3
		Sangamon River basin									
91	05570910	Sangamon River at Fisher, Ill.	240	1979-	03-04-79	18.20	8,380	4	15.38	4,390	--
92	05572000	Sangamon River at Monticello, Ill.	550	1908-	10-04-26	[a]18.50	19,000	6	13.89	3,880	<2
93	05575500	South Fork Sangamon River at Kincaid, Ill.	562	1917-34, 1945-	06-29-57	30.02	21,500	3	--	3,600	<2
94	05575800	Horse Creek at Pawnee, Ill.	52.2	1968-	04-21-73	17.70	4,900	3	15.49	1,390	<2
95	05576000	South Fork Sangamon River near Rochester, Ill.	867	1949-	07-01-57	[a]28.35	18,100	4	27.50	8,940	4
96	05577500	Spring Creek at Springfield, Ill.	107	1948-	03-30-60	12.70	6,750	3	14.44	8,080	35
97	05578500	Salt Creek near Rowell, Ill.	335	1943-	05-16-68	29.21	24,500	3	20.71	4,310	3
98	05579500	Lake Fork near Cornland, Ill.	214	1948-	04-12-79	23.11	8,930	4	22.43	7,270	14
99	05580000	Kickapoo Creek at Waynesville, Ill.	227	1948-	08-15-81	16.91	24,600	3	14.01	5,200	3
100	05580500	Kickapoo Creek near Lincoln, Ill.	306	1945-	04-12-79	16.55	23,200	3	16.60	23,300	>100

Table 6.--Summary of flood stages and discharges for the floods of early December 1982--Continued

Map number	Station number	Station name	Contributing drainage area (mi^2)	Period of record (water year)	Maximum flood previously known: Date	Maximum flood previously known: Gage height (ft)	Maximum flood previously known: Discharge (ft^3/s)	Maximum flood during early December 1982: Date	Maximum flood during early December 1982: Gage height (ft)	Maximum flood during early December 1982: Discharge (ft^3/s)	Recurrence interval (years)
		ILLINOIS RIVER BASIN--Continued									
		Sangamon River basin--Continued									
101	05580950	Sugar Creek near Bloomington, Ill.	34.4	1975-	03-03-79	11.04	3,680	3	14.02	6,600	>100
102	05581500	Sugar Creek near Hartsburg, Ill.	333	1945-	08-15-81	16.57	33,000	4	17.90	41,200	>100
103	05582000	Salt Creek near Greenview, Ill.	1,804	1942-	05-19-43	20.50	41,200	4	20.21	37,500	35
104	05583000	Sangamon River near Oakford, Ill.	5,093	1910-12, 1914-19, 1921-22, 1929-34, 1940-	05-20-43	25.63	123,000	5	23.65	68,700	40
105	05576500	Sangamon River at Riverton, Ill.	2,618	1908-	05-19-43	31.52	68,700	4	23.82	29,600	9
		La Moine River basin									
106	05584400	Drowning Fork at Bushnell, Ill.	26.3	1960-	06-02-80	12.92	3,500	3	12.26	991	3
107	05584500	La Moine River at Colmar, Ill.	655	1945-	09-25-70	25.14	27,000	4	23.82	13,700	4
108	05585000	La Moine River at Ripley, Ill.	1,293	1921-	09-27-70	28.42	24,100	5	27.27	21,000	20
109	05585500	Illinois River at Meredosia, Ill.	26,028	1939-	05-26-43	[d]28.61	123,000	12	[d]26.4	112,000	20
		Mauvaise Terre Creek basin									
110	05586000	North Fork Mauvaise Terre Creek near Jacksonville, Ill.	29.1	1950-	05-06-77	11.62	4,700	3	11.62	4,700	<2
111	05586500	Hurricane Creek near Roodhouse, Ill.	2.30	1951-	06-14-57	11.77	1,700	3	8.74	274	3
		Macoupin Creek basin									
112	05587000	Macoupin Creek near Kane, Ill.	868	1921-34, 1940-	05-18-43	28.5	40,000	4	26.3	26,700	15
		UPPER MISSISSIPPI RIVER BASIN BELOW THE ILLINOIS RIVER									
	05587500	Mississippi River at Alton, Ill.	171,500	1928-	04-29-73	[d]423.15	535,000	5	428.68	422,000	15
		Cahokia Creek basin									
113	05587900	Cahokia Creek at Edwardsville, Ill.	212	1969-	04-12-79	24.74	8,200	4	19.52	5,210	2
114	05588000	Indian Creek at Wanda, Ill.	36.7	1940-	08-15-46	[a]18.41	9,340	3	13.64	2,020	2

Table 6.--Summary of flood stages and discharges for the floods of early December 1982--Continued

Map number	Station number	Station name	Contributing drainage area (mi^2)	Period of record (water year)	Maximum flood previously known: Date	Maximum flood previously known: Gage height (ft)	Maximum flood previously known: Discharge (ft^3/s)	Maximum flood during early December 1982: Date	Maximum flood during early December 1982: Gage height (ft)	Maximum flood during early December 1982: Discharge (ft^3/s)	Recurrence interval (years)
		UPPER MISSISSIPPI RIVER BASIN BELOW THE ILLINOIS RIVER--Continued									
		Cahokia Canal basin									
115	05589500	Canteen Creek at Caseyville, Ill.	22.6	1940-	06-15-57	17.81	10,200	2	7.53	1,400	<2
		Kaskaskia River basin									
116	05590800	Lake Fork at Atwood, Ill.	149	1973-	03-05-79	14.03	4,030	5	10.97	1,400	<2
117	05591200	Kaskaskia River at Cooks Mills, Ill.	473	1971-	03-05-79	16.53	8,910	6	12.38	3,220	<2
118	05591550	Whitley Creek near Allenville, Ill.	34.6	1980-	06-01-80	11.77	936	4	9.60	516	--
119	05591700	West Okaw River near Lovington, Ill.	112	1980-	07-03-82	12.33	2,950	5	8.85	969	--
120	05592050	Robinson Creek near Shelbyville, Ill.	93.1	1980-	01-30-82	12.23	4,010	3	10.92	2,420	--
121	05592800	Hurricane Creek near Mulberry Grove, Ill.	152	1971-	04-12-79	19.69	16,300	3	19.90	17,400	25
122	05592900	East Fork Kaskaskia River near Sandoval, Ill.	113	1980-	02-21-82	--	3,500	4	15.95	2,550	--
123	05593520	Crooked Creek near Hoffman, Ill.	254	1975-	04-12-79	14.95	7,060	4	--	4,500	<2
124	05593575	Little Crooked Creek near New Minden, Ill.	84.3	1968-	12-21-67	21.00	10,900	4	18.63	4,780	4
125	05593900	East Fork Shoal Creek near Coffeen, Ill.	55.5	1964-	12-07-66	14.45	5,910	3	12.86	2,620	3
126	05594000	Shoal Creek near Breese, Ill.	735	1910-15, 1946-	01-06-50	22.63	23,100	6	20.17	13,300	4
127	05594450	Silver Creek near Troy, Ill.	154	1967-	04-12-79	17.52	10,600	4	15.80	5,700	4
128	05594800	Silver Creek near Freeburg, Ill.	464	1971-	04-14-79	20.70	9,200	6	18.57	6,570	3
129	05595200	Richland Creek near Hecker, Ill.	129	1970-	11-02-72	42.88	14,900	3	40.36	4,930	2
		Big Muddy River basin									
130	05595730	Rayse Creek near Waltonville, Ill.	88.0	1980-	01-31-82	14.18	3,060	3	14.76	3,480	--
131	05595830	Casey Fork at Route 37 near Mt. Vernon, Ill.	87.7	1980-	01-31-82	16.62	--	4	17.45	--	--
132	05597500	Crab Orchard Creek near Marion, Ill.	31.7	1952-	01-31-82	12.63	3,520	3	12.06	2,500	5

[a] At former site and datum.
[b] Gage height affected by ice.
[c] Prior to 03-31-81 gage located 1.4 miles upstream at same datum.
[d] Time of peak discharge does not correspond with peak gage height.

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982

[ft, feet; ft^3/s, cubic feet per second]

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05527500 Kankakee River near Wilmington				
Dec. 2	1000	3.41	11,900	Dec. 4	0300	8.11	57,400
	1100	3.41	11,900	(Cont.)	0400	8.01	56,100
	1200	3.41	11,900		0500	7.91	54,900
	1300	3.39	11,800		0700	7.74	52,800
	1400	3.39	11,800		0800	7.65	51,700
	1500	3.39	11,800		0900	7.57	50,700
	1600	3.39	11,800		1000	7.50	49,800
	1700	3.42	12,000		1100	7.41	48,800
	1800	3.44	12,100		1200	7.31	47,600
	1900	3.46	12,200		1300	7.24	46,800
	2000	3.55	12,800		1400	7.15	45,700
	2100	3.69	13,800		1500	7.08	44,900
	2300	4.35	18,600		1600	7.00	44,000
	2400	4.35	18,600		1700	6.92	43,100
					1800	6.85	42,300
Dec. 3	0100	5.20	25,700		1900	6.79	41,600
	0200	5.57	29,100		2000	6.72	40,800
	0300	5.91	32,300		2100	6.66	40,200
	0500	6.40	37,400		2200	6.63	39,800
	0600	6.55	39,000		2300	6.61	39,600
	0700	6.64	40,000		2400	6.57	39,200
	0800	6.75	41,200				
	0900	6.91	43,000	Dec. 5	0100	6.55	39,000
	1000	7.12	45,400		0200	6.55	39,000
	1100	7.37	48,300		0300	6.55	39,000
	1200	7.61	51,200		0400	6.57	39,200
	1300	7.85	54,100		0500	6.55	39,000
	1400	8.08	57,000		0600	6.55	39,000
	1500	8.15	57,900		0700	6.55	39,000
	1600	8.27	59,400		0800	6.54	38,900
	1700	8.36	60,500		0900	6.55	39,000
	1800	8.43	61,400		1000	6.54	38,900
	1900	8.52	62,600		1100	6.54	38,900
	2000	8.53	62,700		1200	6.55	39,000
	2100	8.48	62,100		1300	6.55	39,000
	2200	8.46	61,800		1400	6.54	38,900
	2300	8.39	60,900		1500	6.53	38,800
	2400	8.32	60,000		1600	6.54	38,900
					1700	6.53	38,800
Dec. 4	0100	8.24	59,000		1800	6.53	38,800
	0200	8.13	57,600		1900	6.51	38,500

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
05527500 Kankakee River near Wilmington--Continued							
Dec. 5 (Cont.)	2000	6.51	38,500	Dec. 6 (Cont.)	1000	6.30	36,300
	2100	6.49	38,300		1100	6.29	36,200
	2200	6.48	38,200		1200	6.28	36,100
	2300	6.48	38,200		1300	6.26	35,900
	2400	6.44	37,800		1400	6.25	35,800
					1500	6.23	35,600
Dec. 6	0100	6.44	37,800		1600	6.20	35,200
	0200	6.43	37,700		1700	6.19	35,100
	0300	6.42	37,500		1800	6.17	34,900
	0400	6.40	37,400		1900	6.15	34,700
	0500	6.38	37,100		2000	6.14	34,600
	0600	6.37	37,000		2100	6.12	34,400
	0700	6.35	36,800		2200	6.09	34,100
	0800	6.34	36,700		2300	6.09	34,100
	0900	6.32	36,500		2400	6.06	33,800

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05529500 McDonald Creek near Mount Prospect				
Dec. 1	2200	1.49	4.3	Dec. 3	1500	6.28	193
	2300	1.49	4.3	(Cont.)	1600	6.00	172
	2400	1.49	4.3		1700	5.66	153
					1800	5.32	137
Dec. 2	0100	1.49	4.8		1900	5.09	125
	0200	1.59	6.0		2000	4.76	110
	0300	1.65	6.9		2100	4.48	97
	0400	1.85	11		2200	4.27	87
	0500	2.01	13		2300	4.13	81
	0600	2.16	16		2400	3.99	75
	0700	2.60	26				
	0800	2.88	34	Dec. 4	0100	3.86	69
	0900	3.02	38		0200	3.78	66
	1000	3.20	44		0300	3.69	63
	1100	3.46	54		0400	3.61	59
	1200	3.80	71		0500	3.55	57
	1300	4.14	82		0600	3.48	54
	1400	4.23	86		0700	3.42	52
	1500	4.34	91		0800	3.36	50
	1600	4.39	93		0900	3.34	49
	1700	4.66	106		1000	3.26	46
	1800	5.22	132		1100	3.21	45
	1900	5.44	142		1200	3.14	42
	2000	5.71	156		1300	3.10	41
	2100	6.10	179		1400	3.07	40
	2200	6.48	215		1500	3.04	39
	2300	6.71	247		1600	3.01	38
	240Q	6.90	296		1700	2.99	37
					1800	2.96	36
Dec. 3	0100	7.06	356		1900	2.94	36
	0200	7.20	418		2000	2.92	35
	0300	7.33	475		2100	2.90	35
	0400	7.41	520		2200	2.88	34
	0500	7.43	529		2300	2.87	34
	0600	7.46	548		2400	2.90	35
	0700	7.43	529				
	0800	7.39	515	Dec. 5	0100	3.19	44
	0900	7.31	467		0200	3.55	57
	1000	7.19	414		0300	3.84	68
	1100	7.06	356		0400	4.05	78
	1200	6.90	296		0500	4.21	85
	1300	6.71	247		0600	4.39	93
	1400	6.52	219		0700	4.71	108

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
05529500 McDonald Creek near Mount Prospect--Continued							
Dec. 5	0800	4.91	117	Dec. 5	2400	4.30	89
(Cont.)	0900	5.07	124	(Cont.)			
	1000	5.18	130	Dec. 6	0100	4.13	81
	1100	5.25	134		0200	3.98	74
	1200	5.27	134		0300	3.86	69
	1300	5.23	133		0400	3.75	65
	1400	5.13	127		0500	3.66	61
	1500	5.03	122		0600	3.58	58
	1600	4.99	121		0700	3.50	55
	1700	4.99	121		0800	3.42	52
	1800	5.00	121		0900	3.36	50
	1900	5.01	122		1000	3.29	48
	2000	4.99	121		1100	3.23	45
	2100	4.88	115		1200	3.18	44
	2200	4.71	108		1300	3.13	42
	2300	4.51	99		1400	3.08	40

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05536235 Deer Creek near Chicago Heights				
Dec. 1	1500	3.57	6.7	Dec. 3	0800	11.28	759
	1600	3.58	6.8	(Cont.)	0900	11.31	771
	1700	3.62	7.3		1000	11.32	775
	1800	5.14	38		1100	11.33	780
	1900	6.00	66		1200	11.35	788
	2000	6.08	69		1300	11.36	792
	2100	5.80	59		1400	11.40	809
	2200	5.57	51		1500	11.43	822
	2300	5.41	46		1600	11.47	840
	2400	5.35	44		1700	11.49	848
					1800	11.48	844
Dec. 2	0100	5.34	44		1900	11.46	835
	0200	5.31	43		2000	11.44	826
	0300	5.29	42		2100	11.41	813
	0400	5.27	42		2200	11.38	801
	0500	5.25	41		2300	11.34	784
	0600	5.23	41		2400	11.30	767
	0700	5.19	40				
	0800	5.15	38	Dec. 4	0100	11.25	747
	0900	5.05	36		0200	11.19	723
	1000	5.05	36		0300	11.13	700
	1100	5.03	35		0400	11.07	677
	1200	4.96	33		0500	11.01	655
	1300	4.83	30		0600	10.93	627
	1400	4.95	33		0700	10.85	599
	1500	4.41	20		0800	10.76	570
	1600	4.02	13		0900	10.67	541
	1700	3.83	10		1000	10.57	511
	1800	3.77	9.3		1100	10.47	483
	1900	4.07	14		1200	10.39	464
	2000	4.50	22		1300	10.31	446
	2100	5.44	47		1400	10.24	430
	2200	7.38	125		1500	10.17	415
	2300	9.16	279		1600	10.09	398
	2400	10.30	454		1700	10.03	386
					1800	9.99	378
Dec. 3	0100	10.76	570		1900	9.93	369
	0200	10.92	623		2000	9.88	361
	0300	11.02	659		2100	9.82	352
	0400	11.08	681		2200	9.76	343
	0500	11.14	704		2300	9.73	339
	0600	11.19	723		2400	9.72	337
	0700	11.24	743				

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
05536235 Deer Creek near Chicago Heights--Continued							
Dec. 5	0100	9.68	331	Dec. 6 (Cont.)	1300	8.15	175
	0200	9.62	323		1400	8.02	166
	0300	9.57	316		1500	7.90	159
	0400	9.52	309		1600	7.78	151
	0500	9.45	300		1700	7.66	144
	0600	9.39	292		1800	7.55	138
	0700	9.34	286		1900	7.44	133
	0800	9.30	281		2000	7.36	130
	0900	9.30	281		2100	7.26	125
	1000	9.38	291		2200	7.17	122
	1100	9.43	297		2300	7.08	118
	1200	9.47	303		2400	7.00	115
	1300	9.53	311				
	1400	9.55	313	Dec. 7	0100	6.92	111
	1500	9.54	312		0200	6.82	107
	1600	9.50	307		0300	6.72	103
	1700	9.46	301		0400	6.63	100
	1800	9.43	297		0500	6.55	97
	1900	9.41	295		0600	6.48	94
	2000	9.42	296		0700	6.40	91
	2100	9.44	299		0800	6.33	89
	2200	9.43	297		0900	6.28	87
	2300	9.41	295		1000	6.23	85
	2400	9.39	292		1100	6.18	83
					1200	6.08	80
Dec. 6	0100	9.35	287		1300	5.72	67
	0200	9.29	280		1400	5.24	52
	0300	9.23	272		1500	4.86	41
	0400	9.16	264		1600	4.60	34
	0500	9.10	257		1700	4.42	29
	0600	9.04	250		1800	4.31	27
	0700	8.95	240		1900	4.22	25
	0800	8.84	229		2000	4.17	24
	0900	8.70	216		2100	4.14	23
	1000	8.56	204		2200	4.11	22
	1100	8.42	194		2300	4.08	22
	1200	8.29	185		2400	4.06	21

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05536255 Butterfield Creek at Flossmoor				
Dec. 2	1500	4.32	16	Dec. 4	0800	8.05	424
	1600	4.31	15	(Cont.)	0900	7.96	408
	1700	4.31	15		1000	7.82	383
	1800	4.56	26		1100	7.72	366
	1900	5.34	75		1200	7.62	350
	2000	5.77	112		1300	7.48	327
	2100	7.34	305		1400	7.37	310
	2200	8.86	585		1500	7.26	293
	2300	9.73	800		1600	7.17	280
	2400	10.35	1,040		1700	7.09	268
					1800	6.99	254
Dec. 3	0100	10.93	1,380		1900	6.90	242
	0200	11.18	1,550		2000	6.84	233
	0300	11.25	1,600		2100	6.78	225
	0400	11.29	1,620		2200	6.72	218
	0500	11.37	1,680		2300	6.65	209
	0600	11.44	1,730		2400	6.73	219
	0700	11.43	1,730				
	0800	11.39	1,700	Dec. 5	0100	6.72	218
	0900	11.29	1,620		0200	6.68	212
	1000	11.24	1,590		0300	6.72	218
	1100	11.16	1,530		0400	6.71	216
	1200	11.08	1,480		0500	6.69	214
	1300	10.98	1,420		0600	6.66	210
	1400	10.87	1,350		0700	6.62	205
	1500	10.72	1,260		0800	6.62	205
	1600	10.52	1,140		0900	6.66	210
	1700	10.34	1,050		1000	6.74	220
	1800	10.16	958		1100	6.78	225
	1900	9.98	885		1200	6.83	235
	2000	9.81	825		1300	6.91	242
	2100	9.66	778		1400	6.92	244
	2200	9.50	730		1500	6.89	240
	2300	9.32	688		1600	6.84	233
	2400	9.15	649		1700	6.77	224
					1800	6.73	219
Dec. 4	0100	8.97	609		1900	6.70	215
	0200	8.81	574		2000	6.69	214
	0300	8.67	545		2100	6.66	210
	0400	8.52	514		2200	6.62	205
	0500	8.40	490		2300	6.59	201
	0600	8.29	469		2400	6.57	199
	0700	8.17	446				

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05536255 Butterfield Creek at Flossmoor--Continued				
Dec. 6	0100	6.54	195	Dec. 6	2000	5.67	103
	0200	6.48	188	(Cont.)	2100	5.64	100
	0300	6.41	179		2200	5.61	97
	0400	6.35	172		2300	5.58	95
	0500	6.31	168		2400	5.55	92
	0600	6.27	163				
	0700	6.22	158	Dec. 7	0100	5.53	91
	0800	6.17	152		0200	5.50	88
	0900	6.12	147		0300	5.48	86
	1000	6.08	143		0400	5.46	85
	1100	6.03	137		0500	5.43	82
	1200	5.99	133		0600	5.41	80
	1300	5.97	131		0700	5.38	78
	1400	5.91	125		0800	5.36	76
	1500	5.87	121		0900	5.34	75
	1600	5.83	117		1000	5.31	72
	1700	5.79	114		1100	5.30	72
	1800	5.75	110		1200	5.28	70
	1900	5.71	106				

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05536500 Tinley Creek near Palos Park				
Dec. 2	1500	2.43	13	Dec. 4	0700	4.14	163
	1600	2.43	13	(Cont.)	0800	4.03	151
	1700	2.43	13		0900	3.94	141
	1800	2.49	15		1000	3.87	133
	1900	2.70	27		1100	3.80	126
	2000	3.36	77		1200	3.74	119
	2100	4.80	224		1300	3.69	114
	2200	5.24	279		1400	3.65	110
	2300	6.45	454		1500	3.60	105
	2400	7.98	719		1600	3.55	100
					1700	3.51	96
Dec. 3	0100	9.00	1,100		1800	3.47	42
	0200	9.36	1,290		1900	3.45	90
	0230	9.39	1,310		2000	3.42	88
	0300	9.35	1,290		2100	3.38	84
	0400	9.13	1,160		2200	3.35	81
	0500	8.78	1,020		2300	3.34	80
	0600	8.41	906		2400	3.36	82
	0700	8.08	820				
	0800	7.79	798	Dec. 5	0100	3.45	90
	0900	7.51	682		0200	3.61	106
	1000	7.25	637		0300	3.90	136
	1100	7.01	597		0400	4.13	162
	1200	6.79	557		0500	4.21	172
	1300	6.62	528		0600	4.15	165
	1400	6.46	500		0700	4.05	153
	1500	6.30	473		0800	4.01	149
	1600	6.16	450		0900	3.96	143
	1700	6.02	427		1000	3.92	139
	1800	5.89	406		1100	3.93	140
	1900	5.78	389		1200	3.98	145
	2000	5.67	372		1300	4.08	156
	2100	5.56	355		1400	4.20	170
	2200	5.43	335		1500	4.17	167
	2300	5.30	316		1600	4.10	159
	2400	5.14	293		1700	4.00	147
					1800	3.91	137
Dec. 4	0100	4.96	268		1900	3.83	129
	0200	4.78	243		2000	3.76	121
	0300	4.62	222		2100	3.70	115
	0400	4.49	206		2200	3.66	111
	0500	4.37	191		2300	3.63	108
	0600	4.25	176		2400	3.62	107

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05536500 Tinley Creek near Palos Park--Continued				
Dec. 6	0100	3.59	104	Dec. 6	1300	3.10	59
	0200	3.54	99	(Cont.)	1400	3.08	58
	0300	3.49	94		1500	3.06	56
	0400	3.44	89		1600	3.04	54
	0500	3.39	85		1700	3.02	53
	0600	3.35	81		1800	3.00	51
	0700	3.31	77		1900	2.98	50
	0800	3.27	74		2000	2.96	48
	0900	3.23	70		2100	2.95	47
	1000	3.19	67		2200	2.93	46
	1100	3.16	64		2300	2.92	45
	1200	3.13	62		2400	2.91	44

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05539900 West Branch Du Page River near West Chicago				
Dec. 2	0100	5.53	77	Dec. 3	1900	9.61	673
	0200	5.53	77	(Cont.)	2000	9.52	644
	0300	5.53	77		2100	9.44	621
	0400	5.54	77		2200	9.35	597
	0500	5.57	79		2300	9.27	576
	0600	5.67	86		2400	9.18	553
	0700	5.74	90				
	0800	5.86	99	Dec. 4	0100	9.08	528
	0900	6.03	111		0200	8.99	506
	1000	6.25	129		0300	8.90	486
	1100	6.49	150		0400	8.81	467
	1200	6.75	175		0500	8.72	449
	1300	6.91	191		0600	8.63	430
	1400	7.02	203		0700	8.57	419
	1500	7.11	213		0800	8.50	405
	1600	7.24	228		0900	8.38	386
	1700	7.50	260		1000	8.31	375
	1800	7.78	297		1100	8.23	362
	1900	8.07	338		1200	8.16	351
	2000	8.41	390		1300	8.08	339
	2100	8.84	473		1400	7.99	326
	2200	9.18	553		1500	7.91	315
	2300	9.58	663		1600	7.82	302
	2400	9.82	743		1700	7.74	291
					1800	7.67	282
Dec. 3	0100	10.03	818		1900	7.59	271
	0200	10.20	884		2000	7.54	265
	0300	10.31	929		2100	7.49	259
	0400	10.36	950		2200	7.45	254
	0500	10.39	962		2300	7.41	249
	0600	10.41	971		2400	7.42	250
	0700	10.44	984				
	0800	10.44	984	Dec. 5	0100	7.44	252
	0900	10.40	967		0200	7.46	255
	1000	10.36	950		0300	7.49	259
	1100	10.29	921		0400	7.51	261
	1200	10.19	880		0500	7.55	266
	1300	10.10	845		0600	7.59	271
	1400	10.03	818		0700	7.64	278
	1500	9.95	789		0800	7.70	286
	1600	9.86	757		0900	7.75	293
	1700	9.78	729		1000	7.85	306
	1800	9.69	699		1100	7.91	315

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
05539900 West Branch Du Page River near West Chicago--Continued							
Dec. 5	1200	7.99	326	Dec. 7	0600	7.05	207
(Cont.)	1300	8.06	336	(Cont.)	0700	7.03	204
	1400	8.12	345		0800	7.01	202
	1500	8.18	354		0900	6.99	200
	1600	8.24	364		1000	6.97	198
	1700	8.29	371		1100	6.95	196
	1800	8.32	376		1200	6.91	191
	1900	8.34	379		1300	6.86	186
	2000	8.34	379		1400	6.82	182
	2100	8.34	379		1500	6.78	178
	2200	8.32	376		1600	6.75	175
	2300	8.30	373		1700	6.71	171
	2400	8.27	368		1800	6.68	168
					1900	6.65	165
Dec. 6	0100	8.24	364		2000	6.63	163
	0200	8.20	358		2100	6.61	161
	0300	8.15	350		2200	6.59	159
	0400	8.10	342		2300	6.57	157
	0500	8.05	335		2400	6.55	156
	0600	7.99	326				
	0700	7.94	319	Dec. 8	0100	6.53	154
	0800	7.88	311		0200	6.51	152
	0900	7.83	304		0300	6.49	150
	1000	7.79	298		0400	6.48	148
	1100	7.74	291		0500	6.46	147
	1200	7.69	285		0600	6.45	146
	1300	7.64	278		0700	6.43	145
	1400	7.59	271		0800	6.42	144
	1500	7.54	265		0900	6.40	142
	1600	7.48	257		1000	6.39	141
	1700	7.43	251		1100	6.38	140
	1800	7.37	244		1200	6.37	139
	1900	7.32	238		1300	6.35	138
	2000	7.28	233		1400	6.34	137
	2100	7.24	228		1500	6.33	136
	2200	7.21	225		1600	6.32	135
	2300	7.18	221		1700	6.31	134
	2400	7.16	219		1800	6.30	133
					1900	6.29	132
Dec. 7	0100	7.14	217		2000	6.28	131
	0200	7.12	214		2100	6.27	131
	0300	7.11	213		2200	6.26	130
	0400	7.09	211		2300	6.25	129
	0500	7.07	209		2400	6.24	128

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
05540095 West Branch Du Page River near Warrensville							
Dec. 2	1000	2.33	193	Dec. 4	0300	4.57	1,850
	1100	2.36	206	(Cont.)	0400	4.52	1,800
	1200	2.46	254		0500	4.47	1,750
	1300	2.55	301		0600	4.42	1,700
	1400	2.63	346		0700	4.38	1,670
	1500	2.69	382		0800	4.32	1,610
	1600	2.80	444		0900	4.26	1,550
	1700	2.93	520		1000	4.21	1,510
	1800	3.05	595		1100	4.15	1,450
	1900	3.19	687		1200	4.11	1,420
	2000	3.32	778		1300	4.06	1,370
	2100	3.45	873		1400	4.00	1,320
	2200	3.61	995		1500	3.95	1,280
	2300	3.74	1,100		1600	3.90	1,230
	2400	3.86	1,200		1700	3.86	1,200
					1800	3.82	1,170
Dec. 3	0100	3.92	1,250		1900	3.78	1,130
	0200	4.05	1,360		2000	3.73	1,090
	0300	4.11	1,420		2100	3.70	1,070
	0400	4.20	1,500		2200	3.66	1,040
	0500	4.29	1,580		2300	3.64	1,020
	0600	4.38	1,670		2400	3.63	1,010
	0700	4.47	1,750				
	0800	4.54	1,820	Dec. 5	0100	3.61	995
	0900	4.61	1,890		0200	3.59	980
	1000	4.68	1,960		0300	3.58	972
	1100	4.74	2,020		0400	3.57	964
	1200	4.79	2,070		0500	3.57	964
	1300	4.82	2,100		0600	3.57	964
	1400	4.82	2,100		0700	3.57	964
	1500	4.87	2,150		0800	3.57	964
	1600	4.87	2,150		0900	3.56	956
	1700	4.88	2,160		1000	3.55	964
	1800	4.87	2,150		1100	3.54	956
	1900	4.86	2,140		1200	3.53	949
	2000	4.83	2,110		1300	3.53	941
	2100	4.81	2,090		1400	3.53	933
	2200	4.78	2,060		1500	3.53	933
	2300	4.74	2,020		1600	3.53	933
	2400	4.71	1,990		1700	3.53	933
					1800	3.53	933
Dec. 4	0100	4.66	1,940		1900	3.53	933
	0200	4.62	1,900		2000	3.52	926

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
05540095 West Branch Du Page River near Warrensville							
Dec. 5	2100	3.52	926	Dec. 6	0100	3.51	918
(Cont.)	2200	3.52	926		0200	3.51	918
	2300	3.51	918		0300	3.51	918
	2400	3.51	918		0400	3.50	910
					0500	3.50	910

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05542000 Mazon River near Coal City				
Dec. 2	1100	3.50	612	Dec. 4	0400	19.39	22,100
	1200	3.49	607	(Cont.)	0500	19.38	22,100
	1300	3.49	607		0600	19.38	22,100
	1400	3.49	607		0700	19.26	21,800
	1500	3.49	607		0800	19.12	21,500
	1600	3.50	612		0900	18.95	21,200
	1700	3.57	649		1000	18.83	20,900
	1800	3.64	687		1100	18.65	20,500
	1900	3.75	750		1200	18.49	20,200
	2000	3.96	880		1300	18.31	19,800
	2100	4.28	1,090		1400	18.07	19,300
	2200	4.92	1,490		1500	17.83	18,800
	2300	5.80	2,100		1600	17.57	18,300
	2400	7.00	3,040		1700	17.32	17,800
					1800	17.07	17,300
Dec. 3	0100	8.10	4,010		1900	16.79	16,800
	0200	8.92	4,880		2000	16.50	16,200
	0300	9.53	5,590		2100	16.19	15,700
	0400	10.02	6,190		2200	15.88	15,100
	0500	10.45	6,740		2300	15.51	14,400
	0600	10.79	7,170		2400	15.21	13,900
	0700	11.28	7,820				
	0800	11.79	8,510	Dec. 5	0100	14.84	13,300
	0900	12.32	9,270		0200	14.52	12,700
	1000	13.00	10,300		0300	14.13	12,100
	1100	13.59	11,200		0400	13.78	11,500
	1200	14.28	12,300		0500	13.41	10,900
	1300	15.12	13,700		0600	13.06	10,400
	1400	16.07	15,400		0700	12.72	9,860
	1500	16.60	16,700		0800	12.36	9,330
	1600	17.15	17,500		0900	12.13	9,000
	1700	17.70	18,600		1000	11.93	8,710
	1800	18.11	19,400		1100	11.80	8,530
	1900	18.53	20,300		1200	11.67	8,350
	2000	18.80	20,800		1300	11.61	8,260
	2100	19.03	21,300		1400	11.53	8,150
	2200	19.26	21,800		1500	11.54	8,170
	2300	19.41	22,200		1600	11.53	8,200
	2400	19.46	22,300		1700	11.54	8,220
					1800	11.56	8,250
Dec. 4	0100	19.50	22,400		1900	11.58	8,260
	0200	19.48	22,300		2000	11.60	8,280
	0300	19.49	22,300		2100	11.61	8,290

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05542000 Mazon River near Coal City--Continued				
Dec. 5	2200	11.62	8,280	Dec. 6	1900	9.20	5,200
(Cont.)	2300	11.63	8,290	(Cont.)	2000	8.90	4,860
	2400	11.62	8,280		2100	8.65	4,590
					2200	8.46	4,380
Dec. 6	0100	11.59	8,240		2300	8.30	4,210
	0200	11.55	8,180		2400	8.17	4,080
	0300	11.50	8,110				
	0400	11.45	8,050	Dec. 7	0100	8.04	3,850
	0500	11.38	7,950		0200	7.94	3,750
	0600	11.30	7,840		0300	7.84	3,650
	0700	11.21	7,720		0400	7.73	3,550
	0800	11.12	7,600		0500	7.64	3,460
	0900	11.01	7,460		0600	7.55	3,380
	1000	10.89	7,300		0700	7.46	3,300
	1100	10.77	7,140		0800	7.39	3,230
	1200	10.62	6,950		0900	7.31	3,160
	1300	10.49	6,790		1000	7.24	3,100
	1400	10.33	6,580		1100	7.17	3,030
	1500	10.16	6,360		1200	7.10	3,970
	1600	9.96	6,110		1300	7.04	2,920
	1700	9.75	5,850		1400	6.98	2,870
	1800	9.50	5,550				

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05550500 Poplar Creek at Elgin				
Dec. 2	0100	1.58	38	Dec. 3	1900	5.61	747
	0200	1.57	37	(Cont.)	2000	5.59	743
	0300	1.84	68		2100	5.55	734
	0400	1.72	52		2200	5.46	715
	0500	1.74	55		2300	5.40	702
	0600	1.97	86		2400	5.30	680
	0700	2.05	97				
	0800	2.04	96	Dec. 4	0100	5.20	659
	0900	2.13	108		0200	5.12	642
	1000	2.24	125		0300	5.04	625
	1100	2.39	148		0400	4.97	610
	1200	2.49	163		0500	4.87	590
	1300	2.53	169		0600	4.79	573
	1400	2.62	183		0700	4.70	555
	1500	2.72	199		0800	4.62	539
	1600	2.90	229		0900	4.54	523
	1700	2.99	244		1000	4.49	513
	1800	3.25	289		1100	4.40	496
	1900	3.31	299		1200	4.35	486
	2000	3.36	307		1300	4.29	475
	2100	3.48	328		1400	4.25	467
	2200	3.66	359		1500	4.21	459
	2300	3.80	384		1600	4.15	448
	2400	4.02	424		1700	4.09	437
					1800	4.09	437
Dec. 3	0100	4.22	461		1900	3.96	413
	0200	4.54	523		2000	3.91	404
	0300	4.78	571		2100	3.88	398
	0400	4.97	610		2200	3.83	389
	0500	5.07	631		2300	3.80	384
	0600	5.12	642		2400	3.79	382
	0700	5.20	659				
	0800	5.27	674	Dec. 5	0100	3.81	385
	0900	5.27	674		0200	3.80	384
	1000	5.29	678		0300	3.77	378
	1100	5.29	678		0400	3.77	378
	1200	5.25	670		0500	3.79	382
	1300	5.27	674		0600	3.86	395
	1400	5.29	678		0700	3.90	402
	1500	5.29	678		0800	3.93	407
	1600	5.40	702		0900	3.96	413
	1745	5.67	761		1000	4.00	420
	1800	5.62	750		1100	4.03	426

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05550500 Poplar Creek at Elgin--Continued				
Dec. 5	1200	4.04	428	Dec. 7	0700	2.90	229
(Cont.)	1300	4.05	429	(Cont.)	0800	2.89	227
	1400	4.04	428		0900	2.87	224
	1500	4.06	431		1000	2.86	222
	1600	4.05	429		1100	2.83	217
	1700	4.04	428		1200	2.82	215
	1800	4.03	426		1300	2.79	210
	1900	4.04	428		1400	2.78	209
	2000	4.05	429		1500	2.76	206
	2100	4.03	426		1600	2.74	202
	2200	4.02	424		1700	2.72	200
	2300	4.00	420		1800	2.70	196
	2400	3.97	415		1900	2.68	193
					2000	2.66	190
Dec. 6	0100	3.93	407		2100	2.64	186
	0200	3.91	404		2200	2.62	183
	0300	3.87	396		2300	2.60	180
	0400	3.84	391		2400	2.59	178
	0500	3.78	380				
	0600	3.73	371	Dec. 8	0100	2.57	175
	0700	3.68	362		0200	2.55	172
	0800	3.65	357		0300	2.53	169
	0900	3.63	354		0400	2.52	167
	1000	3.56	341		0500	2.50	164
	1100	3.53	354		0600	2.49	163
	1200	3.49	329		0700	2.46	158
	1300	3.47	326		0800	2.45	156
	1400	3.41	316		0900	2.43	153
	1500	3.38	311		1000	2.42	152
	1600	3.33	302		1100	2.41	151
	1700	3.29	295		1200	2.39	148
	1800	3.27	292		1300	2.38	146
	1900	3.22	283		1400	2.37	144
	2000	3.19	278		1500	2.36	143
	2100	3.15	272		1600	2.35	141
	2200	3.12	266		1700	2.34	140
	2300	3.09	261		1800	2.33	138
	2400	3.06	256		1900	2.31	136
					2000	2.30	134
Dec. 7	0100	3.05	254		2100	2.29	133
	0200	3.02	249		2200	2.28	131
	0300	2.99	244		2300	2.27	129
	0400	2.96	239		2400	2.26	128
	0500	2.94	236				

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05555300 Vermilion River near Leonore				
Dec. 2	0100	7.11	1,700	Dec. 3	1900	23.01	23,000
	0200	7.08	1,680	(Cont.)	2000	23.32	23,600
	0300	7.05	1,660		2100	23.65	24,300
	0400	7.04	1,660		2200	24.00	25,000
	0500	7.01	1,640		2300	24.32	25,800
	0600	6.99	1,630		2400	24.74	26,800
	0700	6.97	1,620				
	0800	6.96	1,610	Dec. 4	0100	25.04	27,500
	0900	6.95	1,570		0200	25.38	28,400
	1000	6.95	1,570		0300	25.71	29,200
	1100	7.01	1,640		0400	25.98	30,000
	1200	7.26	1,790		0500	26.08	30,100
	1300	7.36	1,850		0600	26.34	30,500
	1400	7.36	1,850		0700	26.44	30,700
	1500	7.31	1,820		0800	26.55	30,800
	1600	7.52	1,950		0900	26.68	31,000
	1700	8.81	2,890		1000	26.73	31,100
	1800	9.55	3,450		1100	26.88	31,300
	1900	9.90	3,740		1200	27.00	31,500
	2000	10.57	4,320		1300	27.09	31,700
	2100	11.33	5,020		1400	27.08	31,700
	2200	12.16	5,860		1445	27.13	31,800
	2300	12.61	6,360		1500	27.10	31,700
	2400	13.46	7,350		1600	27.01	31,500
					1700	26.97	31,500
Dec. 3	0100	14.58	10,400		1800	27.01	31,500
	0200	15.61	10,500		1900	26.87	31,300
	0300	16.58	11,900		2000	26.77	31,200
	0400	17.47	13,200		2100	26.70	31,100
	0500	18.19	14,300		2200	26.59	30,900
	0600	18.84	15,200		2300	26.53	30,800
	0700	19.41	16,100		2400	26.53	30,800
	0800	19.91	16,900				
	0900	20.28	17,500	Dec. 5	0100	26.59	30,900
	1000	20.62	18,200		0200	26.31	30,500
	1100	20.93	18,800		0300	26.19	30,300
	1200	21.21	19,400		0400	26.02	30,000
	1300	21.47	19,900		0500	25.83	29,600
	1400	21.71	20,400		0600	25.62	29,000
	1500	21.95	20,900		0700	25.42	28,500
	1600	22.20	21,400		0800	25.21	28,000
	1700	22.46	21,900		0900	25.01	27,500
	1800	22.74	22,400		1000	24.88	27,100

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05555300 Vermilion River near Leonore-Continued				
Dec. 5	1100	24.66	26,600	Dec. 6	0600	22.32	21,600
(Cont.)	1200	24.46	26,100	(Cont.)	0700	22.22	21,400
	1300	24.36	25,900		0800	22.13	21,300
	1400	24.16	25,400		0900	22.09	21,200
	1500	23.92	24,800		1000	22.00	21,000
	1600	23.78	24,500		1100	21.98	21,000
	1700	23.63	24,200		1200	21.88	20,800
	1800	23.50	24,000		1300	21.77	20,500
	1900	23.35	23,700		1400	21.77	20,500
	2000	23.29	23,500		1500	21.65	20,300
	2100	23.13	23,200		1600	21.53	20,000
	2200	23.06	23,100		1700	21.46	19,900
	2300	22.93	22,800		1800	21.34	19,600
	2400	22.86	22,700		1900	21.30	19,600
					2000	21.19	19,300
Dec. 6	0100	22.74	22,400		2100	21.08	19,100
	0200	22.69	22,300		2200	20.89	18,700
	0300	22.60	22,200		2300	20.85	18,700
	0400	22.49	22,000		2400	20.74	18,400
	0500	22.39	21,800				

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05579500 Lake Fork near Cornland				
Dec. 2	0100	7.36	333	Dec. 3	1900	21.08	5,110
	0200	7.34	330	(Cont.)	2000	21.28	5,380
	0300	7.33	329		2100	21.47	5,660
	0400	7.32	328		2200	21.63	5,900
	0500	7.31	326		2300	21.77	6,120
	0600	7.29	324		2400	21.89	6,320
	0700	7.28	323				
	0800	7.27	321	Dec. 4	0100	22.07	6,620
	0900	7.25	319		0200	22.15	6,760
	1000	7.24	317		0300	22.22	6,890
	1100	7.23	316		0400	22.28	7,000
	1200	7.21	313		0500	22.32	7,070
	1300	7.20	312		0600	22.35	7,120
	1400	7.19	311		0700	22.39	7,200
	1500	7.18	309		0800	22.41	7,230
	1600	7.17	308		0900	22.42	7,250
	1700	7.17	308		1000	22.42	7,250
	1800	7.36	333		1100	22.42	7,250
	1900	8.07	426		1200	22.43	7,270
	2000	9.45	591		1300	22.40	7,210
	2100	12.19	973		1400	22.39	7,200
	2200	15.53	1,780		1500	22.37	7,160
	2300	16.94	2,350		1600	22.34	7,100
	2400	18.06	2,880		1700	22.32	7,070
					1800	22.28	7,000
Dec. 3	0100	18.73	3,250		1900	22.25	6,940
	0200	19.10	3,460		2000	22.21	6,870
	0300	19.32	3,590		2100	22.17	6,800
	0400	19.44	3,660		2200	22.14	6,750
	0500	19.55	3,740		2300	22.10	6,680
	0600	19.63	3,800		2400	22.06	6,610
	0700	19.72	3,870				
	0800	19.80	3,940	Dec. 5	0100	22.00	6,510
	0900	19.85	3,980		0200	21.95	6,420
	1000	19.93	4,040		0300	21.90	6,340
	1100	20.00	4,100		0400	21.87	6,290
	1200	20.07	4,160		0500	21.82	6,210
	1300	20.13	4,210		0600	21.77	6,120
	1400	20.24	4,310		0700	21.73	6,060
	1500	20.37	4,420		0800	21.69	6,000
	1600	20.53	4,560		0900	21.67	5,960
	1700	20.68	4,700		1000	21.61	5,870
	1800	20.88	4,890		1100	21.57	5,810

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05579500 Lake Fork near Cornland--Continued				
Dec. 5	1200	21.37	5,510	Dec. 7	0500	18.93	3,360
(Cont.)	1300	21.36	5,500	(Cont.)	0600	18.86	3,320
	1400	21.31	5,420		0700	18.79	3,280
	1500	21.21	5,280		0800	18.72	3,240
	1600	21.16	5,220		0900	18.66	3,210
	1700	21.11	5,150		1000	18.59	3,170
	1800	21.03	5,040		1100	18.52	3,130
	1900	20.95	4,950		1200	18.45	3,090
	2000	20.89	4,900		1300	18.39	3,060
	2100	20.79	4,800		1400	18.33	3,020
	2200	20.73	4,740		1500	18.27	2,990
	2300	20.65	4,670		1600	18.19	2,950
	2400	20.61	4,640		1700	18.11	2,910
					1800	18.03	2,870
Dec. 6	0100	20.55	4,580		1900	17.95	2,820
	0200	20.53	4,560		2000	17.88	2,790
	0300	20.47	4,510		2100	17.81	2,760
	0400	20.42	4,460		2200	17.73	2,710
	0500	20.37	4,420		2300	17.65	2,680
	0600	20.32	4,380		2400	17.57	2,640
	0700	20.27	4,330				
	0800	20.24	4,310	Dec. 8	0100	17.48	2,600
	0900	20.17	4,250		0200	17.40	2,560
	1000	20.11	4,200		0300	17.31	2,520
	1100	20.06	4,150		0400	17.22	2,470
	1200	20.00	4,100		0500	17.13	2,430
	1300	19.94	4,050		0600	17.04	2,390
	1400	19.89	4,010		0700	16.95	2,350
	1500	19.83	3,960		0800	16.86	2,310
	1600	19.77	3,910		0900	16.75	2,260
	1700	19.71	3,870		1000	16.66	2,220
	1800	19.64	3,810		1100	16.57	2,180
	1900	19.58	3,760		1200	16.47	2,140
	2000	19.52	3,720		1300	16.37	2,100
	2100	19.46	3,680		1400	16.27	2,060
	2200	19.39	3,630		1500	16.16	2,010
	2300	19.32	3,590		1600	16.06	1,970
	2400	19.26	3,550		1700	15.96	1,940
					1800	15.83	1,890
Dec. 7	0100	19.19	3,510		1900	15.72	1,850
	0200	19.12	3,470		2000	15.59	1,800
	0300	19.06	3,440		2100	15.47	1,760
	0400	18.99	3,400		2200	15.33	1,710

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05579500 Lake Fork near Cornland--Continued				
Dec. 8	2300	15.18	1,660	Dec. 10	1200	12.02	944
(Cont.)	2400	15.03	1,610	(Cont.)	1300	11.99	938
					1400	11.98	937
Dec. 9	0100	14.86	1,560		1500	11.95	932
	0200	14.70	1,510		1600	11.93	928
	0300	14.52	1,460		1700	11.90	923
	0400	14.33	1,410		1800	11.88	920
	0500	14.15	1,360		1900	11.84	913
	0600	13.99	1,310		2000	11.80	906
	0700	13.87	1,290		2100	11.77	901
	0800	13.75	1,260		2200	11.73	895
	0900	13.67	1,250		2300	11.69	888
	1000	13.59	1,230		2400	11.65	881
	1100	13.50	1,220				
	1200	13.41	1,200	Dec. 11	0100	11.60	873
	1300	13.33	1,180		0200	11.55	865
	1400	13.24	1,170		0300	11.50	856
	1500	13.16	1,150		0400	11.45	848
	1600	13.09	1,140		0500	11.41	842
	1700	13.02	1,120		0600	11.36	835
	1800	12.95	1,110		0700	11.32	829
	1900	12.88	1,100		0800	11.27	823
	2000	12.82	1,090		0900	11.22	816
	2100	12.75	1,070		1000	11.18	810
	2200	12.69	1,060		1100	11.14	805
	2300	12.62	1,050		1200	11.10	800
	2400	12.56	1,040		1300	11.06	794
					1400	11.02	789
Dec. 10	0100	12.51	1,030		1500	10.99	785
	0200	12.47	1,020		1600	10.95	780
	0300	12.42	1,010		1700	10.91	775
	0400	12.36	1,000		1800	10.87	769
	0500	12.31	995		1900	10.83	764
	0600	12.25	984		2000	10.79	759
	0700	12.21	977		2100	10.75	754
	0800	12.16	968		2200	10.71	748
	0900	12.12	961		2300	10.66	742
	1000	12.08	954		2400	10.62	737
	1100	12.05	949				

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
			05592800 Hurricane Creek near Mulberry Grove				
Dec. 2	0100	4.34	110	Dec. 3	1900	18.08	7,330
	0200	4.33	109	(Cont.)	2000	18.69	11,600
	0300	4.33	109		2100	19.15	13,600
	0400	4.33	109		2200	19.51	15,300
	0500	4.31	107		2300	19.72	16,400
	0600	4.31	107		2400	19.85	17,100
	0700	4.31	107				
	0800	4.31	107	Dec. 4	0100	19.89	17,400
	0900	4.30	106		0200	19.89	17,400
	1000	4.30	106		0300	19.81	16,900
	1100	4.30	106		0400	19.70	16,300
	1200	4.30	106		0500	19.57	15,600
	1300	4.30	106		0600	19.41	14,800
	1400	4.32	108		0700	19.20	13,800
	1500	4.32	108		0800	19.01	13,000
	1600	4.33	109		0900	18.80	12,000
	1700	4.34	110		1000	18.57	11,100
	1800	4.35	110		1100	18.36	10,300
	1900	4.36	111		1200	18.17	9,640
	2000	4.36	111		1300	17.95	8,880
	2100	4.38	113		1400	17.71	8,090
	2200	4.38	113		1500	17.50	7,450
	2300	4.53	127		1600	17.30	6,880
	2400	4.99	174		1700	17.07	6,280
					1800	16.87	5,780
Dec. 3	0100	5.90	294		1900	16.67	5,320
	0200	7.56	532		2000	16.49	4,940
	0300	10.17	993		2100	16.31	4,570
	0400	12.08	1,440		2200	16.13	4,230
	0500	13.26	1,820		2300	15.95	3,910
	0600	13.90	2,100		2400	15.78	3,630
	0700	14.32	2,300				
	0800	14.59	2,460	Dec. 5	0100	15.58	3,330
	0900	14.81	2,600		0200	15.38	3,070
	1000	14.99	2,710		0300	15.14	2,800
	1100	15.17	2,830		0400	14.90	2,650
	1200	15.34	3,020		0500	14.63	2,480
	1300	15.57	3,320		0600	14.34	2,300
	1400	15.84	3,720		0700	14.13	2,200
	1500	16.18	4,320		0800	14.02	2,150
	1600	16.51	4,980		0900	13.92	2,100
	1700	16.93	5,930		1000	13.80	2,050
	1800	17.42	7,220		1100	13.67	2,000

Table 7.--Data for selected streamflow-gaging stations for the floods of early December 1982--Continued

Date	Hour	Gage height (ft)	Discharge (ft^3/s)	Date	Hour	Gage height (ft)	Discharge (ft^3/s)
05592800 Hurricane Creek near Mulberry Grove--Continued							
Dec. 5	1200	13.55	1,940	Dec. 6	0600	12.91	1,700
(Cont.)	1300	13.43	1,900	(Cont.)	0700	12.91	1,700
	1400	13.31	1,840		0800	12.92	1,710
	1500	13.22	1,810		0900	12.92	1,710
	1600	13.13	1,780		1000	12.87	1,690
	1700	13.10	1,770		1100	12.72	1,640
	1800	13.05	1,750		1200	12.37	1,510
	1900	13.01	1,740		1300	11.71	1,340
	2000	12.98	1,730		1400	10.68	1,090
	2100	12.94	1,710		1500	9.71	905
	2200	12.91	1,700		1600	8.82	742
	2300	12.89	1,700		1700	8.12	623
	2400	12.87	1,690		1800	7.55	530
					1900	7.18	473
Dec. 6	0100	12.86	1,690		2000	6.95	439
	0200	12.85	1,680		2100	6.74	409
	0300	12.85	1,680		2200	6.60	389
	0400	12.86	1,690		2300	6.40	361
	0500	12.87	1,690		2400	6.26	342

Table 8--Flood-crest elevations for the Illinois River for the floods of early December 1982

[Data from Stone and Bingham, 1991]

Stream and location	Distance upstream from mouth (miles)	Elevation above National Geodetic Vertical Datum of 1929 (feet)
Illinois Waterway (Des Plaines River)		
at Brandon Road Lock and Dam, Upper	285.8	539.1
at Brandon Road Lock and Dam, Lower	285.8	512.4
	285.6	511.8
	281.4	509.7
at I-55	278.2	508.3
at Jack's Marina, Joliet Yacht Club	273.6	509.1
Illinois River		
at Dresden Lock and Dam, Upper	271.4	509.2
at Dresden Lock and Dam, Lower	271.4	505.3
above EU & E Railroad Bridge	270.8	507.3
below EU & E Railroad Bridge	270.6	503.7
above Morris Highway Bridge	263.9	503.5
below Morris Highway Bridge	263.5	501.9
	263.1	501.2
at Bell's Landing	259.2	500.9
	256.0	497.8
	254.1	495.7
at C & R Railroad Service	254.0	495.7
at Seneca Shipyard	253.6	495.4
at Seneca Highway Bridge	252.8	494.9
	252.6	495.0
	248.7	489.2
	247.0	485.0
at Marseilles Dam	247.0	485.0
at Marseilles Lock, Upper	244.6	479.1
at Marseilles Lock, Lower	244.6	474.4
at Ottawa Highway Bridge	239.7	470.6
at CB & O Railroad Bridge	239.5	470.1
	239.3	469.9
	236.1	467.6
	234.0	466.5
at Starved Rock Lock and Dam, Upper	231.0	466.1
at Starved Rock Lock and Dam, Lower	231.0	464.7
	230.5	464.6
	230.1	463.6
	229.5	463.4

Table 8--Flood-crest elevations for the Illinois River for the floods of early December 1982--Continued

Stream and location	Distance upstream from mouth (miles)	Elevation above National Geodetic Vertical Datum of 1929 (feet)
Illinois River--Continued		
at La Salle, Illinois	224.7	462.3
	223.1	461.9
	218.9	459.3
at Spring Valley, Illinois	214.5	459.6
	207.5	457.6
	202.0	457.2
at Henry, Illinois	196.1	457.0
	189.2	459.8
	189.0	458.8
	185.5	456.2
	182.0	460.1
	181.7	459.2
	176.6	456.1
	171.3	455.7
	167.6	455.3
	166.1	455.7
	162.1	455.1
	161.8	455.1
	158.1	454.9
at Peoria Lock and Dam, Upper	157.7	454.6
at Peoria Lock and Dam, Lower	157.7	452.9
at Pekin, Illinois	152.8	454.1
at Kingston, Illinois	145.5	453.0
	140.2	450.9
at Copperas Creek	136.8	450.5
	134.0	450.6
	131.6	450.6
	124.5	449.5
at Havana, Illinois	119.4	449.8
	115.8	449.0
	111.0	447.8
	104.7	449.6
	100.7	448.2
	97.3	448.0
	91.7	448.1
at Beardstown, Illinois	88.9	447.6
	88.7	447.3
	88.1	447.2
	87.4	447.1

Table 8--Flood-crest elevations for the Illinois River for the floods of early December 1982--Continued

Stream and location	Distance upstream from mouth (miles)	Elevation above National Geodetic Vertical Datum of 1929 (feet)
Illinois River-Continued		
at LaGrange Lock and Dam, Upper	80.2	[a]445.9
at LaGrange Lock and Dam, Lower	80.2	[a]445.9
	70.8	[a]444.4
	61.3	[a]442.3
	56.0	[a]441.0
	43.2	[a]437.4
	21.6	[a]433.7

[a] Affected by backwater from the Mississippi River.

★U.S. GOVERNMENT PRINTING OFFICE:1991 -643-643/62029