

FLOODS IN GARDEN PRAIRIE QUADRANGLE,  
NORTHEASTERN ILLINOIS

**Purpose.**—This report presents hydrologic data that can be used to evaluate the extent, depth, and frequency of flooding that affect the economic development of flood plains. It will aid individuals, government agencies, and others responsible for solving existing flood problems and for formulating plans for preventing future flooding. The report will also be useful for preparing building and zoning regulations, locating flood-prone areas, and determining the need for flood-control measures. Flood-prone areas are delineated on a topographic map. The quadrangle location is shown in figure 1. The stream names and their dates of floods as shown on the map are listed in table 1.

**Area Flooded.**—The area flooded by the Garden Prairie quadrangle is delineated on a topographic map. The map shows the location of the quadrangle in relation to the surrounding area. The area flooded is shown in blue on the map. The area flooded is shown in blue on the map.



FIGURE 1.—Index map of northeastern Illinois showing location of quadrangle included in flood-hazard mapping program.

Local residents reported that the flood of June 1967 was the highest observed in the last 20 years on Rock Creek.

Greater floods than those whose boundaries are shown on the map occurred during the flood of June 1967. The flood of June 1967 was the highest observed in the last 20 years on Rock Creek. The flood of June 1967 was the highest observed in the last 20 years on Rock Creek. The flood of June 1967 was the highest observed in the last 20 years on Rock Creek.

The general procedure used in defining the flood boundaries was to construct flood profiles from elevations of flood-prone areas. The extent of flooding delineated on the topographic map was derived from the profiles by interpolating between the elevations of the flood-prone areas and by plotting elevation limits identified during field investigations and surveys. The portrayal of flood boundaries is in terms of elevation limits identified during field investigations and surveys.

The total program includes part of Cook County, nearly all of Madison County, and parts of DeKalb, Kane, and McHenry Counties. Financial support for the preparation of this report was provided by Madison County through the Illinois State Water Survey.

This report was prepared by the U.S. Geological Survey under the administrative direction of Davis W. Ellis, district hydrologist, hydrographer-in-charge of the project at Adams, Wis. The report was prepared by the U.S. Geological Survey under the administrative direction of Davis W. Ellis, district hydrologist, hydrographer-in-charge of the project at Adams, Wis.

Station	Parent flood (date)	Stage (feet above mean sea level)	Discharge (cfs)
05438500	1967	182	782.78
05438506	1970	217	773.06
05438503	1967	13.2	849.21
05438504	1967	36.2	830.36
05438505	1967	29.4	788.82
05438507	1967	5.40	806.54
05438508	1967	16.0	777.94
05438510	1967	94.1	821.09
05438520	1967	12.2	820.33

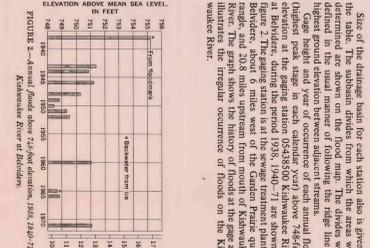


FIGURE 2.—Annual flood stage (feet above mean sea level) at Kaskaskia River at Bidwell.

**Flood discharge.**—The rate of discharge of a stream is the volume of flow that passes a particular location in a given period of time. Discharge rates usually are expressed in terms of cubic feet per second (cfs). The discharge rate is the volume of water that passes a particular location in a given period of time. Discharge rates usually are expressed in terms of cubic feet per second (cfs).

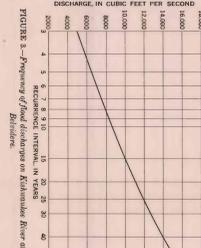


FIGURE 3.—Frequency of flood discharges on Kaskaskia River at Bidwell.

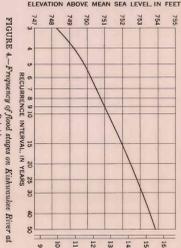


FIGURE 4.—Profile of flood on Kaskaskia River at Bidwell.

**Recurrence interval.**—As applied to flood events, recurrence interval is the average number of years between successive floods of a given magnitude. The recurrence interval is the average number of years between successive floods of a given magnitude.

Recurrence interval (years)	Elevation above mean sea level (feet)
30	733.4
20	732.4
10	731.4
5	730.4
2	728.2

It is emphasized that recurrence intervals are average values. They do not indicate the probability of a flood of a given magnitude occurring in any one year. The recurrence interval is the average number of years between successive floods of a given magnitude.

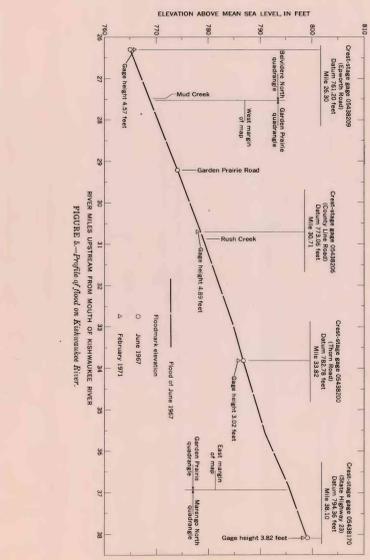


FIGURE 5.—Profile of flood on Kaskaskia River.



FIGURE 6.—Profile of flood on Rock Creek.

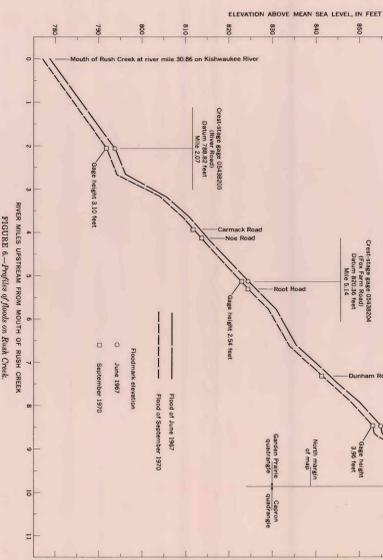


FIGURE 7.—Profile of flood on Garden Prairie Road.

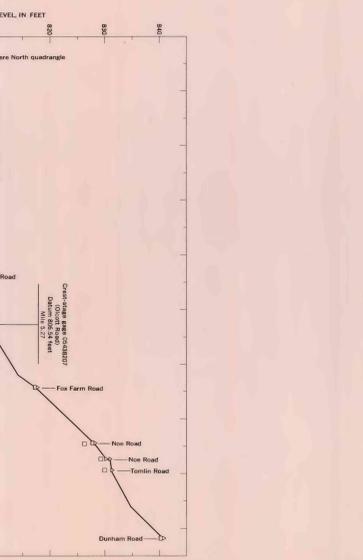


FIGURE 8.—Profile of flood on Mul Creek.

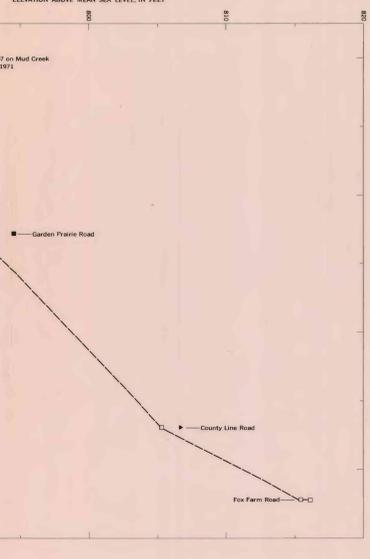


FIGURE 9.—Profile of flood on Mul Creek.

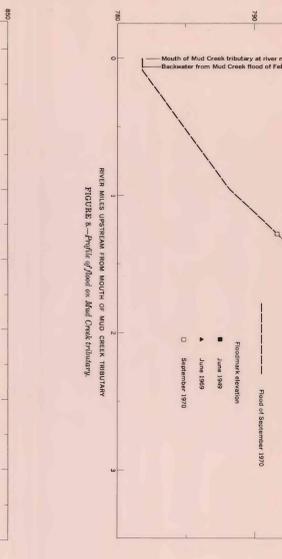


FIGURE 10.—Profile of flood on Mul Creek.

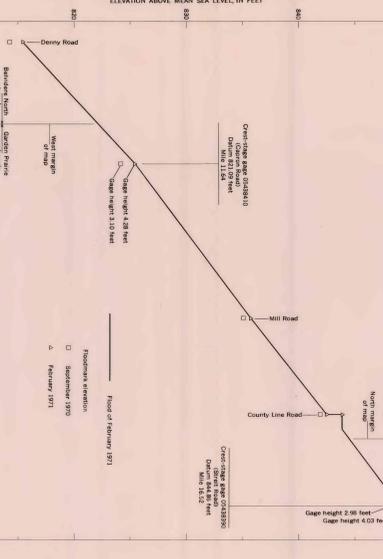


FIGURE 11.—Profile of flood on Mul Creek.

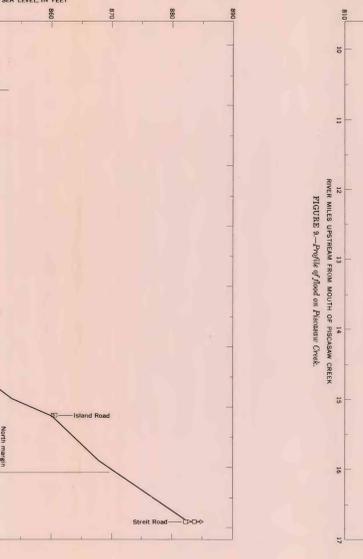


FIGURE 12.—Profile of flood on Mul Creek.

FLOODS IN GARDEN PRAIRIE QUADRANGLE, NORTHEASTERN ILLINOIS

By R. T. Myrick and R. S. Grant

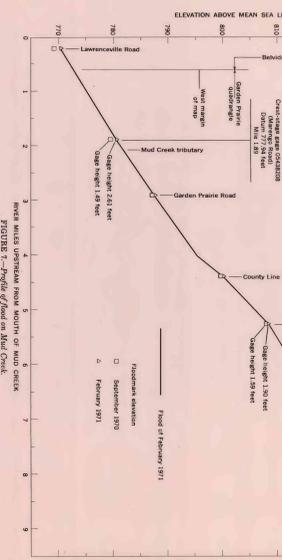


FIGURE 13.—Profile of flood on Mul Creek.

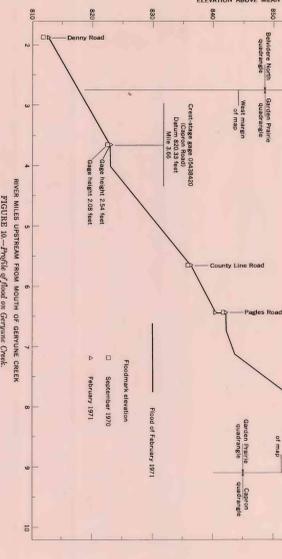


FIGURE 14.—Profile of flood on Mul Creek.