



The rains limited by floods along streams in the Pecos 70-minute quadrant are delineated on a topographic map. The quadrant's location is shown in figure 1. Inundated areas for the Flood of July 1957 are shown along South Branch, Fortified Creek, Rock Creek, Black Water Creek, and the Pecos River. The map also shows the Edna Slough, and several unnamed creeks.

Acknowledgment is made to the Will County Highway Department for furnishing information on floods at several bridges.

FIGURE 1.—*Places and of contemporary Algonquian hunting locations of moccasins included in flood-damaged inventory.*

Greater floods than the flood whose boundaries are shown on the map are possible. The flood boundaries shown provide a record of historic floods that have occurred. Changes in channel dimensions, in waterway openings at highways and railroads, or changes in runoff characteristics of the streams caused by increased urbanization that may have taken place subsequent to the flood represented on the map could affect the flood height reached by a future flood of comparable discharge. Protect the water body of flooding in the area but will not necessarily eliminate all future flooding. The inundation pattern of future floods may be affected by new highways and bridges, relocation and improvement of stream channels, and other cultural changes.

There are several depressions or low lands in the Peotone quadrangle where surface areas into the streams. Frequency and depth of flooding in these areas are attributed to the water-surface elevation along the streams. Some areas are frequently flooded, whereas others are heavily rainfall or snowmelt, whereas others remain inundated continuously, depending largely upon the raised topographical settings. The frequency of flooding in these areas at such areas that were detected in this investigation.

The relation between stream age and frequency of flooding is shown in figure 4. The age and frequency is shown in figure 4. The relation between the age and frequency is dependent on the relation of age to discharge.

Illinois (Mitchell, 1939).

The general relation between recurrence interval and flood height at the gaging station on Hickory Creek at Joliet (Fig. 4) is tabulated below:

Recurrence Interval	Elevation Above Mean Sea Level
50	588.7
100	587.8
200	587.2
500	586.9
1000	586.6
2000	586.4
5000	586.1

It is emphasized that recurrence intervals are a *verage* figures—the average number of years between occurrences of floods that equal or exceed a given magnitude. The fact that a major flood is experienced in one year does not mean that the next year's flood will not exceed in the next year or even in the next week.

Flood profiles.—Profiles of the water surface, based on profiles of the stream bed, for the floods of July 1957, December 1965, and May 1966 are shown in figures 5-9. Where flood-marks could not be identified, the profiles were constructed on the basis of flood crests determined from a series of cross sections at elevations of streambeds and lower flood stages. River miles used for the profiles correspond to those marked along the stream on the flood map.

Flood depths.—Depth of flooding at any point can be estimated by subtracting the ground elevation from the water-surface elevation at the same point. The approximate ground elevation can be obtained from the profiles in figures 5-9. More accurate elevations can be obtained by leveling from nearby bench marks.

Additional data.—Other information pertaining to floods in the Pecatonica quadrangle can be obtained at the office of the U.S. Geological Survey, Oak Park, Ill., and from the following published reports:

Daniels, W. S., and Hale, M. D., 1958, Floods of October 1954 in the Chicago area, Illinois and Indiana: U.S. Geol. Survey Water-Supply Paper 1370-B, 107-209.

Mitchell, W. D., 1954, Floods in Illinois, magnitude and frequency, Illinois Dept. Public Works and Bldgs., Div. of Waterways, 386 p.

FIGURE 5.—Profile of flood on Black Walnut Creek.

FIGURE 6.—Profile of flood on Blue Prairie Creek.

FIGURE 7.—Profile of flood on Hickory Creek at Joliet.

FIGURE 8.—Profile of flood on Marshall Slough and Entire Slough.

FIGURE 9.—Profile of flood on South Branch Peoria Creek.