

Basinwide flooding on the Skunk River seldom occurs. This may be due to the shape of the basin and its orientation relative to the storm tracks. Historical statewide flooding occurred in 1851, 1881 and 1903; however, there are few details on these floods for the Skunk River basin. The most noteworthy basin flood occurred in 1944. Basinwide floods of a lesser extent occurred in 1947 and 1960. The wettest three-month period occurred in March through May 1973. Notable floods occurred in the upper basin of the Skunk River in June 1918, June 1954 and June 1975.

## 2. Stream Data

A stage hydrograph for the South Skunk River gaging station at Oskaloosa, Iowa, shown on Plate 87, extends from March 1993 through September 1993. At Oskaloosa, flooding began in March. The South Skunk River was above flood stage in March, April, May and June. It remained above flood stage for all of July, most of August and half of September. Flood stage is at 15 feet. The peak stage reached during this event was 24.78 feet in mid-July.

The stage hydrograph for the Skunk River gaging station at Augusta, Iowa, is shown on Plate 88. Flooding in March, April and May was rapid and relatively brief. The Skunk River went above the 15 foot-flood stage once each month and remained there for a few days. In June, the river went above flood stage twice for a short period of time. In July, however, the river remained above flood stage for almost the entire month. For the months of April through September 1993 the runoff depth at Augusta, Iowa, was 24.3 inches. The mean runoff depth for the months of April through September for the period of record (78 years) was 4.6 inches.

## 3. Hydraulics

High water profiles of the Skunk River and Squaw Creek show the 1993 Flood compared to other notable historical floods. The Skunk River profiles, shown on Plates 89 through 96, extend from the mouth, at the confluence with the Mississippi River, to Story City, Iowa. Downstream of the county line (Plates 89 through 90) the 1993 Flood was not as severe, and it ranked fourth or fifth highest. Upstream of the Washington-Keokuk County line (Plates 91 through 96), the 1993 Flood ranked the highest of record.

The water surface profiles for Squaw Creek are shown on Plate 97. The profiles extend from the mouth, at the confluence with the Skunk River, to the Hamilton County-Boone County line. The 1993 event ranked highest of record along the entire profile.

## **VIII. Rock River Basin**

### **A. Basin Description**

The Rock River headwaters originate in the lake region of Fond du Lac County in southeastern Wisconsin. Flow is generally southward toward the Wisconsin-Illinois State Line where it flows in a general southwesterly direction, then flows into the Mississippi River downstream from Rock Island, Ill. The drainage area is 10,700 square miles as shown on Plate 98. The topography varies from flat and gently rolling farm land to steep and uncultivated forest land.

## B. Hydrology/Hydraulics

### 1. Description of Flooding

The flooding that occurred in the Rock River basin was not as extensive in severity or duration as other basins within the Rock Island District. Most of the flooding that occurred was related to ice jam flooding early in the year. The exception to that is close to the downstream end of the river. The gage at Joslin, Ill., was at flood stage for an extensive period of time. Two of the gaging stations on the Rock River recorded flood stages that were in the top five floods of record. Table 25 summarizes the top five floods of record on the Rock River. The other stations on the Rock River or within the Rock River basin did not have stages that were in the top five rankings.

**Table 25**  
**Rock River Basin Top 5 Floods of Record**

Station	Flood Stage (feet)	Date 1	Stage 1	Date 2	Stage 2	Date 3	Stage 3	Date 4	Stage 4	Date 5	Stage 5
Joslin, Ill.	12.0	3/26/93	18.35	3/22/79	17.81	4/23/73	17.74	2/23/71	17.69	5/18/74	17.18
Moline, Ill.	12.0	4/26/73	16.15	5/21/74	15.70	2/24/71	15.10	3/25/79	15.00	6/12/93	14.93

The record of historical flooding on the Rock River at Joslin began in 1939. Other historical records provide information on other notable events that occurred before that time. Many of the newspaper records mention the ice jam flooding that frequently occurs on the Rock River.

### 2. Stream Data

The stage hydrograph for the Rock River at Joslin, Ill., is shown on Plate 99. Flooding occurred more extensively closer to the mouth of the Rock River as shown by the stage hydrograph. In early March, the water level exceeded flood stage for a few days reaching a crest at 18 feet. Flood stage is 12.0 feet. By the end of March, the river went above flood stage and remained there until the middle of May. In mid-June, the river went above flood stage and remained there until early August.

Plate 100 shows the stage hydrograph for the Rock River at Moline, Ill. The shape of the Moline hydrograph is similar to that for Joslin. Flood stage was exceeded in early March for a short period of time. At the end of March, the stage went above flood stage and remained above until the middle of May. The river stage went up again during the middle of June and remained above flood stage until the end of July.

### 3. Hydraulics

Water surface profiles along the Rock River show that in the upper part of the basin, the 1993 Flood was not the flood of record. Plates 101 and 102 show the only reach that experienced the flood of record was approximately three miles upstream and six miles downstream of the City of Joslin, Ill. The lower portion of the watershed did not experience the flood of record.