Photomosaic by Photo Science, Inc.
Gaithersburg, Md.

Introduction.—The approximate area inundated by the Maury River at Buena Vista, Va., during the flood of August 20, 1969, is shown on a photomosaic base map. The flood, the highest known on the river, was caused by the torrential rains brought by the remnants of Hurricane Camille. Floodmarks were identified in a 4-mile reach of the river near Buena Vista, and their elevations were determined by leveling to bench marks. Flood boundaries were delineated on aerial photographs taken after the crest and were verified by field inspection.

Flood history.—The flood of August 20, 1969, reached an elevation of 852.0 feet above mean sea level (msl) at U.S. Highway 60 at Buena Vista and was the highest since records began in 1936 and probably the highest since 1870. The previous maximum of record was 845.8 feet, msl, at the same site during the flood of March 17–19, 1936. U.S. Highway 60 crosses the Maury River just upstream from the edge of the map at river mile 12.8.

The peak discharge on August 20, 1969, was 105,000 cubic feet per second (cfs), compared with an estimated peak discharge of 45,000 cfs for the 1936 flood.

Flood frequency.—Stage-frequency relations were derived from stage records for the U.S. Weather Bureau gage at U.S. Highway 60 at Buena Vista for the period 1936–69. The general relationship between recurrence interval and flood height for the Maury River at Buena Vista is shown in figure 1. The March 1936 flood had a recurrence interval of about 25 years (fig. 1), whereas the August 1969 flood had a recurrence interval of about 130 years.

Recurrence intervals.—As applied to flood events, the recurrence interval is the average interval of time within which a given flood will be equaled or exceeded once. It is inversely related to the chance of a flood of a given height being equaled or exceeded in any one year. Thus, a 20-year flood would have 1 chance in 20 of being equaled or exceeded in any year, or a 50-year flood would have 1 chance in 50 of being equaled or exceeded in any year.

It is emphasized that recurrence intervals are average figures—the average number of years that will elapse between floods that equal or exceed a given magnitude. The fact that a major flood occurs does not reduce the probability of a flood as great or greater occurring in the next year or even in the next week.

Flood profiles.—Profiles of the water surface constructed from high-water marks left by the flood of August 20, 1969, are shown in figure 2. Distances in miles (upstream from mouth) used for the profiles correspond to those marked at one-tenth mile intervals along the channel on the flood map.
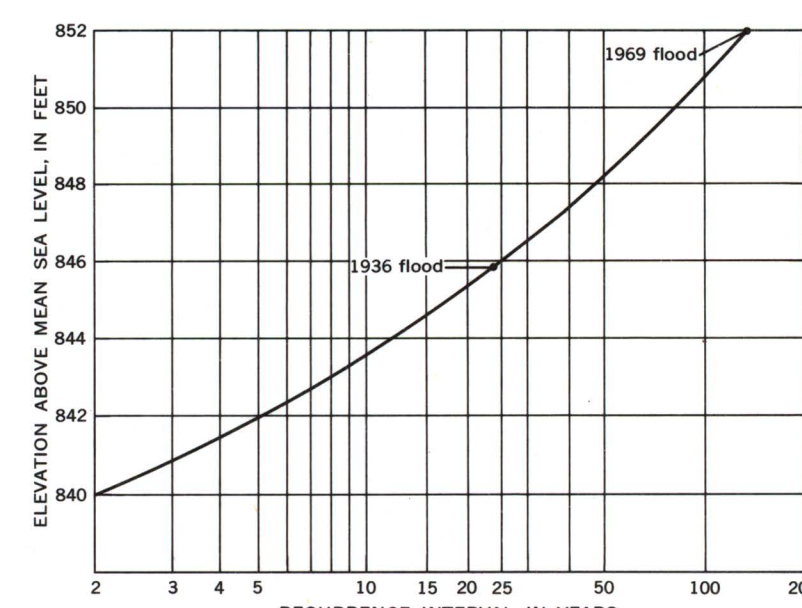

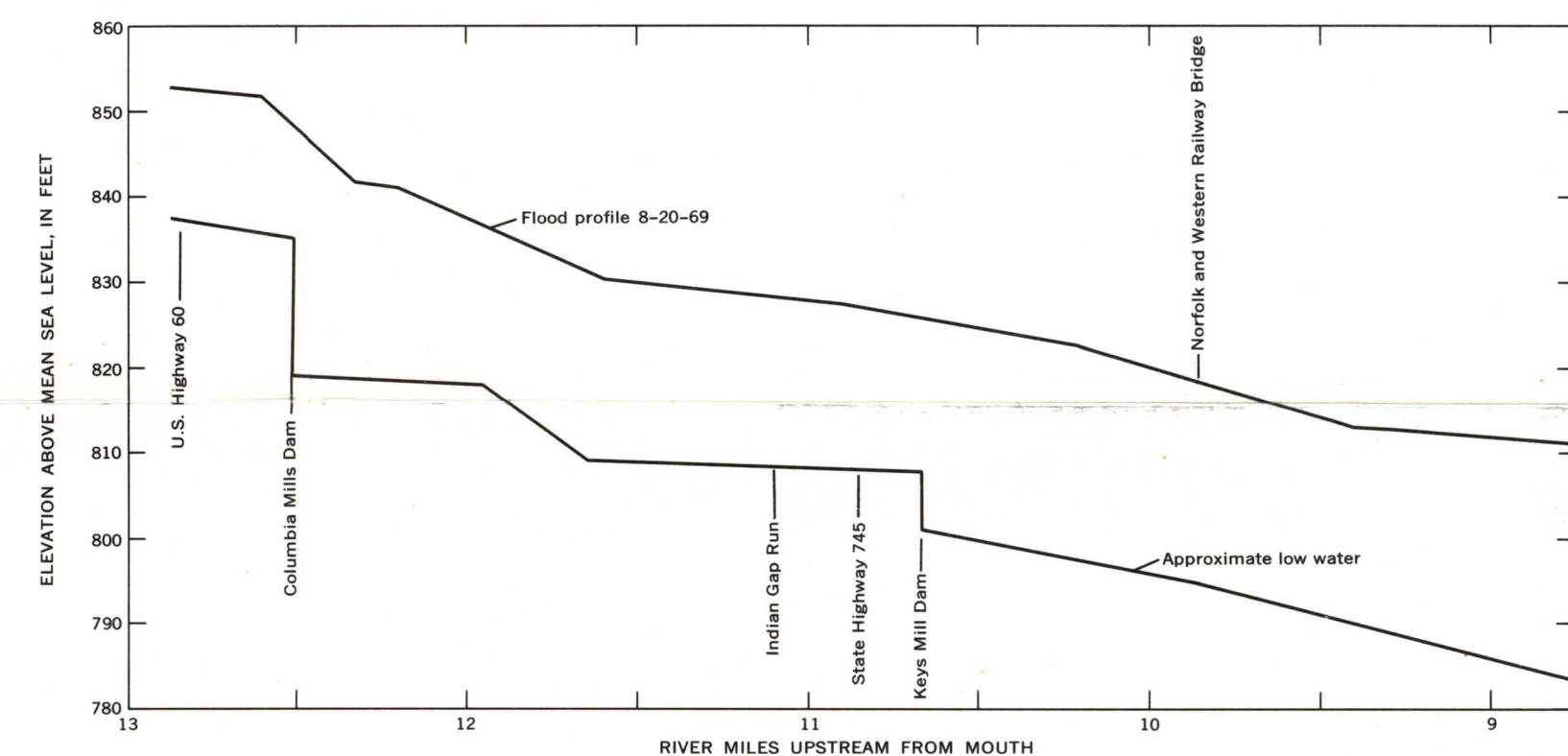FIGURE 1.—*Stage frequency curve for Maury River at U.S. Highway 60 at Buena Vista.*

FIGURE 2.—*Profile of flood of August 20, 1969, Maury River at Buena Vista.*

Photograph from Fitzgerald Photos, Buena Vista
Floodwaters of Maury River surrounding Reeves Bros. plant in Buena Vista, August 1969.

Photograph from Fitzgerald Photos, Buena Vista
Downtown Buena Vista about 10 a.m., August 20, 1969. Floodwater had receded.

Area flooded, August 20, 1969

Boundary of flooded area

⑩ ✕ River mile upstream from mouth

Buena Vista area
VIRGINIA
INDEX MAP

N

0   1000   2000   3000 FEET

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FLOOD OF AUGUST 1969 ON MAURY RIVER AT BUENA VISTA, VIRGINIA

By

Gerald S. Runner

1969