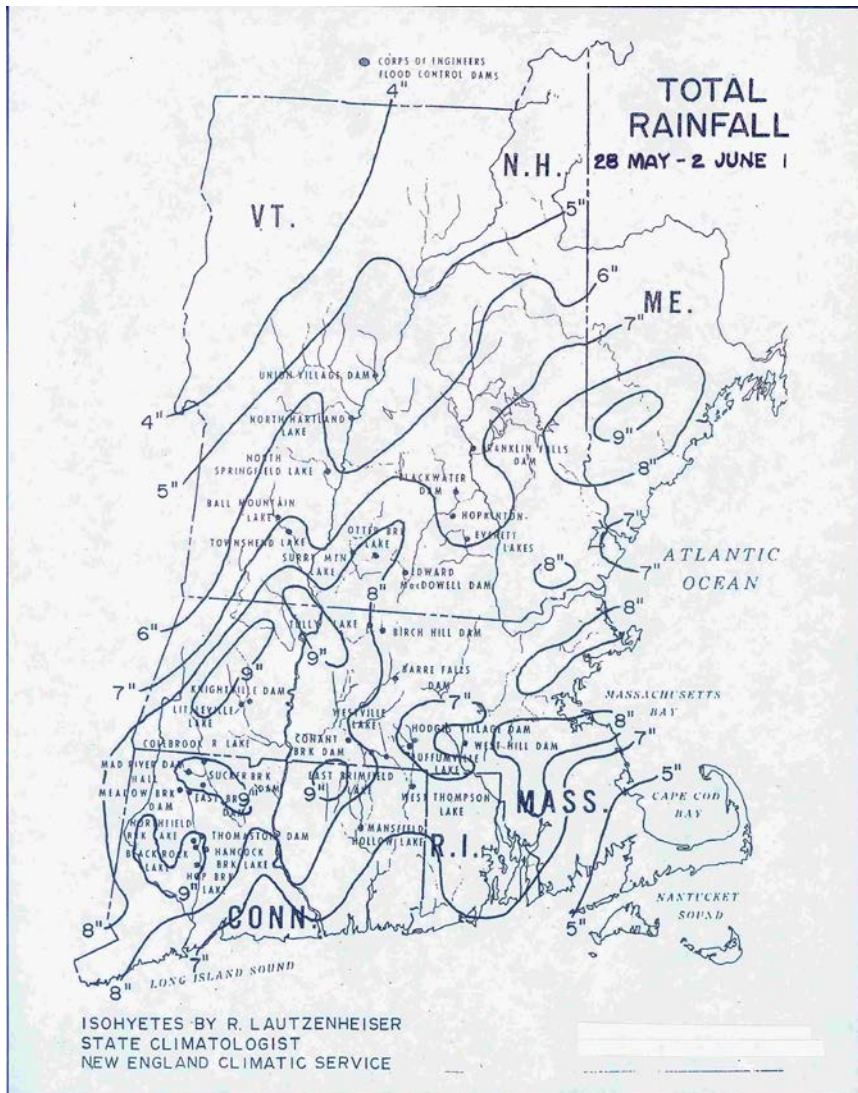


May/June 1984 Flood

During the last week of May an extensive slow moving frontal system passed through New England bringing rainfall on Memorial Day that continued for approximately a week through June 4. Rainfall amounts varied from 8 to 9 inches in Massachusetts, Connecticut and Rhode Island to about 5 to 7 inches in New Hampshire and Vermont, with some isolated amounts of more than 10 inches of northern and western Connecticut, Massachusetts, Vermont, and New Hampshire. The extended rainfall caused record river levels on many streams in southern New England and widespread damage to low lying agricultural lands. Experienced flood levels on the Connecticut



River from Montague City, MA to it's mouth at Long Island, a distance of about 120 miles, were the highest since the September 1938 event, and the greatest event experienced since construction of the 16 Corps dams in the Connecticut River Basin more than 40-years earlier. This was a major flood along the mainstem, with an estimated return frequency of 50-years in southern Massachusetts and Connecticut; it has only been exceeded by

the September 1938 and March 1936 floods since records were initiated by early settlers in the 17th century.

Within the Connecticut River Basin all sixteen Corps reservoirs within the basin were operated during this event, with record amounts of storage being utilized at Colebrook River Lake, Mad River Dam, and Conant Brook Dam. Six other projects, Surry Mountain, Otter Brook, Birch Hill, Tully, Barre Falls, and Littleville recorded the highest pool levels during the June 1984 storm; however, these peak pool levels were surpassed a few years later during the flood of April 1987. Storage utilized at Corps flood control dams ranged from 20 to 98 percent within the Connecticut River Basin; 48 to 85 percent within the Merrimack; 33 to 66 percent within the Naugatuck; 35 to 55 percent within the Thames; and 41 percent within the Blackstone River Basins.

A tabulation of peak observed, computed natural discharges, and effect of Corps flood control reservoirs on the main stem Connecticut River flood levels are shown below:

**June 1984 Flood
Mainstem Connecticut River**

<u>Location</u>	<u>Experienced Discharge</u> (cfs)	<u>Computed Natural Discharge</u> (cfs)	<u>Discharge Reduction</u> (percent)
Montague City, MA	142,400	175,000	19
Holyoke, MA	148,000	181,000	18
Springfield, MA	189,000	225,000	16
Hartford, CT	208,400	245,000	15
Middletown, CT	186,800	220,000	15

Along the mainstem Merrimack River, experienced flows were not as extreme as along the Connecticut River. Although the observed flows were the second highest recorded since the construction of Merrimack River Basin flood control dams, the overall flood was considered to be about a 25-30 year event, which was exceeded a few years later by the April 1987 flood.

A similar tabulation associated with the mainstem Merrimack River is shown below:

**June 1984 Flood
Mainstem Merrimack River**

<u>Location</u>	<u>Experienced Discharge</u> (cfs)	<u>Computed Natural Discharge</u> (cfs)	<u>Discharge Reduction</u> (percent)
Concord, NH	27,300	60,000	55
Manchester, NH	40,000	76,000	48
Nashua, NH	54,000	90,000	40
Lowell, MA	60,300	91,000	34
Haverhill, MA	62,000	92,500	33