

## Causes and Results

Throughout the spring of 1965 many inquiries were made regarding the relation of the Mississippi River dams to the great flood. On May 28, 1965, the Corps of Engineers issued a six-page pamphlet pointing out that, with the exception of the power dams at Minneapolis and Keokuk, the remaining dams were constructed solely as aids to navigation in maintaining the nine-foot channel.

Of the tremendous flood crest the Corps of Engineers declared:

A number of factors accounted for the 1965 flood crest being so high this year. The winter of 1964-65 was very severe through northern Iowa, central and southern Minnesota and southwestern Wisconsin. The winter was unusually cold. An early severe cold period gave the ground an initial freeze-up. Continued sub-zero weather throughout the winter froze the ground to a depth greater than normal. This made the ground more impervious to infiltration of snowmelt into the ground. During the winter period there accumulated a large snow cover that did not have much opportunity to melt due to the sustained cold weather.

At St. Paul the Weather Bureau recorded a total winter snowfall of about 73 inches. This compares to a normal winter fall of about 45-50 inches. As the winter wore on the snow cover condensed and packed into an unusually heavy water content. By mid-March with no alternate



warming temperatures during the day and cooler temperatures at night to permit some gradual melting it became apparent that a potential flood was contained in the snow cover. On top of this snow cover, with its already large water content, heavy rains fell at the end of March and the snow cover absorbed this rainfall with little or no runoff. Finally, in early April, there was a sudden warm period that began a rapid melt of the snow. Since the ground was frozen so deeply most of the melting snow found its way into the streams rather than soaking into the ground.

Man himself is in large measure responsible for the staggering cost to replace the damage wrought. The Report of the Corps of Engineers continues:

This is brought about by man-made encroachments such as levees, highway and railroad embankments, homes and factories that now occupy important portions of the flood plain that previously were used by the river. Unfortunately, data are not available that would permit accurate quantitative evaluation of the effect of these encroachments but unquestionably the qualitative and cumulative effect of encroachments on the regimen of the stream has been to significantly increase stages of major flood flows.

From 1844, when the first reasonably accurate measurement of floods was made, to the year 1965, thoughtful persons have seen the folly of encroaching on a domain clearly preempted by the Father of Waters. In the ever-recurring battle between Man and Nature, it seems incredible that Man's own folly should create his own so-called Disaster Areas.