

solid lines represent within-storm averages for areas less than that of the PMP storm, and the dashed lines represent without-storm averages for areas greater than the area of PMP storm, or the residual precipitation.

Now, by applying the curves in Figure 5.9 to the storm area average PMP from a generalized study at a specific location, 37° N 89° W, a set of curves of the form shown in Figure 5.10 can be obtained. The solid curves connect to 6-hour PMP for various area sizes. The short-dashed lines are the within-storm curves for areas less than the PMP area, and the long-dashed lines are the without-storm curves for areas larger than the PMP area. The curves of Figure 5.10 can then be used to develop isohyetal profiles as discussed in section 2.11.3. Isohyet profiles were developed for specific locations in the eastern United States. Those of Figure 5.11 are for 37° N 89° W. These profiles were then normalized

by converting them to a percentage of the greatest 6-hour increment of PMP for this location. The normalized isohyetal profiles were compared for several locations in the eastern United States and no consistent regional variation could be found. The various isohyetal profiles were combined, therefore, and a nomogram for determining the labels on the isohyet for the first 6-hour PMP increment and for the standard isohyet area sizes between 25.9 and 103 600 km^2 was developed (Figure 5.12).

5.2.7.4.2 Isohyet labels for remaining 6-hour increments

For the fourth through to the twelfth increment in the 72-hour PMP storm, the average depth for the PMP increment is usually small and a use of that depth as an average value over the basin is sufficient. In regions where the increment is large, additional nomograms distributing the rainfall over

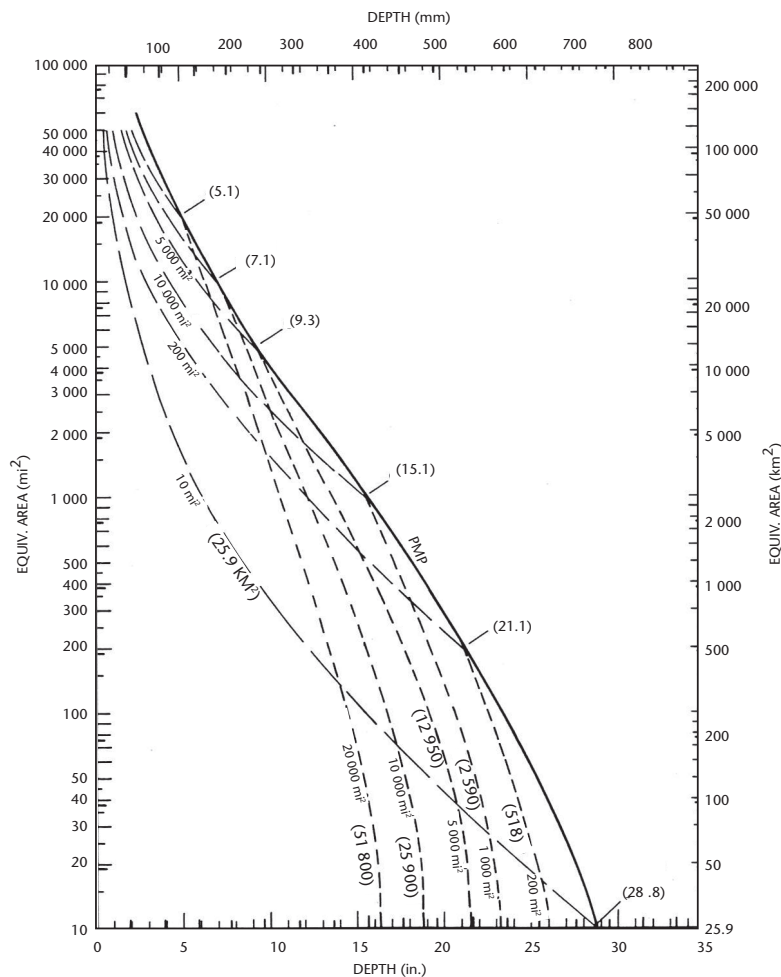


Figure 5.10. Within/without storm curves for PMP at 37° N, 89° W Tennessee River basin over Chattanooga, Tennessee (Zurndorfer and others, 1986). W for standard area sizes (Hansen and others, 1982)