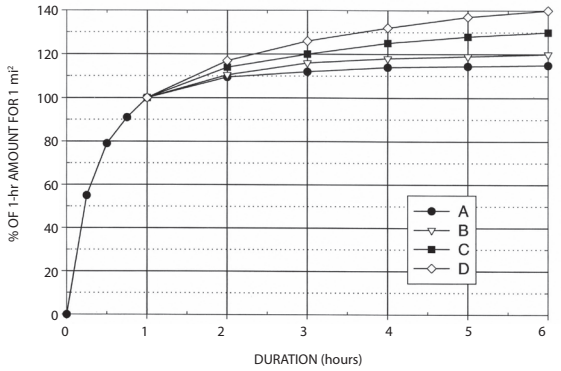

Figure 5.54. Coefficients of correcting PMP for different durations

A smooth curve of PMP is drawn for each duration in Table 5.19, as is shown in Figure 5.57.

(e) Temporal distribution is determined as follows. Analyses of multiple storms in the region show that the duration of storms in the region tends to be less than 6 hours, and that the 1-hour maximum rainfall tends to occur in the first hour. As a result, the guidelines for the temporal distribution of PMP for the region are to put the 1-hour maximum rainfall in the first time interval, put the second-greatest 1-hour rainfall in the second time interval and so forth.

The accumulated PMP hydrograph is read from Figure 5.57 and results are shown in the first row of Table 5.20. Then the PMP for the previous time interval is substracted from the PMP for the one after that to get the PMP hydrograph by time interval (with an interval length of 1 hour), and results are shown in the second row of Table 5.20.

The sequencing of PMP for each time interval in Table 5.20 is in line with the above-mentioned guideline for the temporal distribution, so it is unnecessary to make adjustments.

(f) Areal distribution can be determined using tables available for the percentages of isohyetals corresponding to corrections of types A, B, C and D of rainfall values on the elliptical isohyets (Table 5.21 is for a type-C correction). Their matching determinate isohyets in Figure 5.58 can be used to determine the areal distribution of PMP for the local storm. The ratios of the major axes to the minor axes of the elliptical isohyets in Figure 5.58 all equal 2 : 1, and the percentages in the four tables refer to the ratios of the precipitation depths of the isohyets to PMP for local storms with correction to mean watershed elevation (if no correction is needed, they are the ratios of precipitation depths to the PMP for local storms calculated in (a)). The isohyetal map must be superposed with the 1 : 500 000 watershed map before calculating the mean PMP for the watershed based on it. Once it is finalized, the isohyetal map can be transposed into the watershed. Different orientations will lead to different areal distributions of PMP, of course, thereby leading to different calculated results of areal PMP. The maximum PMP value will be obtained if the isohyetal map is placed at the centre of the watershed; a large peak flood will be obtained if the isohyetal map is placed near the exit section of the watershed.

In addition, it needs to be explained that each of the four tables (of which Table 2.21 (type-C correction) is an example) applies to one of types A, B, C or D. Meanwhile, the percentages shown in the tables apply only to PMP for local storms with 1-hour duration and storm

Table 5.18. Results of corrected PMP for different durations for the Wash watershed

	Duration (hours)								
	0.25	*0.50*	*0.75*	*1*	*2*	*3*	*4*	*5*	*6*
Coefficient of correction for each duration	0.55	0.79	0.91	1.00	1.14	1.20	1.25	1.28	1.30
PMP (mm)	160	229	264	290	330	348	363	371	376

Table 5.19. Results of PMP for the Wash watershed with correction to area size

	Duration (hours)				
	0.25	*0.50*	*1*	*3*	*6*
Coefficient of area reduction	0.31	0.37	0.43	0.50	0.54
PMP (mm)	51	84	124	175	203

Table 5.20. Accumulated PMP hydrograph and time-interval hydrograph for the Wash watershed

	Duration (hours)					
	1	*2*	*3*	*4*	*5*	*6*
Accumulated PMP hydrograph (mm)	124	155	175	188	196	203
PMP time-interval hydrograph (mm)	124	30	20	13	8	8