

General Notes – Figures 1101-2 through 1101-3

The Rainfall Intensity-Duration-Frequency (IDF) curves are based upon precipitation data obtained from the National Oceanic and Atmospheric Administration (NOAA) Atlas 14. The precipitation data was collected between 4/1863 to 12/2000.

Rainfall depth varies across the State with more rainfall depth present in the Southwest portion of the state and gradually decreasing towards the Northeast. IDF curves were developed for 4 regions across the State to simplify hydraulic design. The regions were determined by normalizing contours created from NOAA precipitation GIS data from the 10 year, 60 minute duration.

Federal Highway Administration Hydraulic Engineering Circular No. 12 Appendix A offers a methodology for converting I-D-F data points to an equation of the general form:

$$i = a/(t+b)^c$$

Where: i = rainfall intensity (inches/hour)
 t = time of concentration (minutes)
 a = constant
 b = constant
 c = constant

Figure 1101-2 can be expressed using the above general equation utilizing the constants shown below.

Intensity Zone (Figure 1101-3)	Frequency (Years)	Constant "a"	Constant "b"	Constant "c"
A	2	46.184	9.000	0.859
	5	56.985	10.250	0.851
	10	64.167	11.000	0.842
	25	66.528	11.000	0.811
	50	65.702	10.750	0.782
	100	64.489	10.500	0.754
B	2	47.987	9.000	0.859
	5	60.684	10.500	0.858
	10	73.126	12.000	0.863
	25	75.841	12.000	0.833
	50	65.621	10.000	0.781
	100	85.047	13.250	0.806
C	2	56.299	10.000	0.876
	5	67.933	11.000	0.869
	10	84.550	13.000	0.882
	25	95.736	14.000	0.871
	50	96.783	14.000	0.850
	100	80.436	11.500	0.794
D	2	57.448	10.000	0.876
	5	67.933	11.000	0.869
	10	79.192	12.000	0.864
	25	87.886	12.750	0.849
	50	95.169	13.500	0.839
	100	91.982	13.000	0.810

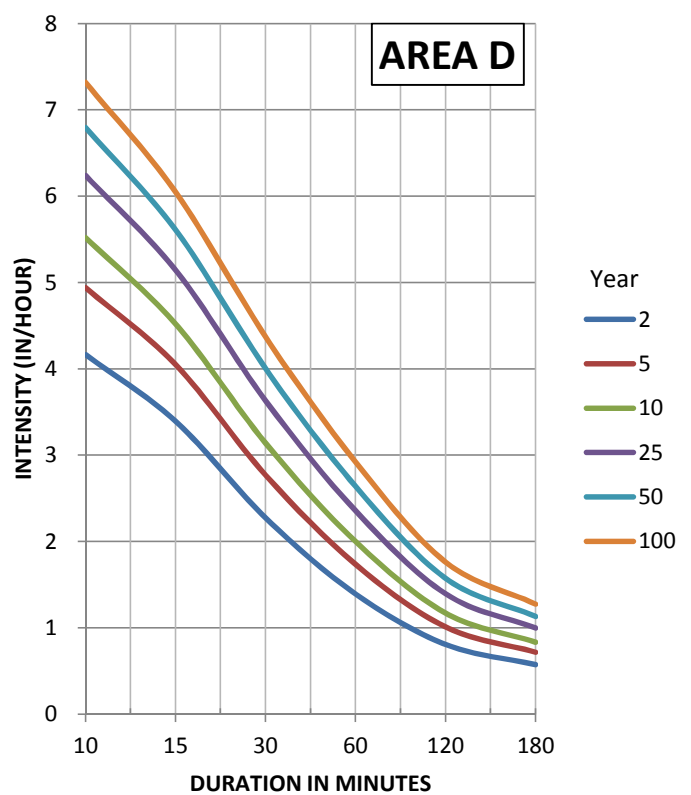
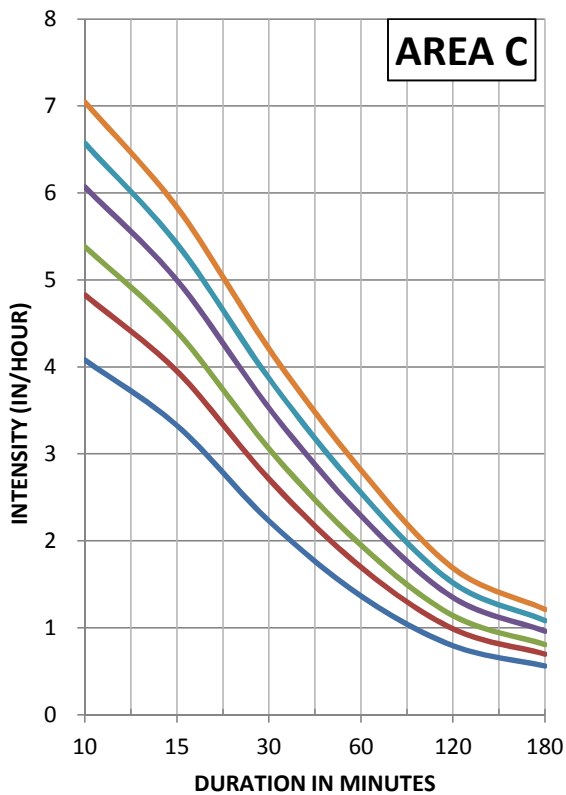
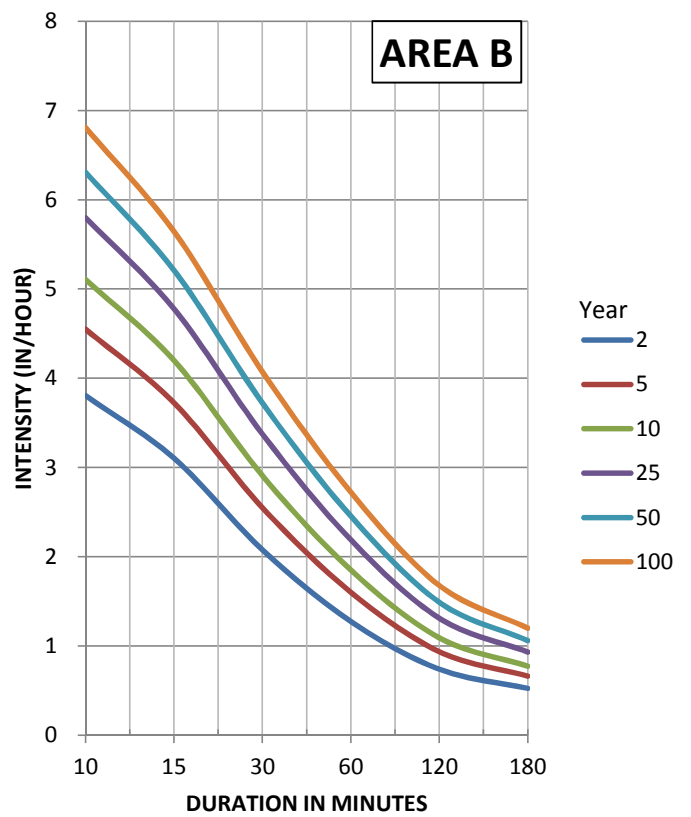
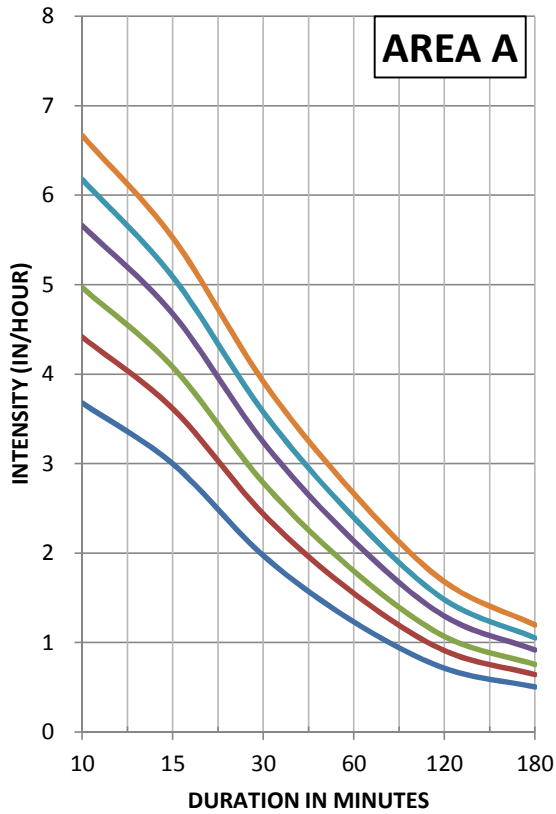
For any projects that have begun using the previous Rainfall Intensity-Duration-Frequency (IDF) curves, continue with their use through the completion of the project. The current Rainfall Intensity-Duration-Frequency (IDF) curves should be used at the start for all new projects.

Rainfall Intensity-Frequency-Duration Curves

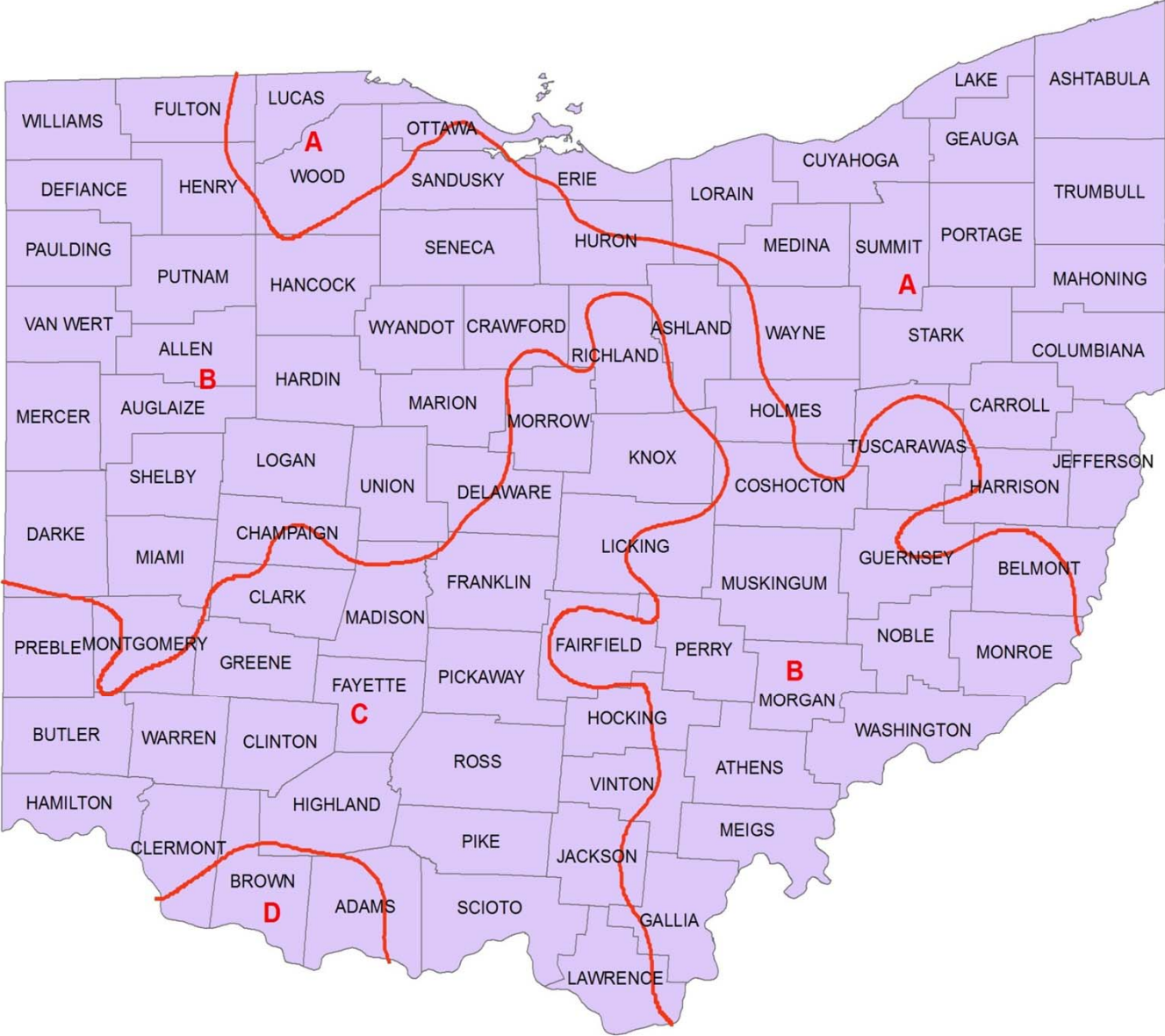
1101-2

Reference Section

1101.2.4



Rainfall Intensity-Frequency-Duration Curves	1101-3
	Reference Section 1101.2.4



Refer to General Notes - Figures 1101-2 through 1101-3