

# NRCS Synthetic Storm Hyetograph (Wurbs & James, 2002)

## Example 7.12

Repeat Example 7.11 using the NRCS type III distribution

**Solution** From Example 7.11, the 50-year, 24-hour rainfall depth is 8.86 inches (225 mm). This amount is distributed over the 24-hour duration using a 2-hour time step as follows.

Duration (hr)	Ratio from Table 7.8 *	Cumulative depth, $P$ (in.)	Incremental depth, $P$ (in.)	Cumulative depth, $\Delta P$ (mm)	Incremental depth, $\Delta P$ (mm)
2	0.0200	0.18	0.18	4.5	4.5
4	0.0430	0.38	0.20	9.7	5.2
6	0.0720	0.64	0.26	16.2	6.5
8	0.1140	1.01	0.37	25.7	9.5
10	0.1890	1.67	0.66	42.5	16.8
12	0.5000	4.43	2.76	112.5	70.0
14	0.8110	7.19	2.76	182.5	70.0
16	0.8860	7.85	0.66	199.4	16.9
18	0.9280	8.22	0.37	208.8	9.4
20	0.9570	8.48	0.26	215.3	6.5
22	0.9808	8.69	0.21	220.6	5.3
24	1.0000	8.86	0.17	225.0	4.4

\* Table 7.2.2 in Mays (2012)