

Regulations for Storm Water Runoff Management

Stormwater Guidance Attachment

24 HOUR RAINFALL

This Atlas of Precipitation has been published by the Northeast Regional Climate Center at Cornell University. It provides accurate data for the 24 hour Rainfall and precipitation of storm events. This atlas should be used to calculate the 24 hour Rainfall, as it is scientifically sound and up to date. Otherwise, structures for stormwater infiltration, retention, detention, and other BMP's may be incorrectly and /or undersized for real storm events.

This Atlas:

1. Utilizes the advances in statistics methodology and computing power since 1961.
2. Provides results determined from data of stations having an average length of record of 51.3 years as compared to the data of TP-40, which had an average length of record of 22.6 years.
3. Recognizes that the frequency of heavy rain events has increased since 1961. TP-40 encompasses a relatively dry period compared to the past 40 years.
4. Provides empirical adjustment factors to transform precipitation amounts pertaining to calendar day observations to maximum precipitation regardless of time of observation.

Analysis of the 1993 Northeast Regional Climate Center Atlas for Plymouth County, corrected for the 24-Hour Storm, result in the following rainfall values.

<u>24-Hour Storm</u>	<u>Rainfall (inches)</u>
1	2.82
2	3.39
5	4.24
10	5.08
25	6.22
50	7.34
100	9.04

The title of this atlas is *Atlas of Precipitation Extremes for the Northeastern United States and Southeastern Canada*, Cornell University, Ithaca, New York, Publication No. RR 93-5, September 1993. A second publication entitled *Atlas of Short-Duration Precipitation Extremes for the Northeastern United States and Southwestern Canada*, Publication No. RR 95-1, March 1995, is also available