

Steps to input site-specific rainfall distribution from the NE Extreme Precipitation Website into WinTR-55

1. Retrieve the rainfall data for the design location from the NE Extreme Precipitation website (www.precip.net).

About this Project **Data & Products** **Documentation**

Select Product ?

- Extreme Precipitation Tables - HTML**
- Extreme Precipitation Tables - Text/CSV ?
- Partial Duration Series ?
- Distribution Curves - Graphical ?
- Distribution Curves - Text/TBL ?
- Intensity Frequency Duration Graphs ?
- Precipitation Frequency Duration Graphs ?
- GIS Data Files ?
- Regional/State Maps ?

Select Location ? Double-click the map to place a marker, or enter address or latitude/longitude.

Hybrid Locate by Address Locate by Lat/Lon Locate by State/County

Select Options ?

Smoothing ?	Delivery ?
Yes	Popup

Submit

In this example, the 10 year and 100-year frequency storms will be run in WinTR-55. The 2-year rainfall depth is needed to compute the time of concentration (Tc) in WinTR-55.

Extreme Precipitation Tables

Northeast Regional Climate Center

Data represents point estimates calculated from partial duration series. All precipitation amounts are displayed in inches.

Smoothing	Yes
State	Massachusetts
Location	near Norwottuck Bicycle Path, Amherst, MA 01002, USA
Longitude	72.517 degrees West
Latitude	42.367 degrees North
Elevation	213 feet
Date/Time	Tue, 13 Apr 2010 13:30:23 -0400

These are the coordinates that are copied to the first line of the downloaded rainfall

Extreme Precipitation Estimates

	5min	10min	15min	30min	60min	120min	3hr	6hr	12hr	24hr	48hr	4day	7day	10day
1yr	0.33	0.50	0.63	0.82	1.02	1.60	1.78	2.08	2.44	2.84	3.18	3.54	4.23	4.86
2yr	0.34	0.53	0.66	0.87	1.09	1.66	1.85	2.18	2.56	3.00	3.38	3.75	4.47	5.12
5yr	0.41	0.63	0.79	1.06	1.36	1.94	2.19	2.62	3.12	3.70	4.25	4.72	5.51	6.29
10yr	0.46	0.72	0.91	1.24	1.61	2.18	2.50	3.03	3.65	4.36	5.07	5.64	6.47	7.34
25yr	0.55	0.88	1.11	1.53	2.03	2.60	3.01	3.71	4.50	5.41	6.40	7.11	7.99	9.04
50yr	0.62	1.00	1.28	1.80	2.42	2.99	3.49	4.34	5.29	6.36	7.61	8.48	9.37	10.57
100yr	0.72	1.17	1.51	2.13	2.90	3.45	4.06	5.08	6.21	7.46	9.08	9.97	11.00	12.37
200yr	0.83	1.35	1.75	2.51	3.47	4.02	4.76	5.99	7.33	8.82	10.83	11.86	12.91	14.55
500yr	1.01	1.66	2.17	3.14	4.40	4.94	5.89	7.43	9.10	10.90	13.76	15.02	15.97	18.06

2. Retrieve the rainfall distribution for the first frequency storm to be run in WinTR-55 (the 10-year storm in this example).

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Documentation

Select Product ?
Select Location ? Double-click the map to place a marker, or enter address or latitude/longitude.

Extreme Precipitation Tables - HTML ?
Locate by Address ?
Locate by Lat/Lon ?
Locate by State/County ?

Extreme Precipitation Tables - Text/CSV ?
 N W

Partial Duration Series ?

Distribution Curves - Graphical ?

Distribution Curves - Text/TBL ?

Intensity Frequency Duration Graphs ?

Precipitation Frequency Duration Graphs ?

GIS Data Files ?

Regional/State Maps ?

Google

Information Service Agency, Ches/Spot Image, GeoEye, MassGIS, Commonwealth of Massachusetts EOEA, U.S. Geological Survey, Town of Amherst, Map data ©2010 Google - Terms of Use

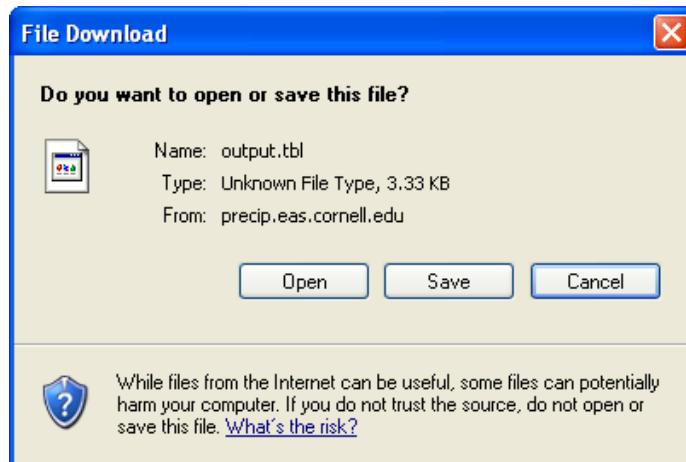
Select Options ?

Recurrence ?
Smoothing ?
Delivery ?

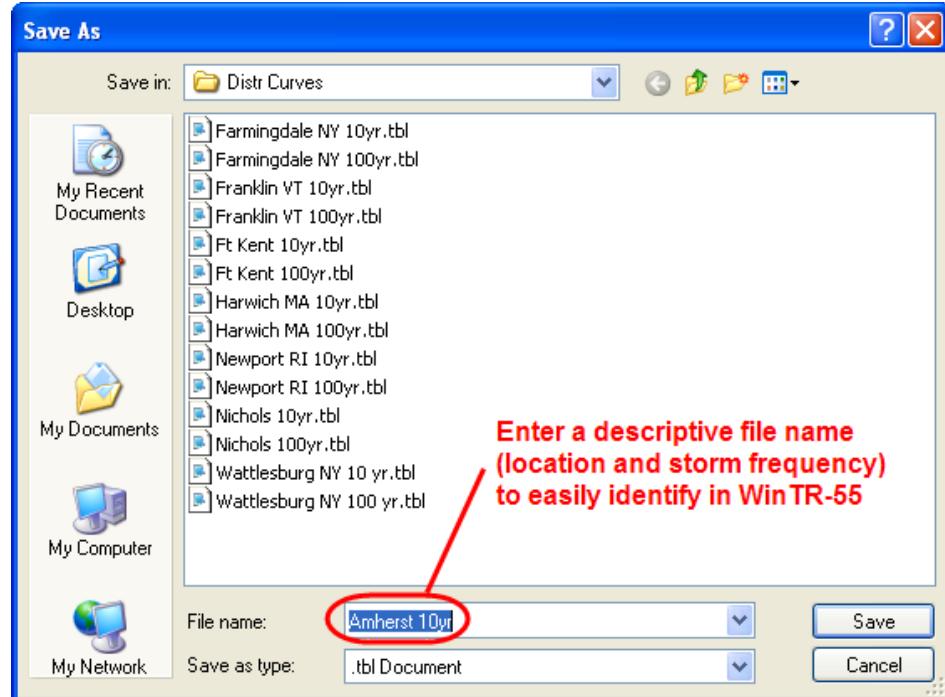
10yr
 Yes
 Download

Submit

- Press the **Submit** Button and the following window appears. Press the **Save** button and you will be prompted for the location to save the file.



- Enter a descriptive name to make the file easier to locate within WinTR-55 (suggest you include the location and the recurrence interval). Press **Save**.



- If another storm frequency will be run in WinTR-55, then choose that recurrence interval on the Web tool and press **Submit** to download and save the distribution file for this storm. Repeat for all the desired storm frequencies.

Select Options ?		
Recurrence ?	Smoothing ?	Delivery ?
100yr	Yes	Download
Submit		

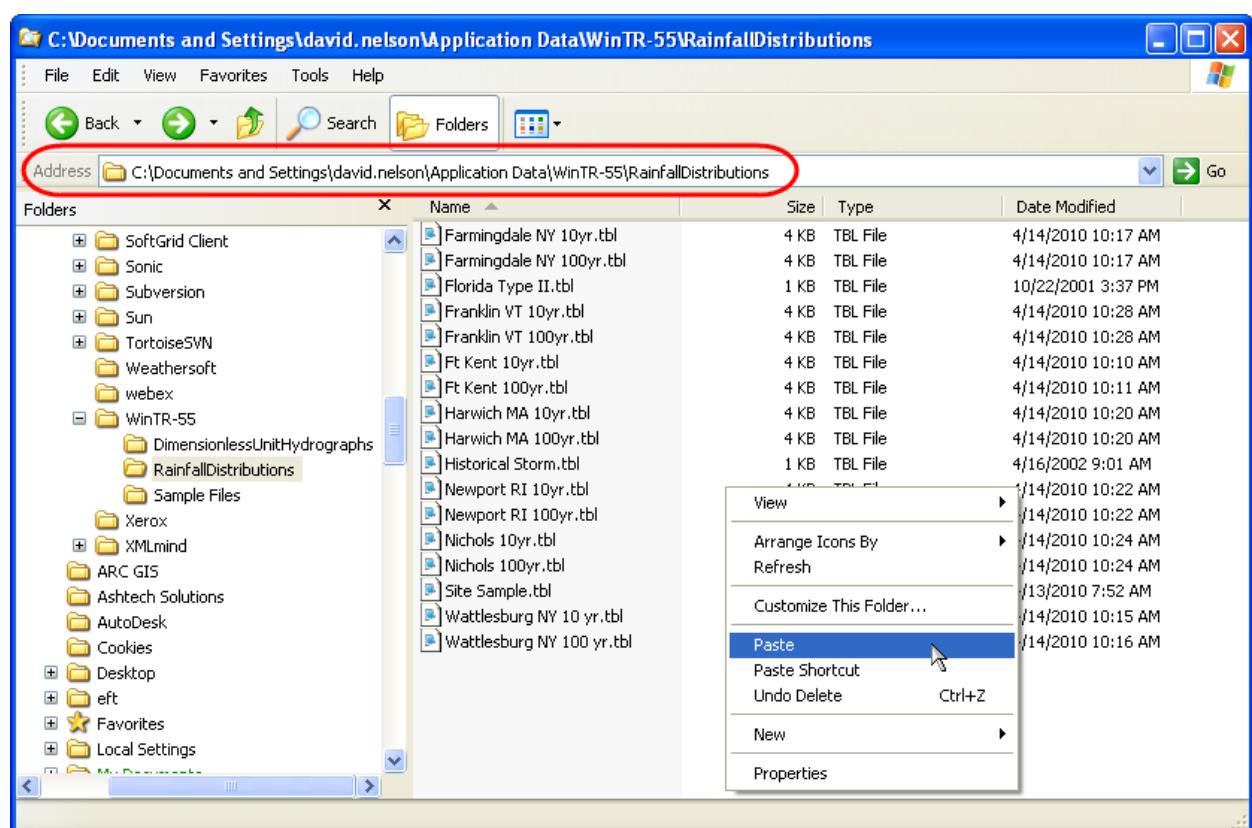
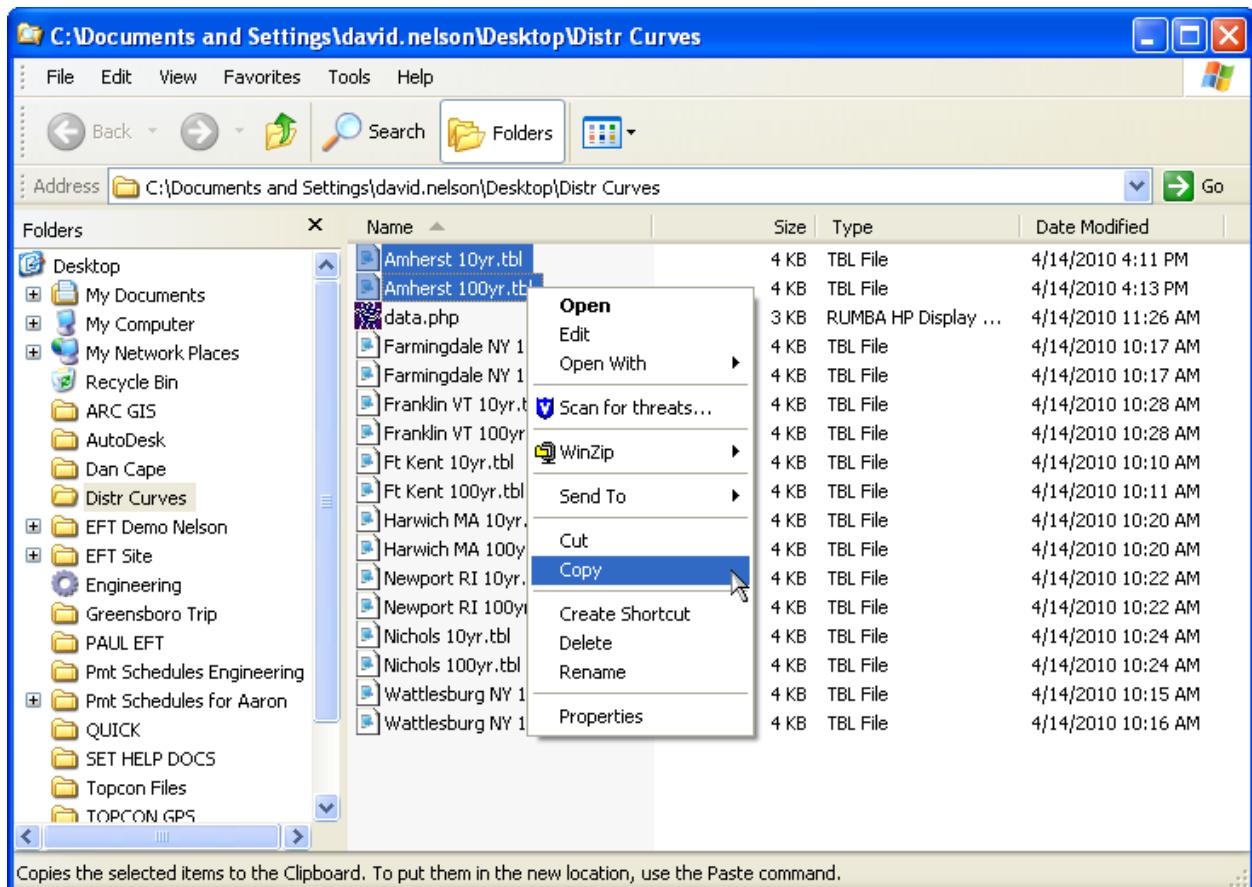
- Move or copy the distribution data file(s) to the proper folder.

- Navigate to the folder containing the downloaded distribution files and copy them to the clipboard.
- Then, navigate to:

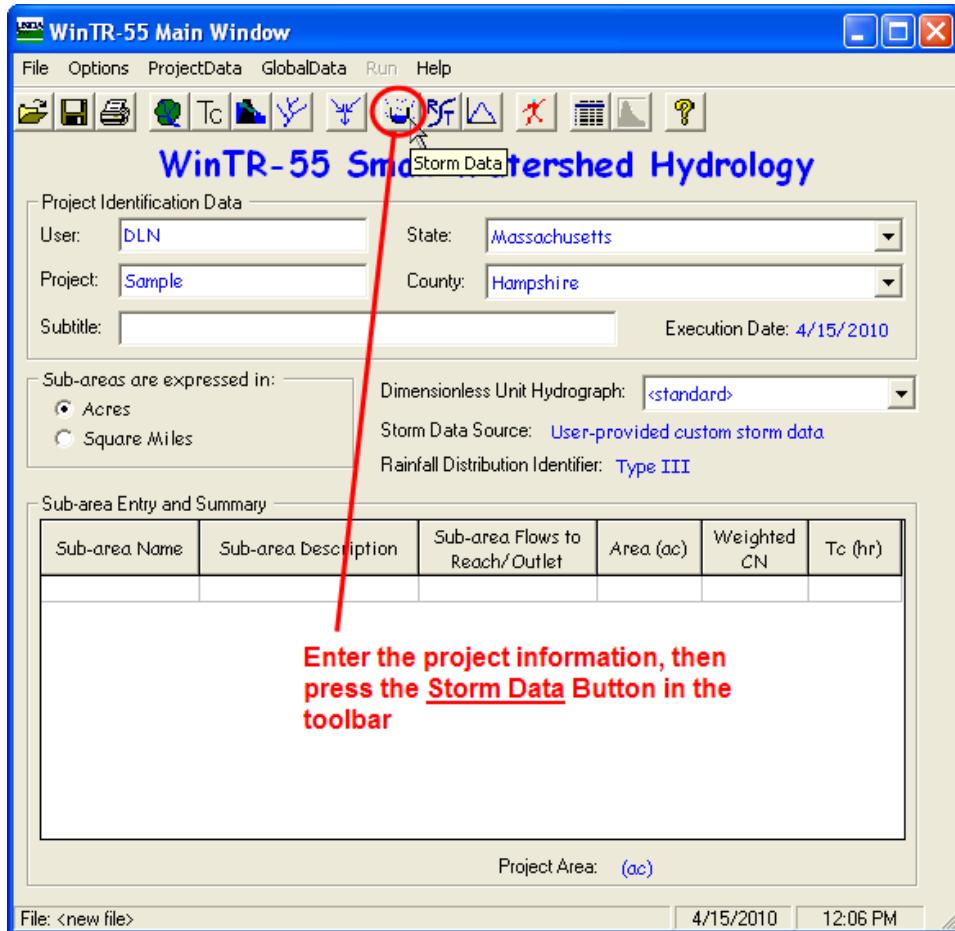
C:\Documents and Settings\first.last\Application Data\WinTR-55\RainfallDistributions
(substitute your name for first.last)

This is the folder where WinTR-55 looks to find user defined distribution data.

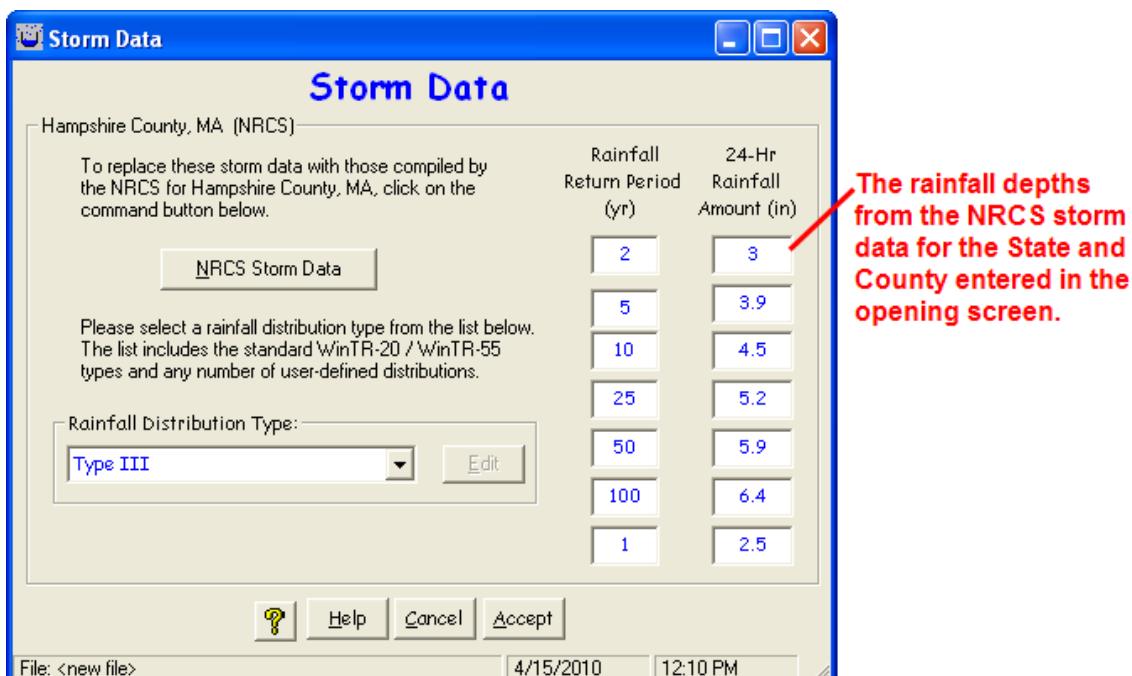
- Paste the file(s) into this folder.



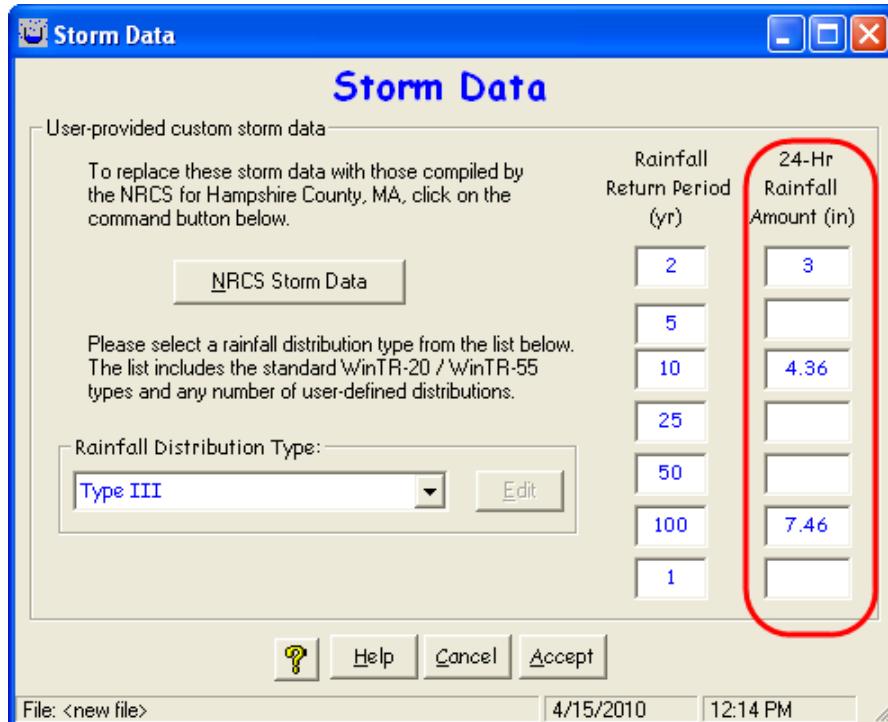
4. Run WinTR-55, and enter the project information on the opening screen.



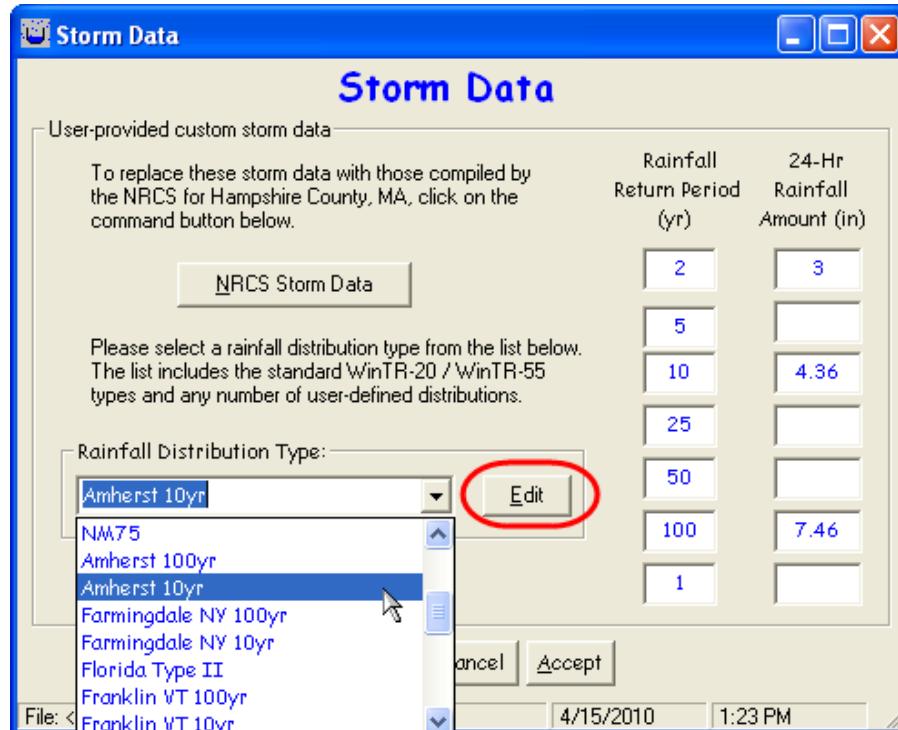
5. Modify the Storm Data (do this first so that the Tc will be based on the correct Q2 rain depth)



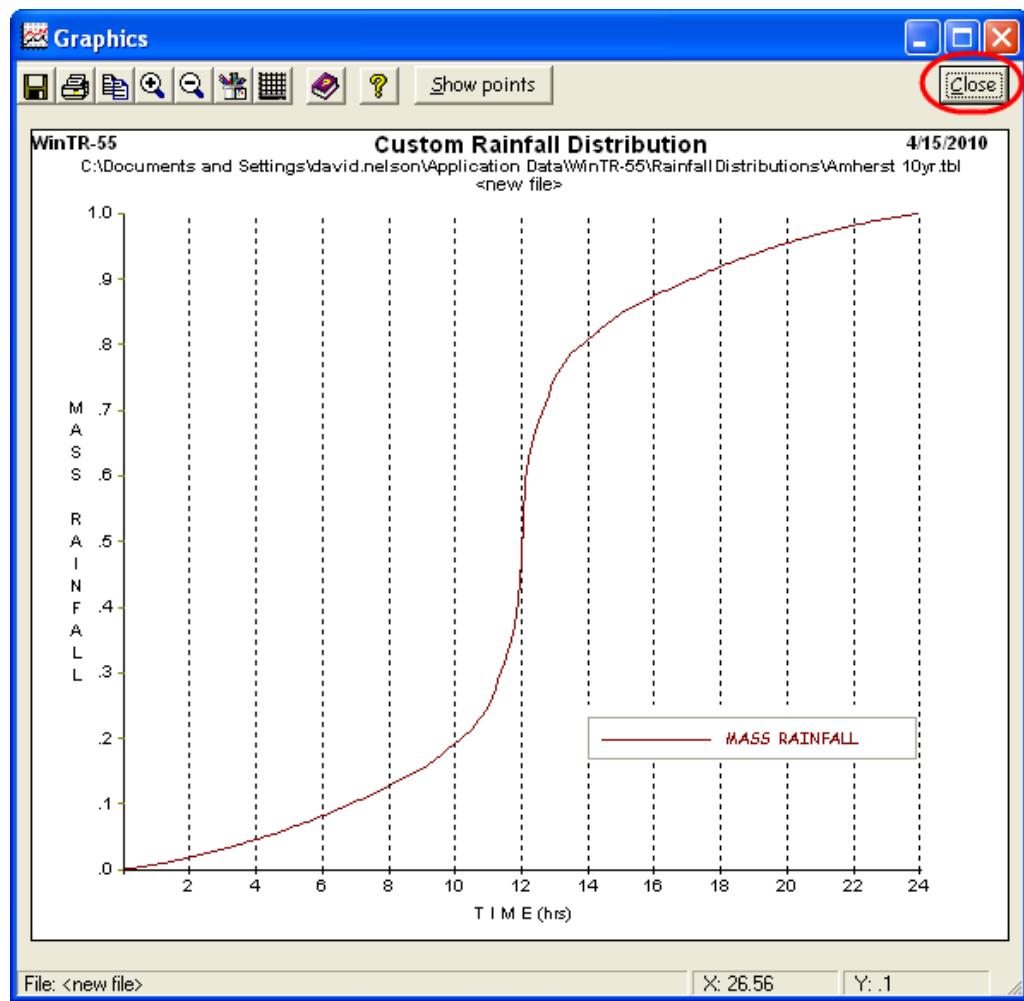
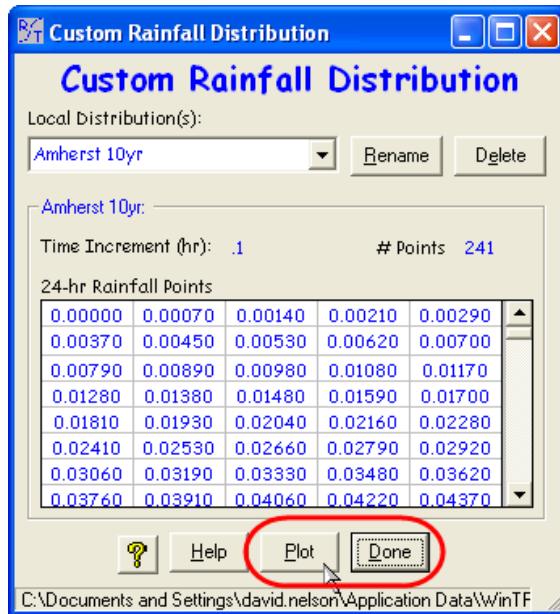
- a. Enter the rainfall depths for the storm(s) to be run (and the Q2 storm depth)



- b. Change the rainfall distribution by choosing the distribution file just downloaded for the first storm to be run.

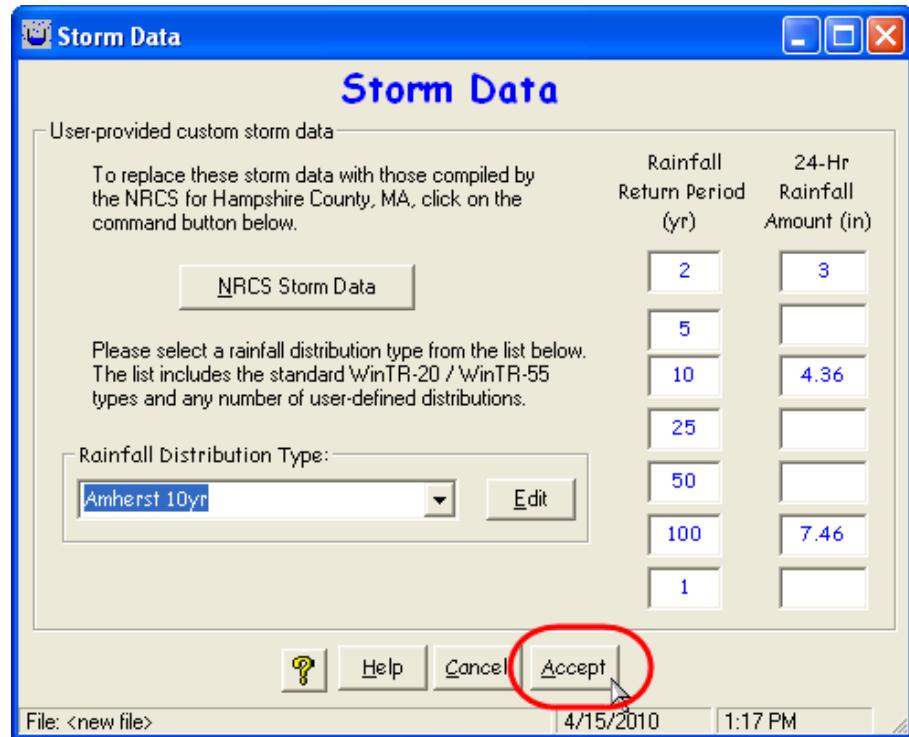


- Press **Edit** if you wish to view the data. Press **Plot** to view the distribution curve.

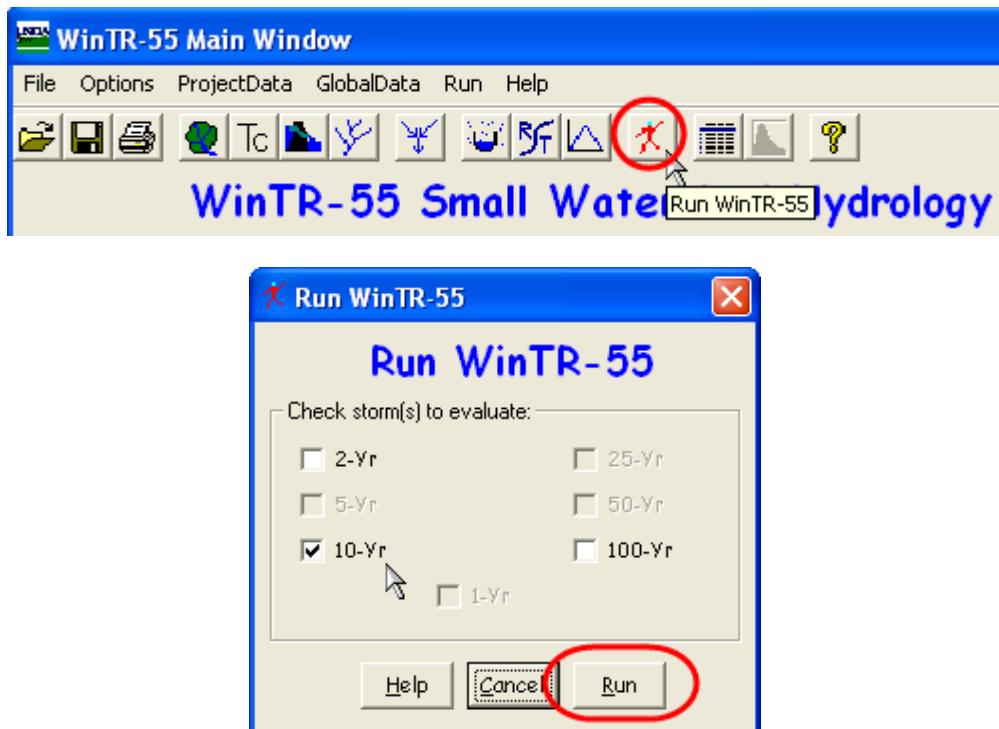


- Press **Close** to close the plot window, and press **Done** to exit the Custom Distribution window

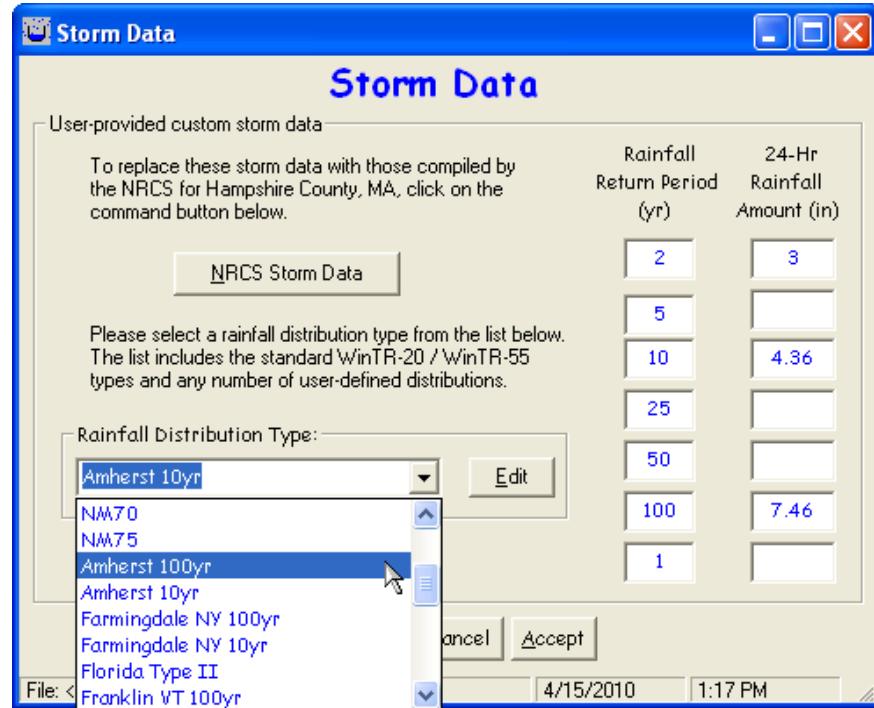
- Press **Accept** to accept the storm data and close the Storm Data window



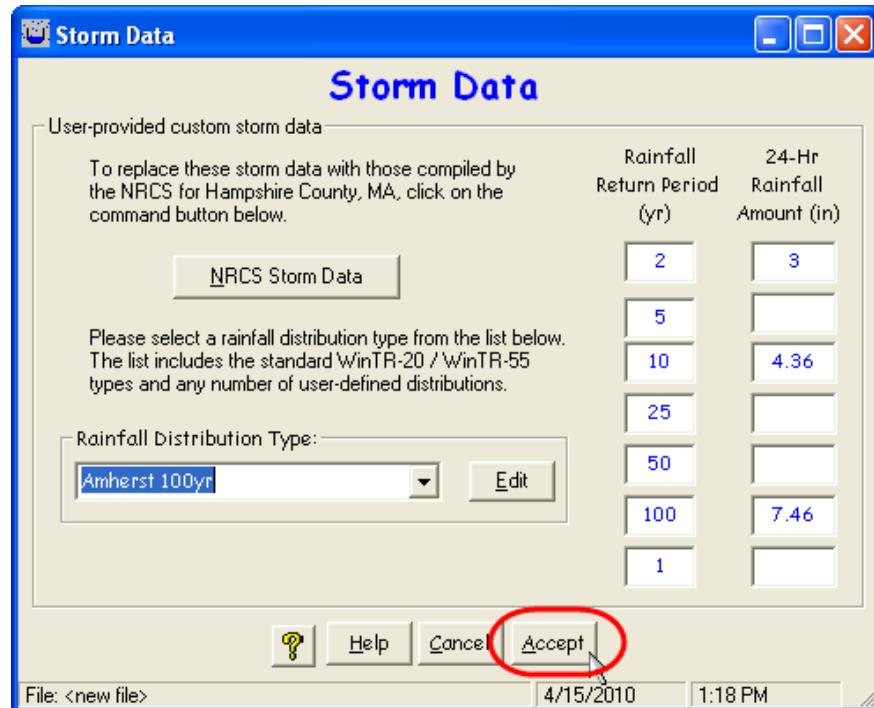
6. Enter the watershed information for the site into WinTR-55.
 - a. Enter the watershed drainage area and RCN (or compute them)
 - b. To compute the Tc, you must have entered the Q2 storm first as described above, or you must enter the final Tc value
7. Press the **Run** button to determine the peak for the first storm. Only choose the storm for which the distribution curve was imported. The second storm will be run later. Press **Run** to determine the peak discharge.



8. Bring in the distribution file for the second storm
- Choose the rainfall distribution for the next storm to be run.



- Press **Edit** if you wish to view the data
- Press **Done** to exit the Custom Distribution window
- Press **Accept** to accept the storm data and close the window



9. Press the Run button to determine the peak for the second storm. Uncheck the previous storm that was just run, and check the storm for which the next distribution curve was imported. Then press **Run** to determine the peak discharge.



10. Repeat the above steps to design other storm frequencies for this location.