

CE 3354 Engineering Hydrology
Exercise Set 4

Exercises

1. Use the Oklahoma data you prepared in ES-3 and analyze using the Bulletin 17C procedure (using the PeakFQ software tool).

You will have to carefully build an input file – the beargrass.txt file is the correct format, and if you just change the name and flows (and dates) in a text editor without getting things in the wrong column, the program should work fine. If there are outliers, identify these, and re-run with the outliers disabled. Be sure to submit with the original run, and a run with the outliers disabled.

2. Use the NOAA Precipitation Frequency Data Server to prepare Intensity-Duration-Frequency curves for Eden, Texas (Concho County). The desired ARI are 2-yr, 10-yr, 50-yr, and 100-yr (4 curves).
3. Use the NOAA Precipitation Frequency Data Server and the SCS Rainfall Distributions to prepare a 50-yr, 24-hour hyetograph for Eden, Texas.
4. Use the NOAA Precipitation Frequency Data Server and the Texas Hyetograph Tool (TxHYETO-2015.xlsx) to prepare a 50-yr, 24-hour hyetograph for Eden, Texas.

Save these 50-yr, 24-hour hyetograph for Eden, Texas.; you will reuse them as inputs for the Hardin Branch project.