Activity 1

Assume that only a single factor is changed on each of the 13 watershed factors listed below. Indicate whether there would be an increase or decrease in peak discharge.

Meteorological Factors	Change From	To	Peak Discharge	
			Increase	Decrease
1.Amount of storm rainfall	3 inches	6 inches		
2.Duration of storm rainfall	2 hours	12 hours		
3.Storm distribution with time	Steady rate	Highly variable rate		
4.Storm distribution with area	Complete coverage	Partial coverage		
5.Temperature snow melt	25°F	50°F		
Watershed Characteristics				
6.Size	10 acres	20 acres		
7.Shape	Elongated	Round		
8.Slope	Steep	Flat		
9.Cover	Pasture	Corn		
10.Hydraulic condition	Heavily grazed	Fenced off		
11.Surface storage	Smooth surface	Marsh		
12.Antecedent Runoff Condition	Dry	Wet		
13.Agricultural practices	Straight uphill rows	Terraces		

Activity 2

Which peak discharge procedure would be recommended for the following situations? Please identify the procedure by number as shown below:

1 = EFM Chapter 2
2 = TR-55 Chapter 4 - Graphical
3 = TR-55 Chapter 5 - Tabular Hydrograph
4 = TR-20 Computer Program

Requirement	Procedure
1. Design a waterway for a cropland watershed of 20 acres and the lower 2/3 is parkland.	
2. Evaluate a large drainage inlet structure above a road at the outlet of the 300 acre watershed. The upper third of the drainage area is converted to housing, \ft 1inch drains into a sediment basin,	
3. Evaluate a 300 acre agricultural watershed that is converted to a housing development with 1/4 acre lots.	
4. Evaluate the above watershed if only the upper third was allowed to be developed.	