

Factors affecting run-off

(1) Type of precipitation: In our country there are basically two types of precipitation, snow fall and rain fall. If snow fall occurs snows are compiled as long as the temperature is 0 degree. When the snows reaches at melting temperature the snows starts to melt. However all the snows don't melt at the same time. At first the topmost layer melts and the remaining starts to melt. So runoff doesn't start immediately. But in case of rain fall runoff starts immediately. So there is a characteristic difference of runoff due to snow fall and rain fall. So if we want to design drainage system for tropical countries like Bangladesh, whereas if we want to design the same for the arctic countries like Australia, Northern Europe etc. we will have to design for snowfall.

(2) Rainfall Intensity: Unit: Depth of rainfall/unit time.

Rainfall event

Infiltration capacity: With type the infiltration capacity of soil decreases exponentially and asymptotically. When the rainfall starts infiltration capacity is very high and with time as infiltration capacity decreases surface runoff gradually increases.

Hydrograph: Necessary to design the drainage system for an area.

If the area is open field or a parking lot, what will be the shape of the hydrograph?

Peak flow

Soil moisture deficiency:

Storm direction:

If temperature, wind increases water evaporates. So hydrograph is affected.