

PEAK RUN-OFF COMPUTATION SHEET

(See National Engineering Handbook (formerly Engineering Field Manual, Chapter 2, Procedure)

Cooperator or Watershed Name _____
 Structure Name or Number _____ Structure Location: _____
 Designer Name _____
 Date _____

Township _____
 Range _____
 Section _____

SOIL COVER COMPLEX NUMBER COMPUTATION (See EFM, Chapter 2, Table 2-3)

Acres	Land Use Cover	Treatment or Condition	Soil Cover Complex No. (CN), Table 2-3	Percent of Area	Complex No. x Percent of Area

Sum =100% Total / 100 = RCN

_____ = Total drainage acres

_____ = RCN

RUN-OFF COMPUTATION

- Drainage Area (DA) DA = _____ ac.
- RCN (weighted Run-off Curve Number) RCN = _____
- L (Longest flow length in watershed) L = _____ ft.
- Y (average watershed slope of land) Y = _____ %
- T_c (time of concentration)
$$T_c = \frac{L^{0.8} \times [(1000/RCN)-9]^{0.7}}{1140 \times (Y)^{0.5}}$$
 T_c = _____ hrs
- Design frequency _____ yrs
- Design precipitation (NOAA Atlas 2, Vol I) for given frequency P_{6 hr} = _____ in.
P_{24 hr} = _____ in.
- Ratio of P_{6 hr} / P_{24 hr} = R R = _____
- Design rainfall distribution,
 if R < 0.518 use Type IA, Use Rainfall Type _____
 if 0.518 ≤ R < 0.64 use Type I
 if 0.64 ≤ R < 0.768 use Type II
 if 0.768 ≤ R contact NRCS State Conservation Engineer
- I_a, Initial abstraction (Use RCN with EFM, Ch. 2, Table 2-4) I_a = _____ in.
- I_a / P ratio (use P_{24 hr} for the design frequency) I_a / P = _____
- q_u, Unit peak discharge (Use EFM, Ch. 2, Exhibits 2-I through 2-II) _____ cfs/ac/in
- Q, Runoff volume (use EFM, Ch.2, Figure 2-26 or Table 2-2 with P_{24 hr} and RCN), _____ watershed-in.
- q_p, Peak discharge = q_u x DA x Q q_p = _____ cfs