WATERSHED RUNOFF COMPUTATION

SWCD_____**FIELD OFFICE**_____

COOPERATOR_____**TYPE OF PRACTICE**_____

STRUCTURE NO._____**ENG. JOB CLASS**_____**PROGRAM (ACP,GPCP,OTHER)**_____

PROGRAM_____**CONTRACT NO.**_____**CIN**_____**FIELD NO.**_____

COMPUTATIONS BY_____**DATE**_____**CHECKED BY**_____**DATE**_____

APPROVED BY_____**DATE**_____

DETERMINATION OF RUNOFF CURVE NUMBER (TABLE 2, PG. 37-40)*

Land Use Or Cover	Cover Condition	Soil Name	Group	Land Slope	Area Acres	Curve Number	Acres X Curve No.	Acres Slope
					TOTAL=	_____	_____	_____

Weighted Curve Number = $\frac{\text{(Acres X Curve No.)}}{\text{Total No. Acres}}$ = _____ = _____ Use_____

Average Watershed Slope = $\frac{\text{(Acres X Slope)}}{\text{Total No. Acres}}$ = _____ = _____ Use_____

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*Reference - Engineering Technical Note 210-18-TX5 or Engineering Field Manual for Conservation Practices (EFM), Chapter 2

Estimating time of concentration

1. Data:
   Rainfall distribution type (II or III), pg. 19 or 20..... = _____

   Drainage area ..... A = _____ ac

   Runoff curve number ..... CN = _____

   Average Watershed slope ..... Y = _____ %

   Flow length ..... L = _____ ft

2. Tc using L, Y, CN and Figure 4, pg.22..... = _____ hrs

   or using equation

$$Tc = \frac{(L)^{0.8}\left[\left(\frac{1000}{CN}\right) - 9\right]^{0.7}}{1140\ Y^{0.5}} = \frac{(\quad)^{0.8}(\quad)^{0.7}}{1140\ (\quad)^{0.5}} = _____ \text{ hrs}$$

Use _____hrs

Estimating peak discharge*	Storm #1	Storm #2	Storm #3
1. Frequency (refer to NHCP).....yr.			
2. Rainfall, P (24-hour) Figure 6, pg. 24-29..in.			
3. Initial abstraction, Ia (Table 4), pg. 42. .in.			
4. Compute Ia/P ratios**.....			
5. Unit peak discharge, qu cfs/ac/in. (Exhibit 1 or 2) pg. 17 or 18.....			
6. Runoff, Q (Figure 3), pg. 21.....in.			
7. Peak discharge, qp (qp = quAQ)..... cfs.			
8. Correction for Pond or Swampy Area, Fp, pg. 5.			
9. Corrected Peak Discharge (qp X Fp).....cfs.			

* Reference - ENG Tech. Note 210-18-TX5
** Use 0.10 for all Ia/P values less than 0.10.

Remarks: