Rainfall Excess Prediction Using the SCS Method

Area (mi2)	Hydrologic Soil Group	CN (AMC-II)	S (in)	Ia (in)
1	C	80	2.5	0.5

		------ Accumulated -----			---------- Cumulative ----------		
Time (hour)	P (in)	P (in)	Pe (in)	Pe (in)	(Ia + Fa) (in)	Ia (in)	Fa (in)
0		0.0	0.0		0.000	0.000	0.000
	1.0			0.083			
2		1.0	0.083		0.917	0.500	0.417
	2.0			1.167			
4		3.0	1.250		1.750	0.500	1.250
	4.0			3.444			
6		7.0	4.694		2.306	0.500	1.806
	1.0			0.931			
8		8.0	5.625		2.375	0.500	1.875

Effective duration (t_r):

$t_r = 8$ hours (between hours 0 and 8)

Depth of direct runoff (r_d):

$r_d = \sum P_e = 5.625$ inches

Volume of direct runoff (V_d):

$V_d = r_d A$

$= (5.725\text{ in})(1\text{ mi}^2)(640\text{ ac/mi}^2)/(12\text{ in/ft})$

$= 300$ ac - ft