

Use the information given below to complete the blanks for pre-development and post-development conditions for Sites B1, B2, and B3. Assume drainage areas equal site areas.

B1		
	Pre	Post
Tc (min)	20	5
Tc (hr)	0.3333	0.0833

CN	74	79
S	3.514	2.658
Ia	0.703	0.532
P, in	2.6	
Ia/P	0.27	0.20
qu (csm/in)*	570	975

*Use Type II rainfall distribution

Q, in	0.665	0.905
Vr, ac-ft	0.299	0.407
Fp	1	1

DA (acres)	5.4	5.4
DA (sq mi)	0.00844	0.00844

q(peak), cfs	3.2	7.4
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q(allowable), cfs	1.9	
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Pre = Pre-development condition
 Post = Post-development condition
 Tc = time of concentration
 CN = Curve Number
 S = Maximum Potential Retention
 Ia = Initial Abstraction
 P = Precipitation

B2		
	Pre	Post
Tc (min)	20	5
Tc (hr)	0.3333	0.0833

CN	74	76
S	3.514	3.158
Ia	0.703	0.632
P, in	2.6	
Ia/P	0.27	0.24
qu (csm/in)*	570	960

*Use Type II rainfall distribution

Q, in	0.665	0.756
Vr, ac-ft	0.299	0.340
Fp	1	1

DA (acres)	5.4	5.4
DA (sq mi)	0.00844	0.00844

q(peak), cfs	3.2	6.1
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q(allowable), cfs	2.3	
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qu = Unit Peak Discharge
 csm/in = cubic feet per second per square mile per inch
 Q, in = Runoff depth in inches
 Vr, ac-ft = Runoff volume in ac-ft (total runoff across drainage area)
 $Vr \text{ (ac-ft)} = Q(\text{in}) \times DA(\text{ac}) \times 1\text{ft}/12\text{in}$
 Fp = Pond and Swamp Adjustment Factor
 DA, ac or sq mi = Drainage Area in acres or square miles
 q(peak), cfs = Peak Discharge Rate in cubic feet per second
 q(allowable), cfs = Allowable Peak Discharge Rate in cubic feet per second

B3		
	Pre	Post
Tc (min)	20	5
Tc (hr)	0.333333	0.0833

CN	74	83
S	3.514	2.048
Ia	0.703	0.410
P, in	2.6	
Ia/P	0.27	0.16
qu (csm/in)*	570	980

*Use Type II rainfall distribution

Q, in	0.665	1.132
Vr, ac-ft	0.299	0.509
Fp	1	1

DA (acres)	5.4	5.4
DA (sq mi)	0.00844	0.00844

q(peak), cfs	3.2	9.4
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q(allowable), cfs	1.5	
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