



AREA 1



AREA 2



AREA 3



AREA 4



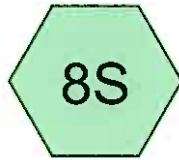
AREA 5



AREA 6



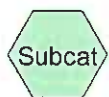
AREA 7



AREA 8



AREA 9



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Prepared by {enter your company name here}

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
147.510	30	Woods, Good, HSG A (1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S)
1.000	35	Brush, Fair, HSG A Easement (1S)
2.100	35	Brush, Fair, HSG A Easement (2S)
4.780	35	easement (3S, 4S)
11.360	55	Woods, Good, HSG B (6S, 7S)
166.750	32	TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
150.610	HSG A	1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S
11.360	HSG B	6S, 7S
0.000	HSG C	
0.000	HSG D	
4.780	Other	3S, 4S
166.750		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
3.100	0.000	0.000	0.000	0.000	3.100	Brush, Fair	1S, 2S
147.510	11.360	0.000	0.000	0.000	158.870	Woods, Good	1S, 2S, 3S, 4S, 5S, 6S, 7S, 8S, 9S
0.000	0.000	0.000	0.000	4.780	4.780	easement	3S, 4S
150.610	11.360	0.000	0.000	4.780	166.750	TOTAL AREA	

Time span=4.00-36.00 hrs, dt=0.05 hrs, 641 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: AREA 1 Runoff Area=2.900 ac 0.00% Impervious Runoff Depth=0.00"
Flow Length=480' Slope=0.1080 '/' Tc=19.6 min CN=32 Runoff=0.00 cfs 0.000 af

Subcatchment 2S: AREA 2 Runoff Area=3.620 ac 0.00% Impervious Runoff Depth=0.00"
Flow Length=350' Slope=0.1340 '/' Tc=13.3 min CN=33 Runoff=0.00 cfs 0.000 af

Subcatchment 3S: AREA 3 Runoff Area=60.370 ac 0.00% Impervious Runoff Depth=0.00"
Tc=40.2 min CN=30 Runoff=0.00 cfs 0.000 af

Subcatchment 4S: AREA 4 Runoff Area=22.110 ac 0.00% Impervious Runoff Depth=0.00"
Flow Length=1,450' Slope=0.1060 '/' Tc=49.5 min CN=31 Runoff=0.00 cfs 0.000 af

Subcatchment 5S: AREA 5 Runoff Area=5.540 ac 0.00% Impervious Runoff Depth=0.00"
Flow Length=850' Slope=0.1220 '/' Tc=31.0 min CN=30 Runoff=0.00 cfs 0.000 af

Subcatchment 6S: AREA 6 Runoff Area=59.050 ac 0.00% Impervious Runoff Depth=0.00"
Tc=58.1 min CN=35 Runoff=0.00 cfs 0.000 af

Subcatchment 7S: AREA 7 Runoff Area=2.950 ac 0.00% Impervious Runoff Depth=0.00"
Flow Length=600' Slope=0.0350 '/' Tc=42.5 min CN=31 Runoff=0.00 cfs 0.000 af

Subcatchment 8S: AREA 8 Runoff Area=7.830 ac 0.00% Impervious Runoff Depth=0.00"
Flow Length=1,000' Slope=0.0140 '/' Tc=104.4 min CN=30 Runoff=0.00 cfs 0.000 af

Subcatchment 9S: AREA 9 Runoff Area=2.380 ac 0.00% Impervious Runoff Depth=0.00"
Flow Length=400' Slope=0.0230 '/' Tc=39.1 min CN=30 Runoff=0.00 cfs 0.000 af

Total Runoff Area = 166.750 ac Runoff Volume = 0.000 af Average Runoff Depth = 0.00"
100.00% Pervious = 166.750 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 1S: AREA 1

[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 4.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2-Year Rainfall=3.00"

Area (ac)	CN	Description
1.900	30	Woods, Good, HSG A
* 1.000	35	Brush, Fair, HSG A Easement
2.900	32	Weighted Average
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.6	480	0.1080	0.41		Lag/CN Method,

Summary for Subcatchment 2S: AREA 2

[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 4.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2-Year Rainfall=3.00"

Area (ac)	CN	Description
1.520	30	Woods, Good, HSG A
* 2.100	35	Brush, Fair, HSG A Easement
3.620	33	Weighted Average
3.620		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.3	350	0.1340	0.44		Lag/CN Method,

Summary for Subcatchment 3S: AREA 3

[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 4.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.00"

Area (ac)	CN	Description
59.370	30	Woods, Good, HSG A
* 1.000	35	easement
60.370	30	Weighted Average
60.370		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.2					Direct Entry,

Summary for Subcatchment 4S: AREA 4

[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 4.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs

Type III 24-hr 2-Year Rainfall=3.00"

Area (ac)	CN	Description
18.330	30	Woods, Good, HSG A
* 3.780	35	easement
22.110	31	Weighted Average
22.110		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
49.5	1,450	0.1060	0.49		Lag/CN Method,

Summary for Subcatchment 5S: AREA 5

[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 4.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2-Year Rainfall=3.00"

Area (ac)	CN	Description
5.540	30	Woods, Good, HSG A
5.540		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.0	850	0.1220	0.46		Lag/CN Method,

Summary for Subcatchment 6S: AREA 6

[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 4.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2-Year Rainfall=3.00"

Area (ac)	CN	Description
47.810	30	Woods, Good, HSG A
11.240	55	Woods, Good, HSG B
59.050	35	Weighted Average
59.050		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
58.1					Direct Entry,

Summary for Subcatchment 7S: AREA 7

[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 4.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2-Year Rainfall=3.00"

Area (ac)	CN	Description
2.830	30	Woods, Good, HSG A
0.120	55	Woods, Good, HSG B
2.950	31	Weighted Average
2.950		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
42.5	600	0.0350	0.24		Lag/CN Method,

Summary for Subcatchment 8S: AREA 8

[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 4.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs

Type III 24-hr 2-Year Rainfall=3.00"

Area (ac)	CN	Description
7.830	30	Woods, Good, HSG A
7.830		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
104.4	1,000	0.0140	0.16		Lag/CN Method,

Summary for Subcatchment 9S: AREA 9

[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 4.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 2-Year Rainfall=3.00"

Area (ac)	CN	Description
2.380	30	Woods, Good, HSG A
2.380		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
39.1	400	0.0230	0.17		Lag/CN Method,

Time span=4.00-36.00 hrs, dt=0.05 hrs, 641 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: AREA 1 Runoff Area=2.900 ac 0.00% Impervious Runoff Depth=0.00"
Flow Length=480' Slope=0.1080 '/' Tc=19.6 min CN=32 Runoff=0.00 cfs 0.001 af

Subcatchment 2S: AREA 2 Runoff Area=3.620 ac 0.00% Impervious Runoff Depth=0.01"
Flow Length=350' Slope=0.1340 '/' Tc=13.3 min CN=33 Runoff=0.01 cfs 0.003 af

Subcatchment 3S: AREA 3 Runoff Area=60.370 ac 0.00% Impervious Runoff Depth=0.00"
Tc=40.2 min CN=30 Runoff=0.00 cfs 0.000 af

Subcatchment 4S: AREA 4 Runoff Area=22.110 ac 0.00% Impervious Runoff Depth=0.00"
Flow Length=1,450' Slope=0.1060 '/' Tc=49.5 min CN=31 Runoff=0.00 cfs 0.000 af

Subcatchment 5S: AREA 5 Runoff Area=5.540 ac 0.00% Impervious Runoff Depth=0.00"
Flow Length=850' Slope=0.1220 '/' Tc=31.0 min CN=30 Runoff=0.00 cfs 0.000 af

Subcatchment 6S: AREA 6 Runoff Area=59.050 ac 0.00% Impervious Runoff Depth=0.03"
Tc=58.1 min CN=35 Runoff=0.22 cfs 0.157 af

Subcatchment 7S: AREA 7 Runoff Area=2.950 ac 0.00% Impervious Runoff Depth=0.00"
Flow Length=600' Slope=0.0350 '/' Tc=42.5 min CN=31 Runoff=0.00 cfs 0.000 af

Subcatchment 8S: AREA 8 Runoff Area=7.830 ac 0.00% Impervious Runoff Depth=0.00"
Flow Length=1,000' Slope=0.0140 '/' Tc=104.4 min CN=30 Runoff=0.00 cfs 0.000 af

Subcatchment 9S: AREA 9 Runoff Area=2.380 ac 0.00% Impervious Runoff Depth=0.00"
Flow Length=400' Slope=0.0230 '/' Tc=39.1 min CN=30 Runoff=0.00 cfs 0.000 af

Total Runoff Area = 166.750 ac Runoff Volume = 0.161 af Average Runoff Depth = 0.01"
100.00% Pervious = 166.750 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 1S: AREA 1

Runoff = 0.00 cfs @ 24.01 hrs, Volume= 0.001 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Rainfall=4.50"

Area (ac)	CN	Description
1.900	30	Woods, Good, HSG A
* 1.000	35	Brush, Fair, HSG A Easement
2.900	32	Weighted Average
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.6	480	0.1080	0.41		Lag/CN Method,

Summary for Subcatchment 2S: AREA 2

Runoff = 0.01 cfs @ 22.88 hrs, Volume= 0.003 af, Depth= 0.01"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Rainfall=4.50"

Area (ac)	CN	Description
1.520	30	Woods, Good, HSG A
* 2.100	35	Brush, Fair, HSG A Easement
3.620	33	Weighted Average
3.620		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.3	350	0.1340	0.44		Lag/CN Method,

Summary for Subcatchment 3S: AREA 3

[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 4.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Rainfall=4.50"

Area (ac)	CN	Description
59.370	30	Woods, Good, HSG A
* 1.000	35	easement
60.370	30	Weighted Average
60.370		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.2					Direct Entry,

Summary for Subcatchment 4S: AREA 4

Runoff = 0.00 cfs @ 24.34 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Rainfall=4.50"

Area (ac)	CN	Description
18.330	30	Woods, Good, HSG A
* 3.780	35	easement
22.110	31	Weighted Average
22.110		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
49.5	1,450	0.1060	0.49		Lag/CN Method,

Summary for Subcatchment 5S: AREA 5

[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 4.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.50"

Area (ac)	CN	Description
5.540	30	Woods, Good, HSG A
5.540		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.0	850	0.1220	0.46		Lag/CN Method,

Summary for Subcatchment 6S: AREA 6

Runoff = 0.22 cfs @ 17.90 hrs, Volume= 0.157 af, Depth= 0.03"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Rainfall=4.50"

Area (ac)	CN	Description
47.810	30	Woods, Good, HSG A
11.240	55	Woods, Good, HSG B
59.050	35	Weighted Average
59.050		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
58.1					Direct Entry,

Summary for Subcatchment 7S: AREA 7

Runoff = 0.00 cfs @ 24.28 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs

Type III 24-hr 10-Year Rainfall=4.50"

Area (ac)	CN	Description
2.830	30	Woods, Good, HSG A
0.120	55	Woods, Good, HSG B
2.950	31	Weighted Average
2.950		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
42.5	600	0.0350	0.24		Lag/CN Method,

Summary for Subcatchment 8S: AREA 8

[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 4.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs

Type III 24-hr 10-Year Rainfall=4.50"

Area (ac)	CN	Description
7.830	30	Woods, Good, HSG A
7.830		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
104.4	1,000	0.0140	0.16		Lag/CN Method,

Summary for Subcatchment 9S: AREA 9

[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 4.00 hrs, Volume= 0.000 af, Depth= 0.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 10-Year Rainfall=4.50"

Area (ac)	CN	Description
2.380	30	Woods, Good, HSG A
2.380		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
39.1	400	0.0230	0.17		Lag/CN Method,

Time span=4.00-36.00 hrs, dt=0.05 hrs, 641 points
Runoff by SCS TR-20 method, UH=SCS
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: AREA 1 Runoff Area=2.900 ac 0.00% Impervious Runoff Depth=0.20"
Flow Length=480' Slope=0.1080 '/' Tc=19.6 min CN=32 Runoff=0.08 cfs 0.048 af

Subcatchment 2S: AREA 2 Runoff Area=3.620 ac 0.00% Impervious Runoff Depth=0.24"
Flow Length=350' Slope=0.1340 '/' Tc=13.3 min CN=33 Runoff=0.13 cfs 0.073 af

Subcatchment 3S: AREA 3 Runoff Area=60.370 ac 0.00% Impervious Runoff Depth=0.12"
Tc=40.2 min CN=30 Runoff=0.94 cfs 0.603 af

Subcatchment 4S: AREA 4 Runoff Area=22.110 ac 0.00% Impervious Runoff Depth=0.16"
Flow Length=1,450' Slope=0.1060 '/' Tc=49.5 min CN=31 Runoff=0.46 cfs 0.289 af

Subcatchment 5S: AREA 5 Runoff Area=5.540 ac 0.00% Impervious Runoff Depth=0.12"
Flow Length=850' Slope=0.1220 '/' Tc=31.0 min CN=30 Runoff=0.09 cfs 0.055 af

Subcatchment 6S: AREA 6 Runoff Area=59.050 ac 0.00% Impervious Runoff Depth=0.34"
Tc=58.1 min CN=35 Runoff=3.26 cfs 1.670 af

Subcatchment 7S: AREA 7 Runoff Area=2.950 ac 0.00% Impervious Runoff Depth=0.16"
Flow Length=600' Slope=0.0350 '/' Tc=42.5 min CN=31 Runoff=0.06 cfs 0.039 af

Subcatchment 8S: AREA 8 Runoff Area=7.830 ac 0.00% Impervious Runoff Depth=0.12"
Flow Length=1,000' Slope=0.0140 '/' Tc=104.4 min CN=30 Runoff=0.11 cfs 0.078 af

Subcatchment 9S: AREA 9 Runoff Area=2.380 ac 0.00% Impervious Runoff Depth=0.12"
Flow Length=400' Slope=0.0230 '/' Tc=39.1 min CN=30 Runoff=0.04 cfs 0.024 af

Total Runoff Area = 166.750 ac Runoff Volume = 2.878 af Average Runoff Depth = 0.21"
100.00% Pervious = 166.750 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 1S: AREA 1

Runoff = 0.08 cfs @ 13.96 hrs, Volume= 0.048 af, Depth= 0.20"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100-Year Rainfall=6.40"

Area (ac)	CN	Description
1.900	30	Woods, Good, HSG A
* 1.000	35	Brush, Fair, HSG A Easement
2.900	32	Weighted Average
2.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.6	480	0.1080	0.41		Lag/CN Method,

Summary for Subcatchment 2S: AREA 2

Runoff = 0.13 cfs @ 12.94 hrs, Volume= 0.073 af, Depth= 0.24"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100-Year Rainfall=6.40"

Area (ac)	CN	Description
1.520	30	Woods, Good, HSG A
* 2.100	35	Brush, Fair, HSG A Easement
3.620	33	Weighted Average
3.620		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.3	350	0.1340	0.44		Lag/CN Method,

Summary for Subcatchment 3S: AREA 3

Runoff = 0.94 cfs @ 15.50 hrs, Volume= 0.603 af, Depth= 0.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100-Year Rainfall=6.40"

Area (ac)	CN	Description
59.370	30	Woods, Good, HSG A
* 1.000	35	easement
60.370	30	Weighted Average
60.370		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
40.2					Direct Entry,

Summary for Subcatchment 4S: AREA 4

Runoff = 0.46 cfs @ 15.35 hrs, Volume= 0.289 af, Depth= 0.16"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100-Year Rainfall=6.40"

Area (ac)	CN	Description
18.330	30	Woods, Good, HSG A
* 3.780	35	easement
22.110	31	Weighted Average
22.110		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
49.5	1,450	0.1060	0.49		Lag/CN Method,

Summary for Subcatchment 5S: AREA 5

Runoff = 0.09 cfs @ 15.41 hrs, Volume= 0.055 af, Depth= 0.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs

Type III 24-hr 100-Year Rainfall=6.40"

Area (ac)	CN	Description
5.540	30	Woods, Good, HSG A
5.540		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
31.0	850	0.1220	0.46		Lag/CN Method,

Summary for Subcatchment 6S: AREA 6

Runoff = 3.26 cfs @ 13.39 hrs, Volume= 1.670 af, Depth= 0.34"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100-Year Rainfall=6.40"

Area (ac)	CN	Description
47.810	30	Woods, Good, HSG A
11.240	55	Woods, Good, HSG B
59.050	35	Weighted Average
59.050		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
58.1					Direct Entry,

Summary for Subcatchment 7S: AREA 7

Runoff = 0.06 cfs @ 15.25 hrs, Volume= 0.039 af, Depth= 0.16"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100-Year Rainfall=6.40"

Area (ac)	CN	Description
2.830	30	Woods, Good, HSG A
0.120	55	Woods, Good, HSG B
2.950	31	Weighted Average
2.950		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
42.5	600	0.0350	0.24		Lag/CN Method,

Summary for Subcatchment 8S: AREA 8

Runoff = 0.11 cfs @ 16.60 hrs, Volume= 0.078 af, Depth= 0.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100-Year Rainfall=6.40"

Area (ac)	CN	Description
7.830	30	Woods, Good, HSG A
7.830		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
104.4	1,000	0.0140	0.16		Lag/CN Method,

Summary for Subcatchment 9S: AREA 9

Runoff = 0.04 cfs @ 15.51 hrs, Volume= 0.024 af, Depth= 0.12"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 4.00-36.00 hrs, dt= 0.05 hrs

Type III 24-hr 100-Year Rainfall=6.40"

Area (ac)	CN	Description
2.380	30	Woods, Good, HSG A
2.380		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
39.1	400	0.0230	0.17		Lag/CN Method,

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project RETREAT AT AMHERST By AW Date 5-14-14

Location AMHERST, MA Checked _____ Date _____

Circle one: Present Developed _____ BASIN #3

Circle one: T_c T_c through subarea _____

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

<u>Sheet flow</u> (Applicable to T _c only)	Segment ID		
1. Surface description (table 3-1)		WOOD	
2. Manning's roughness coeff., n (table 3-1) ..		0.40	
3. Flow length, L (total L < 300 ft)	ft	300	
4. Two-yr 24-hr rainfall, P ₂	in	3.0	
5. Land slope, s	ft/ft	0.10	
6. $T_t = \frac{0.007 (nL)^{0.8}}{P_2^{0.5} s^{0.4}}$ Compute T _t	hr	0.467 +	= 0.467

<u>Shallow concentrated flow</u>	Segment ID		
7. Surface description (paved or unpaved)		UNPAVED	
8. Flow length, L	ft	1200	
9. Watercourse slope, s	ft/ft	0.167	
10. Average velocity, V (figure 3-1)	ft/s	2.1	
11. $T_t = \frac{L}{3600 V}$ Compute T _t	hr	0.159 +	= 0.159

<u>Channel flow</u> (10' wide channel)	Segment ID		
12. Cross sectional flow area, a	ft ²	24	
13. Wetted perimeter, p _w	ft	15.6	
14. Hydraulic radius, $r = \frac{a}{p_w}$ Compute r	ft	1.5385	
15. Channel slope, s	ft/ft	0.072	
16. Manning's roughness coeff., n		0.04	
17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$ Compute V	ft/s	13.3	
18. Flow length, L	ft	2100	
19. $T_t = \frac{L}{3600 V}$ Compute T _t	hr	0.044 +	= 0.044
20. Watershed or subarea T _c or T _t (add T _t in steps 6, 11, and 19)	hr		0.67

40.2 min.

Worksheet 3: Time of concentration (T_c) or travel time (T_t)

Project RETREAT AT AMHELIST By AW Date 5-14-14
 Location AMHELIST, MA Checked _____ Date _____
 Circle one: Present Developed BASIN # 6
 Circle one: T_c T_t through subarea _____

NOTES: Space for as many as two segments per flow type can be used for each worksheet.

Include a map, schematic, or description of flow segments.

Sheet flow (Applicable to T_c only)

	Segment ID			
1. Surface description (table 3-1)		WOOD		
2. Manning's roughness coeff., n (table 3-1) ..		0.40		
3. Flow length, L (total L \leq 300 ft)	ft	300		
4. Two-yr 24-hr rainfall, P_2	in	3.0		
5. Land slope, s	ft/ft	0.033		
6. $T_t = \frac{0.007 (nL)^{0.8}}{P_2^{0.5} s^{0.4}}$ Compute T_t	hr	0.728	+	= 0.728

Shallow concentrated flow

	Segment ID			
7. Surface description (paved or unpaved)		UNPAVED		
8. Flow length, L	ft	1600'		
9. Watercourse slope, s	ft/ft	0.025		
10. Average velocity, V (figure 3-1)	ft/s	2.5		
11. $T_t = \frac{L}{3600 V}$ Compute T_t	hr	0.178	+	= 0.178

Channel flow (5' wide channel)

	Segment ID			
12. Cross sectional flow area, a	ft ²	14		
13. Wetted perimeter, p_w	ft	10.6		
14. Hydraulic radius, $r = \frac{a}{p_w}$ Compute r	ft	1.3208		
15. Channel slope, s	ft/ft	0.0528		
16. Manning's roughness coeff., n		0.04		
17. $V = \frac{1.49 r^{2/3} s^{1/2}}{n}$ Compute V	ft/s	10.3		
18. Flow length, L	ft	2350		
19. $T_t = \frac{L}{3600 V}$ Compute T_t	hr	0.063	+	= 0.063
20. Watershed or subarea T_c or T_t (add T_t in steps 6, 11, and 19)	hr			0.969

58.1 min

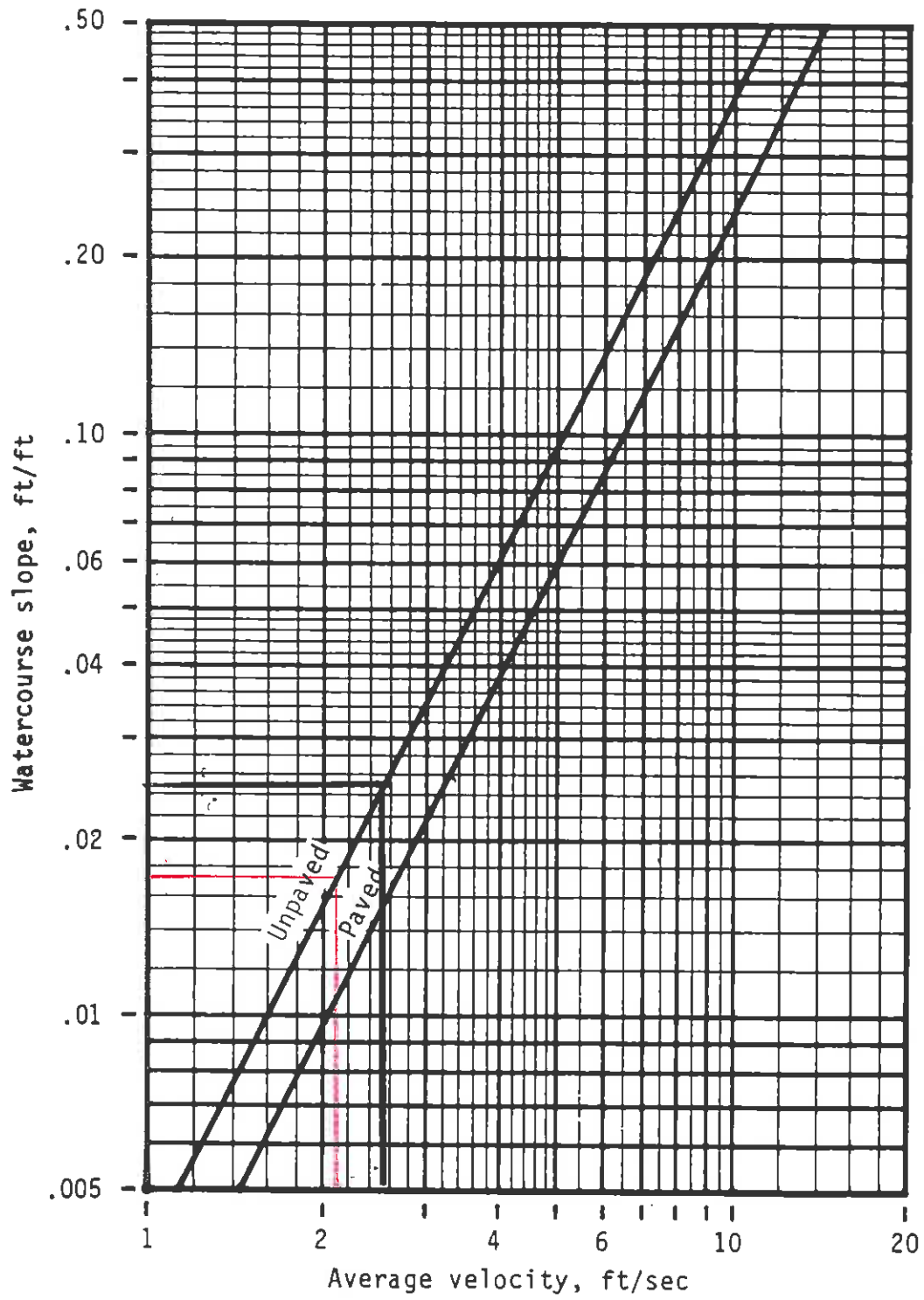


Figure 3-1.—Average velocities for estimating travel time for shallow concentrated flow.