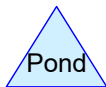
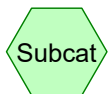
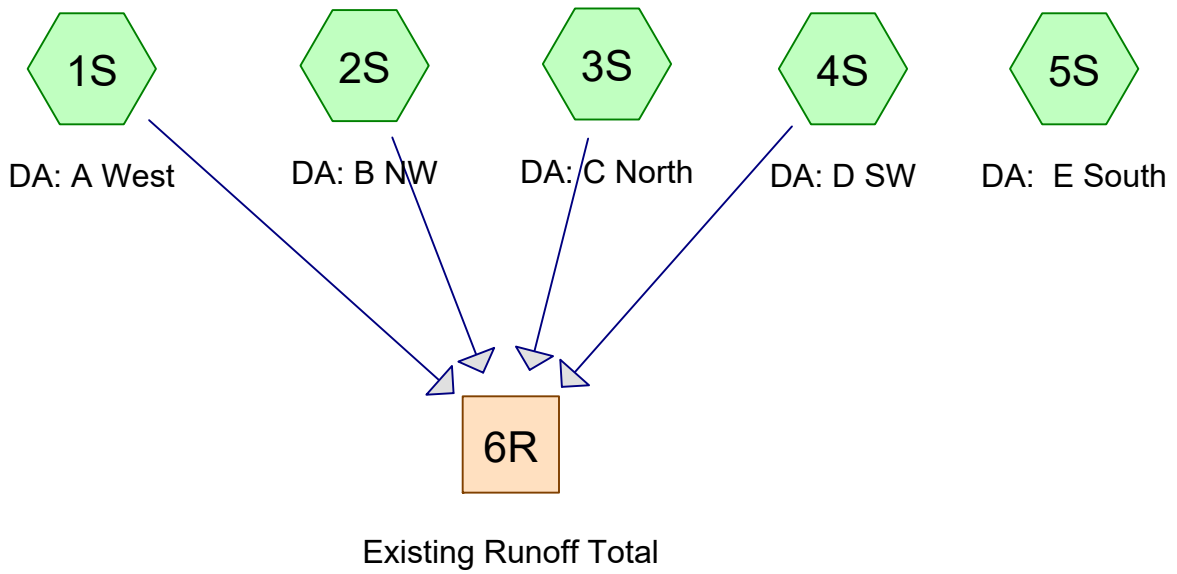


Existing Conditions



Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
3.164	39	>75% Grass cover, Good, HSG A (5S)
0.339	74	>75% Grass cover, Good, HSG C (4S)
1.158	80	>75% Grass cover, Good, HSG D (1S, 2S, 3S)
0.710	98	Paved parking, HSG A (5S)
0.072	98	Paved parking, HSG C (4S)
11.849	98	Paved parking, HSG D (1S, 2S, 3S)
17.291	86	TOTAL AREA

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
3.874	HSG A	5S
0.000	HSG B	
0.410	HSG C	4S
13.006	HSG D	1S, 2S, 3S
0.000	Other	
17.291		TOTAL AREA

ME153504hyd

Prepared by SEH

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Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
3.164	0.000	0.339	1.158	0.000	4.661	>75% Grass cover, Good	1S, 2S, 3S, 4S, 5S
0.710	0.000	0.072	11.849	0.000	12.630	Paved parking	1S, 2S, 3S, 4S, 5S
3.874	0.000	0.410	13.006	0.000	17.291	TOTAL AREA	

Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: DA: A West

Runoff Area=264,561 sf 83.86% Impervious Runoff Depth=2.25"
Flow Length=775' Tc=10.0 min CN=95 Runoff=19.10 cfs 1.141 af

Subcatchment 2S: DA: B NW

Runoff Area=113,952 sf 99.18% Impervious Runoff Depth=2.57"
Tc=10.0 min CN=98 Runoff=8.90 cfs 0.560 af

Subcatchment 3S: DA: C North

Runoff Area=188,039 sf 96.39% Impervious Runoff Depth=2.46"
Tc=10.0 min CN=97 Runoff=14.36 cfs 0.885 af

Subcatchment 4S: DA: D SW

Runoff Area=17,873 sf 17.46% Impervious Runoff Depth=0.99"
Tc=10.0 min CN=78 Runoff=0.55 cfs 0.034 af

Subcatchment 5S: DA: E South

Runoff Area=168,763 sf 18.32% Impervious Runoff Depth=0.06"
Flow Length=300' Slope=0.0300 '/' Tc=21.4 min CN=50 Runoff=0.04 cfs 0.019 af

Reach 6R: Existing Runoff Total

Inflow=42.89 cfs 2.620 af
Outflow=42.89 cfs 2.620 af

Total Runoff Area = 17.291 ac Runoff Volume = 2.639 af Average Runoff Depth = 1.83"
26.95% Pervious = 4.661 ac 73.05% Impervious = 12.630 ac

Summary for Subcatchment 1S: DA: A West

Runoff = 19.10 cfs @ 12.09 hrs, Volume= 1.141 af, Depth= 2.25"

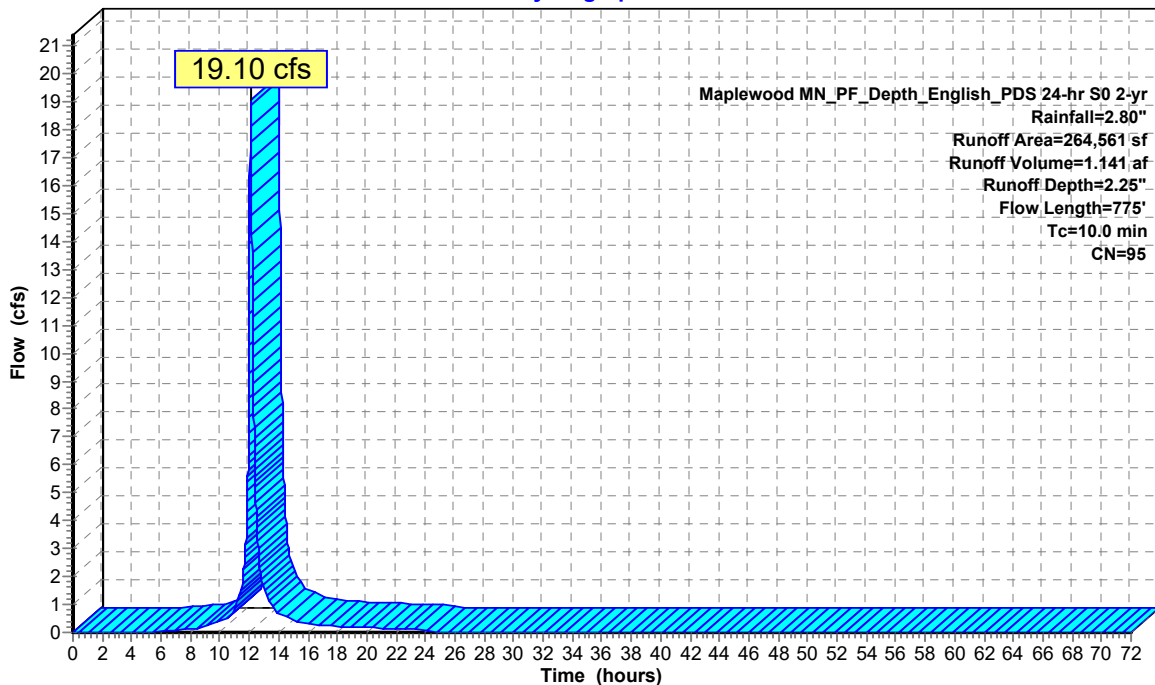
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Maplewood MN_PF_Depth_English_PDS 24-hr S0 2-yr Rainfall=2.80"

Area (sf)	CN	Description
221,864	98	Paved parking, HSG D
42,697	80	>75% Grass cover, Good, HSG D
264,561	95	Weighted Average
42,697		16.14% Pervious Area
221,864		83.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	100	0.0064	0.82		Sheet Flow, Smooth surfaces n= 0.011 P2= 2.80"
4.7	675	0.0140	2.40		Shallow Concentrated Flow, Paved Kv= 20.3 fps
3.3					Direct Entry,
10.0	775	Total			

Subcatchment 1S: DA: A West

Hydrograph



Runoff

Summary for Subcatchment 2S: DA: B NW

Runoff = 8.90 cfs @ 12.08 hrs, Volume= 0.560 af, Depth= 2.57"

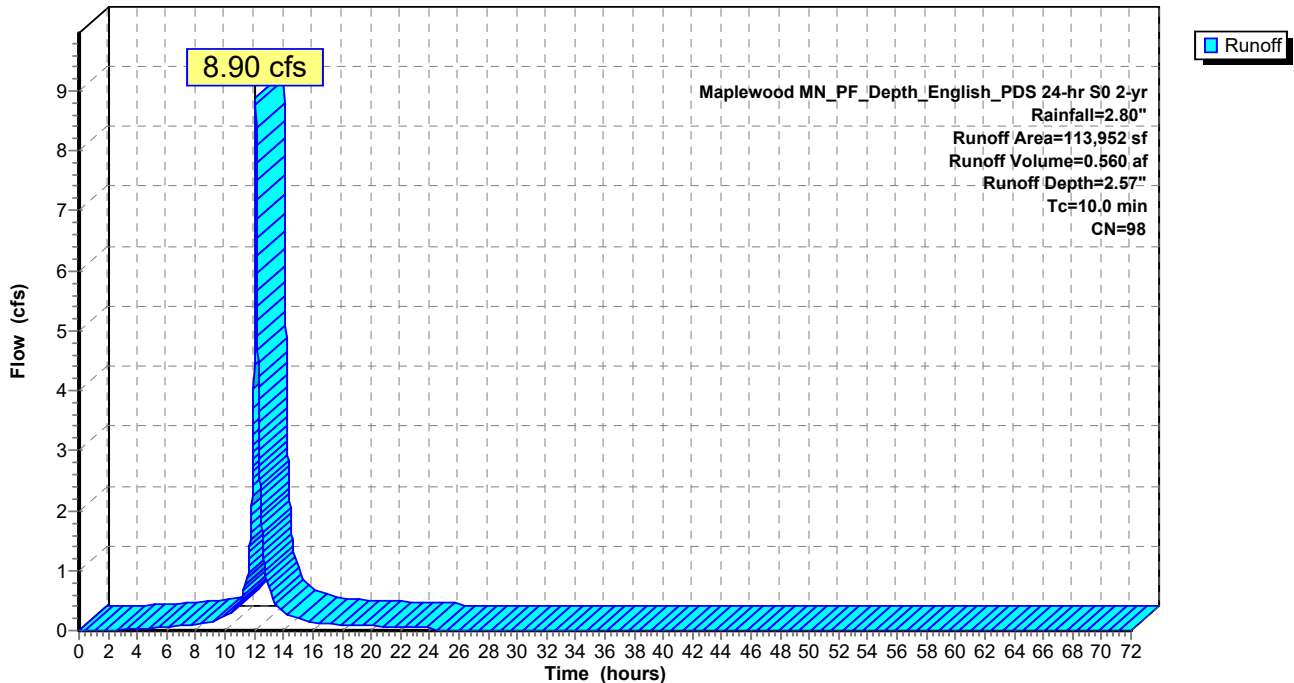
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Maplewood MN_PF_Depth_English_PDS 24-hr S0 2-yr Rainfall=2.80"

Area (sf)	CN	Description
113,012	98	Paved parking, HSG D
940	80	>75% Grass cover, Good, HSG D
113,952	98	Weighted Average
940		0.82% Pervious Area
113,012		99.18% Impervious Area

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

Subcatchment 2S: DA: B NW

Hydrograph



Summary for Subcatchment 3S: DA: C North

Runoff = 14.36 cfs @ 12.09 hrs, Volume= 0.885 af, Depth= 2.46"

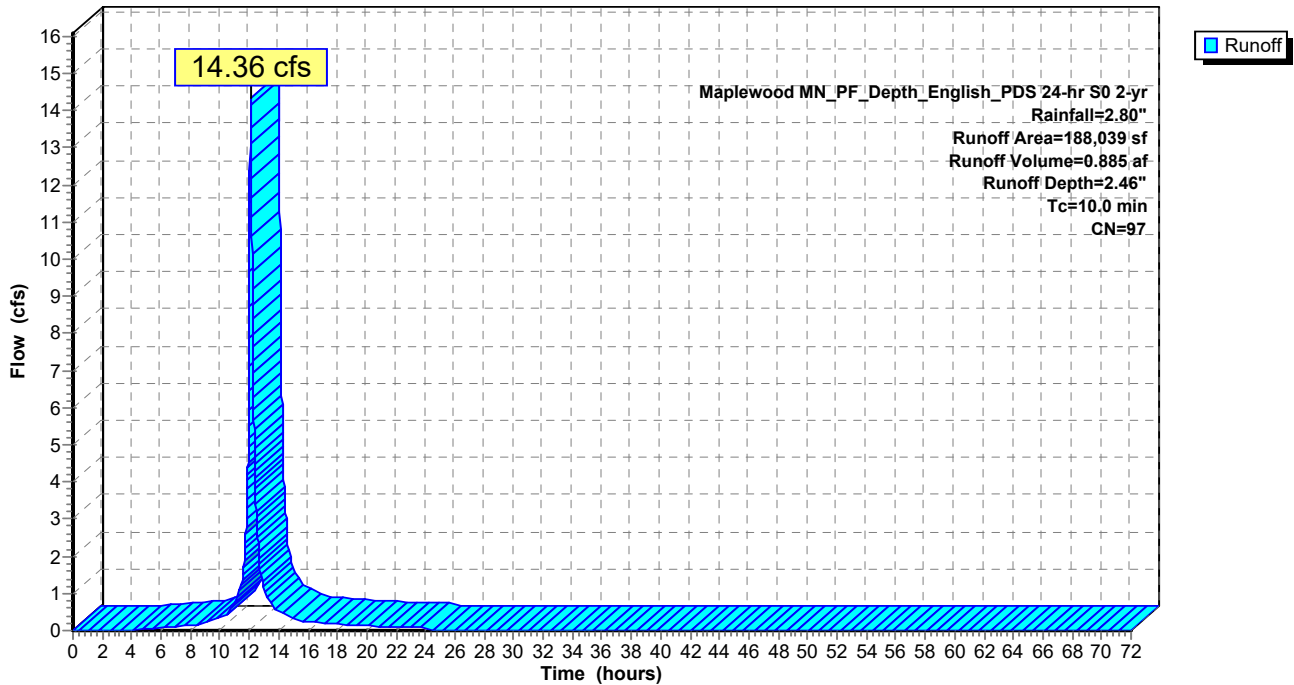
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Maplewood MN_PF_Depth_English_PDS 24-hr S0 2-yr Rainfall=2.80"

Area (sf)	CN	Description
181,248	98	Paved parking, HSG D
6,791	80	>75% Grass cover, Good, HSG D
188,039	97	Weighted Average
6,791		3.61% Pervious Area
181,248		96.39% Impervious Area

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

Subcatchment 3S: DA: C North

Hydrograph



Summary for Subcatchment 4S: DA: D SW

Runoff = 0.55 cfs @ 12.10 hrs, Volume= 0.034 af, Depth= 0.99"

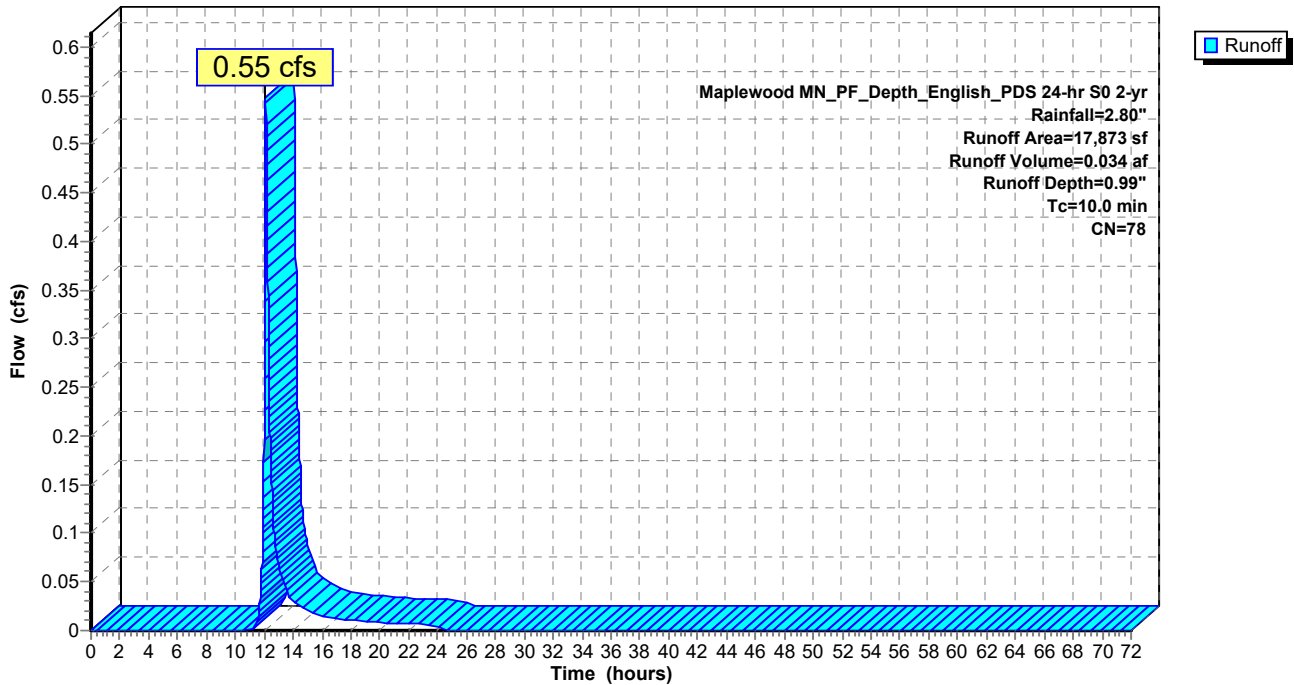
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Maplewood MN_PF_Depth_English_PDS 24-hr S0 2-yr Rainfall=2.80"

Area (sf)	CN	Description
3,121	98	Paved parking, HSG C
14,752	74	>75% Grass cover, Good, HSG C
17,873	78	Weighted Average
14,752		82.54% Pervious Area
3,121		17.46% Impervious Area

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

Subcatchment 4S: DA: D SW

Hydrograph



Summary for Subcatchment 5S: DA: E South

Runoff = 0.04 cfs @ 13.20 hrs, Volume= 0.019 af, Depth= 0.06"

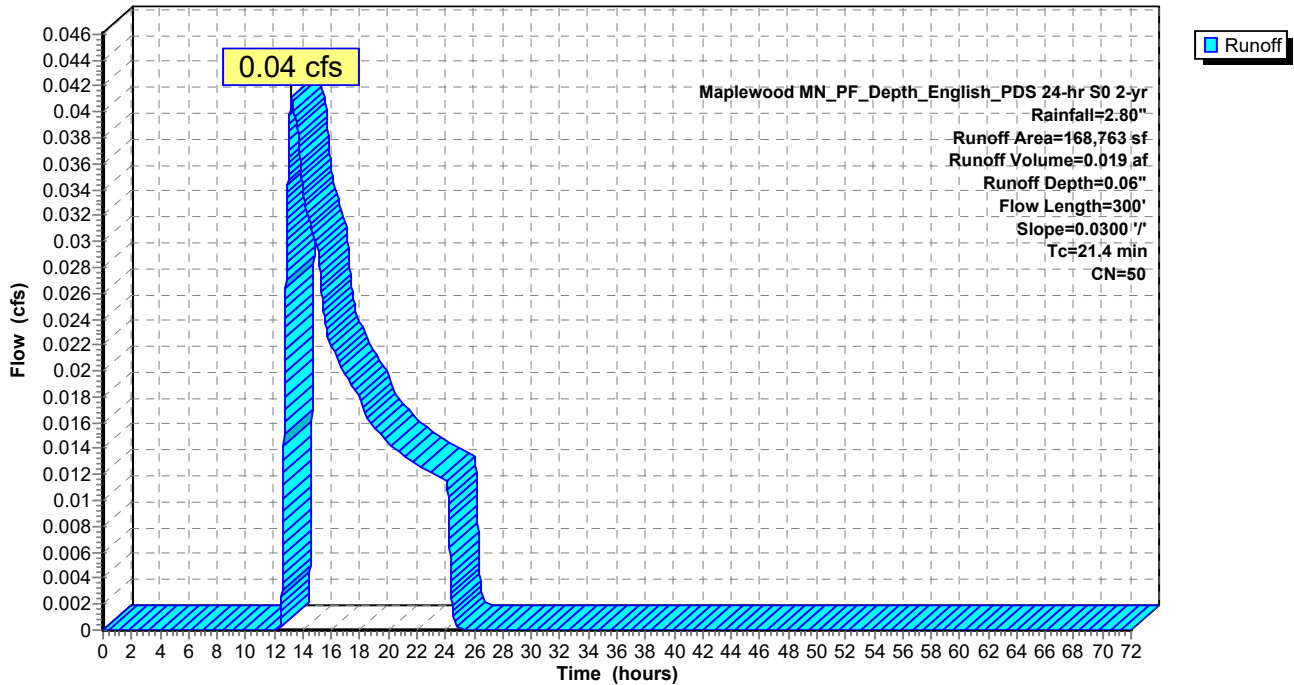
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Maplewood MN_PF_Depth_English_PDS 24-hr S0 2-yr Rainfall=2.80"

Area (sf)	CN	Description
30,924	98	Paved parking, HSG A
137,839	39	>75% Grass cover, Good, HSG A
168,763	50	Weighted Average
137,839		81.68% Pervious Area
30,924		18.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.4	300	0.0300	0.23		Sheet Flow, Grass: Short n= 0.150 P2= 2.80"

Subcatchment 5S: DA: E South

Hydrograph



Summary for Reach 6R: Existing Runoff Total

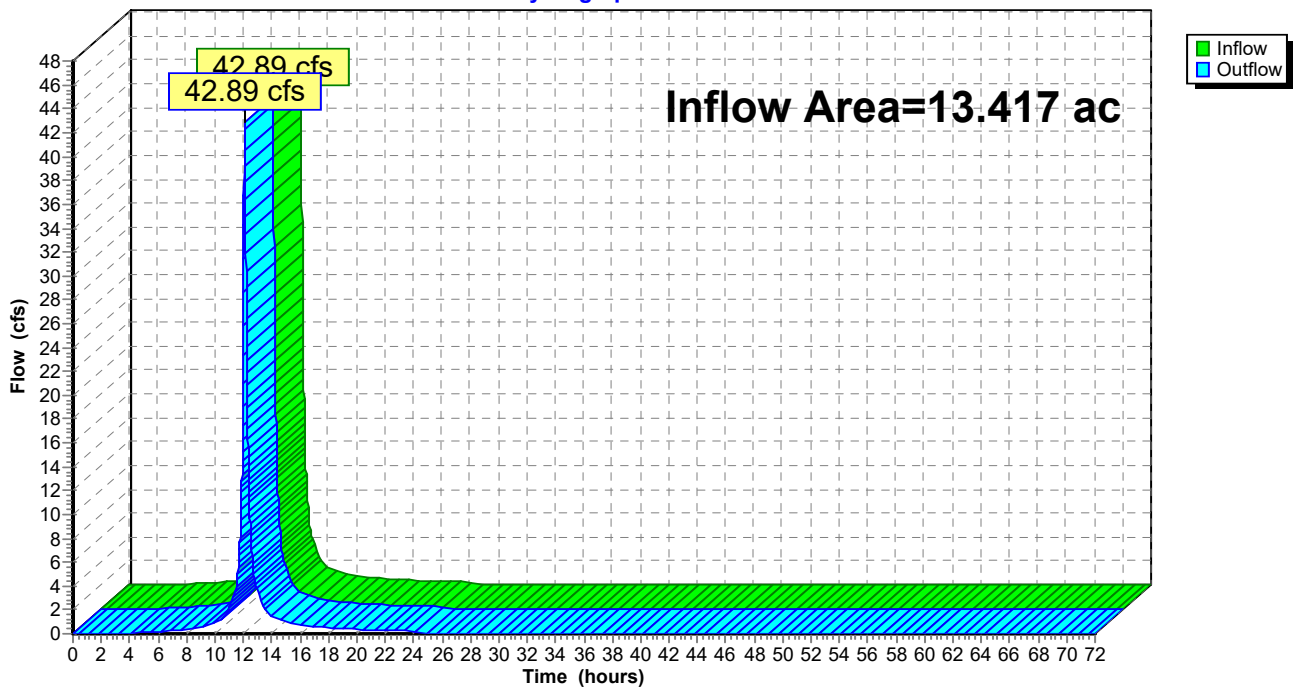
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 13.417 ac, 88.85% Impervious, Inflow Depth = 2.34" for 2-yr event
Inflow = 42.89 cfs @ 12.09 hrs, Volume= 2.620 af
Outflow = 42.89 cfs @ 12.09 hrs, Volume= 2.620 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach 6R: Existing Runoff Total

Hydrograph



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: DA: A West

Runoff Area=264,561 sf 83.86% Impervious Runoff Depth=3.61"
Flow Length=775' Tc=10.0 min CN=95 Runoff=29.66 cfs 1.826 af

Subcatchment 2S: DA: B NW

Runoff Area=113,952 sf 99.18% Impervious Runoff Depth=3.94"
Tc=10.0 min CN=98 Runoff=13.31 cfs 0.860 af

Subcatchment 3S: DA: C North

Runoff Area=188,039 sf 96.39% Impervious Runoff Depth=3.83"
Tc=10.0 min CN=97 Runoff=21.74 cfs 1.378 af

Subcatchment 4S: DA: D SW

Runoff Area=17,873 sf 17.46% Impervious Runoff Depth=2.03"
Tc=10.0 min CN=78 Runoff=1.18 cfs 0.069 af

Subcatchment 5S: DA: E South

Runoff Area=168,763 sf 18.32% Impervious Runoff Depth=0.39"
Flow Length=300' Slope=0.0300 '/' Tc=21.4 min CN=50 Runoff=0.80 cfs 0.126 af

Reach 6R: Existing Runoff Total

Inflow=65.88 cfs 4.134 af
Outflow=65.88 cfs 4.134 af

Total Runoff Area = 17.291 ac Runoff Volume = 4.260 af Average Runoff Depth = 2.96"
26.95% Pervious = 4.661 ac 73.05% Impervious = 12.630 ac

Summary for Subcatchment 1S: DA: A West

Runoff = 29.66 cfs @ 12.08 hrs, Volume= 1.826 af, Depth= 3.61"

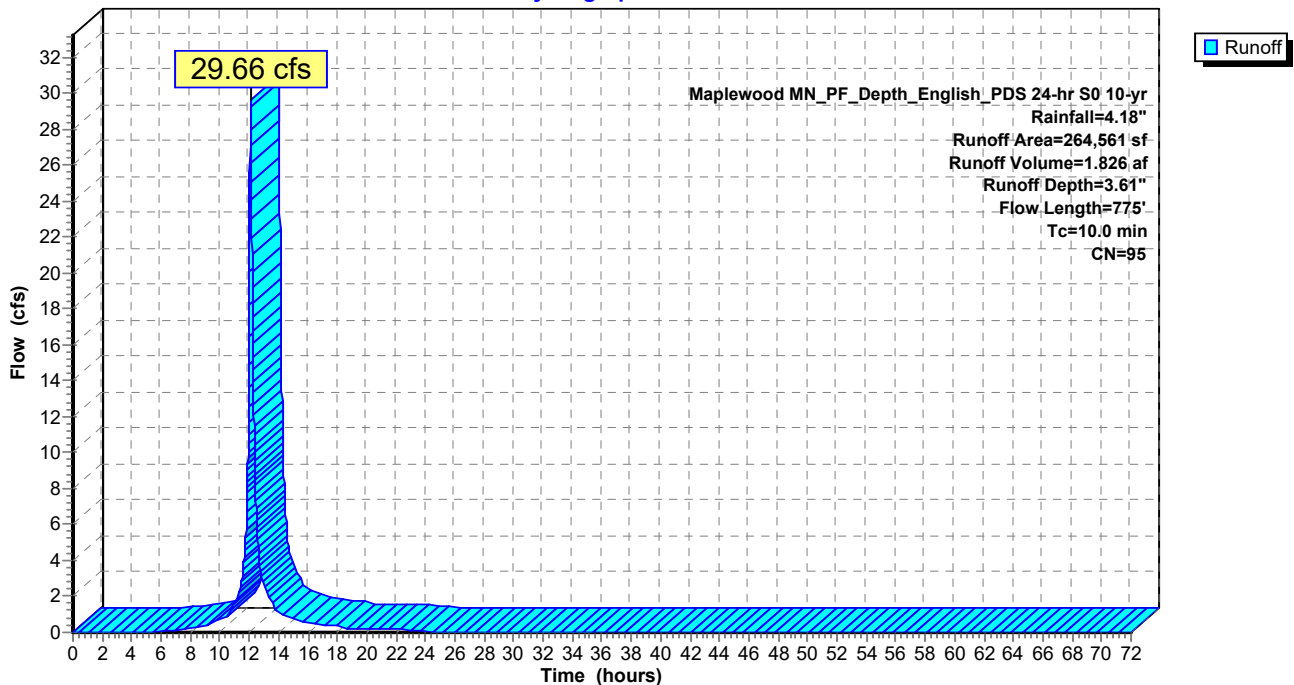
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Maplewood MN_PF_Depth_English_PDS 24-hr S0 10-yr Rainfall=4.18"

Area (sf)	CN	Description
221,864	98	Paved parking, HSG D
42,697	80	>75% Grass cover, Good, HSG D
264,561	95	Weighted Average
42,697		16.14% Pervious Area
221,864		83.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	100	0.0064	0.82		Sheet Flow, Smooth surfaces n= 0.011 P2= 2.80"
4.7	675	0.0140	2.40		Shallow Concentrated Flow, Paved Kv= 20.3 fps
3.3					Direct Entry,
10.0	775	Total			

Subcatchment 1S: DA: A West

Hydrograph



Summary for Subcatchment 2S: DA: B NW

Runoff = 13.31 cfs @ 12.08 hrs, Volume= 0.860 af, Depth= 3.94"

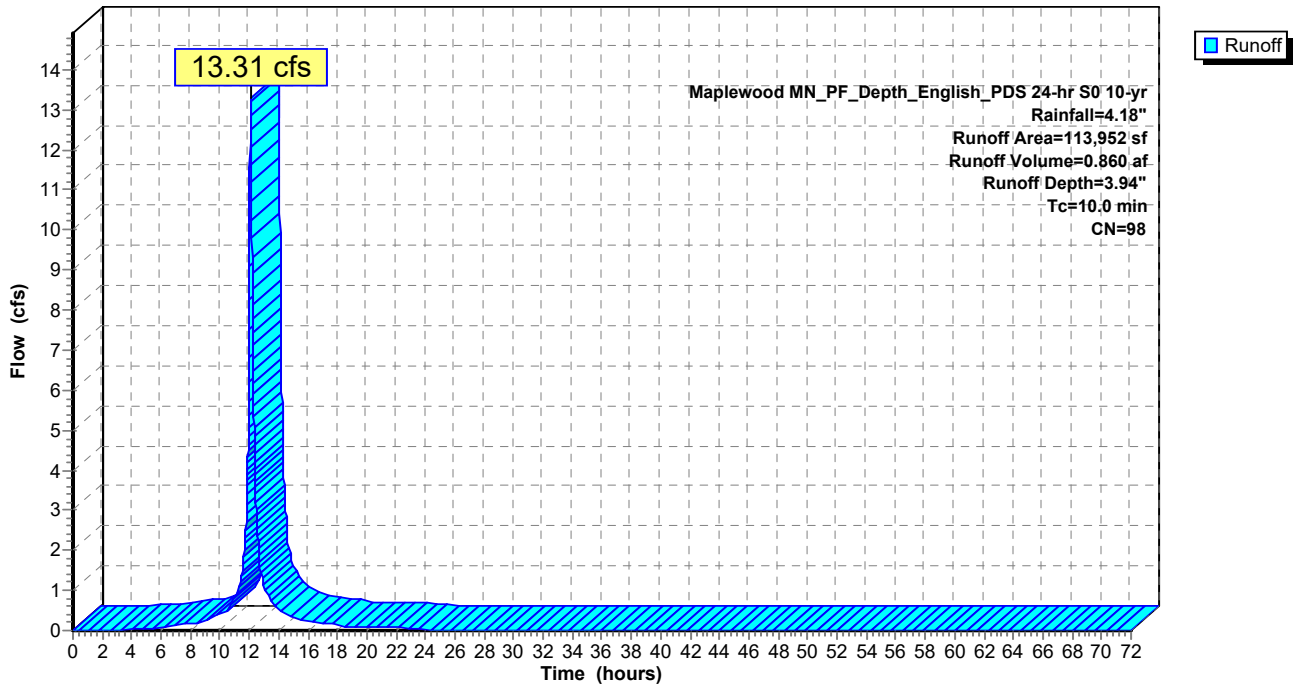
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Maplewood MN_PF_Depth_English_PDS 24-hr S0 10-yr Rainfall=4.18"

Area (sf)	CN	Description
113,012	98	Paved parking, HSG D
940	80	>75% Grass cover, Good, HSG D
113,952	98	Weighted Average
940		0.82% Pervious Area
113,012		99.18% Impervious Area

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

Subcatchment 2S: DA: B NW

Hydrograph



Summary for Subcatchment 3S: DA: C North

Runoff = 21.74 cfs @ 12.08 hrs, Volume= 1.378 af, Depth= 3.83"

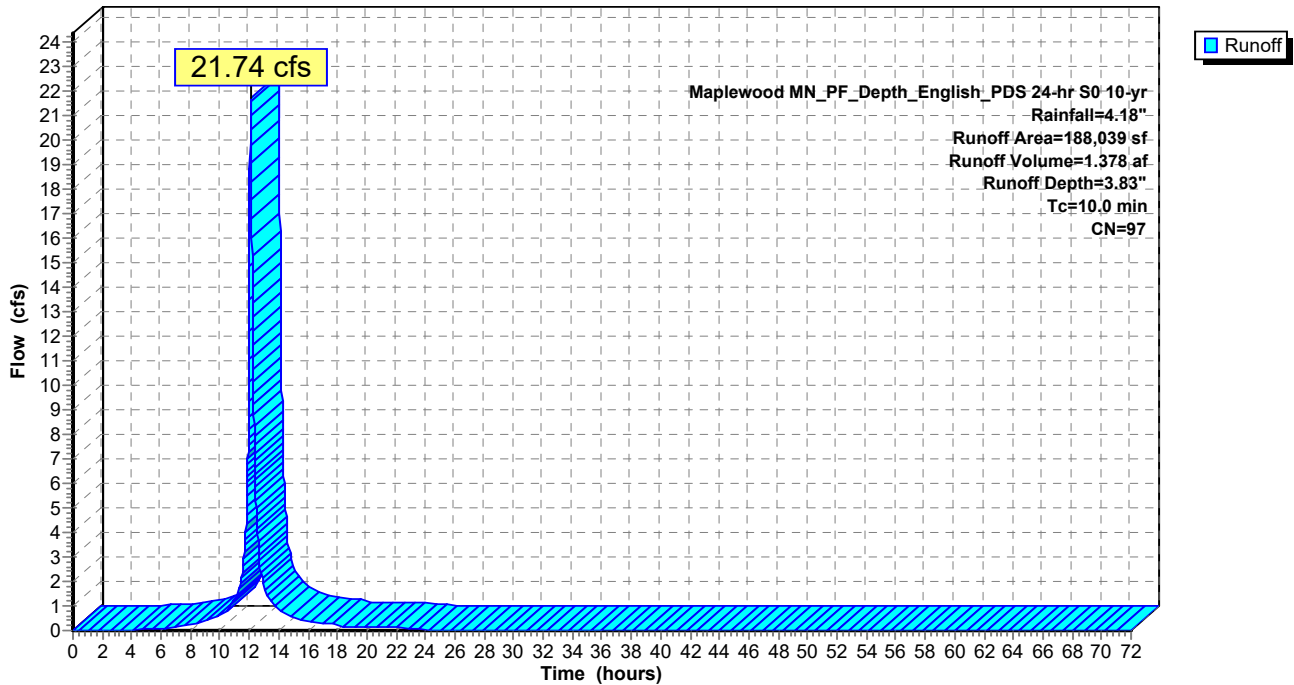
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Maplewood MN_PF_Depth_English_PDS 24-hr S0 10-yr Rainfall=4.18"

Area (sf)	CN	Description
181,248	98	Paved parking, HSG D
6,791	80	>75% Grass cover, Good, HSG D
188,039	97	Weighted Average
6,791		3.61% Pervious Area
181,248		96.39% Impervious Area

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

Subcatchment 3S: DA: C North

Hydrograph



Summary for Subcatchment 4S: DA: D SW

Runoff = 1.18 cfs @ 12.10 hrs, Volume= 0.069 af, Depth= 2.03"

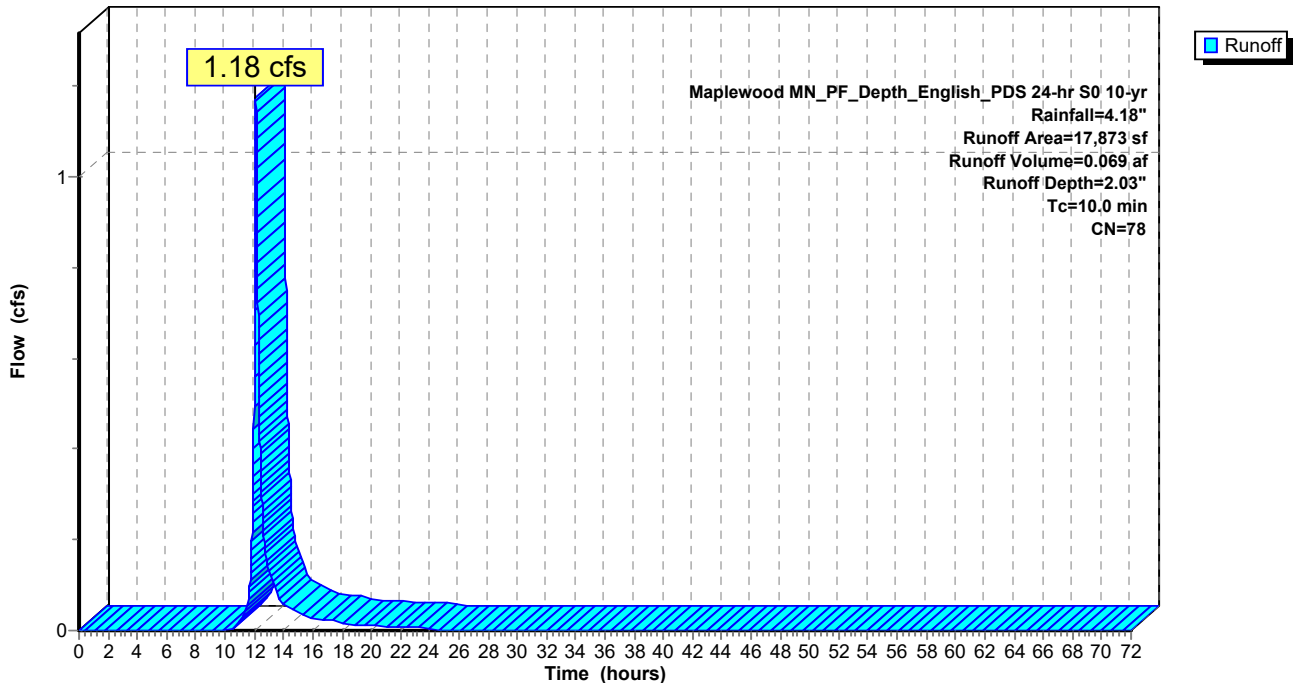
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Maplewood MN_PF_Depth_English_PDS 24-hr S0 10-yr Rainfall=4.18"

Area (sf)	CN	Description
3,121	98	Paved parking, HSG C
14,752	74	>75% Grass cover, Good, HSG C
17,873	78	Weighted Average
14,752		82.54% Pervious Area
3,121		17.46% Impervious Area

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

Subcatchment 4S: DA: D SW

Hydrograph



Summary for Subcatchment 5S: DA: E South

Runoff = 0.80 cfs @ 12.43 hrs, Volume= 0.126 af, Depth= 0.39"

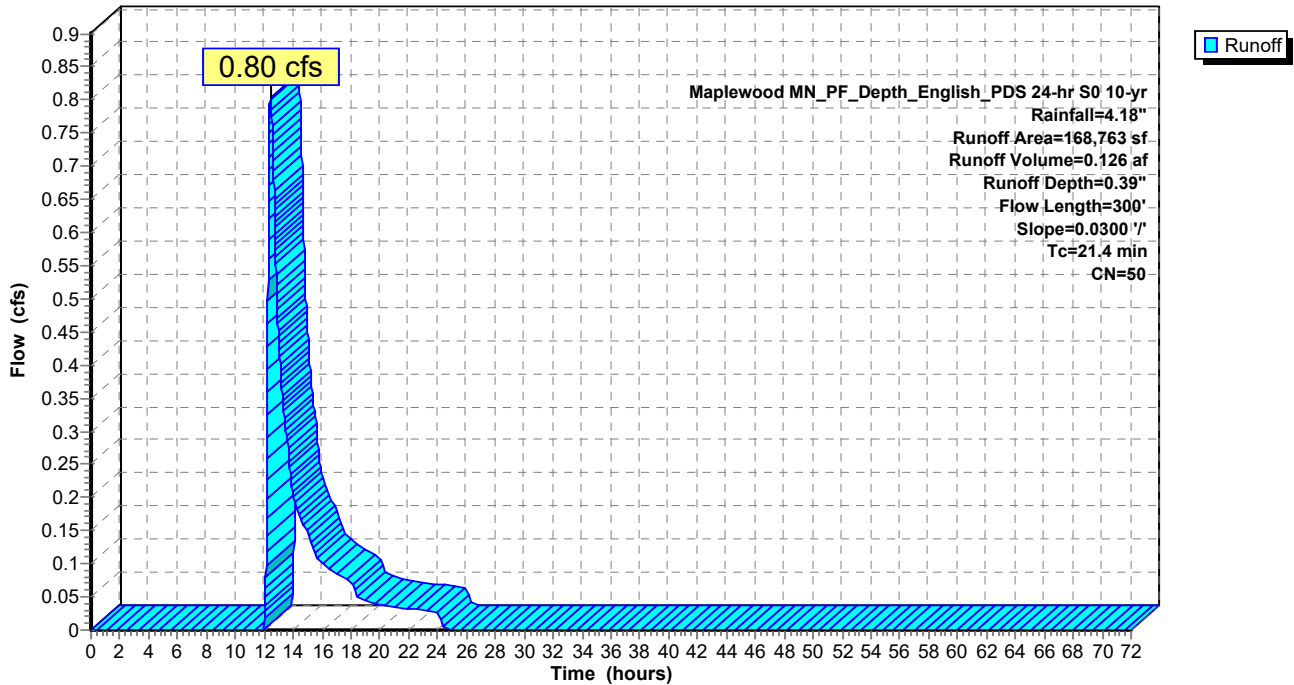
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Maplewood MN_PF_Depth_English_PDS 24-hr S0 10-yr Rainfall=4.18"

Area (sf)	CN	Description
30,924	98	Paved parking, HSG A
137,839	39	>75% Grass cover, Good, HSG A
168,763	50	Weighted Average
137,839		81.68% Pervious Area
30,924		18.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.4	300	0.0300	0.23		Sheet Flow, Grass: Short n= 0.150 P2= 2.80"

Subcatchment 5S: DA: E South

Hydrograph



Summary for Reach 6R: Existing Runoff Total

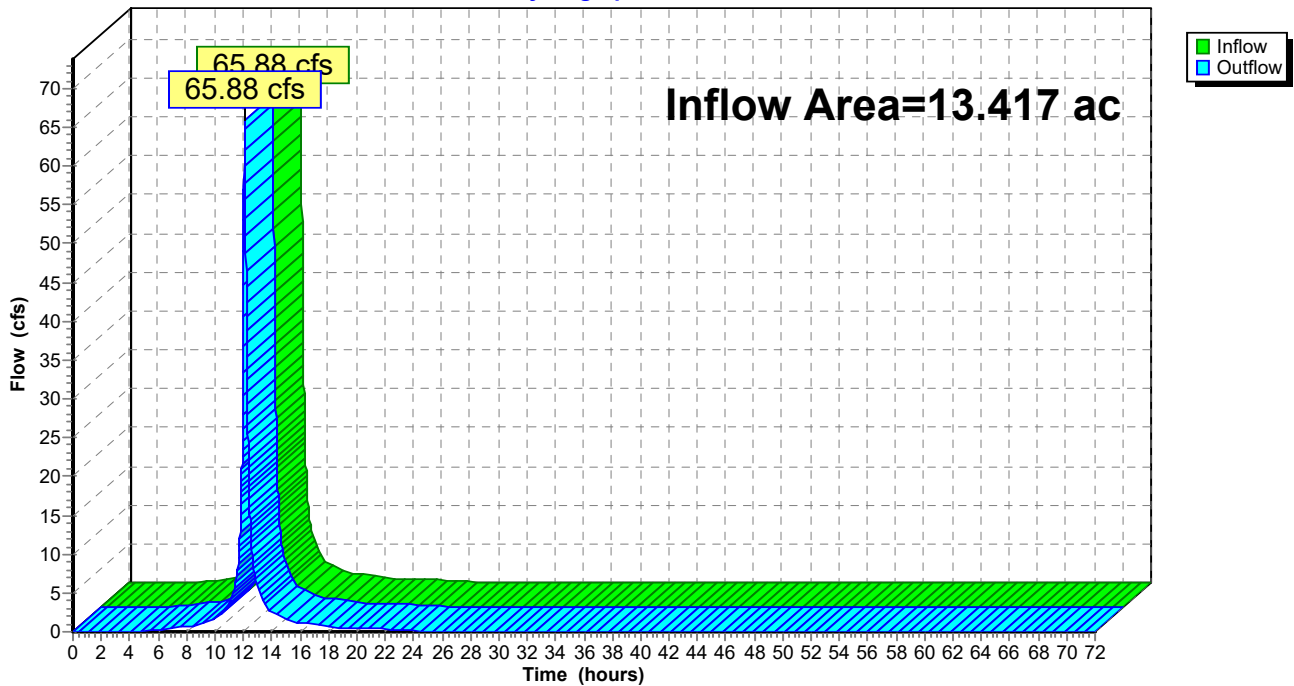
[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 13.417 ac, 88.85% Impervious, Inflow Depth = 3.70" for 10-yr event
Inflow = 65.88 cfs @ 12.08 hrs, Volume= 4.134 af
Outflow = 65.88 cfs @ 12.08 hrs, Volume= 4.134 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach 6R: Existing Runoff Total

Hydrograph



Time span=0.00-72.00 hrs, dt=0.01 hrs, 7201 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: DA: A West

Runoff Area=264,561 sf 83.86% Impervious Runoff Depth=6.75"
Flow Length=775' Tc=10.0 min CN=95 Runoff=47.72 cfs 3.418 af

Subcatchment 2S: DA: B NW

Runoff Area=113,952 sf 99.18% Impervious Runoff Depth=7.11"
Tc=10.0 min CN=98 Runoff=20.88 cfs 1.550 af

Subcatchment 3S: DA: C North

Runoff Area=188,039 sf 96.39% Impervious Runoff Depth=6.99"
Tc=10.0 min CN=97 Runoff=34.32 cfs 2.515 af

Subcatchment 4S: DA: D SW

Runoff Area=17,873 sf 17.46% Impervious Runoff Depth=4.79"
Tc=10.0 min CN=78 Runoff=2.49 cfs 0.164 af

Subcatchment 5S: DA: E South

Runoff Area=168,763 sf 18.32% Impervious Runoff Depth=1.86"
Flow Length=300' Slope=0.0300 '/' Tc=21.4 min CN=50 Runoff=5.69 cfs 0.602 af

Reach 6R: Existing Runoff Total

Inflow=105.40 cfs 7.647 af
Outflow=105.40 cfs 7.647 af

Total Runoff Area = 17.291 ac Runoff Volume = 8.249 af Average Runoff Depth = 5.73"
26.95% Pervious = 4.661 ac 73.05% Impervious = 12.630 ac

Summary for Subcatchment 1S: DA: A West

Runoff = 47.72 cfs @ 12.08 hrs, Volume= 3.418 af, Depth= 6.75"

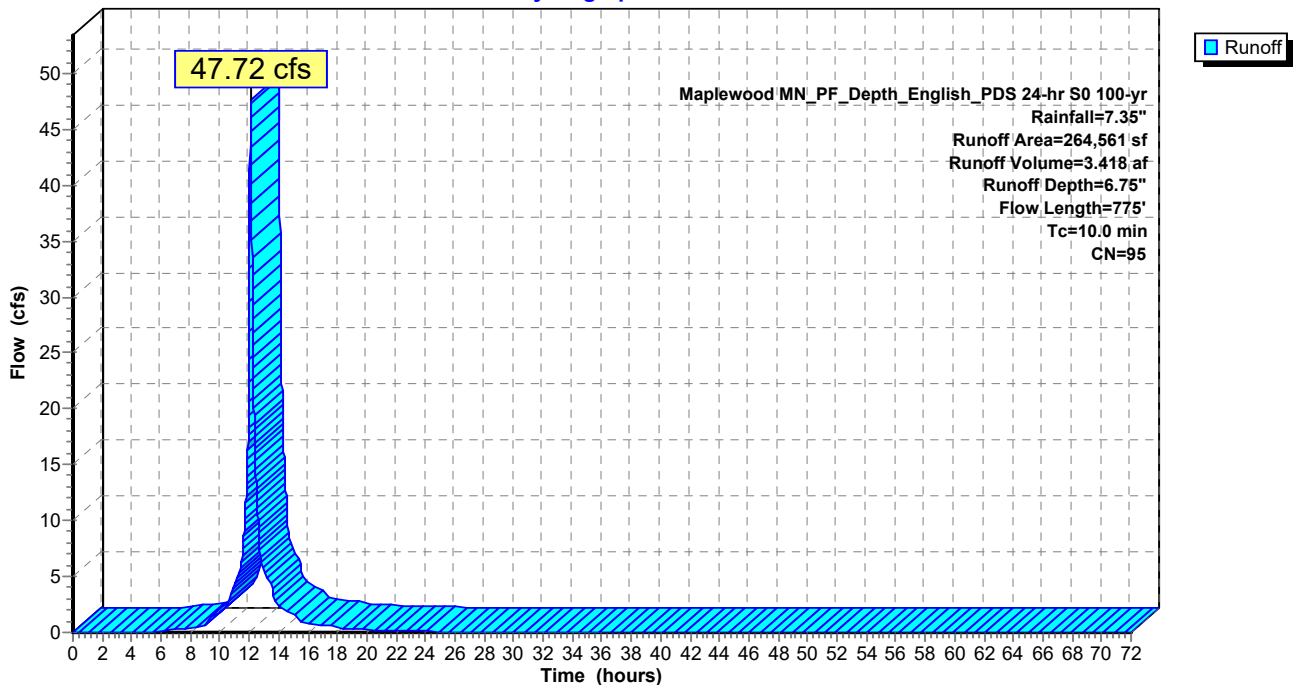
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Maplewood MN_PF_Depth_English_PDS 24-hr S0 100-yr Rainfall=7.35"

Area (sf)	CN	Description
221,864	98	Paved parking, HSG D
42,697	80	>75% Grass cover, Good, HSG D
264,561	95	Weighted Average
42,697		16.14% Pervious Area
221,864		83.86% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.0	100	0.0064	0.82		Sheet Flow, Smooth surfaces n= 0.011 P2= 2.80"
4.7	675	0.0140	2.40		Shallow Concentrated Flow, Paved Kv= 20.3 fps
3.3					Direct Entry,
10.0	775	Total			

Subcatchment 1S: DA: A West

Hydrograph



Summary for Subcatchment 2S: DA: B NW

Runoff = 20.88 cfs @ 12.08 hrs, Volume= 1.550 af, Depth= 7.11"

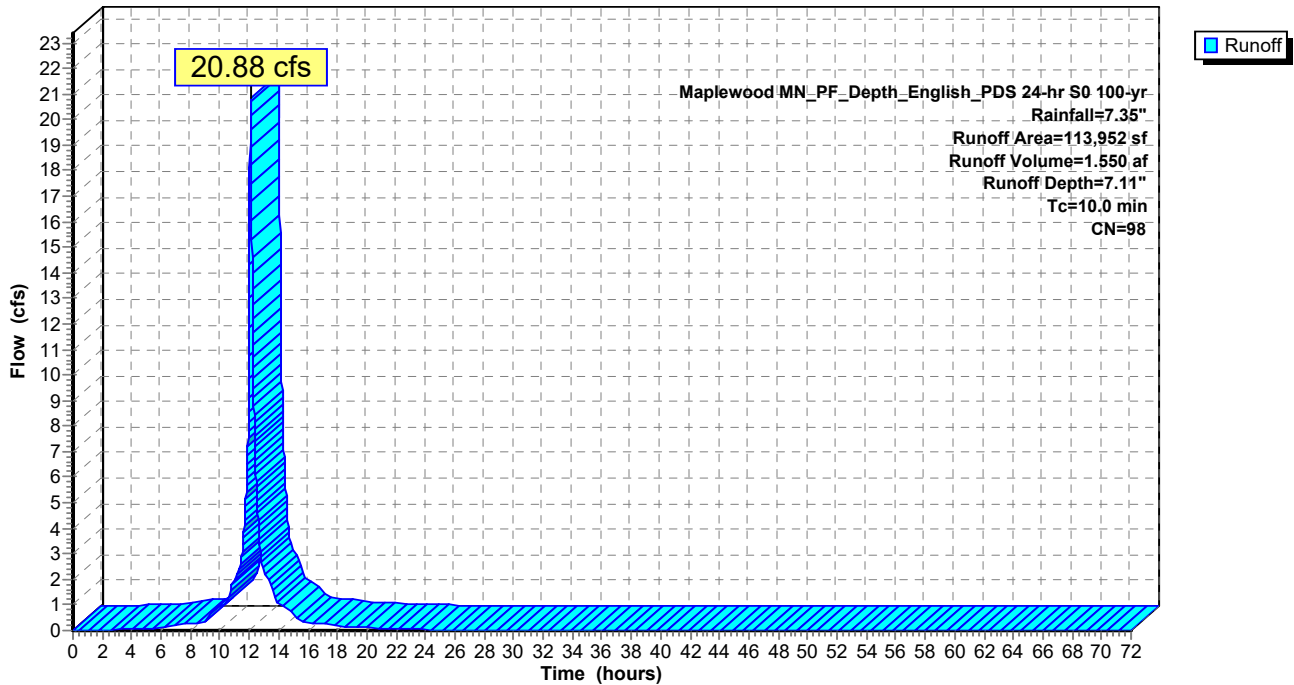
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Maplewood MN_PF_Depth_English_PDS 24-hr S0 100-yr Rainfall=7.35"

Area (sf)	CN	Description
113,012	98	Paved parking, HSG D
940	80	>75% Grass cover, Good, HSG D
113,952	98	Weighted Average
940		0.82% Pervious Area
113,012		99.18% Impervious Area

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

Subcatchment 2S: DA: B NW

Hydrograph



Summary for Subcatchment 3S: DA: C North

Runoff = 34.32 cfs @ 12.08 hrs, Volume= 2.515 af, Depth= 6.99"

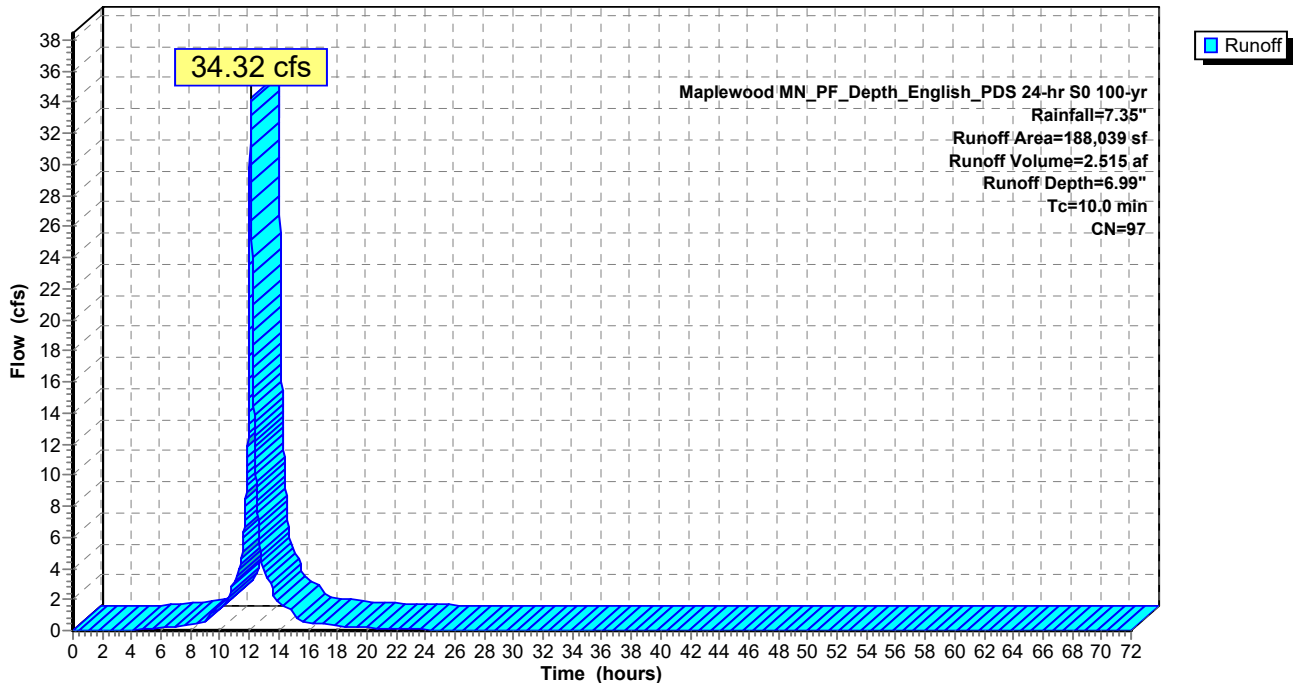
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Maplewood MN_PF_Depth_English_PDS 24-hr S0 100-yr Rainfall=7.35"

Area (sf)	CN	Description
181,248	98	Paved parking, HSG D
6,791	80	>75% Grass cover, Good, HSG D
188,039	97	Weighted Average
6,791		3.61% Pervious Area
181,248		96.39% Impervious Area

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

Subcatchment 3S: DA: C North

Hydrograph



Summary for Subcatchment 4S: DA: D SW

Runoff = 2.49 cfs @ 12.09 hrs, Volume= 0.164 af, Depth= 4.79"

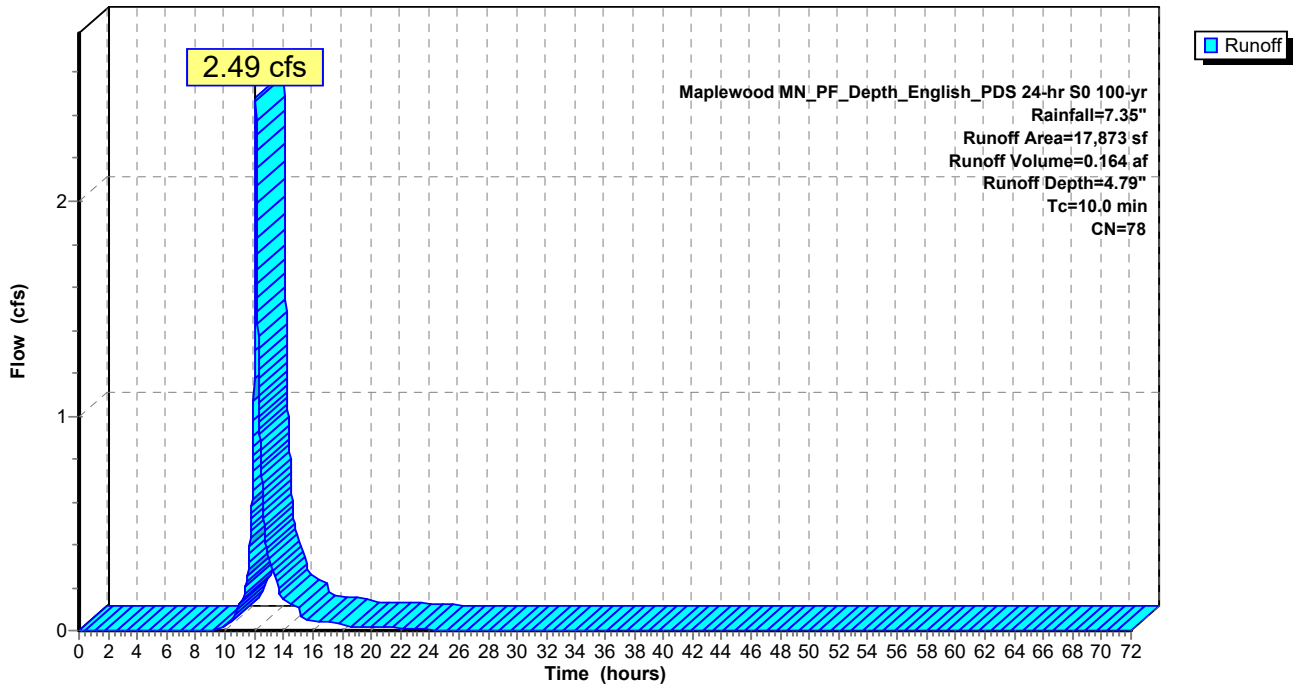
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Maplewood MN_PF_Depth_English_PDS 24-hr S0 100-yr Rainfall=7.35"

Area (sf)	CN	Description
3,121	98	Paved parking, HSG C
14,752	74	>75% Grass cover, Good, HSG C
17,873	78	Weighted Average
14,752		82.54% Pervious Area
3,121		17.46% Impervious Area

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

Subcatchment 4S: DA: D SW

Hydrograph



Summary for Subcatchment 5S: DA: E South

Runoff = 5.69 cfs @ 12.30 hrs, Volume= 0.602 af, Depth= 1.86"

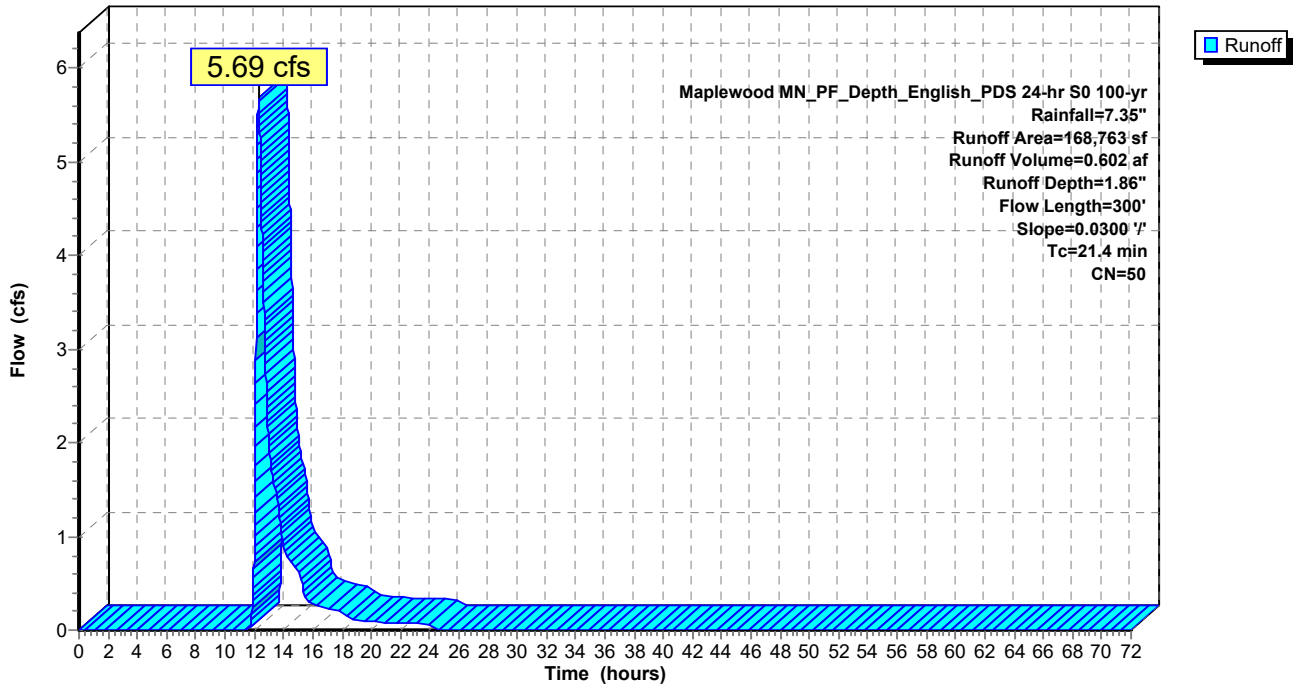
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs
 Maplewood MN_PF_Depth_English_PDS 24-hr S0 100-yr Rainfall=7.35"

Area (sf)	CN	Description
30,924	98	Paved parking, HSG A
137,839	39	>75% Grass cover, Good, HSG A
168,763	50	Weighted Average
137,839		81.68% Pervious Area
30,924		18.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.4	300	0.0300	0.23		Sheet Flow, Grass: Short n= 0.150 P2= 2.80"

Subcatchment 5S: DA: E South

Hydrograph



Summary for Reach 6R: Existing Runoff Total

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 13.417 ac, 88.85% Impervious, Inflow Depth = 6.84" for 100-yr event
Inflow = 105.40 cfs @ 12.08 hrs, Volume= 7.647 af
Outflow = 105.40 cfs @ 12.08 hrs, Volume= 7.647 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.01 hrs

Reach 6R: Existing Runoff Total

Hydrograph

