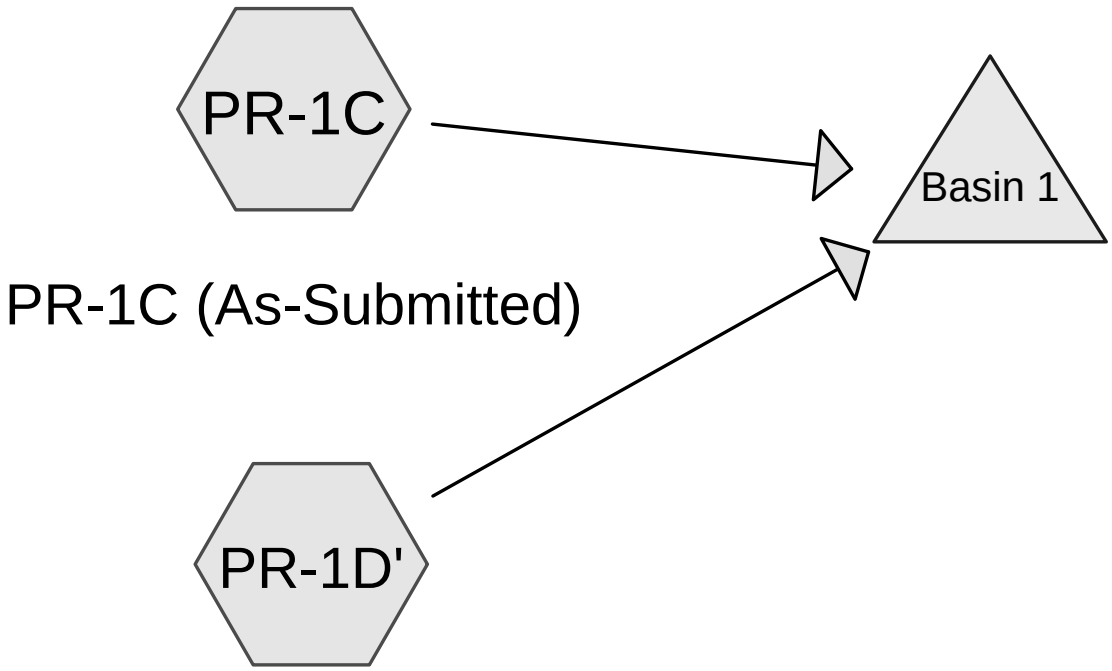


Subcat Reach Pond Link

Routing Diagram for Sudbury Post-Development Supplemental
Prepared by Microsoft, Printed 6/8/2020

Summary for Subcatchment PR-1C: PR-1C (As-Submitted)

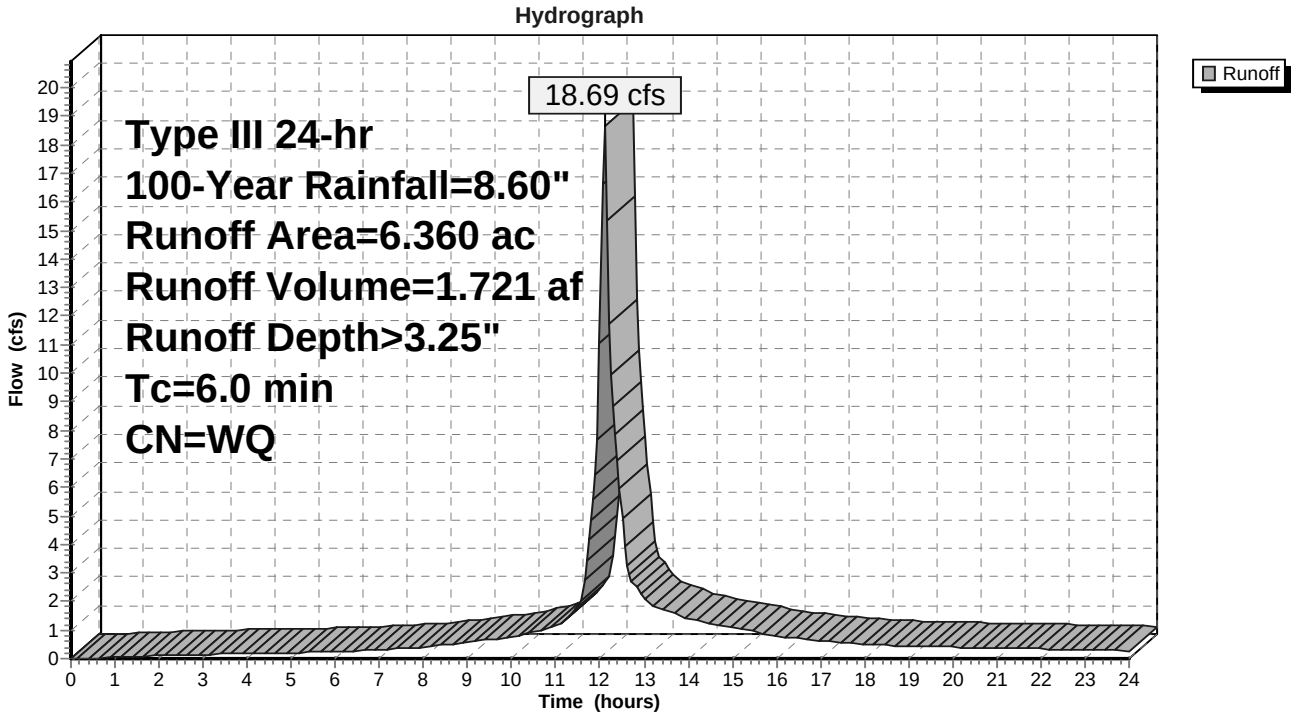
Runoff = 18.69 cfs @ 12.09 hrs, Volume= 1.721 af, Depth> 3.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=8.60"

Area (ac)	CN	Description
0.940	98	Paved parking, HSG A
0.750	98	Roofs, HSG A
2.580	39	>75% Grass cover, Good, HSG A
0.660	35	Brush, Fair, HSG A
1.250	30	Woods, Good, HSG A
0.180	98	Water Surface, HSG A
6.360		Weighted Average
4.490		70.60% Pervious Area
1.870		29.40% Impervious Area

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

Subcatchment PR-1C: PR-1C (As-Submitted)



Summary for Subcatchment PR-1D': 1/2 of PR-1D Porous Pavement as Impervious w/6 min. TC

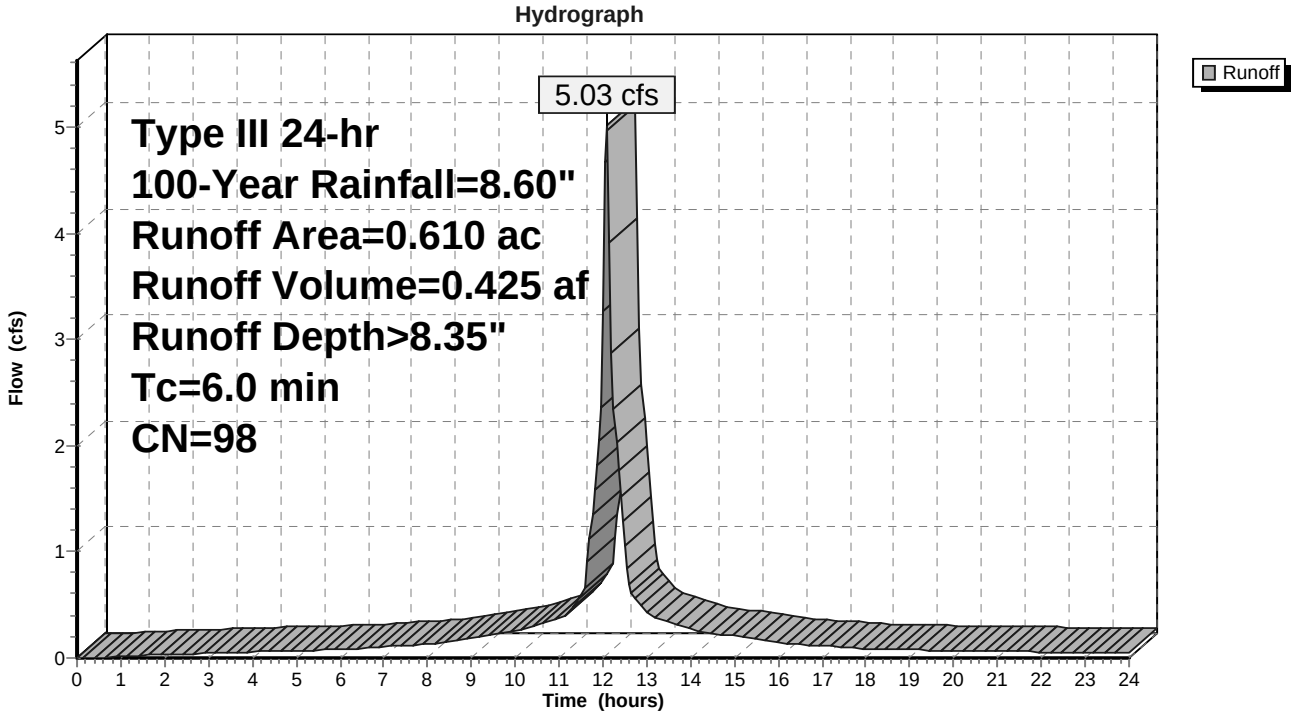
Runoff = 5.03 cfs @ 12.09 hrs, Volume= 0.425 af, Depth> 8.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-Q, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=8.60"

	Area (ac)	CN	Description
*	0.610	98	Porous Pavement, HSG A
	0.610		100.00% Impervious Area

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

Subcatchment PR-1D': 1/2 of PR-1D Porous Pavement as Impervious w/6 min. TC



Summary for Pond Basin 1:

Inflow Area = 6.970 ac, 35.58% Impervious, Inflow Depth > 3.69" for 100-Year event
Inflow = 23.70 cfs @ 12.09 hrs, Volume= 2.146 af
Outflow = 2.46 cfs @ 13.04 hrs, Volume= 2.100 af, Atten= 90%, Lag= 56.8 min
Discarded = 2.46 cfs @ 13.04 hrs, Volume= 2.100 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= 133.90' @ 13.04 hrs Surf.Area= 12,830 sf Storage= 36,688 cf

Plug-Flow detention time= 159.7 min calculated for 2.100 af (98% of inflow)
Center-of-Mass det. time= 146.2 min (920.2 - 774.1)

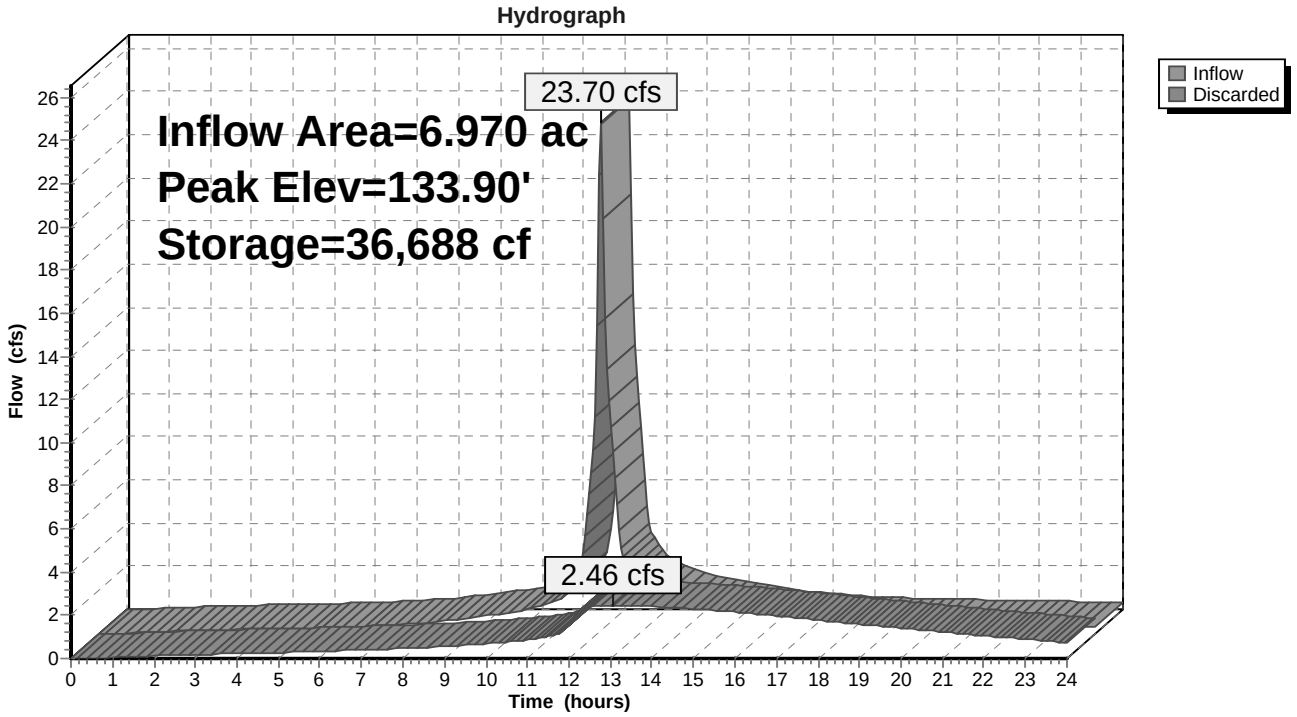
Volume	Invert	Avail.Storage	Storage Description
#1	129.00'	37,923 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
129.00	2,178	0	0
130.00	4,430	3,304	3,304
132.00	8,573	13,003	16,307
134.00	13,043	21,616	37,923

Device	Routing	Invert	Outlet Devices
#1	Discarded	129.00'	**8.270 in/hr Exfiltration over Horizontal area**

Discarded OutFlow Max=2.46 cfs @ 13.04 hrs HW=133.90' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 2.46 cfs)

Pond Basin 1:


Hydrograph
Inflow
Discarded
23.70 cfs
2.46 cfs
Inflow Area=6.970 ac
Peak Elev=133.90'
Storage=36,688 cf
Flow (cfs)
Time (hours)
0 2 4 6 8 10 12 14 16 18 20 22 24 26
0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24