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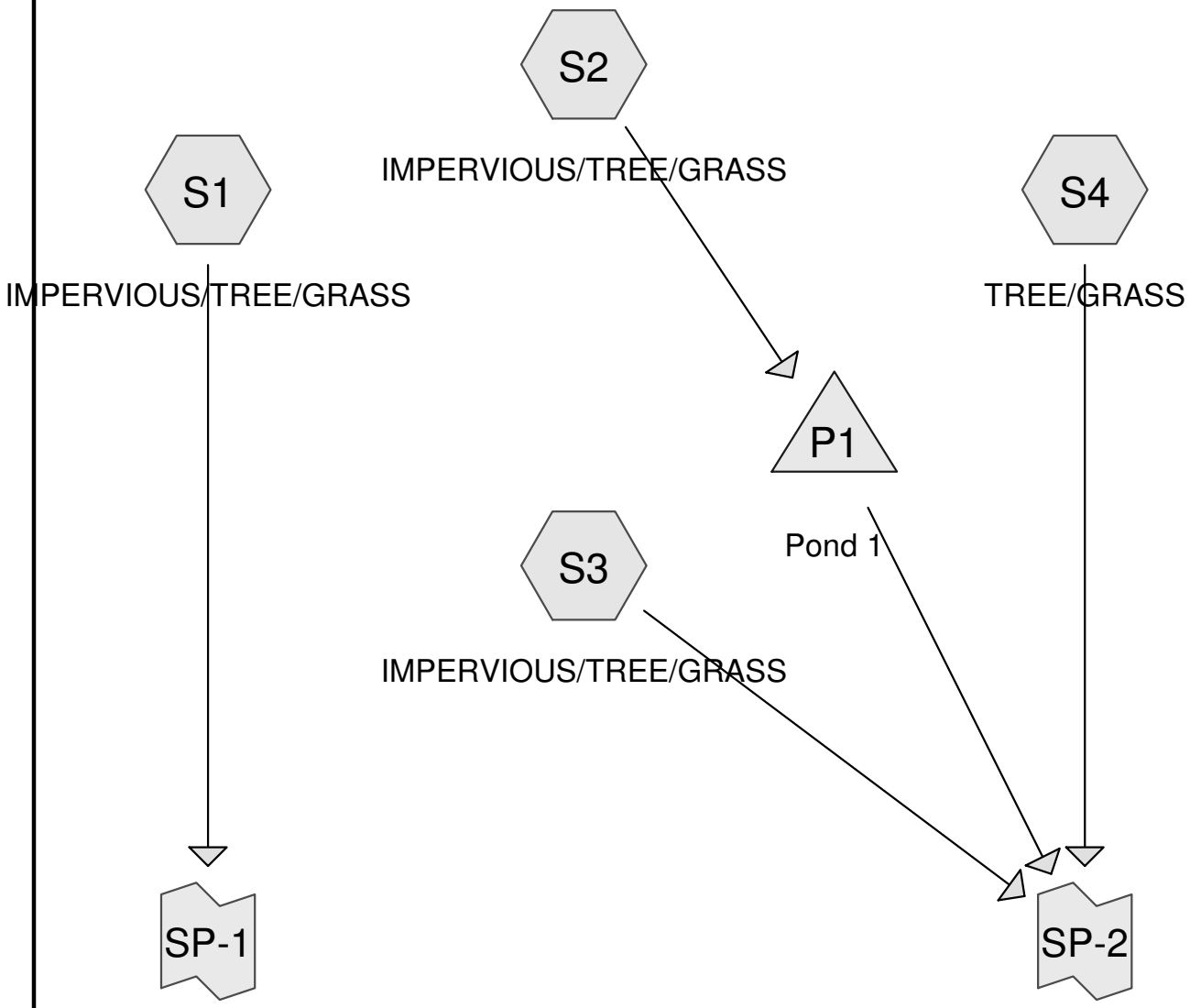

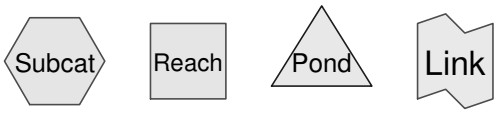

Routing Diagram for 40905 POST 10-3-16
Prepared by Microsoft, Printed 10/5/2016
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Summary for Subcatchment S1: IMPERVIOUS/TREE/GRASS

Runoff = 0.00 cfs @ 14.79 hrs, Volume= 0.001 af, Depth> 0.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
9	98	Paved parking, HSG A
2,407	30	Woods, Good, HSG A
1,133	39	>75% Grass cover, Good, HSG A
3,549	33	Weighted Average
3,540		99.75% Pervious Area
9		0.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0	34	0.0590	0.09		**Sheet Flow, A-B SHEET** Woods: Light underbrush n= 0.400 P2= 3.10"
0.5	45	0.0421	1.44		**Shallow Concentrated Flow, B-C SHALLOW** Short Grass Pasture Kv= 7.0 fps
0.9	53	0.0356	0.94		**Shallow Concentrated Flow, C-D SHALLOW** Woodland Kv= 5.0 fps
0.4	34	0.0356	1.32		**Shallow Concentrated Flow, D-E SHALLOW** Short Grass Pasture Kv= 7.0 fps
0.7	36	0.0304	0.87		**Shallow Concentrated Flow, E-F SHALLOW** Woodland Kv= 5.0 fps
0.1	5	0.0200	0.99		**Shallow Concentrated Flow, F-G SHALLOW** Short Grass Pasture Kv= 7.0 fps
8.6	207	Total			

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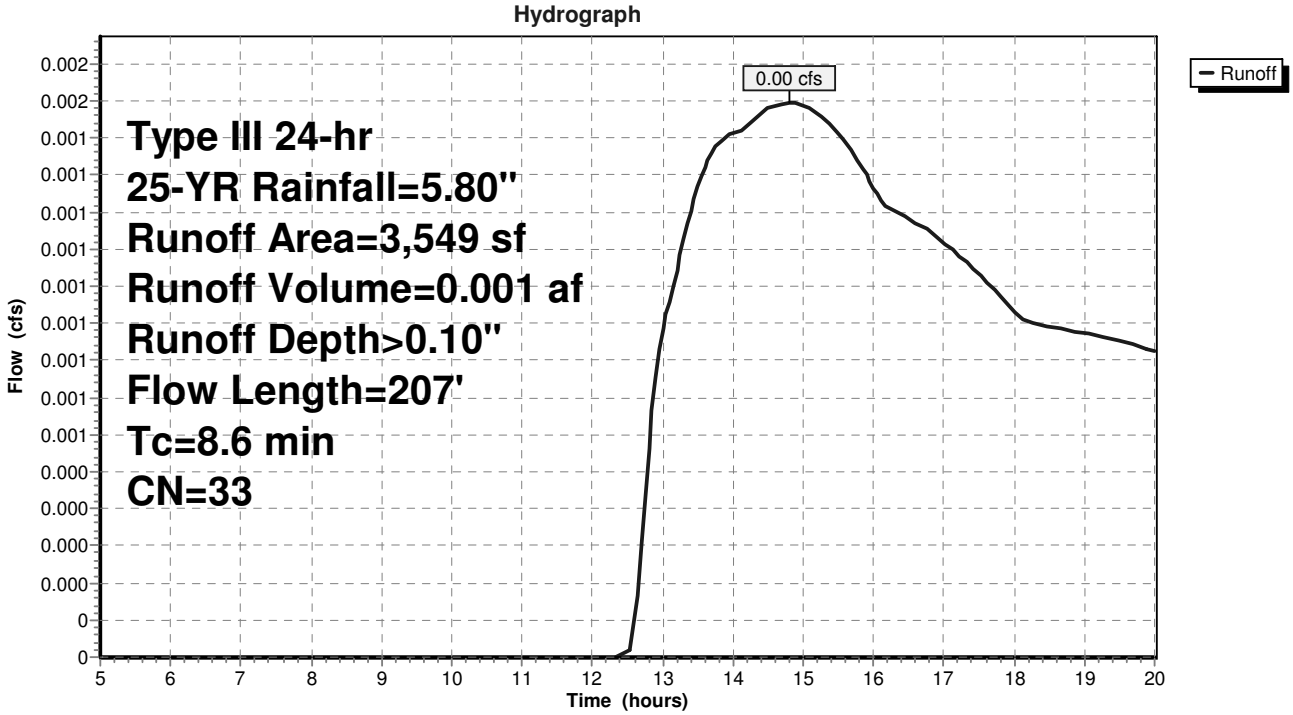
Subcatchment S1: IMPERVIOUS/TREE/GRASS



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Summary for Subcatchment S2: IMPERVIOUS/TREE/GRASS

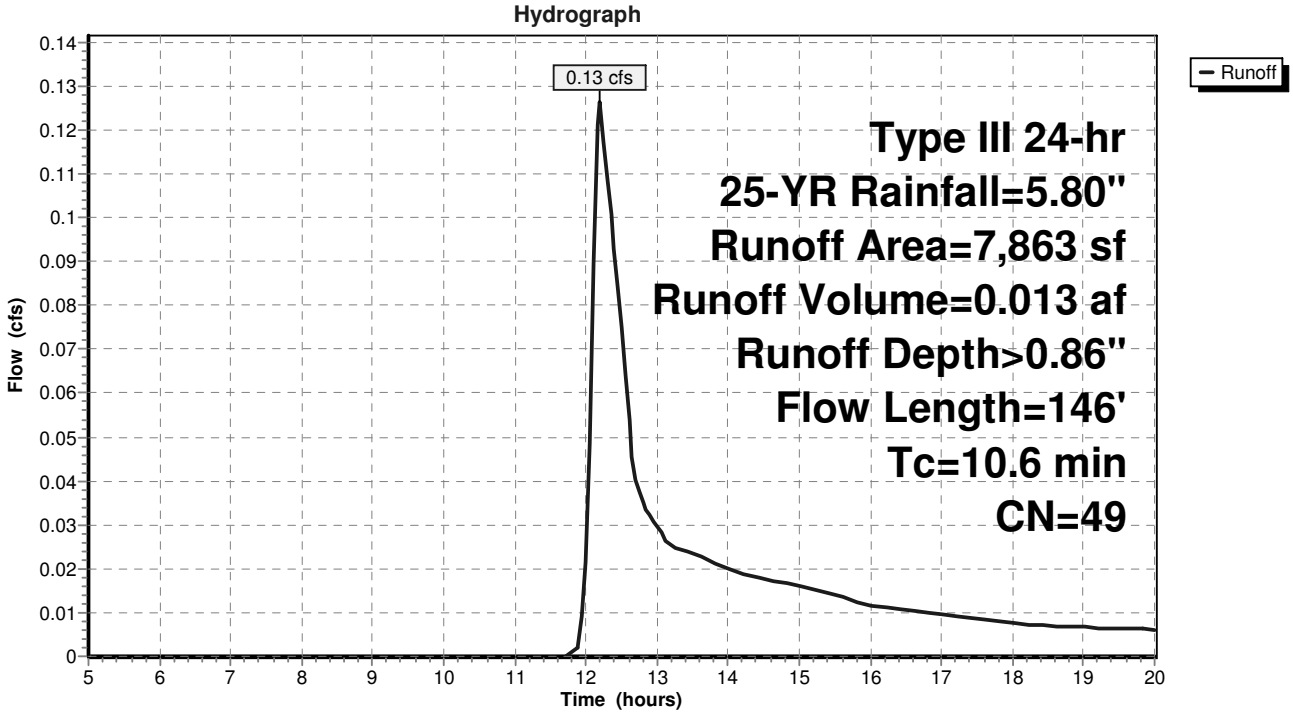
Runoff = 0.13 cfs @ 12.19 hrs, Volume= 0.013 af, Depth> 0.86"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
1,598	98	Roofs, HSG D
1,396	30	Woods, Good, HSG A
4,869	39	>75% Grass cover, Good, HSG A
7,863	49	Weighted Average
6,265		79.68% Pervious Area
1,598		20.32% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	37	0.0217	0.06		**Sheet Flow, A-B SHEET** Woods: Light underbrush n= 0.400 P2= 3.10"
0.6	58	0.0466	1.51		**Shallow Concentrated Flow, B-C SHALLOW** Short Grass Pasture Kv= 7.0 fps
0.2	9	0.0353	0.94		**Shallow Concentrated Flow, C-D SHALLOW** Woodland Kv= 5.0 fps
0.3	42	0.1077	2.30		**Shallow Concentrated Flow, D-E SHALLOW** Short Grass Pasture Kv= 7.0 fps
10.6	146	Total			

Subcatchment S2: IMPERVIOUS/TREE/GRASS



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Summary for Subcatchment S3: IMPERVIOUS/TREE/GRASS

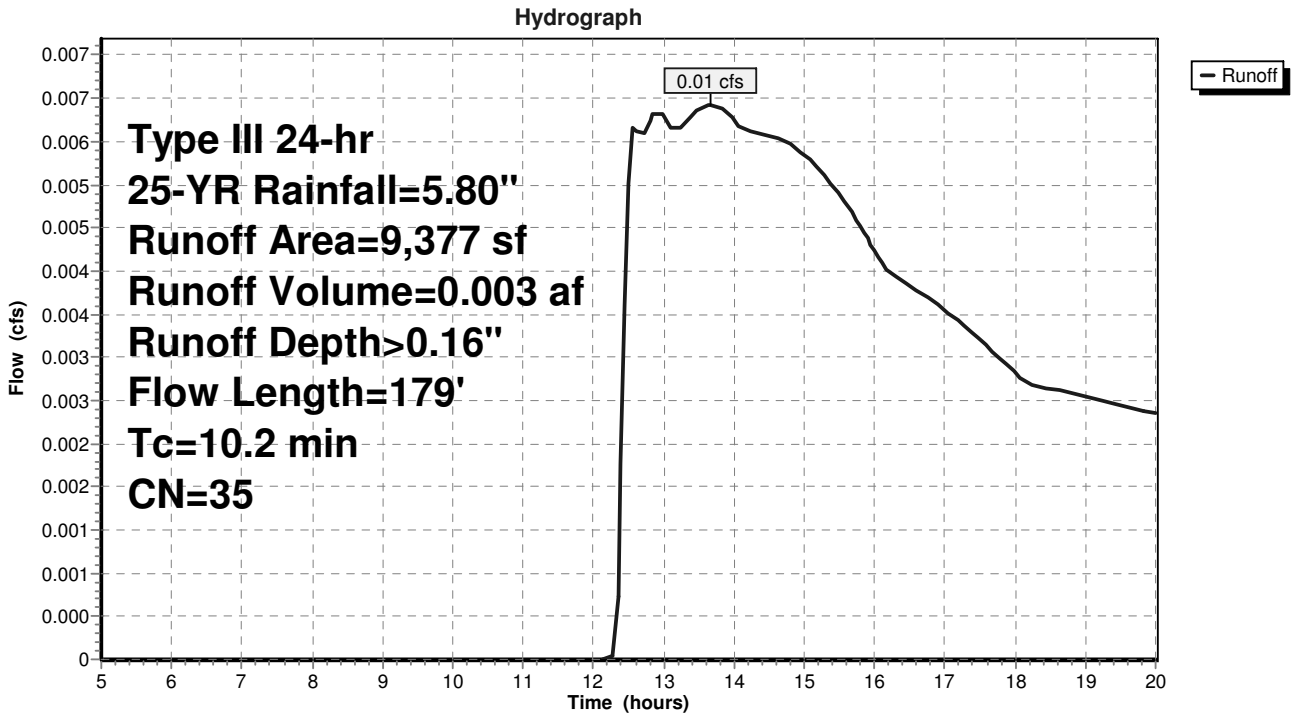
Runoff = 0.01 cfs @ 13.67 hrs, Volume= 0.003 af, Depth> 0.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
279	98	Paved parking, HSG A
6,289	30	Woods, Good, HSG A
2,809	39	>75% Grass cover, Good, HSG A
9,377	35	Weighted Average
9,098		97.02% Pervious Area
279		2.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.5	44	0.0407	0.09		**Sheet Flow, A-B SHEET** Woods: Light underbrush n= 0.400 P2= 3.10"
0.5	48	0.0438	1.46		**Shallow Concentrated Flow, B-C SHALLOW** Short Grass Pasture Kv= 7.0 fps
1.2	87	0.0589	1.21		**Shallow Concentrated Flow, C-D SHALLOW** Woodland Kv= 5.0 fps
10.2	179	Total			

Subcatchment S3: IMPERVIOUS/TREE/GRASS



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Summary for Subcatchment S4: TREE/GRASS

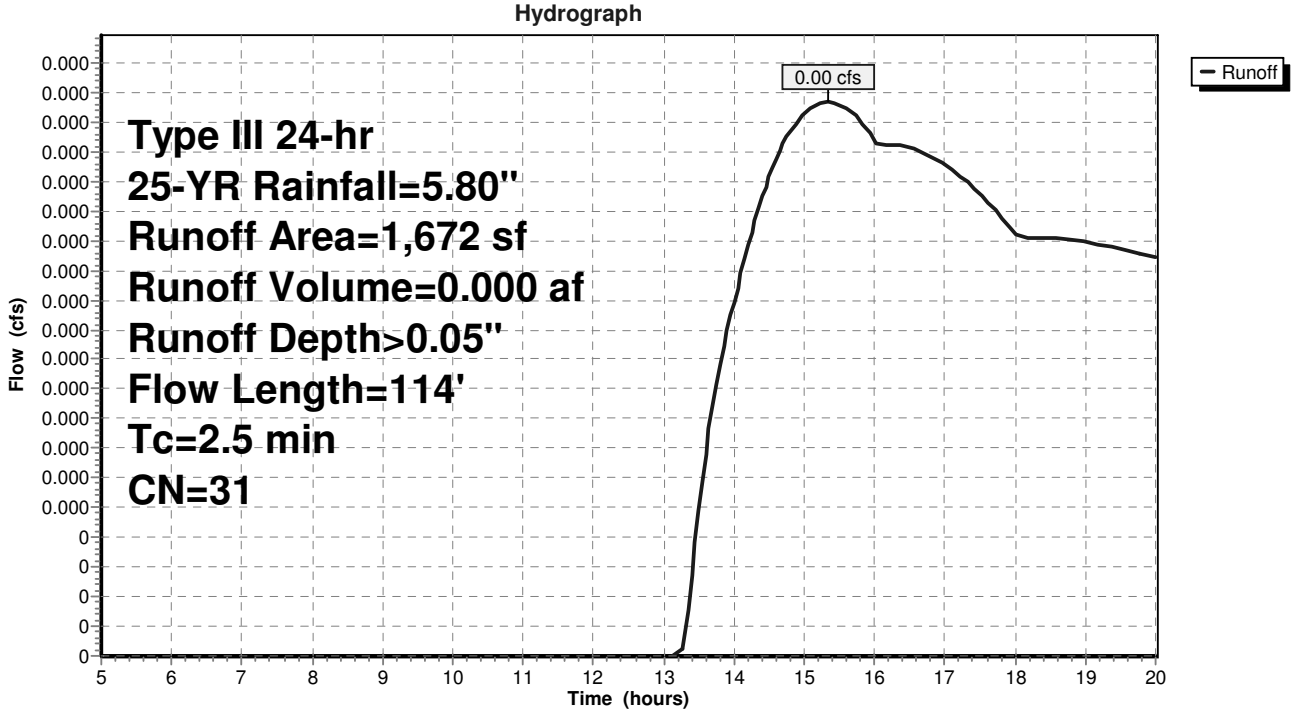
Runoff = 0.00 cfs @ 15.34 hrs, Volume= 0.000 af, Depth> 0.05"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YR Rainfall=5.80"

Area (sf)	CN	Description
1,424	30	Woods, Good, HSG A
248	39	>75% Grass cover, Good, HSG A
1,672	31	Weighted Average
1,672		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	12	0.0403	0.14		**Sheet Flow, A-B SHEET** Grass: Short n= 0.150 P2= 3.10"
1.1	102	0.0931	1.53		**Shallow Concentrated Flow, B-C SHALLOW** Woodland Kv= 5.0 fps
2.5	114	Total			

Subcatchment S4: TREE/GRASS



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Summary for Pond P1: Pond 1

Inflow Area =	0.181 ac, 20.32% Impervious, Inflow Depth > 0.86" for 25-YR event				
Inflow =	0.13 cfs @	12.19 hrs,	Volume=	0.013 af	
Outflow =	0.02 cfs @	13.61 hrs,	Volume=	0.011 af,	Atten= 82%, Lag= 85.1 min
Discarded =	0.02 cfs @	13.61 hrs,	Volume=	0.011 af	
Primary =	0.01 cfs @	13.61 hrs,	Volume=	0.000 af	

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 70.80' @ 13.61 hrs Surf.Area= 297 sf Storage= 210 cf

Plug-Flow detention time= 149.7 min calculated for 0.011 af (84% of inflow)
Center-of-Mass det. time= 103.0 min (953.9 - 850.9)

Volume	Invert	Avail.Storage	Storage Description
#1	70.00'	271 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
70.00	227	0	0
71.00	314	271	271

Device	Routing	Invert	Outlet Devices
#1	Discarded	70.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	70.80'	**10.0' long x 3.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 Coef. (English) 2.44 2.58 2.68 2.67 2.65 2.64 2.64 2.68 2.68 2.72 2.81 2.92 2.97 3.07 3.32

Discarded OutFlow Max=0.02 cfs @ 13.61 hrs HW=70.80' (Free Discharge)
└─**1=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.00 cfs @ 13.61 hrs HW=70.80' (Free Discharge)
└─**2=Broad-Crested Rectangular Weir** (Weir Controls 0.00 cfs @ 0.12 fps)

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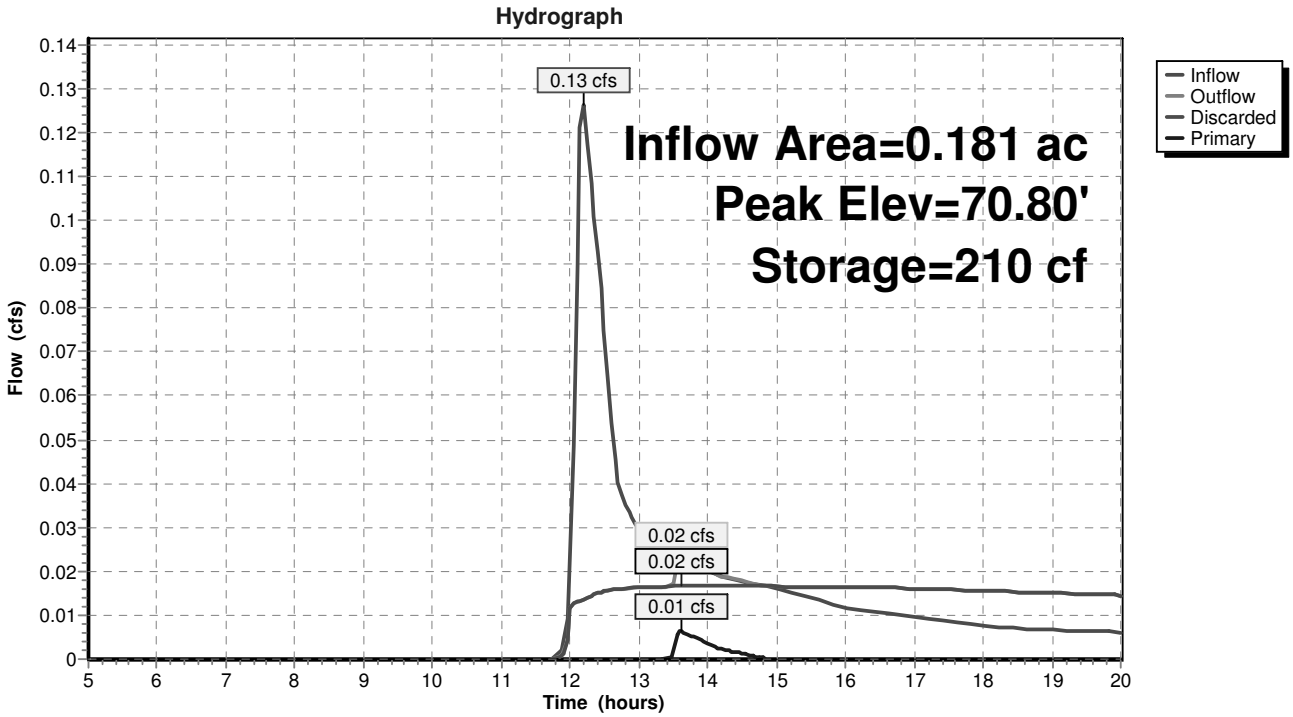
Pond P1: Pond 1



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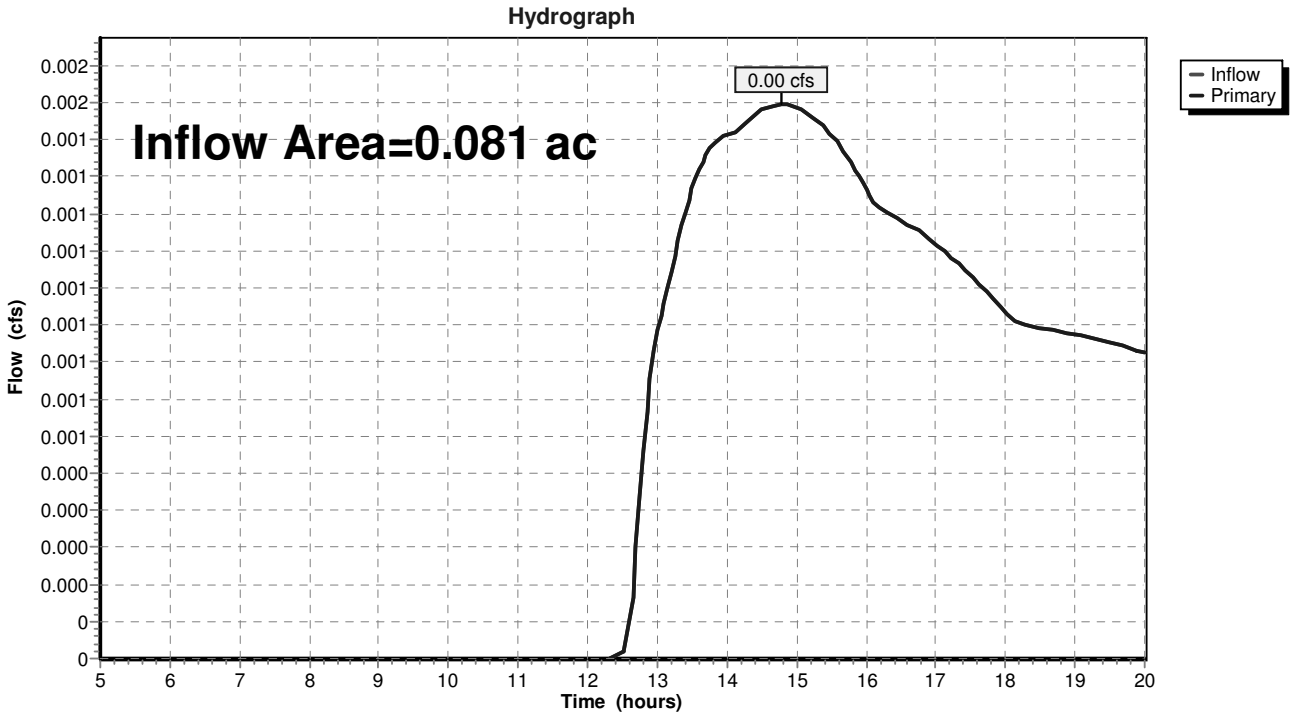
Summary for Link SP-1:

Inflow Area = 0.081 ac, 0.25% Impervious, Inflow Depth > 0.10" for 25-YR event
Inflow = 0.00 cfs @ 14.79 hrs, Volume= 0.001 af
Primary = 0.00 cfs @ 14.79 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link SP-1:



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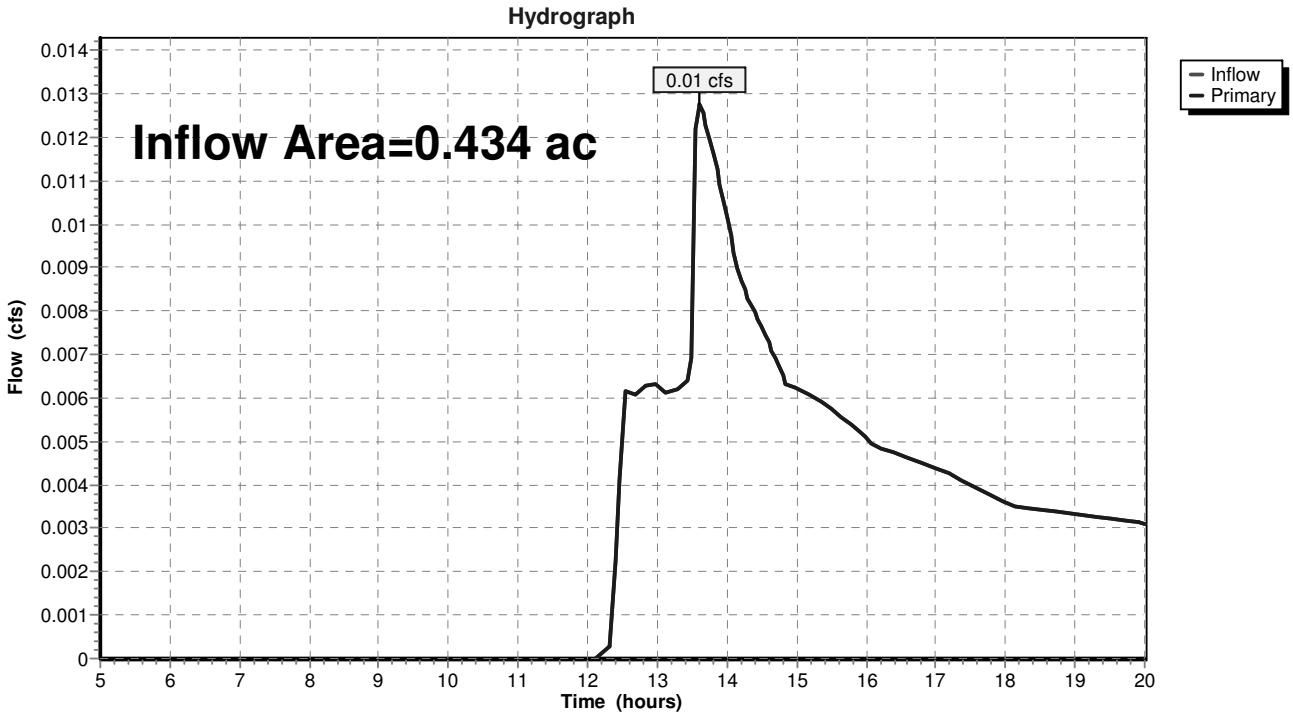
Summary for Link SP-2:

Inflow Area = 0.434 ac, 9.92% Impervious, Inflow Depth > 0.09" for 25-YR event
Inflow = 0.01 cfs @ 13.61 hrs, Volume= 0.003 af
Primary = 0.01 cfs @ 13.61 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link SP-2: