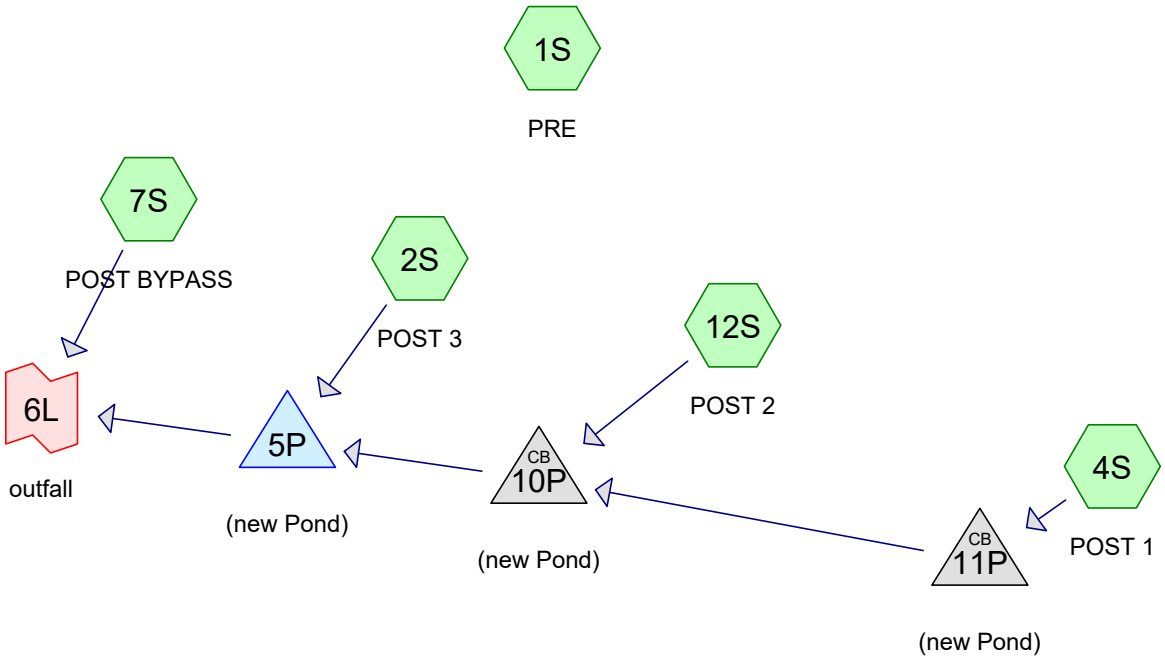


Subcat Reach Pond Link

Routing Diagram for lineage metals

Prepared by Somers Consulting Services LLC, Printed 5/29/2026

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-yr	Type II 24-hr		Default	24.00	1	3.89	2
2	10-yr	Type II 24-hr		Default	24.00	1	5.41	2
3	25-yr	Type II 24-hr		Default	24.00	1	6.33	2
4	100-yr	Type II 24-hr		Default	24.00	1	7.82	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.416	98	(2S, 4S, 12S)
19.677	61	Pasture/grassland/range, Good, HSG B (1S, 2S, 4S, 7S, 12S)
21.093	**63**	**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.000	0.000	0.000	1.416	1.416		2S, 4S, 12S
0.000	19.677	0.000	0.000	0.000	19.677	Pasture/grassland/range, Good	1S, 2S, 4S, 7S, 12S
0.000	**19.677**	**0.000**	**0.000**	**1.416**	**21.093**	**TOTAL AREA**	

Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)	Node Name
1	5P	642.10	642.07	6.0	0.0050	0.013	0.0	18.0	0.0	
2	10P	643.12	642.50	124.0	0.0050	0.013	0.0	18.0	0.0	
3	11P	646.39	645.00	277.0	0.0050	0.013	0.0	15.0	0.0	

Time span=0.00-24.00 hrs, dt=0.09 hrs, 268 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: PRE Runoff Area=10.563 ac 0.00% Impervious Runoff Depth>0.75"
Flow Length=1,000' Slope=0.0150 '/' Tc=31.8 min CN=61 Runoff=5.12 cfs 0.659 af

Subcatchment2S: POST 3 Runoff Area=7.989 ac 4.92% Impervious Runoff Depth>0.85"
Flow Length=850' Slope=0.0150 '/' Tc=24.4 min CN=63 Runoff=5.55 cfs 0.567 af

Subcatchment4S: POST 1 Runoff Area=0.473 ac 48.63% Impervious Runoff Depth>1.87"
Tc=5.0 min CN=79 Runoff=1.54 cfs 0.074 af

Subcatchment7S: POST BYPASS Runoff Area=0.720 ac 0.00% Impervious Runoff Depth>0.75"
Flow Length=400' Tc=18.4 min CN=61 Runoff=0.50 cfs 0.045 af

Subcatchment12S: POST 2 Runoff Area=1.348 ac 58.83% Impervious Runoff Depth>2.19"
Tc=5.0 min CN=83 Runoff=5.09 cfs 0.246 af

Pond 5P: (new Pond) Peak Elev=643.21' Storage=10,433 cf Inflow=7.99 cfs 0.887 af
Outflow=3.09 cfs 0.870 af

Pond 10P: (new Pond) Peak Elev=644.68' Inflow=6.64 cfs 0.320 af
18.0" Round Culvert n=0.013 L=124.0' S=0.0050 '/' Outflow=6.64 cfs 0.320 af

Pond 11P: (new Pond) Peak Elev=647.07' Inflow=1.54 cfs 0.074 af
15.0" Round Culvert n=0.013 L=277.0' S=0.0050 '/' Outflow=1.54 cfs 0.074 af

Link 6L: outfall Inflow=3.26 cfs 0.915 af
Primary=3.26 cfs 0.915 af

Total Runoff Area = 21.093 ac Runoff Volume = 1.591 af Average Runoff Depth = 0.90"
93.29% Pervious = 19.677 ac 6.71% Impervious = 1.416 ac

Summary for Subcatchment 1S: PRE

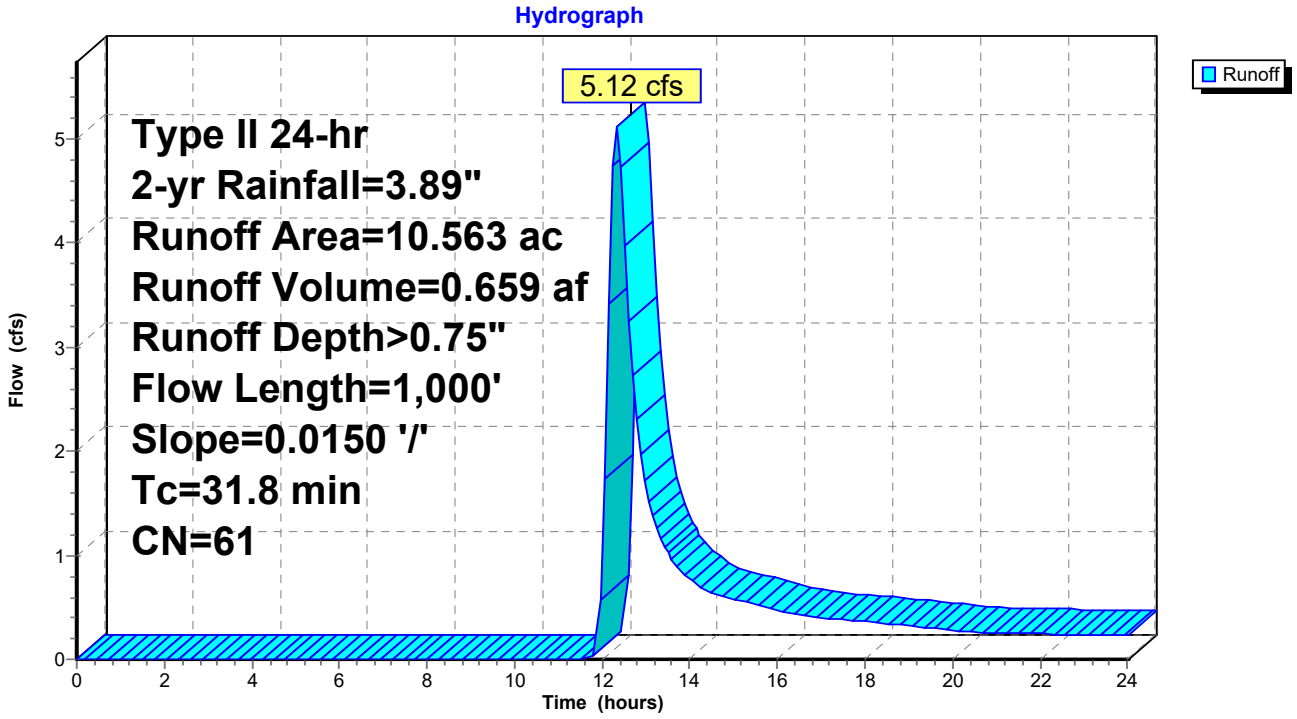
Runoff = 5.12 cfs @ 12.33 hrs, Volume= 0.659 af, Depth> 0.75"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Type II 24-hr 2-yr Rainfall=3.89"

Area (ac)	CN	Description
10.563	61	Pasture/grassland/range, Good, HSG B
10.563		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	100	0.0150	0.12		**Sheet Flow, Sheet flow** Grass: Dense n= 0.240 P2= 4.00"
17.5	900	0.0150	0.86		**Shallow Concentrated Flow, Shallow concentrated** Short Grass Pasture Kv= 7.0 fps
31.8	1,000	Total			

Subcatchment 1S: PRE



Summary for Subcatchment 2S: POST 3

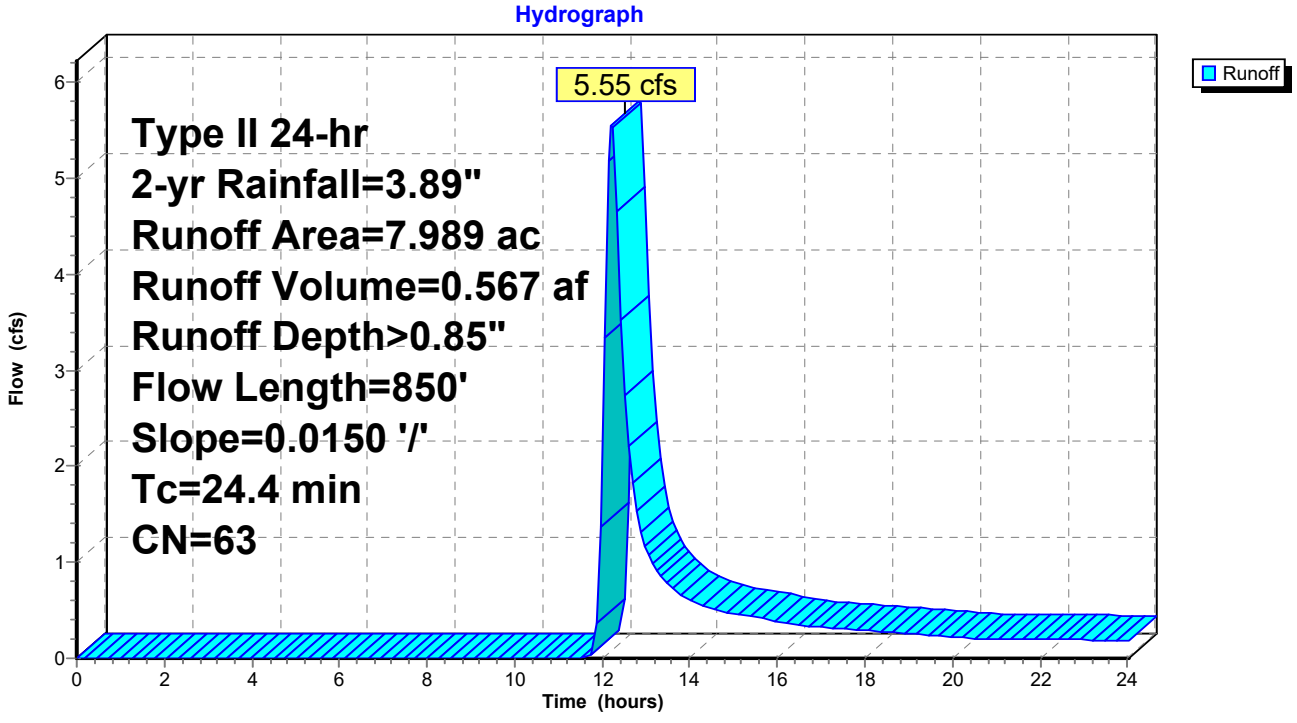
Runoff = 5.55 cfs @ 12.22 hrs, Volume= 0.567 af, Depth> 0.85"
Routed to Pond 5P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Type II 24-hr 2-yr Rainfall=3.89"

	Area (ac)	CN	Description
	7.596	61	Pasture/grassland/range, Good, HSG B
*	0.393	98	
	7.989	63	Weighted Average
	7.596		95.08% Pervious Area
	0.393		4.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8	100	0.0150	0.17		**Sheet Flow, Sheet Flow** Grass: Short n= 0.150 P2= 4.00"
14.6	750	0.0150	0.86		**Shallow Concentrated Flow, Shallow Concentrated** Short Grass Pasture Kv= 7.0 fps
24.4	850	Total			

Subcatchment 2S: POST 3



Summary for Subcatchment 4S: POST 1

[49] Hint: Tc<2dt may require smaller dt

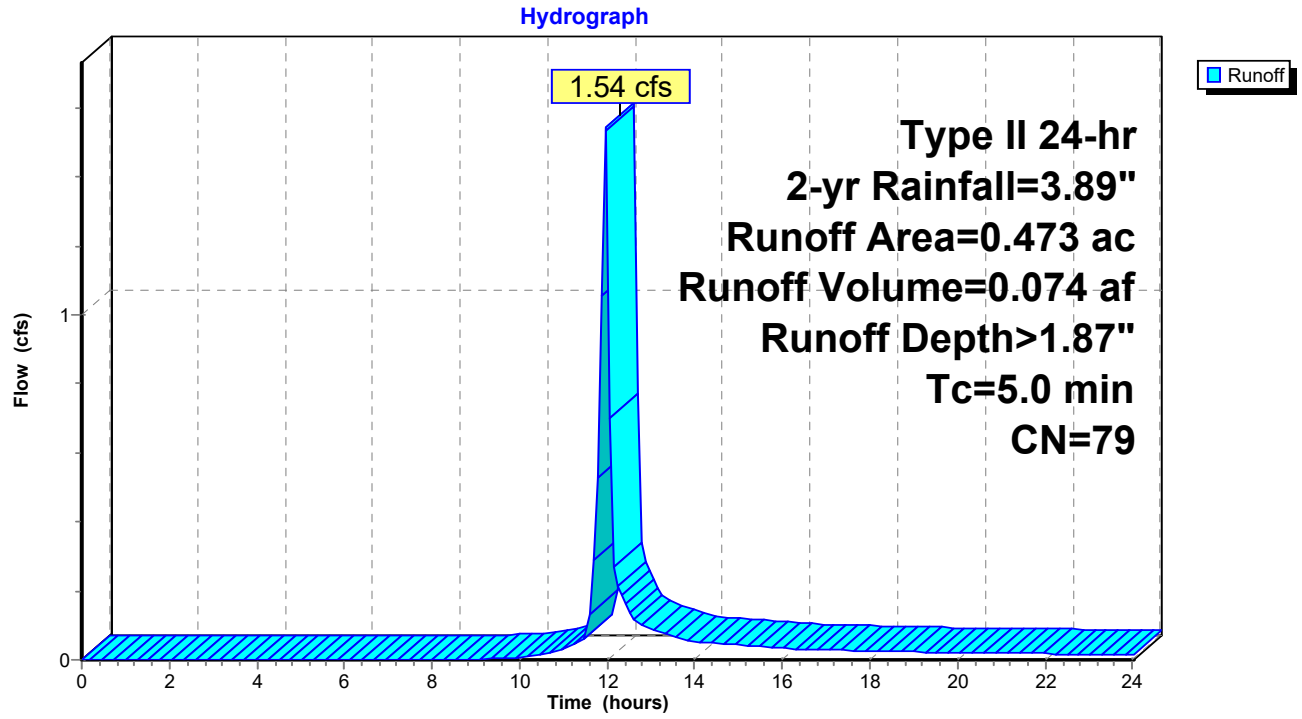
Runoff = 1.54 cfs @ 11.96 hrs, Volume= 0.074 af, Depth> 1.87"
Routed to Pond 11P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Type II 24-hr 2-yr Rainfall=3.89"

	Area (ac)	CN	Description
	0.243	61	Pasture/grassland/range, Good, HSG B
*	0.230	98	
	0.473	79	Weighted Average
	0.243		51.37% Pervious Area
	0.230		48.63% Impervious Area

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

Subcatchment 4S: POST 1



Summary for Subcatchment 7S: POST BYPASS

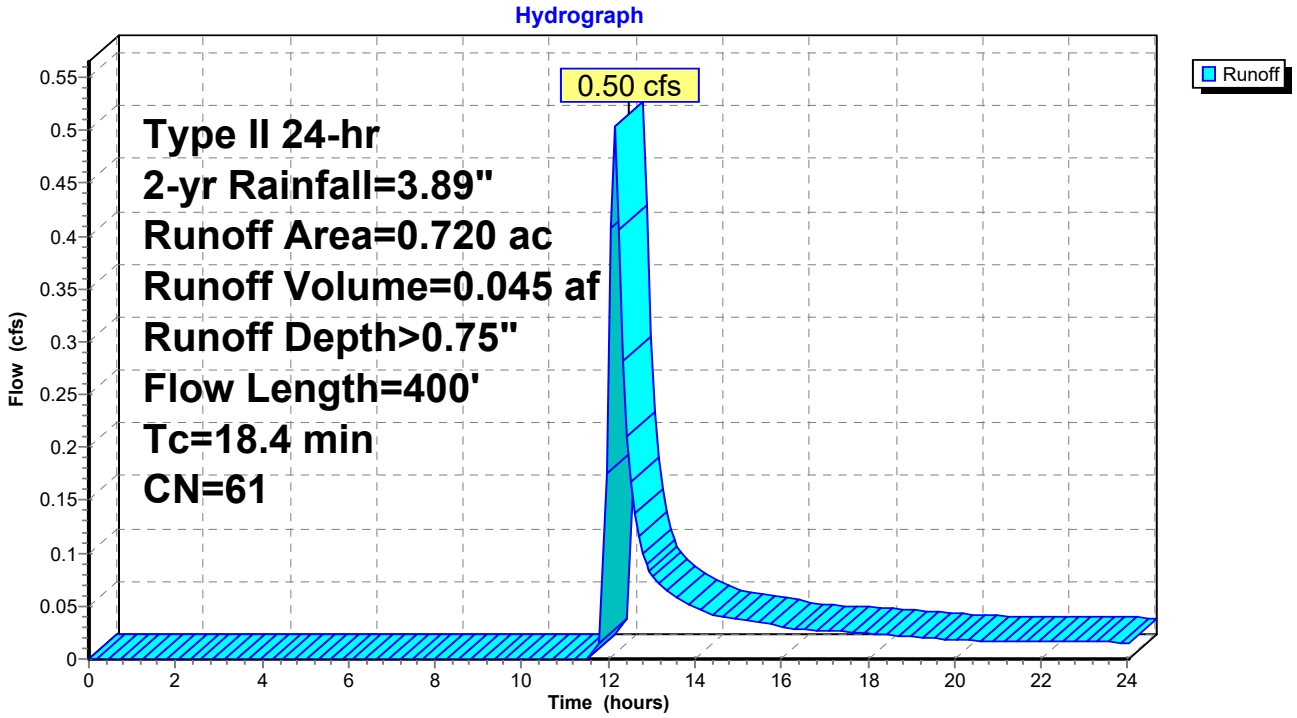
Runoff = 0.50 cfs @ 12.15 hrs, Volume= 0.045 af, Depth> 0.75"
Routed to Link 6L : outfall

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Type II 24-hr 2-yr Rainfall=3.89"

Area (ac)	CN	Description
0.720	61	Pasture/grassland/range, Good, HSG B
0.720		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	100	0.0150	0.12		**Sheet Flow, Sheet flow** Grass: Dense n= 0.240 P2= 4.00"
4.1	300	0.0300	1.21		**Shallow Concentrated Flow, Shallow concentrated** Short Grass Pasture Kv= 7.0 fps
18.4	400	Total			

Subcatchment 7S: POST BYPASS



Summary for Subcatchment 12S: POST 2

[49] Hint: Tc<2dt may require smaller dt

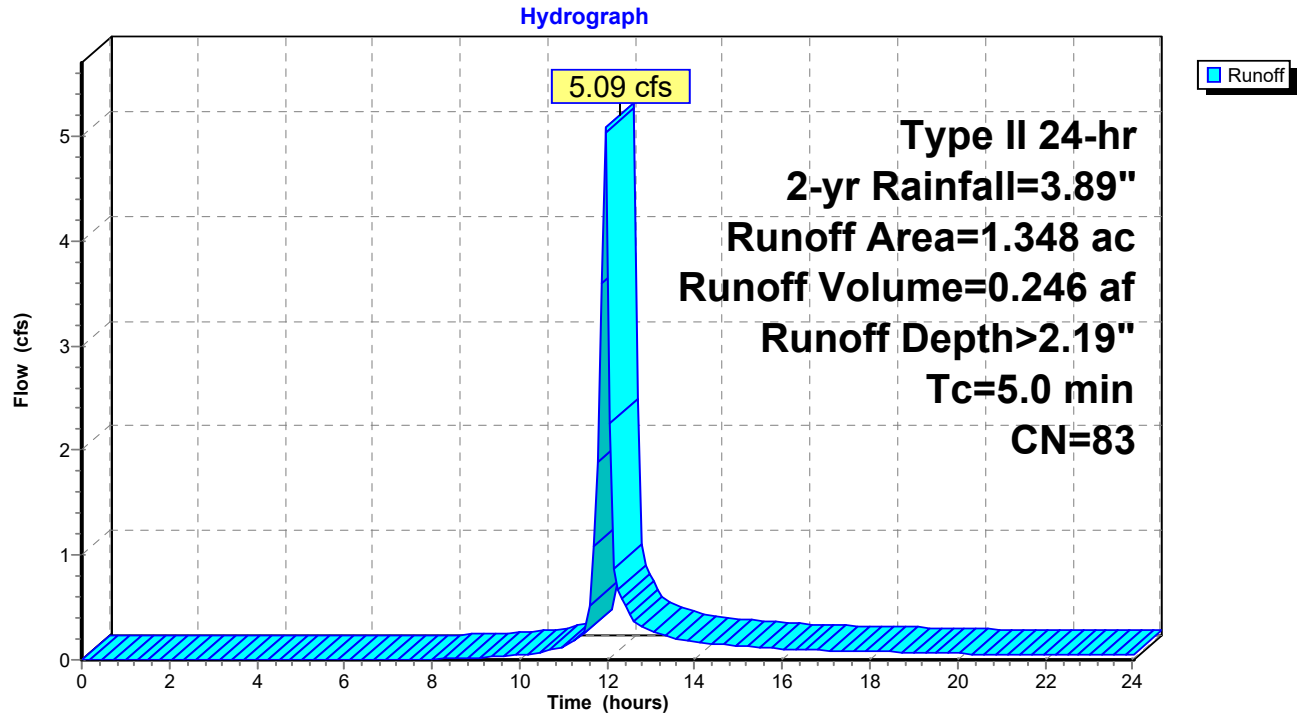
Runoff = 5.09 cfs @ 11.96 hrs, Volume= 0.246 af, Depth> 2.19"
Routed to Pond 10P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Type II 24-hr 2-yr Rainfall=3.89"

	Area (ac)	CN	Description
	0.555	61	Pasture/grassland/range, Good, HSG B
*	0.793	98	
	1.348	83	Weighted Average
	0.555		41.17% Pervious Area
	0.793		58.83% Impervious Area

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

Subcatchment 12S: POST 2



Summary for Pond 5P: (new Pond)

[79] Warning: Submerged Pond 10P Primary device # 1 INLET by 0.09'

Inflow Area = 9.810 ac, 14.43% Impervious, Inflow Depth > 1.08" for 2-yr event
Inflow = 7.99 cfs @ 11.98 hrs, Volume= 0.887 af
Outflow = 3.09 cfs @ 12.55 hrs, Volume= 0.870 af, Atten= 61%, Lag= 33.8 min
Primary = 3.09 cfs @ 12.55 hrs, Volume= 0.870 af
Routed to Link 6L : outfall

Routing by Stor-Ind method, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs / 3
Peak Elev= 643.21' @ 12.55 hrs Surf.Area= 16,875 sf Storage= 10,433 cf

Plug-Flow detention time= 51.3 min calculated for 0.867 af (98% of inflow)
Center-of-Mass det. time= 40.8 min (909.7 - 868.9)

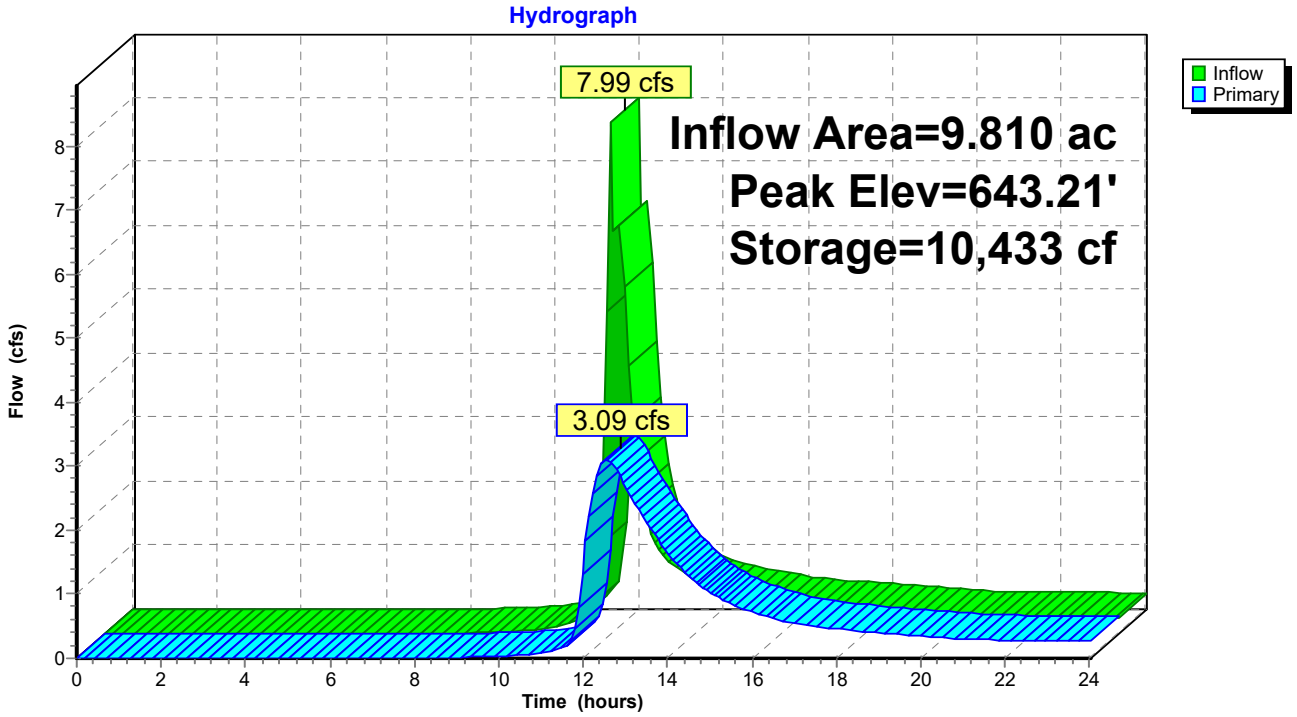
Volume	Invert	Avail.Storage	Storage Description
#1	642.10'	38,158 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
642.10	0	0	0
643.00	15,590	7,015	7,015
644.00	21,693	18,642	25,657
644.50	28,311	12,501	38,158

Device	Routing	Invert	Outlet Devices
#1	Primary	642.10'	**18.0" Round Culvert** L= 6.0' Ke= 1.000 Inlet / Outlet Invert= 642.10' / 642.07' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Primary	644.00'	**10.0' long + 3.0 '/' SideZ x 2.0' 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 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=3.09 cfs @ 12.55 hrs HW=643.21' (Free Discharge)
1=Culvert (Barrel Controls 3.09 cfs @ 3.07 fps)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 5P: (new Pond)



Summary for Pond 10P: (new Pond)

[57] Hint: Peaked at 644.68' (Flood elevation advised)

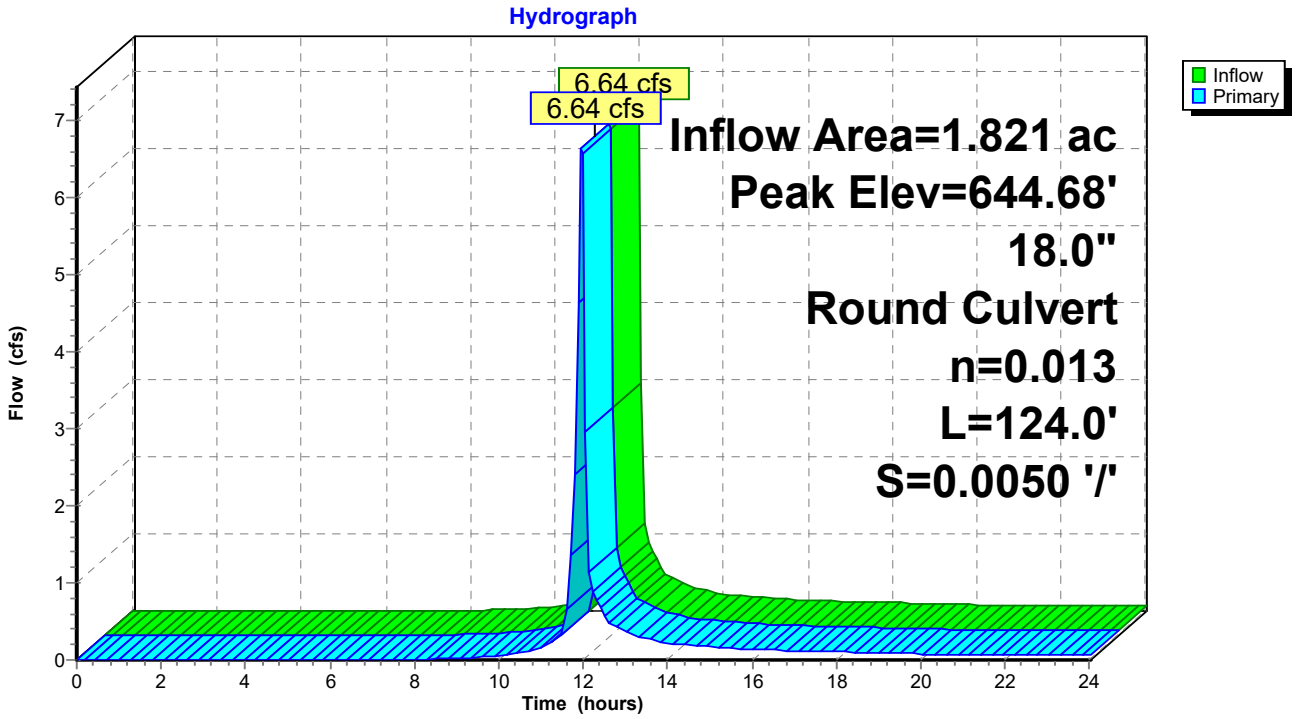
Inflow Area = 1.821 ac, 56.18% Impervious, Inflow Depth > 2.11" for 2-yr event
Inflow = 6.64 cfs @ 11.96 hrs, Volume= 0.320 af
Outflow = 6.64 cfs @ 11.96 hrs, Volume= 0.320 af, Atten= 0%, Lag= 0.0 min
Primary = 6.64 cfs @ 11.96 hrs, Volume= 0.320 af
Routed to Pond 5P : (new Pond)

Routing by Stor-Ind method, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Peak Elev= 644.68' @ 11.96 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	643.12'	**18.0" Round Culvert** L= 124.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 643.12' / 642.50' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf

Primary OutFlow Max=6.30 cfs @ 11.96 hrs HW=644.62' (Free Discharge)
1=Culvert (Barrel Controls 6.30 cfs @ 4.43 fps)

Pond 10P: (new Pond)



Summary for Pond 11P: (new Pond)

[57] Hint: Peaked at 647.07' (Flood elevation advised)

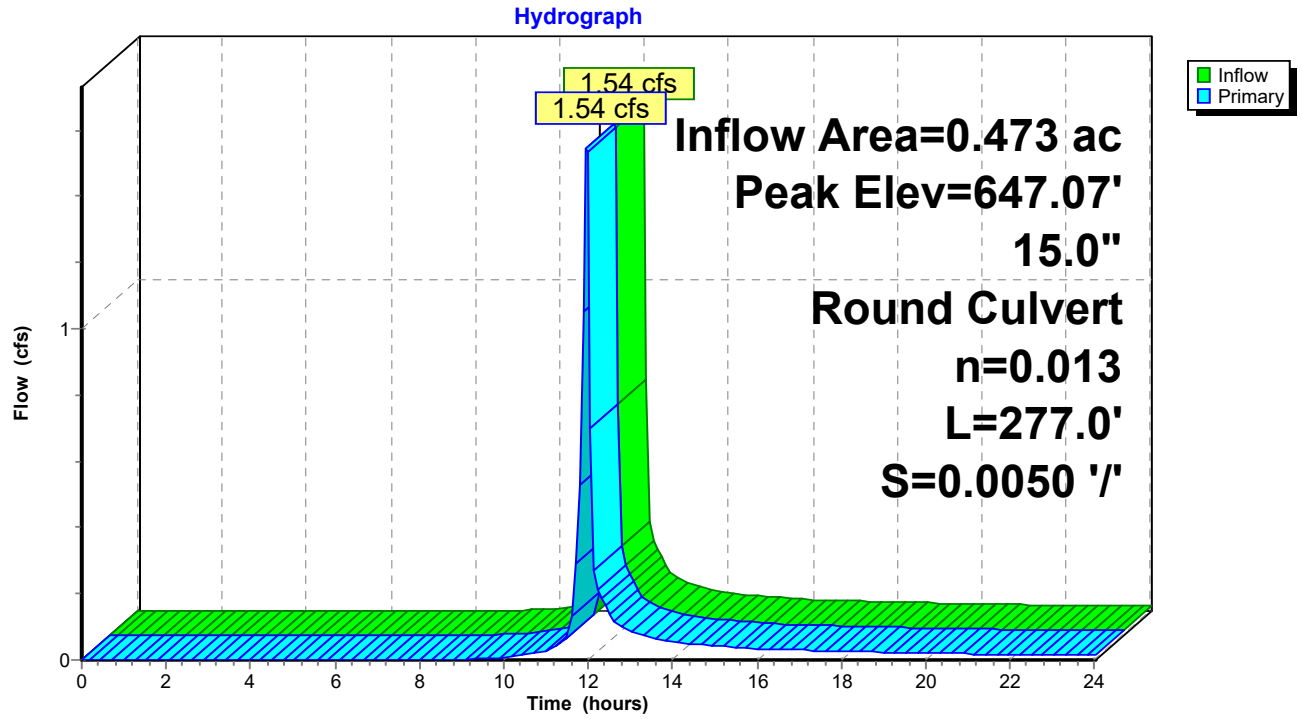
Inflow Area = 0.473 ac, 48.63% Impervious, Inflow Depth > 1.87" for 2-yr event
Inflow = 1.54 cfs @ 11.96 hrs, Volume= 0.074 af
Outflow = 1.54 cfs @ 11.96 hrs, Volume= 0.074 af, Atten= 0%, Lag= 0.0 min
Primary = 1.54 cfs @ 11.96 hrs, Volume= 0.074 af
Routed to Pond 10P : (new Pond)

Routing by Stor-Ind method, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Peak Elev= 647.07' @ 11.96 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	646.39'	**15.0" Round Culvert** L= 277.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 646.39' / 645.00' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf

Primary OutFlow Max=1.46 cfs @ 11.96 hrs HW=647.05' (Free Discharge)
1=Culvert (Barrel Controls 1.46 cfs @ 3.24 fps)

Pond 11P: (new Pond)

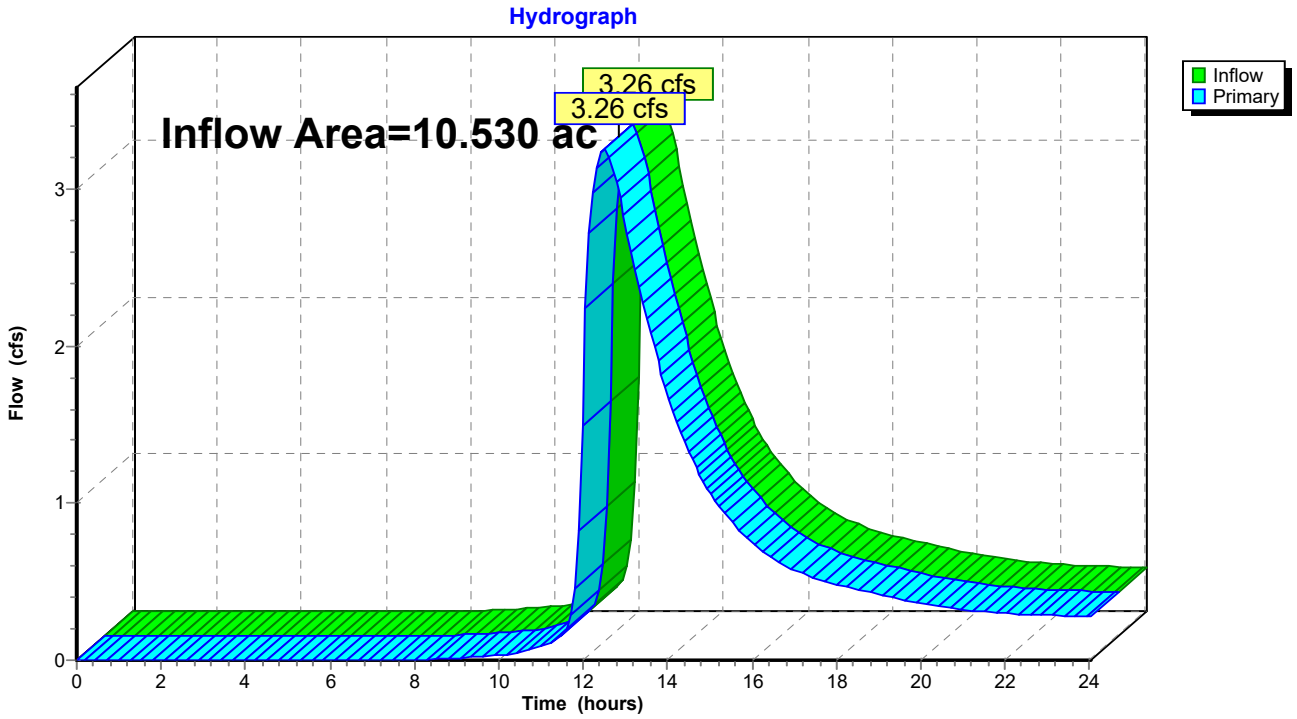


Summary for Link 6L: outfall

Inflow Area = 10.530 ac, 13.45% Impervious, Inflow Depth > 1.04" for 2-yr event
Inflow = 3.26 cfs @ 12.50 hrs, Volume= 0.915 af
Primary = 3.26 cfs @ 12.50 hrs, Volume= 0.915 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs

Link 6L: outfall



Time span=0.00-24.00 hrs, dt=0.09 hrs, 268 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: PRE Runoff Area=10.563 ac 0.00% Impervious Runoff Depth>1.61"
Flow Length=1,000' Slope=0.0150 '/' Tc=31.8 min CN=61 Runoff=12.87 cfs 1.414 af

Subcatchment2S: POST 3 Runoff Area=7.989 ac 4.92% Impervious Runoff Depth>1.76"
Flow Length=850' Slope=0.0150 '/' Tc=24.4 min CN=63 Runoff=12.93 cfs 1.173 af

Subcatchment4S: POST 1 Runoff Area=0.473 ac 48.63% Impervious Runoff Depth>3.16"
Tc=5.0 min CN=79 Runoff=2.57 cfs 0.124 af

Subcatchment7S: POST BYPASS Runoff Area=0.720 ac 0.00% Impervious Runoff Depth>1.61"
Flow Length=400' Tc=18.4 min CN=61 Runoff=1.24 cfs 0.097 af

Subcatchment12S: POST 2 Runoff Area=1.348 ac 58.83% Impervious Runoff Depth>3.55"
Tc=5.0 min CN=83 Runoff=8.08 cfs 0.398 af

Pond 5P: (new Pond) Peak Elev=643.85' Storage=22,478 cf Inflow=15.58 cfs 1.696 af
Outflow=6.23 cfs 1.668 af

Pond 10P: (new Pond) Peak Elev=646.08' Inflow=10.65 cfs 0.523 af
18.0" Round Culvert n=0.013 L=124.0' S=0.0050 '/' Outflow=10.65 cfs 0.523 af

Pond 11P: (new Pond) Peak Elev=647.30' Inflow=2.57 cfs 0.124 af
15.0" Round Culvert n=0.013 L=277.0' S=0.0050 '/' Outflow=2.57 cfs 0.124 af

Link 6L: outfall Inflow=6.59 cfs 1.765 af
Primary=6.59 cfs 1.765 af

Total Runoff Area = 21.093 ac Runoff Volume = 3.207 af Average Runoff Depth = 1.82"
93.29% Pervious = 19.677 ac 6.71% Impervious = 1.416 ac

Summary for Subcatchment 1S: PRE

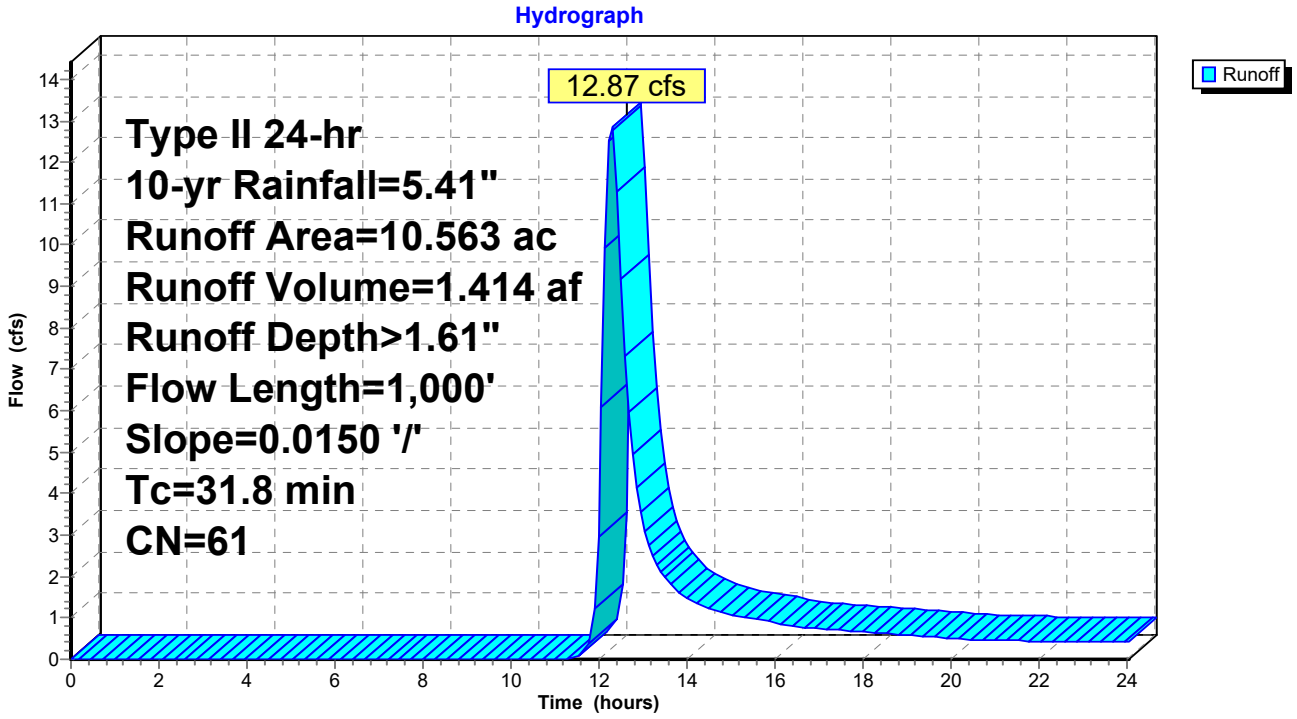
Runoff = 12.87 cfs @ 12.30 hrs, Volume= 1.414 af, Depth> 1.61"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Type II 24-hr 10-yr Rainfall=5.41"

Area (ac)	CN	Description
10.563	61	Pasture/grassland/range, Good, HSG B
10.563		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	100	0.0150	0.12		**Sheet Flow, Sheet flow** Grass: Dense n= 0.240 P2= 4.00"
17.5	900	0.0150	0.86		**Shallow Concentrated Flow, Shallow concentrated** Short Grass Pasture Kv= 7.0 fps
31.8	1,000	Total			

Subcatchment 1S: PRE



Summary for Subcatchment 2S: POST 3

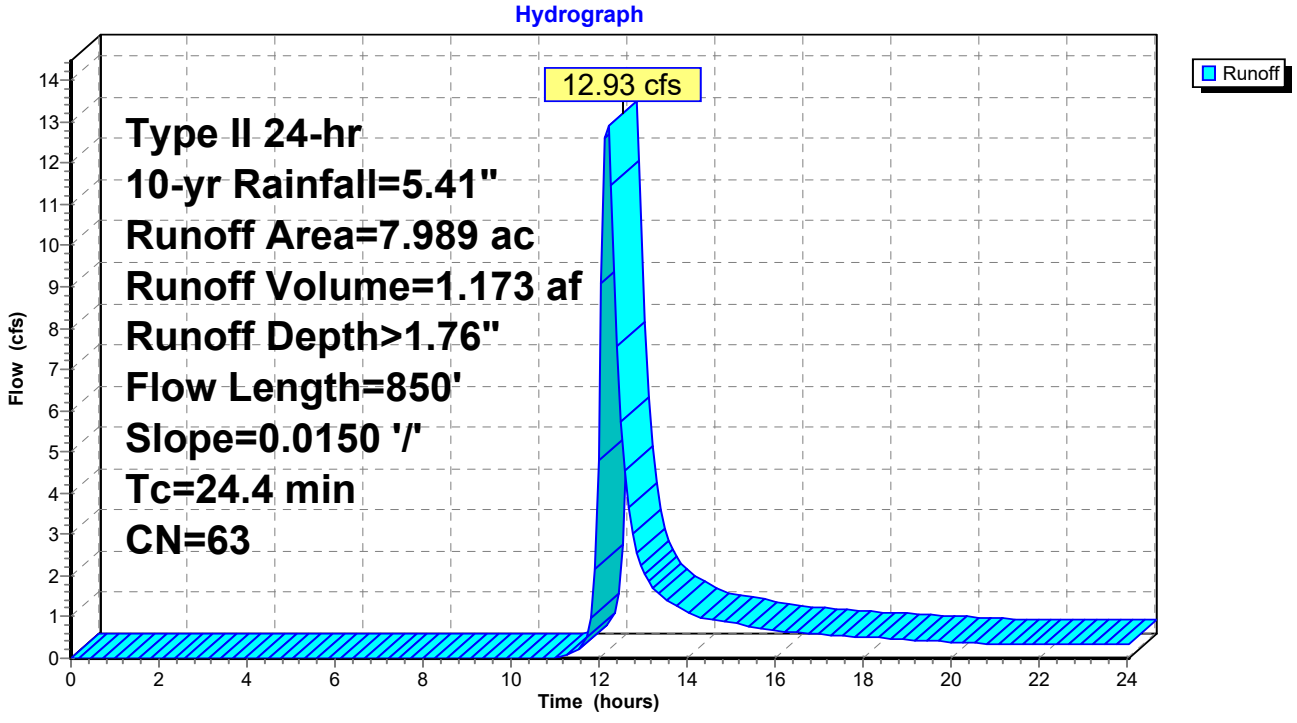
Runoff = 12.93 cfs @ 12.20 hrs, Volume= 1.173 af, Depth> 1.76"
Routed to Pond 5P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Type II 24-hr 10-yr Rainfall=5.41"

	Area (ac)	CN	Description
	7.596	61	Pasture/grassland/range, Good, HSG B
*	0.393	98	
	7.989	63	Weighted Average
	7.596		95.08% Pervious Area
	0.393		4.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8	100	0.0150	0.17		**Sheet Flow, Sheet Flow** Grass: Short n= 0.150 P2= 4.00"
14.6	750	0.0150	0.86		**Shallow Concentrated Flow, Shallow Concentrated** Short Grass Pasture Kv= 7.0 fps
24.4	850	Total			

Subcatchment 2S: POST 3



Summary for Subcatchment 4S: POST 1

[49] Hint: Tc<2dt may require smaller dt

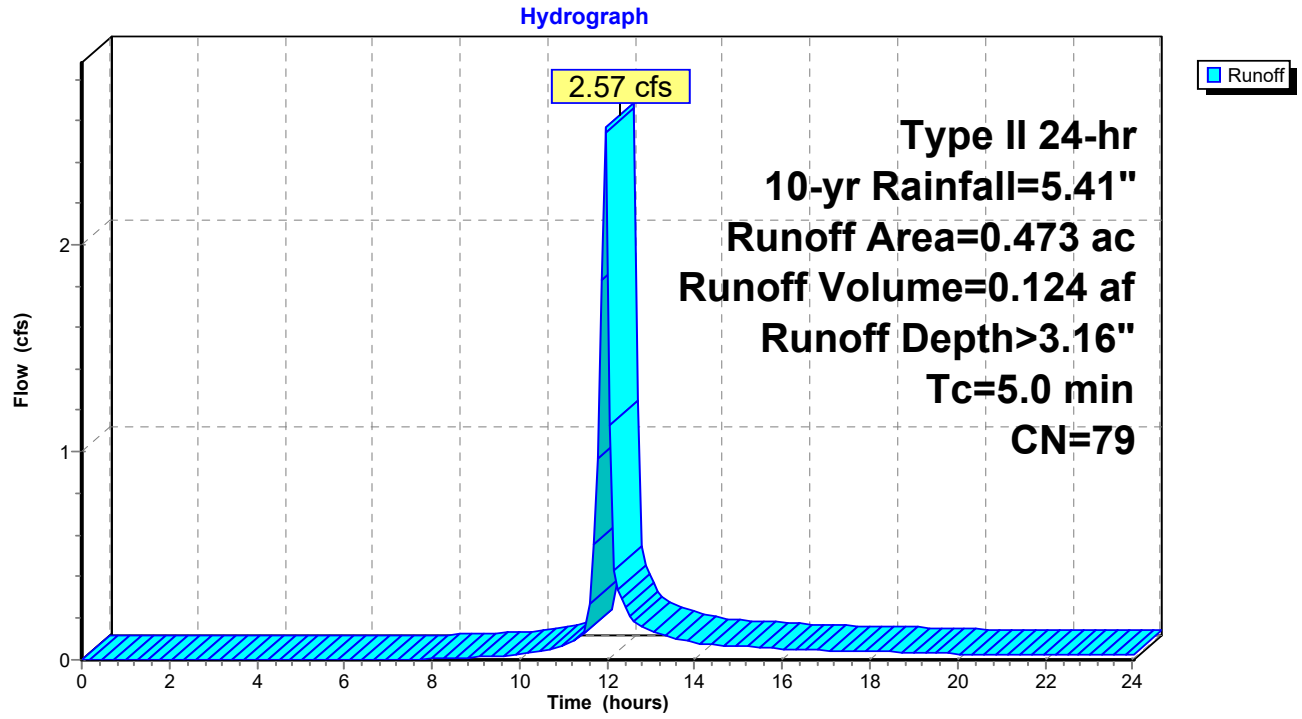
Runoff = 2.57 cfs @ 11.96 hrs, Volume= 0.124 af, Depth> 3.16"
Routed to Pond 11P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Type II 24-hr 10-yr Rainfall=5.41"

	Area (ac)	CN	Description
	0.243	61	Pasture/grassland/range, Good, HSG B
*	0.230	98	
	0.473	79	Weighted Average
	0.243		51.37% Pervious Area
	0.230		48.63% Impervious Area

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

Subcatchment 4S: POST 1



Summary for Subcatchment 7S: POST BYPASS

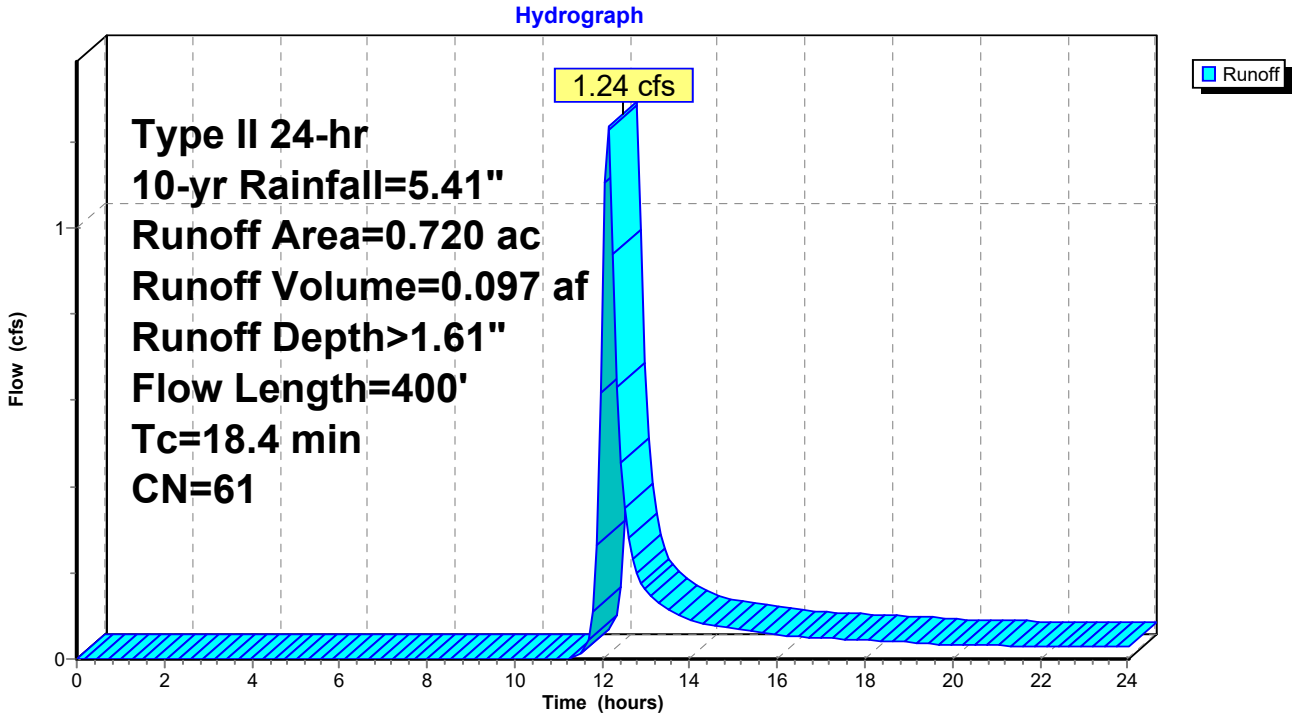
Runoff = 1.24 cfs @ 12.13 hrs, Volume= 0.097 af, Depth> 1.61"
Routed to Link 6L : outfall

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Type II 24-hr 10-yr Rainfall=5.41"

Area (ac)	CN	Description
0.720	61	Pasture/grassland/range, Good, HSG B
0.720		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	100	0.0150	0.12		**Sheet Flow, Sheet flow** Grass: Dense n= 0.240 P2= 4.00"
4.1	300	0.0300	1.21		**Shallow Concentrated Flow, Shallow concentrated** Short Grass Pasture Kv= 7.0 fps
18.4	400	Total			

Subcatchment 7S: POST BYPASS



Summary for Subcatchment 12S: POST 2

[49] Hint: Tc<2dt may require smaller dt

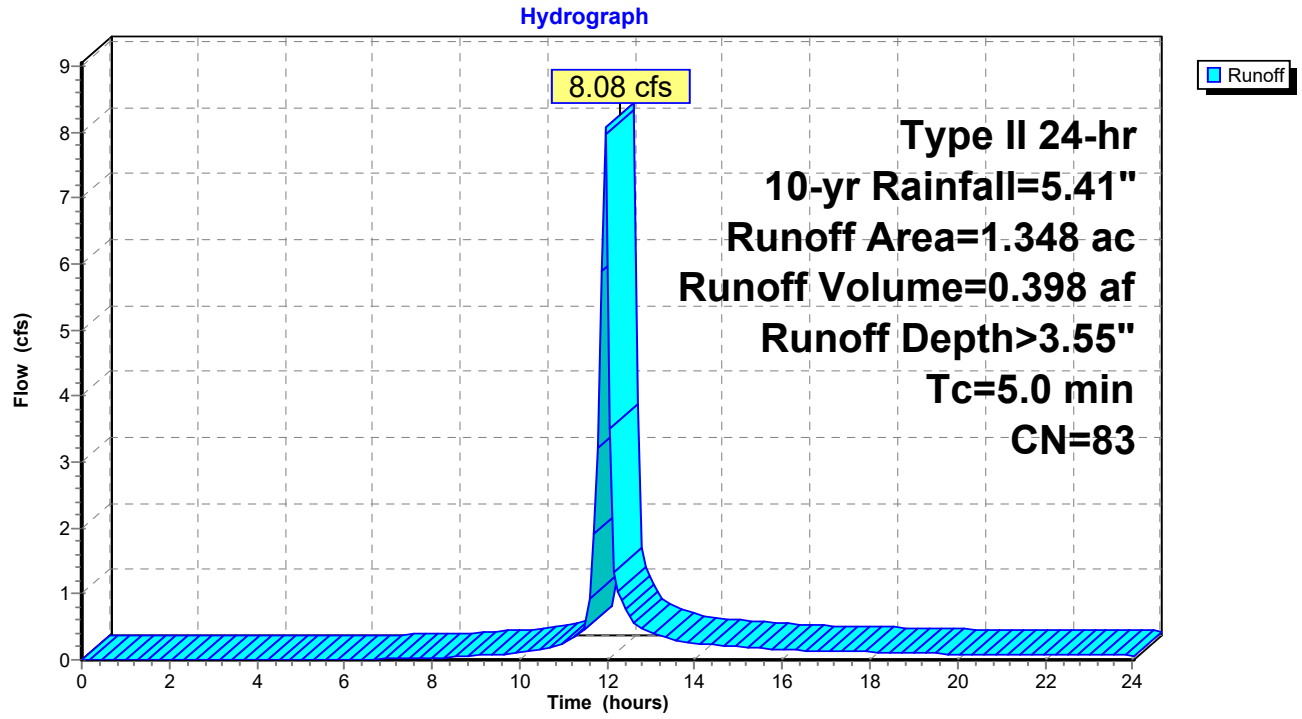
Runoff = 8.08 cfs @ 11.95 hrs, Volume= 0.398 af, Depth> 3.55"
Routed to Pond 10P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Type II 24-hr 10-yr Rainfall=5.41"

	Area (ac)	CN	Description
	0.555	61	Pasture/grassland/range, Good, HSG B
*	0.793	98	
	1.348	83	Weighted Average
	0.555		41.17% Pervious Area
	0.793		58.83% Impervious Area

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

Subcatchment 12S: POST 2



Summary for Pond 5P: (new Pond)

[81] Warning: Exceeded Pond 10P by 0.29' @ 12.60 hrs

Inflow Area = 9.810 ac, 14.43% Impervious, Inflow Depth > 2.07" for 10-yr event
Inflow = 15.58 cfs @ 11.99 hrs, Volume= 1.696 af
Outflow = 6.23 cfs @ 12.54 hrs, Volume= 1.668 af, Atten= 60%, Lag= 32.7 min
Primary = 6.23 cfs @ 12.54 hrs, Volume= 1.668 af
Routed to Link 6L : outfall

Routing by Stor-Ind method, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs / 3
Peak Elev= 643.85' @ 12.54 hrs Surf.Area= 20,779 sf Storage= 22,478 cf

Plug-Flow detention time= 54.2 min calculated for 1.668 af (98% of inflow)
Center-of-Mass det. time= 44.5 min (896.4 - 851.9)

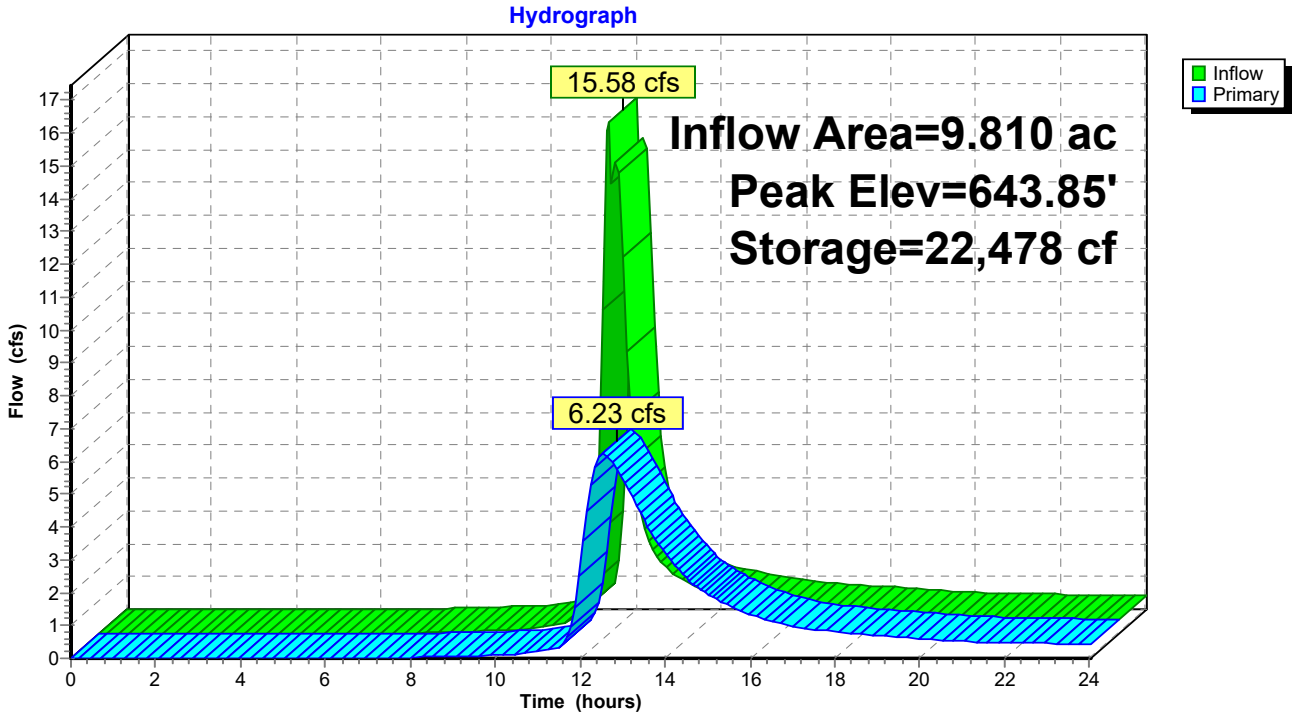
Volume	Invert	Avail.Storage	Storage Description
#1	642.10'	38,158 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
642.10	0	0	0
643.00	15,590	7,015	7,015
644.00	21,693	18,642	25,657
644.50	28,311	12,501	38,158

Device	Routing	Invert	Outlet Devices
#1	Primary	642.10'	**18.0" Round Culvert** L= 6.0' Ke= 1.000 Inlet / Outlet Invert= 642.10' / 642.07' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Primary	644.00'	**10.0' long + 3.0 '/' SideZ x 2.0' 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 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=6.22 cfs @ 12.54 hrs HW=643.85' (Free Discharge)
1=Culvert (Barrel Controls 6.22 cfs @ 3.80 fps)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 5P: (new Pond)



Summary for Pond 10P: (new Pond)

[57] Hint: Peaked at 646.08' (Flood elevation advised)
[79] Warning: Submerged Pond 11P Primary device # 1 OUTLET by 1.07'

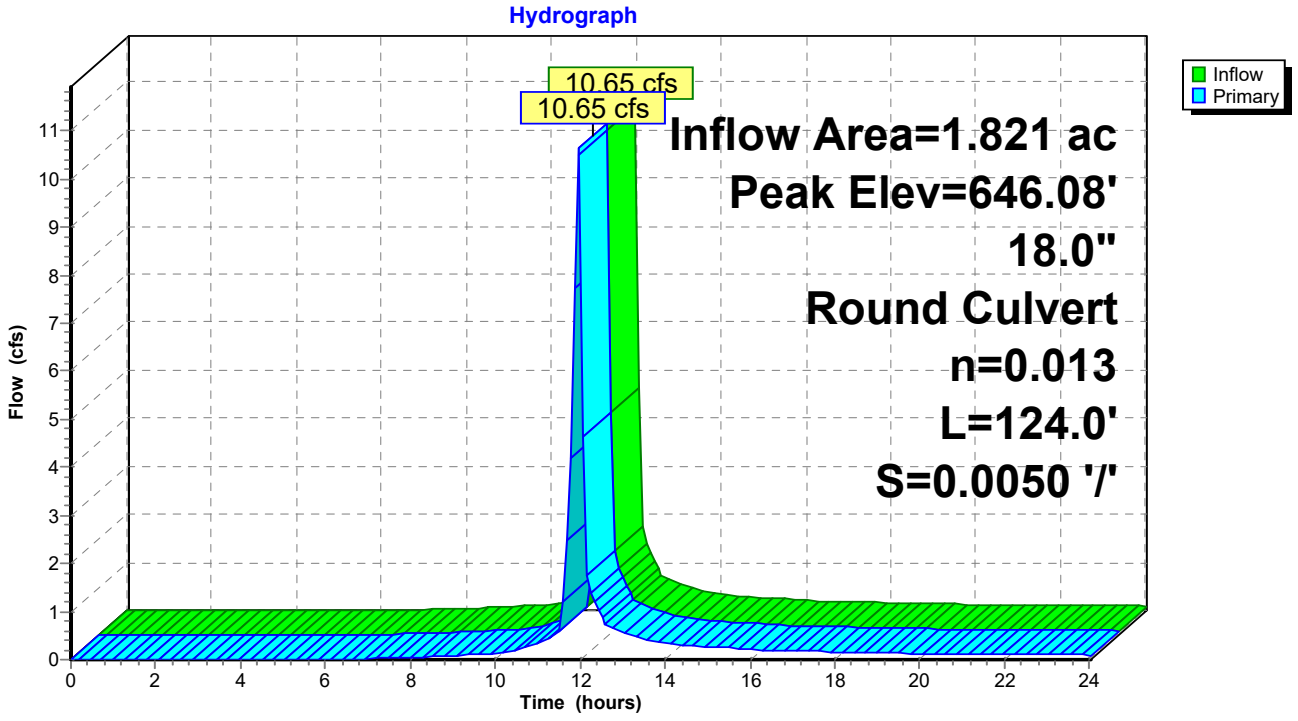
Inflow Area = 1.821 ac, 56.18% Impervious, Inflow Depth > 3.45" for 10-yr event
Inflow = 10.65 cfs @ 11.95 hrs, Volume= 0.523 af
Outflow = 10.65 cfs @ 11.95 hrs, Volume= 0.523 af, Atten= 0%, Lag= 0.0 min
Primary = 10.65 cfs @ 11.95 hrs, Volume= 0.523 af
Routed to Pond 5P : (new Pond)

Routing by Stor-Ind method, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Peak Elev= 646.08' @ 11.96 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	643.12'	**18.0" Round Culvert** L= 124.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 643.12' / 642.50' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf

Primary OutFlow Max=9.98 cfs @ 11.95 hrs HW=645.87' (Free Discharge)
1=Culvert (Barrel Controls 9.98 cfs @ 5.65 fps)

Pond 10P: (new Pond)



Summary for Pond 11P: (new Pond)

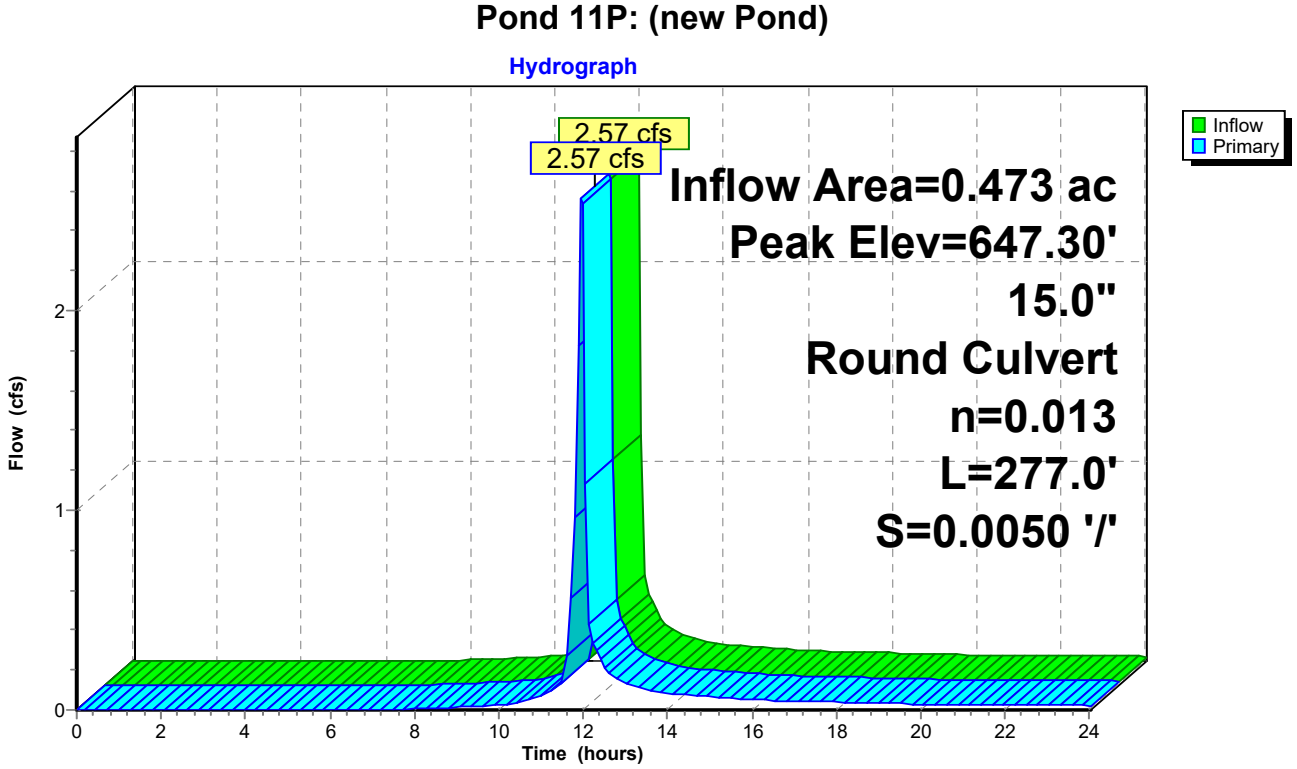
[57] Hint: Peaked at 647.30' (Flood elevation advised)

Inflow Area = 0.473 ac, 48.63% Impervious, Inflow Depth > 3.16" for 10-yr event
Inflow = 2.57 cfs @ 11.96 hrs, Volume= 0.124 af
Outflow = 2.57 cfs @ 11.96 hrs, Volume= 0.124 af, Atten= 0%, Lag= 0.0 min
Primary = 2.57 cfs @ 11.96 hrs, Volume= 0.124 af
Routed to Pond 10P : (new Pond)

Routing by Stor-Ind method, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Peak Elev= 647.30' @ 11.95 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	646.39'	**15.0" Round Culvert** L= 277.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 646.39' / 645.00' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf

Primary OutFlow Max=2.42 cfs @ 11.96 hrs HW=647.27' (Free Discharge)
1=Culvert (Barrel Controls 2.42 cfs @ 3.68 fps)

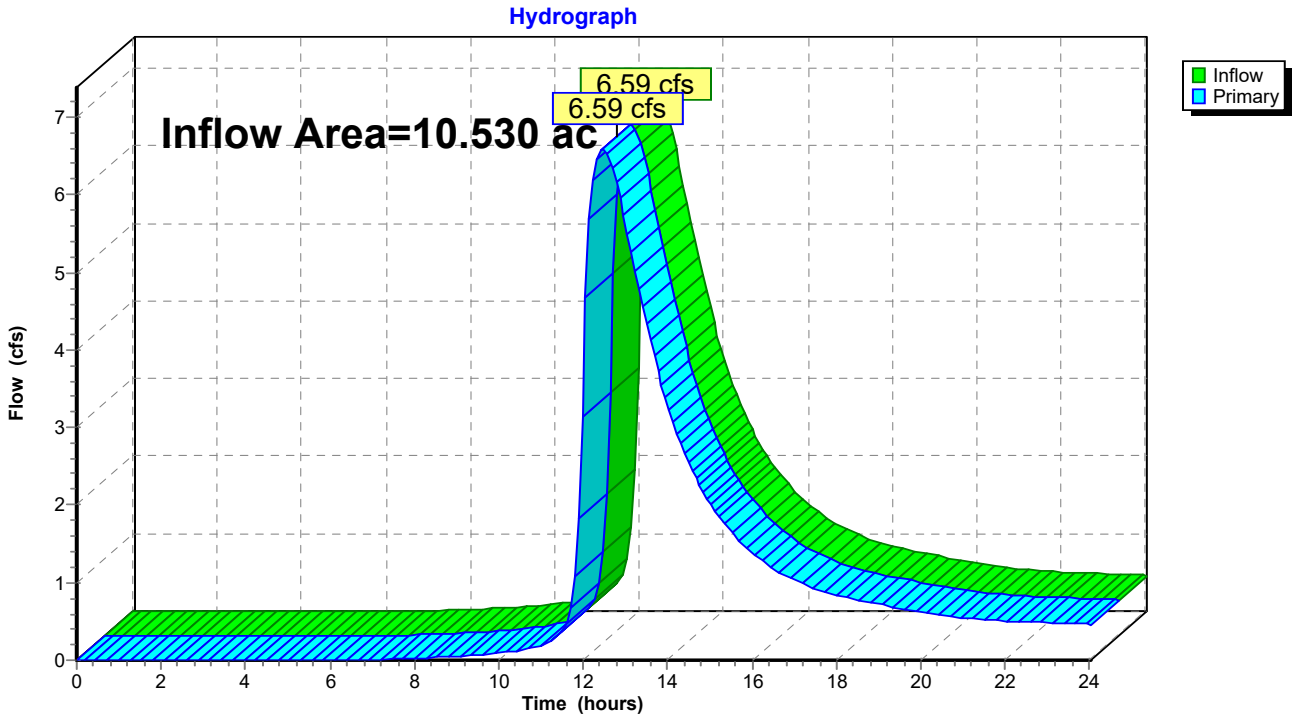


Summary for Link 6L: outfall

Inflow Area = 10.530 ac, 13.45% Impervious, Inflow Depth > 2.01" for 10-yr event
Inflow = 6.59 cfs @ 12.46 hrs, Volume= 1.765 af
Primary = 6.59 cfs @ 12.46 hrs, Volume= 1.765 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs

Link 6L: outfall



Time span=0.00-24.00 hrs, dt=0.09 hrs, 268 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: PRE Runoff Area=10.563 ac 0.00% Impervious Runoff Depth>2.21"
Flow Length=1,000' Slope=0.0150 '/' Tc=31.8 min CN=61 Runoff=18.38 cfs 1.945 af

Subcatchment2S: POST 3 Runoff Area=7.989 ac 4.92% Impervious Runoff Depth>2.39"
Flow Length=850' Slope=0.0150 '/' Tc=24.4 min CN=63 Runoff=18.22 cfs 1.594 af

Subcatchment4S: POST 1 Runoff Area=0.473 ac 48.63% Impervious Runoff Depth>3.97"
Tc=5.0 min CN=79 Runoff=3.20 cfs 0.157 af

Subcatchment7S: POST BYPASS Runoff Area=0.720 ac 0.00% Impervious Runoff Depth>2.22"
Flow Length=400' Tc=18.4 min CN=61 Runoff=1.75 cfs 0.133 af

Subcatchment12S: POST 2 Runoff Area=1.348 ac 58.83% Impervious Runoff Depth>4.40"
Tc=5.0 min CN=83 Runoff=9.90 cfs 0.494 af

Pond 5P: (new Pond) Peak Elev=644.20' Storage=30,169 cf Inflow=20.24 cfs 2.245 af
Outflow=9.72 cfs 2.209 af

Pond 10P: (new Pond) Peak Elev=647.17' Inflow=13.10 cfs 0.651 af
18.0" Round Culvert n=0.013 L=124.0' S=0.0050 '/' Outflow=13.10 cfs 0.651 af

Pond 11P: (new Pond) Peak Elev=647.44' Inflow=3.20 cfs 0.157 af
15.0" Round Culvert n=0.013 L=277.0' S=0.0050 '/' Outflow=3.20 cfs 0.157 af

Link 6L: outfall Inflow=10.29 cfs 2.342 af
Primary=10.29 cfs 2.342 af

Total Runoff Area = 21.093 ac Runoff Volume = 4.323 af Average Runoff Depth = 2.46"
93.29% Pervious = 19.677 ac 6.71% Impervious = 1.416 ac

Summary for Subcatchment 1S: PRE

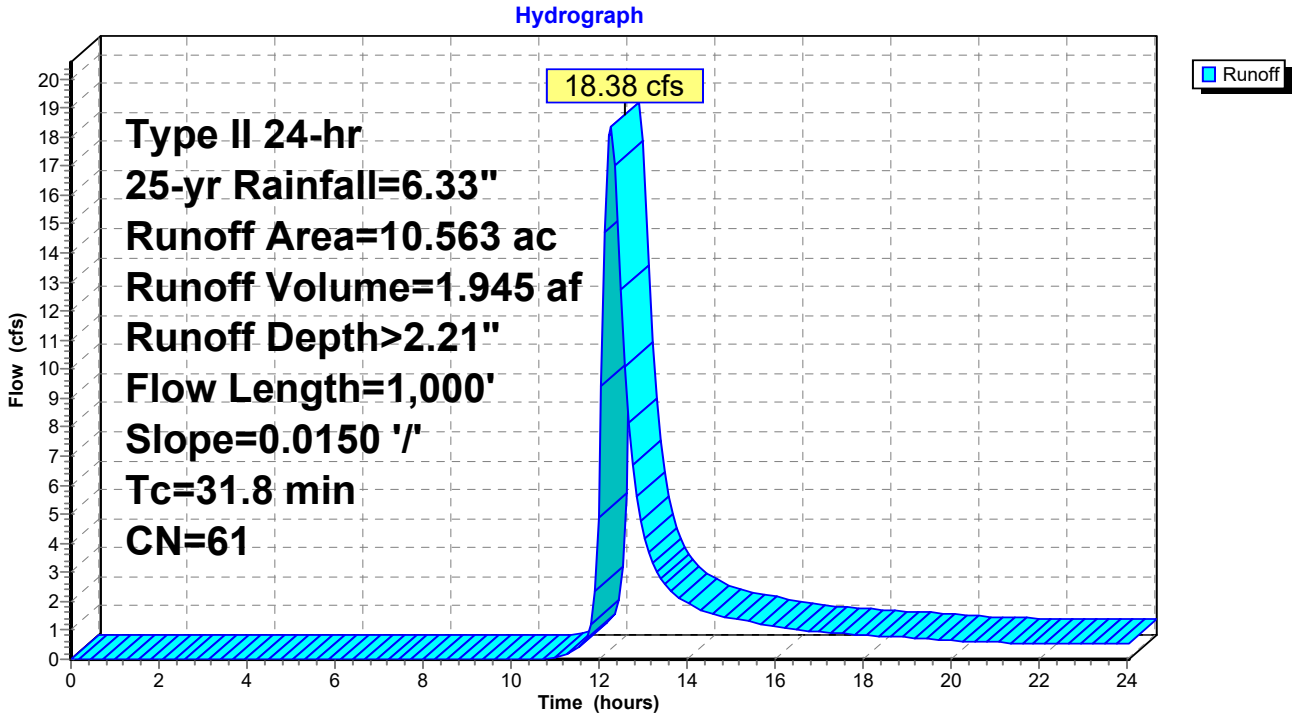
Runoff = 18.38 cfs @ 12.29 hrs, Volume= 1.945 af, Depth> 2.21"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Type II 24-hr 25-yr Rainfall=6.33"

Area (ac)	CN	Description
10.563	61	Pasture/grassland/range, Good, HSG B
10.563		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	100	0.0150	0.12		**Sheet Flow, Sheet flow** Grass: Dense n= 0.240 P2= 4.00"
17.5	900	0.0150	0.86		**Shallow Concentrated Flow, Shallow concentrated** Short Grass Pasture Kv= 7.0 fps
31.8	1,000	Total			

Subcatchment 1S: PRE



Summary for Subcatchment 2S: POST 3

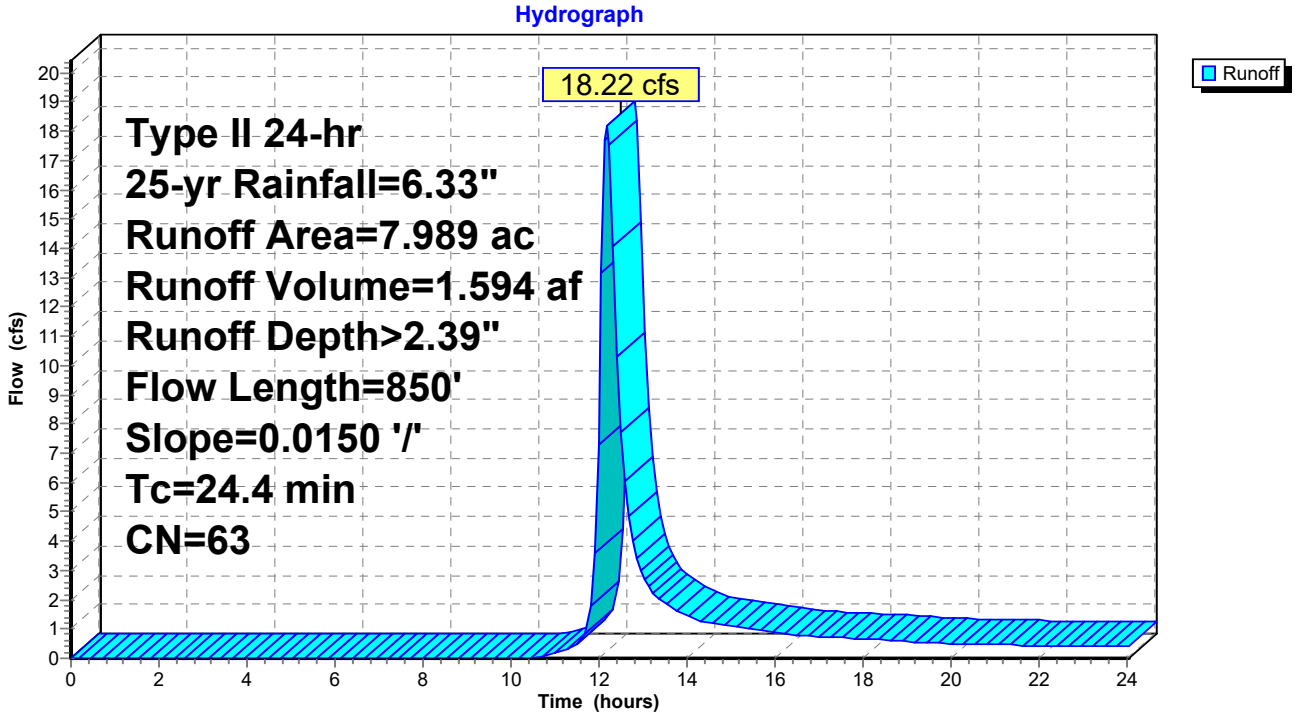
Runoff = 18.22 cfs @ 12.19 hrs, Volume= 1.594 af, Depth> 2.39"
Routed to Pond 5P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Type II 24-hr 25-yr Rainfall=6.33"

	Area (ac)	CN	Description
	7.596	61	Pasture/grassland/range, Good, HSG B
*	0.393	98	
	7.989	63	Weighted Average
	7.596		95.08% Pervious Area
	0.393		4.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8	100	0.0150	0.17		**Sheet Flow, Sheet Flow** Grass: Short n= 0.150 P2= 4.00"
14.6	750	0.0150	0.86		**Shallow Concentrated Flow, Shallow Concentrated** Short Grass Pasture Kv= 7.0 fps
24.4	850	Total			

Subcatchment 2S: POST 3



Summary for Subcatchment 4S: POST 1

[49] Hint: Tc<2dt may require smaller dt

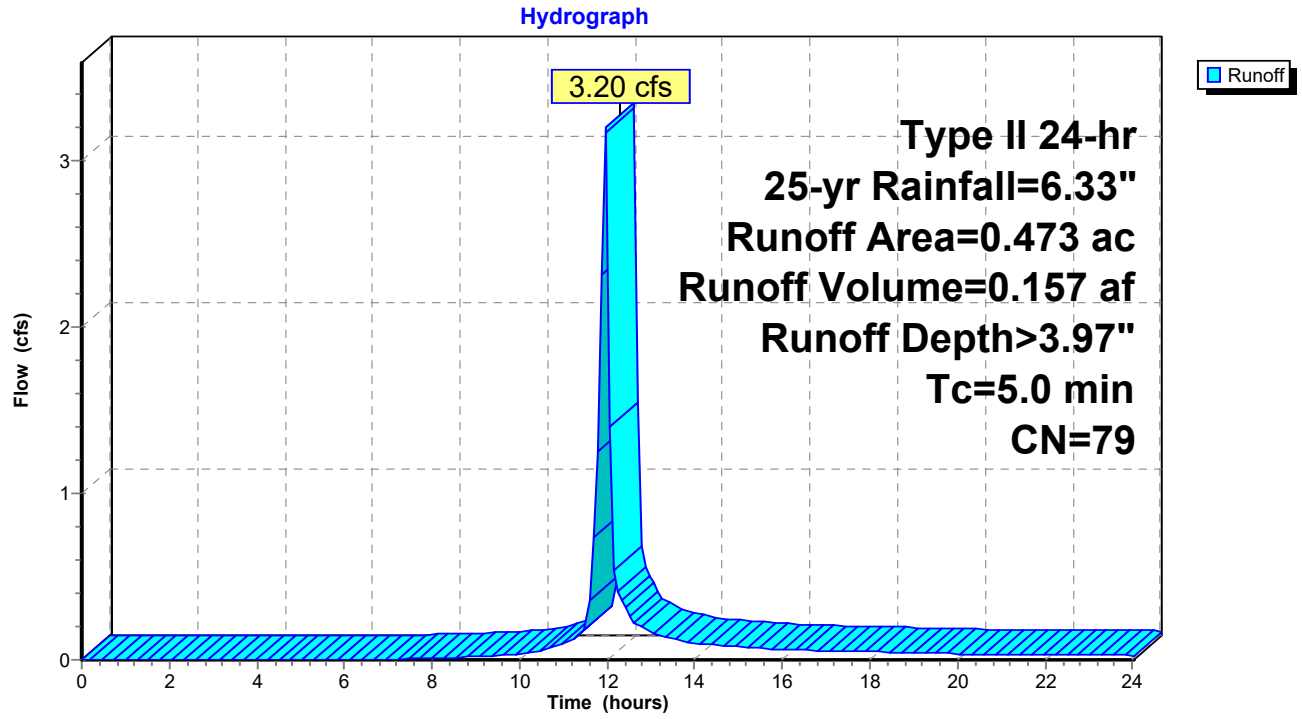
Runoff = 3.20 cfs @ 11.95 hrs, Volume= 0.157 af, Depth> 3.97"
Routed to Pond 11P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Type II 24-hr 25-yr Rainfall=6.33"

	Area (ac)	CN	Description
	0.243	61	Pasture/grassland/range, Good, HSG B
*	0.230	98	
	0.473	79	Weighted Average
	0.243		51.37% Pervious Area
	0.230		48.63% Impervious Area

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

Subcatchment 4S: POST 1



Summary for Subcatchment 7S: POST BYPASS

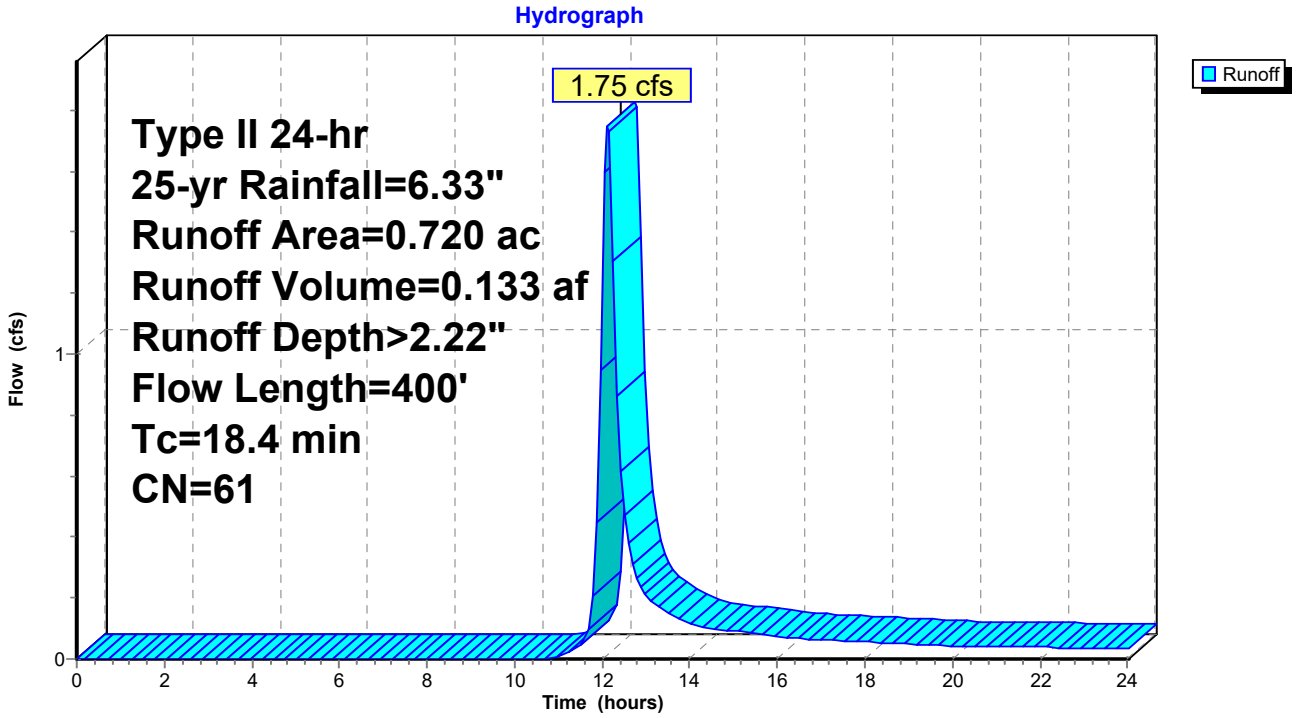
Runoff = 1.75 cfs @ 12.13 hrs, Volume= 0.133 af, Depth> 2.22"
Routed to Link 6L : outfall

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Type II 24-hr 25-yr Rainfall=6.33"

Area (ac)	CN	Description
0.720	61	Pasture/grassland/range, Good, HSG B
0.720		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	100	0.0150	0.12		**Sheet Flow, Sheet flow** Grass: Dense n= 0.240 P2= 4.00"
4.1	300	0.0300	1.21		**Shallow Concentrated Flow, Shallow concentrated** Short Grass Pasture Kv= 7.0 fps
18.4	400	Total			

Subcatchment 7S: POST BYPASS



Summary for Subcatchment 12S: POST 2

[49] Hint: Tc<2dt may require smaller dt

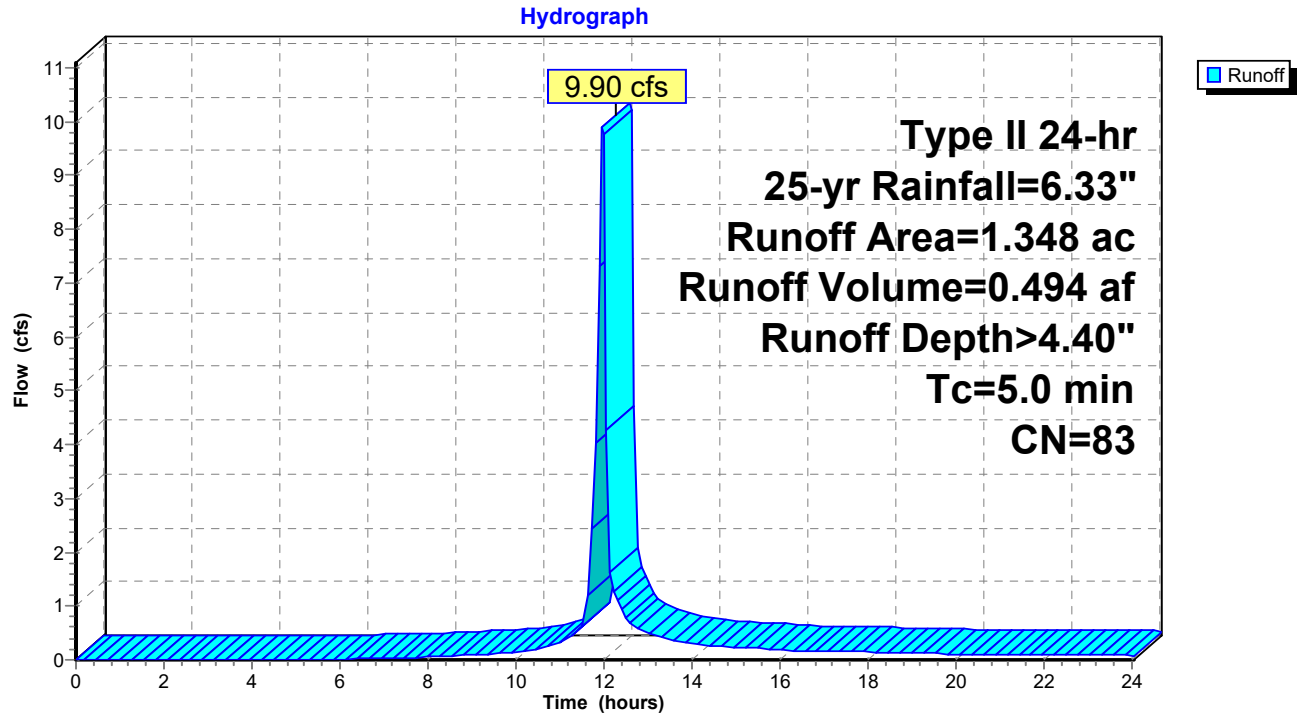
Runoff = 9.90 cfs @ 11.95 hrs, Volume= 0.494 af, Depth> 4.40"
Routed to Pond 10P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Type II 24-hr 25-yr Rainfall=6.33"

	Area (ac)	CN	Description
	0.555	61	Pasture/grassland/range, Good, HSG B
*	0.793	98	
	1.348	83	Weighted Average
	0.555		41.17% Pervious Area
	0.793		58.83% Impervious Area

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

Subcatchment 12S: POST 2



Summary for Pond 5P: (new Pond)

[81] Warning: Exceeded Pond 10P by 0.57' @ 12.60 hrs

Inflow Area = 9.810 ac, 14.43% Impervious, Inflow Depth > 2.75" for 25-yr event
Inflow = 20.24 cfs @ 11.97 hrs, Volume= 2.245 af
Outflow = 9.72 cfs @ 12.49 hrs, Volume= 2.209 af, Atten= 52%, Lag= 31.0 min
Primary = 9.72 cfs @ 12.49 hrs, Volume= 2.209 af
Routed to Link 6L : outfall

Routing by Stor-Ind method, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs / 3
Peak Elev= 644.20' @ 12.49 hrs Surf.Area= 24,290 sf Storage= 30,169 cf

Plug-Flow detention time= 54.6 min calculated for 2.209 af (98% of inflow)
Center-of-Mass det. time= 45.2 min (890.0 - 844.7)

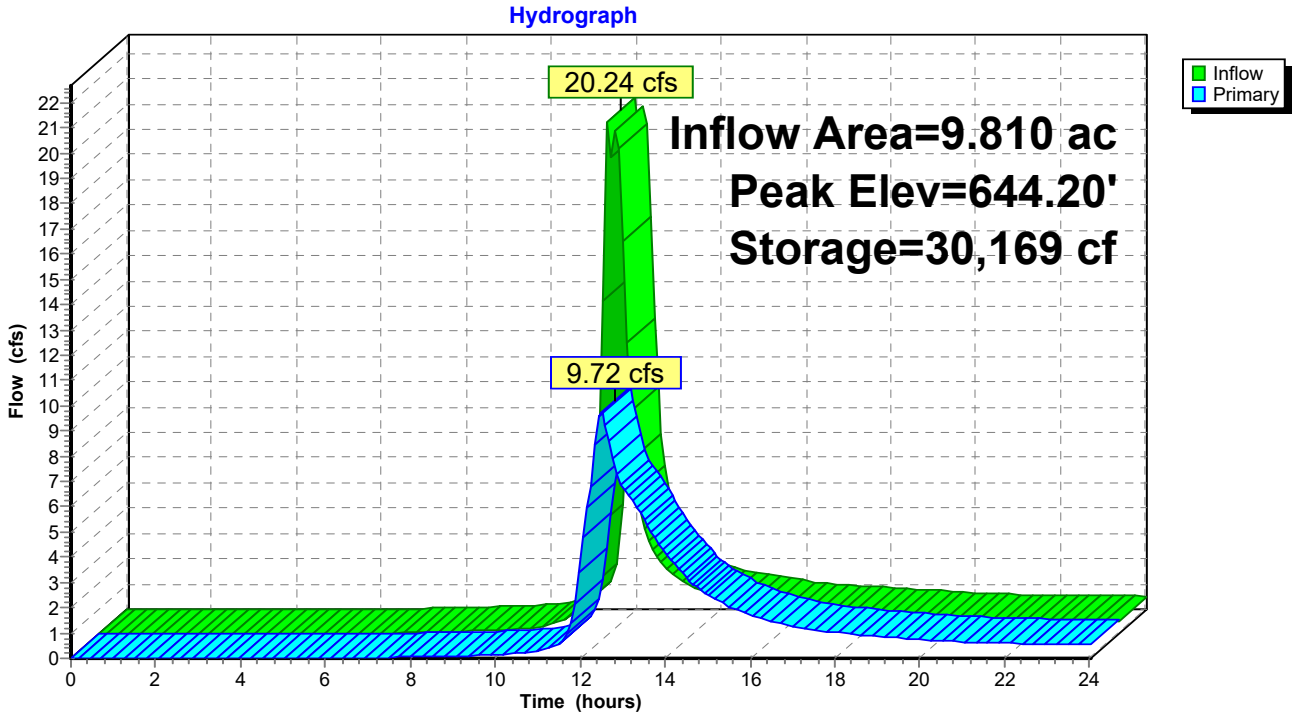
Volume	Invert	Avail.Storage	Storage Description
#1	642.10'	38,158 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
642.10	0	0	0
643.00	15,590	7,015	7,015
644.00	21,693	18,642	25,657
644.50	28,311	12,501	38,158

Device	Routing	Invert	Outlet Devices
#1	Primary	642.10'	**18.0" Round Culvert** L= 6.0' Ke= 1.000 Inlet / Outlet Invert= 642.10' / 642.07' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Primary	644.00'	**10.0' long + 3.0 '/' SideZ x 2.0' 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 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=9.66 cfs @ 12.49 hrs HW=644.19' (Free Discharge)
1=Culvert (Inlet Controls 7.40 cfs @ 4.19 fps)
2=Broad-Crested Rectangular Weir (Weir Controls 2.26 cfs @ 1.10 fps)

Pond 5P: (new Pond)



Summary for Pond 10P: (new Pond)

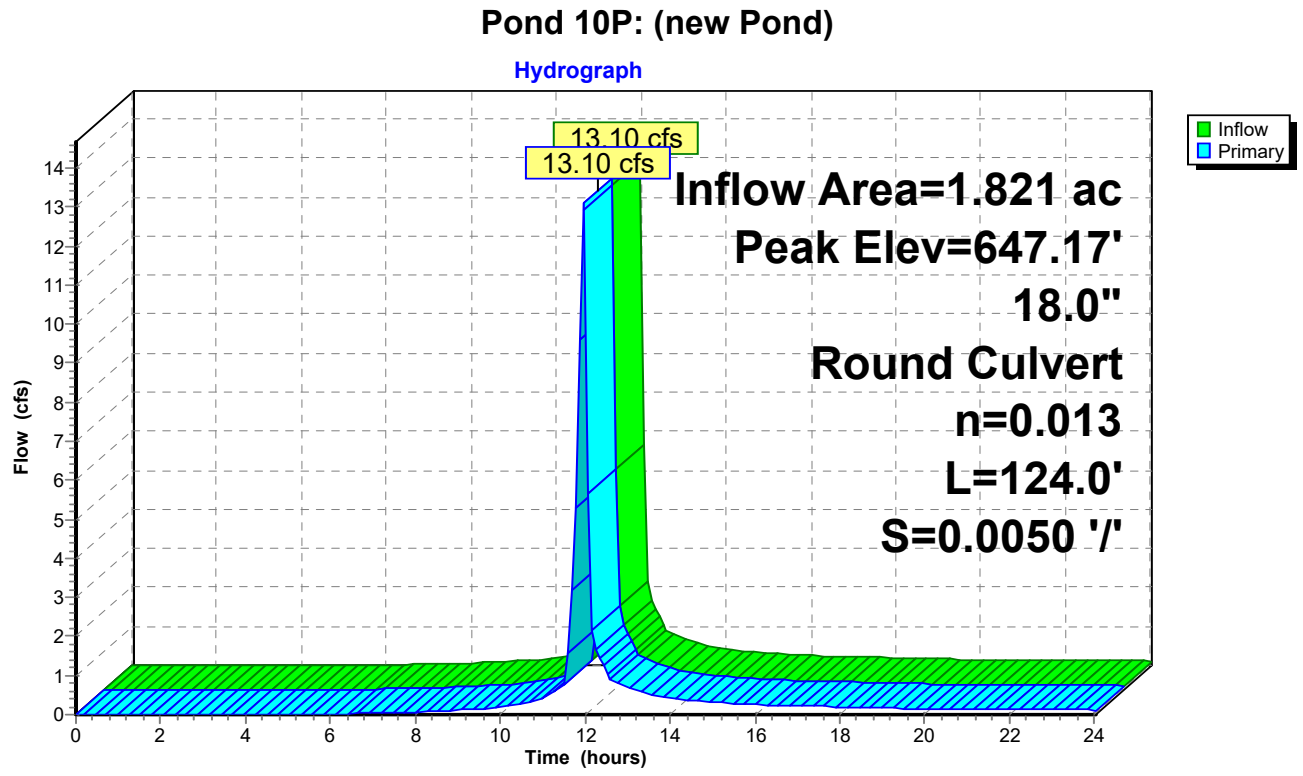
[57] Hint: Peaked at 647.17' (Flood elevation advised)
[79] Warning: Submerged Pond 11P Primary device # 1 INLET by 0.74'

Inflow Area = 1.821 ac, 56.18% Impervious, Inflow Depth > 4.29" for 25-yr event
Inflow = 13.10 cfs @ 11.95 hrs, Volume= 0.651 af
Outflow = 13.10 cfs @ 11.95 hrs, Volume= 0.651 af, Atten= 0%, Lag= 0.0 min
Primary = 13.10 cfs @ 11.95 hrs, Volume= 0.651 af
Routed to Pond 5P : (new Pond)

Routing by Stor-Ind method, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Peak Elev= 647.17' @ 11.96 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	643.12'	**18.0" Round Culvert** L= 124.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 643.12' / 642.50' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf

Primary OutFlow Max=12.36 cfs @ 11.95 hrs HW=646.86' (Free Discharge)
└**1=Culvert** (Barrel Controls 12.36 cfs @ 7.00 fps)



Summary for Pond 11P: (new Pond)

[57] Hint: Peaked at 647.44' (Flood elevation advised)

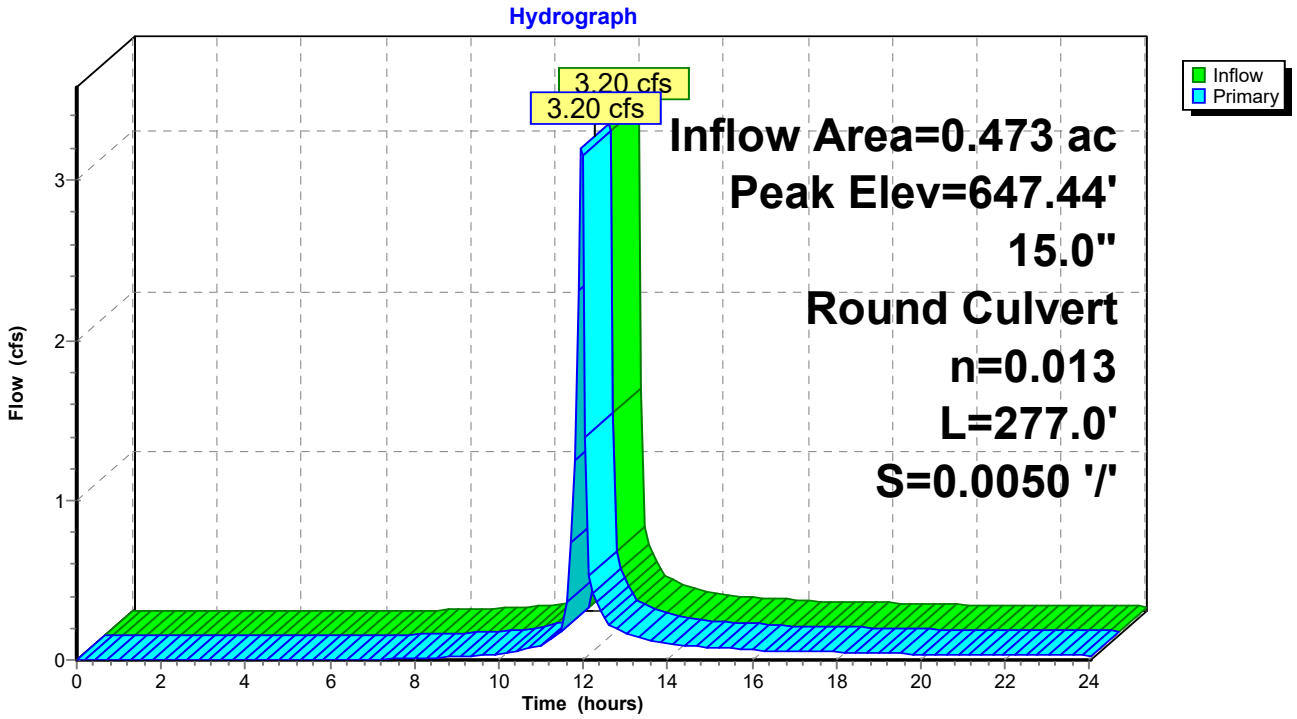
Inflow Area = 0.473 ac, 48.63% Impervious, Inflow Depth > 3.97" for 25-yr event
Inflow = 3.20 cfs @ 11.95 hrs, Volume= 0.157 af
Outflow = 3.20 cfs @ 11.95 hrs, Volume= 0.157 af, Atten= 0%, Lag= 0.0 min
Primary = 3.20 cfs @ 11.95 hrs, Volume= 0.157 af
Routed to Pond 10P : (new Pond)

Routing by Stor-Ind method, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Peak Elev= 647.44' @ 11.95 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	646.39'	**15.0" Round Culvert** L= 277.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 646.39' / 645.00' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf

Primary OutFlow Max=3.01 cfs @ 11.95 hrs HW=647.40' (Free Discharge)
└**1=Culvert** (Barrel Controls 3.01 cfs @ 3.87 fps)

Pond 11P: (new Pond)

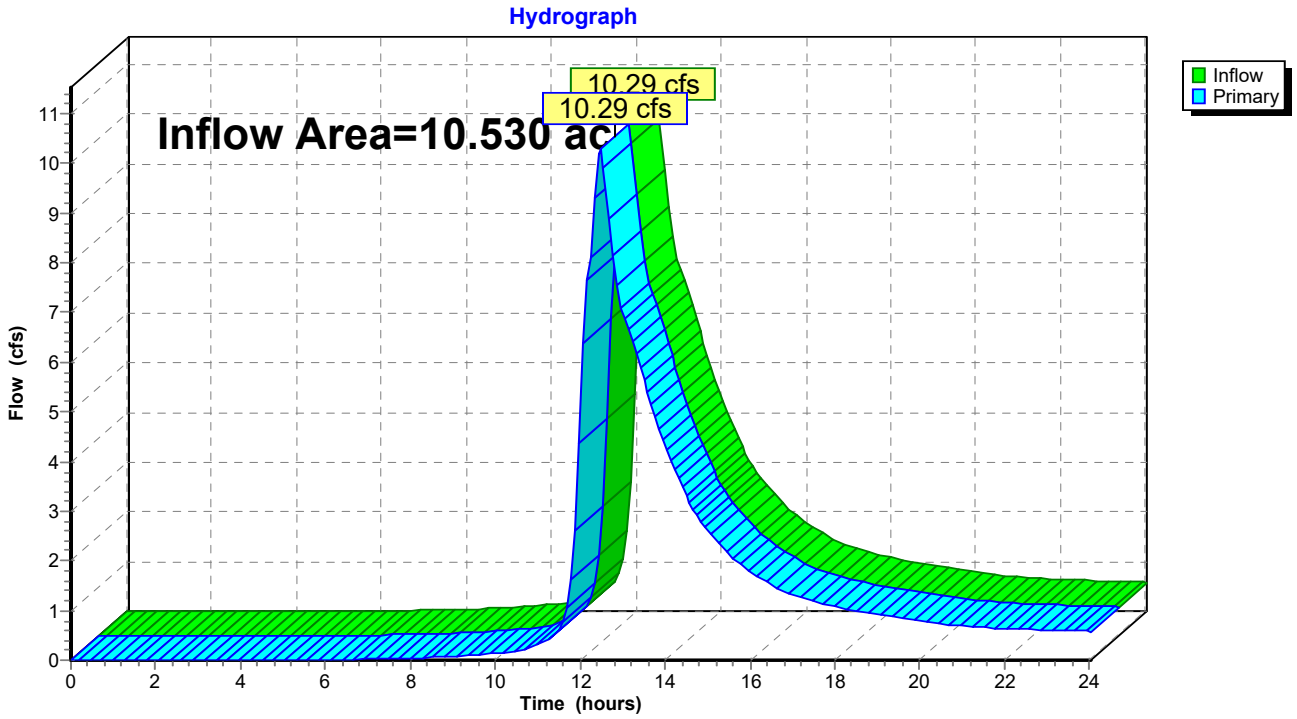


Summary for Link 6L: outfall

Inflow Area = 10.530 ac, 13.45% Impervious, Inflow Depth > 2.67" for 25-yr event
Inflow = 10.29 cfs @ 12.46 hrs, Volume= 2.342 af
Primary = 10.29 cfs @ 12.46 hrs, Volume= 2.342 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs

Link 6L: outfall



Time span=0.00-24.00 hrs, dt=0.09 hrs, 268 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment1S: PRE Runoff Area=10.563 ac 0.00% Impervious Runoff Depth>3.28"
Flow Length=1,000' Slope=0.0150 '/' Tc=31.8 min CN=61 Runoff=28.31 cfs 2.888 af

Subcatchment2S: POST 3 Runoff Area=7.989 ac 4.92% Impervious Runoff Depth>3.51"
Flow Length=850' Slope=0.0150 '/' Tc=24.4 min CN=63 Runoff=27.25 cfs 2.335 af

Subcatchment4S: POST 1 Runoff Area=0.473 ac 48.63% Impervious Runoff Depth>5.34"
Tc=5.0 min CN=79 Runoff=4.23 cfs 0.210 af

Subcatchment7S: POST BYPASS Runoff Area=0.720 ac 0.00% Impervious Runoff Depth>3.29"
Flow Length=400' Tc=18.4 min CN=61 Runoff=2.66 cfs 0.198 af

Subcatchment12S: POST 2 Runoff Area=1.348 ac 58.83% Impervious Runoff Depth>5.80"
Tc=5.0 min CN=83 Runoff=12.85 cfs 0.652 af

Pond 5P: (new Pond) Peak Elev=644.72' Storage=38,158 cf Inflow=29.46 cfs 3.197 af
Outflow=27.21 cfs 3.192 af

Pond 10P: (new Pond) Peak Elev=649.39' Inflow=17.09 cfs 0.862 af
18.0" Round Culvert n=0.013 L=124.0' S=0.0050 '/' Outflow=17.09 cfs 0.862 af

Pond 11P: (new Pond) Peak Elev=647.69' Inflow=4.23 cfs 0.210 af
15.0" Round Culvert n=0.013 L=277.0' S=0.0050 '/' Outflow=4.23 cfs 0.210 af

Link 6L: outfall Inflow=28.46 cfs 3.389 af
Primary=28.46 cfs 3.389 af

Total Runoff Area = 21.093 ac Runoff Volume = 6.283 af Average Runoff Depth = 3.57"
93.29% Pervious = 19.677 ac 6.71% Impervious = 1.416 ac

Summary for Subcatchment 1S: PRE

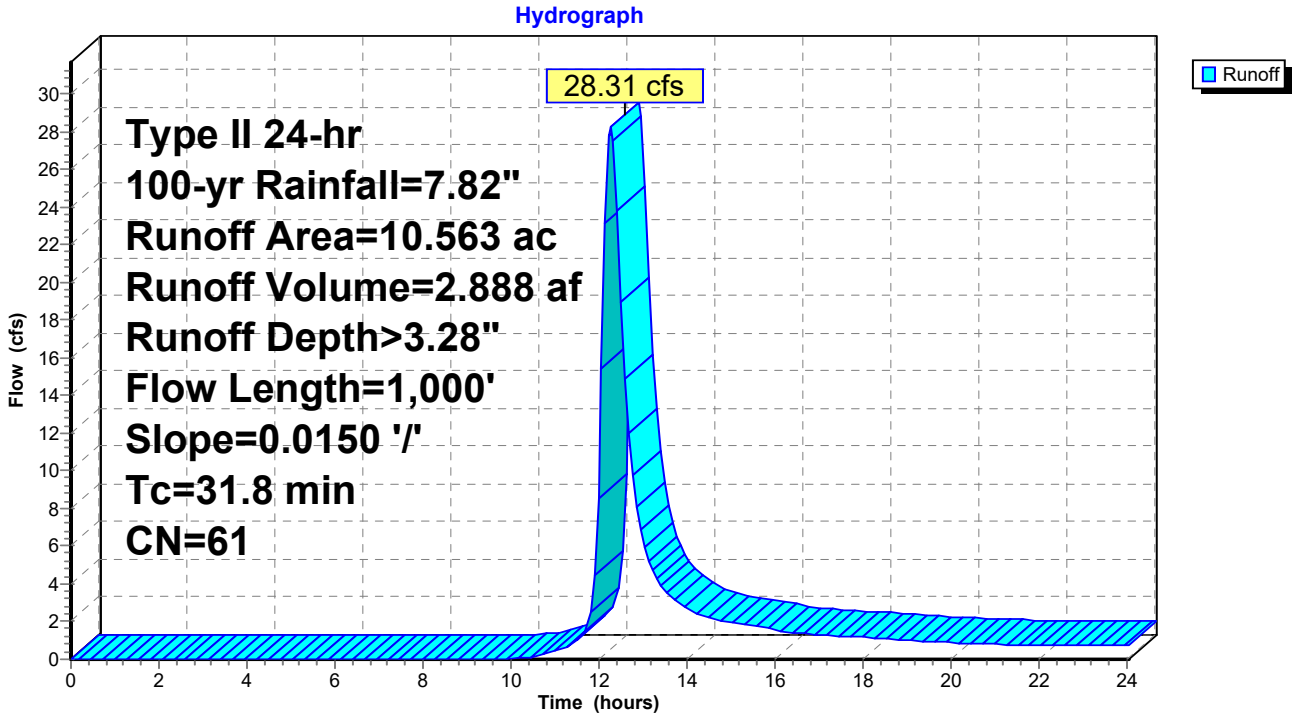
Runoff = 28.31 cfs @ 12.28 hrs, Volume= 2.888 af, Depth> 3.28"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Type II 24-hr 100-yr Rainfall=7.82"

Area (ac)	CN	Description
10.563	61	Pasture/grassland/range, Good, HSG B
10.563		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	100	0.0150	0.12		**Sheet Flow, Sheet flow** Grass: Dense n= 0.240 P2= 4.00"
17.5	900	0.0150	0.86		**Shallow Concentrated Flow, Shallow concentrated** Short Grass Pasture Kv= 7.0 fps
31.8	1,000	Total			

Subcatchment 1S: PRE



Summary for Subcatchment 2S: POST 3

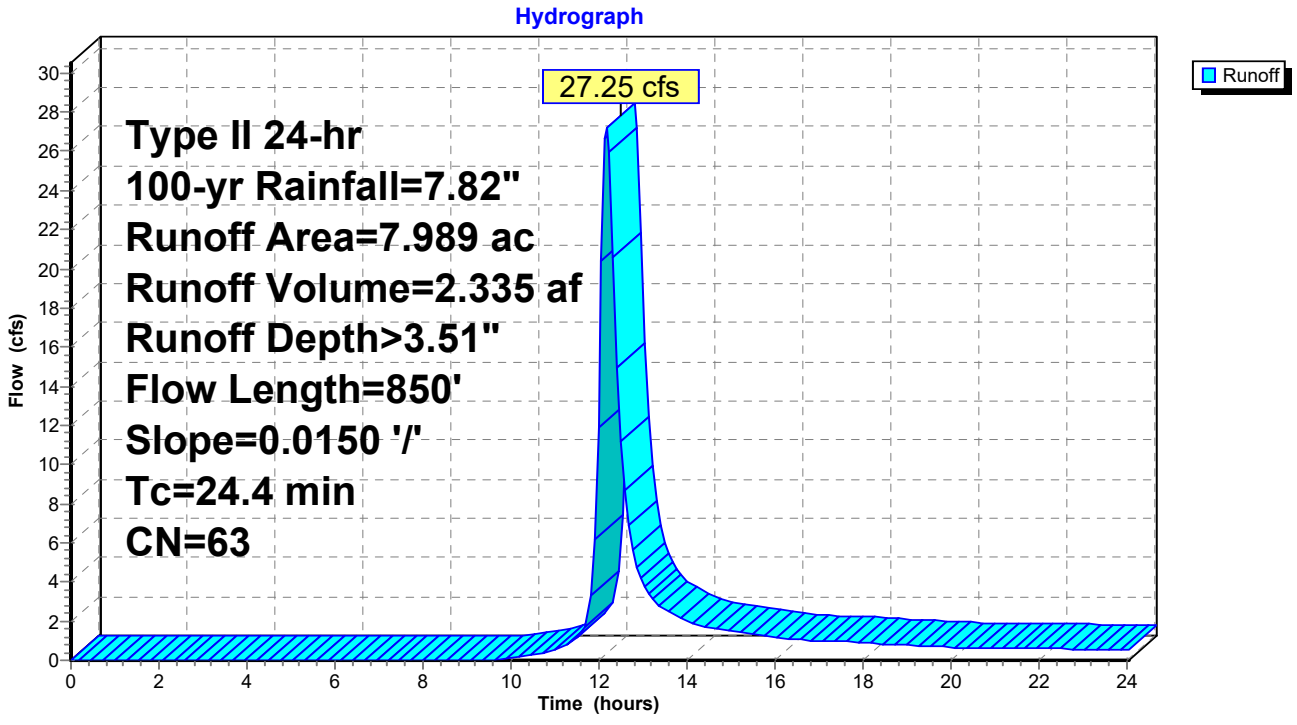
Runoff = 27.25 cfs @ 12.19 hrs, Volume= 2.335 af, Depth> 3.51"
Routed to Pond 5P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Type II 24-hr 100-yr Rainfall=7.82"

	Area (ac)	CN	Description
	7.596	61	Pasture/grassland/range, Good, HSG B
*	0.393	98	
	7.989	63	Weighted Average
	7.596		95.08% Pervious Area
	0.393		4.92% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8	100	0.0150	0.17		**Sheet Flow, Sheet Flow** Grass: Short n= 0.150 P2= 4.00"
14.6	750	0.0150	0.86		**Shallow Concentrated Flow, Shallow Concentrated** Short Grass Pasture Kv= 7.0 fps
24.4	850	Total			

Subcatchment 2S: POST 3



Summary for Subcatchment 4S: POST 1

[49] Hint: Tc<2dt may require smaller dt

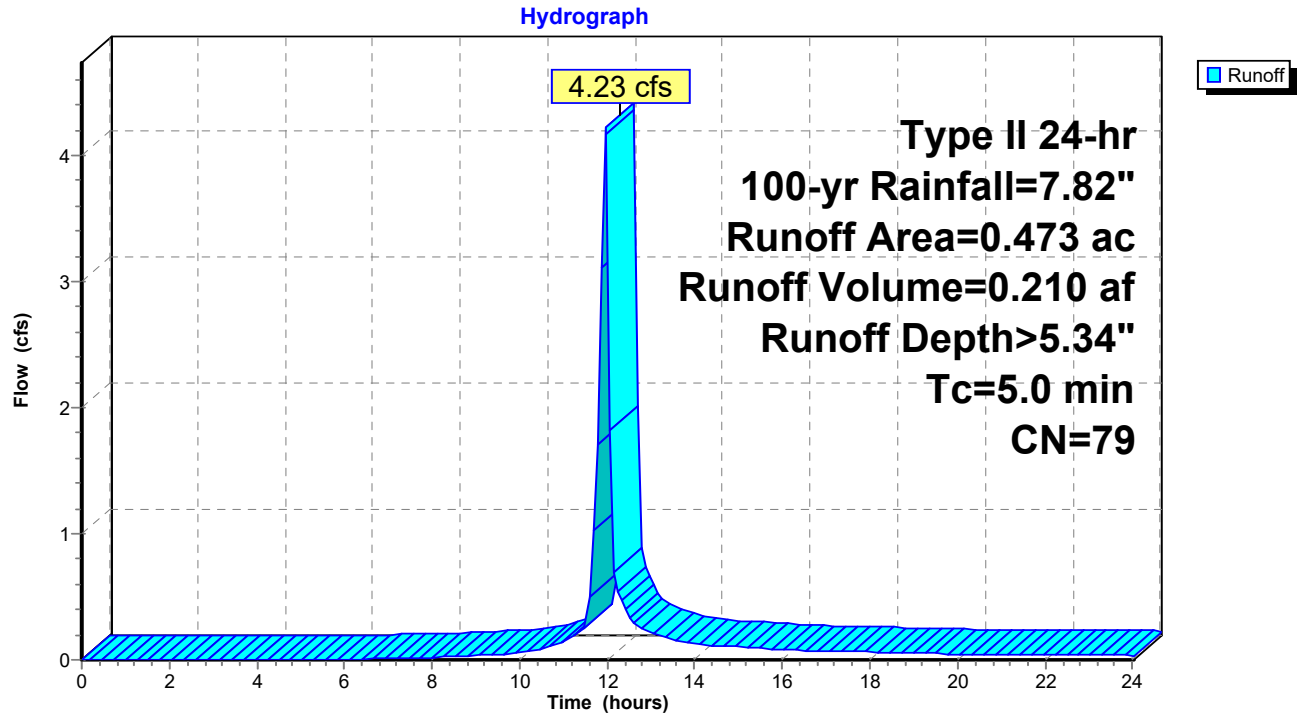
Runoff = 4.23 cfs @ 11.95 hrs, Volume= 0.210 af, Depth> 5.34"
Routed to Pond 11P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Type II 24-hr 100-yr Rainfall=7.82"

	Area (ac)	CN	Description
	0.243	61	Pasture/grassland/range, Good, HSG B
*	0.230	98	
	0.473	79	Weighted Average
	0.243		51.37% Pervious Area
	0.230		48.63% Impervious Area

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

Subcatchment 4S: POST 1



Summary for Subcatchment 7S: POST BYPASS

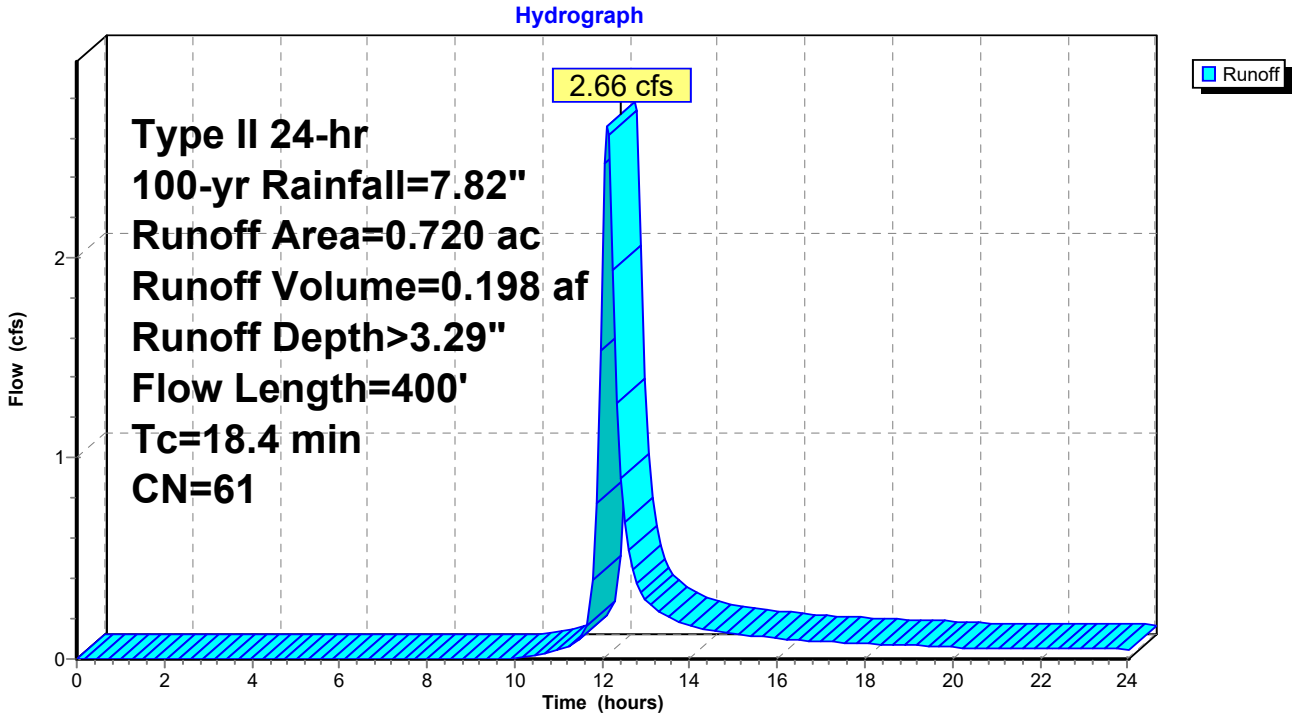
Runoff = 2.66 cfs @ 12.12 hrs, Volume= 0.198 af, Depth> 3.29"
Routed to Link 6L : outfall

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Type II 24-hr 100-yr Rainfall=7.82"

Area (ac)	CN	Description
0.720	61	Pasture/grassland/range, Good, HSG B
0.720		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.3	100	0.0150	0.12		**Sheet Flow, Sheet flow** Grass: Dense n= 0.240 P2= 4.00"
4.1	300	0.0300	1.21		**Shallow Concentrated Flow, Shallow concentrated** Short Grass Pasture Kv= 7.0 fps
18.4	400	Total			

Subcatchment 7S: POST BYPASS



Summary for Subcatchment 12S: POST 2

[49] Hint: Tc<2dt may require smaller dt

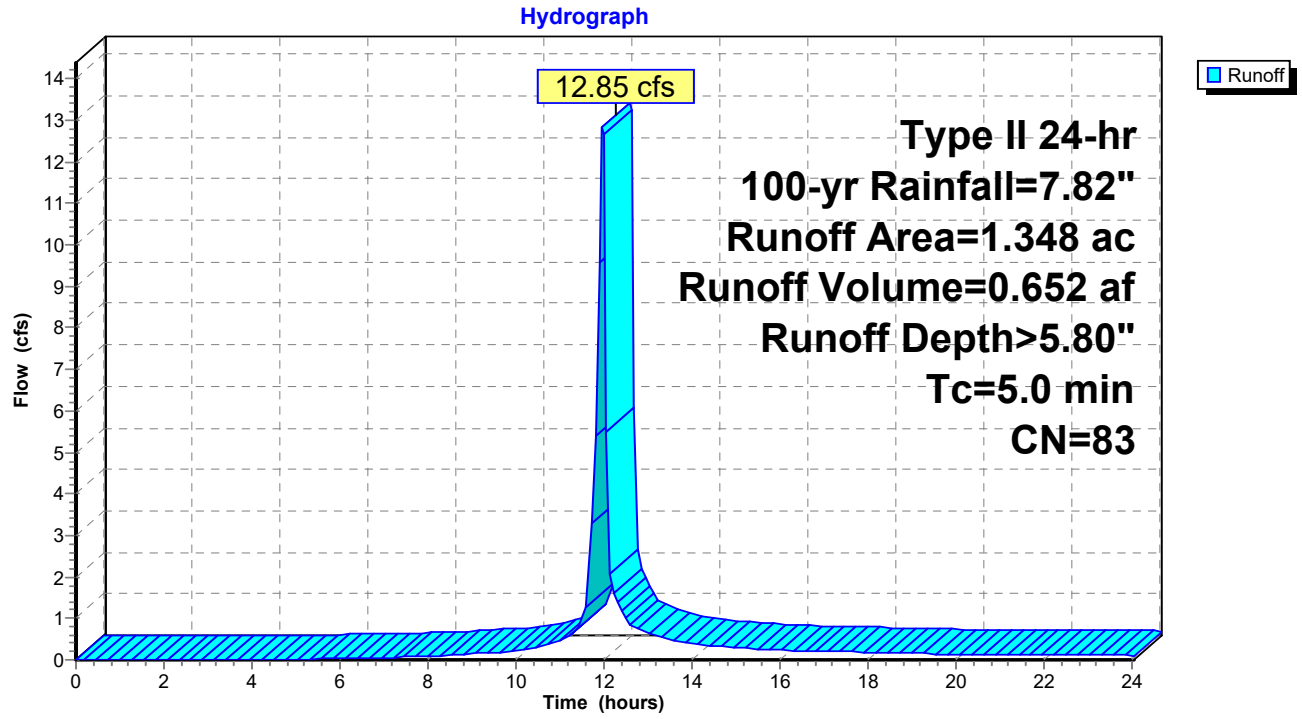
Runoff = 12.85 cfs @ 11.95 hrs, Volume= 0.652 af, Depth> 5.80"
Routed to Pond 10P : (new Pond)

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Type II 24-hr 100-yr Rainfall=7.82"

	Area (ac)	CN	Description
	0.555	61	Pasture/grassland/range, Good, HSG B
*	0.793	98	
	1.348	83	Weighted Average
	0.555		41.17% Pervious Area
	0.793		58.83% Impervious Area

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

Subcatchment 12S: POST 2



Summary for Pond 5P: (new Pond)

[93] Warning: Storage range exceeded by 0.22'
[81] Warning: Exceeded Pond 10P by 0.89' @ 12.33 hrs

Inflow Area = 9.810 ac, 14.43% Impervious, Inflow Depth > 3.91" for 100-yr event
Inflow = 29.46 cfs @ 12.16 hrs, Volume= 3.197 af
Outflow = 27.21 cfs @ 12.34 hrs, Volume= 3.192 af, Atten= 8%, Lag= 10.8 min
Primary = 27.21 cfs @ 12.34 hrs, Volume= 3.192 af
Routed to Link 6L : outfall

Routing by Stor-Ind method, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs / 3
Peak Elev= 644.72' @ 12.34 hrs Surf.Area= 28,311 sf Storage= 38,158 cf

Plug-Flow detention time= 39.9 min calculated for 3.180 af (99% of inflow)
Center-of-Mass det. time= 38.8 min (874.6 - 835.8)

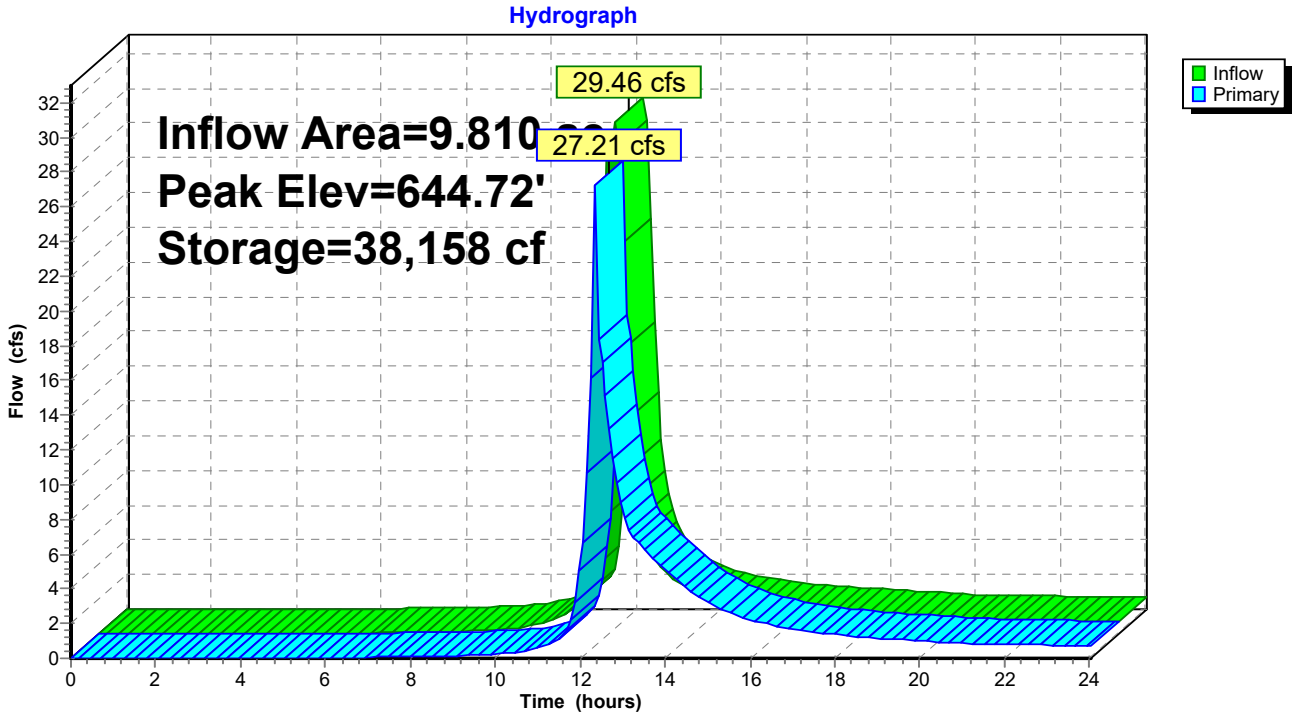
Volume	Invert	Avail.Storage	Storage Description
#1	642.10'	38,158 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
642.10	0	0	0
643.00	15,590	7,015	7,015
644.00	21,693	18,642	25,657
644.50	28,311	12,501	38,158

Device	Routing	Invert	Outlet Devices
#1	Primary	642.10'	**18.0" Round Culvert** L= 6.0' Ke= 1.000 Inlet / Outlet Invert= 642.10' / 642.07' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf
#2	Primary	644.00'	**10.0' long + 3.0 '/' SideZ x 2.0' 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 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=26.62 cfs @ 12.34 hrs HW=644.70' (Free Discharge)
1=Culvert (Inlet Controls 8.69 cfs @ 4.92 fps)
2=Broad-Crested Rectangular Weir (Weir Controls 17.94 cfs @ 2.11 fps)

Pond 5P: (new Pond)



Summary for Pond 10P: (new Pond)

[57] Hint: Peaked at 649.39' (Flood elevation advised)
[81] Warning: Exceeded Pond 11P by 1.63' @ 11.97 hrs

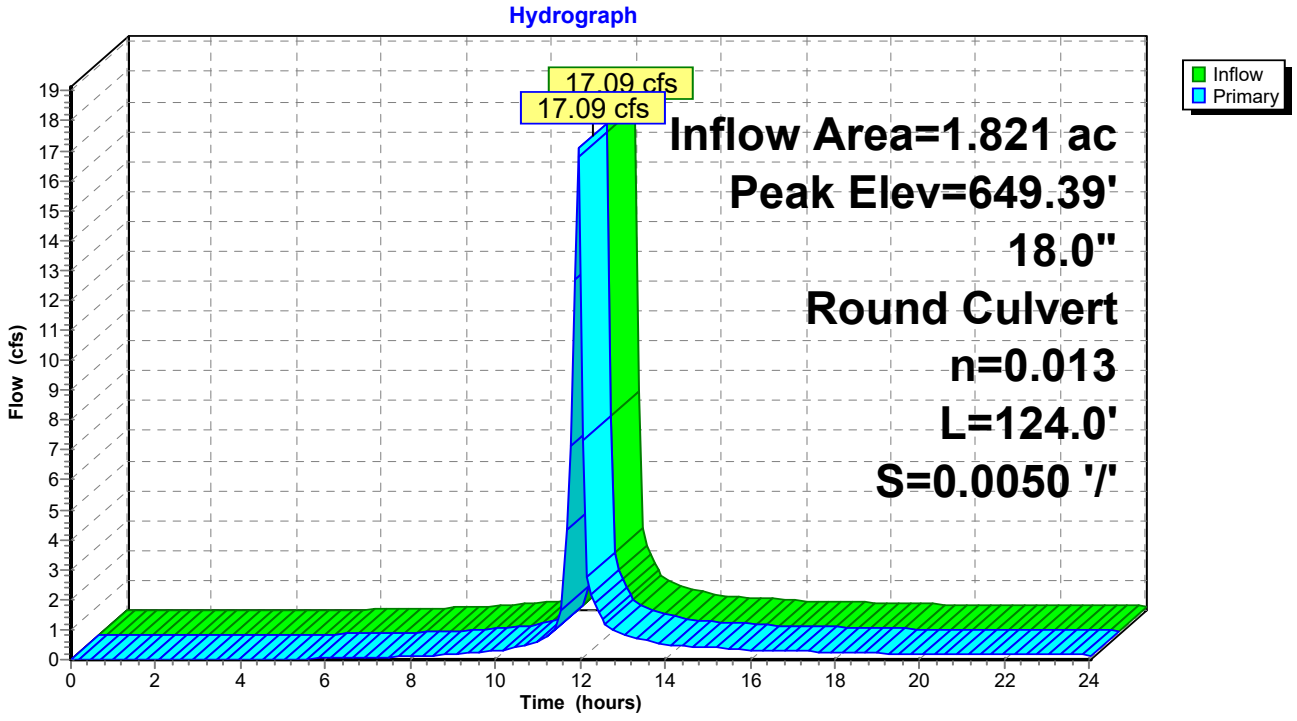
Inflow Area = 1.821 ac, 56.18% Impervious, Inflow Depth > 5.68" for 100-yr event
Inflow = 17.09 cfs @ 11.95 hrs, Volume= 0.862 af
Outflow = 17.09 cfs @ 11.95 hrs, Volume= 0.862 af, Atten= 0%, Lag= 0.0 min
Primary = 17.09 cfs @ 11.95 hrs, Volume= 0.862 af
Routed to Pond 5P : (new Pond)

Routing by Stor-Ind method, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Peak Elev= 649.39' @ 11.96 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	643.12'	**18.0" Round Culvert** L= 124.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 643.12' / 642.50' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.77 sf

Primary OutFlow Max=16.09 cfs @ 11.95 hrs HW=648.85' (Free Discharge)
└**1=Culvert** (Barrel Controls 16.09 cfs @ 9.10 fps)

Pond 10P: (new Pond)



Summary for Pond 11P: (new Pond)

[57] Hint: Peaked at 647.69' (Flood elevation advised)

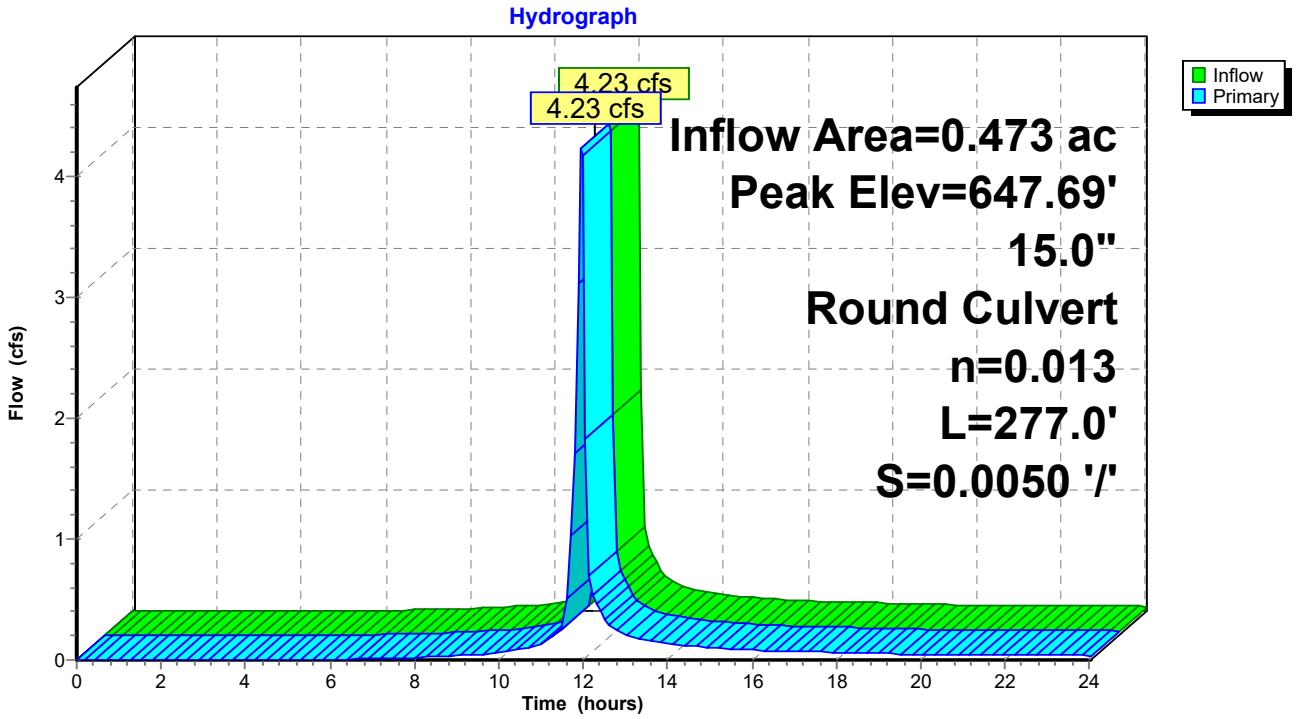
Inflow Area = 0.473 ac, 48.63% Impervious, Inflow Depth > 5.34" for 100-yr event
Inflow = 4.23 cfs @ 11.95 hrs, Volume= 0.210 af
Outflow = 4.23 cfs @ 11.95 hrs, Volume= 0.210 af, Atten= 0%, Lag= 0.0 min
Primary = 4.23 cfs @ 11.95 hrs, Volume= 0.210 af
Routed to Pond 10P : (new Pond)

Routing by Stor-Ind method, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs
Peak Elev= 647.69' @ 11.95 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	646.39'	**15.0" Round Culvert** L= 277.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 646.39' / 645.00' S= 0.0050 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf

Primary OutFlow Max=3.99 cfs @ 11.95 hrs HW=647.63' (Free Discharge)
└**1=Culvert** (Barrel Controls 3.99 cfs @ 4.09 fps)

Pond 11P: (new Pond)



Summary for Link 6L: outfall

Inflow Area = 10.530 ac, 13.45% Impervious, Inflow Depth > 3.86" for 100-yr event
Inflow = 28.46 cfs @ 12.33 hrs, Volume= 3.389 af
Primary = 28.46 cfs @ 12.33 hrs, Volume= 3.389 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.03 hrs, dt= 0.09 hrs

Link 6L: outfall