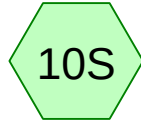
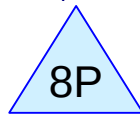


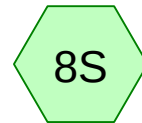
PRE-WET



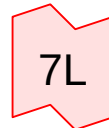
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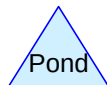
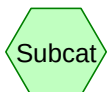
BIORETENTION



UNC



POST-WET



Routing Diagram for 670 METACOM-REV2

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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-yr	Type III 24-hr		Default	24.00	1	2.80	2
2	10-yr	Type III 24-hr		Default	24.00	1	4.90	2
3	25-yr	Type III 24-hr		Default	24.00	1	6.10	2
4	100-yr	Type III 24-hr		Default	24.00	1	8.60	2

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.662	74	>75% Grass cover, Good, HSG C (8S, 9S, 10S)
0.293	96	Gravel surface, HSG C (9S)
0.207	98	Paved parking, HSG C (9S, 10S)
0.080	98	Roofs, HSG C (10S)
0.017	98	Sidewalk (10S)
0.015	98	Town Concrete sidewalk, HSG C (8S)
0.154	70	Woods, Good, HSG C (8S, 9S)
1.428	83	TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
1.411	HSG C	8S, 9S, 10S
0.000	HSG D	
0.017	Other	10S
1.428		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
0.000	0.000	0.662	0.000	0.000	0.662	>75% Grass cover, Good	8S, 9S, 10S
0.000	0.000	0.293	0.000	0.000	0.293	Gravel surface	9S
0.000	0.000	0.207	0.000	0.000	0.207	Paved parking	9S, 10S
0.000	0.000	0.080	0.000	0.000	0.080	Roofs	10S
0.000	0.000	0.000	0.000	0.017	0.017	Sidewalk	10S
0.000	0.000	0.015	0.000	0.000	0.015	Town Concrete sidewalk	8S
0.000	0.000	0.154	0.000	0.000	0.154	Woods, Good	8S, 9S
0.000	0.000	1.411	0.000	0.017	1.428	TOTAL AREA	

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Type III 24-hr 1-yr Rainfall=2.80"

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Time span=0.00-30.00 hrs, dt=0.03 hrs, 1001 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 8S: UNC

Runoff Area=7,996 sf 7.95% Impervious Runoff Depth=0.78"
Tc=6.0 min CN=74 Runoff=0.15 cfs 0.012 af

Subcatchment 9S: PRE-WET

Runoff Area=31,096 sf 0.75% Impervious Runoff Depth=1.29"
Flow Length=149' Slope=0.0170 '/' Tc=20.5 min CN=83 Runoff=0.71 cfs 0.077 af

Subcatchment 10S: CONT

Runoff Area=23,100 sf 56.32% Impervious Runoff Depth=1.64"
Tc=6.0 min CN=88 Runoff=1.01 cfs 0.073 af

Pond 8P: BIORETENTION

Peak Elev=116.31' Storage=1,512 cf Inflow=1.01 cfs 0.073 af
Discarded=0.06 cfs 0.073 af Primary=0.00 cfs 0.000 af Outflow=0.06 cfs 0.073 af

Link 7L: POST-WET

Inflow=0.15 cfs 0.012 af
Primary=0.15 cfs 0.012 af

Total Runoff Area = 1.428 ac Runoff Volume = 0.161 af Average Runoff Depth = 1.35"
77.68% Pervious = 1.109 ac 22.32% Impervious = 0.319 ac

Summary for Subcatchment 8S: UNC

Runoff = 0.15 cfs @ 12.10 hrs, Volume= 0.012 af, Depth= 0.78"
 Routed to Link 7L : POST-WET

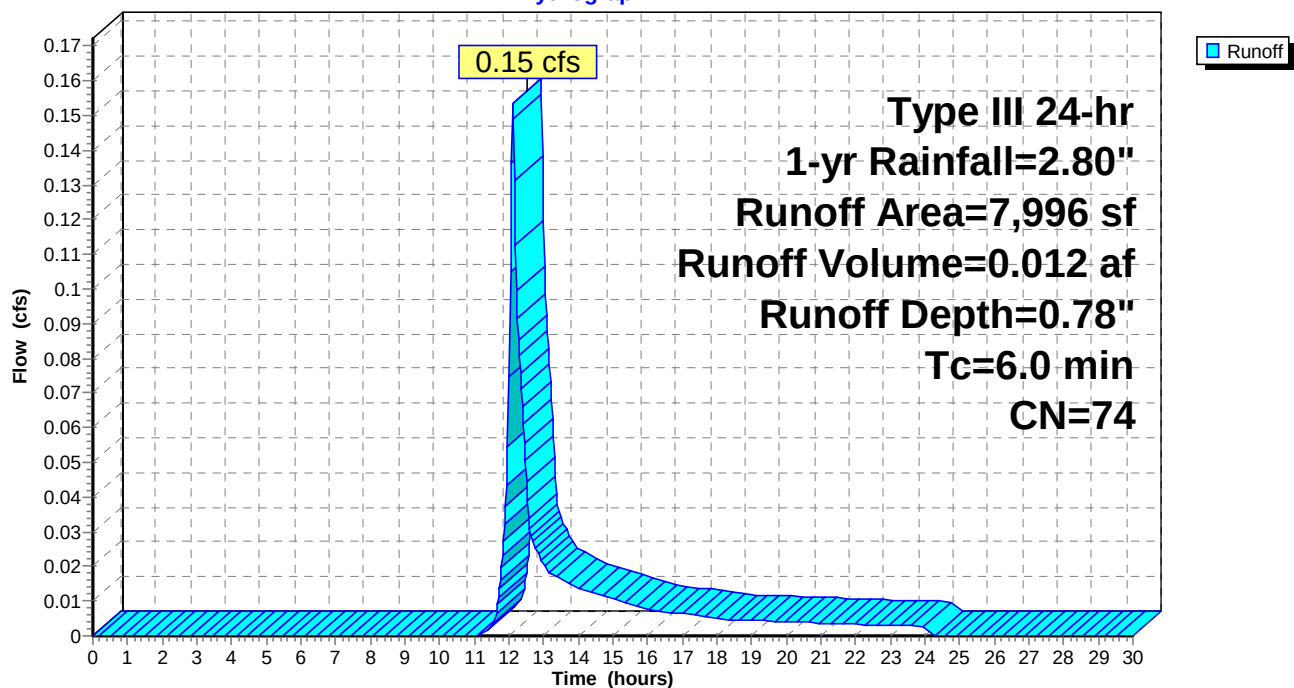
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
 Type III 24-hr 1-yr Rainfall=2.80"

	Area (sf)	CN	Description
*	636	98	Town Concrete sidewalk, HSG C
	3,625	74	>75% Grass cover, Good, HSG C
	3,735	70	Woods, Good, HSG C
	7,996	74	Weighted Average
	7,360	72	92.05% Pervious Area
	636	98	7.95% Impervious Area

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

Subcatchment 8S: UNC

Hydrograph



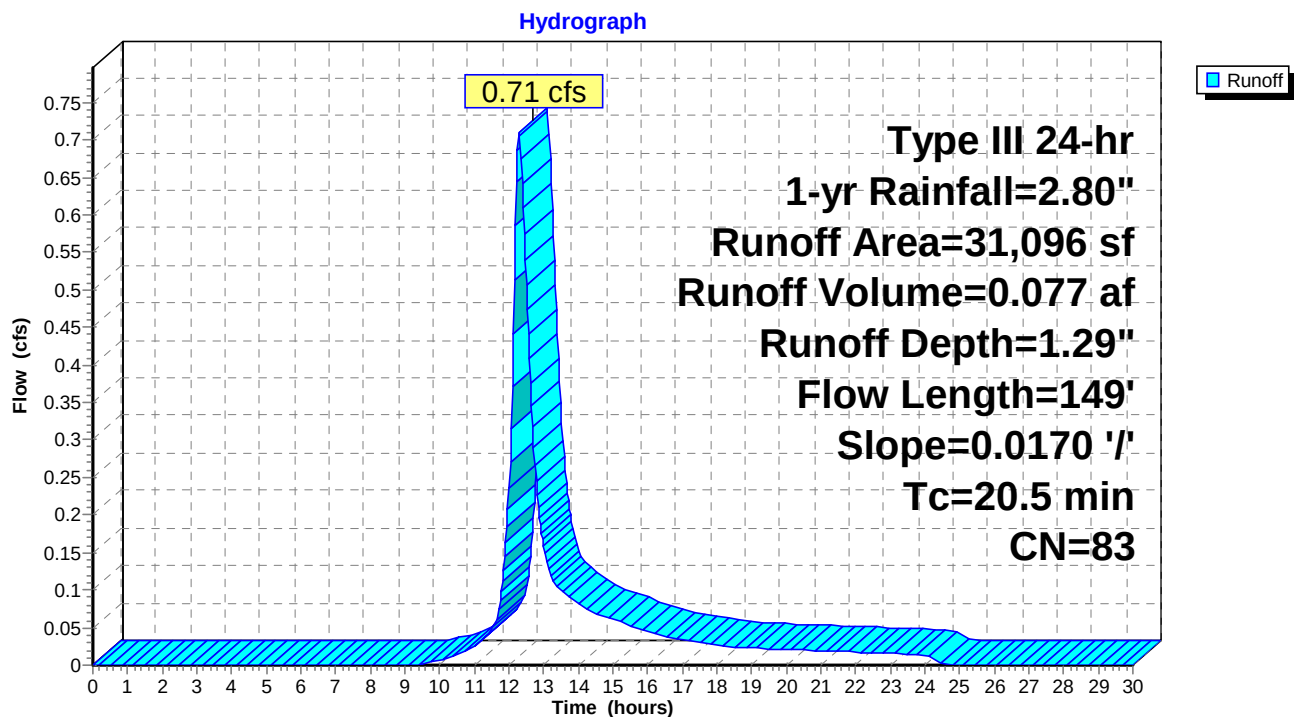
Summary for Subcatchment 9S: PRE-WET

Runoff = 0.71 cfs @ 12.29 hrs, Volume= 0.077 af, Depth= 1.29"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 1-yr Rainfall=2.80"

Area (sf)	CN	Description
233	98	Paved parking, HSG C
12,750	96	Gravel surface, HSG C
15,124	74	>75% Grass cover, Good, HSG C
2,989	70	Woods, Good, HSG C
31,096	83	Weighted Average
30,863	83	99.25% Pervious Area
233	98	0.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.5	149	0.0170	0.12		Sheet Flow, Grass: Dense n= 0.240 P2= 3.33"

Subcatchment 9S: PRE-WET

Summary for Subcatchment 10S: CONT

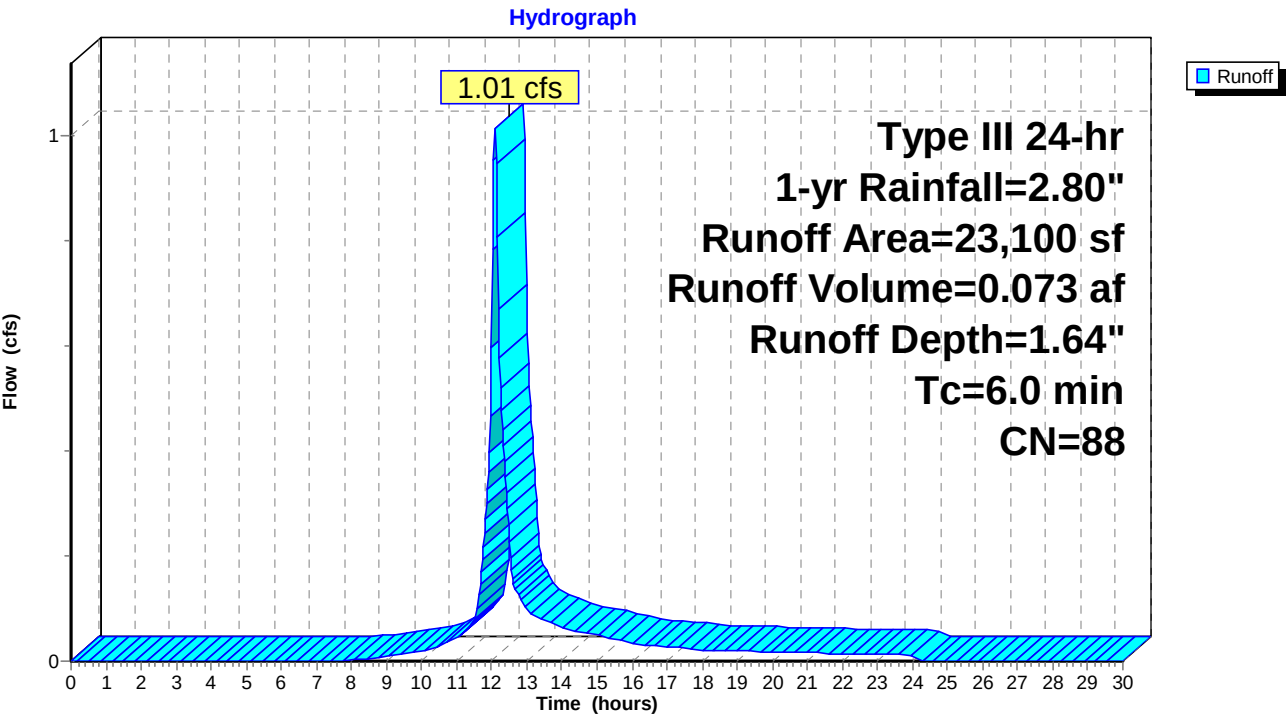
Runoff = 1.01 cfs @ 12.09 hrs, Volume= 0.073 af, Depth= 1.64"
Routed to Pond 8P : BIORETENTION

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 1-yr Rainfall=2.80"

	Area (sf)	CN	Description
	3,500	98	Roofs, HSG C
	8,788	98	Paved parking, HSG C
*	723	98	Sidewalk
	10,089	74	>75% Grass cover, Good, HSG C
	23,100	88	Weighted Average
	10,089	74	43.68% Pervious Area
	13,011	98	56.32% Impervious Area

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

Subcatchment 10S: CONT



Summary for Pond 8P: BIORETENTION

Inflow Area = 0.530 ac, 56.32% Impervious, Inflow Depth = 1.64" for 1-yr event
 Inflow = 1.01 cfs @ 12.09 hrs, Volume= 0.073 af
 Outflow = 0.06 cfs @ 14.17 hrs, Volume= 0.073 af, Atten= 94%, Lag= 124.9 min
 Discarded = 0.06 cfs @ 14.17 hrs, Volume= 0.073 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
 Routed to Link 7L : POST-WET

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
 Peak Elev= 116.31' @ 14.17 hrs Surf.Area= 5,207 sf Storage= 1,512 cf

Plug-Flow detention time= 253.5 min calculated for 0.072 af (100% of inflow)
 Center-of-Mass det. time= 253.4 min (1,074.1 - 820.7)

Volume	Invert	Avail.Storage	Storage Description
#1	116.00'	5,650 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

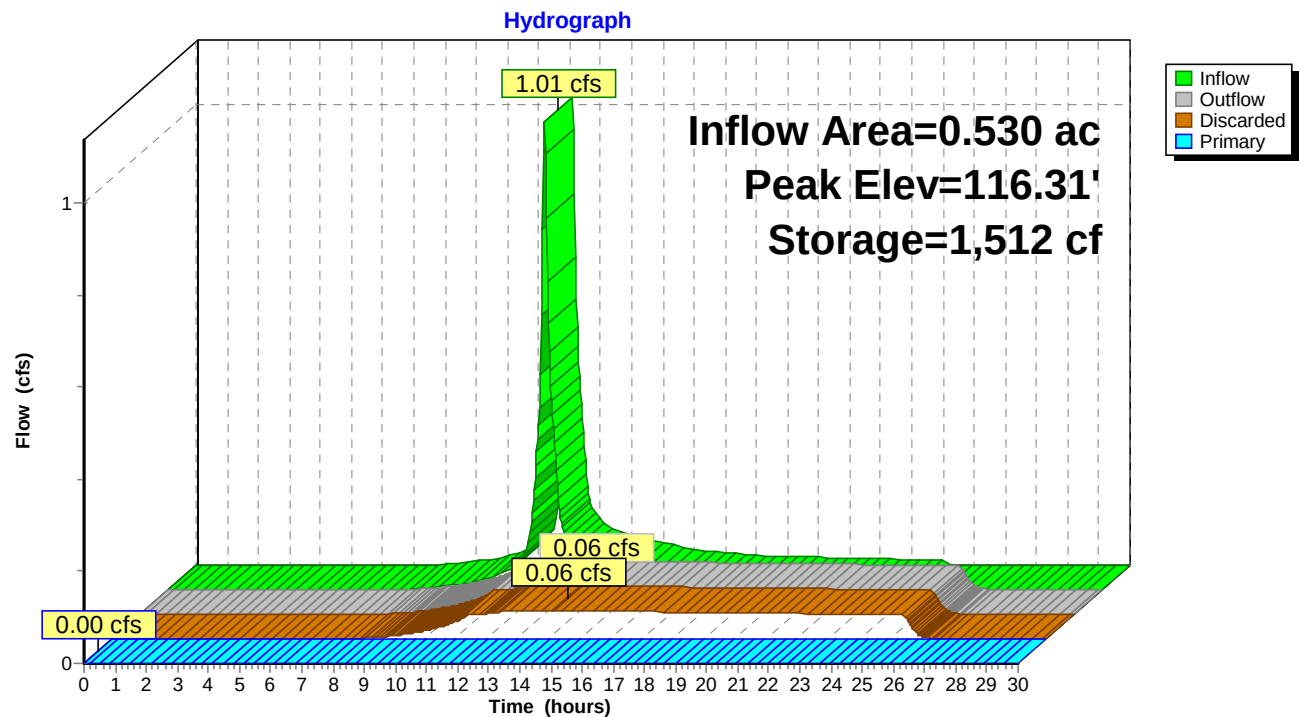
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
116.00	4,470	0	0
117.00	6,829	5,650	5,650

Device	Routing	Invert	Outlet Devices
#1	Discarded	116.00'	0.500 in/hr Exfiltration over Surface area
#2	Primary	116.60'	10.0' long 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

Discarded OutFlow Max=0.06 cfs @ 14.17 hrs HW=116.31' (Free Discharge)
 ↑ **1=Exfiltration** (Exfiltration Controls 0.06 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=116.00' (Free Discharge)
 ↑ **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 8P: BIORETENTION



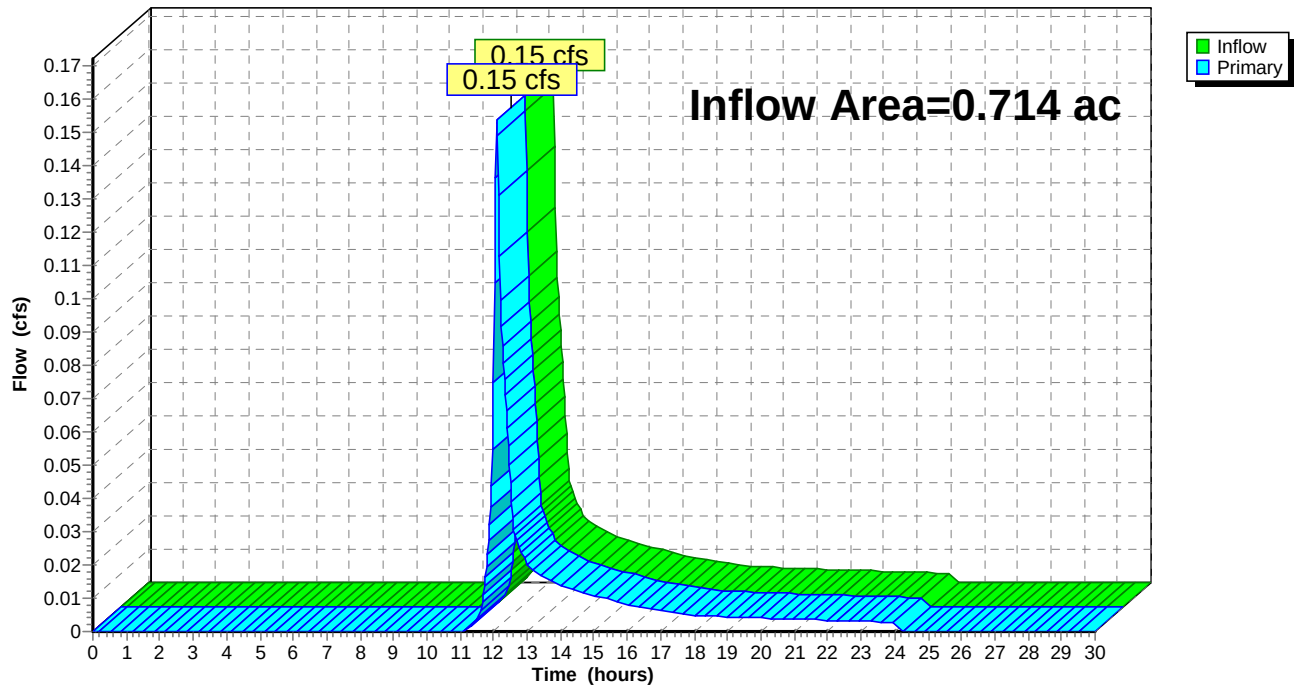
Summary for Link 7L: POST-WET

Inflow Area = 0.714 ac, 43.89% Impervious, Inflow Depth = 0.20" for 1-yr event
Inflow = 0.15 cfs @ 12.10 hrs, Volume= 0.012 af
Primary = 0.15 cfs @ 12.10 hrs, Volume= 0.012 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Link 7L: POST-WET

Hydrograph



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Type III 24-hr 10-yr Rainfall=4.90"

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Time span=0.00-30.00 hrs, dt=0.03 hrs, 1001 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 8S: UNC

Runoff Area=7,996 sf 7.95% Impervious Runoff Depth=2.28"
Tc=6.0 min CN=74 Runoff=0.49 cfs 0.035 af

Subcatchment 9S: PRE-WET

Runoff Area=31,096 sf 0.75% Impervious Runoff Depth=3.08"
Flow Length=149' Slope=0.0170 '/' Tc=20.5 min CN=83 Runoff=1.72 cfs 0.183 af

Subcatchment 10S: CONT

Runoff Area=23,100 sf 56.32% Impervious Runoff Depth=3.57"
Tc=6.0 min CN=88 Runoff=2.16 cfs 0.158 af

Pond 8P: BIORETENTION

Peak Elev=116.64' Storage=3,336 cf Inflow=2.16 cfs 0.158 af
Discarded=0.07 cfs 0.113 af Primary=0.19 cfs 0.024 af Outflow=0.26 cfs 0.137 af

Link 7L: POST-WET

Inflow=0.49 cfs 0.058 af
Primary=0.49 cfs 0.058 af

Total Runoff Area = 1.428 ac Runoff Volume = 0.376 af Average Runoff Depth = 3.16"
77.68% Pervious = 1.109 ac 22.32% Impervious = 0.319 ac

670 METACOM-REV2

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Type III 24-hr 10-yr Rainfall=4.90"

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Summary for Subcatchment 8S: UNC

Runoff = 0.49 cfs @ 12.09 hrs, Volume= 0.035 af, Depth= 2.28"
Routed to Link 7L : POST-WET

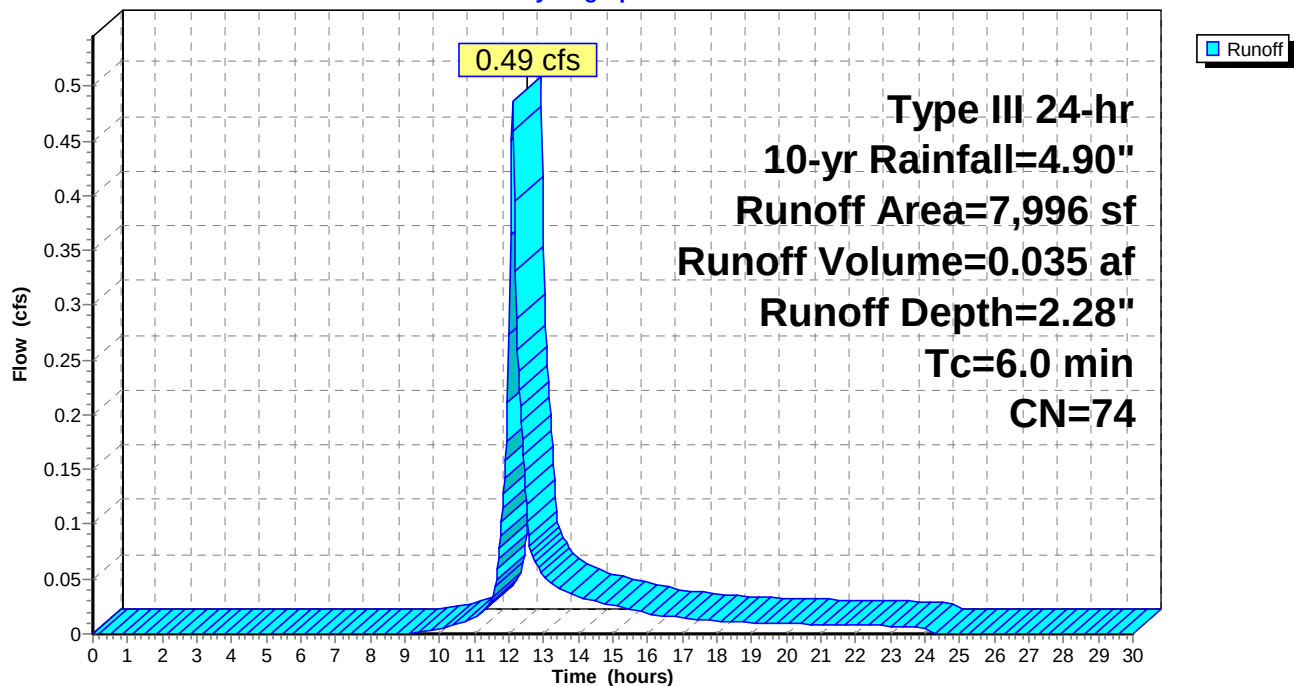
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 10-yr Rainfall=4.90"

	Area (sf)	CN	Description
*	636	98	Town Concrete sidewalk, HSG C
	3,625	74	>75% Grass cover, Good, HSG C
	3,735	70	Woods, Good, HSG C
	7,996	74	Weighted Average
	7,360	72	92.05% Pervious Area
	636	98	7.95% Impervious Area

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

Subcatchment 8S: UNC

Hydrograph



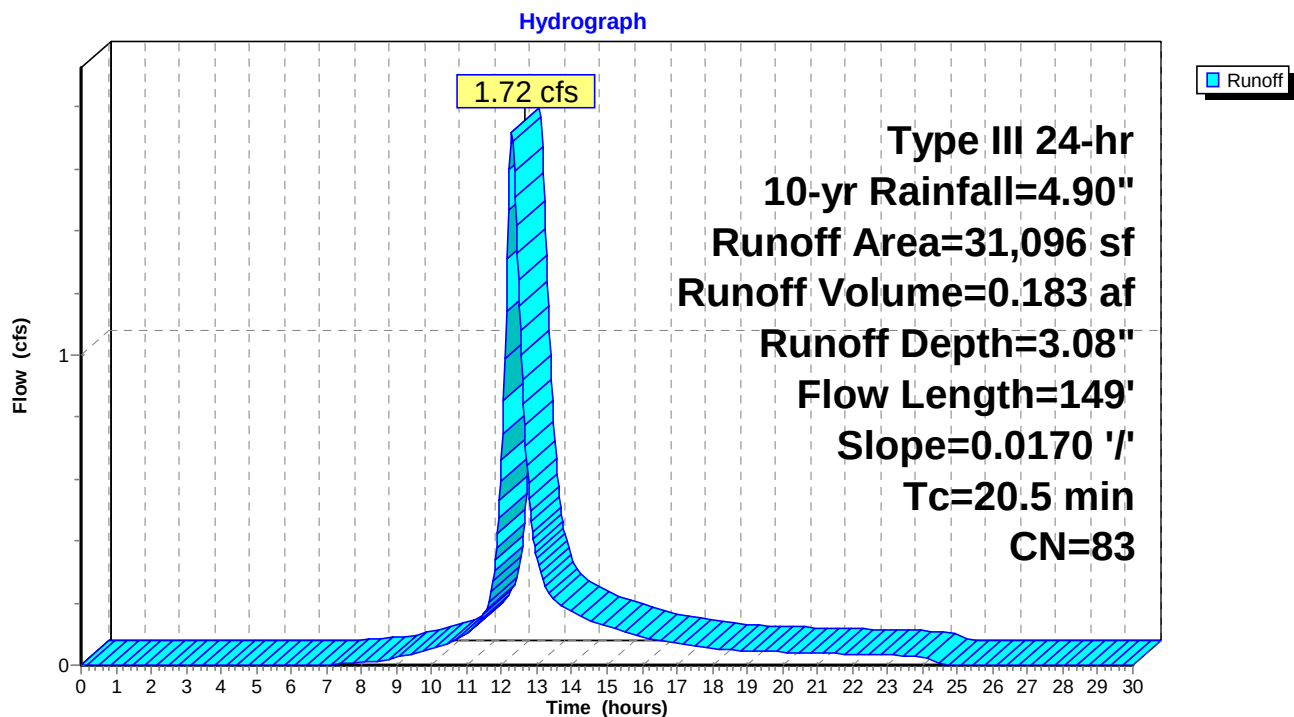
Summary for Subcatchment 9S: PRE-WET

Runoff = 1.72 cfs @ 12.28 hrs, Volume= 0.183 af, Depth= 3.08"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 10-yr Rainfall=4.90"

Area (sf)	CN	Description
233	98	Paved parking, HSG C
12,750	96	Gravel surface, HSG C
15,124	74	>75% Grass cover, Good, HSG C
2,989	70	Woods, Good, HSG C
31,096	83	Weighted Average
30,863	83	99.25% Pervious Area
233	98	0.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.5	149	0.0170	0.12		Sheet Flow, Grass: Dense n= 0.240 P2= 3.33"

Subcatchment 9S: PRE-WET

Summary for Subcatchment 10S: CONT

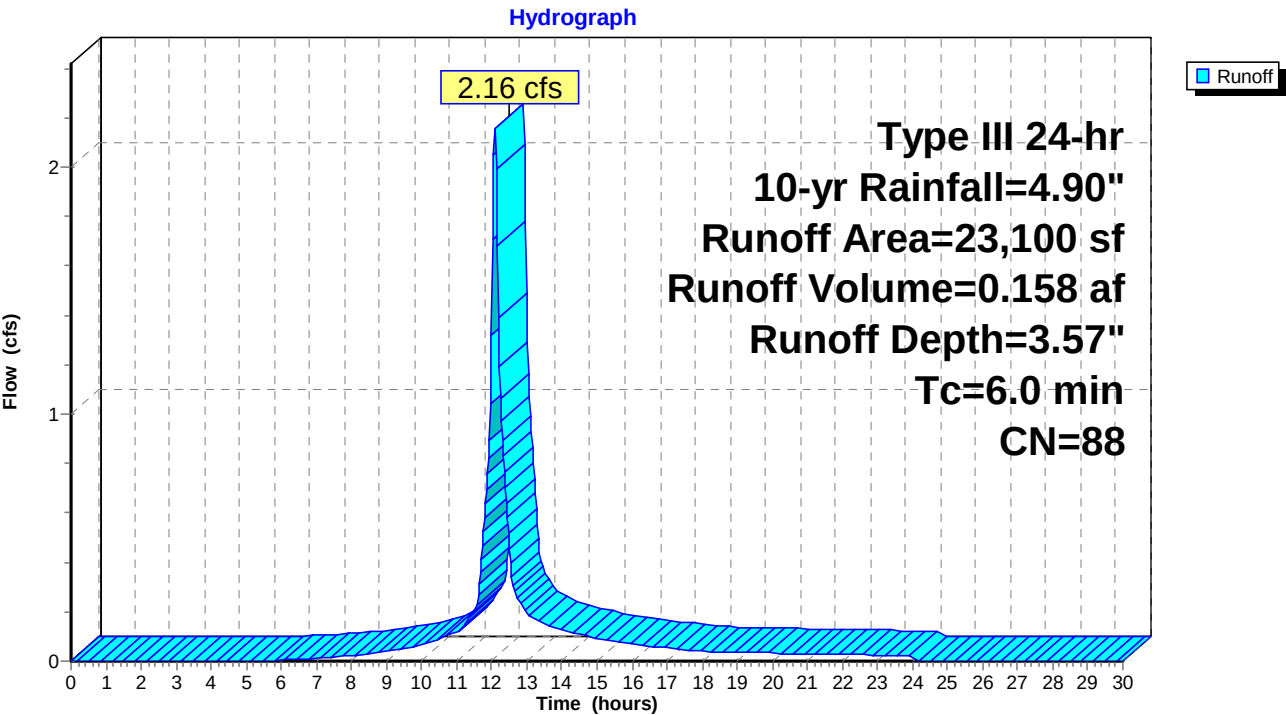
Runoff = 2.16 cfs @ 12.09 hrs, Volume= 0.158 af, Depth= 3.57"
Routed to Pond 8P : BIORETENTION

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 10-yr Rainfall=4.90"

	Area (sf)	CN	Description
	3,500	98	Roofs, HSG C
	8,788	98	Paved parking, HSG C
*	723	98	Sidewalk
	10,089	74	>75% Grass cover, Good, HSG C
	23,100	88	Weighted Average
	10,089	74	43.68% Pervious Area
	13,011	98	56.32% Impervious Area

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

Subcatchment 10S: CONT



Summary for Pond 8P: BIORETENTION

Inflow Area = 0.530 ac, 56.32% Impervious, Inflow Depth = 3.57" for 10-yr event
 Inflow = 2.16 cfs @ 12.09 hrs, Volume= 0.158 af
 Outflow = 0.26 cfs @ 12.70 hrs, Volume= 0.137 af, Atten= 88%, Lag= 36.8 min
 Discarded = 0.07 cfs @ 12.70 hrs, Volume= 0.113 af
 Primary = 0.19 cfs @ 12.70 hrs, Volume= 0.024 af
 Routed to Link 7L : POST-WET

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
 Peak Elev= 116.64' @ 12.70 hrs Surf.Area= 5,977 sf Storage= 3,336 cf

Plug-Flow detention time= 354.0 min calculated for 0.136 af (86% of inflow)
 Center-of-Mass det. time= 294.5 min (1,093.1 - 798.6)

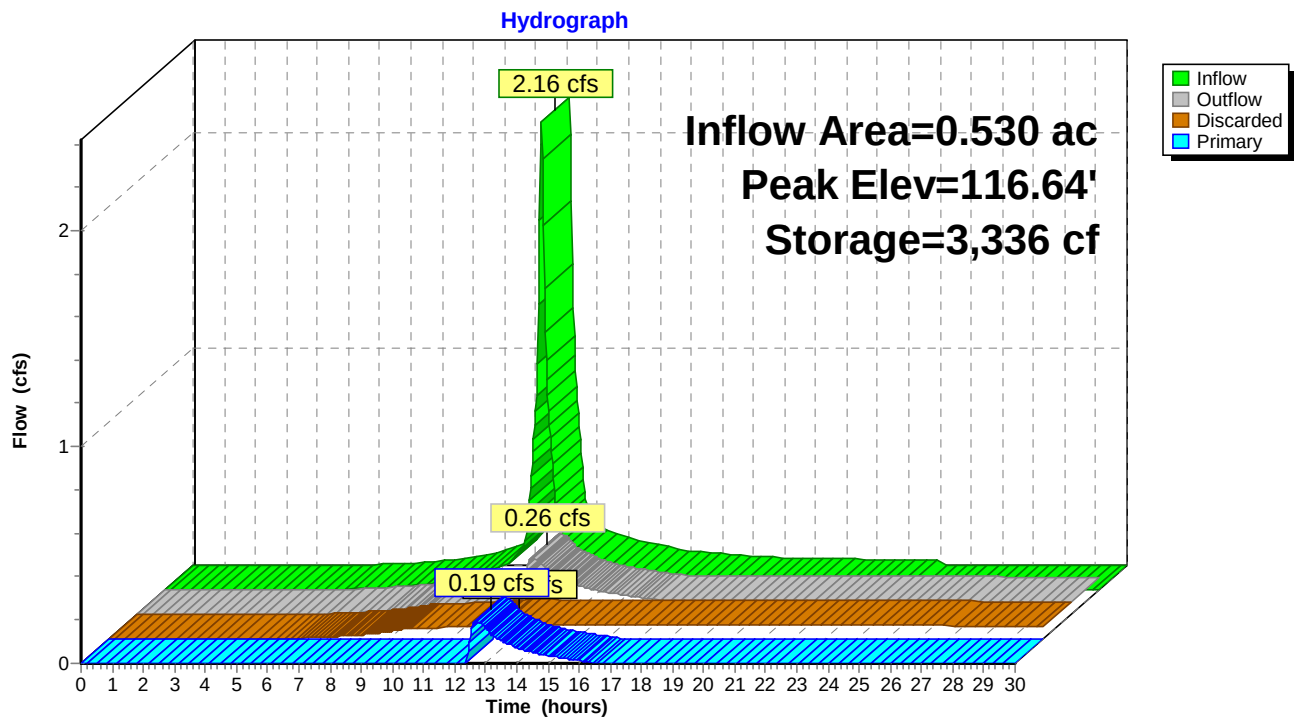
Volume	Invert	Avail.Storage	Storage Description
#1	116.00'	5,650 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
116.00	4,470	0	0
117.00	6,829	5,650	5,650

Device	Routing	Invert	Outlet Devices
#1	Discarded	116.00'	0.500 in/hr Exfiltration over Surface area
#2	Primary	116.60'	10.0' long 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

Discarded OutFlow Max=0.07 cfs @ 12.70 hrs HW=116.64' (Free Discharge)
 ↑ **1=Exfiltration** (Exfiltration Controls 0.07 cfs)

Primary OutFlow Max=0.19 cfs @ 12.70 hrs HW=116.64' (Free Discharge)
 ↑ **2=Broad-Crested Rectangular Weir** (Weir Controls 0.19 cfs @ 0.50 fps)

Pond 8P: BIORETENTION

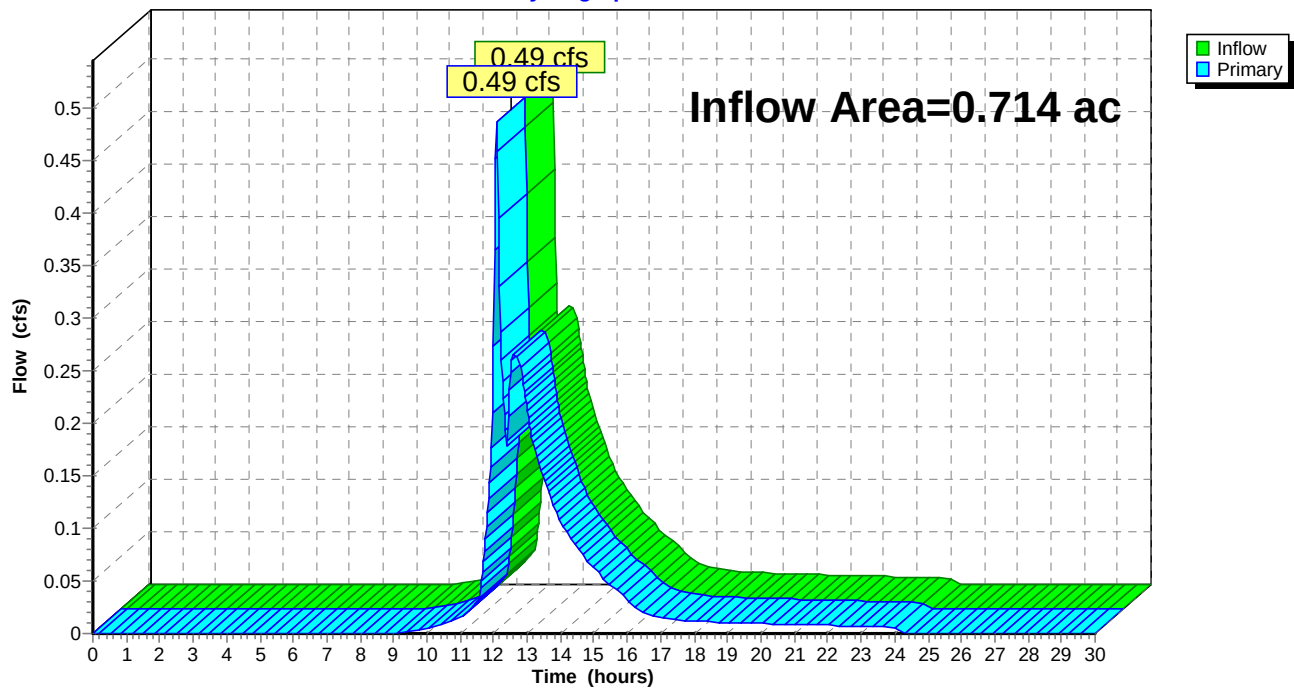
Summary for Link 7L: POST-WET

Inflow Area = 0.714 ac, 43.89% Impervious, Inflow Depth = 0.98" for 10-yr event
Inflow = 0.49 cfs @ 12.09 hrs, Volume= 0.058 af
Primary = 0.49 cfs @ 12.09 hrs, Volume= 0.058 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Link 7L: POST-WET

Hydrograph



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Type III 24-hr 25-yr Rainfall=6.10"

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Time span=0.00-30.00 hrs, dt=0.03 hrs, 1001 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 8S: UNC

Runoff Area=7,996 sf 7.95% Impervious Runoff Depth=3.27"
Tc=6.0 min CN=74 Runoff=0.70 cfs 0.050 af

Subcatchment 9S: PRE-WET

Runoff Area=31,096 sf 0.75% Impervious Runoff Depth=4.18"
Flow Length=149' Slope=0.0170 '/' Tc=20.5 min CN=83 Runoff=2.32 cfs 0.249 af

Subcatchment 10S: CONT

Runoff Area=23,100 sf 56.32% Impervious Runoff Depth=4.72"
Tc=6.0 min CN=88 Runoff=2.82 cfs 0.209 af

Pond 8P: BIORETENTION

Peak Elev=116.71' Storage=3,746 cf Inflow=2.82 cfs 0.209 af
Discarded=0.07 cfs 0.118 af Primary=0.88 cfs 0.064 af Outflow=0.95 cfs 0.183 af

Link 7L: POST-WET

Inflow=1.15 cfs 0.114 af
Primary=1.15 cfs 0.114 af

Total Runoff Area = 1.428 ac Runoff Volume = 0.508 af Average Runoff Depth = 4.27"
77.68% Pervious = 1.109 ac 22.32% Impervious = 0.319 ac

Summary for Subcatchment 8S: UNC

Runoff = 0.70 cfs @ 12.09 hrs, Volume= 0.050 af, Depth= 3.27"
 Routed to Link 7L : POST-WET

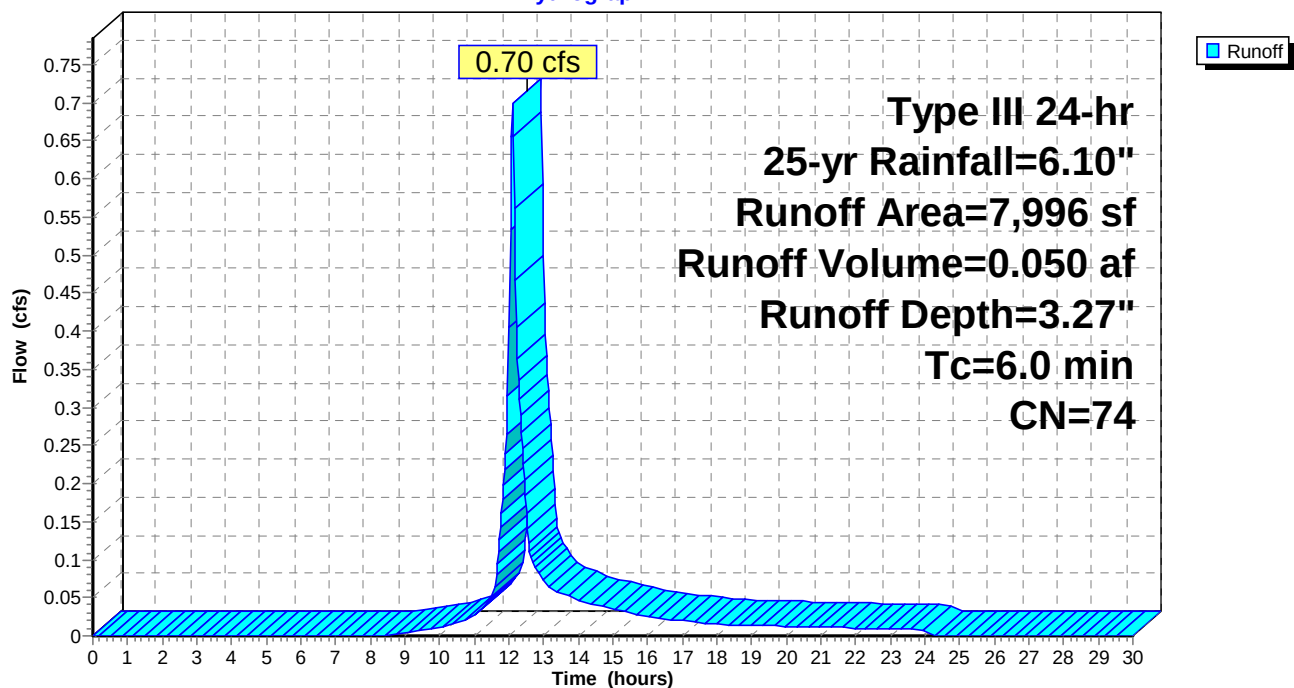
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
 Type III 24-hr 25-yr Rainfall=6.10"

	Area (sf)	CN	Description
*	636	98	Town Concrete sidewalk, HSG C
	3,625	74	>75% Grass cover, Good, HSG C
	3,735	70	Woods, Good, HSG C
	7,996	74	Weighted Average
	7,360	72	92.05% Pervious Area
	636	98	7.95% Impervious Area

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

Subcatchment 8S: UNC

Hydrograph



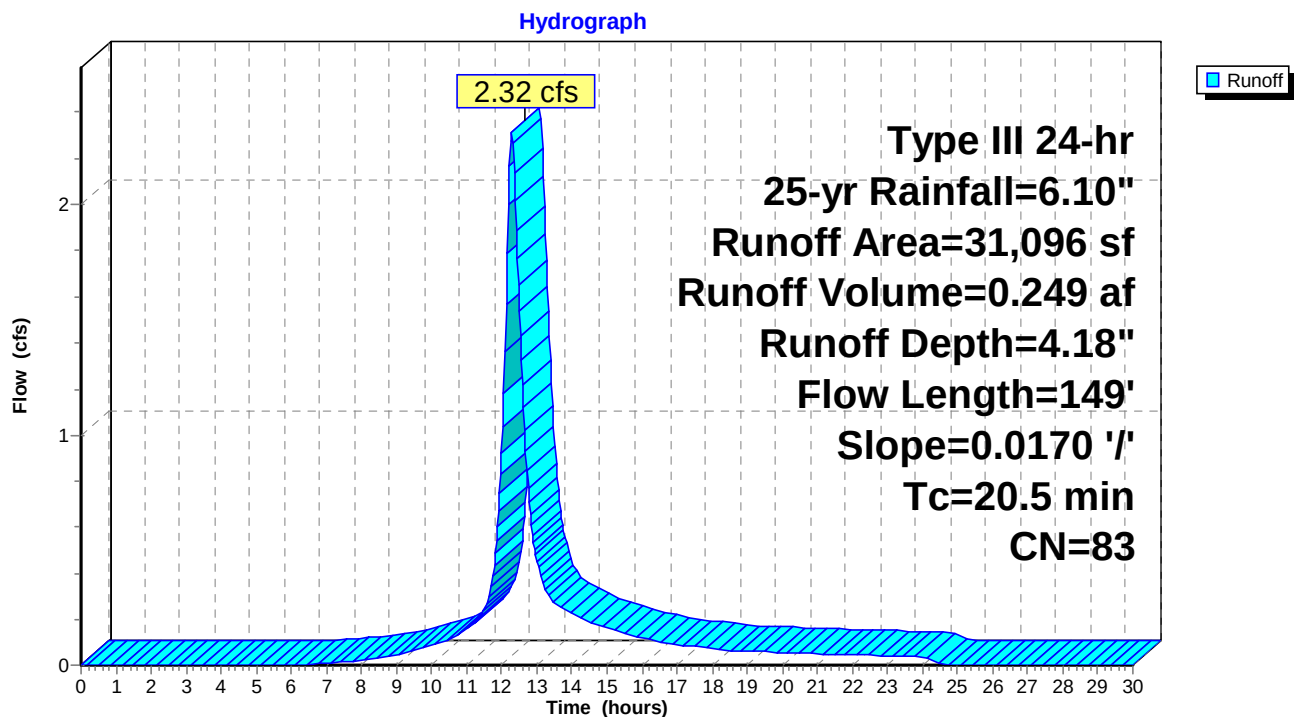
Summary for Subcatchment 9S: PRE-WET

Runoff = 2.32 cfs @ 12.28 hrs, Volume= 0.249 af, Depth= 4.18"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 25-yr Rainfall=6.10"

Area (sf)	CN	Description
233	98	Paved parking, HSG C
12,750	96	Gravel surface, HSG C
15,124	74	>75% Grass cover, Good, HSG C
2,989	70	Woods, Good, HSG C
31,096	83	Weighted Average
30,863	83	99.25% Pervious Area
233	98	0.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.5	149	0.0170	0.12		Sheet Flow, Grass: Dense n= 0.240 P2= 3.33"

Subcatchment 9S: PRE-WET

Summary for Subcatchment 10S: CONT

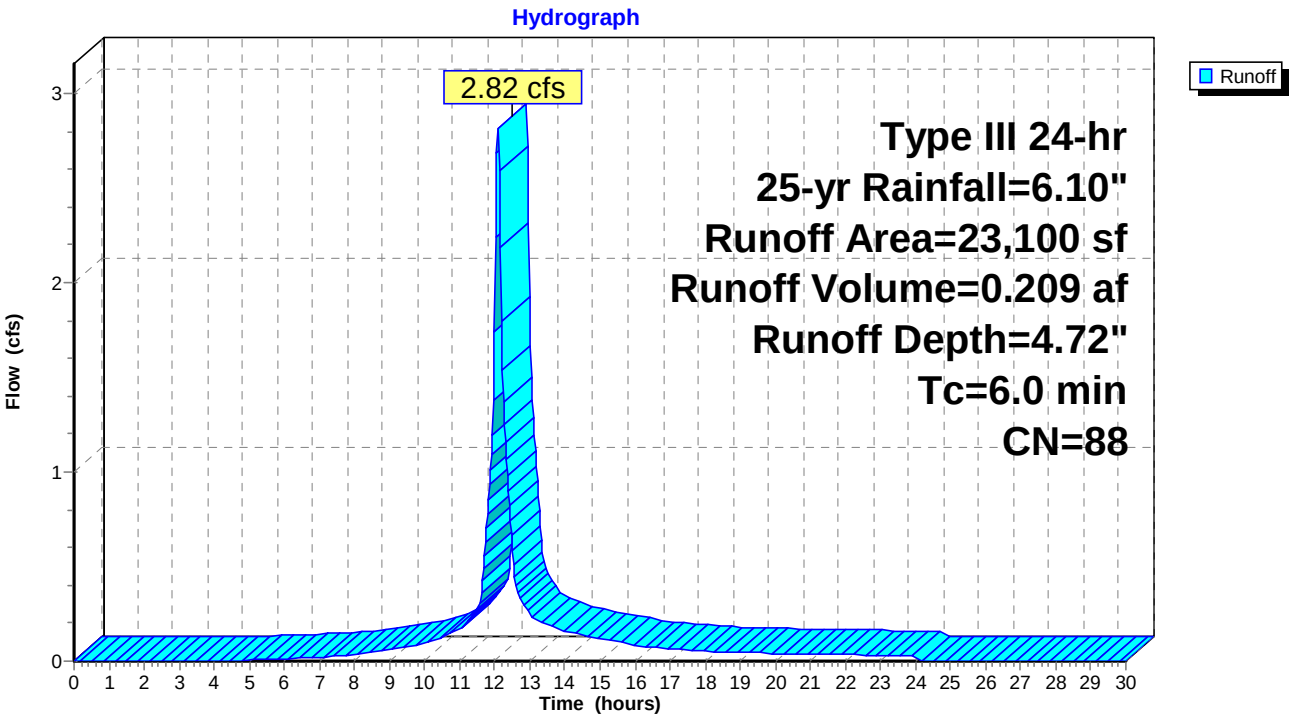
Runoff = 2.82 cfs @ 12.09 hrs, Volume= 0.209 af, Depth= 4.72"
Routed to Pond 8P : BIORETENTION

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 25-yr Rainfall=6.10"

	Area (sf)	CN	Description
	3,500	98	Roofs, HSG C
	8,788	98	Paved parking, HSG C
*	723	98	Sidewalk
	10,089	74	>75% Grass cover, Good, HSG C
	23,100	88	Weighted Average
	10,089	74	43.68% Pervious Area
	13,011	98	56.32% Impervious Area

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

Subcatchment 10S: CONT



Summary for Pond 8P: BIORETENTION

Inflow Area = 0.530 ac, 56.32% Impervious, Inflow Depth = 4.72" for 25-yr event
 Inflow = 2.82 cfs @ 12.09 hrs, Volume= 0.209 af
 Outflow = 0.95 cfs @ 12.37 hrs, Volume= 0.183 af, Atten= 66%, Lag= 17.2 min
 Discarded = 0.07 cfs @ 12.37 hrs, Volume= 0.118 af
 Primary = 0.88 cfs @ 12.37 hrs, Volume= 0.064 af
 Routed to Link 7L : POST-WET

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
 Peak Elev= 116.71' @ 12.37 hrs Surf.Area= 6,136 sf Storage= 3,746 cf

Plug-Flow detention time= 276.2 min calculated for 0.182 af (87% of inflow)
 Center-of-Mass det. time= 219.9 min (1,010.8 - 790.9)

Volume	Invert	Avail.Storage	Storage Description
#1	116.00'	5,650 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

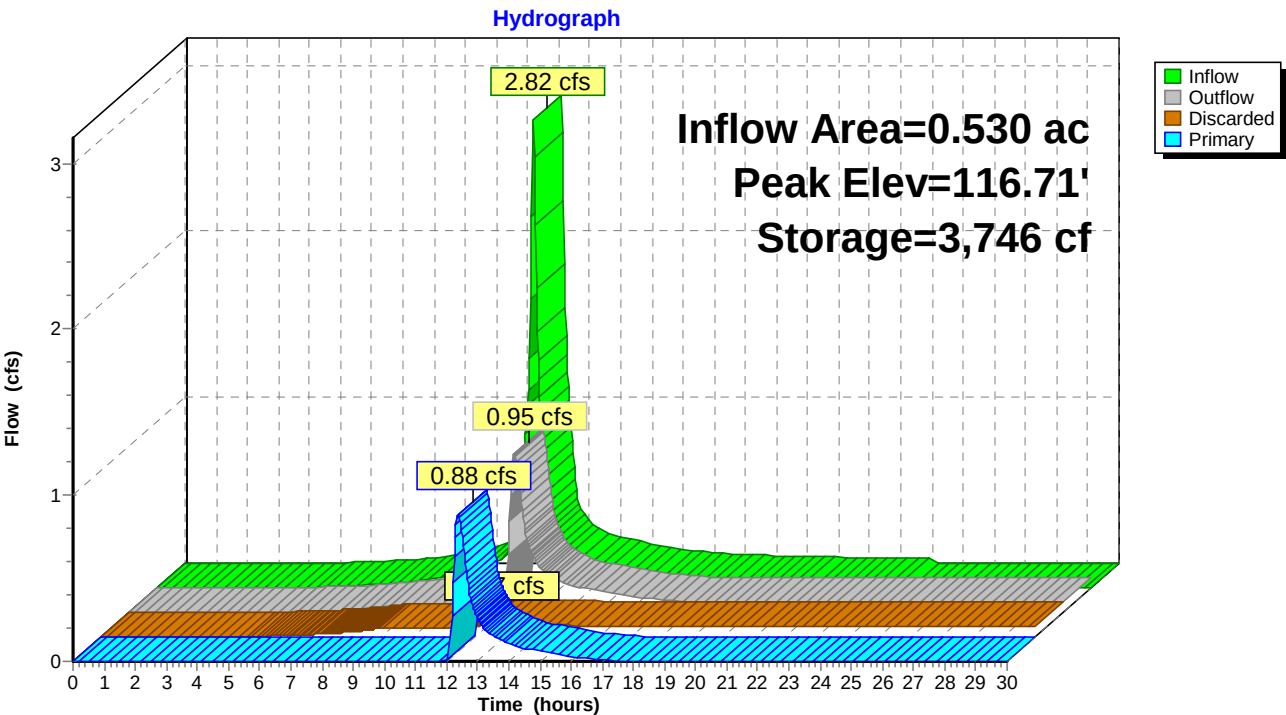
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
116.00	4,470	0	0
117.00	6,829	5,650	5,650

Device	Routing	Invert	Outlet Devices
#1	Discarded	116.00'	0.500 in/hr Exfiltration over Surface area
#2	Primary	116.60'	10.0' long 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

Discarded OutFlow Max=0.07 cfs @ 12.37 hrs HW=116.71' (Free Discharge)
 ↑ **1=Exfiltration** (Exfiltration Controls 0.07 cfs)

Primary OutFlow Max=0.88 cfs @ 12.37 hrs HW=116.71' (Free Discharge)
 ↑ **2=Broad-Crested Rectangular Weir** (Weir Controls 0.88 cfs @ 0.83 fps)

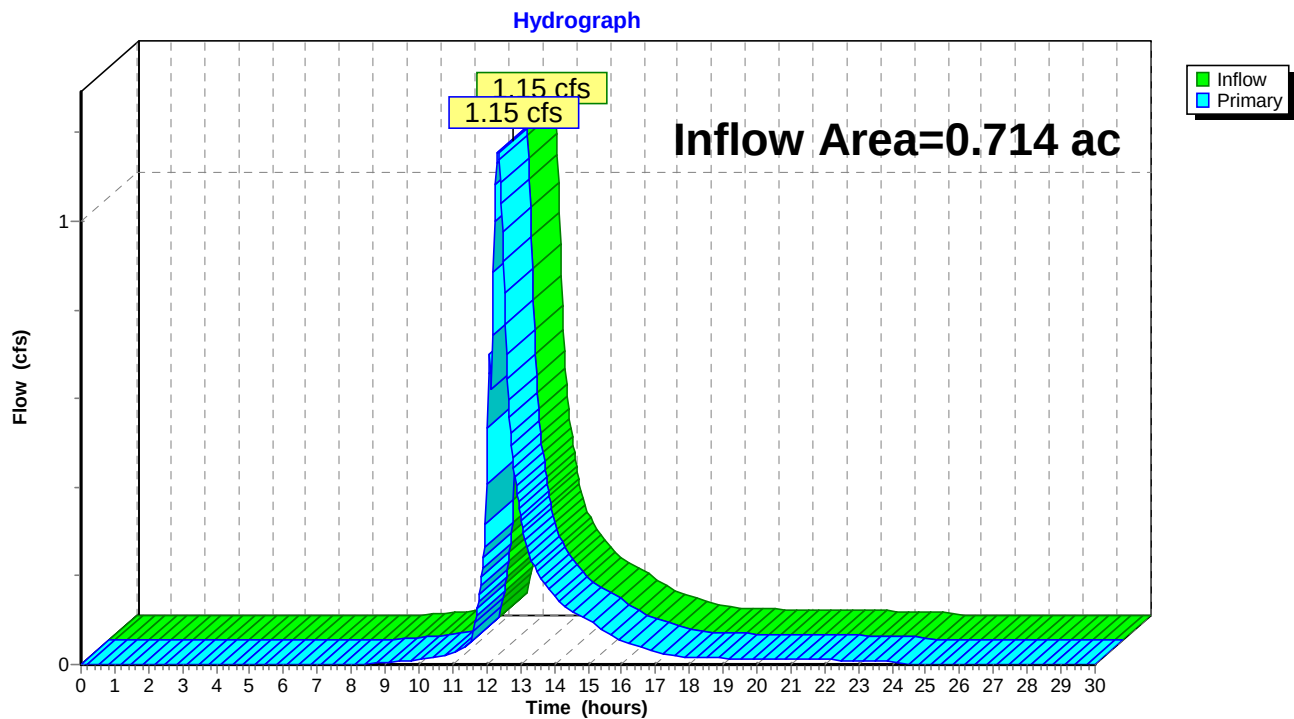
Pond 8P: BIORETENTION



Summary for Link 7L: POST-WET

Inflow Area = 0.714 ac, 43.89% Impervious, Inflow Depth = 1.92" for 25-yr event
Inflow = 1.15 cfs @ 12.34 hrs, Volume= 0.114 af
Primary = 1.15 cfs @ 12.34 hrs, Volume= 0.114 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Link 7L: POST-WET

670 METACOM-REV2*Type III 24-hr 100-yr Rainfall=8.60"*

Prepared by Principe Engineering, Inc

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Time span=0.00-30.00 hrs, dt=0.03 hrs, 1001 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 8S: UNC

Runoff Area=7,996 sf 7.95% Impervious Runoff Depth=5.47"
Tc=6.0 min CN=74 Runoff=1.16 cfs 0.084 af

Subcatchment 9S: PRE-WET

Runoff Area=31,096 sf 0.75% Impervious Runoff Depth=6.55"
Flow Length=149' Slope=0.0170 '/' Tc=20.5 min CN=83 Runoff=3.57 cfs 0.390 af

Subcatchment 10S: CONT

Runoff Area=23,100 sf 56.32% Impervious Runoff Depth=7.16"
Tc=6.0 min CN=88 Runoff=4.17 cfs 0.316 af

Pond 8P: BIORETENTION

Peak Elev=116.83' Storage=4,501 cf Inflow=4.17 cfs 0.316 af
Discarded=0.07 cfs 0.127 af Primary=2.75 cfs 0.156 af Outflow=2.83 cfs 0.283 af

Link 7L: POST-WET

Inflow=3.63 cfs 0.239 af
Primary=3.63 cfs 0.239 af

Total Runoff Area = 1.428 ac Runoff Volume = 0.790 af Average Runoff Depth = 6.64"
77.68% Pervious = 1.109 ac 22.32% Impervious = 0.319 ac

Summary for Subcatchment 8S: UNC

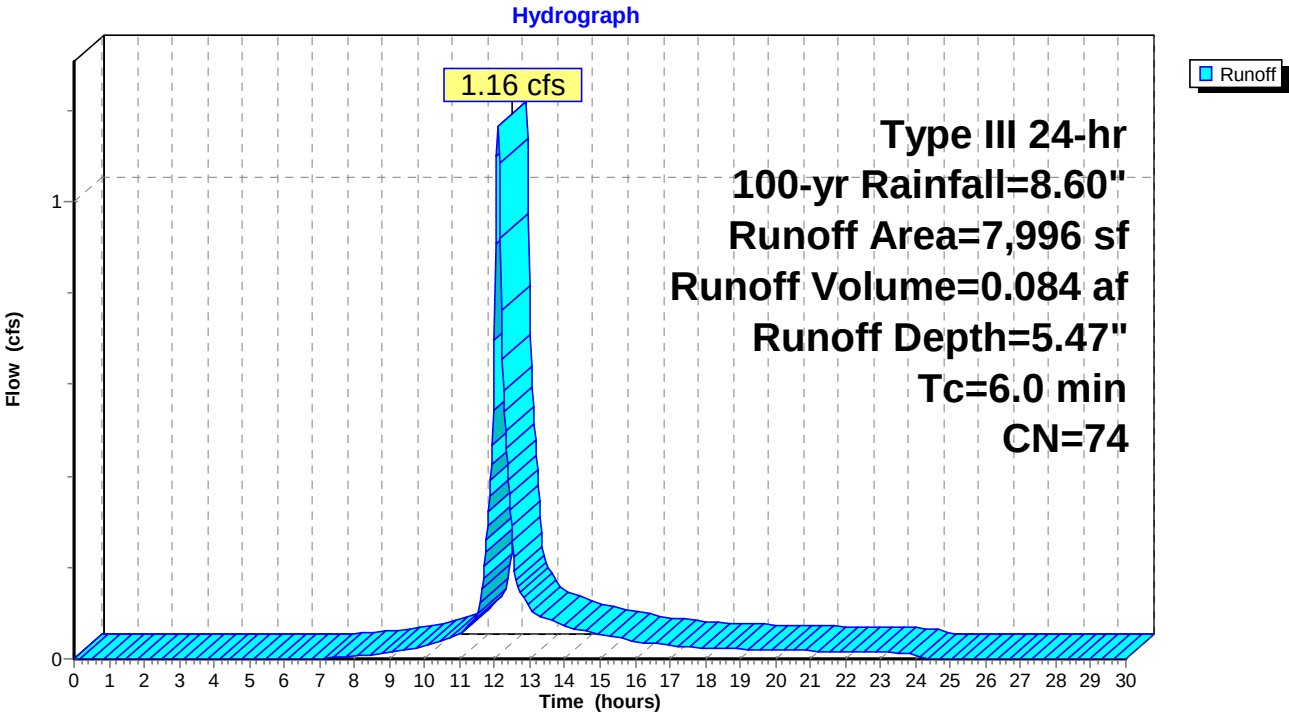
Runoff = 1.16 cfs @ 12.09 hrs, Volume= 0.084 af, Depth= 5.47"
Routed to Link 7L : POST-WET

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 100-yr Rainfall=8.60"

	Area (sf)	CN	Description
*	636	98	Town Concrete sidewalk, HSG C
	3,625	74	>75% Grass cover, Good, HSG C
	3,735	70	Woods, Good, HSG C
	7,996	74	Weighted Average
	7,360	72	92.05% Pervious Area
	636	98	7.95% Impervious Area

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

Subcatchment 8S: UNC



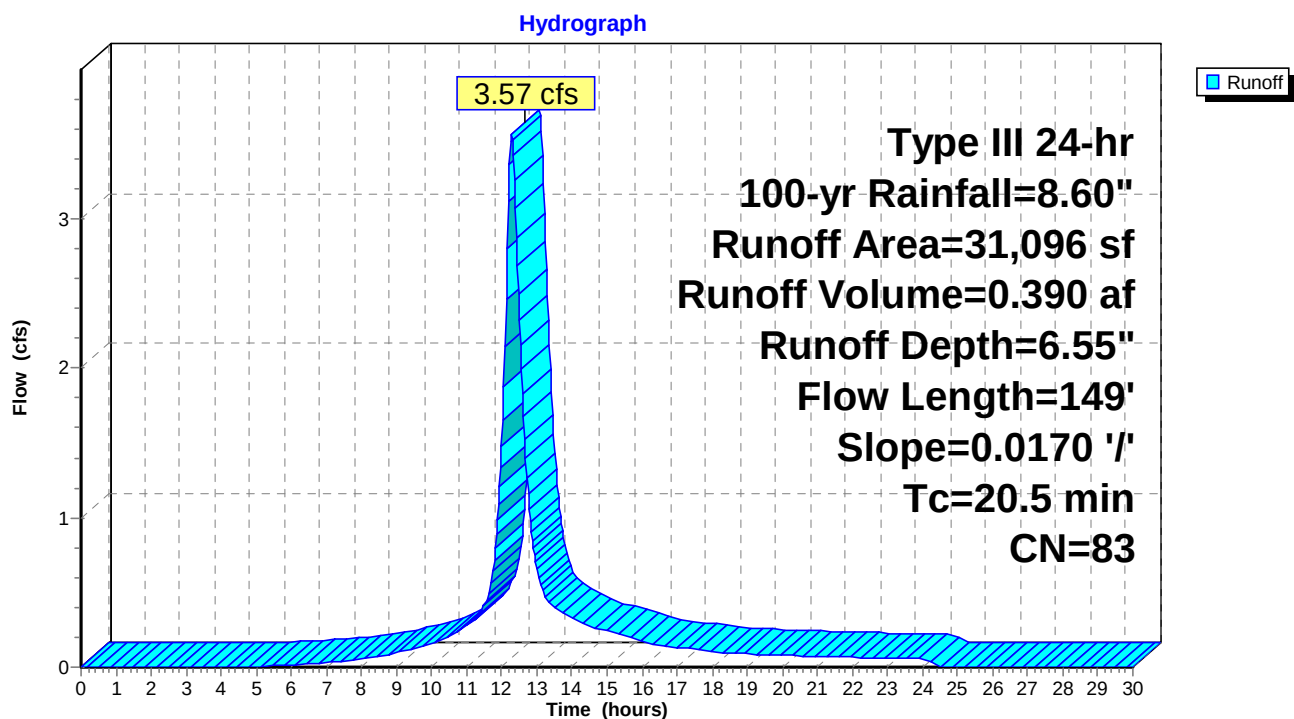
Summary for Subcatchment 9S: PRE-WET

Runoff = 3.57 cfs @ 12.27 hrs, Volume= 0.390 af, Depth= 6.55"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 100-yr Rainfall=8.60"

Area (sf)	CN	Description
233	98	Paved parking, HSG C
12,750	96	Gravel surface, HSG C
15,124	74	>75% Grass cover, Good, HSG C
2,989	70	Woods, Good, HSG C
31,096	83	Weighted Average
30,863	83	99.25% Pervious Area
233	98	0.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.5	149	0.0170	0.12		Sheet Flow, Grass: Dense n= 0.240 P2= 3.33"

Subcatchment 9S: PRE-WET

Summary for Subcatchment 10S: CONT

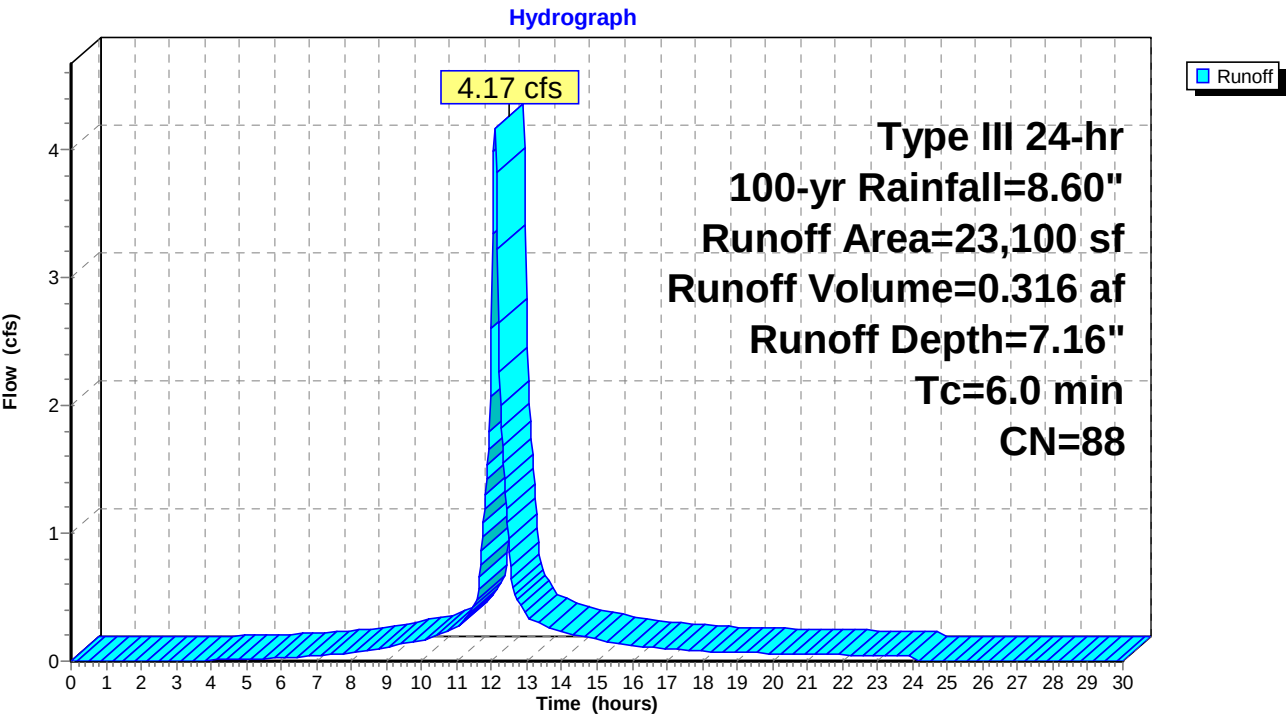
Runoff = 4.17 cfs @ 12.09 hrs, Volume= 0.316 af, Depth= 7.16"
Routed to Pond 8P : BIORETENTION

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
Type III 24-hr 100-yr Rainfall=8.60"

	Area (sf)	CN	Description
	3,500	98	Roofs, HSG C
	8,788	98	Paved parking, HSG C
*	723	98	Sidewalk
	10,089	74	>75% Grass cover, Good, HSG C
	23,100	88	Weighted Average
	10,089	74	43.68% Pervious Area
	13,011	98	56.32% Impervious Area

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

Subcatchment 10S: CONT



Summary for Pond 8P: BIORETENTION

Inflow Area = 0.530 ac, 56.32% Impervious, Inflow Depth = 7.16" for 100-yr event
 Inflow = 4.17 cfs @ 12.09 hrs, Volume= 0.316 af
 Outflow = 2.83 cfs @ 12.17 hrs, Volume= 0.283 af, Atten= 32%, Lag= 5.3 min
 Discarded = 0.07 cfs @ 12.17 hrs, Volume= 0.127 af
 Primary = 2.75 cfs @ 12.17 hrs, Volume= 0.156 af
 Routed to Link 7L : POST-WET

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs
 Peak Elev= 116.83' @ 12.17 hrs Surf.Area= 6,420 sf Storage= 4,501 cf

Plug-Flow detention time= 193.6 min calculated for 0.283 af (89% of inflow)
 Center-of-Mass det. time= 142.7 min (922.5 - 779.9)

Volume	Invert	Avail.Storage	Storage Description
#1	116.00'	5,650 cf	Custom Stage Data (Prismatic) Listed below (Recalc)

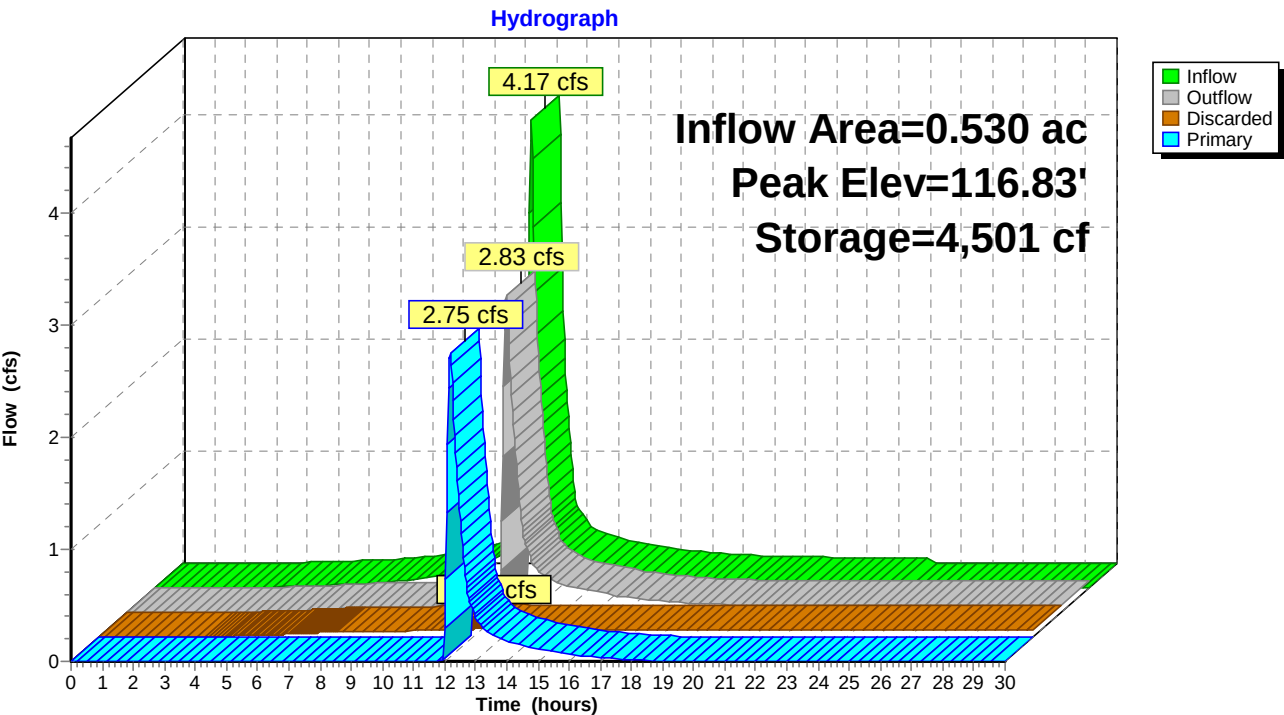
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
116.00	4,470	0	0
117.00	6,829	5,650	5,650

Device	Routing	Invert	Outlet Devices
#1	Discarded	116.00'	0.500 in/hr Exfiltration over Surface area
#2	Primary	116.60'	10.0' long 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

Discarded OutFlow Max=0.07 cfs @ 12.17 hrs HW=116.83' (Free Discharge)
 ↑ **1=Exfiltration** (Exfiltration Controls 0.07 cfs)

Primary OutFlow Max=2.74 cfs @ 12.17 hrs HW=116.83' (Free Discharge)
 ↑ **2=Broad-Crested Rectangular Weir** (Weir Controls 2.74 cfs @ 1.21 fps)

Pond 8P: BIORETENTION



Summary for Link 7L: POST-WET

Inflow Area = 0.714 ac, 43.89% Impervious, Inflow Depth = 4.02" for 100-yr event
Inflow = 3.63 cfs @ 12.15 hrs, Volume= 0.239 af
Primary = 3.63 cfs @ 12.15 hrs, Volume= 0.239 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-30.00 hrs, dt= 0.03 hrs

Link 7L: POST-WET