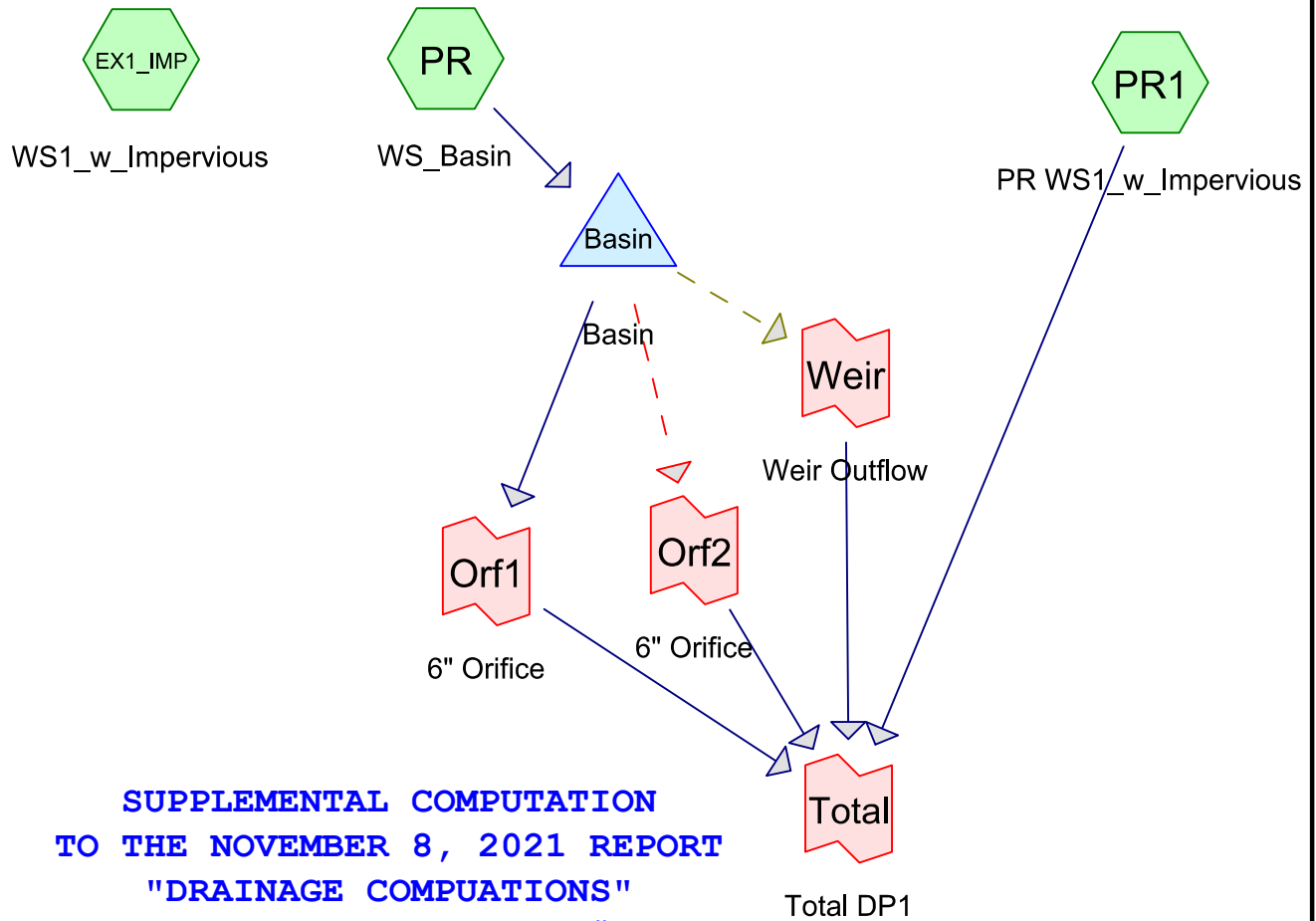


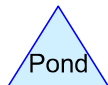
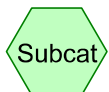
## Results of Including 9123 sf of Impervious Area

Event	Rainfall (inches)	Existing Runoff (cfs)	Proposed Inflow (cfs)
2	3.42	3.10	2.84
10	5.13	8.93	8.40
100	<b>9.23</b>	<b>26.84</b>	<b>24.26</b>



**SUPPLEMENTAL COMPUTATION  
TO THE NOVEMBER 8, 2021 REPORT  
"DRAINAGE COMPUTATIONS"  
MODIFYING WATERSHED #1  
MATRIX LLC AND HUDSON NATIONAL**

RALPH G. MASTROMONACO, P.E., P.C.  
Consulting Engineers  
13 Dove Court, Croton-on-Hudson, New York 10520  
Tel: (914) 271-4762 Fax: (914) 271-2820



**Routing Diagram for hn\_basin**  
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## hn\_basin

Prepared by RGMPEPC

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Site WS1 - IMP

Type III 24-hr 2 Rainfall=3.42"

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Page 2

### Summary for Subcatchment EX1\_IMP: WS1\_w\_Impervious

Runoff = 3.10 cfs @ 12.49 hrs, Volume= 0.468 af, Depth> 0.68"

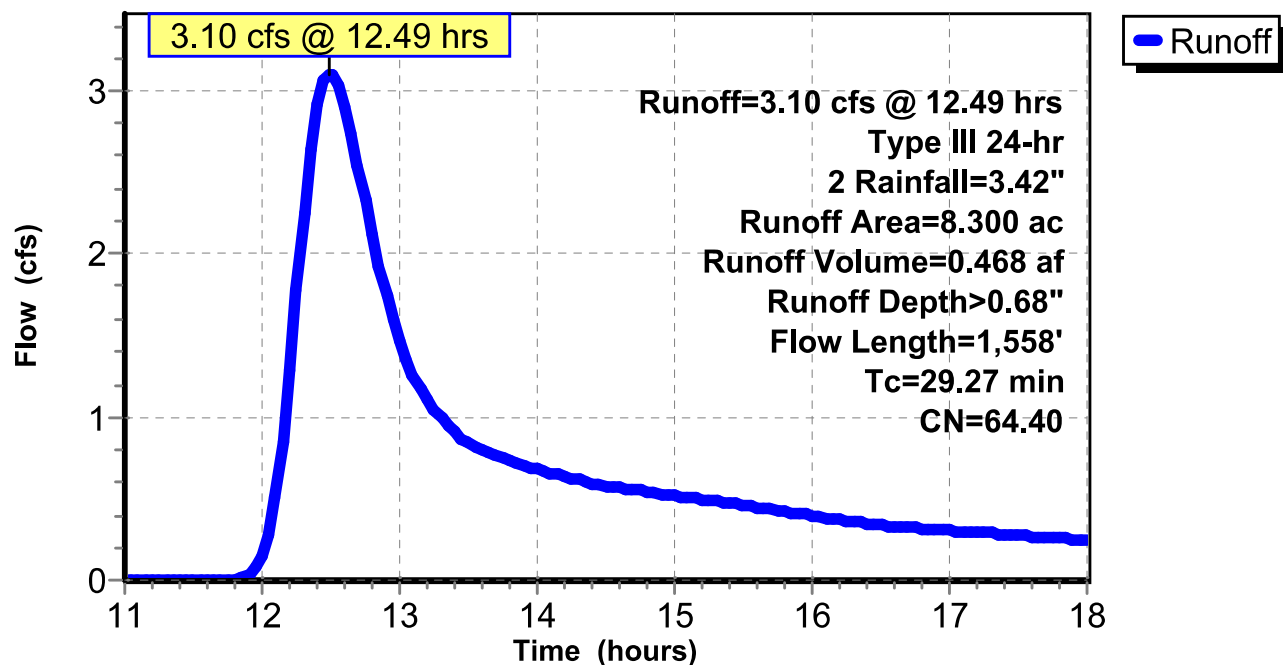
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs  
Type III 24-hr 2 Rainfall=3.42"

Area (ac)	CN	Description
2.000	60.00	Woods, Fair, HSG B
4.590	60.00	Woods, Fair, HSG B
1.500	79.00	Woods, Fair, HSG D
* 0.210	98.00	Driveway - Impervious
8.300	64.40	Weighted Average
8.090		97.47% Pervious Area
0.210		2.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.72	508	0.2500	1.48		Lag/CN Method,
14.37	449	0.0325	0.52		Lag/CN Method,
9.18	601	0.1270	1.09		Lag/CN Method,
29.27	1,558	Total			

### Subcatchment EX1\_IMP: WS1\_w\_Impervious

#### Hydrograph



## hn\_basin

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Site WS1 - IMP  
Type III 24-hr 2 Rainfall=3.42"

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Page 3

### Summary for Subcatchment PR: WS\_Basin

Runoff = 0.35 cfs @ 12.56 hrs, Volume= 0.066 af, Depth> 0.44"

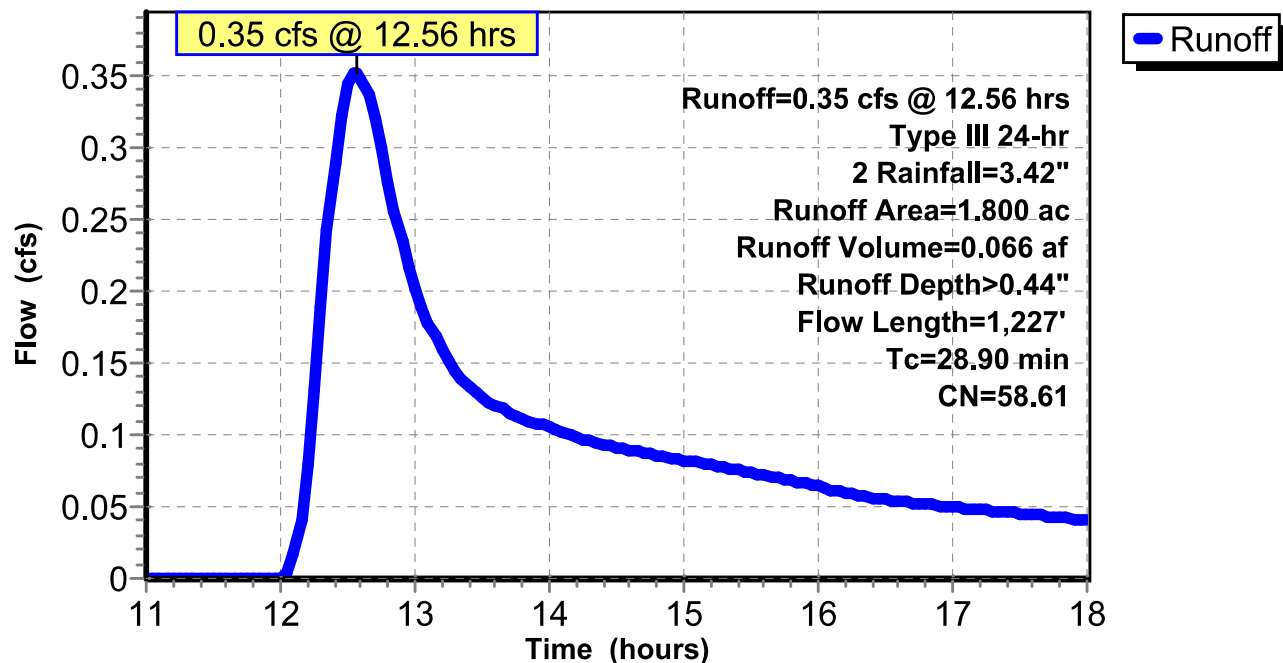
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs  
Type III 24-hr 2 Rainfall=3.42"

Area (ac)	CN	Description
0.550	60.00	Woods, Fair, HSG B
1.250	58.00	Meadow, non-grazed, HSG B
1.800	58.61	Weighted Average
1.800		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.63	508	0.2500	1.28		Lag/CN Method,
16.66	449	0.0325	0.45		Lag/CN Method,
5.61	270	0.1270	0.80		Lag/CN Method,
28.90	1,227	Total			

### Subcatchment PR: WS\_Basin

#### Hydrograph



## hn\_basin

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Site WS1 - IMP

Type III 24-hr 2 Rainfall=3.42"

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Page 4

### Summary for Subcatchment PR1: PR WS1\_w\_Impervious

Runoff = 2.60 cfs @ 12.48 hrs, Volume= 0.383 af, Depth> 0.71"

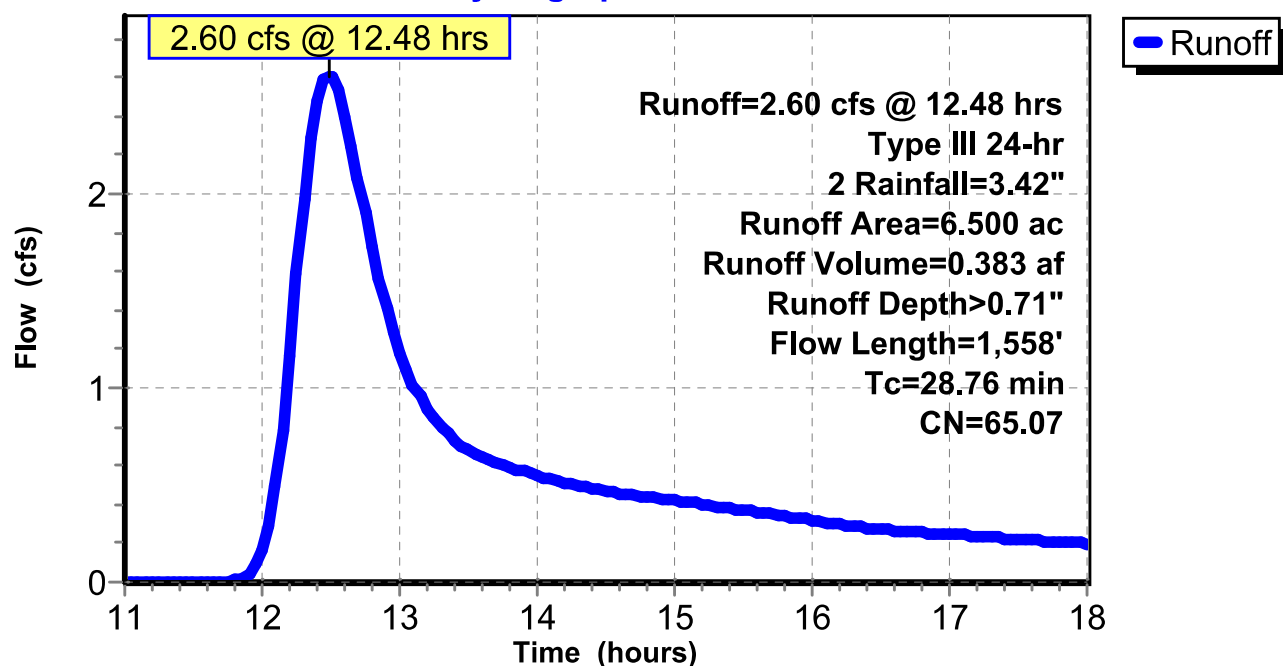
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs  
Type III 24-hr 2 Rainfall=3.42"

Area (ac)	CN	Description
2.000	60.00	Woods, Fair, HSG B
1.750	58.00	Meadow, non-grazed, HSG B
1.500	79.00	Woods, Fair, HSG D
1.040	60.00	Woods, Fair, HSG B
* 0.210	98.00	Impervious - Driveway
6.500	65.07	Weighted Average
6.290		96.77% Pervious Area
0.210		3.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.62	508	0.2500	1.51		Lag/CN Method,
14.12	449	0.0325	0.53		Lag/CN Method,
9.02	601	0.1270	1.11		Lag/CN Method,
28.76	1,558				Total

### Subcatchment PR1: PR WS1\_w\_Impervious

#### Hydrograph



## hn\_basin

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Site WS1 - IMP  
Type III 24-hr 2 Rainfall=3.42"

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### Summary for Pond Basin: Basin

Inflow Area = 1.800 ac, 0.00% Impervious, Inflow Depth > 0.44" for 2 event  
Inflow = 0.35 cfs @ 12.56 hrs, Volume= 0.066 af  
Outflow = 0.33 cfs @ 12.69 hrs, Volume= 0.065 af, Atten= 7%, Lag= 7.7 min  
Primary = 0.16 cfs @ 12.69 hrs, Volume= 0.032 af  
Secondary = 0.16 cfs @ 12.69 hrs, Volume= 0.032 af  
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs  
Peak Elev= 318.25' @ 12.69 hrs Surf.Area= 822 sf Storage= 194 cf

Plug-Flow detention time= 18.4 min calculated for 0.065 af (98% of inflow)  
Center-of-Mass det. time= 10.8 min ( 945.3 - 934.5 )

Volume	Invert	Avail.Storage	Storage Description
#1	318.00'	5,428 cf	<b>Basin (Prismatic)</b> Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
318.00	751	0	0
320.00	1,329	2,080	2,080
322.00	2,019	3,348	5,428

Device	Routing	Invert	Outlet Devices
#1	Primary	318.00'	<b>6.0" Vert. Orifice1</b> C= 0.600 Limited to weir flow at low heads
#2	Secondary	318.00'	<b>6.0" Vert. Orifice2</b> C= 0.600 Limited to weir flow at low heads
#3	Tertiary	321.00'	<b>3.0' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s)

**Primary OutFlow** Max=0.16 cfs @ 12.69 hrs HW=318.25' (Free Discharge)

↑**1=Orifice1** (Orifice Controls 0.16 cfs @ 1.69 fps)

**Secondary OutFlow** Max=0.16 cfs @ 12.69 hrs HW=318.25' (Free Discharge)

↑**2=Orifice2** (Orifice Controls 0.16 cfs @ 1.69 fps)

**Tertiary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=318.00' (Free Discharge)

↑**3=Sharp-Crested Rectangular Weir** ( Controls 0.00 cfs)

# hn\_basin

Prepared by RGMPEPC

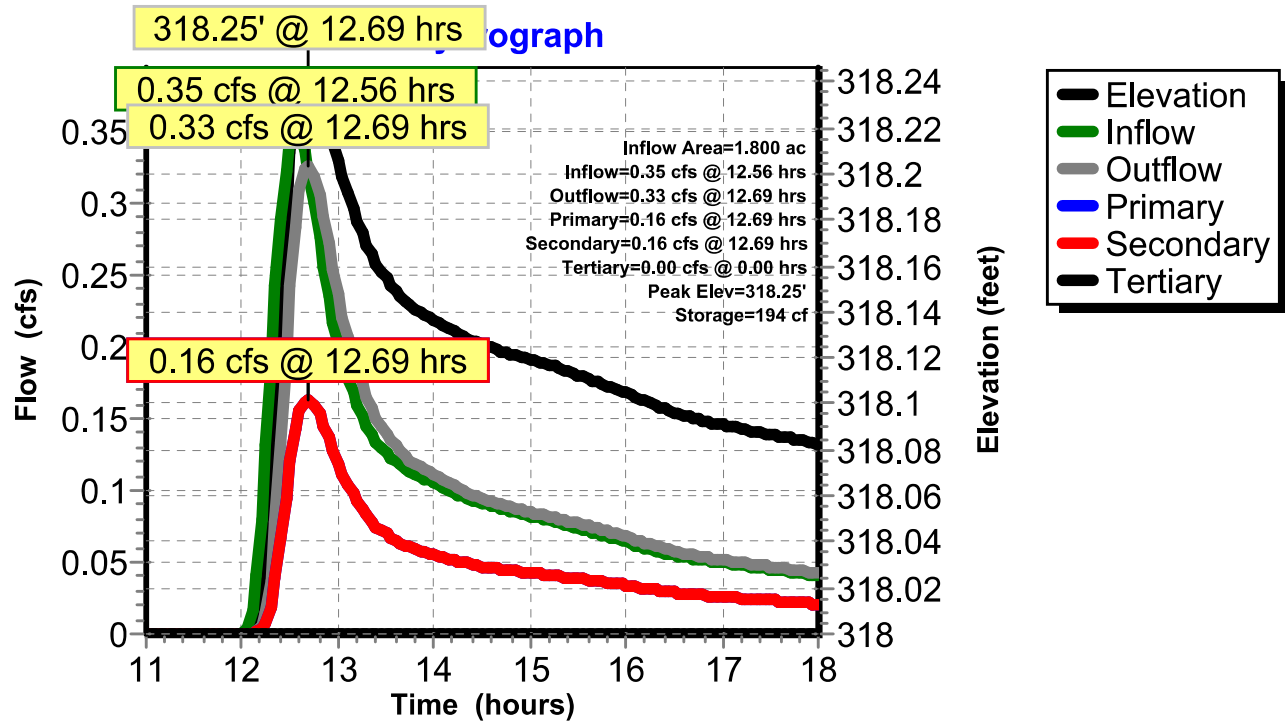
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Site WS1 - IMP  
Type III 24-hr 2 Rainfall=3.42"

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## Pond Basin: Basin



## hn\_basin

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Site WS1 - IMP  
Type III 24-hr 2 Rainfall=3.42"

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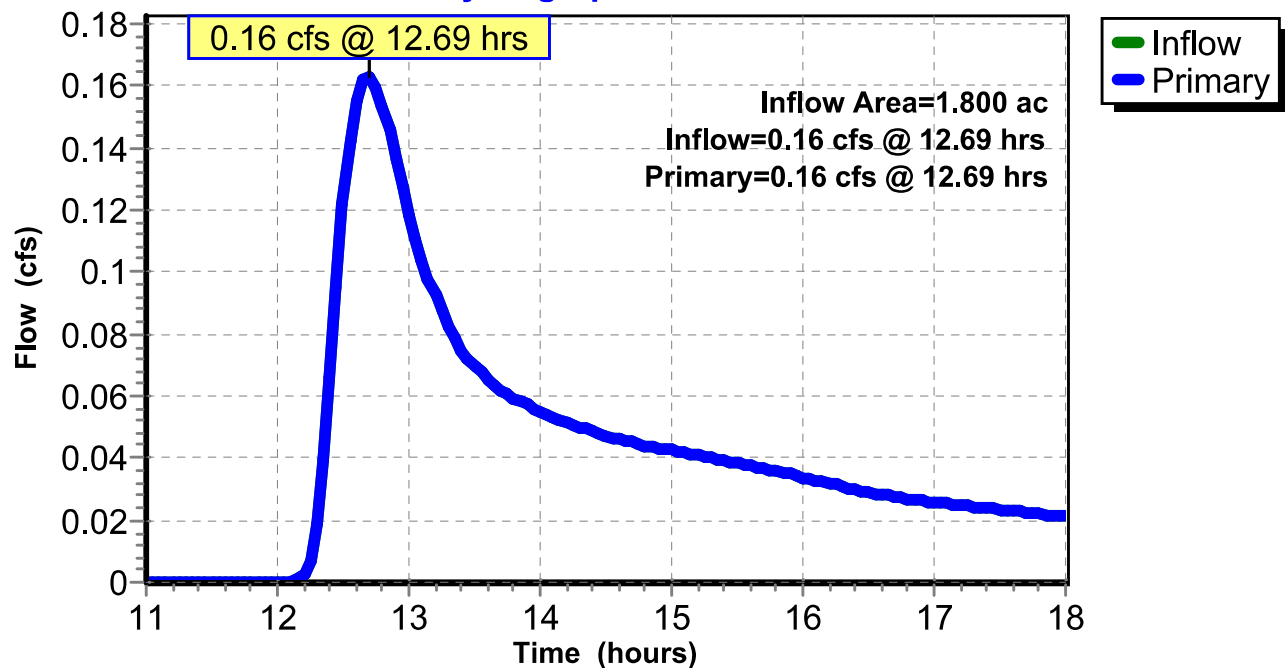
### Summary for Link Orf1: 6" Orifice

Inflow Area = 1.800 ac, 0.00% Impervious, Inflow Depth > 0.22" for 2 event  
Inflow = 0.16 cfs @ 12.69 hrs, Volume= 0.032 af  
Primary = 0.16 cfs @ 12.69 hrs, Volume= 0.032 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

### Link Orf1: 6" Orifice

#### Hydrograph



## hn\_basin

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Site WS1 - IMP  
Type III 24-hr 2 Rainfall=3.42"

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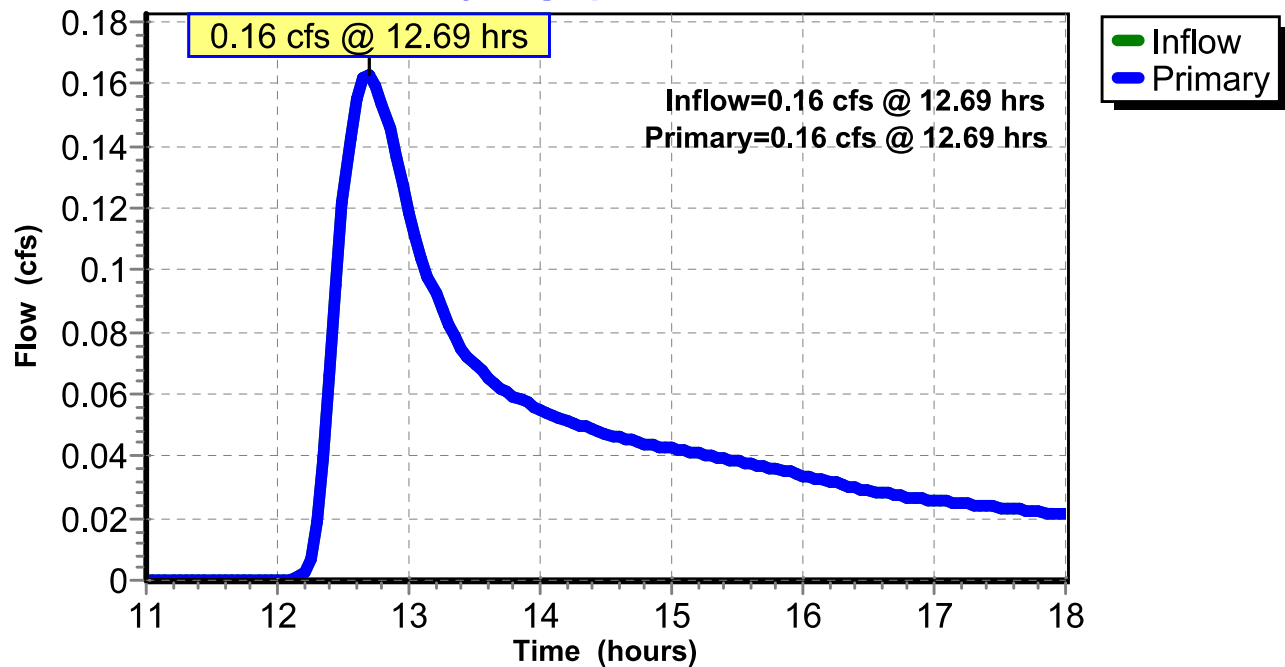
### Summary for Link Orf2: 6" Orifice

Inflow = 0.16 cfs @ 12.69 hrs, Volume= 0.032 af  
Primary = 0.16 cfs @ 12.69 hrs, Volume= 0.032 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

### Link Orf2: 6" Orifice

#### Hydrograph





## hn\_basin

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Site WS1 - IMP

Type III 24-hr 2 Rainfall=3.42"

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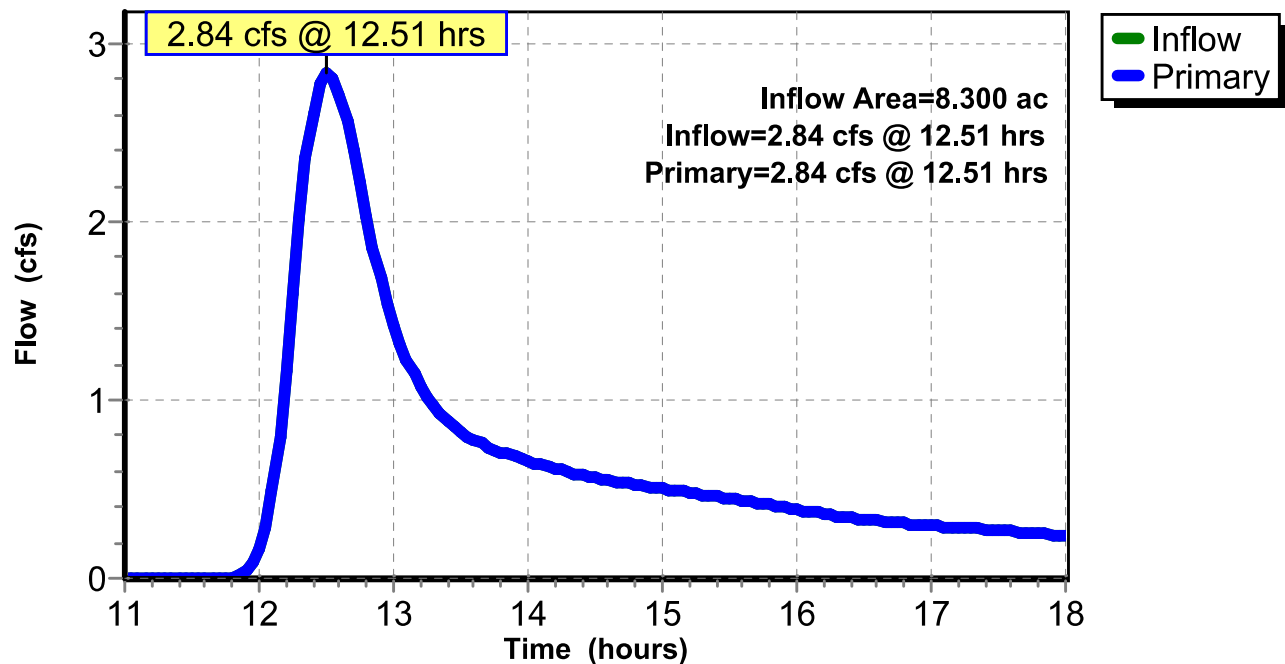
### Summary for Link Total: Total DP1

Inflow Area = 8.300 ac, 2.53% Impervious, Inflow Depth > 0.65" for 2 event  
Inflow = 2.84 cfs @ 12.51 hrs, Volume= 0.448 af  
Primary = 2.84 cfs @ 12.51 hrs, Volume= 0.448 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

### Link Total: Total DP1

#### Hydrograph



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Site WS1 - IMP

Type III 24-hr 2 Rainfall=3.42"

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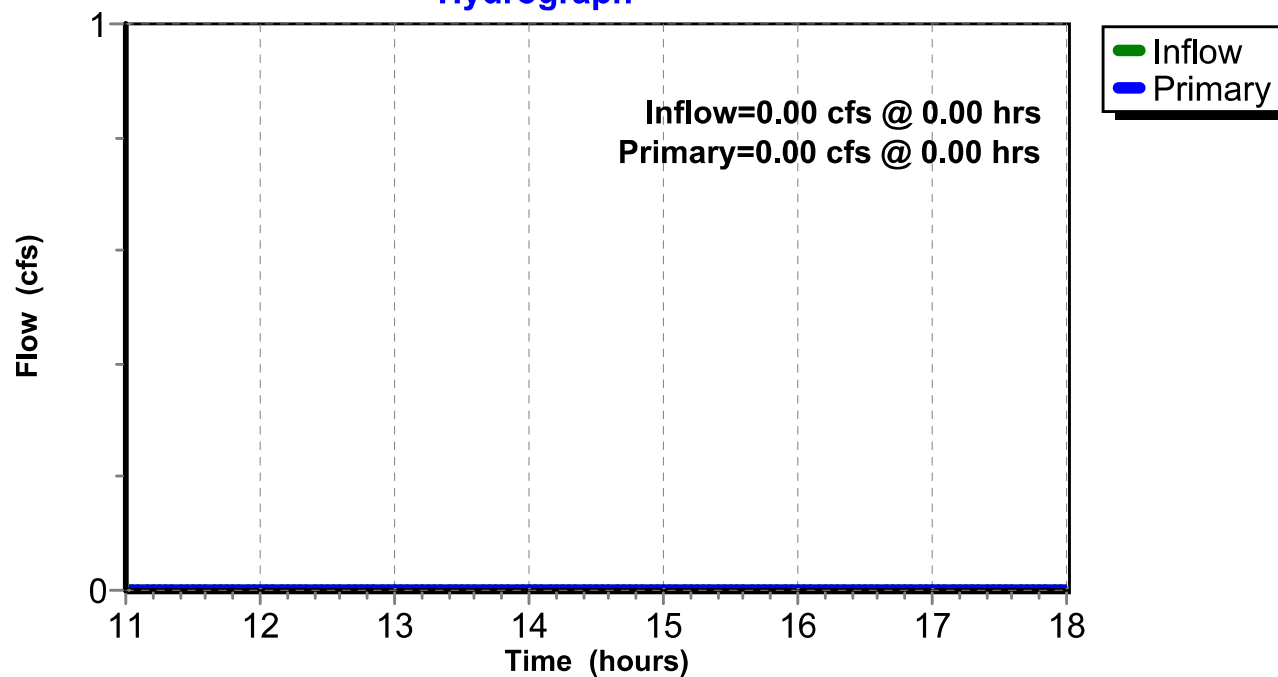
### Summary for Link Weir: Weir Outflow

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af  
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

### Link Weir: Weir Outflow

#### Hydrograph



## hn\_basin

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Site WS1 - IMP

Type III 24-hr 10 Rainfall=5.13"

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### Summary for Subcatchment EX1\_IMP: WS1\_w\_Impervious

Runoff = 8.93 cfs @ 12.44 hrs, Volume= 1.164 af, Depth> 1.68"

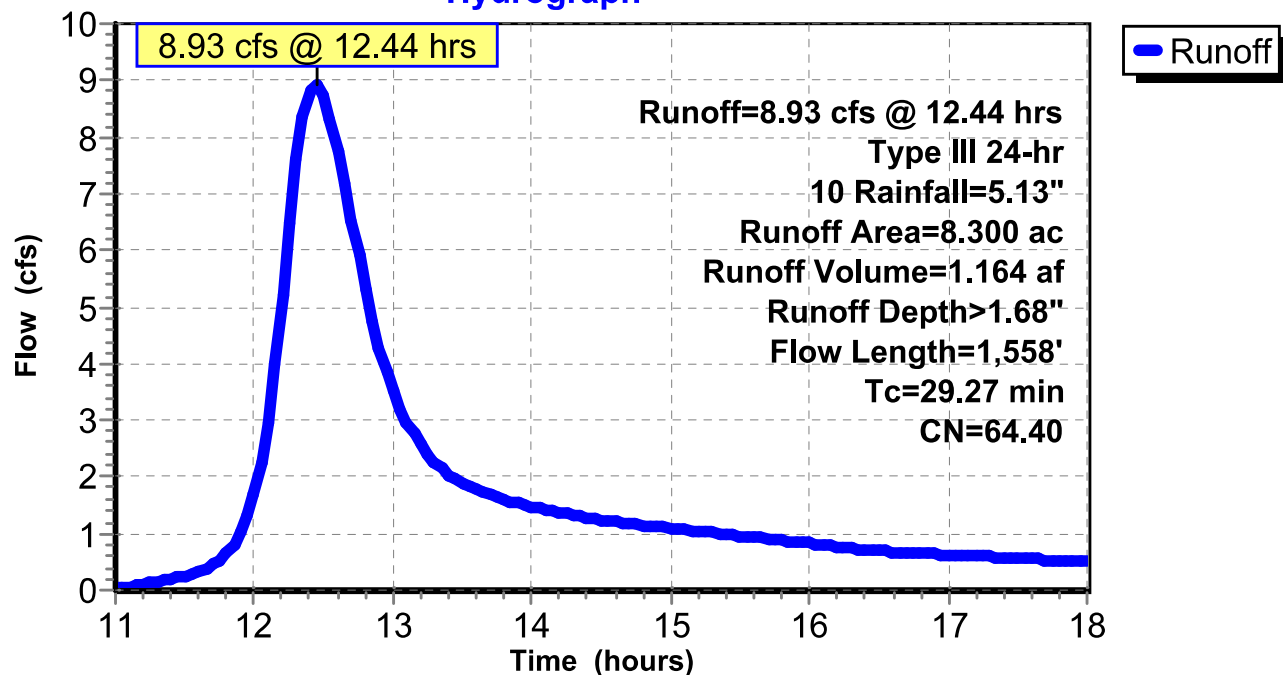
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10 Rainfall=5.13"

Area (ac)	CN	Description
2.000	60.00	Woods, Fair, HSG B
4.590	60.00	Woods, Fair, HSG B
1.500	79.00	Woods, Fair, HSG D
* 0.210	98.00	Driveway - Impervious
8.300	64.40	Weighted Average
8.090		97.47% Pervious Area
0.210		2.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.72	508	0.2500	1.48		Lag/CN Method,
14.37	449	0.0325	0.52		Lag/CN Method,
9.18	601	0.1270	1.09		Lag/CN Method,
29.27	1,558	Total			

### Subcatchment EX1\_IMP: WS1\_w\_Impervious

#### Hydrograph



## hn\_basin

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Site WS1 - IMP

Type III 24-hr 10 Rainfall=5.13"

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### Summary for Subcatchment PR: WS\_Basin

Runoff = 1.37 cfs @ 12.46 hrs, Volume= 0.191 af, Depth> 1.27"

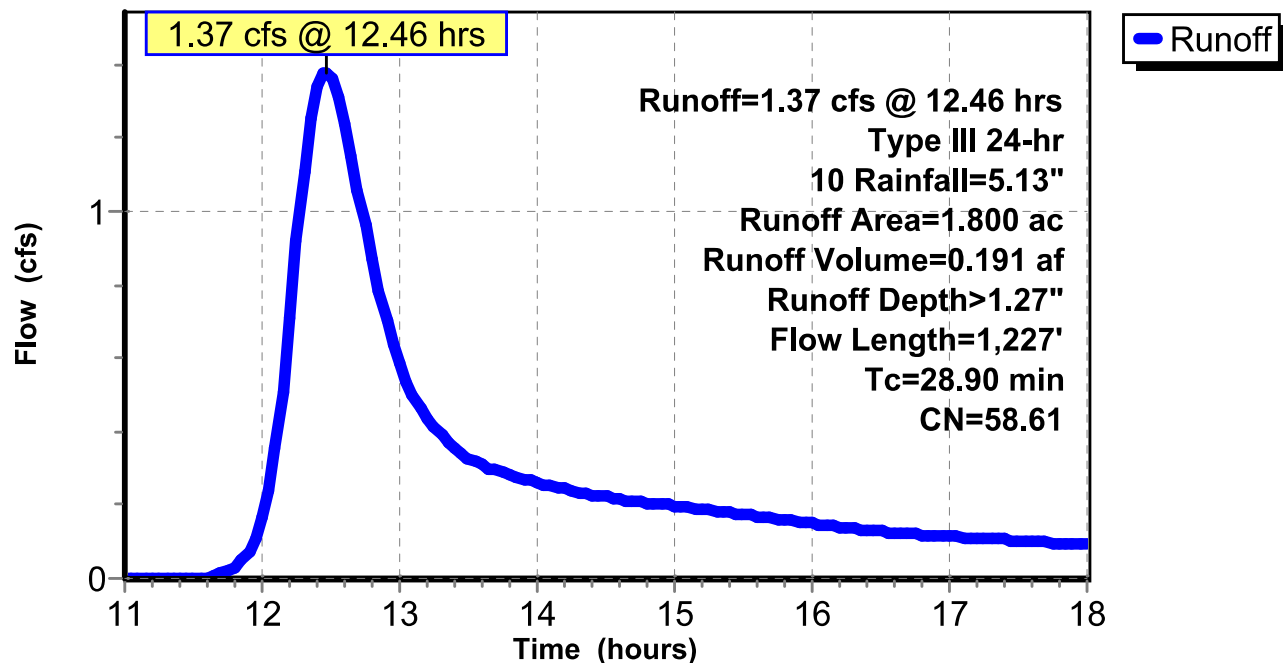
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10 Rainfall=5.13"

Area (ac)	CN	Description
0.550	60.00	Woods, Fair, HSG B
1.250	58.00	Meadow, non-grazed, HSG B
1.800	58.61	Weighted Average
1.800		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.63	508	0.2500	1.28		Lag/CN Method,
16.66	449	0.0325	0.45		Lag/CN Method,
5.61	270	0.1270	0.80		Lag/CN Method,
28.90	1,227	Total			

### Subcatchment PR: WS\_Basin

#### Hydrograph



## hn\_basin

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Site WS1 - IMP

Type III 24-hr 10 Rainfall=5.13"

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### Summary for Subcatchment PR1: PR WS1\_w\_Impervious

Runoff = 7.29 cfs @ 12.43 hrs, Volume= 0.939 af, Depth> 1.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs  
Type III 24-hr 10 Rainfall=5.13"

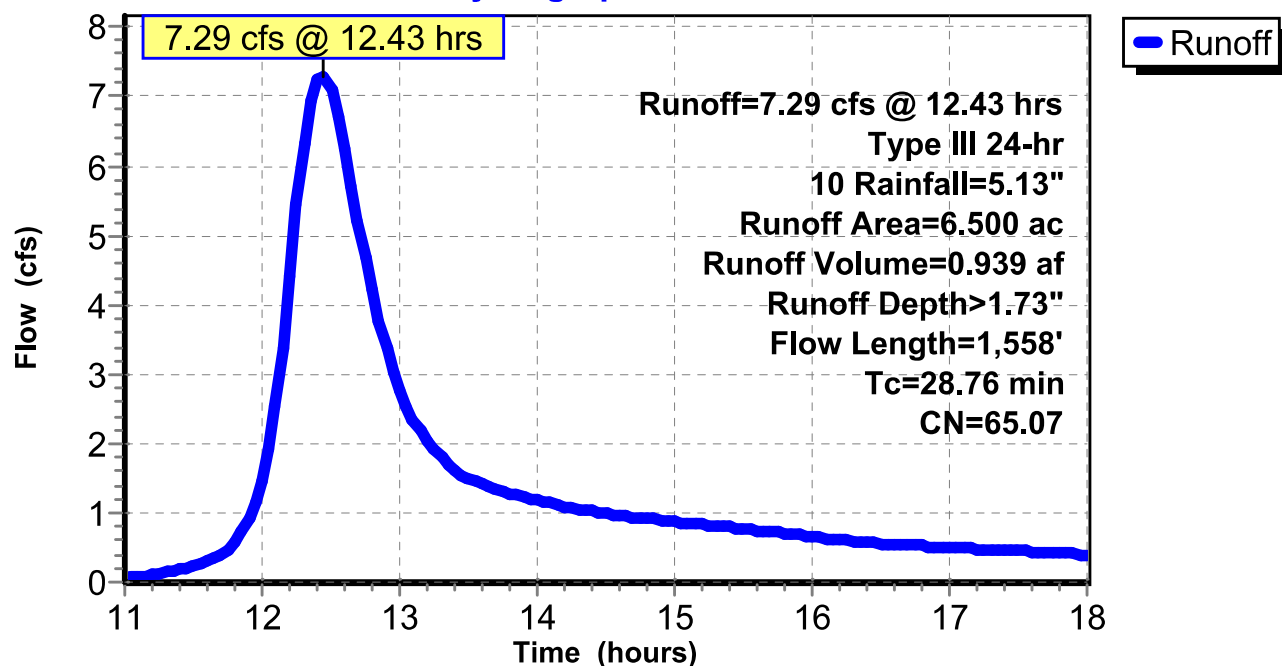
Area (ac)	CN	Description
2.000	60.00	Woods, Fair, HSG B
1.750	58.00	Meadow, non-grazed, HSG B
1.500	79.00	Woods, Fair, HSG D
1.040	60.00	Woods, Fair, HSG B
* 0.210	98.00	Impervious - Driveway
6.500	65.07	Weighted Average
6.290		96.77% Pervious Area
0.210		3.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.62	508	0.2500	1.51		Lag/CN Method,
14.12	449	0.0325	0.53		Lag/CN Method,
9.02	601	0.1270	1.11		Lag/CN Method,
28.76	1,558	Total			

### Subcatchment PR1: PR WS1\_w\_Impervious

#### Hydrograph



## hn\_basin

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Site WS1 - IMP

Type III 24-hr 10 Rainfall=5.13"

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### Summary for Pond Basin: Basin

Inflow Area = 1.800 ac, 0.00% Impervious, Inflow Depth > 1.27" for 10 event  
Inflow = 1.37 cfs @ 12.46 hrs, Volume= 0.191 af  
Outflow = 1.24 cfs @ 12.60 hrs, Volume= 0.189 af, Atten= 10%, Lag= 8.3 min  
Primary = 0.62 cfs @ 12.60 hrs, Volume= 0.095 af  
Secondary = 0.62 cfs @ 12.60 hrs, Volume= 0.095 af  
Tertiary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs  
Peak Elev= 318.68' @ 12.60 hrs Surf.Area= 947 sf Storage= 575 cf

Plug-Flow detention time= 11.6 min calculated for 0.189 af (99% of inflow)  
Center-of-Mass det. time= 7.2 min ( 901.5 - 894.3 )

Volume	Invert	Avail.Storage	Storage Description
#1	318.00'	5,428 cf	<b>Basin (Prismatic)</b> Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
318.00	751	0	0
320.00	1,329	2,080	2,080
322.00	2,019	3,348	5,428

Device	Routing	Invert	Outlet Devices
#1	Primary	318.00'	<b>6.0" Vert. Orifice1</b> C= 0.600 Limited to weir flow at low heads
#2	Secondary	318.00'	<b>6.0" Vert. Orifice2</b> C= 0.600 Limited to weir flow at low heads
#3	Tertiary	321.00'	<b>3.0' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s)

**Primary OutFlow** Max=0.62 cfs @ 12.60 hrs HW=318.68' (Free Discharge)

↑**1=Orifice1** (Orifice Controls 0.62 cfs @ 3.15 fps)

**Secondary OutFlow** Max=0.62 cfs @ 12.60 hrs HW=318.68' (Free Discharge)

↑**2=Orifice2** (Orifice Controls 0.62 cfs @ 3.15 fps)

**Tertiary OutFlow** Max=0.00 cfs @ 0.00 hrs HW=318.00' (Free Discharge)

↑**3=Sharp-Crested Rectangular Weir**( Controls 0.00 cfs)

hn\_basin

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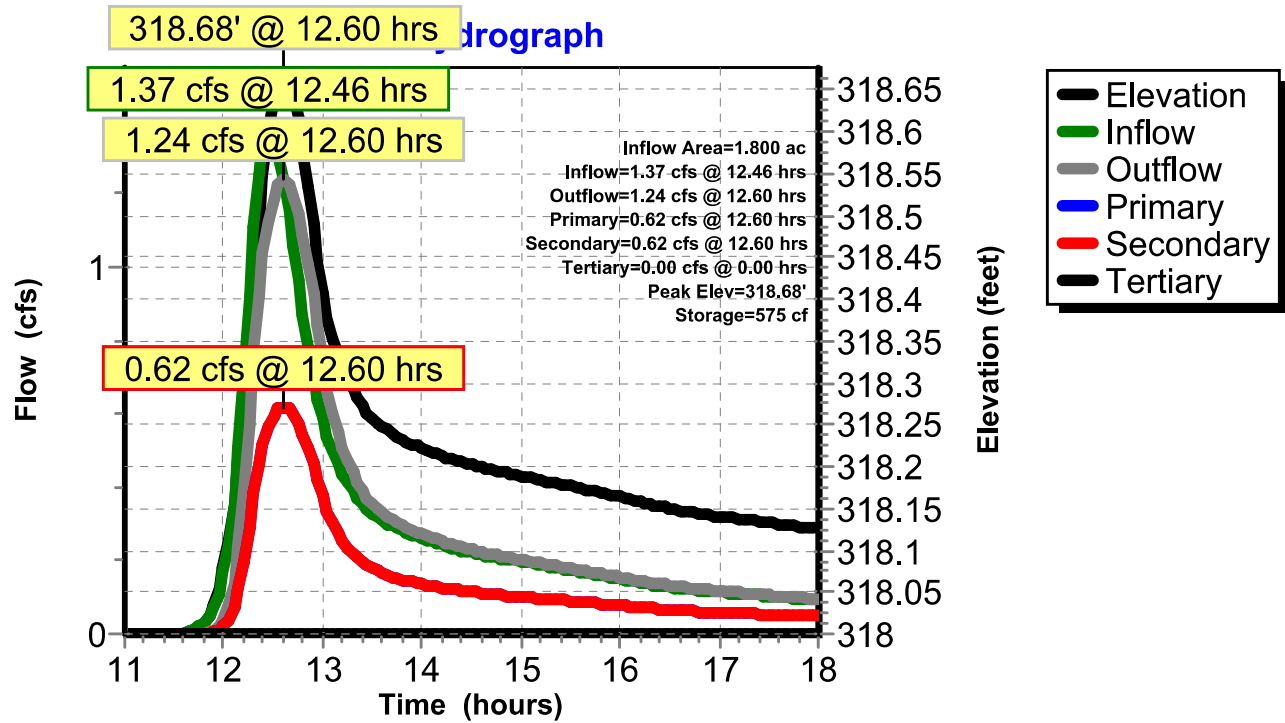
Site WS1 - IMP

Type III 24-hr 10 Rainfall=5.13"

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### Pond Basin: Basin



## hn\_basin

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Site WS1 - IMP

Type III 24-hr 10 Rainfall=5.13"

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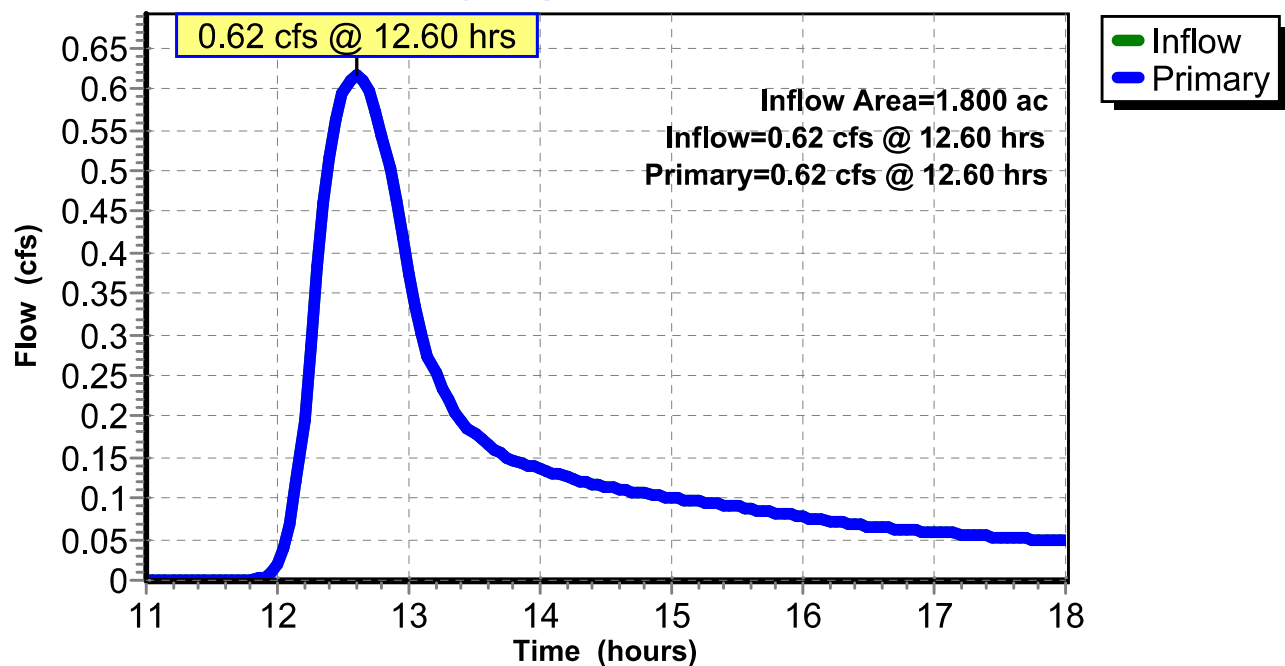
### Summary for Link Orf1: 6" Orifice

Inflow Area = 1.800 ac, 0.00% Impervious, Inflow Depth > 0.63" for 10 event  
Inflow = 0.62 cfs @ 12.60 hrs, Volume= 0.095 af  
Primary = 0.62 cfs @ 12.60 hrs, Volume= 0.095 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

### Link Orf1: 6" Orifice

#### Hydrograph





## hn\_basin

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Site WS1 - IMP

Type III 24-hr 10 Rainfall=5.13"

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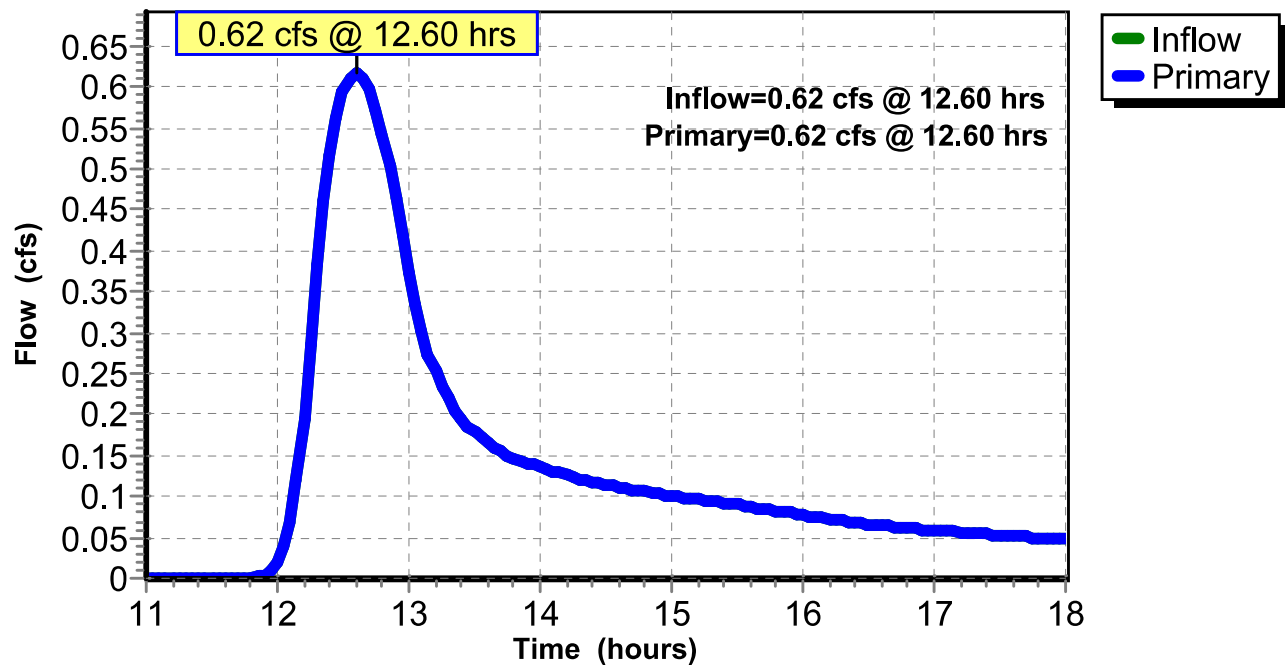
### Summary for Link Orf2: 6" Orifice

Inflow = 0.62 cfs @ 12.60 hrs, Volume= 0.095 af  
Primary = 0.62 cfs @ 12.60 hrs, Volume= 0.095 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

### Link Orf2: 6" Orifice

#### Hydrograph



## hn\_basin

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Site WS1 - IMP  
Type III 24-hr 10 Rainfall=5.13"

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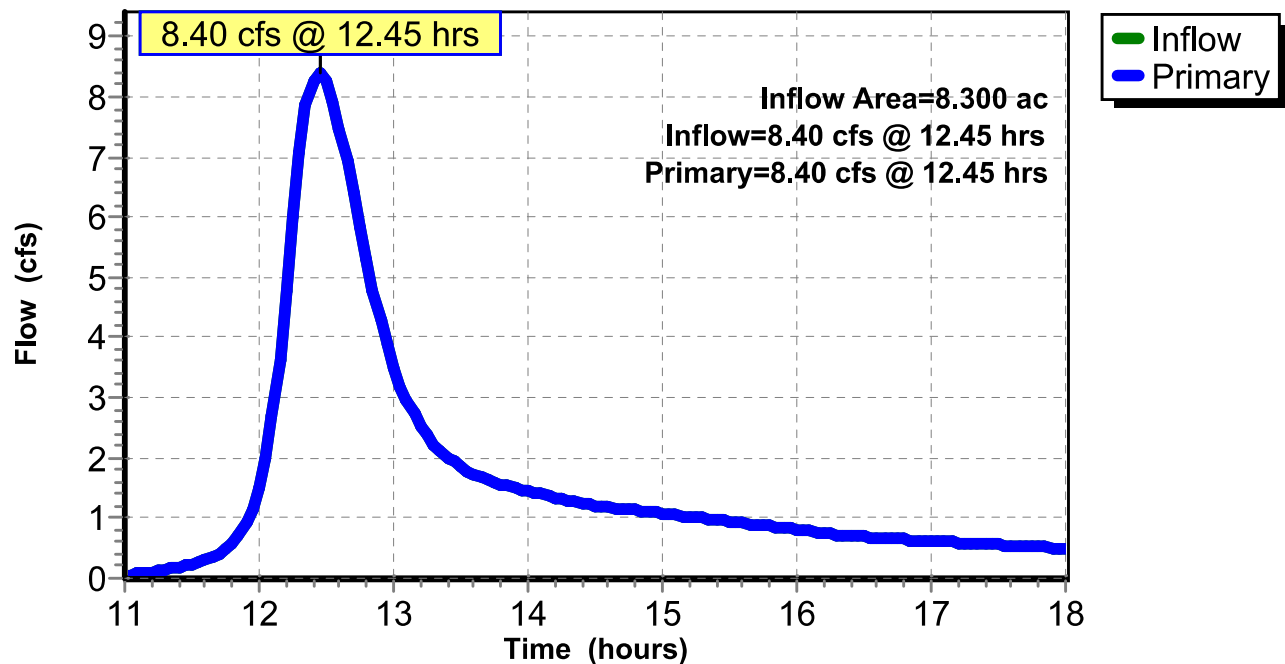
### Summary for Link Total: Total DP1

Inflow Area = 8.300 ac, 2.53% Impervious, Inflow Depth > 1.63" for 10 event  
Inflow = 8.40 cfs @ 12.45 hrs, Volume= 1.128 af  
Primary = 8.40 cfs @ 12.45 hrs, Volume= 1.128 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

### Link Total: Total DP1

#### Hydrograph



## hn\_basin

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Site WS1 - IMP

Type III 24-hr 10 Rainfall=5.13"

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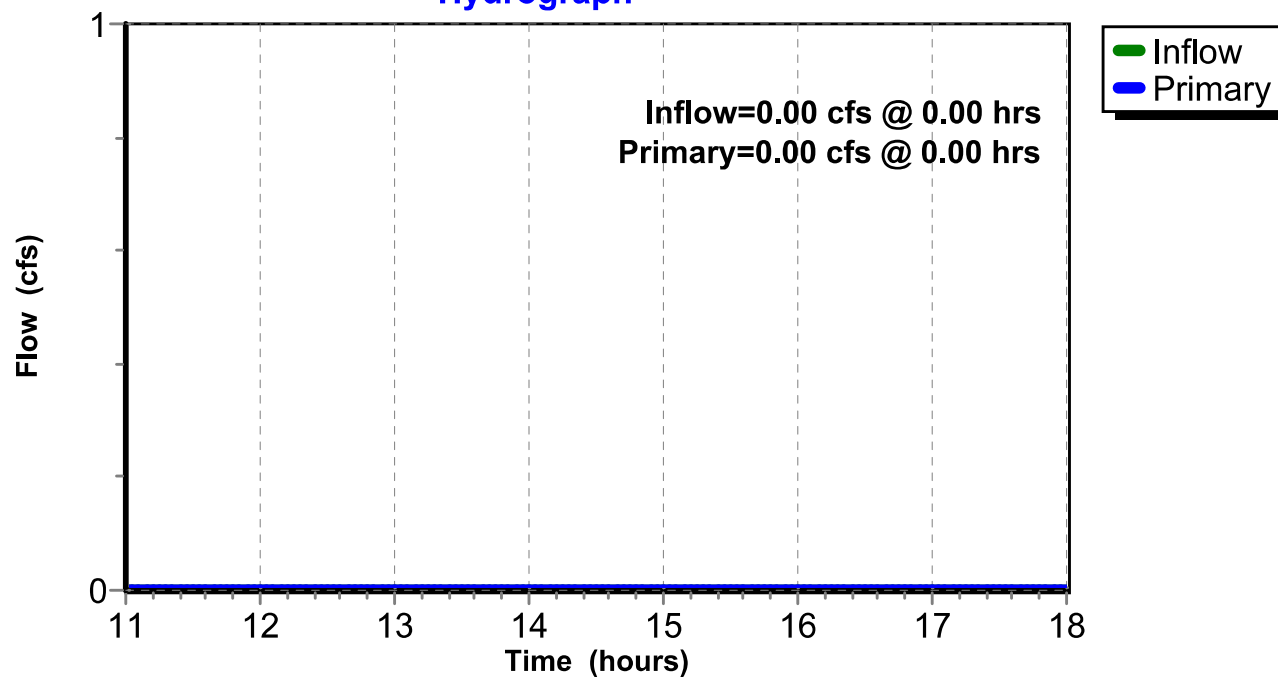
### Summary for Link Weir: Weir Outflow

Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af  
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

### Link Weir: Weir Outflow

#### Hydrograph



## hn\_basin

Prepared by RGMPEPC

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Site WS1 - IMP

Type III 24-hr 100 Rainfall=9.23"

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### Summary for Subcatchment EX1\_IMP: WS1\_w\_Impervious

Runoff = 26.84 cfs @ 12.41 hrs, Volume= 3.324 af, Depth> 4.81"

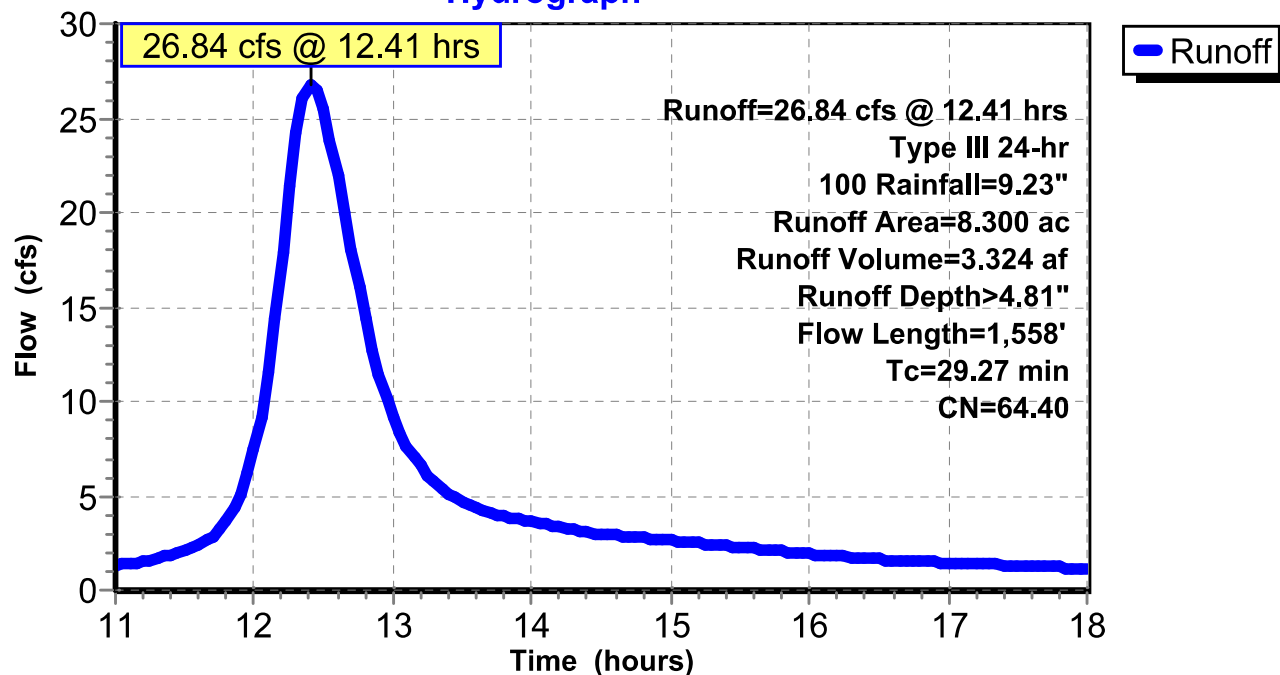
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs  
Type III 24-hr 100 Rainfall=9.23"

Area (ac)	CN	Description
2.000	60.00	Woods, Fair, HSG B
4.590	60.00	Woods, Fair, HSG B
1.500	79.00	Woods, Fair, HSG D
* 0.210	98.00	Driveway - Impervious
8.300	64.40	Weighted Average
8.090		97.47% Pervious Area
0.210		2.53% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.72	508	0.2500	1.48		Lag/CN Method,
14.37	449	0.0325	0.52		Lag/CN Method,
9.18	601	0.1270	1.09		Lag/CN Method,
29.27	1,558	Total			

### Subcatchment EX1\_IMP: WS1\_w\_Impervious

#### Hydrograph



## hn\_basin

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Site WS1 - IMP

Type III 24-hr 100 Rainfall=9.23"

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### Summary for Subcatchment PR: WS\_Basin

Runoff = 4.91 cfs @ 12.42 hrs, Volume= 0.612 af, Depth> 4.08"

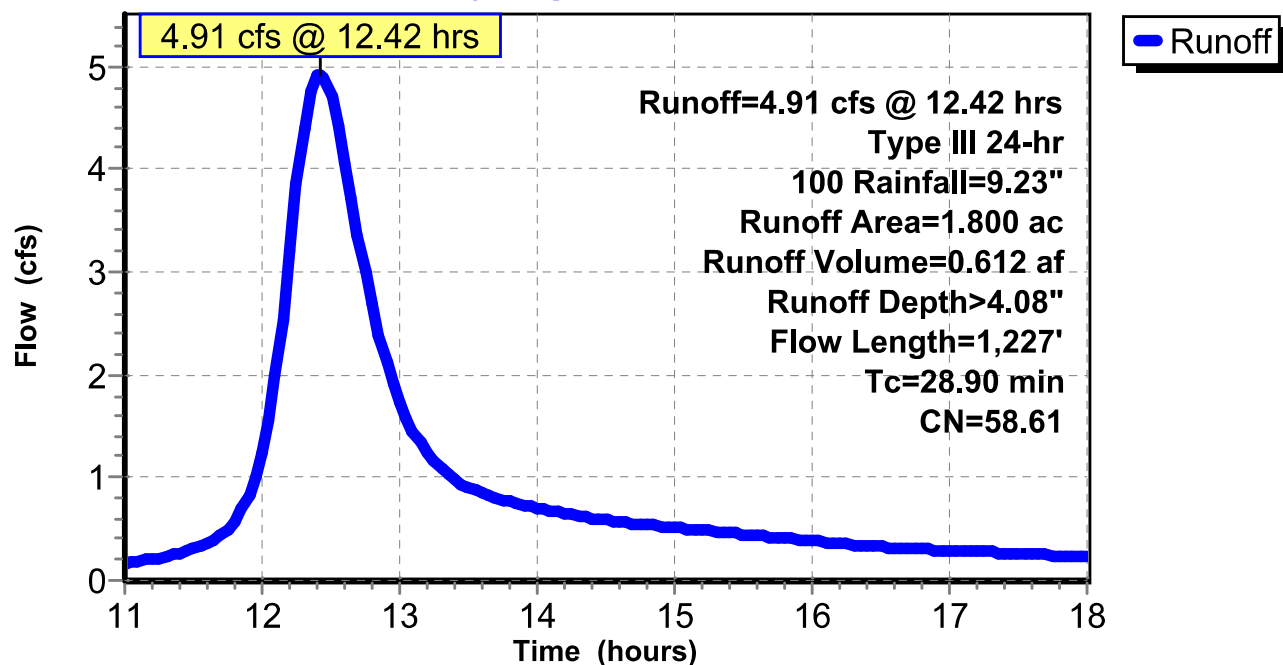
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs  
Type III 24-hr 100 Rainfall=9.23"

Area (ac)	CN	Description
0.550	60.00	Woods, Fair, HSG B
1.250	58.00	Meadow, non-grazed, HSG B
1.800	58.61	Weighted Average
1.800		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.63	508	0.2500	1.28		Lag/CN Method,
16.66	449	0.0325	0.45		Lag/CN Method,
5.61	270	0.1270	0.80		Lag/CN Method,
28.90	1,227	Total			

### Subcatchment PR: WS\_Basin

#### Hydrograph



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Type III 24-hr 100 Rainfall=9.23"

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### Summary for Subcatchment PR1: PR WS1\_w\_Impervious

Runoff = 21.53 cfs @ 12.40 hrs, Volume= 2.649 af, Depth> 4.89"

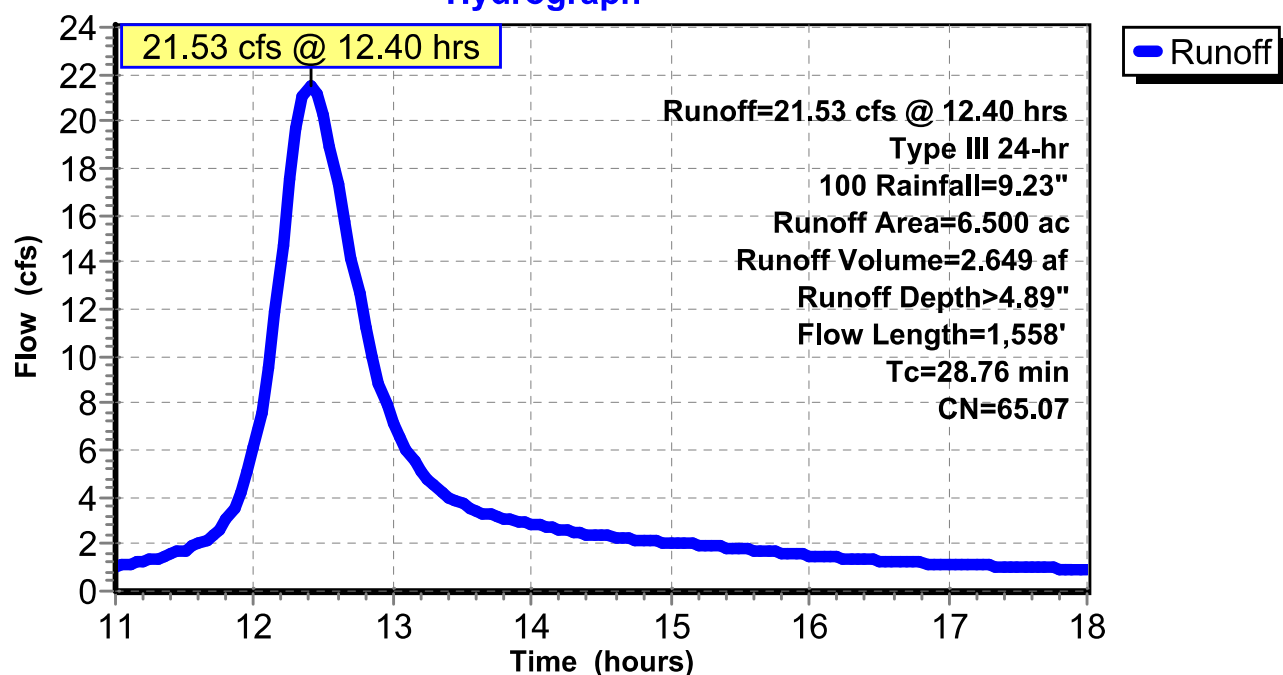
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs  
Type III 24-hr 100 Rainfall=9.23"

Area (ac)	CN	Description
2.000	60.00	Woods, Fair, HSG B
1.750	58.00	Meadow, non-grazed, HSG B
1.500	79.00	Woods, Fair, HSG D
1.040	60.00	Woods, Fair, HSG B
* 0.210	98.00	Impervious - Driveway
6.500	65.07	Weighted Average
6.290		96.77% Pervious Area
0.210		3.23% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.62	508	0.2500	1.51		Lag/CN Method,
14.12	449	0.0325	0.53		Lag/CN Method,
9.02	601	0.1270	1.11		Lag/CN Method,
28.76	1,558				Total

### Subcatchment PR1: PR WS1\_w\_Impervious

#### Hydrograph



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Type III 24-hr 100 Rainfall=9.23"

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**Summary for Pond Basin: Basin**

Inflow Area = 1.800 ac, 0.00% Impervious, Inflow Depth > 4.08" for 100 event  
 Inflow = 4.91 cfs @ 12.42 hrs, Volume= 0.612 af  
 Outflow = 3.49 cfs @ 12.69 hrs, Volume= 0.610 af, Atten= 29%, Lag= 16.1 min  
 Primary = 1.60 cfs @ 12.69 hrs, Volume= 0.303 af  
 Secondary = 1.60 cfs @ 12.69 hrs, Volume= 0.303 af  
 Tertiary = 0.30 cfs @ 12.69 hrs, Volume= 0.004 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs  
 Peak Elev= 321.10' @ 12.69 hrs Surf.Area= 1,708 sf Storage= 3,747 cf

Plug-Flow detention time= 12.7 min calculated for 0.610 af (100% of inflow)  
 Center-of-Mass det. time= 10.4 min ( 869.4 - 859.1 )

Volume	Invert	Avail.Storage	Storage Description
#1	318.00'	5,428 cf	<b>Basin (Prismatic)</b> Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
318.00	751	0	0
320.00	1,329	2,080	2,080
322.00	2,019	3,348	5,428

Device	Routing	Invert	Outlet Devices
#1	Primary	318.00'	<b>6.0" Vert. Orifice1</b> C= 0.600 Limited to weir flow at low heads
#2	Secondary	318.00'	<b>6.0" Vert. Orifice2</b> C= 0.600 Limited to weir flow at low heads
#3	Tertiary	321.00'	<b>3.0' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s)

**Primary OutFlow** Max=1.59 cfs @ 12.69 hrs HW=321.09' (Free Discharge)

↑**1=Orifice1** (Orifice Controls 1.59 cfs @ 8.12 fps)

**Secondary OutFlow** Max=1.59 cfs @ 12.69 hrs HW=321.09' (Free Discharge)

↑**2=Orifice2** (Orifice Controls 1.59 cfs @ 8.12 fps)

**Tertiary OutFlow** Max=0.28 cfs @ 12.69 hrs HW=321.09' (Free Discharge)

↑**3=Sharp-Crested Rectangular Weir**(Weir Controls 0.28 cfs @ 1.01 fps)

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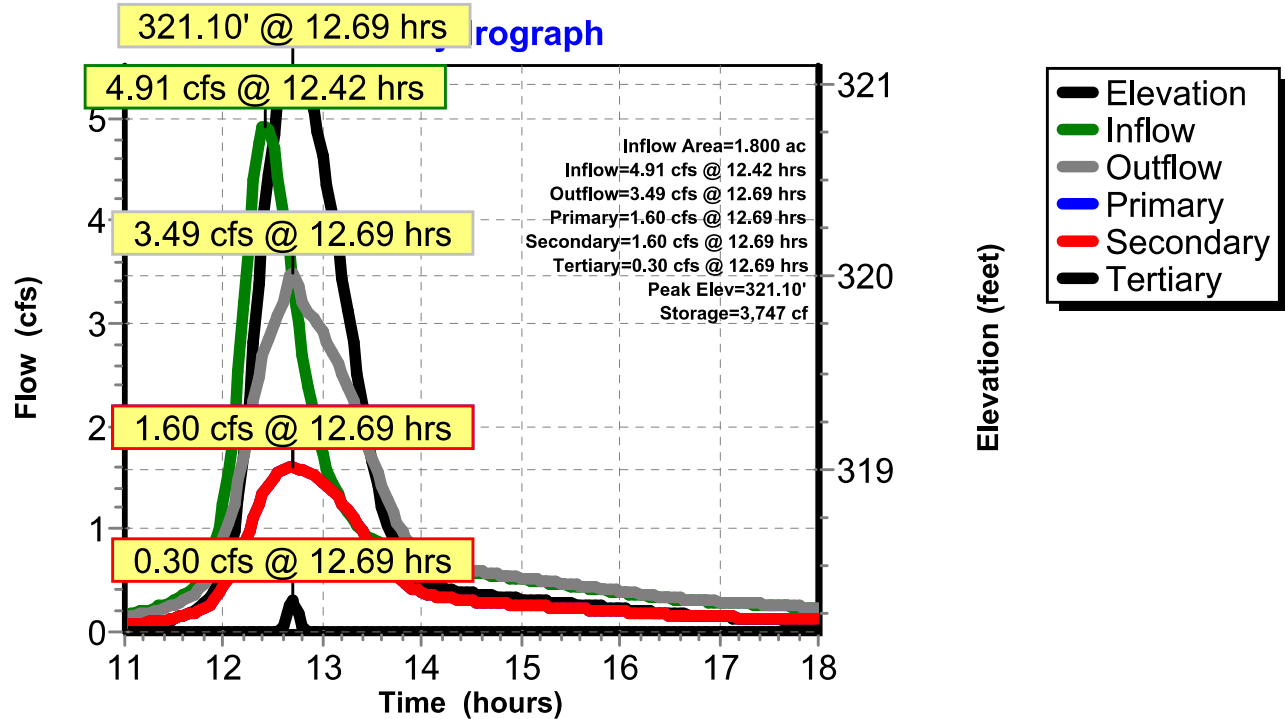
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Type III 24-hr 100 Rainfall=9.23"

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### Pond Basin: Basin





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Site WS1 - IMP

Type III 24-hr 100 Rainfall=9.23"

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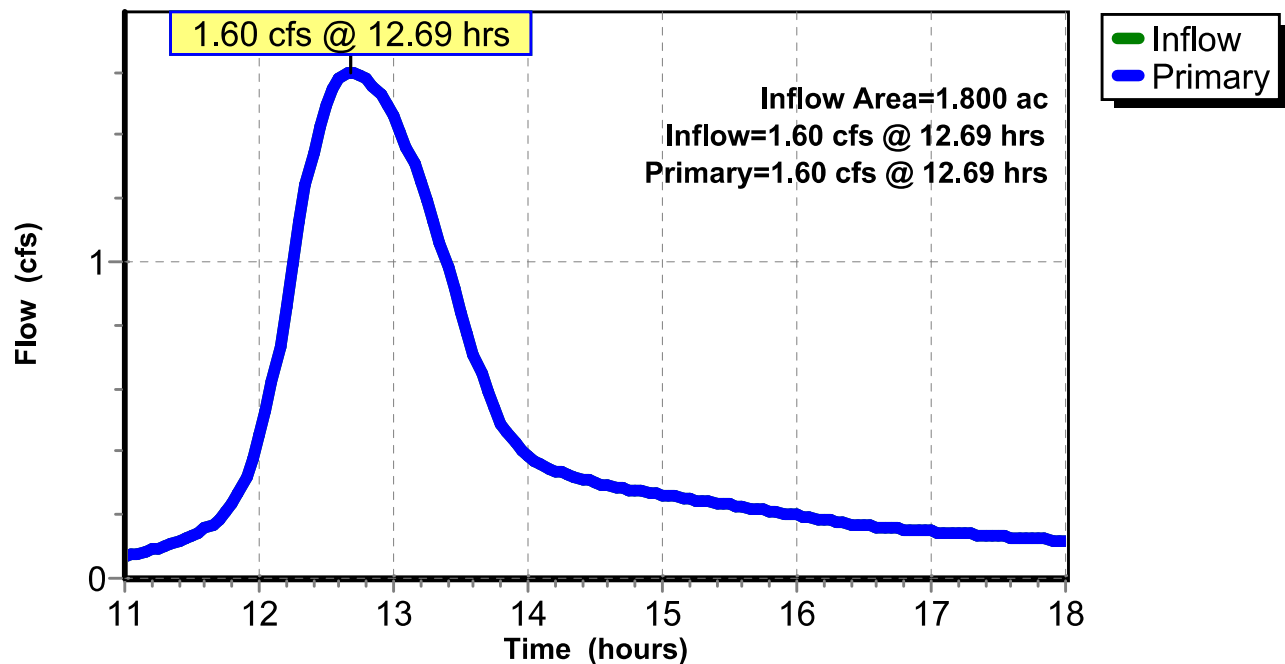
### Summary for Link Orf1: 6" Orifice

Inflow Area = 1.800 ac, 0.00% Impervious, Inflow Depth > 2.02" for 100 event  
Inflow = 1.60 cfs @ 12.69 hrs, Volume= 0.303 af  
Primary = 1.60 cfs @ 12.69 hrs, Volume= 0.303 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

### Link Orf1: 6" Orifice

#### Hydrograph



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Site WS1 - IMP

Type III 24-hr 100 Rainfall=9.23"

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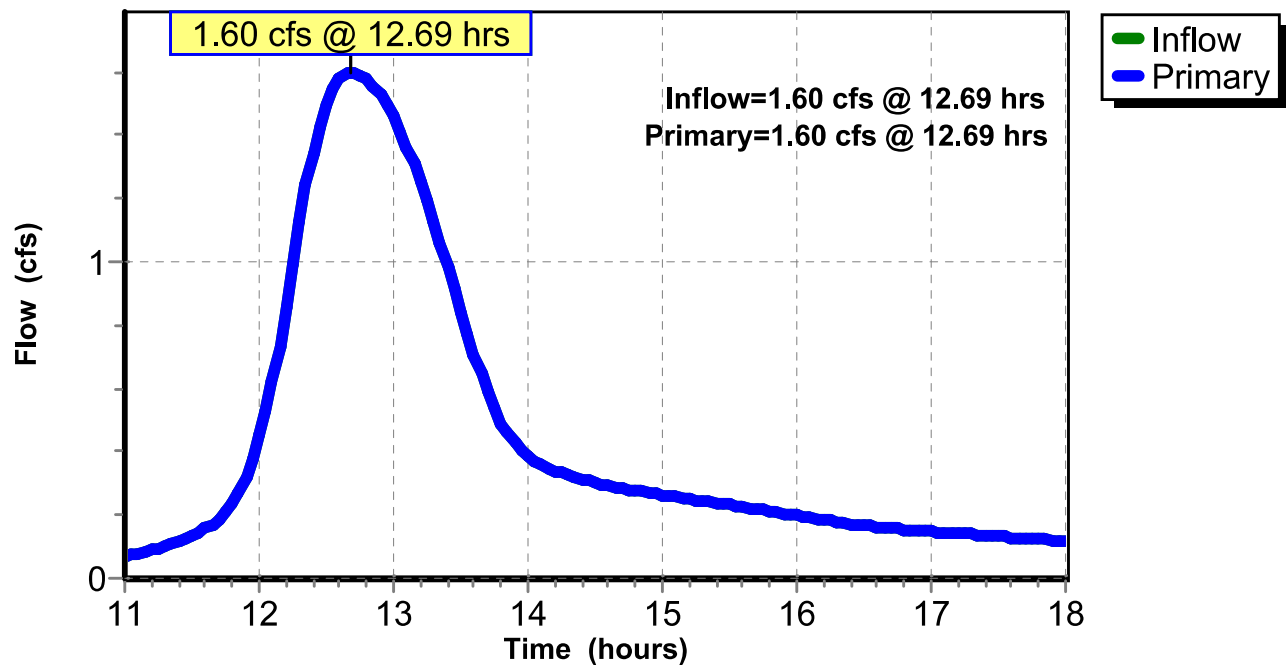
### Summary for Link Orf2: 6" Orifice

Inflow = 1.60 cfs @ 12.69 hrs, Volume= 0.303 af  
Primary = 1.60 cfs @ 12.69 hrs, Volume= 0.303 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

### Link Orf2: 6" Orifice

#### Hydrograph



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Site WS1 - IMP  
Type III 24-hr 100 Rainfall=9.23"

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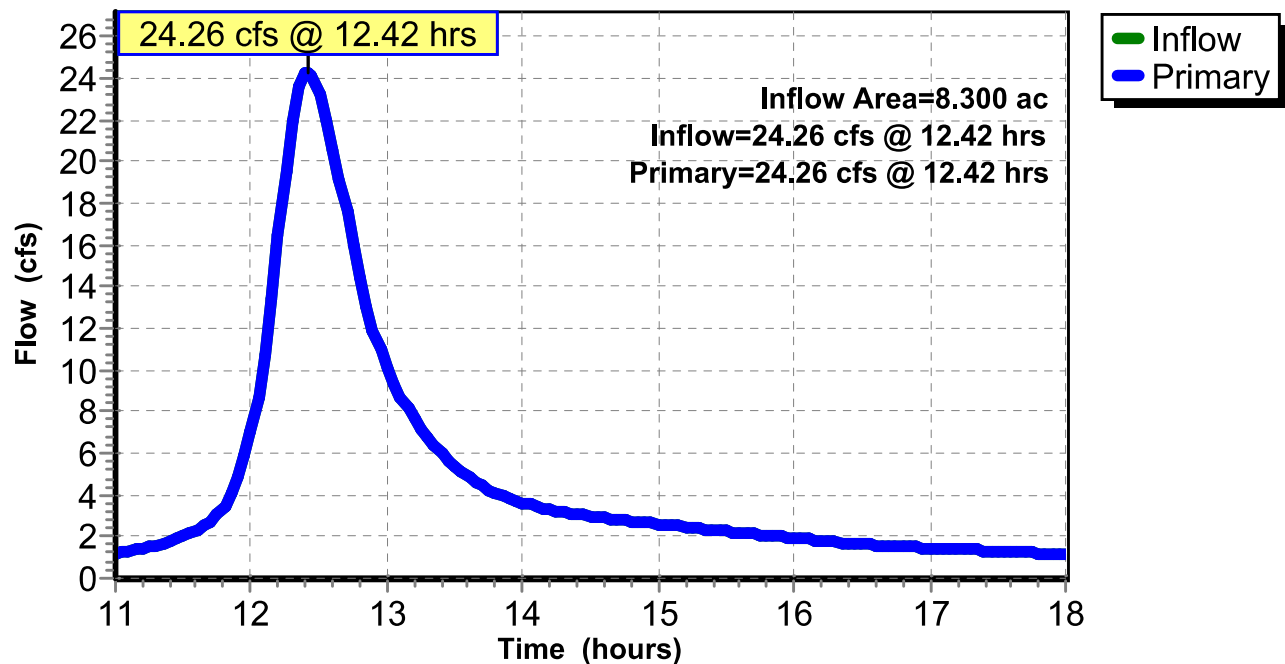
### Summary for Link Total: Total DP1

Inflow Area = 8.300 ac, 2.53% Impervious, Inflow Depth > 4.71" for 100 event  
Inflow = 24.26 cfs @ 12.42 hrs, Volume= 3.259 af  
Primary = 24.26 cfs @ 12.42 hrs, Volume= 3.259 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

### Link Total: Total DP1

#### Hydrograph



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Site WS1 - IMP

Type III 24-hr 100 Rainfall=9.23"

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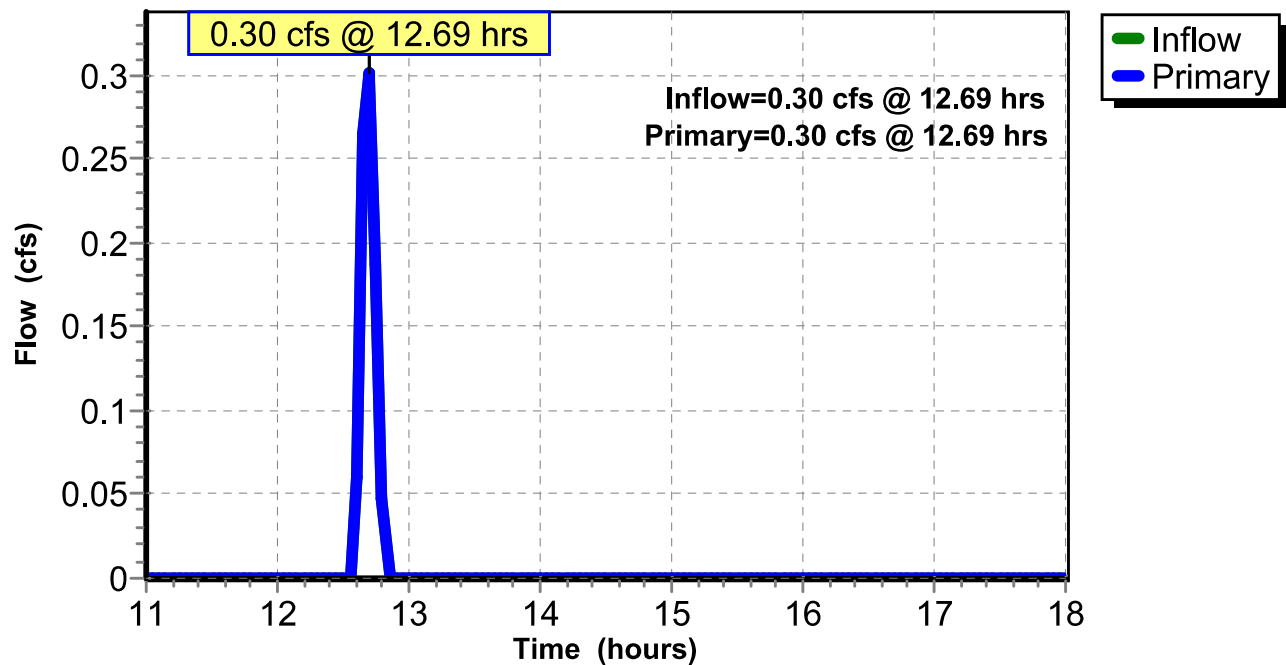
### Summary for Link Weir: Weir Outflow

Inflow = 0.30 cfs @ 12.69 hrs, Volume= 0.004 af  
Primary = 0.30 cfs @ 12.69 hrs, Volume= 0.004 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

### Link Weir: Weir Outflow

#### Hydrograph



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Site WS1 - IMP  
*Multi-Event Tables*

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**Events for Subcatchment EX1\_IMP: WS1\_w\_Impervious**

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
2	3.42	3.10	0.468	0.68
10	5.13	8.93	1.164	1.68
100	<b>9.23</b>	<b>26.84</b>	<b>3.324</b>	<b>4.81</b>

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Site WS1 - IMP  
*Multi-Event Tables*

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**Events for Subcatchment PR: WS\_Basin**

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
2	3.42	0.35	0.066	0.44
10	5.13	1.37	0.191	1.27
100	<b>9.23</b>	<b>4.91</b>	<b>0.612</b>	<b>4.08</b>

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Site WS1 - IMP  
*Multi-Event Tables*

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**Events for Subcatchment PR1: PR WS1\_w\_Impervious**

Event	Rainfall (inches)	Runoff (cfs)	Volume (acre-feet)	Depth (inches)
2	3.42	2.60	0.383	0.71
10	5.13	7.29	0.939	1.73
100	<b>9.23</b>	<b>21.53</b>	<b>2.649</b>	<b>4.89</b>

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*Multi-Event Tables*

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**Events for Pond Basin: Basin**

Event	Inflow (cfs)	Outflow (cfs)	Primary (cfs)	Secondary (cfs)	Tertiary (cfs)	Elevation (feet)	Storage (cubic-feet)
2	0.35	0.33	0.16	0.16	0.00	318.25	194
10	1.37	1.24	0.62	0.62	0.00	318.68	575
100	<b>4.91</b>	<b>3.49</b>	<b>1.60</b>	<b>1.60</b>	<b>0.30</b>	<b>321.10</b>	<b>3,747</b>



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Site WS1 - IMP  
*Multi-Event Tables*

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**Events for Link Orf1: 6" Orifice**

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)
2	0.16	0.16	<b>0.00</b>
10	0.62	0.62	0.00
100	<b>1.60</b>	<b>1.60</b>	0.00

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**Events for Link Orf2: 6" Orifice**

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)
2	0.16	0.16	<b>0.00</b>
10	0.62	0.62	0.00
100	<b>1.60</b>	<b>1.60</b>	0.00

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**Events for Link Total: Total DP1**

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)
2	2.84	2.84	<b>0.00</b>
10	8.40	8.40	0.00
100	<b>24.26</b>	<b>24.26</b>	0.00

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Site WS1 - IMP  
*Multi-Event Tables*

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**Events for Link Weir: Weir Outflow**

Event	Inflow (cfs)	Primary (cfs)	Elevation (feet)
2	0.00	0.00	<b>0.00</b>
10	0.00	0.00	0.00
100	<b>0.30</b>	<b>0.30</b>	0.00