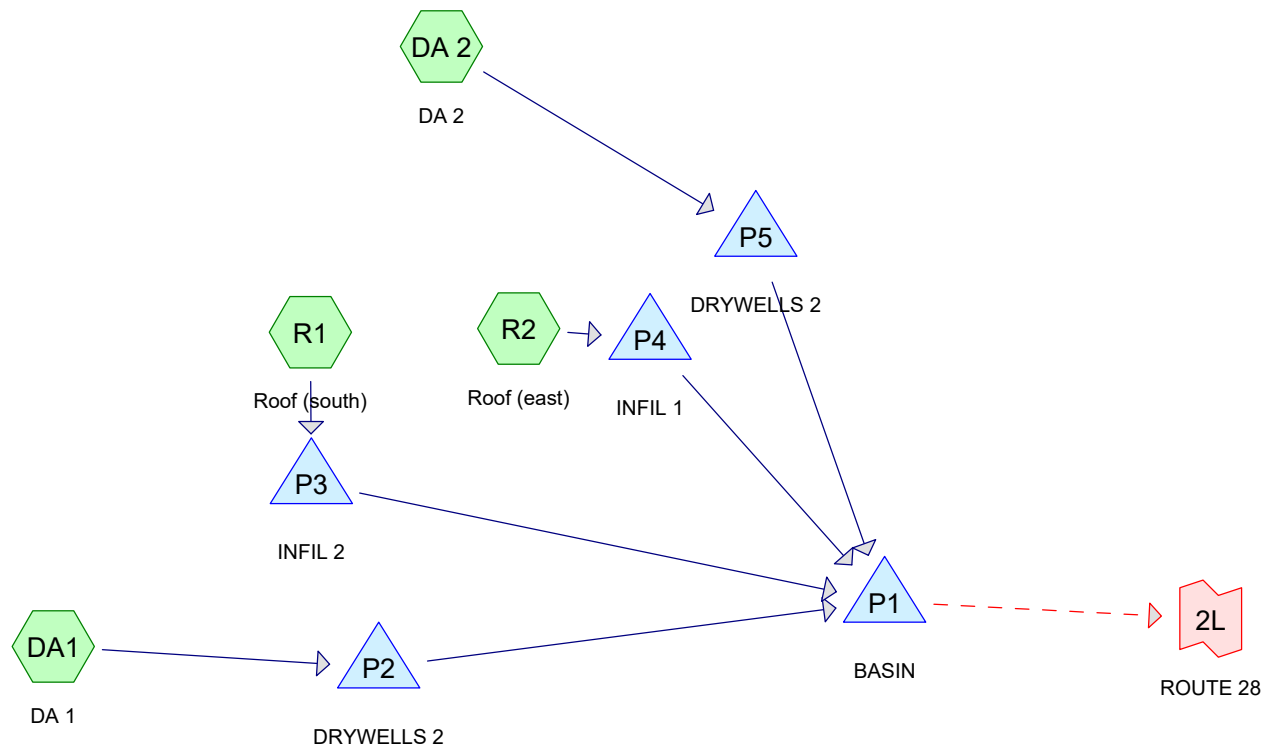
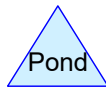
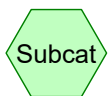




Water Quality Swale



Routing Diagram for Site Hydrology 2
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Site Hydrology 2

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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2 year	Type III 24-hr		Default	24.00	1	3.44	2
2	10 year	Type III 24-hr		Default	24.00	1	5.02	2
3	100 year	Type III 24-hr		Default	24.00	1	7.52	2

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.909	39	>75% Grass cover, Good, HSG A (DA 2, DA1)
1.142	48	Composite CN - Naturalizing area (DA1)
2.394	48	Composite CN for naturalizing area (DA 2)
0.150	39	Grass - stormwater swale (DA1)
1.449	98	Paved parking, HSG A (DA 2, DA1)
0.272	98	Roofs, HSG A (DA 2, DA1)
0.206	98	Stormwater basin when full (DA1)
0.352	98	Unconnected roofs, HSG A (R1, R2)
1.020	30	Woods, Good, HSG A (DA 2, DA1)
7.894	59	TOTAL AREA

Site Hydrology 2

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Type III 24-hr 2 year Rainfall=3.44"

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Summary for Subcatchment DA 2: DA 2

Runoff = 0.17 cfs @ 12.83 hrs, Volume= 0.057 af, Depth= 0.23"
Routed to Pond P5 : DRYWELLS 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs
Type III 24-hr 2 year Rainfall=3.44"

	Area (sf)	CN	Description
	10,475	98	Roofs, HSG A
	3,230	30	Woods, Good, HSG A
*	104,263	48	Composite CN for naturalizing area
	6,288	39	>75% Grass cover, Good, HSG A
	2,076	98	Paved parking, HSG A
	126,332	52	Weighted Average
	113,781		90.07% Pervious Area
	12,551		9.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.6	50	0.1400	0.07		Sheet Flow, Wooded area Woods: Dense underbrush n= 0.800 P2= 2.30"
12.9	569	0.0110	0.73		Shallow Concentrated Flow, Through naturalizing area Short Grass Pasture Kv= 7.0 fps
11.7	176	0.0100	0.25		Shallow Concentrated Flow, Through landscaped area Forest w/Heavy Litter Kv= 2.5 fps
0.3	27	0.0050	1.44		Shallow Concentrated Flow, Across driveway Paved Kv= 20.3 fps
36.5	822	Total			

Site Hydrology 2

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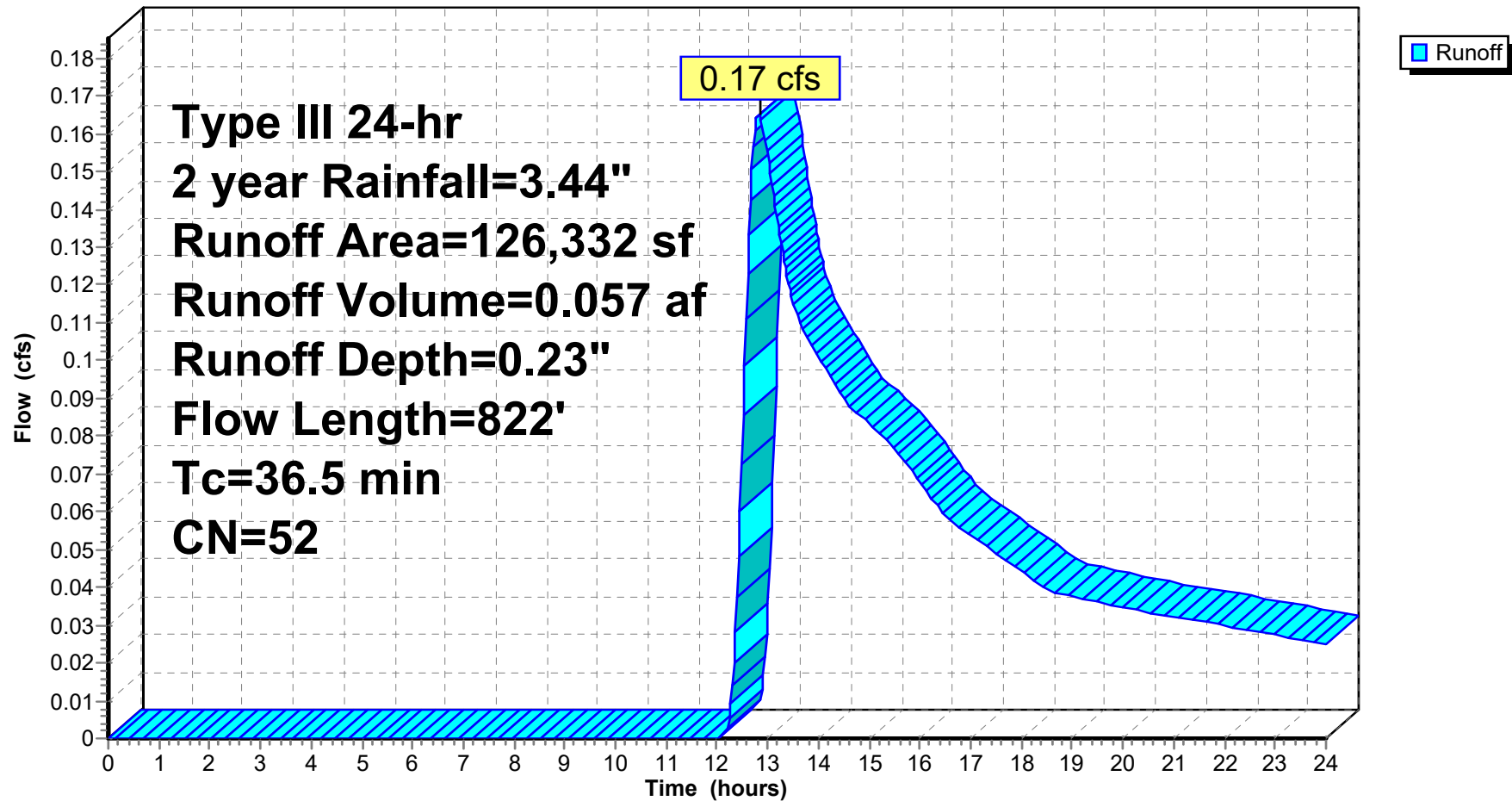
Type III 24-hr 2 year Rainfall=3.44"

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Subcatchment DA 2: DA 2

Hydrograph



Site Hydrology 2

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Type III 24-hr 2 year Rainfall=3.44"

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Summary for Subcatchment DA1: DA 1

Runoff = 1.24 cfs @ 12.41 hrs, Volume= 0.196 af, Depth= 0.51"
Routed to Pond P2 : DRYWELLS 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs
Type III 24-hr 2 year Rainfall=3.44"

Area (sf)	CN	Description
1,353	98	Roofs, HSG A
41,209	30	Woods, Good, HSG A
33,324	39	>75% Grass cover, Good, HSG A
* 49,750	48	Composite CN - Naturalizing area
* 6,552	39	Grass - stormwater swale
61,054	98	Paved parking, HSG A
* 8,960	98	Stormwater basin when full
202,202	60	Weighted Average
130,835		64.71% Pervious Area
71,367		35.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.6	50	0.1400	0.07		Sheet Flow, Woods Woods: Dense underbrush n= 0.800 P2= 2.30"
7.8	373	0.0130	0.80		Shallow Concentrated Flow, Through naturalizing area Short Grass Pasture Kv= 7.0 fps
1.8	211	0.0095	1.98		Shallow Concentrated Flow, Through parking Paved Kv= 20.3 fps
21.2	634	Total			

Site Hydrology 2

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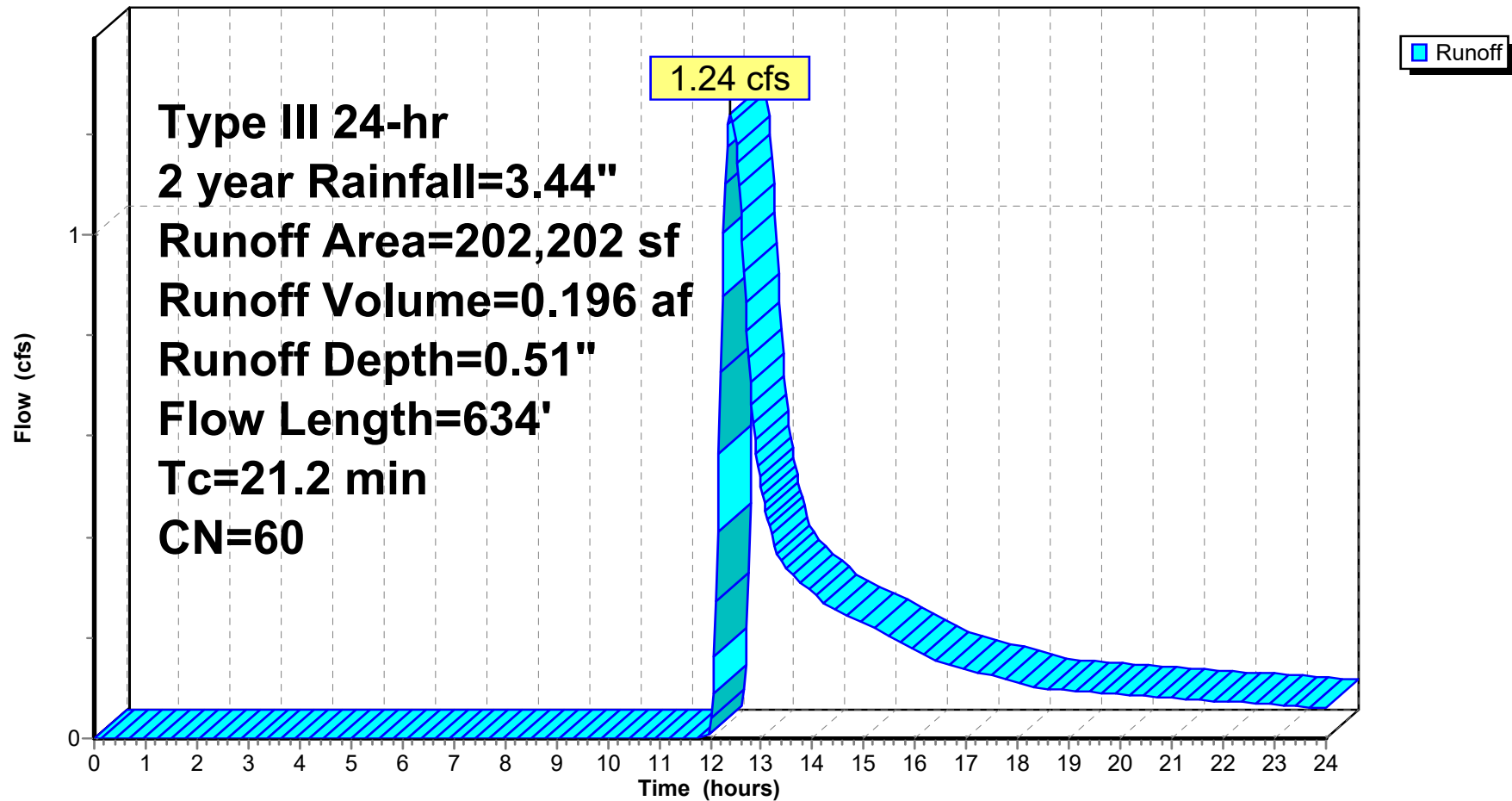
Type III 24-hr 2 year Rainfall=3.44"

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Subcatchment DA1: DA 1

Hydrograph



Site Hydrology 2

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Type III 24-hr 2 year Rainfall=3.44"

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Summary for Subcatchment R1: Roof (south)

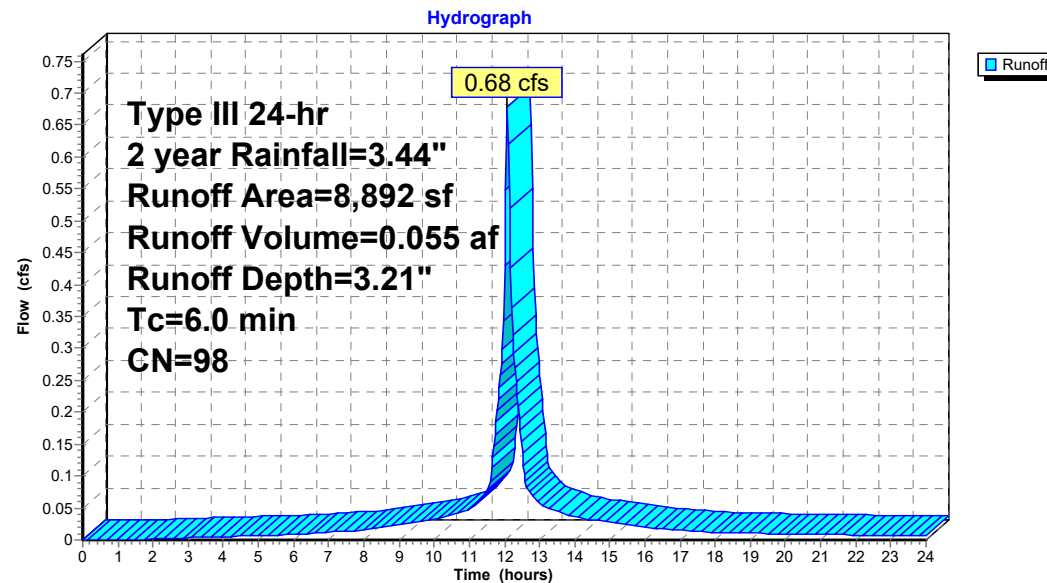
Runoff = 0.68 cfs @ 12.08 hrs, Volume= 0.055 af, Depth= 3.21"
Routed to Pond P3 : INFIL 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs
Type III 24-hr 2 year Rainfall=3.44"

Area (sf)	CN	Description
8,892	98	Unconnected roofs, HSG A
8,892		100.00% Impervious Area
8,892		100.00% Unconnected

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

Subcatchment R1: Roof (south)



Site Hydrology 2

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Type III 24-hr 2 year Rainfall=3.44"

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Summary for Subcatchment R2: Roof (east)

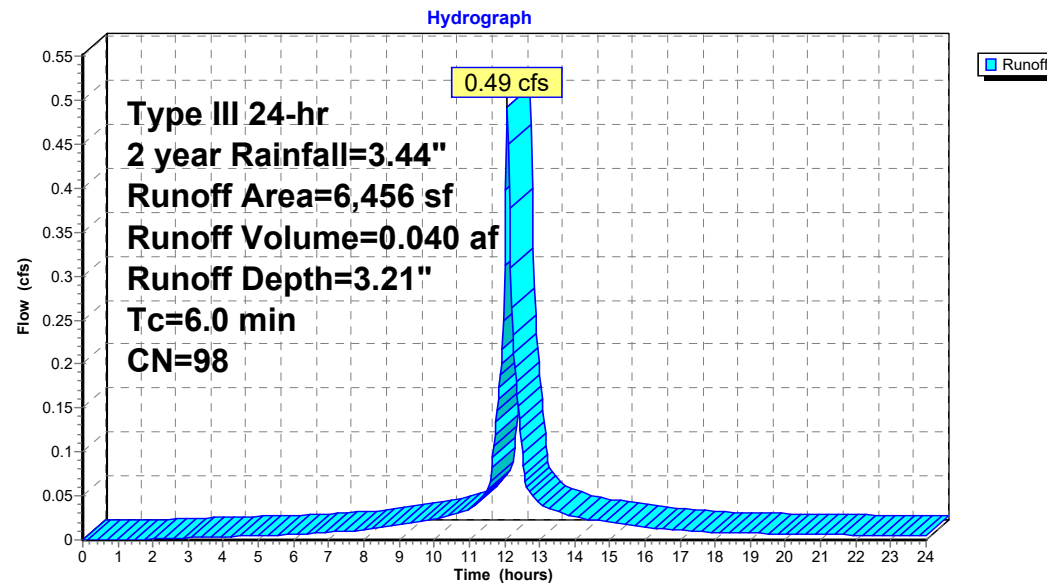
Runoff = 0.49 cfs @ 12.08 hrs, Volume= 0.040 af, Depth= 3.21"
Routed to Pond P4 : INFIL 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs
Type III 24-hr 2 year Rainfall=3.44"

Area (sf)	CN	Description
6,456	98	Unconnected roofs, HSG A
6,456		100.00% Impervious Area
6,456		100.00% Unconnected

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

Subcatchment R2: Roof (east)



Site Hydrology 2

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Type III 24-hr 2 year Rainfall=3.44"

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Summary for Reach REACH: Water Quality Swale

Bank-Full Depth= 2.00' Flow Area= 42.0 sf, Capacity= 102.69 cfs

15.00' x 2.00' deep channel, n= 0.050 Earth, long dense weeds

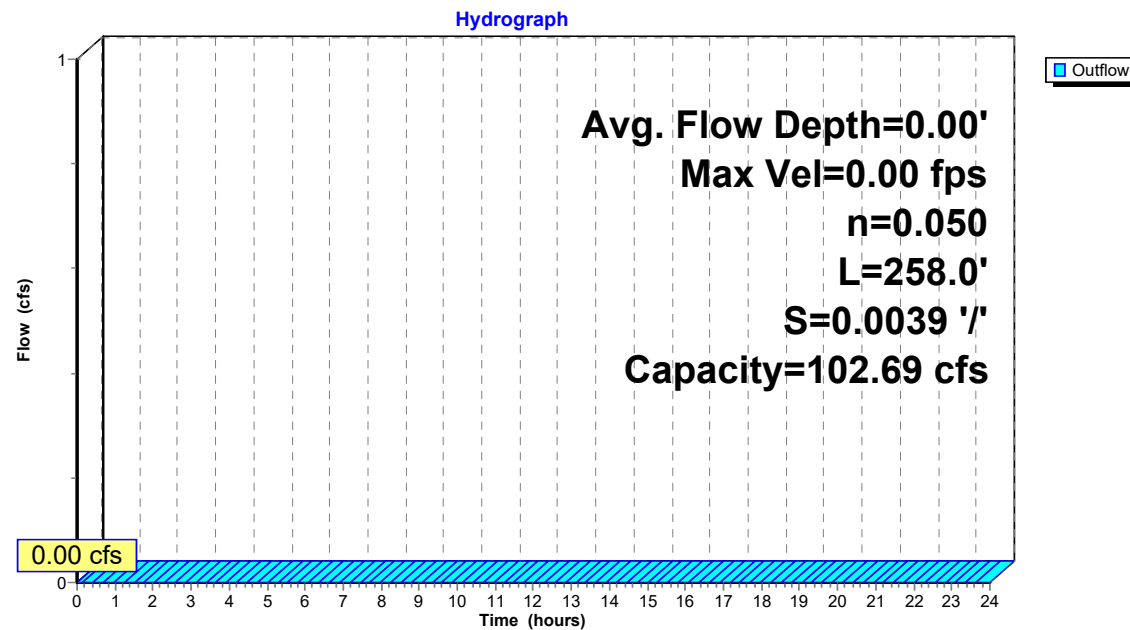
Side Slope Z-value= 3.0 '/' Top Width= 27.00'

Length= 258.0' Slope= 0.0039 '/'

Inlet Invert= 105.00', Outlet Invert= 104.00'



Reach REACH: Water Quality Swale



Site Hydrology 2

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Type III 24-hr 2 year Rainfall=3.44"

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Summary for Pond P1: BASIN

Inflow Area = 7.894 ac, 28.87% Impervious, Inflow Depth = 0.29" for 2 year event
Inflow = 1.24 cfs @ 12.42 hrs, Volume= 0.190 af
Outflow = 1.21 cfs @ 12.58 hrs, Volume= 0.159 af, Atten= 2%, Lag= 9.9 min
Discarded = 1.21 cfs @ 12.58 hrs, Volume= 0.159 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs / 3
Peak Elev= 100.99' @ 12.57 hrs Surf.Area= 509 sf Storage= 1,423 cf

Plug-Flow detention time= 110.4 min calculated for 0.159 af (83% of inflow)
Center-of-Mass det. time= 37.6 min (966.7 - 929.1)

Volume	Invert	Avail.Storage	Storage Description
#1	94.00'	1,425 cf	18.00'D x 7.00'H Drywells - stone around x 2 3,563 cf Overall x 40.0% Voids
#2	101.00'	72,867 cf	Stormwater basin (Prismatic) Listed below (Recalc)
		74,292 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
101.00	3,122	0	0
102.00	4,058	3,590	3,590
103.00	5,053	4,556	8,146
104.00	6,109	5,581	13,727
105.00	8,008	7,059	20,785
105.40	8,960	3,394	24,179
106.00	20,000	8,688	32,867
107.00	60,000	40,000	72,867

Device	Routing	Invert	Outlet Devices
#1	Discarded	94.75'	8.270 in/hr Exfiltration X 2.00 over Surface area from 94.75' - 101.75' Excluded Surface area = 509 sf 8.270 in/hr Exfiltration - pond bottom over Surface area from 103.75' - 105.40' Excluded Surface area = 6,354 sf Phase-In= 0.01'
#2	Discarded	103.75'	
#3	Primary	105.75'	5.0' long x 35.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60

Site Hydrology 2

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Type III 24-hr 2 year Rainfall=3.44"

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Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Discarded OutFlow Max=0.00 cfs @ 12.58 hrs HW=100.99' (Free Discharge)

↑ 1=Exfiltration (Exfiltration Controls 0.00 cfs)

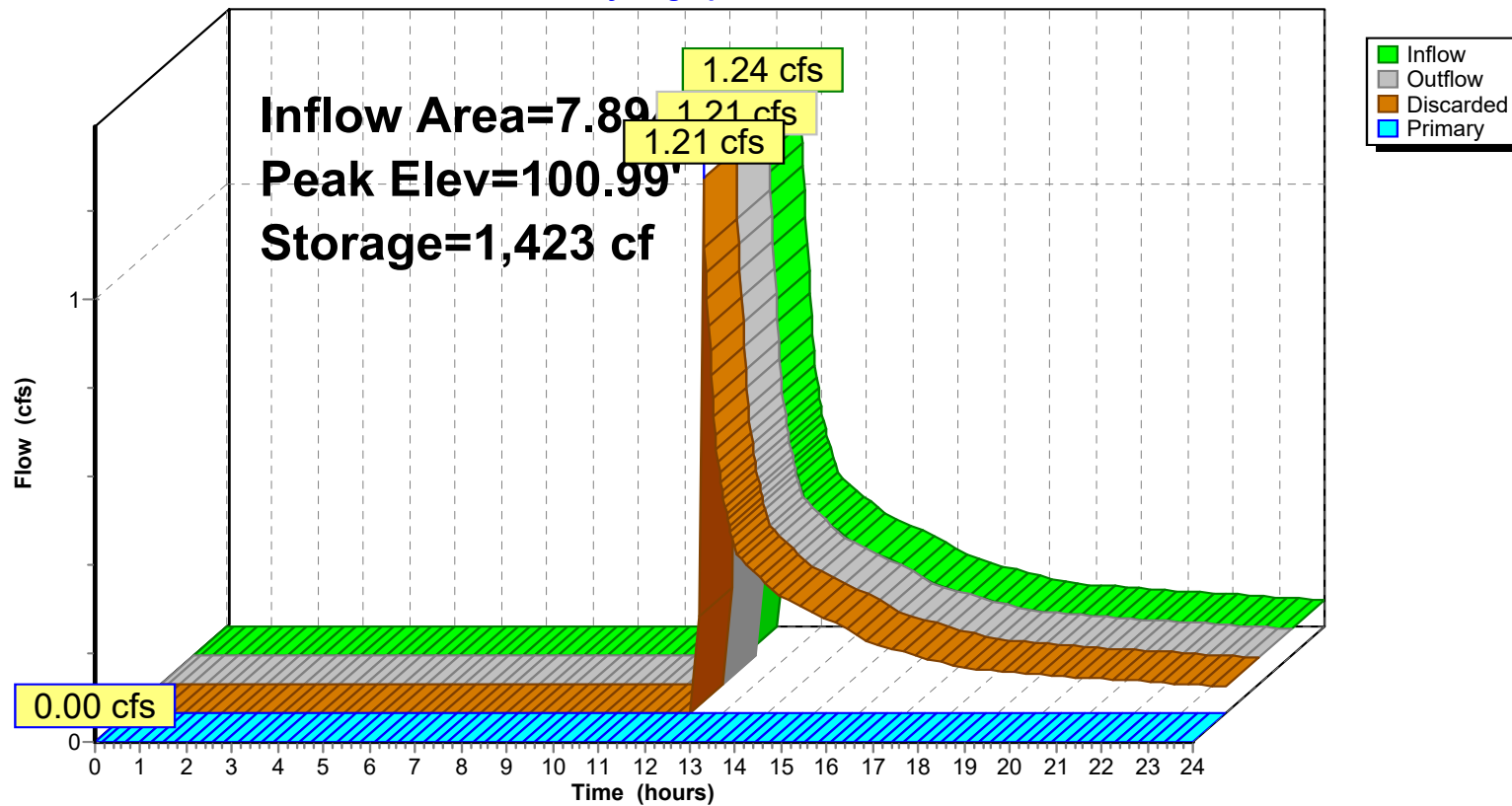
↑ 2=Exfiltration - pond bottom (Controls 0.00 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=94.00' (Free Discharge)

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

Pond P1: BASIN

Hydrograph



Site Hydrology 2

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Type III 24-hr 2 year Rainfall=3.44"

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Summary for Pond P2: DRYWELLS 2

Inflow Area = 4.642 ac, 35.29% Impervious, Inflow Depth = 0.51" for 2 year event
Inflow = 1.24 cfs @ 12.41 hrs, Volume= 0.196 af
Outflow = 1.24 cfs @ 12.42 hrs, Volume= 0.192 af, Atten= 0%, Lag= 0.6 min
Discarded = 0.00 cfs @ 12.21 hrs, Volume= 0.001 af
Primary = 1.24 cfs @ 12.42 hrs, Volume= 0.190 af
Routed to Pond P1 : BASIN

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs / 3
Peak Elev= 108.54' @ 12.42 hrs Surf.Area= 336 sf Storage= 205 cf

Plug-Flow detention time= 19.0 min calculated for 0.192 af (98% of inflow)
Center-of-Mass det. time= 8.3 min (933.3 - 925.0)

Volume	Invert	Avail.Storage	Storage Description
#1	99.25'	6 cf	18.00'D x 7.00'H Drywells - stone around 1,781 cf Overall - 231 cf Embedded = 1,550 cf x 0.4% Voids
#2	100.25'	170 cf	6.00'D x 6.00'H Concrete drywell Inside #1 231 cf Overall - 6.0" Wall Thickness = 170 cf
#3	106.25'	6 cf	2.00'D x 2.00'H Riser
#4	108.25'	20 cf	10.00'D x 0.25'H Surface depression
#5	108.50'	277 cf	Airspace above drywell (Prismatic) Listed below (Recalc) -Impervious
		478 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.50	79	0	0
112.00	79	277	277

Device	Routing	Invert	Outlet Devices
#1	Discarded	99.25'	8.270 in/hr Exfiltration over Surface area from 99.25' - 106.25' Excluded Surface area = 254 sf
#2	Primary	108.51'	Overflow X 2.00, Cv= 2.62 (C= 3.28) Head (feet) 0.01 0.25 Width (feet) 31.00 31.00

Site Hydrology 2

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Discarded OutFlow Max=0.00 cfs @ 12.21 hrs HW=108.52' (Free Discharge)

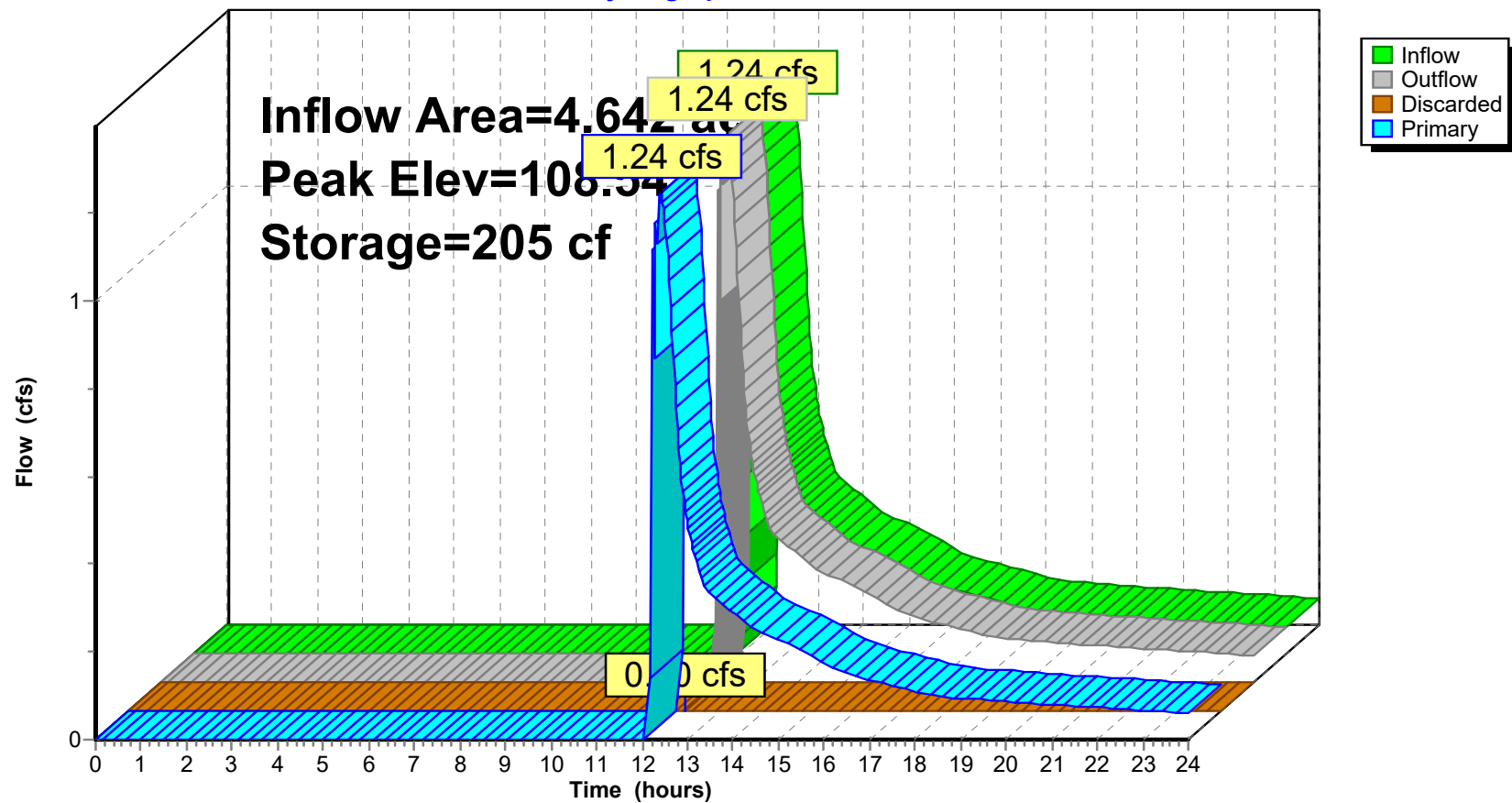
↳ **1=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.96 cfs @ 12.42 hrs HW=108.54' (Free Discharge)

↳ **2=Overflow** (Weir Controls 0.96 cfs @ 0.55 fps)

Pond P2: DRYWELLS 2

Hydrograph



Site Hydrology 2

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Summary for Pond P3: INFIL 2

Inflow Area = 0.204 ac, 100.00% Impervious, Inflow Depth = 3.21" for 2 year event
Inflow = 0.68 cfs @ 12.08 hrs, Volume= 0.055 af
Outflow = 0.26 cfs @ 11.88 hrs, Volume= 0.055 af, Atten= 62%, Lag= 0.0 min
Discarded = 0.26 cfs @ 11.88 hrs, Volume= 0.055 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond P1 : BASIN

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs / 4
Peak Elev= 108.58' @ 12.32 hrs Surf.Area= 1,350 sf Storage= 270 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 3.9 min (758.8 - 754.9)

Volume	Invert	Avail.Storage	Storage Description
#1	102.00'	5 cf	5.00'W x 90.00'L x 3.00'H Infiltration trench 1,350 cf Overall x 0.4% Voids
#2	105.00'	4 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 1,350 cf Overall x 0.3% Voids
#3	108.00'	900 cf	Open area above trench (Prismatic) Listed below (Recalc)
		909 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
105.00	450	0	0
108.00	450	1,350	1,350

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.00	450	0	0
109.00	450	450	450
110.00	450	450	900

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Device	Routing	Invert	Outlet Devices
#1	Discarded	102.00'	8.270 in/hr Exfiltration over Surface area
#2	Primary	108.80'	4.0" Vert. Overflow from downspouts X 3.00 C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.26 cfs @ 11.88 hrs HW=108.00' (Free Discharge)

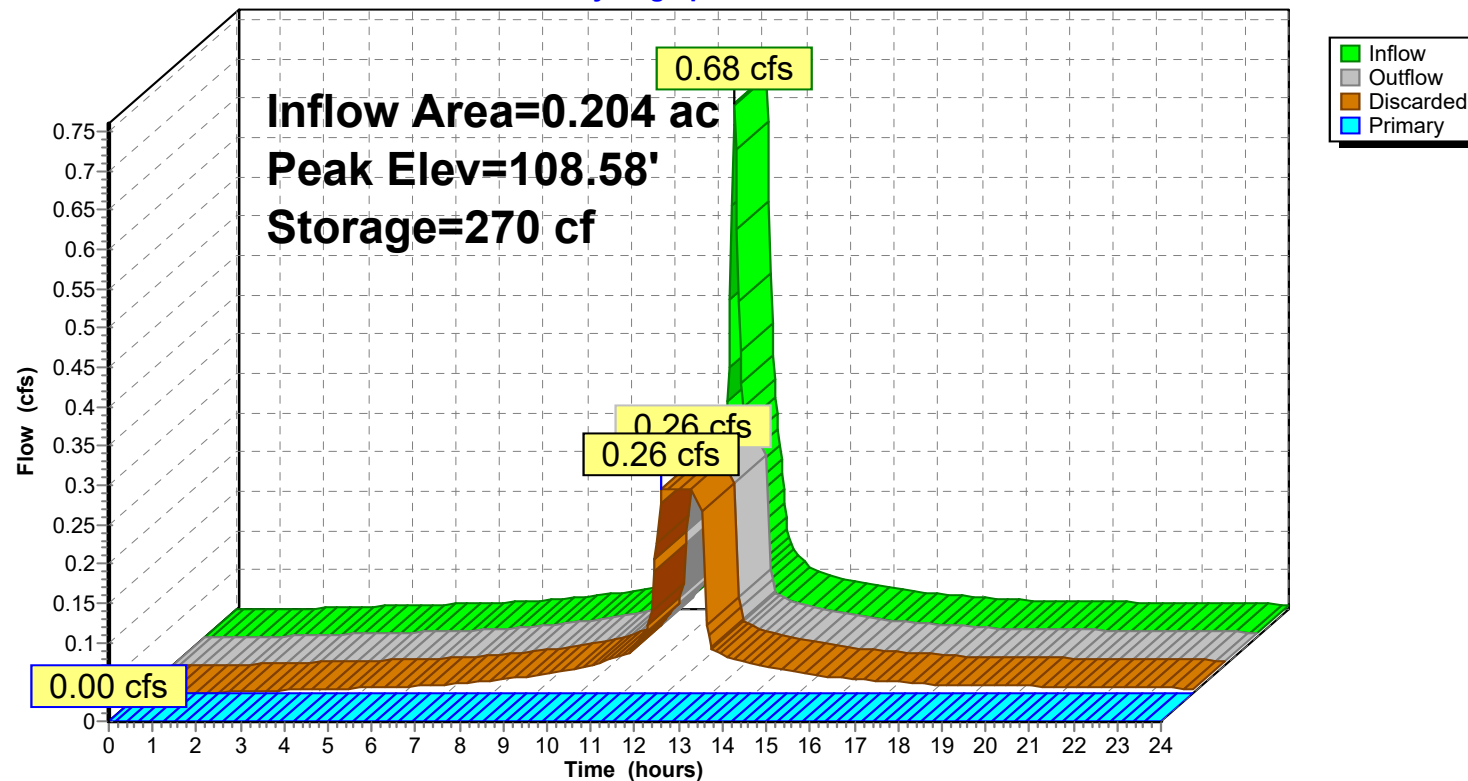
←**1=Exfiltration** (Exfiltration Controls 0.26 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=102.00' (Free Discharge)

←**2=Overflow from downspouts** (Controls 0.00 cfs)

Pond P3: INFIL 2

Hydrograph



Site Hydrology 2

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Summary for Pond P4: INFIL 1

Inflow Area = 0.148 ac, 100.00% Impervious, Inflow Depth = 3.21" for 2 year event
Inflow = 0.49 cfs @ 12.08 hrs, Volume= 0.040 af
Outflow = 0.13 cfs @ 12.27 hrs, Volume= 0.040 af, Atten= 73%, Lag= 11.1 min
Discarded = 0.13 cfs @ 12.27 hrs, Volume= 0.040 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond P1 : BASIN

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs / 4
Peak Elev= 105.23' @ 12.43 hrs Surf.Area= 700 sf Storage= 444 cf

Plug-Flow detention time= 34.9 min calculated for 0.040 af (100% of inflow)
Center-of-Mass det. time= 34.8 min (789.7 - 754.9)

Volume	Invert	Avail.Storage	Storage Description
#1	102.00'	420 cf	5.00'W x 70.00'L x 3.00'H Infiltration trench 1,050 cf Overall x 40.0% Voids
#2	105.00'	315 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 1,050 cf Overall x 30.0% Voids
#3	108.00'	700 cf	Area over infil trench (Prismatic) Listed below (Recalc) -Impervious
		1,435 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
105.00	350	0	0
108.00	350	1,050	1,050

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.00	350	0	0
109.00	350	350	350
110.00	350	350	700

Site Hydrology 2

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Type III 24-hr 2 year Rainfall=3.44"

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Device	Routing	Invert	Outlet Devices
#1	Discarded	102.00'	8.270 in/hr Exfiltration over Surface area
#2	Primary	108.80'	4.0" Vert. Overflow from downspouts X 3.00 C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.13 cfs @ 12.27 hrs HW=105.02' (Free Discharge)

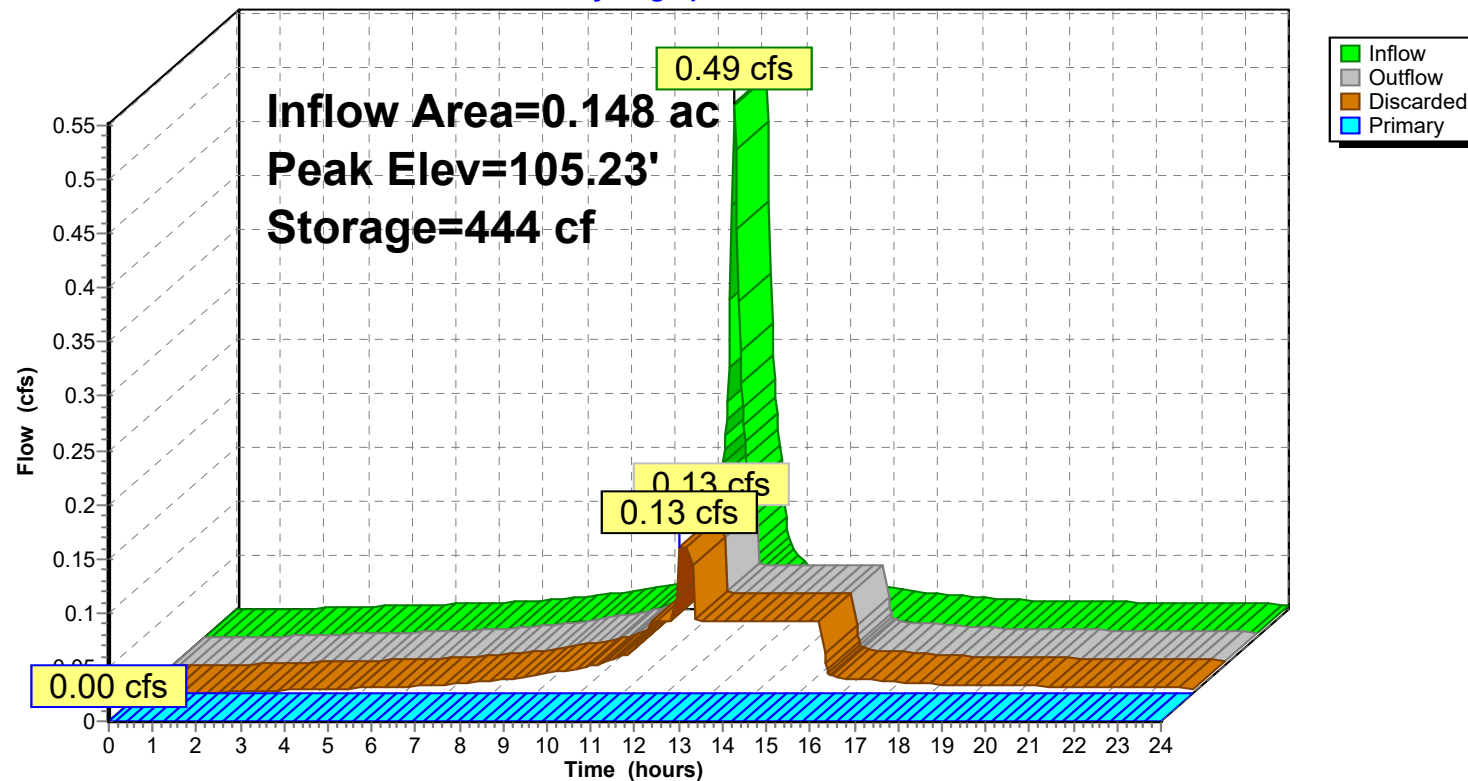
↳ **1=Exfiltration** (Exfiltration Controls 0.13 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=102.00' (Free Discharge)

↳ **2=Overflow from downspouts** (Controls 0.00 cfs)

Pond P4: INFIL 1

Hydrograph



Site Hydrology 2

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Type III 24-hr 2 year Rainfall=3.44"

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Summary for Pond P5: DRYWELLS 2

Inflow Area = 2.900 ac, 9.93% Impervious, Inflow Depth = 0.23" for 2 year event
Inflow = 0.17 cfs @ 12.83 hrs, Volume= 0.057 af
Outflow = 0.14 cfs @ 12.66 hrs, Volume= 0.056 af, Atten= 18%, Lag= 0.0 min
Discarded = 0.14 cfs @ 12.66 hrs, Volume= 0.056 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond P1 : BASIN

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs / 4
Peak Elev= 100.36' @ 13.20 hrs Surf.Area= 999 sf Storage= 40 cf

Plug-Flow detention time= 3.9 min calculated for 0.056 af (100% of inflow)
Center-of-Mass det. time= 1.8 min (996.2 - 994.4)

Volume	Invert	Avail.Storage	Storage Description
#1	99.25'	19 cf	18.00'D x 7.00'H Drywells - stone around x 3 5,344 cf Overall - 693 cf Embedded = 4,651 cf x 0.4% Voids
#2	100.25'	509 cf	6.00'D x 6.00'H Concrete drywell x 3 Inside #1 693 cf Overall - 6.0" Wall Thickness = 509 cf
#3	100.25'	1,944 cf	10.00'D x 8.25'H Surface depression x 3
#4	108.50'	12,540 cf	Airspace over drywell (Prismatic) Listed below (Recalc)
		15,011 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.50	79	0	0
109.50	25,000	12,540	12,540

Device	Routing	Invert	Outlet Devices
#1	Discarded	99.25'	8.270 in/hr Exfiltration X 3.00 over Surface area from 99.25' - 106.25' Excluded Surface area = 763 sf
#2	Primary	108.51'	Overflow X 3.00, Cv= 2.62 (C= 3.28) Head (feet) 0.01 0.25 Width (feet) 31.00 31.00

Site Hydrology 2

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Discarded OutFlow Max=0.14 cfs @ 12.66 hrs HW=100.25' (Free Discharge)

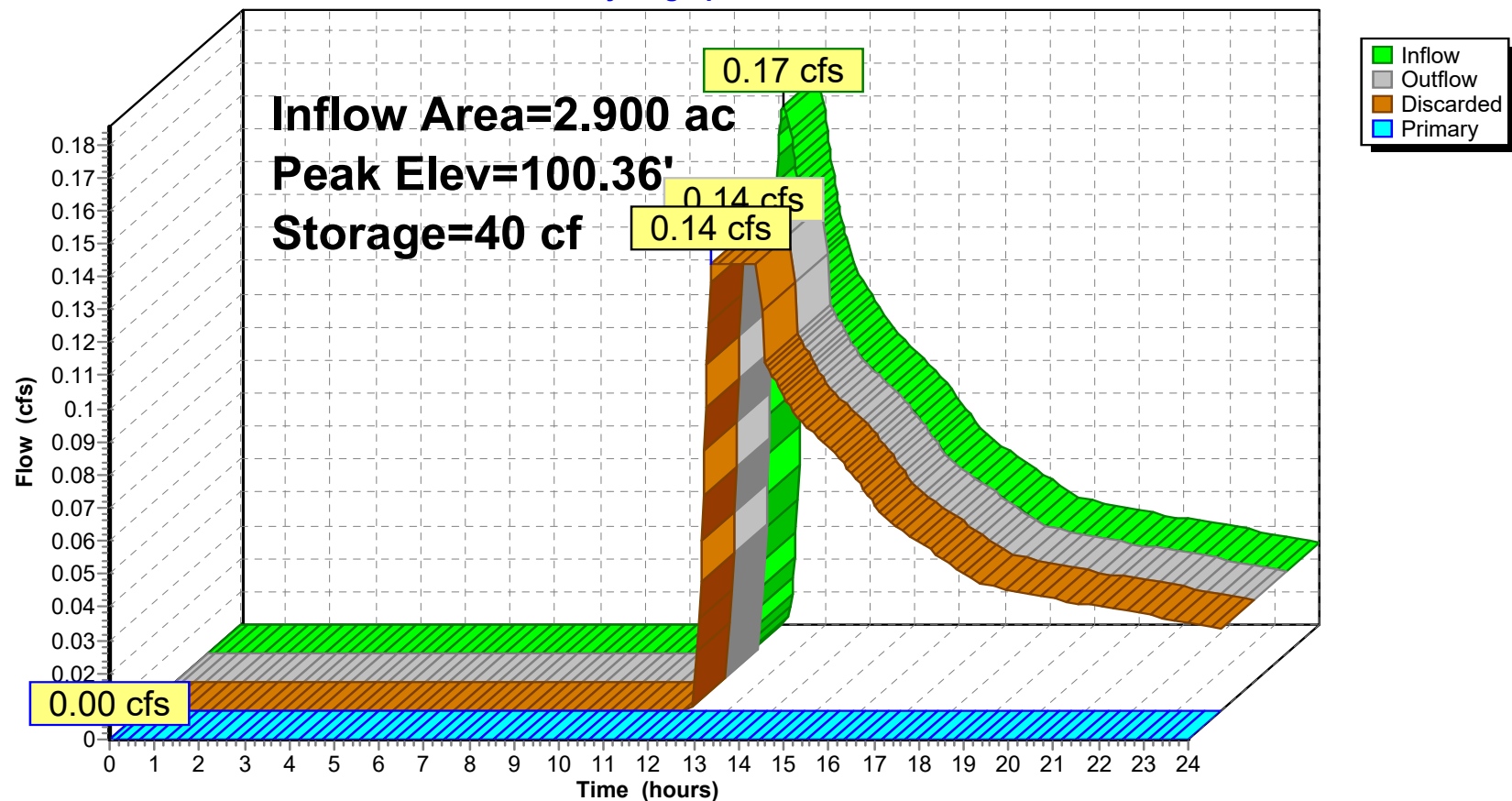
↳ **1=Exfiltration** (Exfiltration Controls 0.14 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=99.25' (Free Discharge)

↳ **2=Overflow** (Controls 0.00 cfs)

Pond P5: DRYWELLS 2

Hydrograph



Site Hydrology 2

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Type III 24-hr 2 year Rainfall=3.44"

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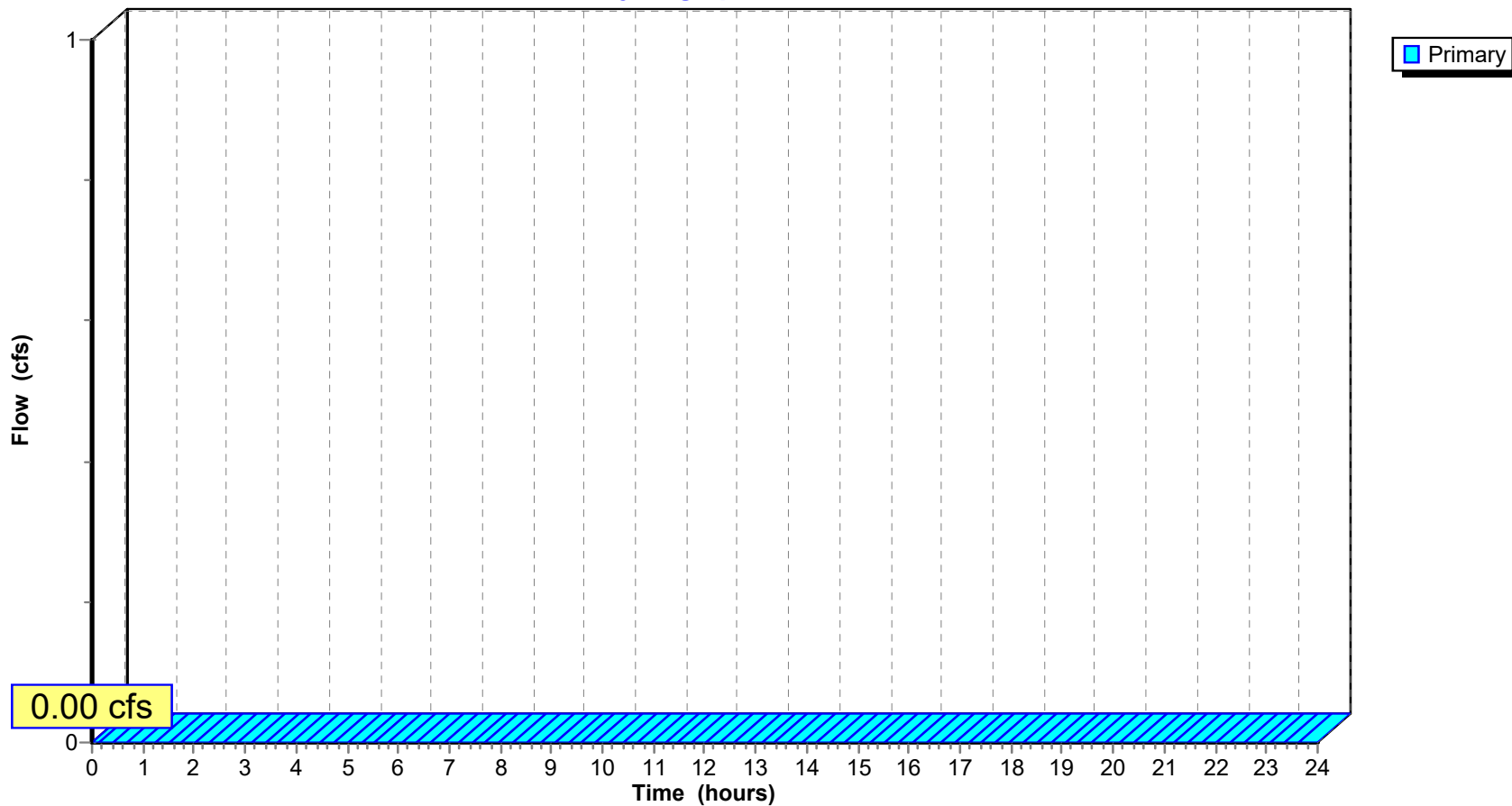
Summary for Link 2L: ROUTE 28

Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs

Link 2L: ROUTE 28

Hydrograph



Site Hydrology 2

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Type III 24-hr 10 year Rainfall=5.02"

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Summary for Subcatchment DA 2: DA 2

Runoff = 1.06 cfs @ 12.63 hrs, Volume= 0.196 af, Depth= 0.81"
Routed to Pond P5 : DRYWELLS 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs
Type III 24-hr 10 year Rainfall=5.02"

	Area (sf)	CN	Description
	10,475	98	Roofs, HSG A
	3,230	30	Woods, Good, HSG A
*	104,263	48	Composite CN for naturalizing area
	6,288	39	>75% Grass cover, Good, HSG A
	2,076	98	Paved parking, HSG A
	126,332	52	Weighted Average
	113,781		90.07% Pervious Area
	12,551		9.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.6	50	0.1400	0.07		Sheet Flow, Wooded area Woods: Dense underbrush n= 0.800 P2= 2.30"
12.9	569	0.0110	0.73		Shallow Concentrated Flow, Through naturalizing area Short Grass Pasture Kv= 7.0 fps
11.7	176	0.0100	0.25		Shallow Concentrated Flow, Through landscaped area Forest w/Heavy Litter Kv= 2.5 fps
0.3	27	0.0050	1.44		Shallow Concentrated Flow, Across driveway Paved Kv= 20.3 fps
36.5	822	Total			

Site Hydrology 2

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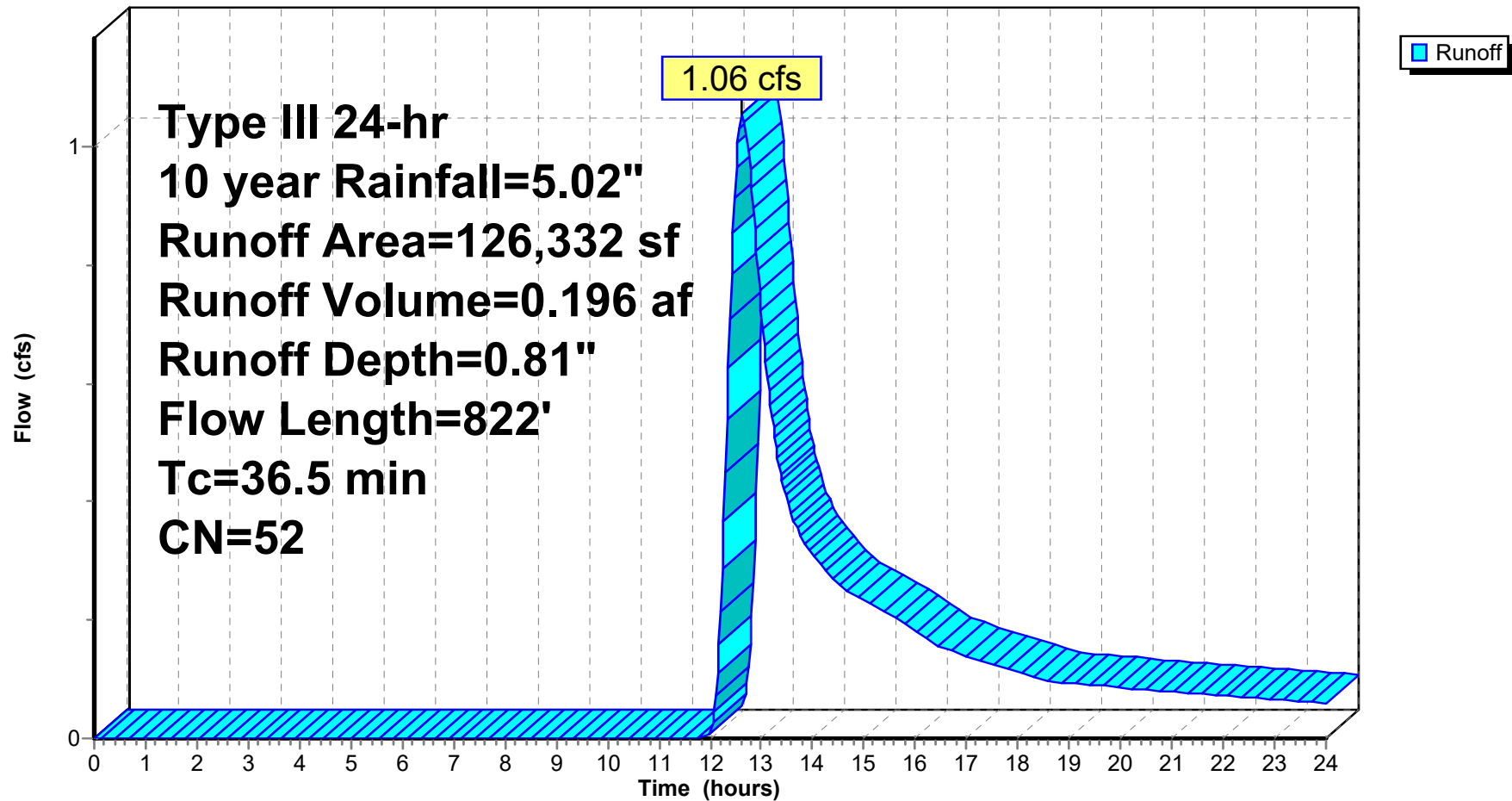
Type III 24-hr 10 year Rainfall=5.02"

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Subcatchment DA 2: DA 2

Hydrograph



Site Hydrology 2

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Type III 24-hr 10 year Rainfall=5.02"

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Summary for Subcatchment DA1: DA 1

Runoff = 4.19 cfs @ 12.33 hrs, Volume= 0.508 af, Depth= 1.31"
Routed to Pond P2 : DRYWELLS 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs
Type III 24-hr 10 year Rainfall=5.02"

Area (sf)	CN	Description
1,353	98	Roofs, HSG A
41,209	30	Woods, Good, HSG A
33,324	39	>75% Grass cover, Good, HSG A
* 49,750	48	Composite CN - Naturalizing area
* 6,552	39	Grass - stormwater swale
61,054	98	Paved parking, HSG A
* 8,960	98	Stormwater basin when full
202,202	60	Weighted Average
130,835		64.71% Pervious Area
71,367		35.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.6	50	0.1400	0.07		Sheet Flow, Woods Woods: Dense underbrush n= 0.800 P2= 2.30"
7.8	373	0.0130	0.80		Shallow Concentrated Flow, Through naturalizing area Short Grass Pasture Kv= 7.0 fps
1.8	211	0.0095	1.98		Shallow Concentrated Flow, Through parking Paved Kv= 20.3 fps
21.2	634	Total			

Site Hydrology 2

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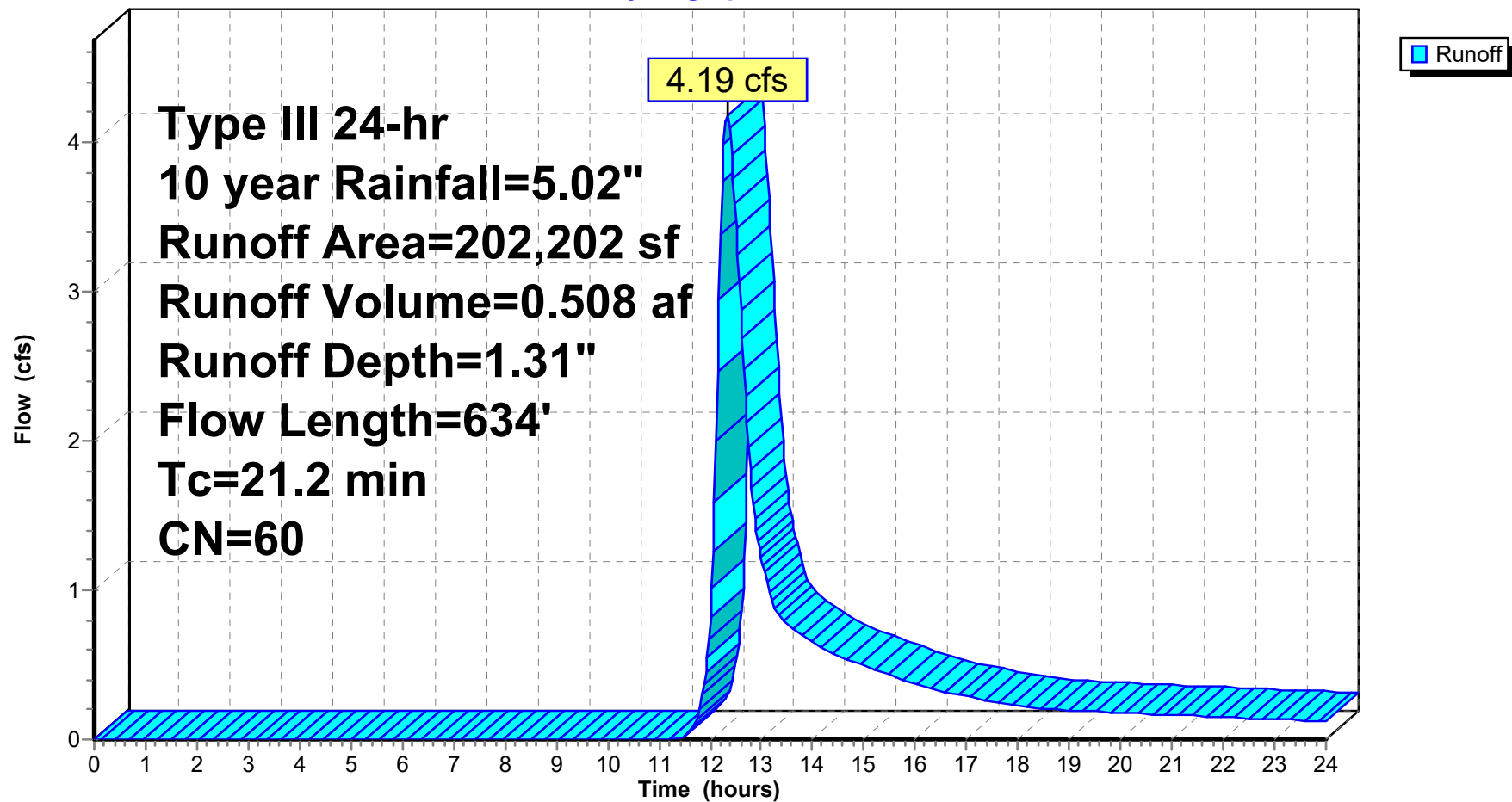
Type III 24-hr 10 year Rainfall=5.02"

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Subcatchment DA1: DA 1

Hydrograph



Site Hydrology 2

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Type III 24-hr 10 year Rainfall=5.02"

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Summary for Subcatchment R1: Roof (south)

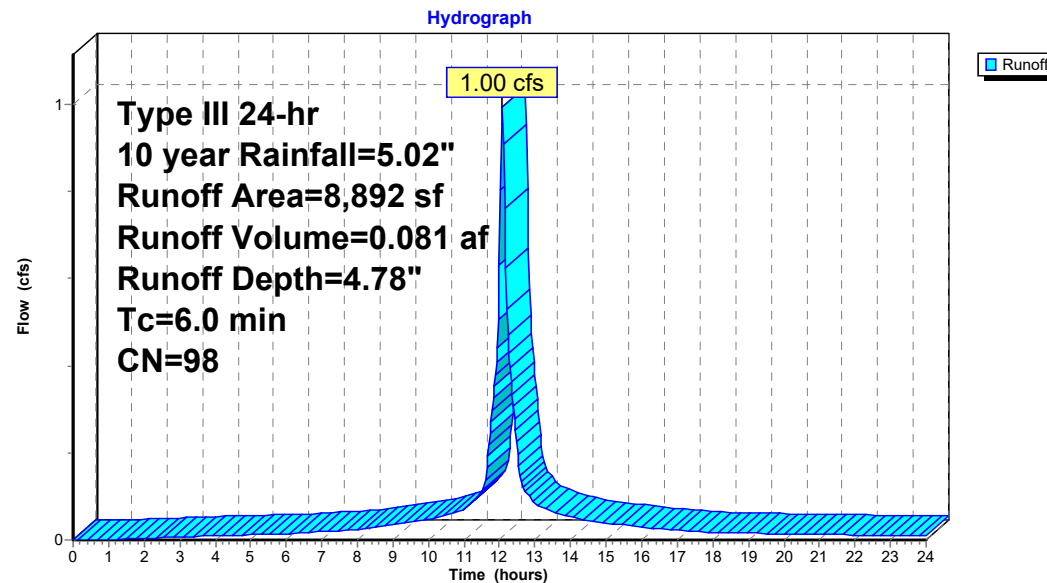
Runoff = 1.00 cfs @ 12.08 hrs, Volume= 0.081 af, Depth= 4.78"
Routed to Pond P3 : INFIL 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs
Type III 24-hr 10 year Rainfall=5.02"

Area (sf)	CN	Description
8,892	98	Unconnected roofs, HSG A
8,892		100.00% Impervious Area
8,892		100.00% Unconnected

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

Subcatchment R1: Roof (south)



Site Hydrology 2

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Type III 24-hr 10 year Rainfall=5.02"

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Summary for Subcatchment R2: Roof (east)

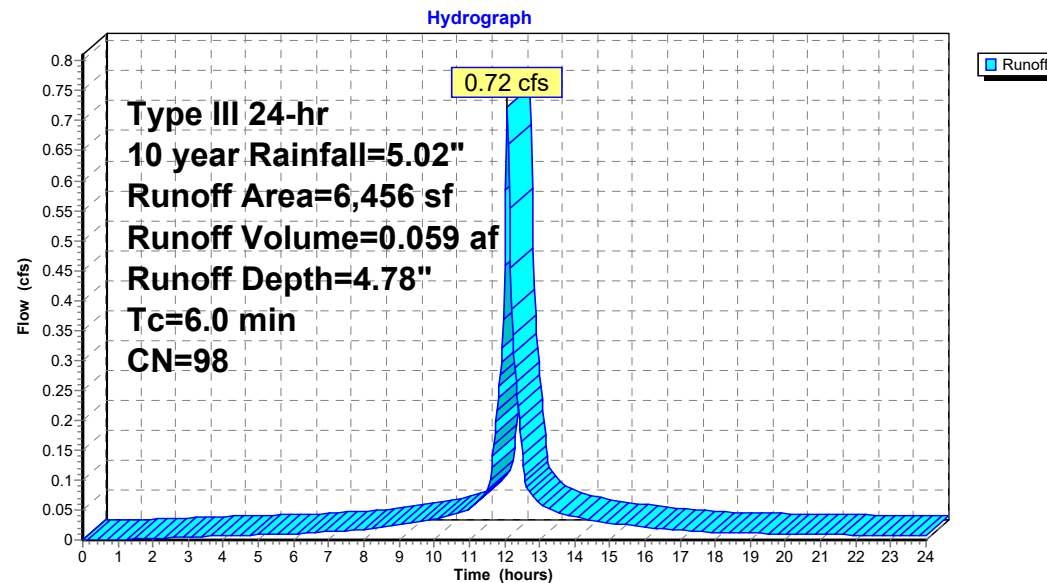
Runoff = 0.72 cfs @ 12.08 hrs, Volume= 0.059 af, Depth= 4.78"
Routed to Pond P4 : INFIL 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs
Type III 24-hr 10 year Rainfall=5.02"

Area (sf)	CN	Description
6,456	98	Unconnected roofs, HSG A
6,456		100.00% Impervious Area
6,456		100.00% Unconnected

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

Subcatchment R2: Roof (east)



Site Hydrology 2

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Type III 24-hr 10 year Rainfall=5.02"

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Summary for Reach REACH: Water Quality Swale

Bank-Full Depth= 2.00' Flow Area= 42.0 sf, Capacity= 102.69 cfs

15.00' x 2.00' deep channel, n= 0.050 Earth, long dense weeds

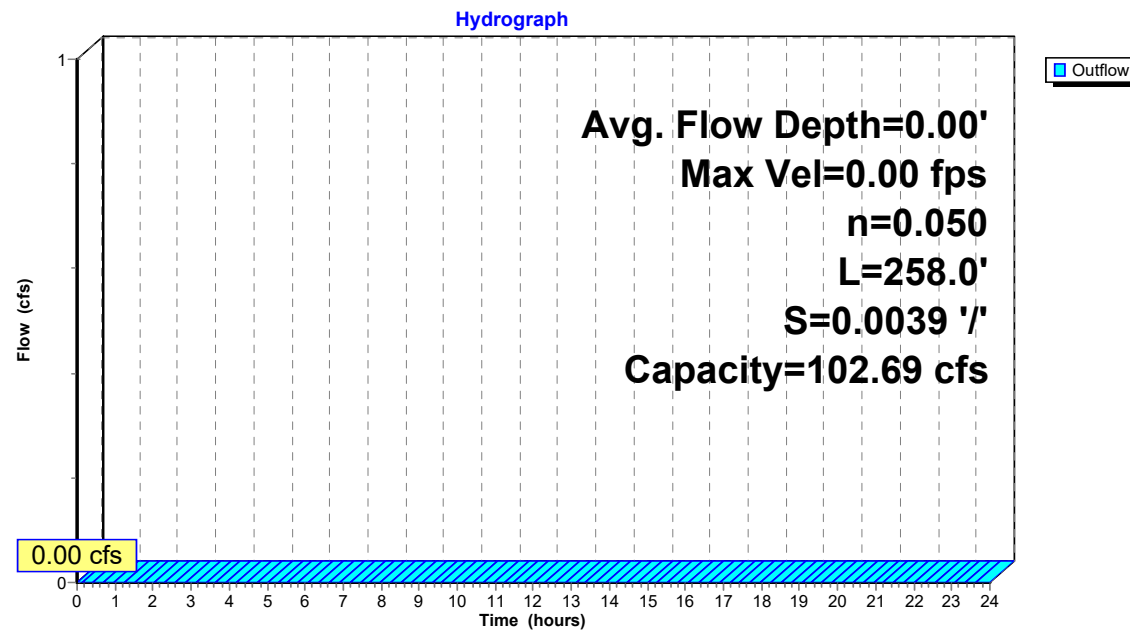
Side Slope Z-value= 3.0 '/' Top Width= 27.00'

Length= 258.0' Slope= 0.0039 '/'

Inlet Invert= 105.00', Outlet Invert= 104.00'



Reach REACH: Water Quality Swale



Site Hydrology 2

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Type III 24-hr 10 year Rainfall=5.02"

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Summary for Pond P1: BASIN

Inflow Area = 7.894 ac, 28.87% Impervious, Inflow Depth = 0.82" for 10 year event
Inflow = 4.36 cfs @ 12.32 hrs, Volume= 0.540 af
Outflow = 1.46 cfs @ 12.48 hrs, Volume= 0.507 af, Atten= 66%, Lag= 9.5 min
Discarded = 1.46 cfs @ 12.48 hrs, Volume= 0.507 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs / 3
Peak Elev= 102.16' @ 12.88 hrs Surf.Area= 4,730 sf Storage= 5,693 cf

Plug-Flow detention time= 61.7 min calculated for 0.507 af (94% of inflow)
Center-of-Mass det. time= 30.4 min (917.8 - 887.4)

Volume	Invert	Avail.Storage	Storage Description
#1	94.00'	1,425 cf	18.00'D x 7.00'H Drywells - stone around x 2 3,563 cf Overall x 40.0% Voids
#2	101.00'	72,867 cf	Stormwater basin (Prismatic) Listed below (Recalc)
		74,292 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
101.00	3,122	0	0
102.00	4,058	3,590	3,590
103.00	5,053	4,556	8,146
104.00	6,109	5,581	13,727
105.00	8,008	7,059	20,785
105.40	8,960	3,394	24,179
106.00	20,000	8,688	32,867
107.00	60,000	40,000	72,867

Device	Routing	Invert	Outlet Devices
#1	Discarded	94.75'	8.270 in/hr Exfiltration X 2.00 over Surface area from 94.75' - 101.75' Excluded Surface area = 509 sf 8.270 in/hr Exfiltration - pond bottom over Surface area from 103.75' - 105.40' Excluded Surface area = 6,354 sf Phase-In= 0.01'
#2	Discarded	103.75'	
#3	Primary	105.75'	5.0' long x 35.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60

Site Hydrology 2

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Type III 24-hr 10 year Rainfall=5.02"

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Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Discarded OutFlow Max=1.46 cfs @ 12.48 hrs HW=101.82' (Free Discharge)

↑ **1=Exfiltration** (Exfiltration Controls 1.46 cfs)

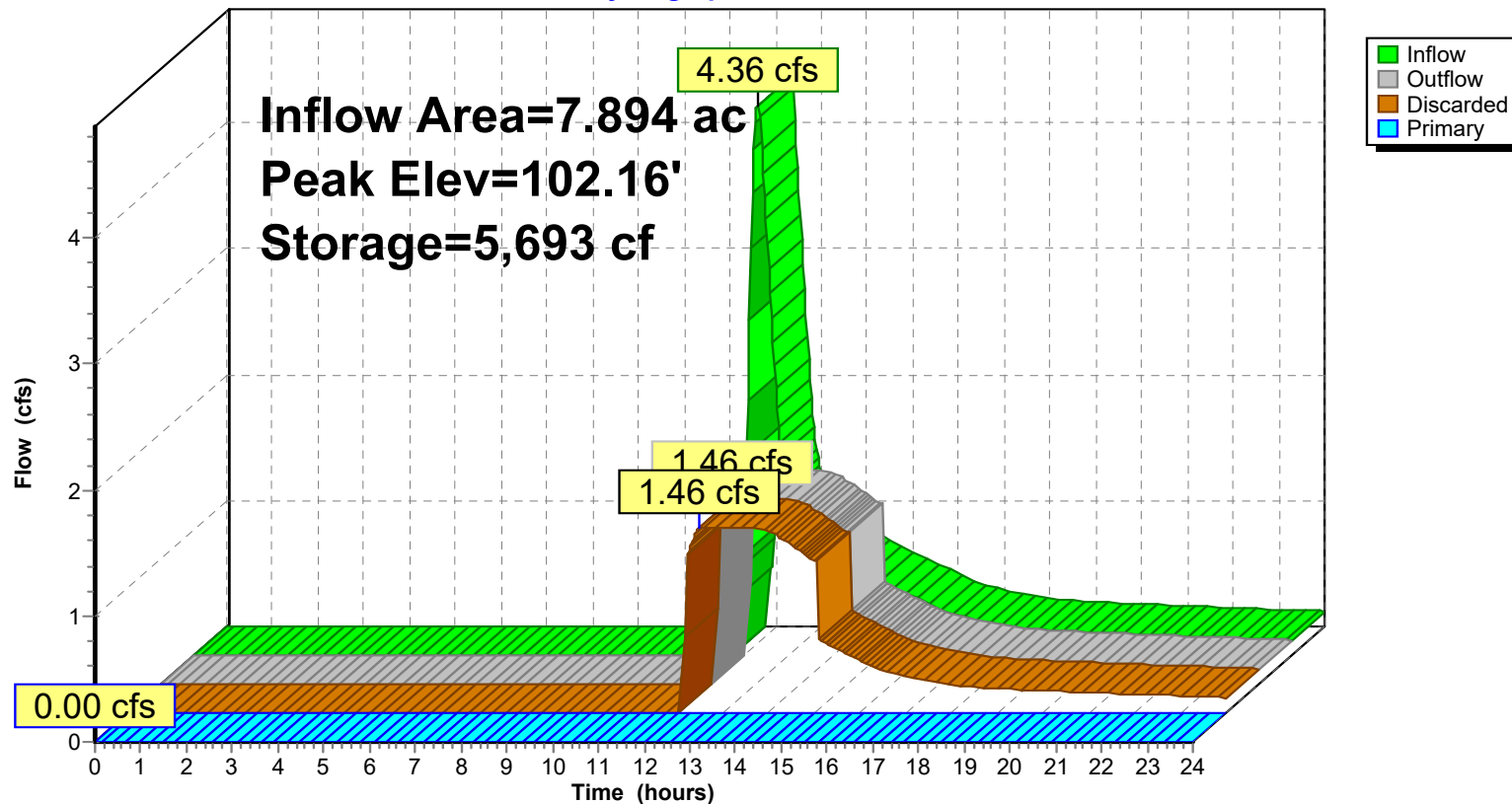
↑ **2=Exfiltration - pond bottom** (Controls 0.00 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=94.00' (Free Discharge)

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

Pond P1: BASIN

Hydrograph



Site Hydrology 2

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Type III 24-hr 10 year Rainfall=5.02"

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Summary for Pond P2: DRYWELLS 2

Inflow Area = 4.642 ac, 35.29% Impervious, Inflow Depth = 1.31" for 10 year event
Inflow = 4.19 cfs @ 12.33 hrs, Volume= 0.508 af
Outflow = 4.19 cfs @ 12.33 hrs, Volume= 0.504 af, Atten= 0%, Lag= 0.0 min
Discarded = 0.00 cfs @ 11.91 hrs, Volume= 0.001 af
Primary = 4.19 cfs @ 12.33 hrs, Volume= 0.503 af
Routed to Pond P1 : BASIN

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs / 3
Peak Elev= 108.58' @ 12.33 hrs Surf.Area= 336 sf Storage= 208 cf

Plug-Flow detention time= 7.2 min calculated for 0.504 af (99% of inflow)
Center-of-Mass det. time= 2.9 min (892.1 - 889.2)

Volume	Invert	Avail.Storage	Storage Description
#1	99.25'	6 cf	18.00'D x 7.00'H Drywells - stone around 1,781 cf Overall - 231 cf Embedded = 1,550 cf x 0.4% Voids
#2	100.25'	170 cf	6.00'D x 6.00'H Concrete drywell Inside #1 231 cf Overall - 6.0" Wall Thickness = 170 cf
#3	106.25'	6 cf	2.00'D x 2.00'H Riser
#4	108.25'	20 cf	10.00'D x 0.25'H Surface depression
#5	108.50'	277 cf	Airspace above drywell (Prismatic) Listed below (Recalc) -Impervious
		478 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.50	79	0	0
112.00	79	277	277

Device	Routing	Invert	Outlet Devices
#1	Discarded	99.25'	8.270 in/hr Exfiltration over Surface area from 99.25' - 106.25' Excluded Surface area = 254 sf
#2	Primary	108.51'	Overflow X 2.00, Cv= 2.62 (C= 3.28) Head (feet) 0.01 0.25 Width (feet) 31.00 31.00

Site Hydrology 2

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Type III 24-hr 10 year Rainfall=5.02"

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Discarded OutFlow Max=0.00 cfs @ 11.91 hrs HW=108.52' (Free Discharge)

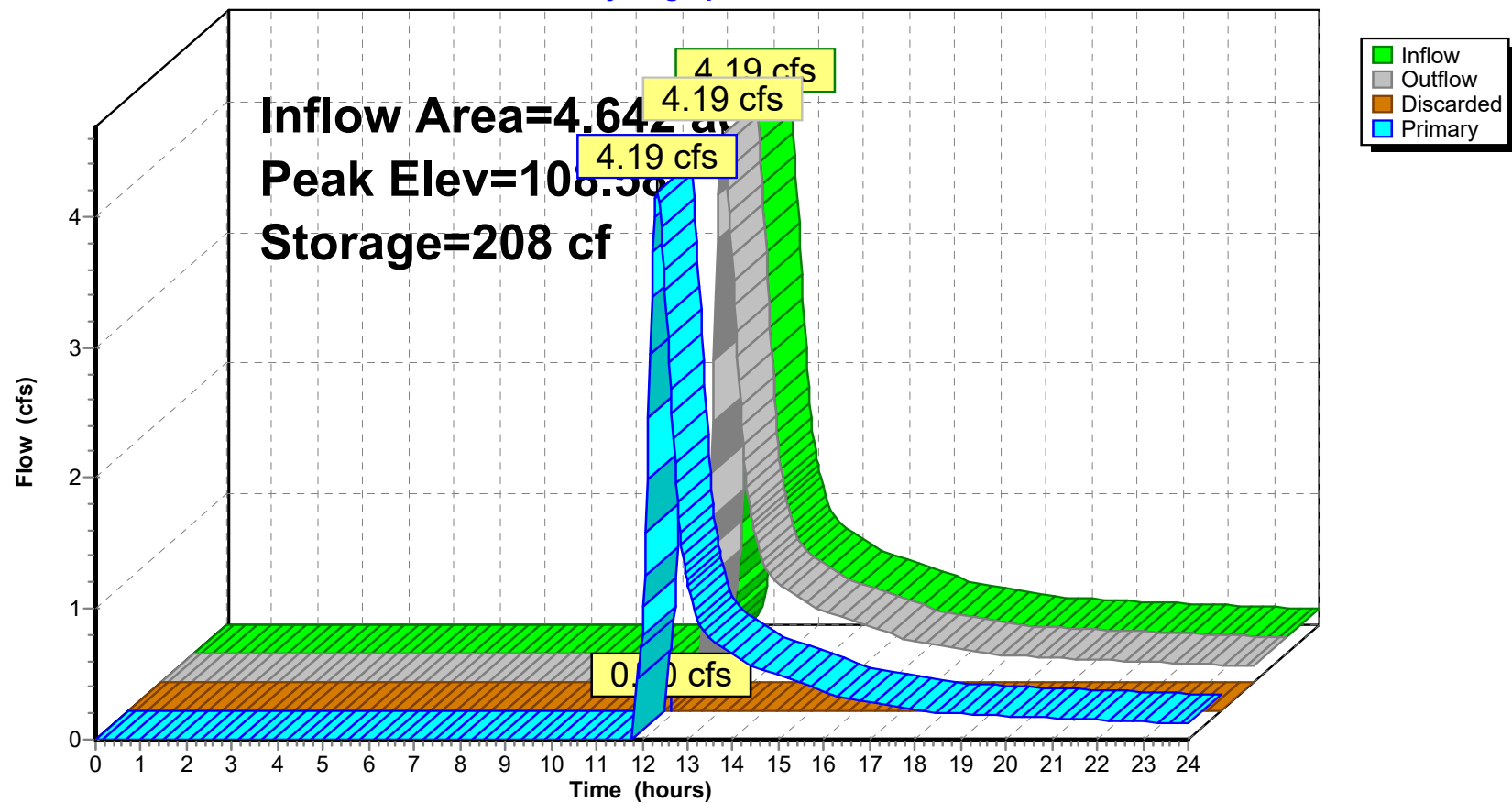
↑ **1=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=3.62 cfs @ 12.33 hrs HW=108.58' (Free Discharge)

↑ **2=Overflow** (Weir Controls 3.62 cfs @ 0.86 fps)

Pond P2: DRYWELLS 2

Hydrograph



Site Hydrology 2

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Type III 24-hr 10 year Rainfall=5.02"

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Summary for Pond P3: INFIL 2

Inflow Area = 0.204 ac, 100.00% Impervious, Inflow Depth = 4.78" for 10 year event
Inflow = 1.00 cfs @ 12.08 hrs, Volume= 0.081 af
Outflow = 0.56 cfs @ 12.21 hrs, Volume= 0.081 af, Atten= 44%, Lag= 7.3 min
Discarded = 0.26 cfs @ 11.76 hrs, Volume= 0.076 af
Primary = 0.30 cfs @ 12.21 hrs, Volume= 0.006 af
Routed to Pond P1 : BASIN

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs / 4
Peak Elev= 109.02' @ 12.21 hrs Surf.Area= 1,350 sf Storage= 470 cf

Plug-Flow detention time= 6.7 min calculated for 0.081 af (100% of inflow)
Center-of-Mass det. time= 6.2 min (754.2 - 748.0)

Volume	Invert	Avail.Storage	Storage Description
#1	102.00'	5 cf	5.00'W x 90.00'L x 3.00'H Infiltration trench 1,350 cf Overall x 0.4% Voids
#2	105.00'	4 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 1,350 cf Overall x 0.3% Voids
#3	108.00'	900 cf	Open area above trench (Prismatic) Listed below (Recalc)
		909 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
105.00	450	0	0
108.00	450	1,350	1,350

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.00	450	0	0
109.00	450	450	450
110.00	450	450	900

Site Hydrology 2

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Type III 24-hr 10 year Rainfall=5.02"

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Device	Routing	Invert	Outlet Devices
#1	Discarded	102.00'	8.270 in/hr Exfiltration over Surface area
#2	Primary	108.80'	4.0" Vert. Overflow from downspouts X 3.00 C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.26 cfs @ 11.76 hrs HW=108.00' (Free Discharge)

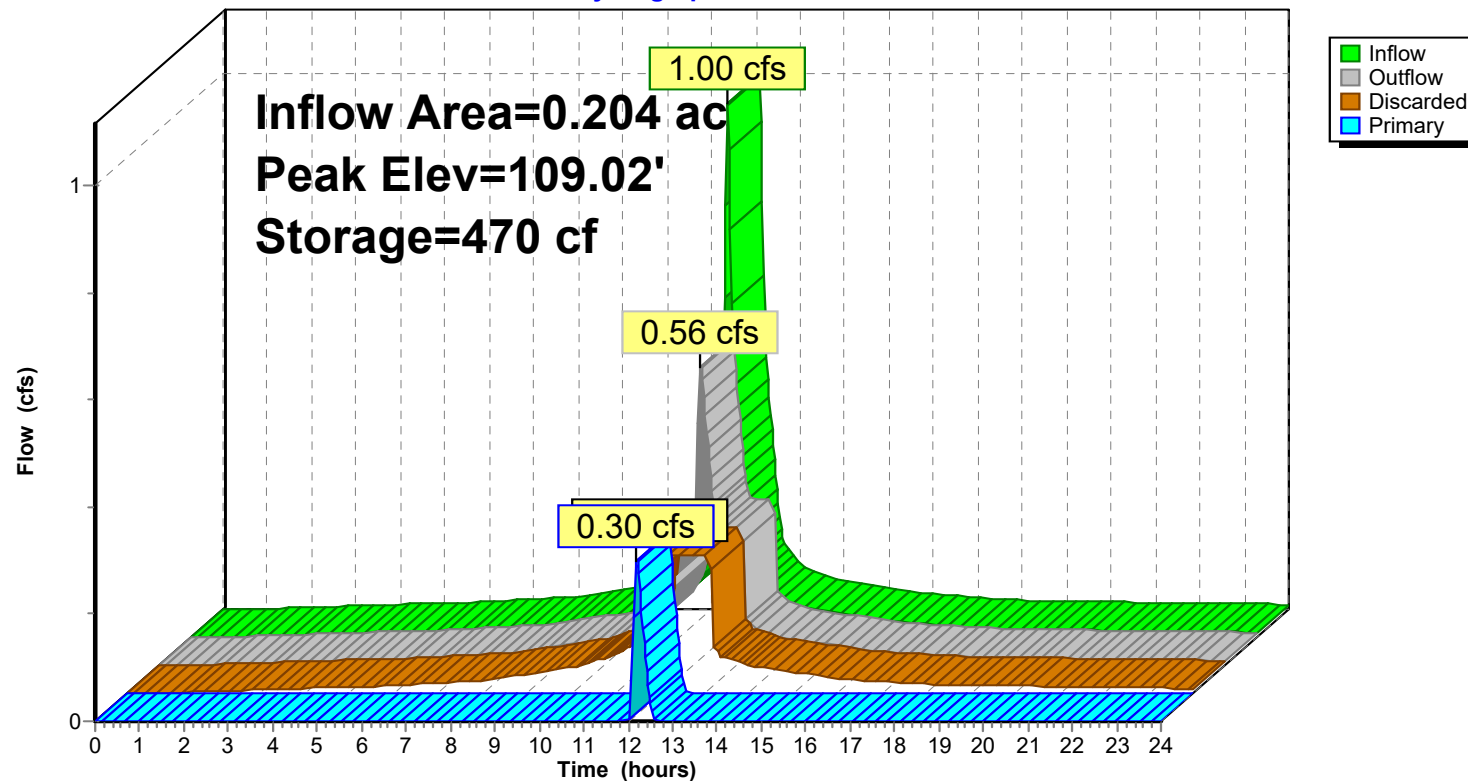
↳ **1=Exfiltration** (Exfiltration Controls 0.26 cfs)

Primary OutFlow Max=0.30 cfs @ 12.21 hrs HW=109.02' (Free Discharge)

↳ **2=Overflow from downspouts** (Orifice Controls 0.30 cfs @ 1.60 fps)

Pond P3: INFIL 2

Hydrograph



Site Hydrology 2

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Type III 24-hr 10 year Rainfall=5.02"

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Summary for Pond P4: INFIL 1

Inflow Area = 0.148 ac, 100.00% Impervious, Inflow Depth = 4.78" for 10 year event
Inflow = 0.72 cfs @ 12.08 hrs, Volume= 0.059 af
Outflow = 0.13 cfs @ 12.09 hrs, Volume= 0.059 af, Atten= 81%, Lag= 0.3 min
Discarded = 0.13 cfs @ 12.09 hrs, Volume= 0.059 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond P1 : BASIN

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs / 4
Peak Elev= 108.02' @ 12.52 hrs Surf.Area= 700 sf Storage= 744 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 42.6 min (790.6 - 748.0)

Volume	Invert	Avail.Storage	Storage Description
#1	102.00'	420 cf	5.00'W x 70.00'L x 3.00'H Infiltration trench 1,050 cf Overall x 40.0% Voids
#2	105.00'	315 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 1,050 cf Overall x 30.0% Voids
#3	108.00'	700 cf	Area over infil trench (Prismatic) Listed below (Recalc) -Impervious
		1,435 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
105.00	350	0	0
108.00	350	1,050	1,050

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.00	350	0	0
109.00	350	350	350
110.00	350	350	700

Site Hydrology 2

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Type III 24-hr 10 year Rainfall=5.02"

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Device	Routing	Invert	Outlet Devices
#1	Discarded	102.00'	8.270 in/hr Exfiltration over Surface area
#2	Primary	108.80'	4.0" Vert. Overflow from downspouts X 3.00 C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.13 cfs @ 12.09 hrs HW=105.17' (Free Discharge)

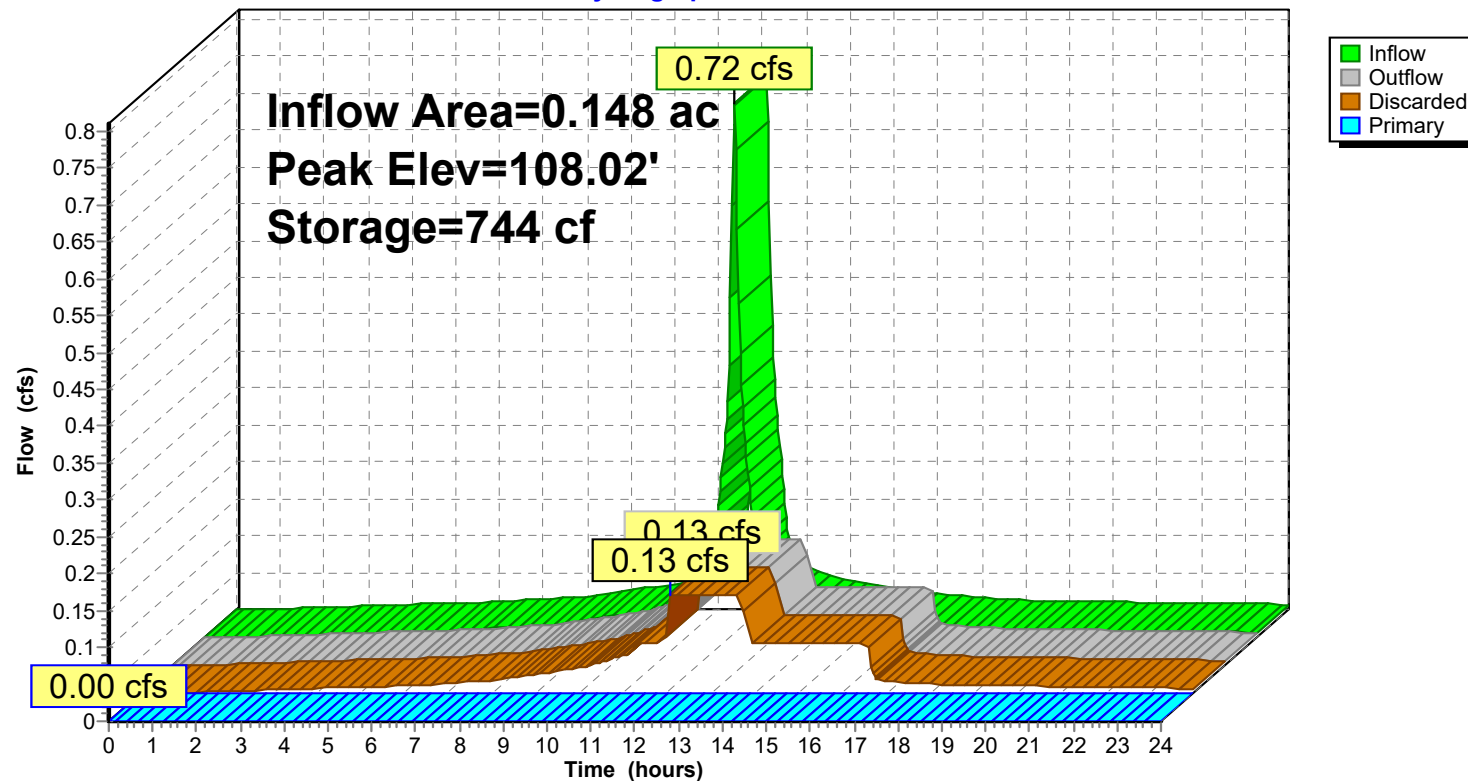
←**1=Exfiltration** (Exfiltration Controls 0.13 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=102.00' (Free Discharge)

←**2=Overflow from downspouts** (Controls 0.00 cfs)

Pond P4: INFIL 1

Hydrograph



Site Hydrology 2

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Type III 24-hr 10 year Rainfall=5.02"

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Summary for Pond P5: DRYWELLS 2

Inflow Area = 2.900 ac, 9.93% Impervious, Inflow Depth = 0.81" for 10 year event
Inflow = 1.06 cfs @ 12.63 hrs, Volume= 0.196 af
Outflow = 0.50 cfs @ 13.36 hrs, Volume= 0.196 af, Atten= 53%, Lag= 43.9 min
Discarded = 0.14 cfs @ 12.18 hrs, Volume= 0.164 af
Primary = 0.36 cfs @ 13.36 hrs, Volume= 0.032 af
Routed to Pond P1 : BASIN

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs / 4
Peak Elev= 108.52' @ 13.35 hrs Surf.Area= 1,574 sf Storage= 2,478 cf

Plug-Flow detention time= 186.2 min calculated for 0.196 af (100% of inflow)
Center-of-Mass det. time= 185.6 min (1,118.6 - 933.0)

Volume	Invert	Avail.Storage	Storage Description
#1	99.25'	19 cf	18.00'D x 7.00'H Drywells - stone around x 3 5,344 cf Overall - 693 cf Embedded = 4,651 cf x 0.4% Voids
#2	100.25'	509 cf	6.00'D x 6.00'H Concrete drywell x 3 Inside #1 693 cf Overall - 6.0" Wall Thickness = 509 cf
#3	100.25'	1,944 cf	10.00'D x 8.25'H Surface depression x 3
#4	108.50'	12,540 cf	Airspace over drywell (Prismatic) Listed below (Recalc)
		15,011 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.50	79	0	0
109.50	25,000	12,540	12,540

Device	Routing	Invert	Outlet Devices
#1	Discarded	99.25'	8.270 in/hr Exfiltration X 3.00 over Surface area from 99.25' - 106.25' Excluded Surface area = 763 sf
#2	Primary	108.51'	Overflow X 3.00, Cv= 2.62 (C= 3.28) Head (feet) 0.01 0.25 Width (feet) 31.00 31.00

Site Hydrology 2

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Type III 24-hr 10 year Rainfall=5.02"

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Discarded OutFlow Max=0.14 cfs @ 12.18 hrs HW=100.25' (Free Discharge)

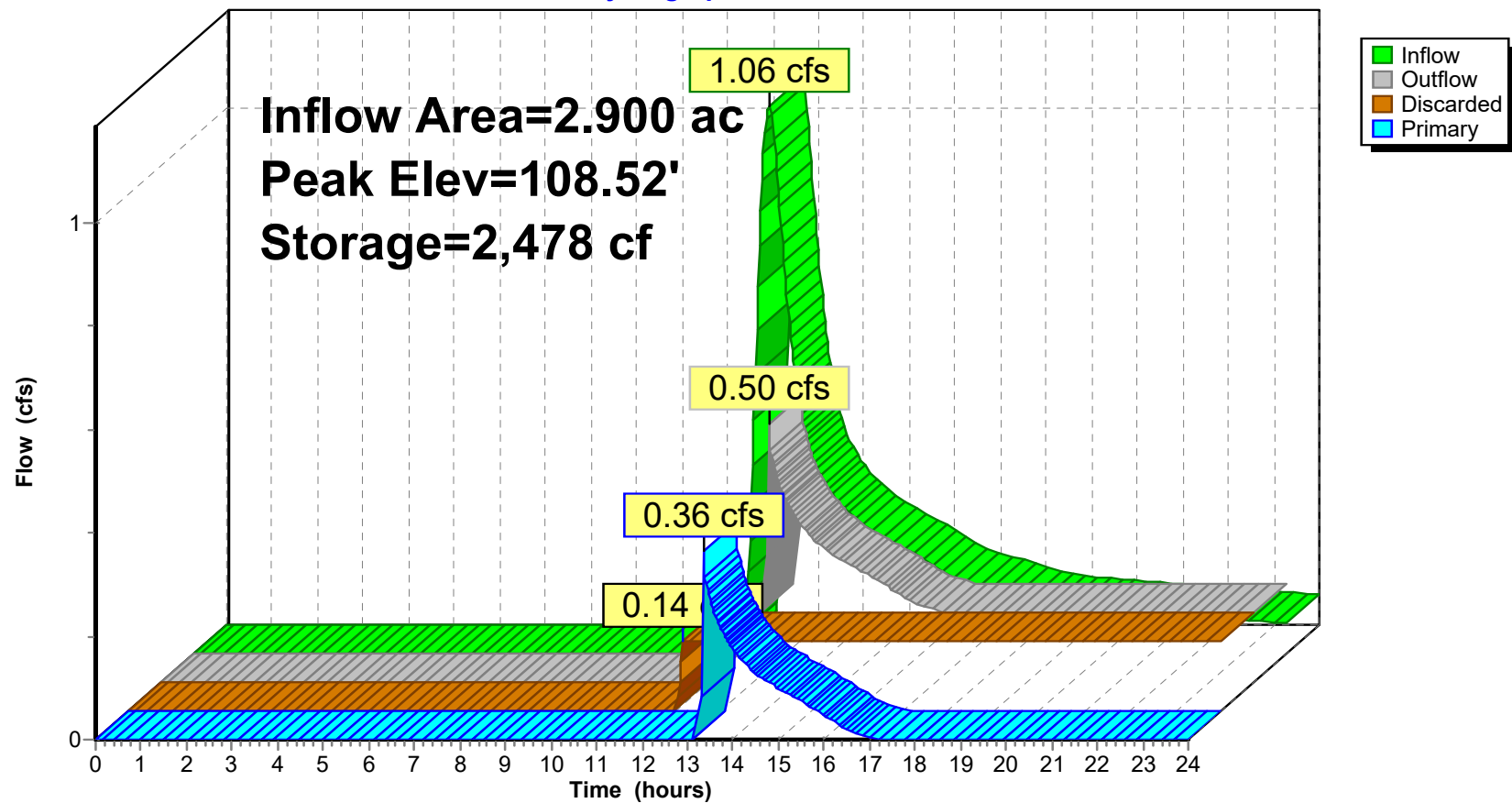
↑ **1=Exfiltration** (Exfiltration Controls 0.14 cfs)

Primary OutFlow Max=0.29 cfs @ 13.36 hrs HW=108.52' (Free Discharge)

↑ **2=Overflow** (Weir Controls 0.29 cfs @ 0.32 fps)

Pond P5: DRYWELLS 2

Hydrograph



Site Hydrology 2

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Type III 24-hr 10 year Rainfall=5.02"

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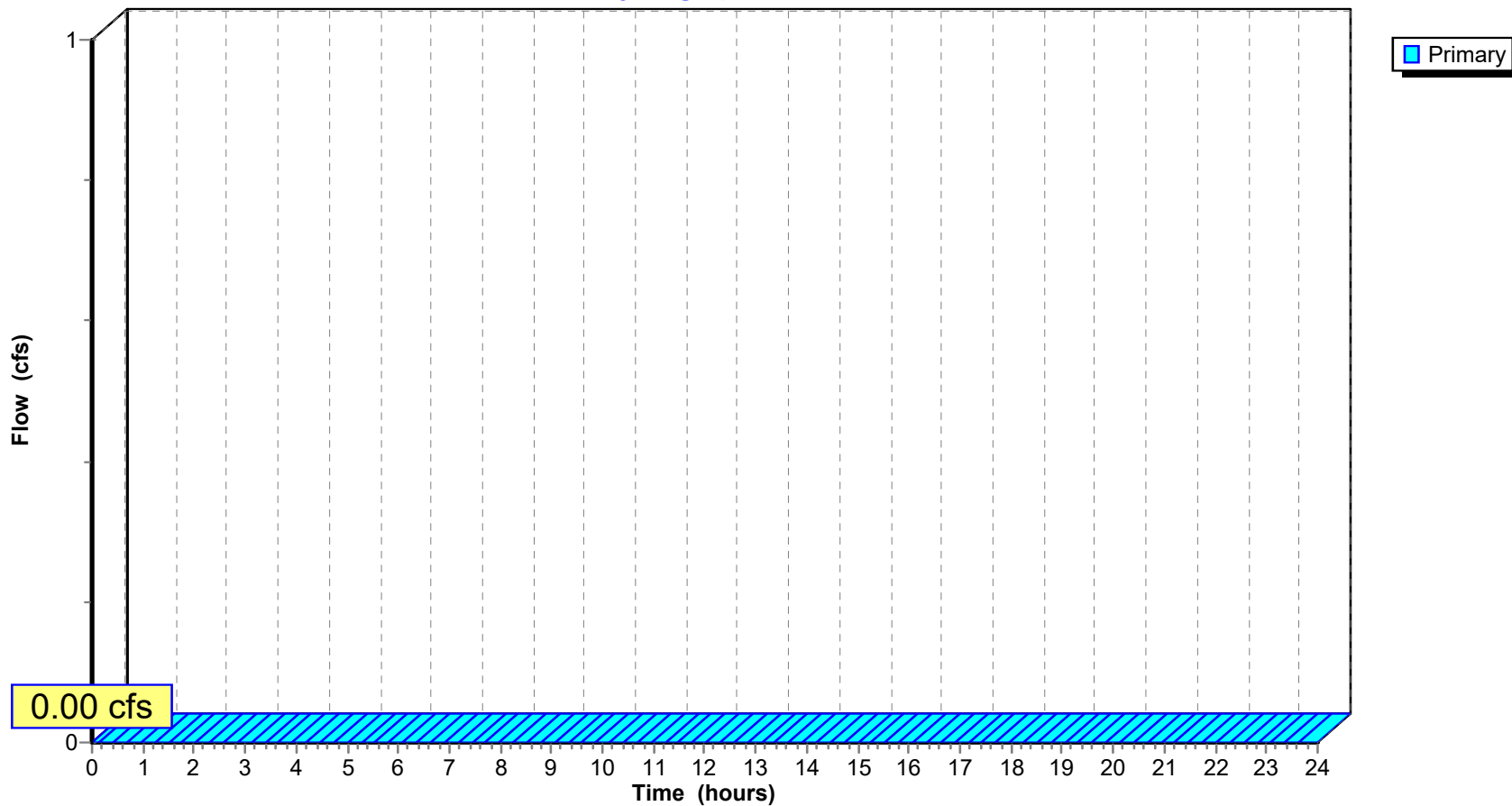
Summary for Link 2L: ROUTE 28

Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs

Link 2L: ROUTE 28

Hydrograph



Site Hydrology 2

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Type III 24-hr 100 year Rainfall=7.52"

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Summary for Subcatchment DA 2: DA 2

Runoff = 3.48 cfs @ 12.56 hrs, Volume= 0.522 af, Depth= 2.16"
Routed to Pond P5 : DRYWELLS 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs
Type III 24-hr 100 year Rainfall=7.52"

	Area (sf)	CN	Description
	10,475	98	Roofs, HSG A
	3,230	30	Woods, Good, HSG A
*	104,263	48	Composite CN for naturalizing area
	6,288	39	>75% Grass cover, Good, HSG A
	2,076	98	Paved parking, HSG A
	126,332	52	Weighted Average
	113,781		90.07% Pervious Area
	12,551		9.93% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.6	50	0.1400	0.07		Sheet Flow, Wooded area Woods: Dense underbrush n= 0.800 P2= 2.30"
12.9	569	0.0110	0.73		Shallow Concentrated Flow, Through naturalizing area Short Grass Pasture Kv= 7.0 fps
11.7	176	0.0100	0.25		Shallow Concentrated Flow, Through landscaped area Forest w/Heavy Litter Kv= 2.5 fps
0.3	27	0.0050	1.44		Shallow Concentrated Flow, Across driveway Paved Kv= 20.3 fps
36.5	822	Total			

Site Hydrology 2

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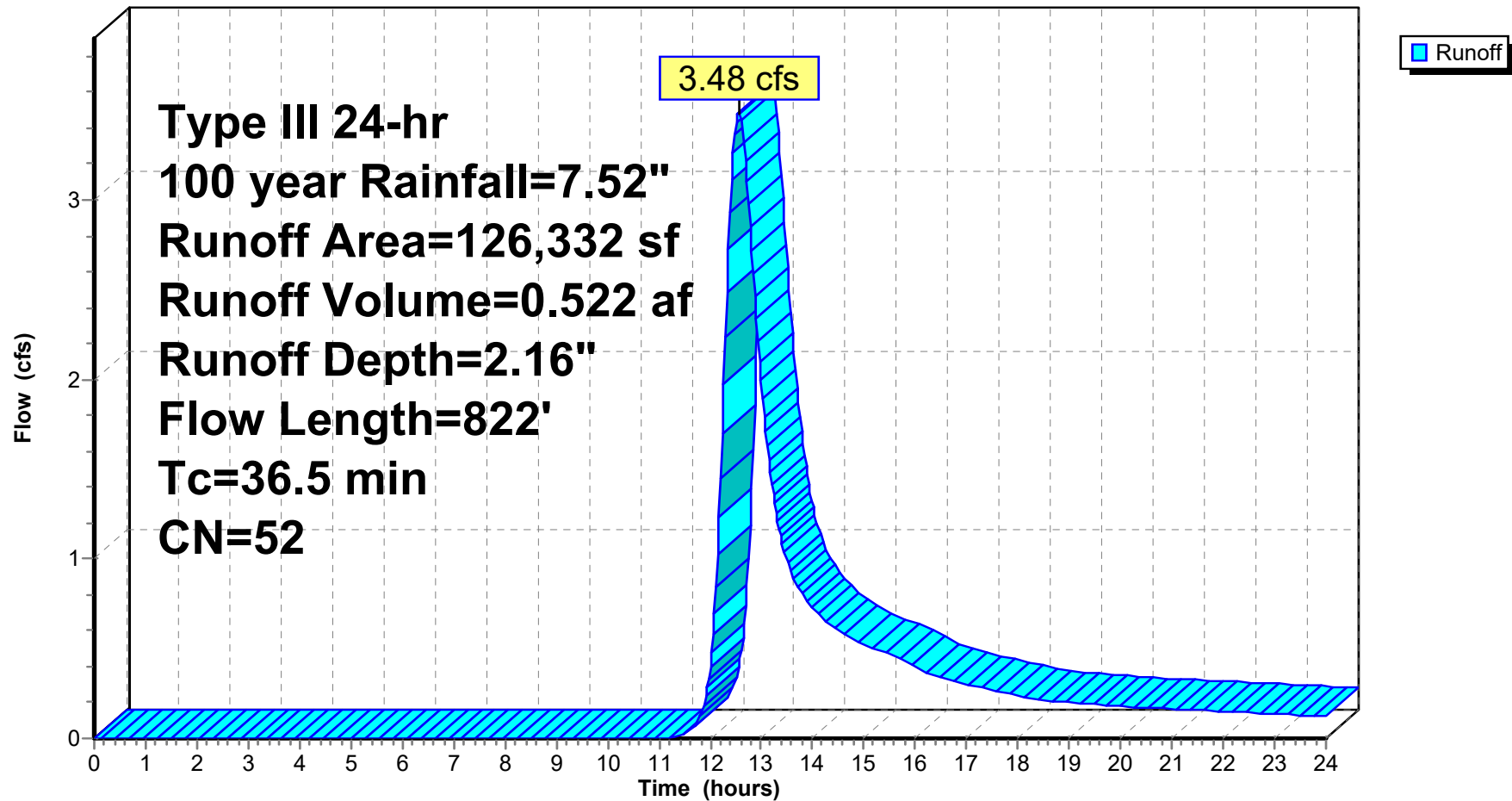
Type III 24-hr 100 year Rainfall=7.52"

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Subcatchment DA 2: DA 2

Hydrograph



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Summary for Subcatchment DA1: DA 1

Runoff = 10.37 cfs @ 12.31 hrs, Volume= 1.152 af, Depth= 2.98"
Routed to Pond P2 : DRYWELLS 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs
Type III 24-hr 100 year Rainfall=7.52"

Area (sf)	CN	Description
1,353	98	Roofs, HSG A
41,209	30	Woods, Good, HSG A
33,324	39	>75% Grass cover, Good, HSG A
* 49,750	48	Composite CN - Naturalizing area
* 6,552	39	Grass - stormwater swale
61,054	98	Paved parking, HSG A
* 8,960	98	Stormwater basin when full
202,202	60	Weighted Average
130,835		64.71% Pervious Area
71,367		35.29% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.6	50	0.1400	0.07		Sheet Flow, Woods Woods: Dense underbrush n= 0.800 P2= 2.30"
7.8	373	0.0130	0.80		Shallow Concentrated Flow, Through naturalizing area Short Grass Pasture Kv= 7.0 fps
1.8	211	0.0095	1.98		Shallow Concentrated Flow, Through parking Paved Kv= 20.3 fps
21.2	634	Total			

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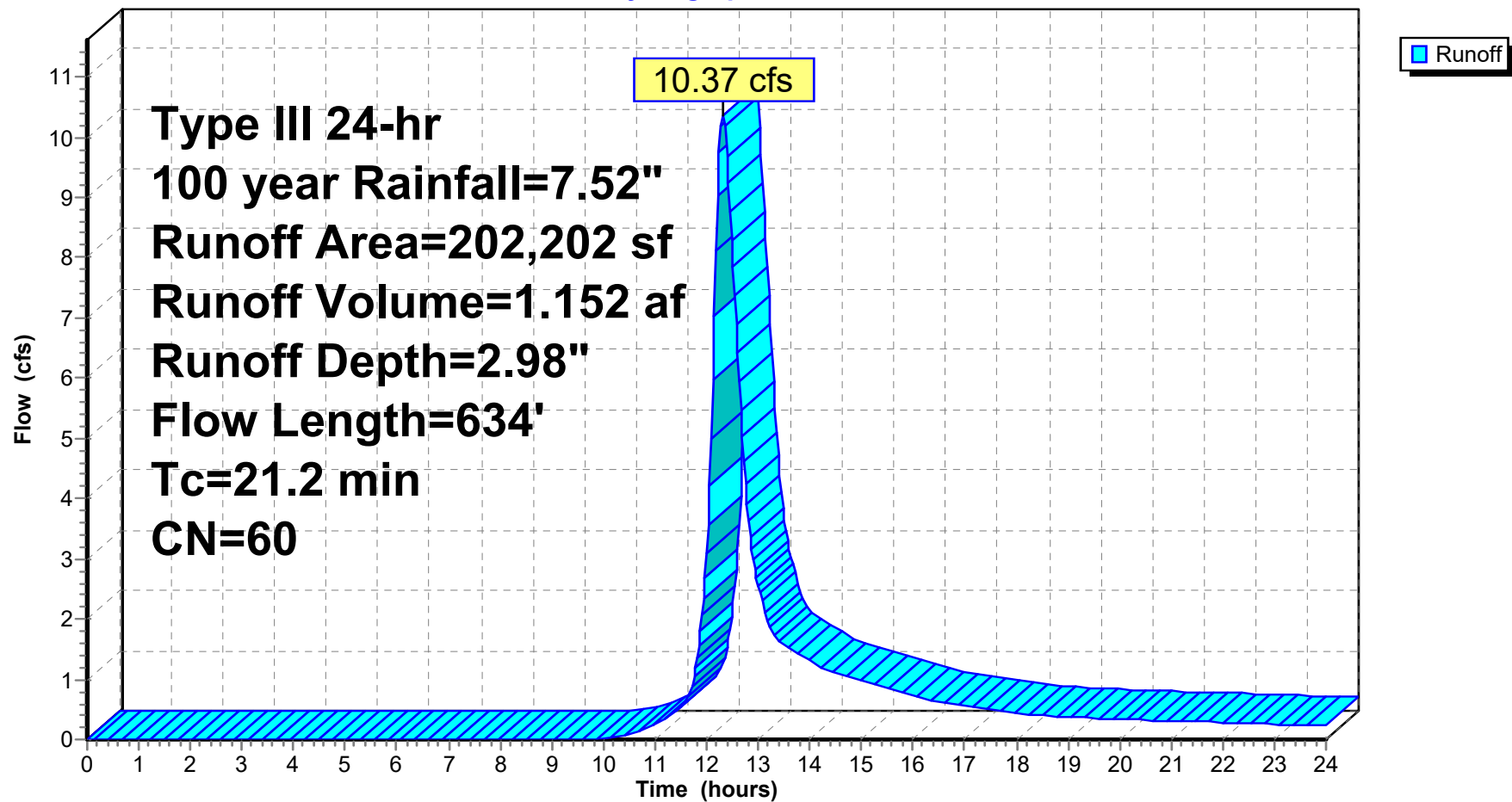
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Subcatchment DA1: DA 1

Hydrograph



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Summary for Subcatchment R1: Roof (south)

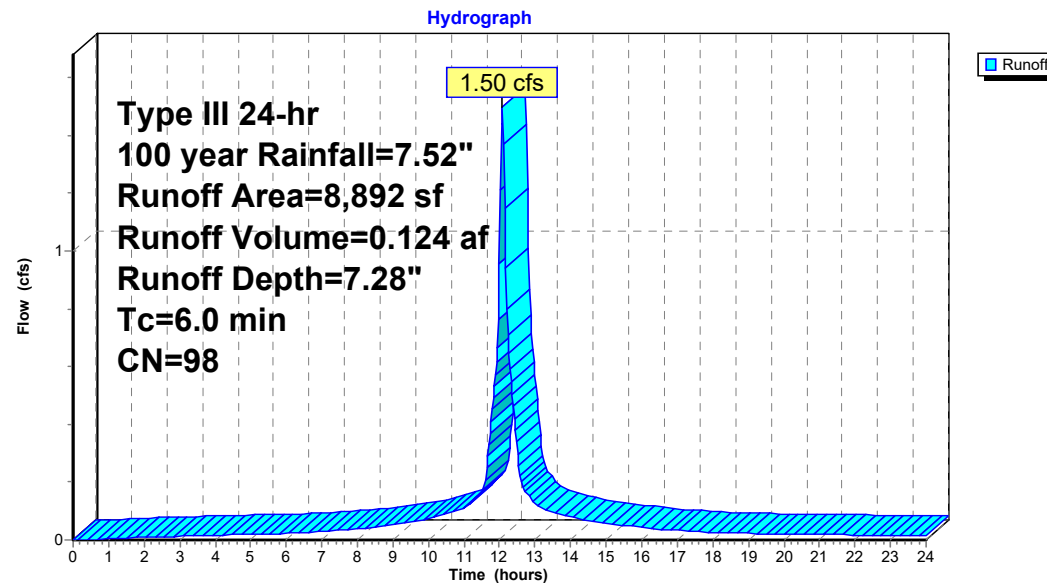
Runoff = 1.50 cfs @ 12.08 hrs, Volume= 0.124 af, Depth= 7.28"
Routed to Pond P3 : INFIL 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs
Type III 24-hr 100 year Rainfall=7.52"

Area (sf)	CN	Description
8,892	98	Unconnected roofs, HSG A
8,892		100.00% Impervious Area
8,892		100.00% Unconnected

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

Subcatchment R1: Roof (south)



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Summary for Subcatchment R2: Roof (east)

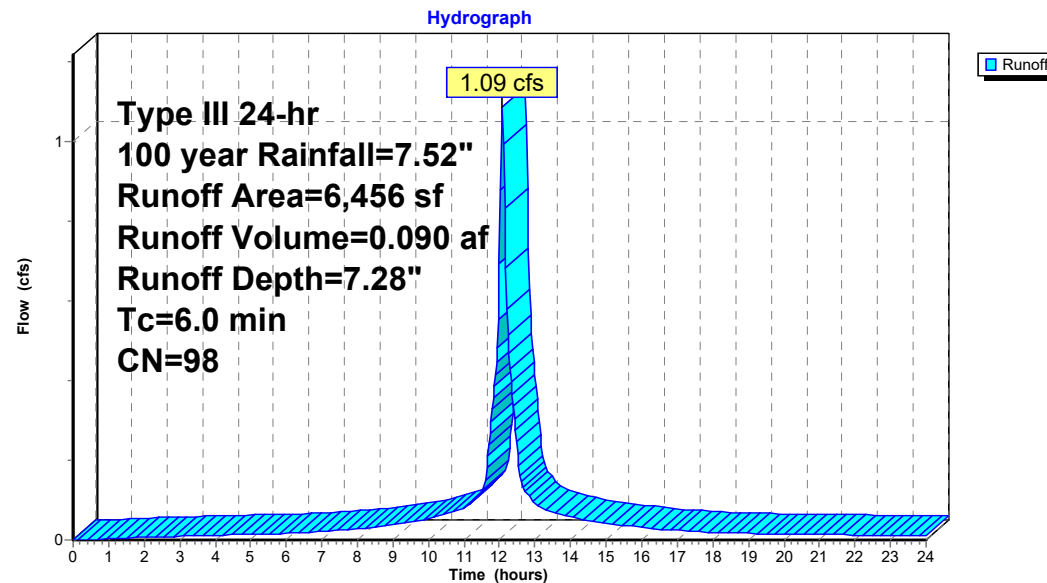
Runoff = 1.09 cfs @ 12.08 hrs, Volume= 0.090 af, Depth= 7.28"
Routed to Pond P4 : INFIL 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs
Type III 24-hr 100 year Rainfall=7.52"

Area (sf)	CN	Description
6,456	98	Unconnected roofs, HSG A
6,456		100.00% Impervious Area
6,456		100.00% Unconnected

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

Subcatchment R2: Roof (east)



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Summary for Reach REACH: Water Quality Swale

Bank-Full Depth= 2.00' Flow Area= 42.0 sf, Capacity= 102.69 cfs

15.00' x 2.00' deep channel, n= 0.050 Earth, long dense weeds

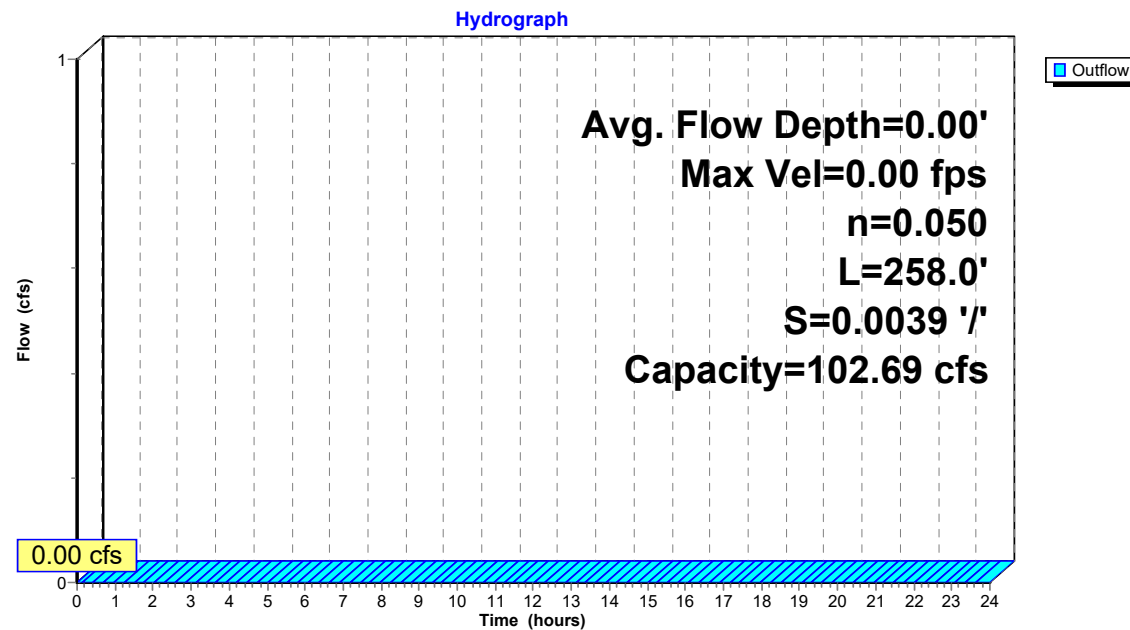
Side Slope Z-value= 3.0 '/' Top Width= 27.00'

Length= 258.0' Slope= 0.0039 '/'

Inlet Invert= 105.00', Outlet Invert= 104.00'



Reach REACH: Water Quality Swale



Site Hydrology 2

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Summary for Pond P1: BASIN

Inflow Area = 7.894 ac, 28.87% Impervious, Inflow Depth = 2.28" for 100 year event
Inflow = 12.43 cfs @ 12.46 hrs, Volume= 1.499 af
Outflow = 2.06 cfs @ 13.02 hrs, Volume= 1.466 af, Atten= 83%, Lag= 33.5 min
Discarded = 2.06 cfs @ 13.02 hrs, Volume= 1.466 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs / 3
Peak Elev= 105.60' @ 13.82 hrs Surf.Area= 13,212 sf Storage= 27,807 cf

Plug-Flow detention time= 159.1 min calculated for 1.466 af (98% of inflow)
Center-of-Mass det. time= 146.9 min (1,004.3 - 857.3)

Volume	Invert	Avail.Storage	Storage Description
#1	94.00'	1,425 cf	18.00'D x 7.00'H Drywells - stone around x 2 3,563 cf Overall x 40.0% Voids
#2	101.00'	72,867 cf	Stormwater basin (Prismatic) Listed below (Recalc)
		74,292 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
101.00	3,122	0	0
102.00	4,058	3,590	3,590
103.00	5,053	4,556	8,146
104.00	6,109	5,581	13,727
105.00	8,008	7,059	20,785
105.40	8,960	3,394	24,179
106.00	20,000	8,688	32,867
107.00	60,000	40,000	72,867

Device	Routing	Invert	Outlet Devices
#1	Discarded	94.75'	8.270 in/hr Exfiltration X 2.00 over Surface area from 94.75' - 101.75' Excluded Surface area = 509 sf 8.270 in/hr Exfiltration - pond bottom over Surface area from 103.75' - 105.40' Excluded Surface area = 6,354 sf Phase-In= 0.01'
#2	Discarded	103.75'	
#3	Primary	105.75'	5.0' long x 35.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60

Site Hydrology 2

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Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Discarded OutFlow Max=2.06 cfs @ 13.02 hrs HW=105.42' (Free Discharge)

↑ **1=Exfiltration** (Exfiltration Controls 1.46 cfs)

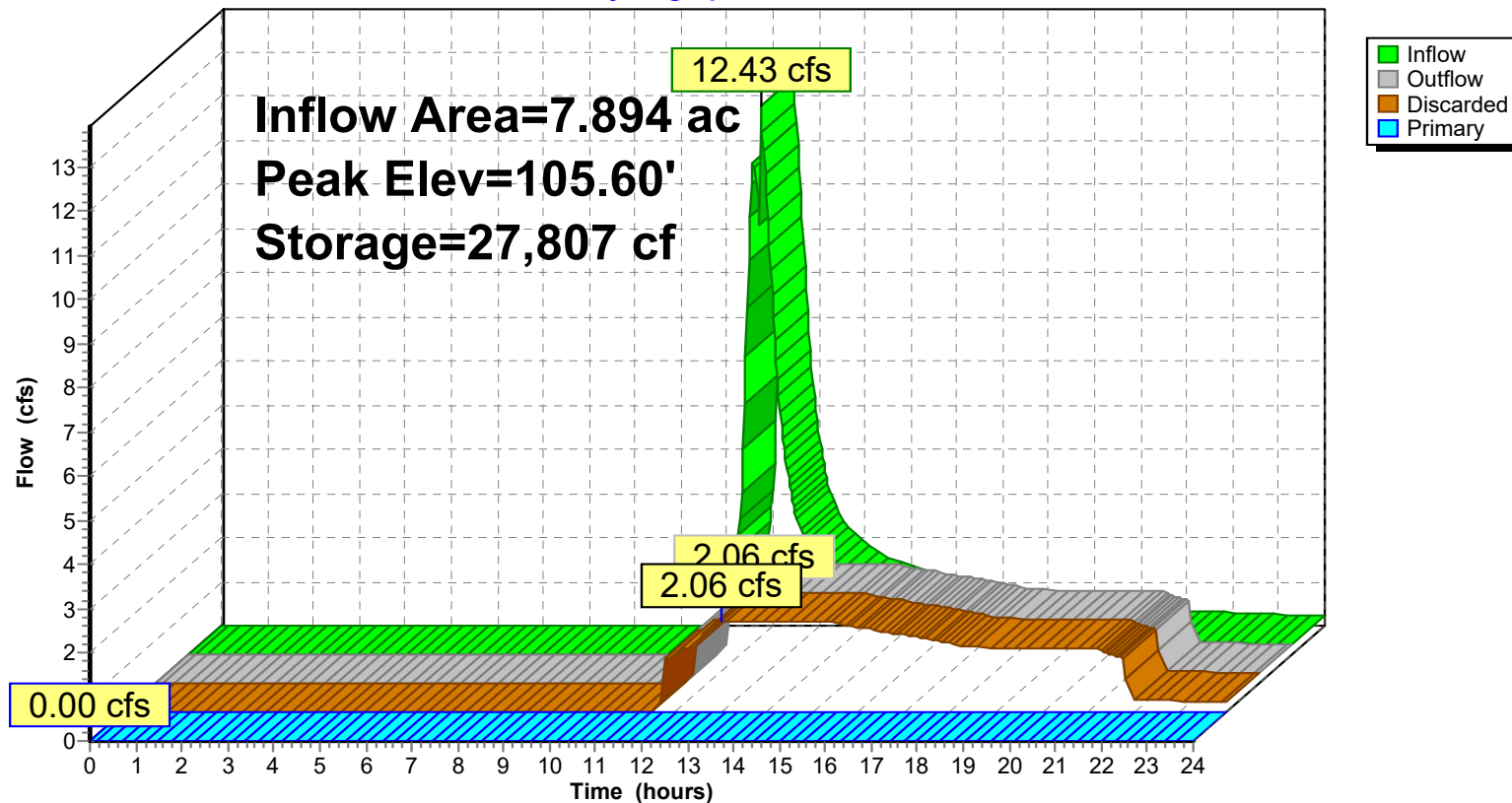
↑ **2=Exfiltration - pond bottom** (Exfiltration Controls 0.60 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=94.00' (Free Discharge)

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

Pond P1: BASIN

Hydrograph



Site Hydrology 2

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Summary for Pond P2: DRYWELLS 2

Inflow Area = 4.642 ac, 35.29% Impervious, Inflow Depth = 2.98" for 100 year event
Inflow = 10.37 cfs @ 12.31 hrs, Volume= 1.152 af
Outflow = 10.37 cfs @ 12.31 hrs, Volume= 1.148 af, Atten= 0%, Lag= 0.0 min
Discarded = 0.00 cfs @ 10.77 hrs, Volume= 0.001 af
Primary = 10.37 cfs @ 12.31 hrs, Volume= 1.147 af
Routed to Pond P1 : BASIN

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs / 3
Peak Elev= 108.64' @ 12.31 hrs Surf.Area= 336 sf Storage= 213 cf

Plug-Flow detention time= 3.9 min calculated for 1.148 af (100% of inflow)
Center-of-Mass det. time= 1.6 min (865.1 - 863.6)

Volume	Invert	Avail.Storage	Storage Description
#1	99.25'	6 cf	18.00'D x 7.00'H Drywells - stone around 1,781 cf Overall - 231 cf Embedded = 1,550 cf x 0.4% Voids
#2	100.25'	170 cf	6.00'D x 6.00'H Concrete drywell Inside #1 231 cf Overall - 6.0" Wall Thickness = 170 cf
#3	106.25'	6 cf	2.00'D x 2.00'H Riser
#4	108.25'	20 cf	10.00'D x 0.25'H Surface depression
#5	108.50'	277 cf	Airspace above drywell (Prismatic) Listed below (Recalc) -Impervious
		478 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.50	79	0	0
112.00	79	277	277

Device	Routing	Invert	Outlet Devices
#1	Discarded	99.25'	8.270 in/hr Exfiltration over Surface area from 99.25' - 106.25' Excluded Surface area = 254 sf
#2	Primary	108.51'	Overflow X 2.00, Cv= 2.62 (C= 3.28) Head (feet) 0.01 0.25 Width (feet) 31.00 31.00

Site Hydrology 2

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Discarded OutFlow Max=0.00 cfs @ 10.77 hrs HW=108.33' (Free Discharge)

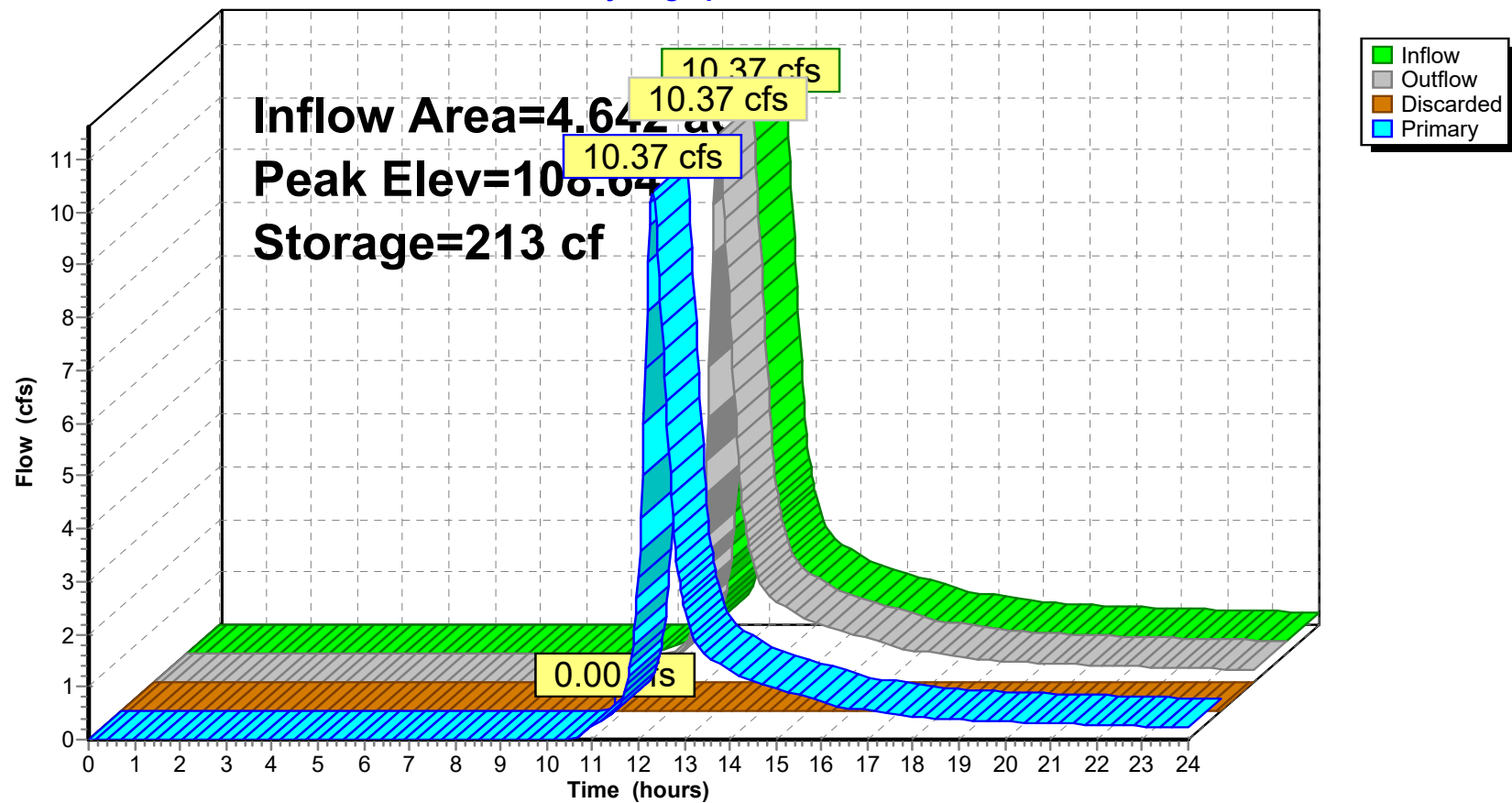
↳ **1=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=9.50 cfs @ 12.31 hrs HW=108.64' (Free Discharge)

↳ **2=Overflow** (Weir Controls 9.50 cfs @ 1.18 fps)

Pond P2: DRYWELLS 2

Hydrograph



Site Hydrology 2

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Summary for Pond P3: INFIL 2

Inflow Area = 0.204 ac, 100.00% Impervious, Inflow Depth = 7.28" for 100 year event
Inflow = 1.50 cfs @ 12.08 hrs, Volume= 0.124 af
Outflow = 1.09 cfs @ 12.16 hrs, Volume= 0.124 af, Atten= 27%, Lag= 4.5 min
Discarded = 0.26 cfs @ 11.67 hrs, Volume= 0.103 af
Primary = 0.83 cfs @ 12.16 hrs, Volume= 0.021 af
Routed to Pond P1 : BASIN

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs / 4
Peak Elev= 109.40' @ 12.16 hrs Surf.Area= 1,350 sf Storage= 641 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 6.1 min (748.1 - 742.0)

Volume	Invert	Avail.Storage	Storage Description
#1	102.00'	5 cf	5.00'W x 90.00'L x 3.00'H Infiltration trench 1,350 cf Overall x 0.4% Voids
#2	105.00'	4 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 1,350 cf Overall x 0.3% Voids
#3	108.00'	900 cf	Open area above trench (Prismatic) Listed below (Recalc)
		909 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
105.00	450	0	0
108.00	450	1,350	1,350

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.00	450	0	0
109.00	450	450	450
110.00	450	450	900

Site Hydrology 2

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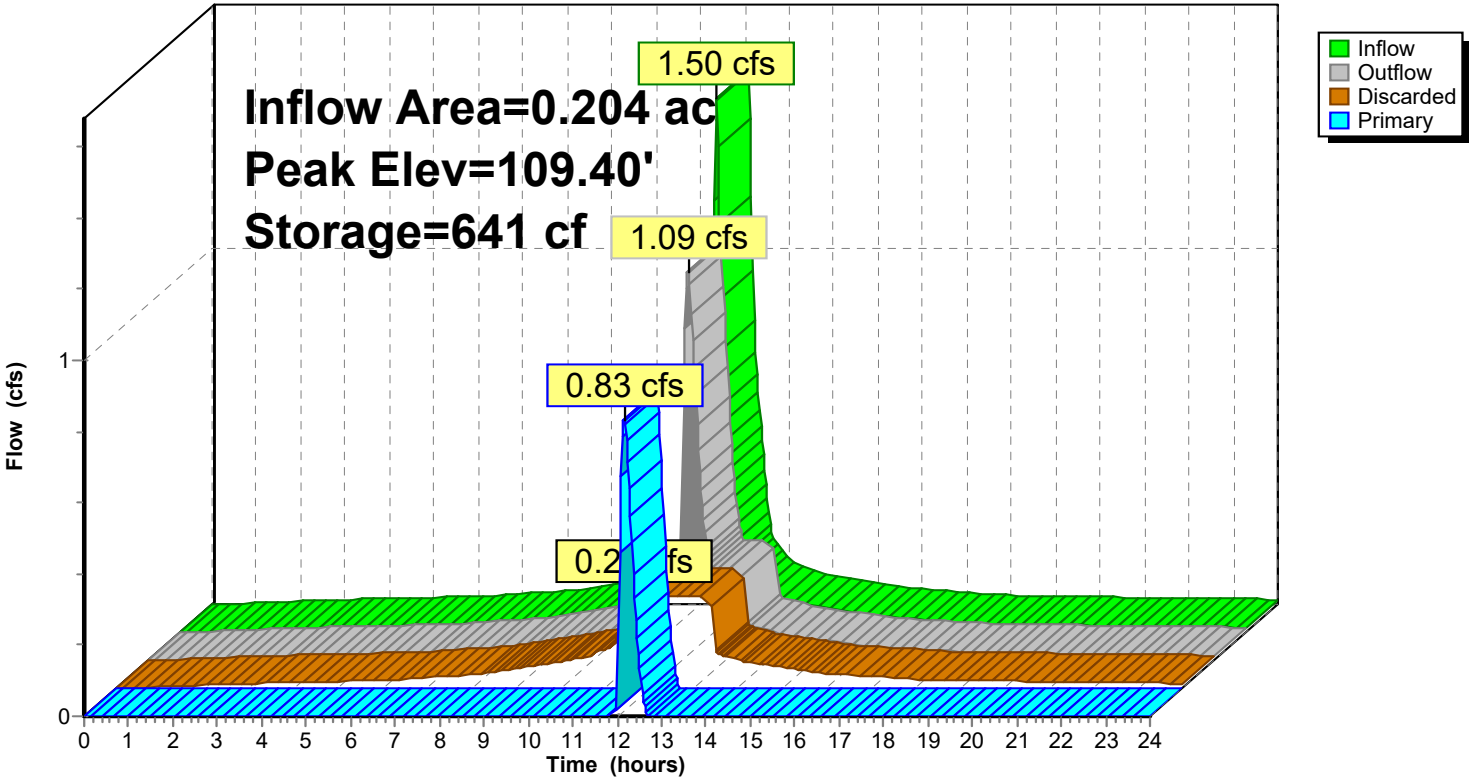
Device	Routing	Invert	Outlet Devices
#1	Discarded	102.00'	8.270 in/hr Exfiltration over Surface area
#2	Primary	108.80'	4.0" Vert. Overflow from downspouts X 3.00 C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.26 cfs @ 11.67 hrs HW=108.00' (Free Discharge)
1=Exfiltration (Exfiltration Controls 0.26 cfs)

Primary OutFlow Max=0.83 cfs @ 12.16 hrs HW=109.40' (Free Discharge)
2=Overflow from downspouts (Orifice Controls 0.83 cfs @ 3.16 fps)

Pond P3: INFIL 2

Hydrograph



Site Hydrology 2

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Summary for Pond P4: INFIL 1

Inflow Area = 0.148 ac, 100.00% Impervious, Inflow Depth = 7.28" for 100 year event
Inflow = 1.09 cfs @ 12.08 hrs, Volume= 0.090 af
Outflow = 0.43 cfs @ 12.30 hrs, Volume= 0.090 af, Atten= 60%, Lag= 13.0 min
Discarded = 0.13 cfs @ 11.97 hrs, Volume= 0.083 af
Primary = 0.30 cfs @ 12.30 hrs, Volume= 0.007 af
Routed to Pond P1 : BASIN

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs / 4
Peak Elev= 109.02' @ 12.30 hrs Surf.Area= 700 sf Storage= 1,093 cf

Plug-Flow detention time= 52.5 min calculated for 0.090 af (100% of inflow)
Center-of-Mass det. time= 52.4 min (794.4 - 742.0)

Volume	Invert	Avail.Storage	Storage Description
#1	102.00'	420 cf	5.00'W x 70.00'L x 3.00'H Infiltration trench 1,050 cf Overall x 40.0% Voids
#2	105.00'	315 cf	Custom Stage Data (Prismatic) Listed below (Recalc) 1,050 cf Overall x 30.0% Voids
#3	108.00'	700 cf	Area over infil trench (Prismatic) Listed below (Recalc) -Impervious
		1,435 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
105.00	350	0	0
108.00	350	1,050	1,050

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.00	350	0	0
109.00	350	350	350
110.00	350	350	700

Site Hydrology 2

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Device	Routing	Invert	Outlet Devices
#1	Discarded	102.00'	8.270 in/hr Exfiltration over Surface area
#2	Primary	108.80'	4.0" Vert. Overflow from downspouts X 3.00 C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.13 cfs @ 11.97 hrs HW=105.20' (Free Discharge)

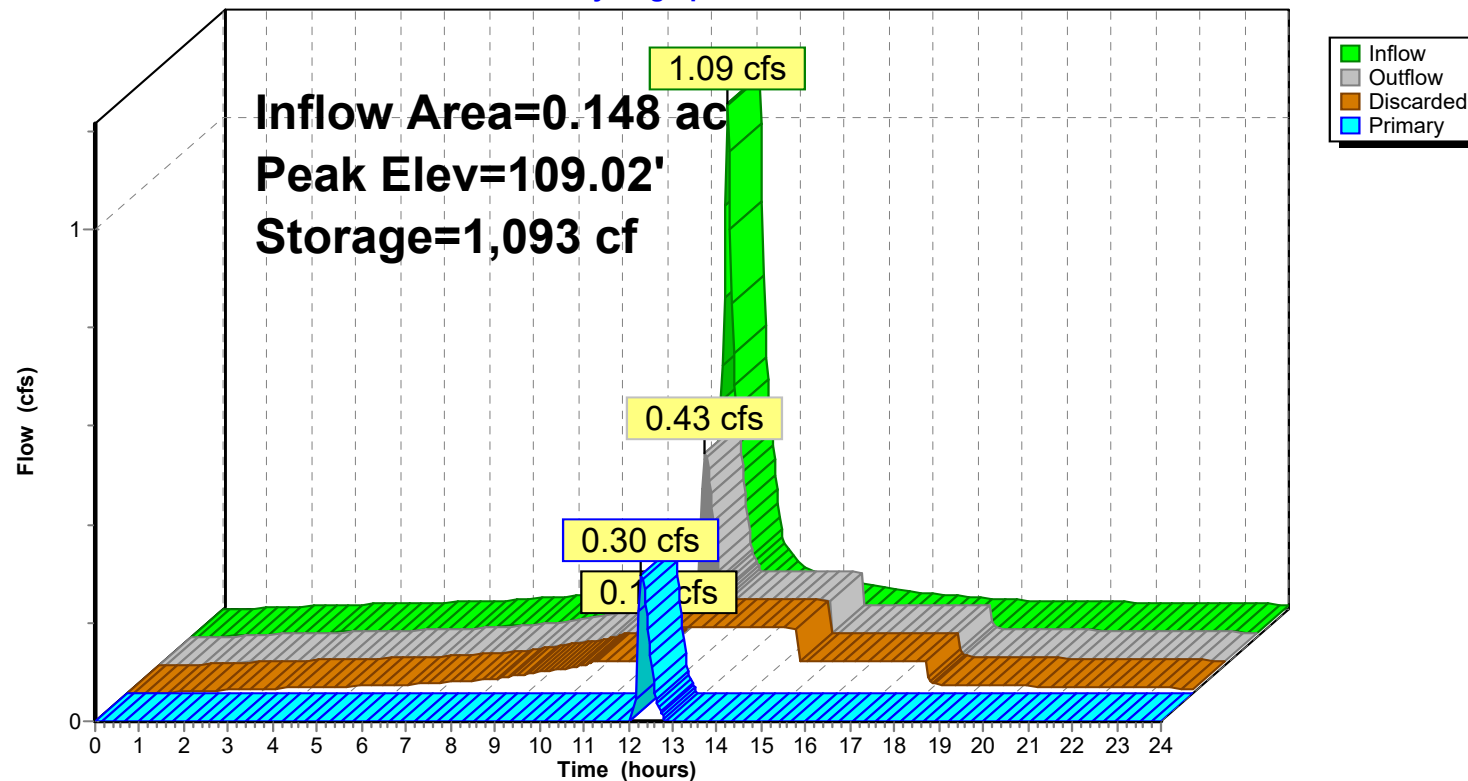
↳ **1=Exfiltration** (Exfiltration Controls 0.13 cfs)

Primary OutFlow Max=0.30 cfs @ 12.30 hrs HW=109.02' (Free Discharge)

↳ **2=Overflow from downspouts** (Orifice Controls 0.30 cfs @ 1.61 fps)

Pond P4: INFIL 1

Hydrograph



Site Hydrology 2

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Summary for Pond P5: DRYWELLS 2

Inflow Area = 2.900 ac, 9.93% Impervious, Inflow Depth = 2.16" for 100 year event
Inflow = 3.48 cfs @ 12.56 hrs, Volume= 0.522 af
Outflow = 3.48 cfs @ 12.56 hrs, Volume= 0.524 af, Atten= 0%, Lag= 0.4 min
Discarded = 0.14 cfs @ 11.82 hrs, Volume= 0.200 af
Primary = 3.35 cfs @ 12.56 hrs, Volume= 0.324 af
Routed to Pond P1 : BASIN

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs / 4
Peak Elev= 108.56' @ 12.56 hrs Surf.Area= 2,556 sf Storage= 2,520 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 95.0 min (992.7 - 897.7)

Volume	Invert	Avail.Storage	Storage Description
#1	99.25'	19 cf	18.00'D x 7.00'H Drywells - stone around x 3 5,344 cf Overall - 693 cf Embedded = 4,651 cf x 0.4% Voids
#2	100.25'	509 cf	6.00'D x 6.00'H Concrete drywell x 3 Inside #1 693 cf Overall - 6.0" Wall Thickness = 509 cf
#3	100.25'	1,944 cf	10.00'D x 8.25'H Surface depression x 3
#4	108.50'	12,540 cf	Airspace over drywell (Prismatic) Listed below (Recalc)
		15,011 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
108.50	79	0	0
109.50	25,000	12,540	12,540

Device	Routing	Invert	Outlet Devices
#1	Discarded	99.25'	8.270 in/hr Exfiltration X 3.00 over Surface area from 99.25' - 106.25' Excluded Surface area = 763 sf
#2	Primary	108.51'	Overflow X 3.00, Cv= 2.62 (C= 3.28) Head (feet) 0.01 0.25 Width (feet) 31.00 31.00

Site Hydrology 2

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Discarded OutFlow Max=0.14 cfs @ 11.82 hrs HW=100.25' (Free Discharge)

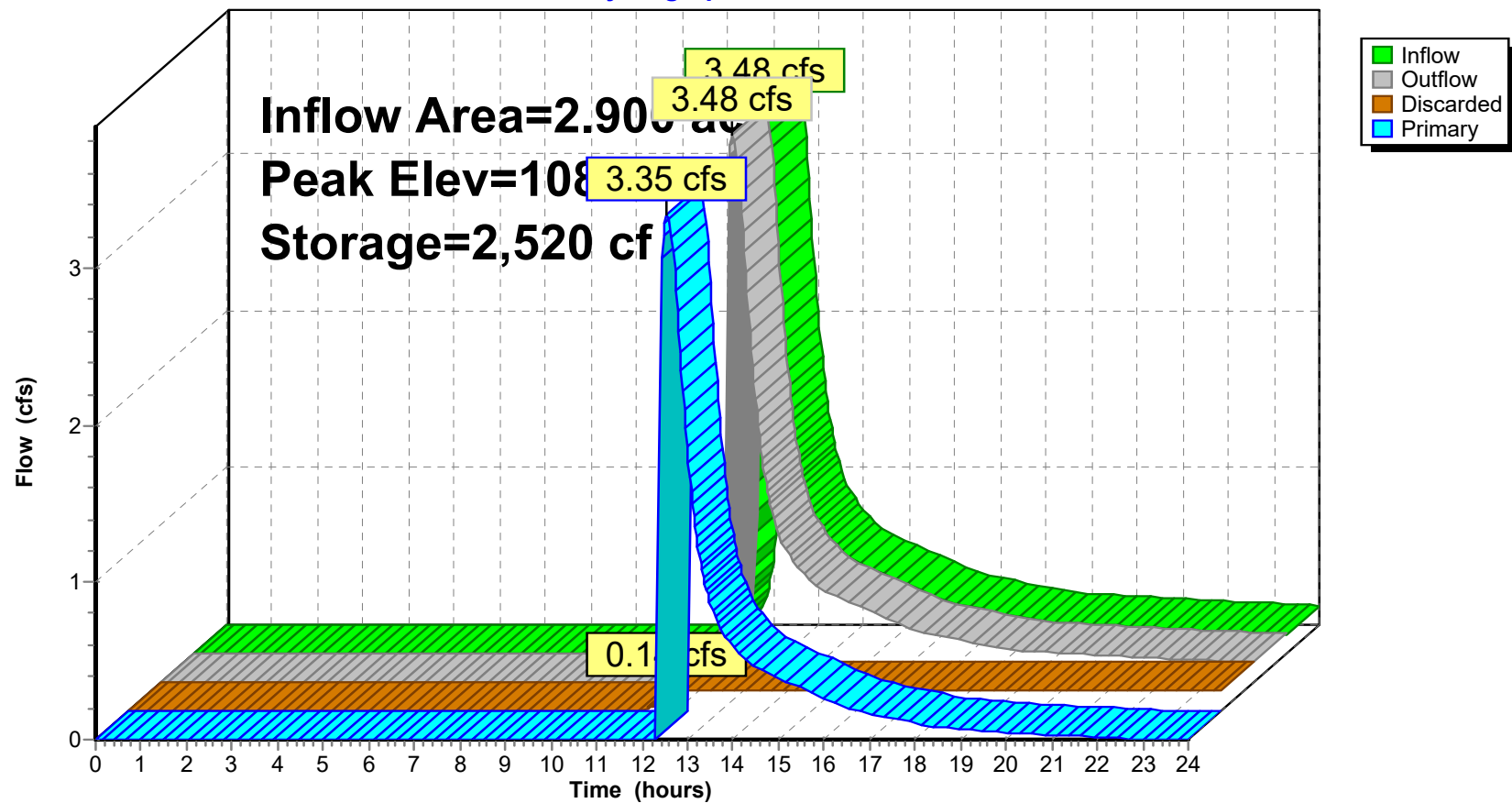
↑ **1=Exfiltration** (Exfiltration Controls 0.14 cfs)

Primary OutFlow Max=3.33 cfs @ 12.56 hrs HW=108.56' (Free Discharge)

↑ **2=Overflow** (Weir Controls 3.33 cfs @ 0.73 fps)

Pond P5: DRYWELLS 2

Hydrograph



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Summary for Link 2L: ROUTE 28

Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.03 hrs

Link 2L: ROUTE 28

Hydrograph

