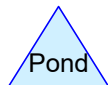


Subcat



Reach



Pond



Link

Routing Diagram for 292--whiton--PROPOSED-final-2yr
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292--whiton--PROPOSED-final-2yr

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Area Listing (all nodes)

Area (acres)	C	Description (subcatchment-numbers)
0.014	0.60	GRASS (5S)
0.024	0.98	ROOF/PARKING/REAR SIDEWALK (5S)
0.038	0.84	TOTAL AREA

292--whiton--PROPOSED-final-2yr

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.038	Other	5S
0.038		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	0.000	0.000	0.014	0.014	GRASS	
0.000	0.000	0.000	0.000	0.024	0.024	ROOF/PARKING/REAR SIDEWALK	
0.000	0.000	0.000	0.000	0.038	0.038	TOTAL AREA	

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Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	3R	-0.12	-0.54	145.0	0.0029	0.010	4.0	0.0	0.0

Time span=0.00-2.00 hrs, dt=0.01 hrs, 201 points

Runoff by Rational method, Rise/Fall=1.0/1.0 xTc

Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment5S: PROPOSED

Runoff Area=1,666 sf 62.24% Impervious Runoff Depth=1.22"

Flow Length=267' Slope=0.1530 '/' Tc=0.6 min C=0.84 Runoff=0.05 cfs 0.004 af

Reach 3R: PIPE

Avg. Flow Depth=0.14' Max Vel=1.39 fps Inflow=0.05 cfs 0.004 af

4.0" Round Pipe n=0.010 L=145.0' S=0.0029 '/' Capacity=0.13 cfs Outflow=0.05 cfs 0.004 af

Pond 2P: DETENTION PIPES

Peak Elev=-1.57' Storage=169 cf Inflow=0.05 cfs 0.004 af

Outflow=0.00 cfs 0.000 af

Total Runoff Area = 0.038 ac Runoff Volume = 0.004 af Average Runoff Depth = 1.22"**37.76% Pervious = 0.014 ac 62.24% Impervious = 0.024 ac**

Summary for Subcatchment 5S: PROPOSED ROOF/DRIVEWAY/GRASS RUNOFF

Exsiting Drainage area that picks up the PROPOSED runoff
WITH A 10 YEAR STORAGE CRITERA

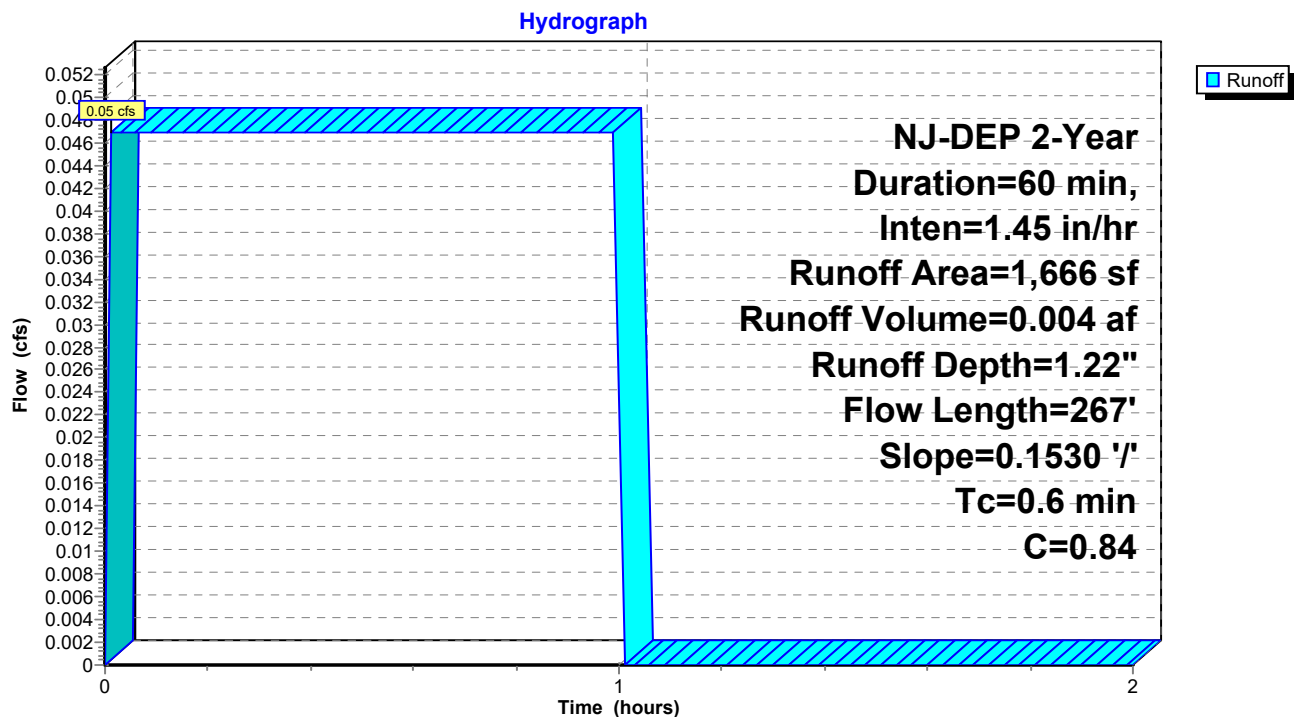
[70] Warning: $T_c < 8dt$ requires smaller dt

Runoff = 0.05 cfs @ 0.01 hrs, Volume= 0.004 af, Depth= 1.22"

Runoff by Rational method, Rise/Fall=1.0/1.0 x T_c , Time Span= 0.00-2.00 hrs, $dt=0.01$ hrs
NJ-DEP 2-Year Duration=60 min, Inten=1.45 in/hr

Area (sf)	C	Description
1,037	0.98	ROOF/PARKING/REAR SIDEWALK
629	0.60	GRASS
1,666	0.84	Weighted Average
629		37.76% Pervious Area
1,037		62.24% Impervious Area

T_c (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
0.6	267	0.1530	7.94		Shallow Concentrated Flow, Paved $K_v=20.3$ fps

Subcatchment 5S: PROPOSED ROOF/DRIVEWAY/GRASS RUNOFF

Summary for Reach 3R: PIPE

[52] Hint: Inlet/Outlet conditions not evaluated

Inflow Area = 0.038 ac, 62.24% Impervious, Inflow Depth = 1.22" for 2-Year event
 Inflow = 0.05 cfs @ 0.01 hrs, Volume= 0.004 af
 Outflow = 0.05 cfs @ 0.78 hrs, Volume= 0.004 af, Atten= 0%, Lag= 46.2 min

Routing by Stor-Ind method, Time Span= 0.00-2.00 hrs, dt= 0.01 hrs

Max. Velocity= 1.39 fps, Min. Travel Time= 1.7 min

Avg. Velocity = 0.94 fps, Avg. Travel Time= 2.6 min

Peak Storage= 5 cf @ 0.77 hrs

Average Depth at Peak Storage= 0.14'

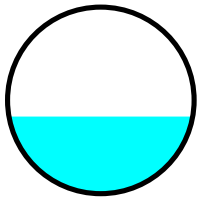
Bank-Full Depth= 0.33' Flow Area= 0.1 sf, Capacity= 0.13 cfs

4.0" Round Pipe

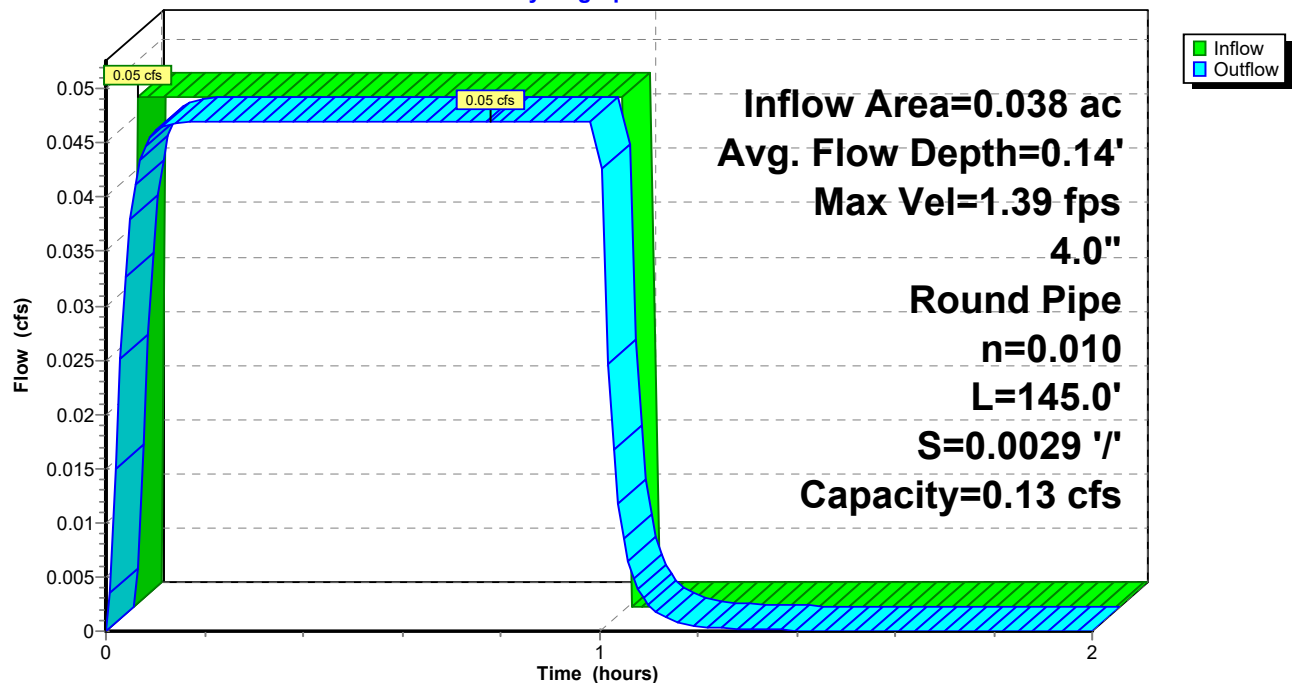
n= 0.010 PVC, smooth interior

Length= 145.0' Slope= 0.0029 '/

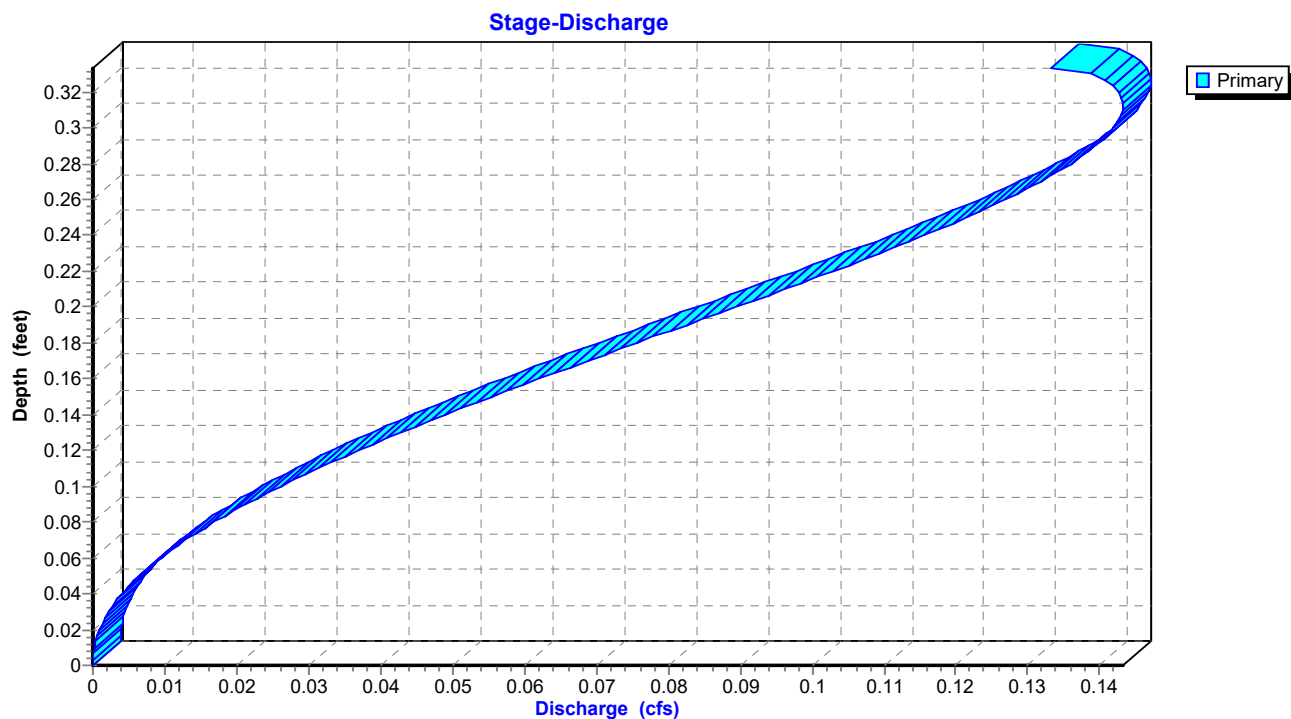
Inlet Invert= -0.12', Outlet Invert= -0.54'

**Reach 3R: PIPE**

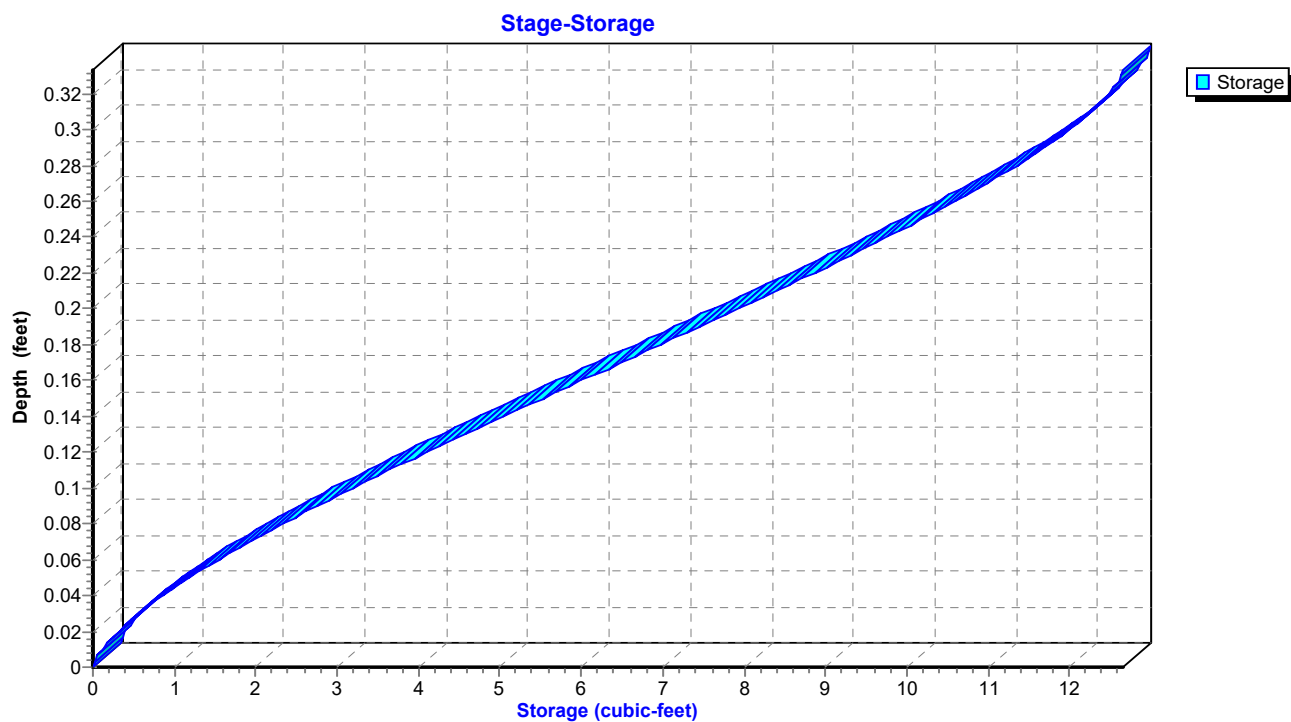
Hydrograph



Reach 3R: PIPE



Reach 3R: PIPE



Summary for Pond 2P: DETENTION PIPES

Inflow Area = 0.038 ac, 62.24% Impervious, Inflow Depth > 1.22" for 2-Year event
 Inflow = 0.05 cfs @ 0.78 hrs, Volume= 0.004 af
 Outflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min

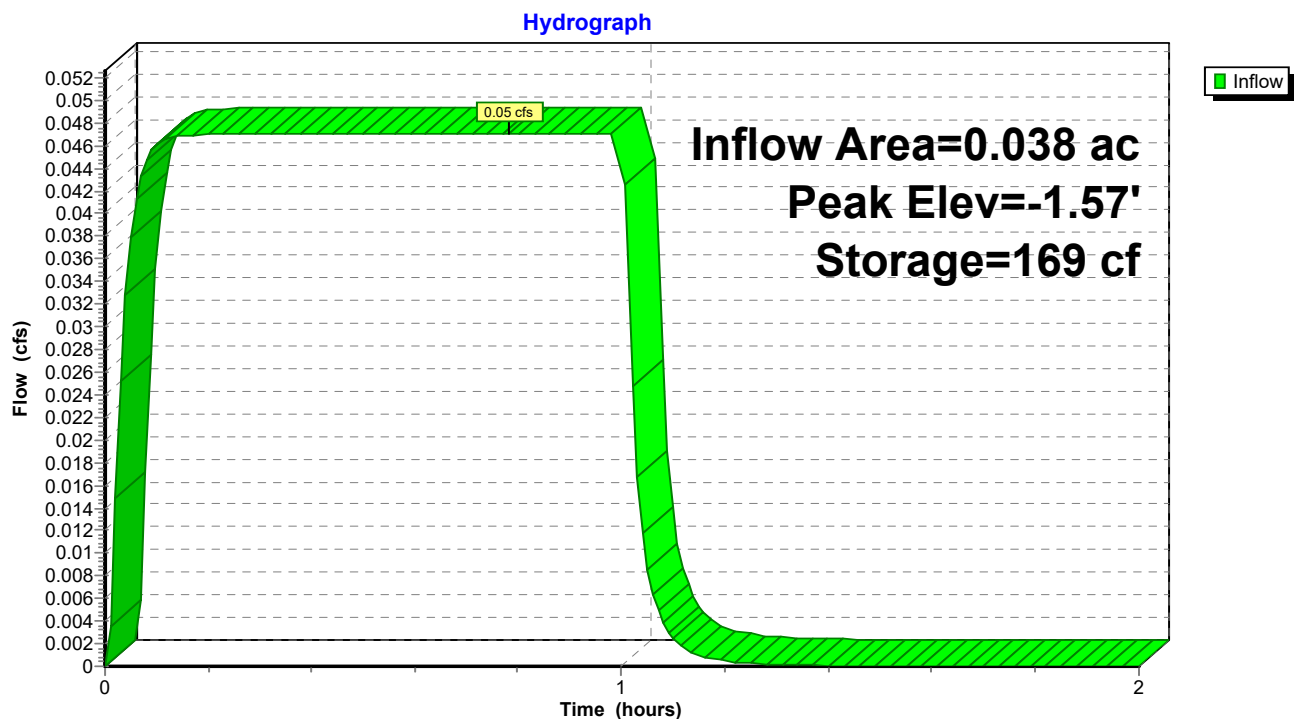
Routing by Stor-Ind method, Time Span= 0.00-2.00 hrs, dt= 0.01 hrs

Peak Elev= -1.57' @ 2.00 hrs Surf.Area= 110 sf Storage= 169 cf

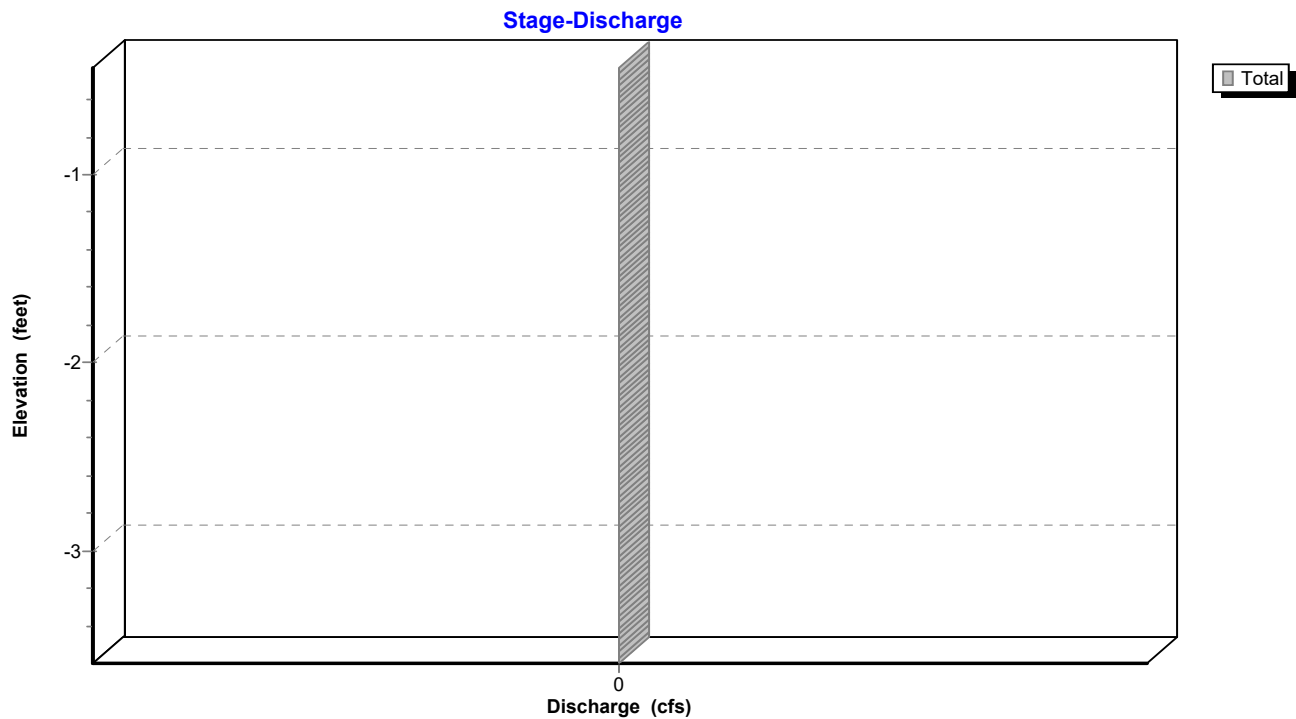
Plug-Flow detention time= (not calculated: initial storage exceeds outflow)

Center-of-Mass det. time= (not calculated: no outflow)

Volume	Invert	Avail.Storage	Storage Description
#1	-3.60'	236 cf	30.0" Round 30 IN HDPE L= 48.0' S= 0.0140 '/'

Pond 2P: DETENTION PIPES

Pond 2P: DETENTION PIPES



Pond 2P: DETENTION PIPES

