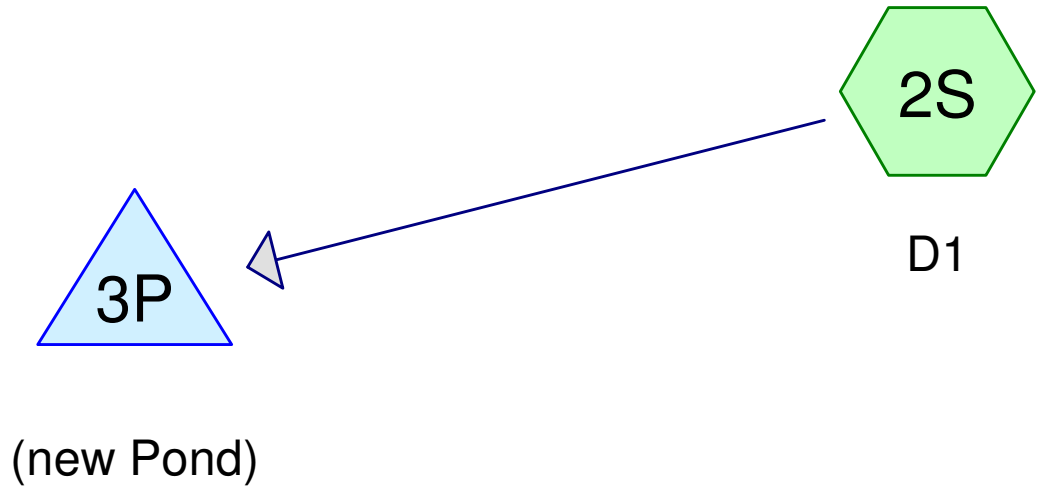


Subcat Reach Pond Link

Routing Diagram for OVCC SCS Runoff Rev1

Prepared by HydroCAD SAMPLER 1-800-927-7246 www.hydrocad.net, Printed 3/6/2015
HydroCAD® 10.00-12 Sampler s/n S25591

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.820	69	50-75% Grass cover, Fair, HSG B (2S)
0.429	98	Asphalt/roofs, HSG B (2S)
1.478	61	Pasture/grassland/range, Good, HSG B (2S)
2.727	**69**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
2.727	HSG B	2S
0.000	HSG C	
0.000	HSG D	
0.000	Other	
2.727		**TOTAL AREA**

Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	0.820	0.000	0.000	0.000	0.820	50-75% Grass cover, Fair	2S
0.000	0.429	0.000	0.000	0.000	0.429	Asphalt/roofs	2S
0.000	1.478	0.000	0.000	0.000	1.478	Pasture/grassland/range, Good	2S
0.000	**2.727**	**0.000**	**0.000**	**0.000**	**2.727**	**TOTAL AREA**	

Time span=0.00-24.00 hrs, dt=0.05 hrs, 481 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 2S: D1 Runoff Area=118,799 sf 15.72% Impervious Runoff Depth>1.27"
Flow Length=502' Tc=4.1 min CN=69 Runoff=6.44 cfs 0.289 af

Pond 3P: (new Pond) Peak Elev=-0.94' Storage=5,384 cf Inflow=6.44 cfs 0.289 af
Discarded=0.27 cfs 0.232 af Primary=0.27 cfs 0.017 af Outflow=0.54 cfs 0.249 af

Total Runoff Area = 2.727 ac Runoff Volume = 0.289 af Average Runoff Depth = 1.27"
84.28% Pervious = 2.299 ac 15.72% Impervious = 0.429 ac

Summary for Subcatchment 2S: D1

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

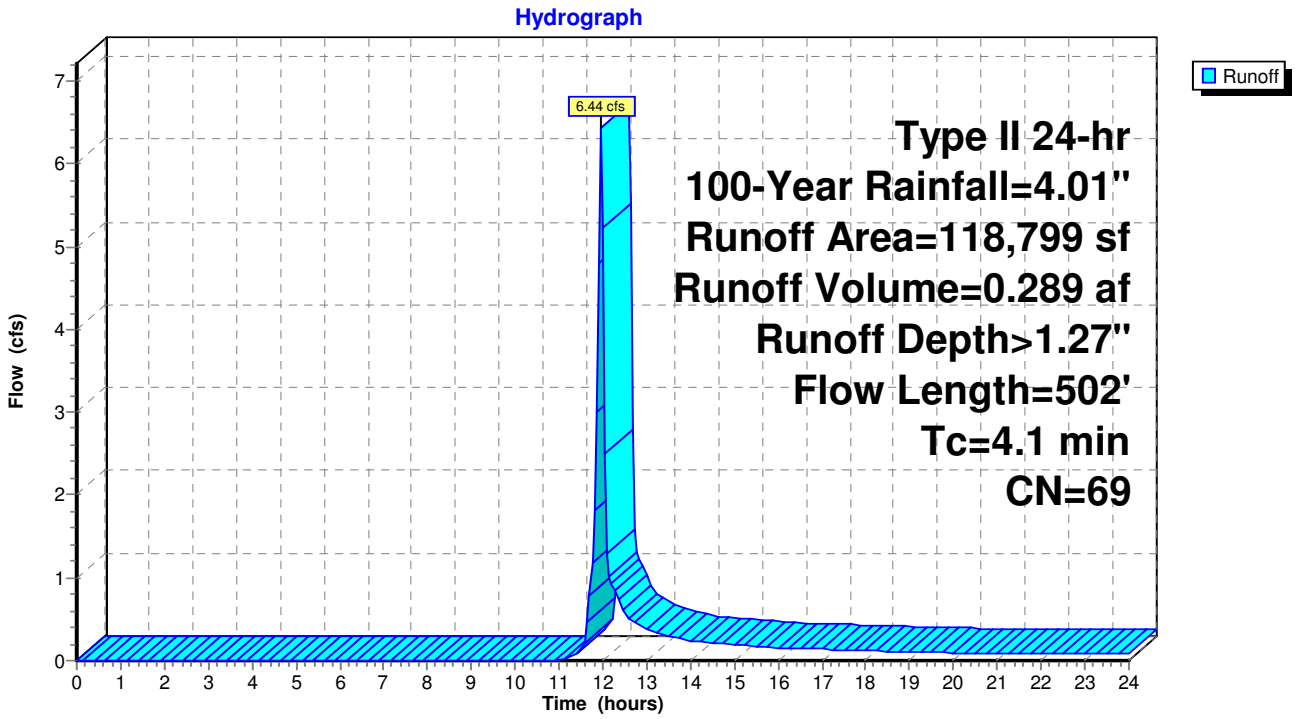
Runoff = 6.44 cfs @ 11.95 hrs, Volume= 0.289 af, Depth> 1.27"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type II 24-hr 100-Year Rainfall=4.01"

	Area (sf)	CN	Description
*	18,671	98	Asphalt/roofs, HSG B
	35,732	69	50-75% Grass cover, Fair, HSG B
	64,396	61	Pasture/grassland/range, Good, HSG B
	118,799	69	Weighted Average
	100,128		84.28% Pervious Area
	18,671		15.72% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	200	0.0325	2.70		**Shallow Concentrated Flow, Sheet Flow** Grassed Waterway Kv= 15.0 fps
2.9	302	0.0132	1.72		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
4.1	502	Total			

Subcatchment 2S: D1



Summary for Pond 3P: (new Pond)

Inflow Area = 2.727 ac, 15.72% Impervious, Inflow Depth > 1.27" for 100-Year event
Inflow = 6.44 cfs @ 11.95 hrs, Volume= 0.289 af
Outflow = 0.54 cfs @ 12.55 hrs, Volume= 0.249 af, Atten= 92%, Lag= 35.5 min
Discarded = 0.27 cfs @ 12.55 hrs, Volume= 0.232 af
Primary = 0.27 cfs @ 12.55 hrs, Volume= 0.017 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Peak Elev= -0.94' @ 12.55 hrs Surf.Area= 2,856 sf Storage= 5,384 cf

Plug-Flow detention time= 228.7 min calculated for 0.249 af (86% of inflow)
Center-of-Mass det. time= 163.1 min (1,020.8 - 857.8)

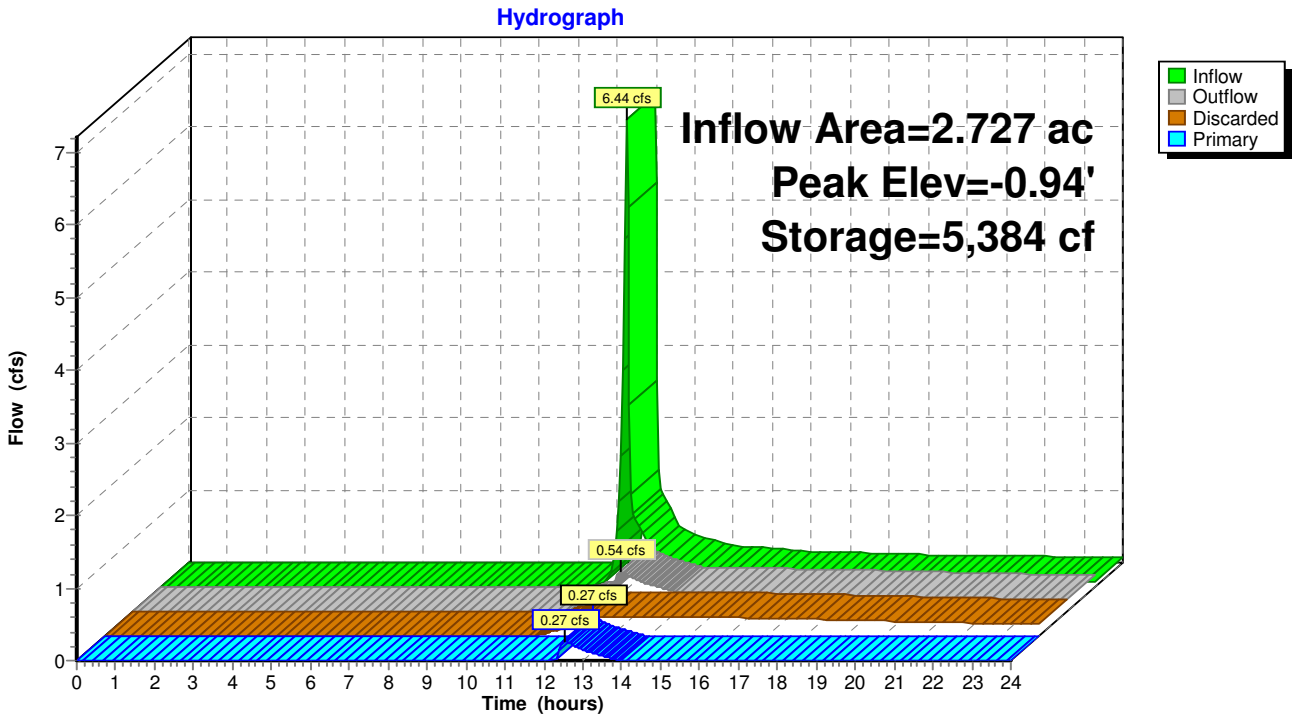
Volume	Invert	Avail.Storage	Storage Description
#1	-4.00'	8,424 cf	**9.00'W x 86.00'L x 4.00'H Prismatoid Z=3.0**

Device	Routing	Invert	Outlet Devices
#1	Primary	-1.00'	**7.0' long x 9.0' 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 4.00 4.50 5.00 5.50 Coef. (English) 2.46 2.55 2.70 2.69 2.68 2.68 2.67 2.64 2.64 2.64 2.65 2.64 2.65 2.65 2.66 2.67 2.69
#2	Discarded	-4.00'	**4.000 in/hr Exfiltration over Wetted area**

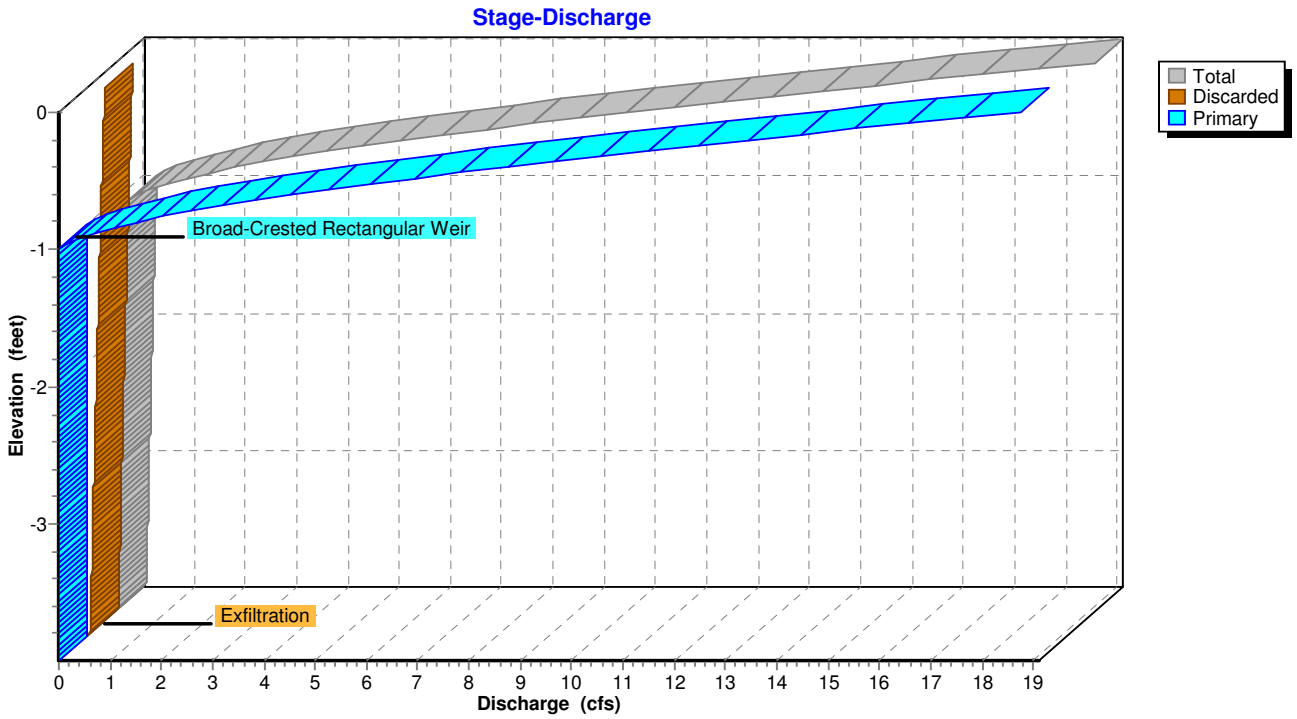
Discarded OutFlow Max=0.27 cfs @ 12.55 hrs HW=-0.94' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.27 cfs)

Primary OutFlow Max=0.26 cfs @ 12.55 hrs HW=-0.94' (Free Discharge)
↑—**1=Broad-Crested Rectangular Weir** (Weir Controls 0.26 cfs @ 0.61 fps)

Pond 3P: (new Pond)



Pond 3P: (new Pond)



Pond 3P: (new Pond)