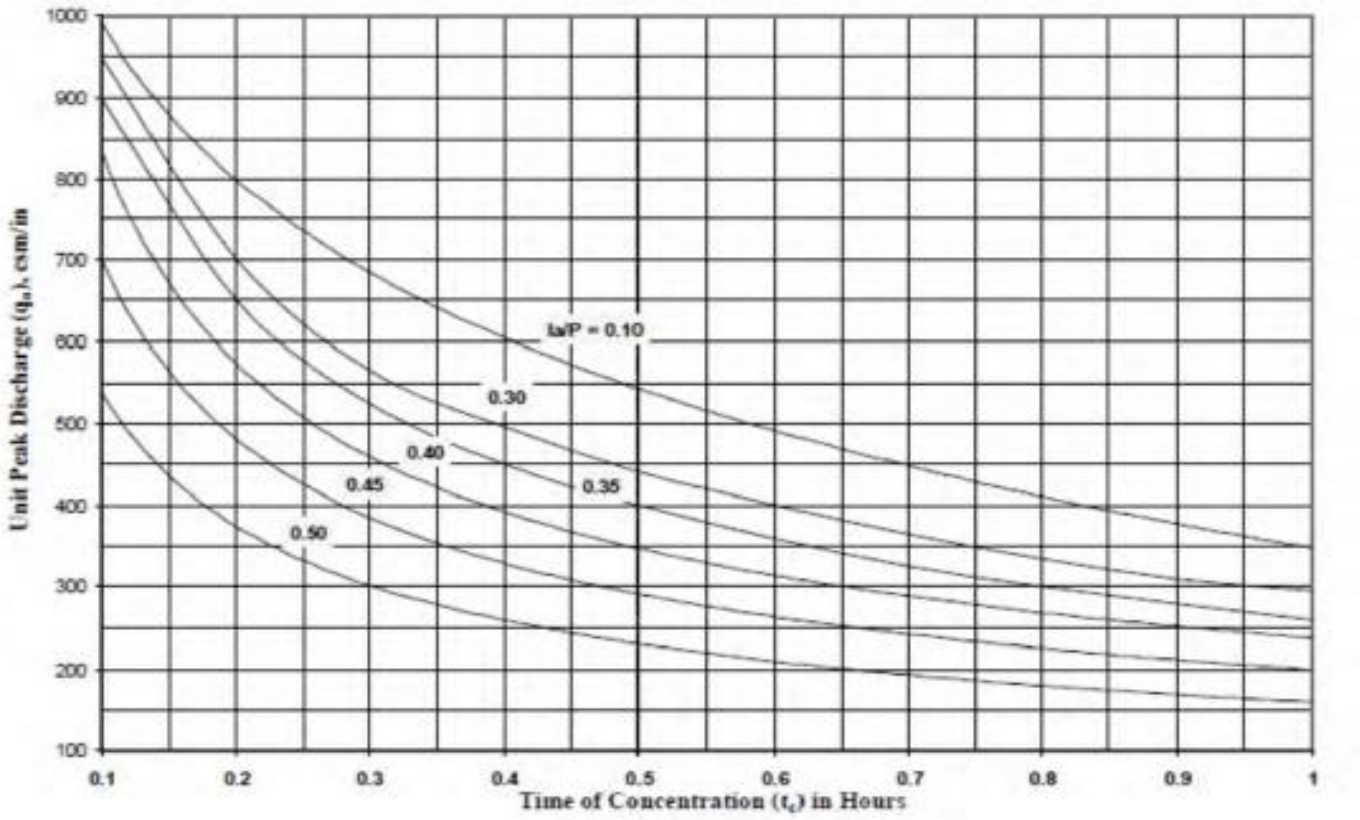
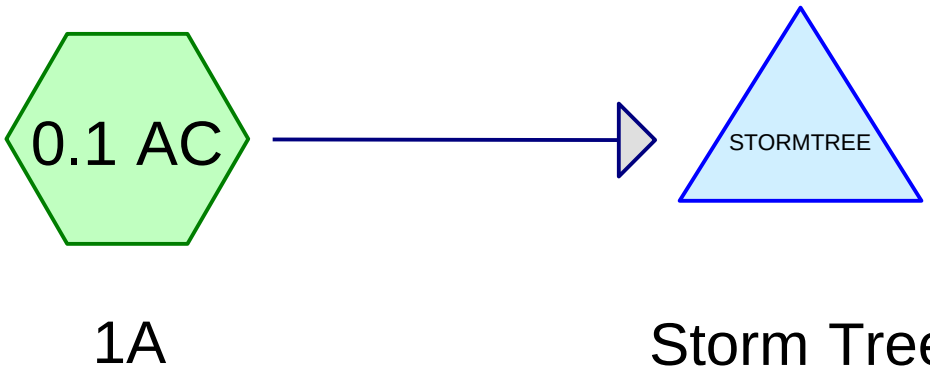
StormTree Interior Unit Dimensions	**4' x 6'**
Effective Media Surface Area	**29.6 sf**

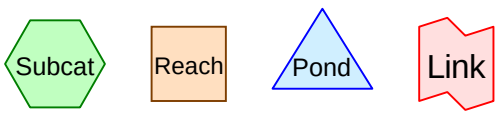
WQv Peak Discharge - Rational Method

Contributing Drainage Area:	0.1	ac
Impervious Area:	0.098	ac
I (Percent Impervious):	98%	%
P (Rainfall Data):	1.00	in
Rv = 0.05 + 0.009 x I:	0.932	
Qa = P x Rv:	0.932	in
CN (Curve Number):	98	
Tc (Time of Concentration):	6	min
Ia = (200/CN) - 2:	0.041	
Ia/P:	0.041	
qu (from TF-55 Figure D.11.1):	1000	csm/in
Area	0.00016	mi^2
Qp (Peak Discharge) = qu x A x Qa:	0.146	cfs

Figure D.11.1 SCS Graphical Method of Determining Peak Discharge (q_u) in csm/in for 24-Hour Type II Storm Distribution







Routing Diagram for StormTree 4x6 Analysis VA

Prepared by HydroCAD SAMPLER 1-800-927-7246 www.hydrocad.net, Printed 11/19/2021

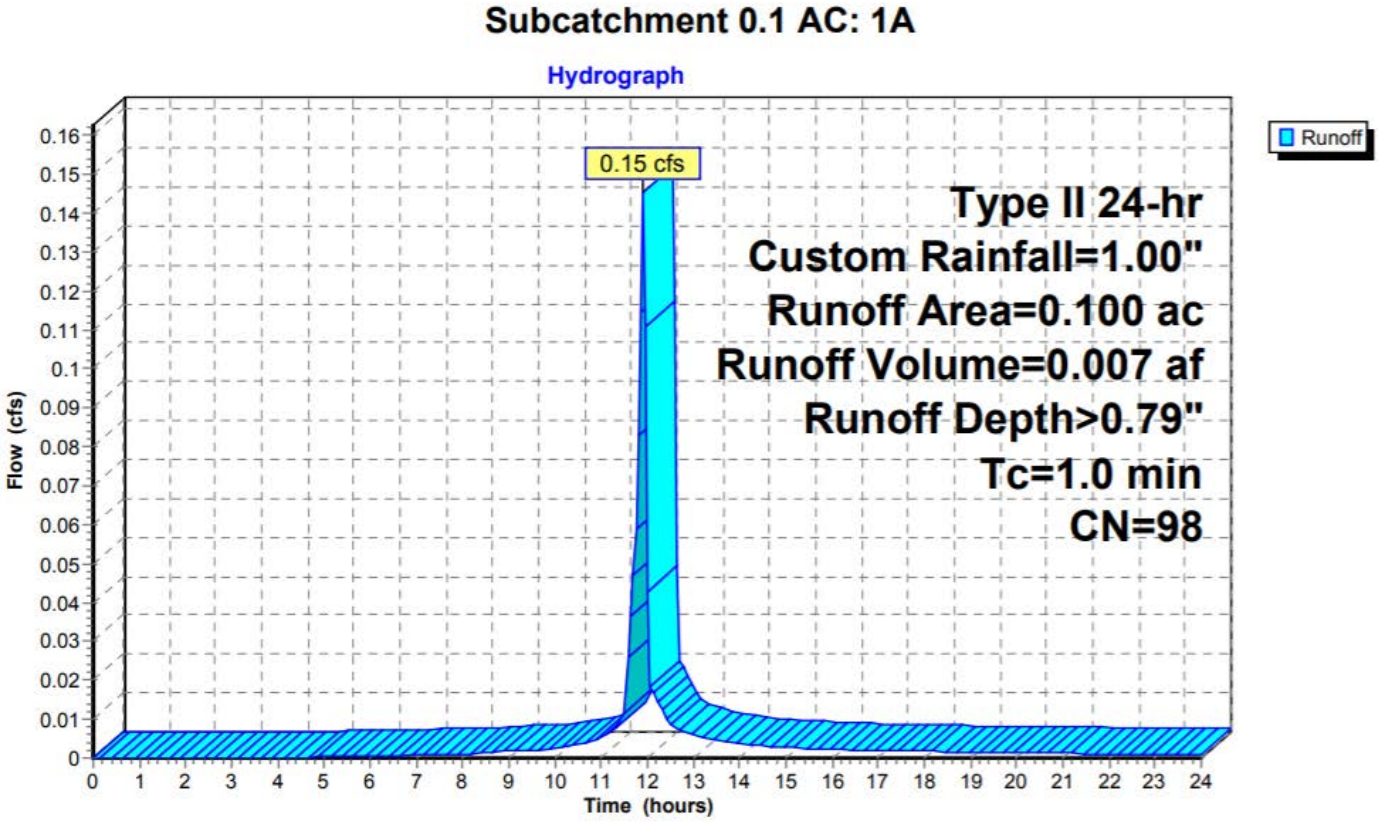
Summary for Subcatchment 0.1 AC: 1A

Runoff = 0.15 cfs @ 11.90 hrs, Volume= 0.007 af, Depth> 0.79"
Routed to Pond STORMTREE : Storm Tree

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 Custom Rainfall=1.00"

	Area (ac)	CN	Description
*	0.100	98	Impervious
	0.100		100.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0					**Direct Entry, Typical Minimum**



Summary for Pond STORMTREE: Storm Tree

Inflow Area = 0.100 ac,100.00% Impervious, Inflow Depth > 0.79" for Custom event
Inflow = 0.15 cfs @ 11.90 hrs, Volume= 0.007 af
Outflow = 0.09 cfs @ 11.95 hrs, Volume= 0.007 af, Atten= 39%, Lag= 3.1 min
Discarded = 0.09 cfs @ 11.95 hrs, Volume= 0.007 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs / 2
Peak Elev= 1.01' @ 11.93 hrs Surf.Area= 60 sf Storage= 12 cf

Plug-Flow detention time=(not calculated: outflow precedes inflow)
Center-of-Mass det. time=0.2 min (780.2 - 780.0)

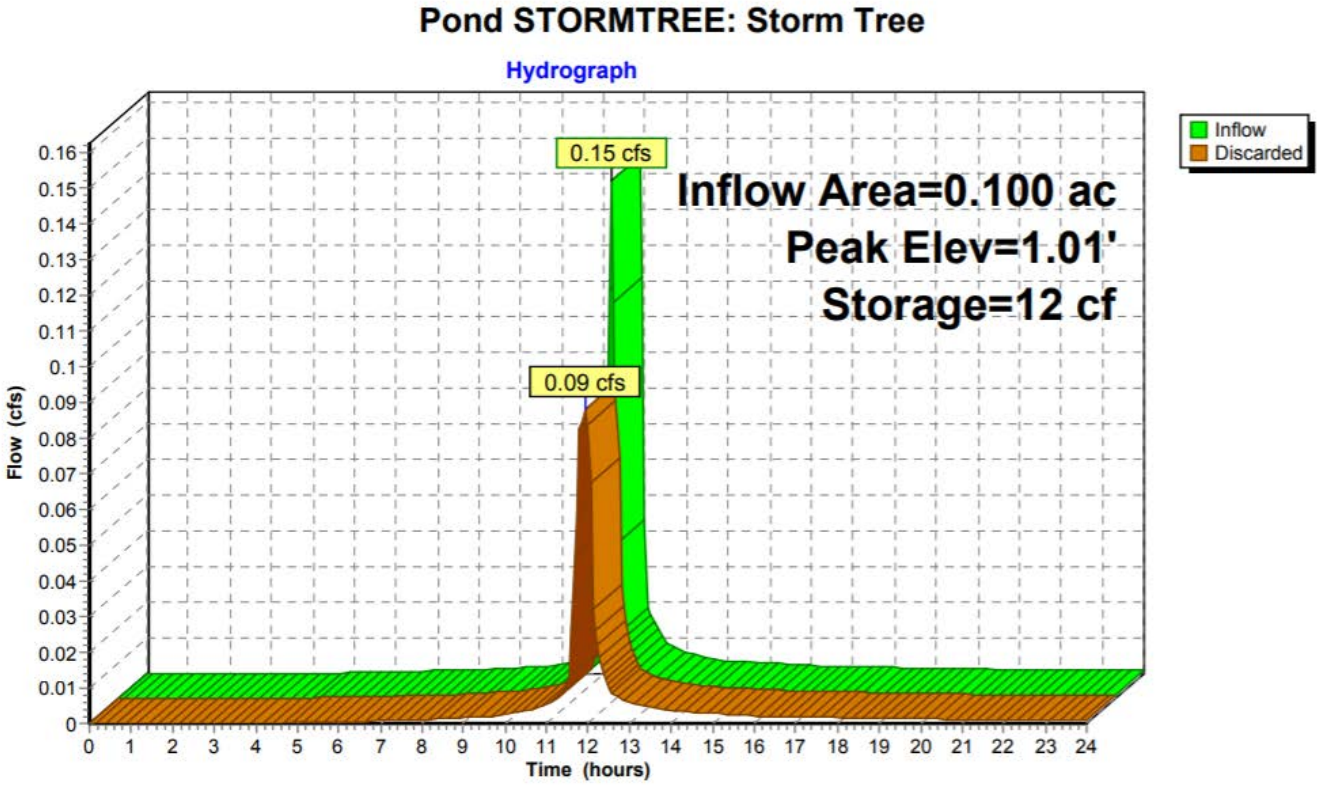
Volume	Invert	Avail.Storage	Storage Description
#1	0.00'	12 cf	**Gravel 4'x6' (5'x7' OD) (Prismatic)**
			30 cf Overall x 40.0% Voids
#2	1.00'	24 cf	**Media 4'x6' (5'x7' OD) (Prismatic)**
			60 cf Overall x 40.0% Voids
		36 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
0.00	30	0	0
1.00	30	30	30

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1.00	30	0	0
3.00	30	60	60

Device	Routing	Invert	Outlet Devices
#1	Discarded	0.00'	**120.000 in/hr Exfiltration Into Soil over Surface area**

Discarded OutFlow Max=0.08 cfs @ 11.95 hrs HW=0.99' (Free Discharge)
↑**1=Exfiltration Into Soil** (Exfiltration Controls 0.08 cfs)


Pond STORMTREE: Storm Tree
Hydrograph
Inflow
Discarded
0.15 cfs
0.09 cfs
Inflow Area=0.100 ac
Peak Elev=1.01'
Storage=12 cf
Flow (cfs)
Time (hours)