

**Subcatchment 14S: Proposed Davis Moore Land**

Runoff = 93.07 cfs @ 0.30 hrs, Volume= 7.307 af, Depth= 2.91"

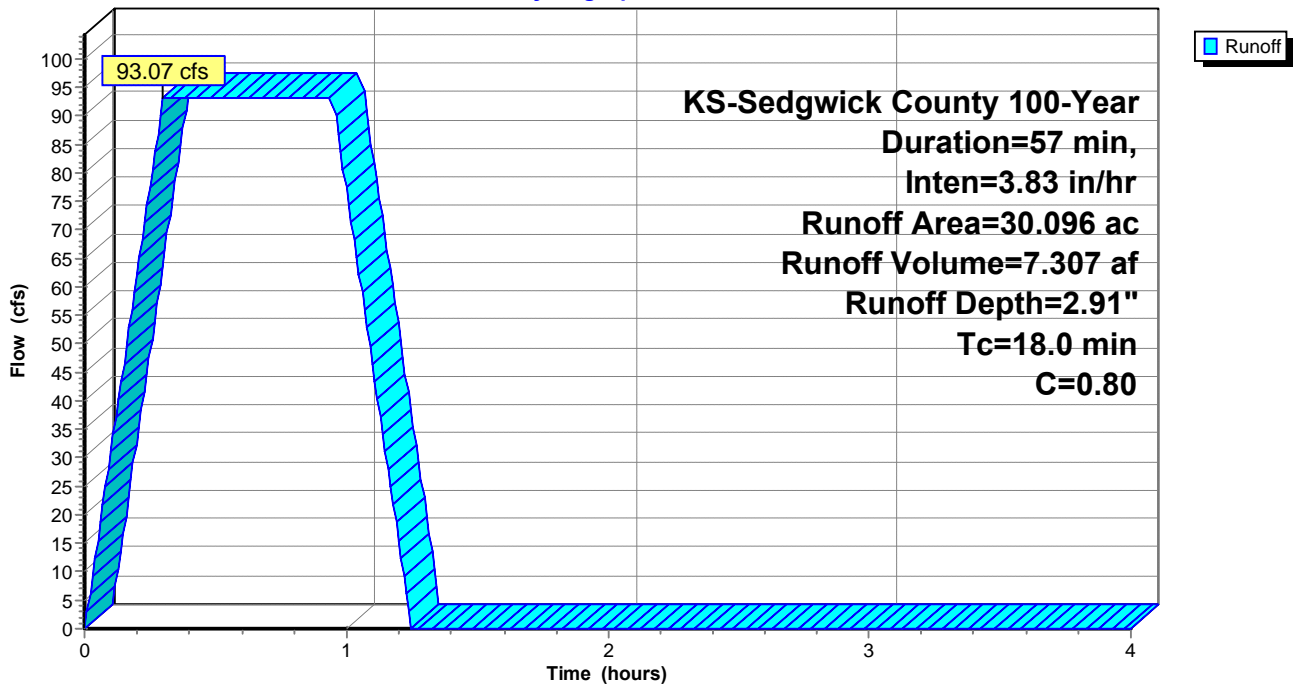
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-4.00 hrs, dt= 0.01 hrs  
 KS-Sedgwick County 100-Year Duration=57 min, Inten=3.83 in/hr

Area (ac)	C	Description
30.096	0.80	Developed
30.096	0.80	Pervious Area

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

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Hydrograph



**Pond 15P: (new Pond)**

Inflow Area = 30.096 ac, Inflow Depth = 2.91" for 100-Year event  
 Inflow = 93.07 cfs @ 0.30 hrs, Volume= 7.307 af  
 Outflow = 74.19 cfs @ 1.01 hrs, Volume= 5.587 af, Atten= 20%, Lag= 42.7 min  
 Primary = 74.19 cfs @ 1.01 hrs, Volume= 5.587 af

Routing by Stor-Ind method, Time Span= 0.00-4.00 hrs, dt= 0.01 hrs  
 Peak Elev= 1,353.98' @ 1.01 hrs Surf.Area= 1.631 ac Storage= 4.277 af

Plug-Flow detention time= 40.8 min calculated for 5.587 af (76% of inflow)  
 Center-of-Mass det. time= 33.7 min ( 71.2 - 37.5 )

Volume	Invert	Avail.Storage	Storage Description
#1	1,351.00'	6.004 af	<b>600.00'W x 90.00'L x 4.00'H Prismatic Z=4.0</b>

Device	Routing	Invert	Outlet Devices
#1	Primary	1,353.00'	<b>8.5' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s) 4.0' Crest Height
#2	Primary	1,351.00'	<b>3.5' long Sharp-Crested Rectangular Weir</b> 2 End Contraction(s) 4.0' Crest Height

**Primary OutFlow** Max=74.18 cfs @ 1.01 hrs HW=1,353.98' TW=1,352.30' (Fixed TW Elev= 1,352.30')  
 1=Sharp-Crested Rectangular Weir (Weir Controls 27.31 cfs @ 3.34 fps)  
 2=Sharp-Crested Rectangular Weir (Weir Controls 46.87 cfs @ 5.41 fps)

**Pond 15P: (new Pond)**

Hydrograph

