Subcatchment 14S: Proposed Davis Moore Land

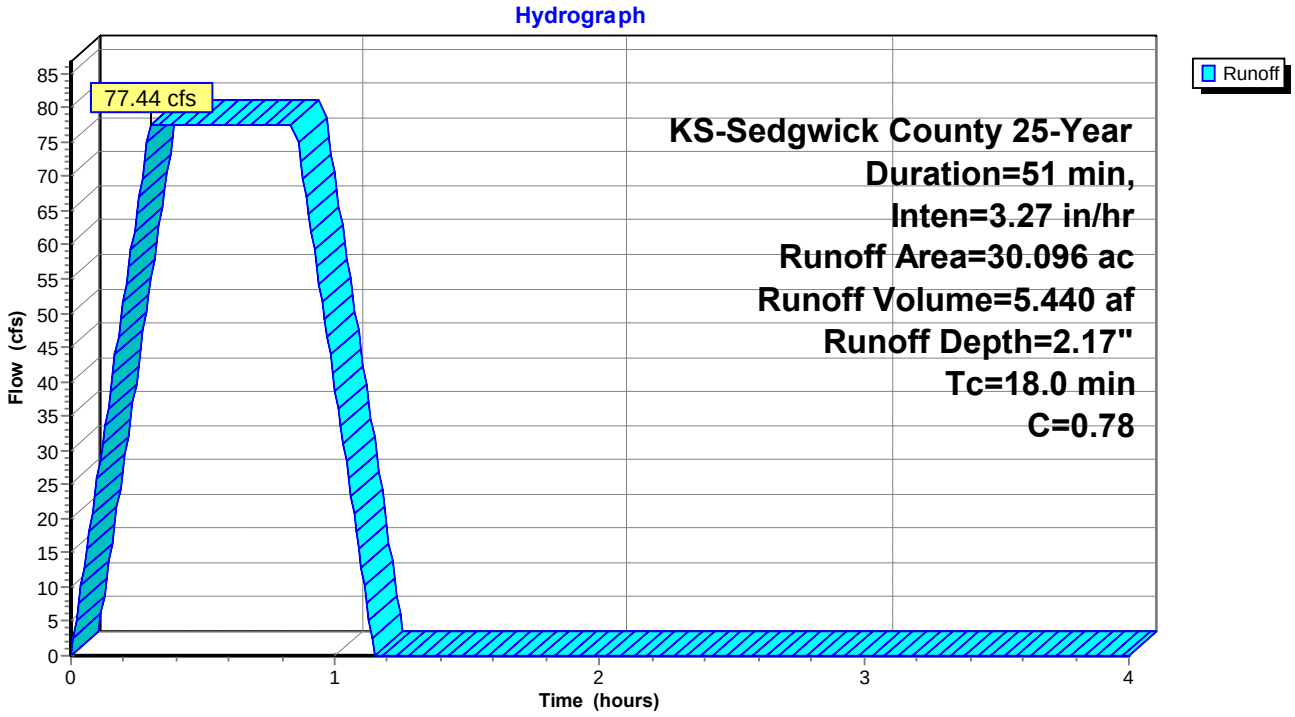
Runoff = 77.44 cfs @ 0.30 hrs, Volume= 5.440 af, Depth= 2.17"

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 25-Year Duration=51 min, Inten=3.27 in/hr

Area (ac)	C	Description
30.096	0.78	Developed
30.096	0.78	Pervious Area

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

Subcatchment 14S: Proposed Davis Moore Land



Pond 15P: (new Pond)

Inflow Area = 30.096 ac, Inflow Depth = 2.17" for 25-Year event
Inflow = 77.44 cfs @ 0.30 hrs, Volume= 5.440 af
Outflow = 53.96 cfs @ 0.94 hrs, Volume= 3.721 af, Atten= 30%, Lag= 38.5 min
Primary = 53.96 cfs @ 0.94 hrs, Volume= 3.721 af

Routing by Stor-Ind method, Time Span= 0.00-4.00 hrs, dt= 0.01 hrs
Peak Elev= 1,353.54' @ 0.94 hrs Surf.Area= 1.571 ac Storage= 3.560 af

Plug-Flow detention time= 42.0 min calculated for 3.721 af (68% of inflow)
Center-of-Mass det. time= 33.5 min (68.0 - 34.5)

Volume	Invert	Avail.Storage	Storage Description
#1	1,351.00'	6.004 af	**600.00'W x 90.00'L x 4.00'H Prismatoid Z=4.0**

Device	Routing	Invert	Outlet Devices
#1	Primary	1,352.50'	**7.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 4.0' Crest Height
#2	Primary	1,351.00'	**3.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s) 4.0' Crest Height

Primary OutFlow Max=53.95 cfs @ 0.94 hrs HW=1,353.54' TW=1,352.30' (Fixed TW Elev= 1,352.30')
1=Sharp-Crested Rectangular Weir (Weir Controls 24.19 cfs @ 3.44 fps)
2=Sharp-Crested Rectangular Weir (Weir Controls 29.76 cfs @ 4.71 fps)

Pond 15P: (new Pond)