

Subcatchment 14S: Proposed Davis Moore Land

Runoff = 51.86 cfs @ 0.30 hrs, Volume= 4.715 af, Depth= 1.88"

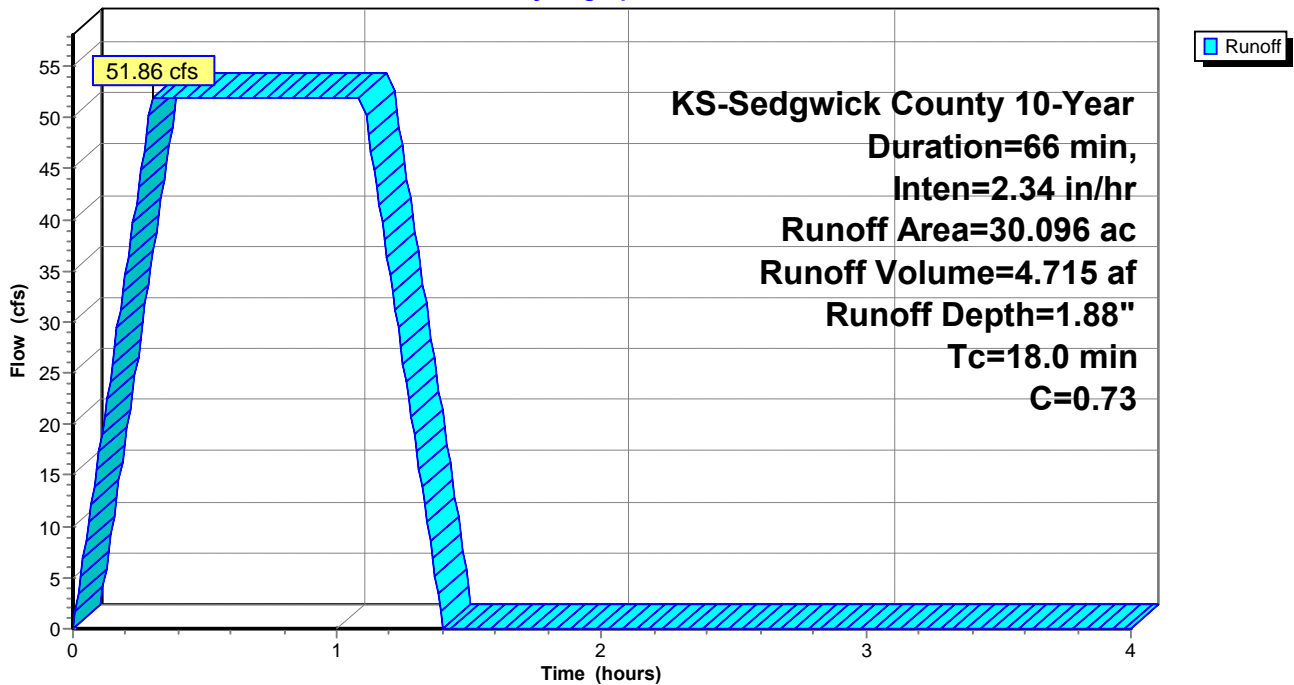
Runoff by Rational method, Rise/Fall=1.0/1.0 xTc, Time Span= 0.00-4.00 hrs, dt= 0.01 hrs
 KS-Sedgwick County 10-Year Duration=66 min, Inten=2.34 in/hr

Area (ac)	C	Description
30.096	0.73	Developed
30.096	0.73	Pervious Area

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

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Hydrograph



DavisMoore Proposed 10yr

KS-Sedgwick County 10-Year Duration=66 min, Inten=2.34 in/hr

Prepared by {enter your company name here}

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Pond 15P: (new Pond)

Inflow Area = 30.096 ac, Inflow Depth = 1.88" for 10-Year event
 Inflow = 51.86 cfs @ 0.30 hrs, Volume= 4.715 af
 Outflow = 35.59 cfs @ 1.19 hrs, Volume= 2.995 af, Atten= 31%, Lag= 53.6 min
 Primary = 35.59 cfs @ 1.19 hrs, Volume= 2.995 af

Routing by Stor-Ind method, Time Span= 0.00-4.00 hrs, dt= 0.01 hrs
 Peak Elev= 1,353.32' @ 1.19 hrs Surf.Area= 1.542 ac Storage= 3.226 af

Plug-Flow detention time= 52.8 min calculated for 2.995 af (64% of inflow)
 Center-of-Mass det. time= 40.4 min (82.4 - 42.0)

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

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

Primary OutFlow Max=35.59 cfs @ 1.19 hrs HW=1,353.32' TW=1,352.30' (Fixed TW Elev= 1,352.30')
 1=Sharp-Crested Rectangular Weir (Weir Controls 5.08 cfs @ 1.87 fps)
 2=Sharp-Crested Rectangular Weir (Weir Controls 30.51 cfs @ 4.33 fps)

Pond 15P: (new Pond)

Hydrograph

