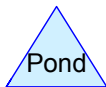


Subcat



Reach



Pond



Link

Routing Diagram for 20-2624 KINGS HIGHWAY NORTH HAVEN - PRE Revised 11-10-2020

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Area Listing (all nodes)

Area (sq-ft)	CN	Description (subcatchment-numbers)
751,023	74	>75% Grass cover, Good, HSG C (DA-1, DA-10, DA-11, DA-12, DA-13, DA-2, DA-3, DA-4, DA-5, DA-6, DA-7, DA-8, DA-9)
159,897	98	Paved parking, HSG C (DA-1, DA-10, DA-11, DA-12, DA-13, DA-14, DA-15, DA-16, DA-17, DA-2, DA-3, DA-4, DA-5, DA-6, DA-7, DA-8, DA-9)
951,487	72	Woods/grass comb., Good, HSG C (DA-1, DA-12, DA-13, DA-2, DA-3, DA-4, DA-5, DA-6, DA-7, DA-8, DA-9)
1,862,407	75	TOTAL AREA

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Soil Listing (all nodes)

Area (sq-ft)	Soil Group	Subcatchment Numbers
0	HSG A	
0	HSG B	
1,862,407	HSG C	DA-1, DA-10, DA-11, DA-12, DA-13, DA-14, DA-15, DA-16, DA-17, DA-2, DA-3, DA-4, DA-5, DA-6, DA-7, DA-8, DA-9
0	HSG D	
0	Other	
1,862,407		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (sq-ft)	HSG-B (sq-ft)	HSG-C (sq-ft)	HSG-D (sq-ft)	Other (sq-ft)	Total (sq-ft)	Ground Cover
0	0	751,023	0	0	751,023	>75% Grass cover, Good
0	0	159,897	0	0	159,897	Paved parking
0	0	951,487	0	0	951,487	Woods/grass comb., Good
0	0	1,862,407	0	0	1,862,407	TOTAL AREA

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Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Diam/Width (inches)	Height (inches)	Inside-Fill (inches)
1	CB-1	26.90	26.50	33.0	0.0121	0.012	15.0	0.0	0.0
2	CB-10	35.20	35.20	91.0	0.0000	0.025	18.0	0.0	0.0
3	CB-11	35.50	35.10	26.0	0.0154	0.012	15.0	0.0	0.0
4	CB-12	39.70	35.20	95.0	0.0474	0.012	18.0	0.0	0.0
5	CB-13	43.30	39.80	63.0	0.0556	0.025	18.0	0.0	0.0
6	CB-14	49.50	43.40	117.0	0.0521	0.012	18.0	0.0	0.0
7	CB-15	54.10	49.60	83.0	0.0542	0.012	18.0	0.0	0.0
8	CB-16	63.90	54.10	183.0	0.0536	0.012	18.0	0.0	0.0
9	CB-17	69.40	64.00	206.0	0.0262	0.012	18.0	0.0	0.0
10	CB-2	26.40	26.20	78.0	0.0026	0.025	18.0	0.0	0.0
11	CB-3	28.20	26.20	39.0	0.0513	0.012	15.0	0.0	0.0
12	CB-4	26.00	25.30	227.0	0.0031	0.012	24.0	0.0	0.0
13	CB-5	29.50	26.30	89.0	0.0360	0.025	15.0	0.0	0.0
14	CB-6	27.10	26.50	36.0	0.0167	0.012	24.0	0.0	0.0
15	CB-7	25.10	22.70	117.0	0.0205	0.012	30.0	0.0	0.0
16	CB-8	29.50	26.30	193.0	0.0166	0.012	18.0	0.0	0.0
17	CB-9	35.40	31.00	190.0	0.0232	0.025	18.0	0.0	0.0

Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 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 DA-1: DA-1	Runoff Area=165,148 sf 6.20% Impervious Runoff Depth=1.23" Flow Length=1,068' Tc=27.4 min CN=74 Runoff=4.08 cfs 16,969 cf
Subcatchment DA-10: DA-10	Runoff Area=29,242 sf 8.57% Impervious Runoff Depth=1.36" Flow Length=447' Tc=11.3 min CN=76 Runoff=1.31 cfs 3,309 cf
Subcatchment DA-11: DA-11	Runoff Area=60,828 sf 5.01% Impervious Runoff Depth=1.29" Flow Length=496' Tc=12.2 min CN=75 Runoff=2.51 cfs 6,563 cf
Subcatchment DA-12: DA-12	Runoff Area=145,643 sf 10.79% Impervious Runoff Depth=1.36" Flow Length=863' Tc=12.7 min CN=76 Runoff=6.23 cfs 16,483 cf
Subcatchment DA-13: DA-13	Runoff Area=391,463 sf 8.69% Impervious Runoff Depth=1.29" Flow Length=655' Tc=24.6 min CN=75 Runoff=10.99 cfs 42,237 cf
Subcatchment DA-14: DA-14	Runoff Area=6,316 sf 100.00% Impervious Runoff Depth=3.26" Tc=5.0 min CN=98 Runoff=0.72 cfs 1,714 cf
Subcatchment DA-15: DA-15	Runoff Area=2,159 sf 100.00% Impervious Runoff Depth=3.26" Tc=5.0 min CN=98 Runoff=0.25 cfs 586 cf
Subcatchment DA-16: DA-16	Runoff Area=1,630 sf 100.00% Impervious Runoff Depth=3.26" Tc=5.0 min CN=98 Runoff=0.19 cfs 442 cf
Subcatchment DA-17: DA-17	Runoff Area=2,107 sf 100.00% Impervious Runoff Depth=3.26" Tc=5.0 min CN=98 Runoff=0.24 cfs 572 cf
Subcatchment DA-2: DA-2	Runoff Area=136,129 sf 5.36% Impervious Runoff Depth=1.23" Flow Length=1,056' Tc=27.5 min CN=74 Runoff=3.35 cfs 13,987 cf
Subcatchment DA-3: DA-3	Runoff Area=85,670 sf 0.96% Impervious Runoff Depth=1.11" Flow Length=911' Tc=25.1 min CN=72 Runoff=1.99 cfs 7,956 cf
Subcatchment DA-4: DA-4	Runoff Area=154,372 sf 10.42% Impervious Runoff Depth=1.29" Flow Length=1,029' Tc=15.4 min CN=75 Runoff=5.69 cfs 16,656 cf
Subcatchment DA-5: DA-5	Runoff Area=163,409 sf 7.18% Impervious Runoff Depth=1.29" Flow Length=1,011' Tc=26.2 min CN=75 Runoff=4.41 cfs 17,631 cf
Subcatchment DA-6: DA-6	Runoff Area=226,139 sf 2.75% Impervious Runoff Depth=1.17" Flow Length=1,017' Tc=25.5 min CN=73 Runoff=5.52 cfs 22,103 cf
Subcatchment DA-7: DA-7	Runoff Area=46,018 sf 12.08% Impervious Runoff Depth=1.36" Flow Length=721' Tc=24.9 min CN=76 Runoff=1.35 cfs 5,208 cf
Subcatchment DA-8: DA-8	Runoff Area=21,184 sf 14.41% Impervious Runoff Depth=1.42" Flow Length=545' Tc=23.6 min CN=77 Runoff=0.68 cfs 2,512 cf

Subcatchment DA-9: DA-9	Runoff Area=224,950 sf 13.96% Impervious Runoff Depth=1.42" Flow Length=927' Tc=26.2 min CN=77 Runoff=6.77 cfs 26,677 cf
Reach 7R: OUTLET	Inflow=48.82 cfs 201,605 cf Outflow=48.82 cfs 201,605 cf
Pond CB-1: CB-1	Peak Elev=28.02' Inflow=4.08 cfs 16,969 cf 15.0" Round Culvert n=0.012 L=33.0' S=0.0121 '/' Outflow=4.08 cfs 16,969 cf
Pond CB-10: CB-10	Peak Elev=63.55' Inflow=25.89 cfs 104,703 cf 18.0" Round Culvert n=0.025 L=91.0' S=0.0000 '/' Outflow=25.89 cfs 104,703 cf
Pond CB-11: CB-11	Peak Elev=35.90' Inflow=0.72 cfs 1,714 cf 15.0" Round Culvert n=0.012 L=26.0' S=0.0154 '/' Outflow=0.72 cfs 1,714 cf
Pond CB-12: CB-12	Peak Elev=48.82' Inflow=24.64 cfs 97,781 cf 18.0" Round Culvert n=0.012 L=95.0' S=0.0474 '/' Outflow=24.64 cfs 97,781 cf
Pond CB-13: CB-13	Peak Elev=58.92' Inflow=23.99 cfs 95,268 cf 18.0" Round Culvert n=0.025 L=63.0' S=0.0556 '/' Outflow=23.99 cfs 95,268 cf
Pond CB-14: CB-14	Peak Elev=54.86' Inflow=18.26 cfs 68,592 cf 18.0" Round Culvert n=0.012 L=117.0' S=0.0521 '/' Outflow=18.26 cfs 68,592 cf
Pond CB-15: CB-15	Peak Elev=58.93' Inflow=17.20 cfs 65,282 cf 18.0" Round Culvert n=0.012 L=83.0' S=0.0542 '/' Outflow=17.20 cfs 65,282 cf
Pond CB-16: CB-16	Peak Elev=67.81' Inflow=15.12 cfs 58,719 cf 18.0" Round Culvert n=0.012 L=183.0' S=0.0536 '/' Outflow=15.12 cfs 58,719 cf
Pond CB-17: CB-17	Peak Elev=71.82' Inflow=10.99 cfs 42,237 cf 18.0" Round Culvert n=0.012 L=206.0' S=0.0262 '/' Outflow=10.99 cfs 42,237 cf
Pond CB-2: CB-2	Peak Elev=28.08' Inflow=4.11 cfs 17,541 cf 18.0" Round Culvert n=0.025 L=78.0' S=0.0026 '/' Outflow=4.11 cfs 17,541 cf
Pond CB-3: CB-3	Peak Elev=29.33' Inflow=3.35 cfs 13,987 cf 15.0" Round Culvert n=0.012 L=39.0' S=0.0513 '/' Outflow=3.35 cfs 13,987 cf
Pond CB-4: CB-4	Peak Elev=27.45' Inflow=7.48 cfs 31,971 cf 24.0" Round Culvert n=0.012 L=227.0' S=0.0031 '/' Outflow=7.48 cfs 31,971 cf
Pond CB-5: CB-5	Peak Elev=30.30' Inflow=1.99 cfs 7,956 cf 15.0" Round Culvert n=0.025 L=89.0' S=0.0360 '/' Outflow=1.99 cfs 7,956 cf
Pond CB-6: CB-6	Peak Elev=35.79' Inflow=41.96 cfs 169,048 cf 24.0" Round Culvert n=0.012 L=36.0' S=0.0167 '/' Outflow=41.96 cfs 169,048 cf
Pond CB-7: CB-7	Peak Elev=30.62' Inflow=48.82 cfs 201,605 cf 30.0" Round Culvert n=0.012 L=117.0' S=0.0205 '/' Outflow=48.82 cfs 201,605 cf
Pond CB-8: CB-8	Peak Elev=55.50' Inflow=35.16 cfs 144,437 cf 18.0" Round Culvert n=0.012 L=193.0' S=0.0166 '/' Outflow=35.16 cfs 144,437 cf

Pond CB-9: CB-9

Peak Elev=102.92' Inflow=30.99 cfs 126,806 cf
18.0" Round Culvert n=0.025 L=190.0' S=0.0232 '/' Outflow=30.99 cfs 126,806 cf

Total Runoff Area = 1,862,407 sf Runoff Volume = 201,605 cf Average Runoff Depth = 1.30"
91.41% Pervious = 1,702,510 sf 8.59% Impervious = 159,897 sf

Summary for Subcatchment DA-1: DA-1

Runoff = 4.08 cfs @ 12.23 hrs, Volume= 16,969 cf, Depth= 1.23"

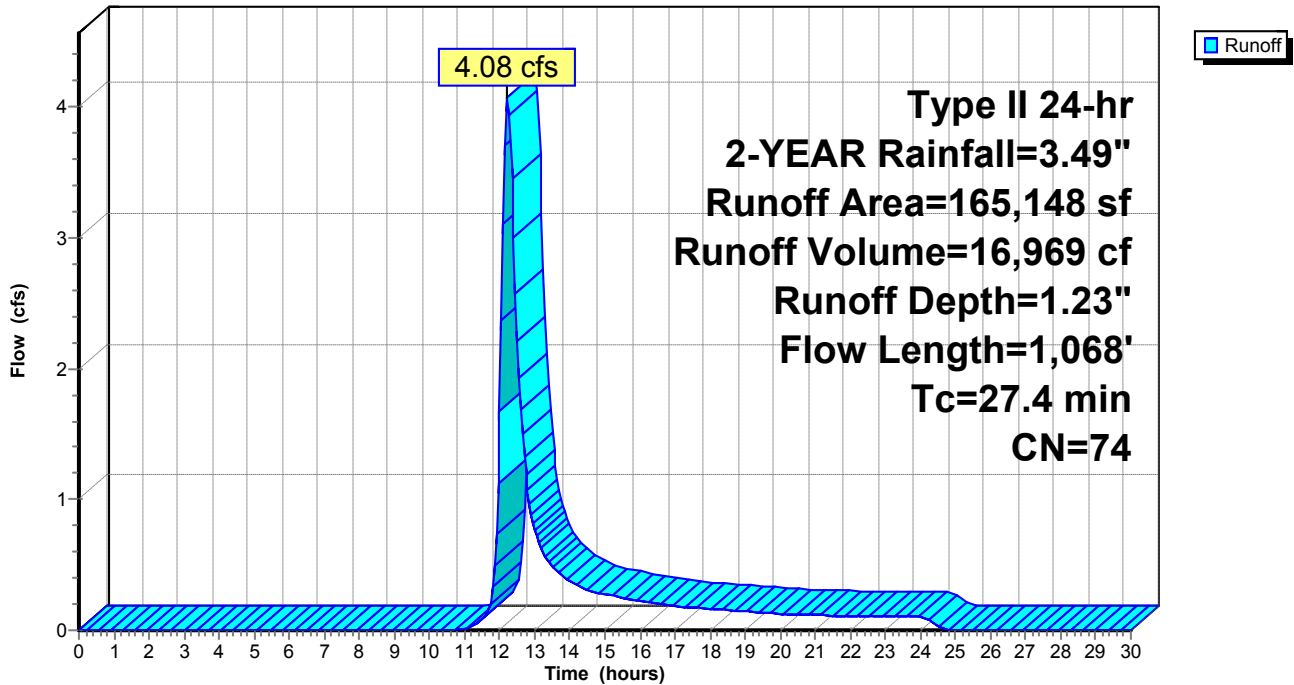
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-YEAR Rainfall=3.49"

Area (sf)	CN	Description
92,833	72	Woods/grass comb., Good, HSG C
62,071	74	>75% Grass cover, Good, HSG C
10,244	98	Paved parking, HSG C
165,148	74	Weighted Average
154,904		93.80% Pervious Area
10,244		6.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.9	250	0.1200	0.20		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
6.5	818	0.0890	2.09		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
27.4	1,068	Total			

Subcatchment DA-1: DA-1

Hydrograph



Summary for Subcatchment DA-10: DA-10

Runoff = 1.31 cfs @ 12.04 hrs, Volume= 3,309 cf, Depth= 1.36"

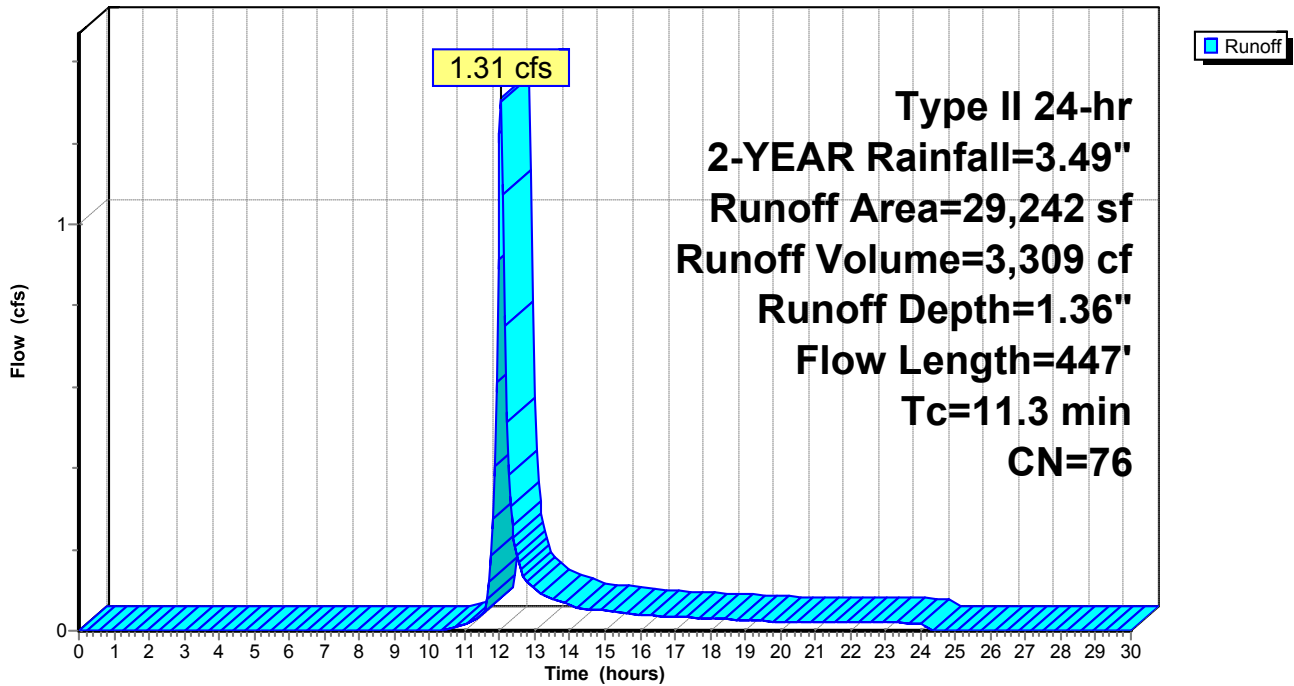
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-YEAR Rainfall=3.49"

Area (sf)	CN	Description
26,737	74	>75% Grass cover, Good, HSG C
2,505	98	Paved parking, HSG C
29,242	76	Weighted Average
26,737		91.43% Pervious Area
2,505		8.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.7	250	0.1160	0.43		Sheet Flow, Grass: Short n= 0.150 P2= 3.49"
1.6	197	0.0812	1.99		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
11.3	447	Total			

Subcatchment DA-10: DA-10

Hydrograph



Summary for Subcatchment DA-11: DA-11

Runoff = 2.51 cfs @ 12.05 hrs, Volume= 6,563 cf, Depth= 1.29"

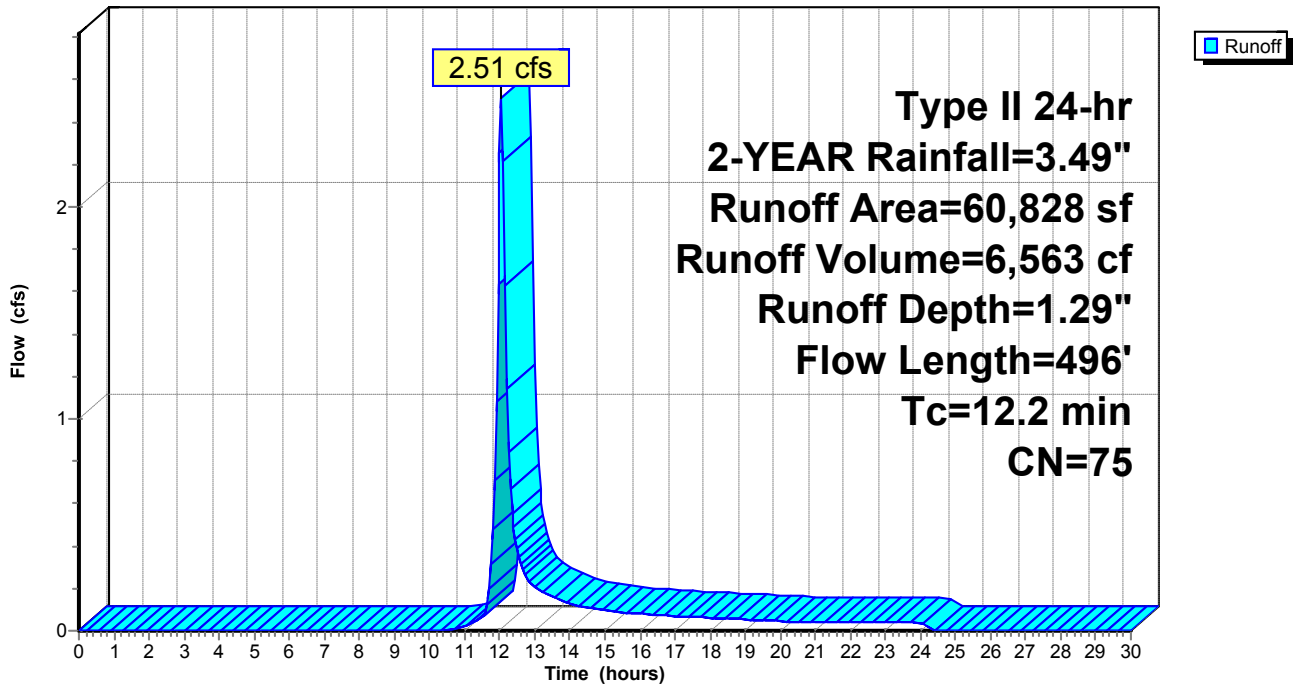
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-YEAR Rainfall=3.49"

Area (sf)	CN	Description
57,780	74	>75% Grass cover, Good, HSG C
3,048	98	Paved parking, HSG C
60,828	75	Weighted Average
57,780		94.99% Pervious Area
3,048		5.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8	250	0.1120	0.43		Sheet Flow, Grass: Short n= 0.150 P2= 3.49"
2.4	246	0.0610	1.73		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
12.2	496	Total			

Subcatchment DA-11: DA-11

Hydrograph



Summary for Subcatchment DA-12: DA-12

Runoff = 6.23 cfs @ 12.05 hrs, Volume= 16,483 cf, Depth= 1.36"

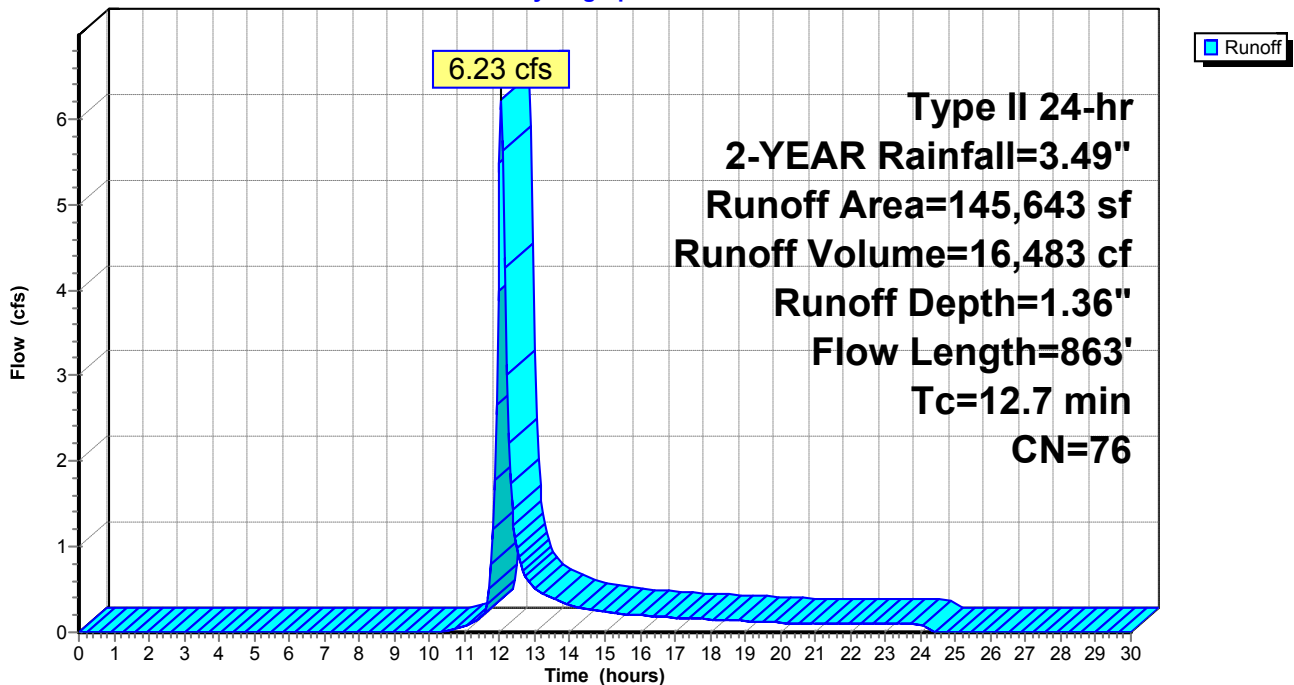
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-YEAR Rainfall=3.49"

Area (sf)	CN	Description
33,394	72	Woods/grass comb., Good, HSG C
96,537	74	>75% Grass cover, Good, HSG C
15,712	98	Paved parking, HSG C
145,643	76	Weighted Average
129,931		89.21% Pervious Area
15,712		10.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.2	147	0.1220	0.40		Sheet Flow, Grass: Short n= 0.150 P2= 3.49"
3.1	395	0.0911	2.11		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
3.4	321	0.0500	1.57		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
12.7	863	Total			

Subcatchment DA-12: DA-12

Hydrograph



Summary for Subcatchment DA-13: DA-13

Runoff = 10.99 cfs @ 12.19 hrs, Volume= 42,237 cf, Depth= 1.29"

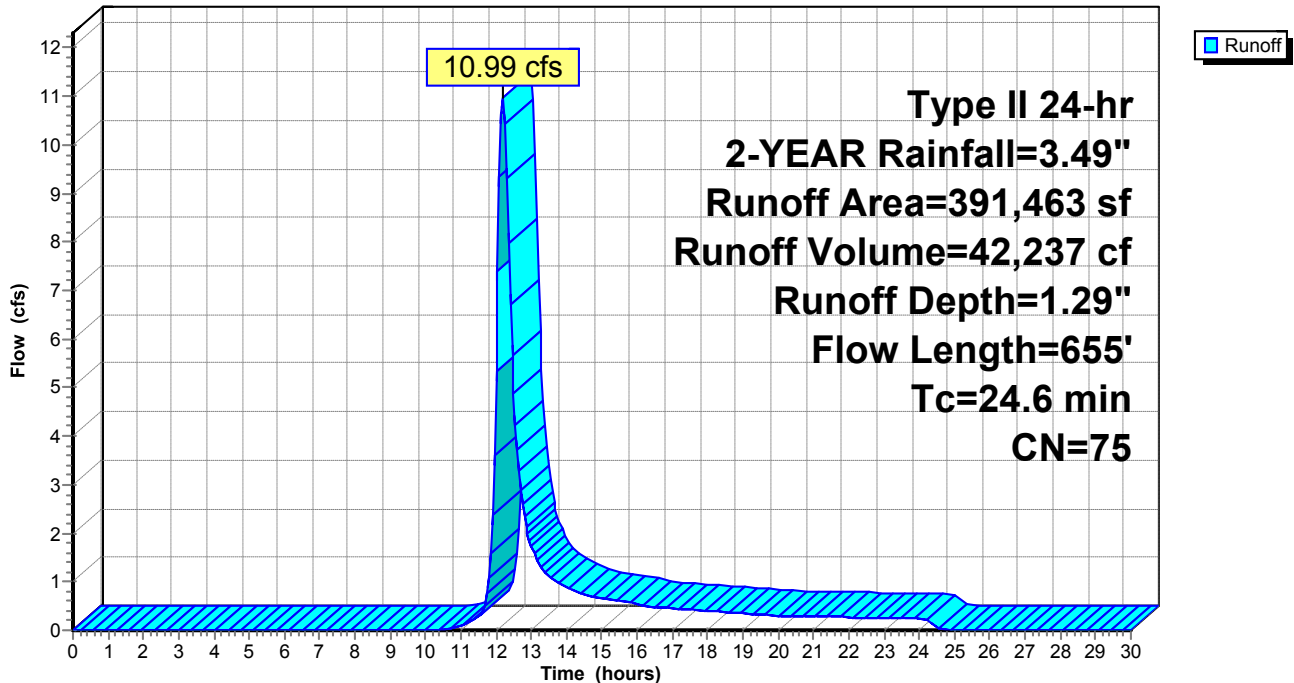
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-YEAR Rainfall=3.49"

Area (sf)	CN	Description
192,024	72	Woods/grass comb., Good, HSG C
165,425	74	>75% Grass cover, Good, HSG C
34,014	98	Paved parking, HSG C
391,463	75	Weighted Average
357,449		91.31% Pervious Area
34,014		8.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.5	250	0.1120	0.19		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
3.1	405	0.0938	2.14		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
24.6	655	Total			

Subcatchment DA-13: DA-13

Hydrograph



Summary for Subcatchment DA-14: DA-14

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

Runoff = 0.72 cfs @ 11.95 hrs, Volume= 1,714 cf, Depth= 3.26"

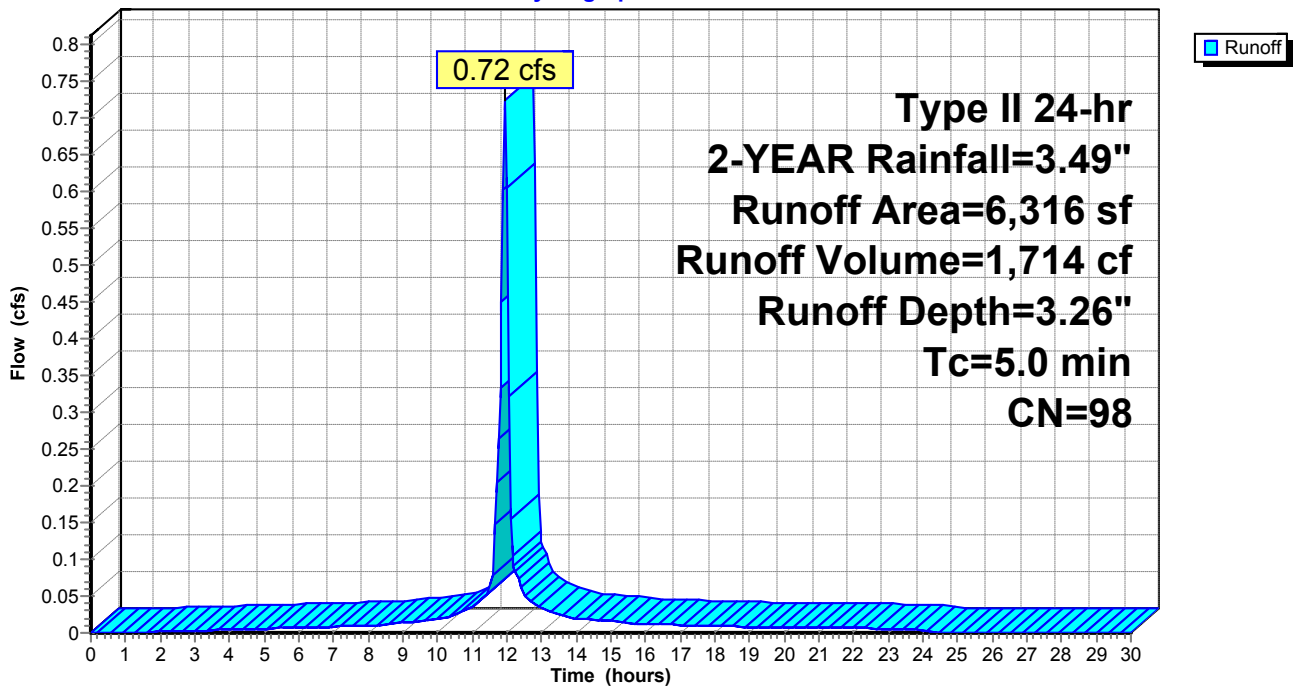
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-YEAR Rainfall=3.49"

Area (sf)	CN	Description
6,316	98	Paved parking, HSG C
6,316		100.00% Impervious Area

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

Subcatchment DA-14: DA-14

Hydrograph



Summary for Subcatchment DA-15: DA-15

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.25 cfs @ 11.95 hrs, Volume= 586 cf, Depth= 3.26"

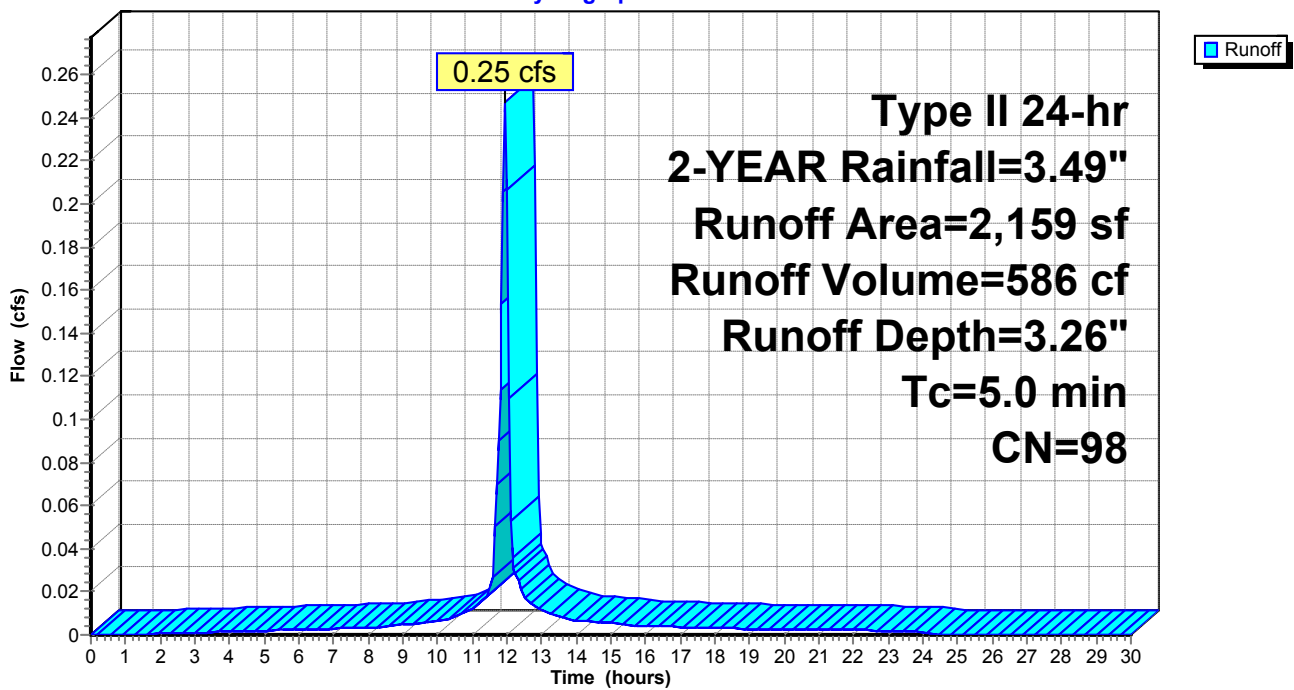
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-YEAR Rainfall=3.49"

Area (sf)	CN	Description
2,159	98	Paved parking, HSG C
2,159		100.00% Impervious Area

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

Subcatchment DA-15: DA-15

Hydrograph



Summary for Subcatchment DA-16: DA-16

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.19 cfs @ 11.95 hrs, Volume= 442 cf, Depth= 3.26"

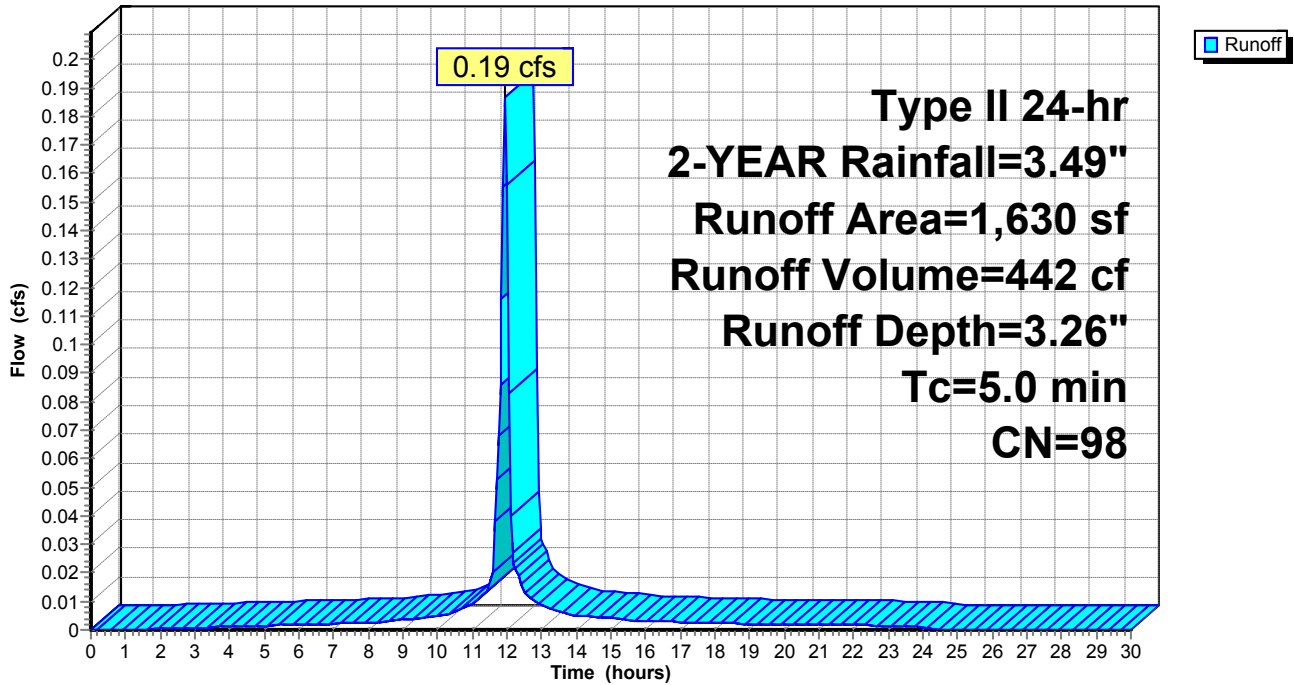
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-YEAR Rainfall=3.49"

Area (sf)	CN	Description
1,630	98	Paved parking, HSG C
1,630		100.00% Impervious Area

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

Subcatchment DA-16: DA-16

Hydrograph



Summary for Subcatchment DA-17: DA-17

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

Runoff = 0.24 cfs @ 11.95 hrs, Volume= 572 cf, Depth= 3.26"

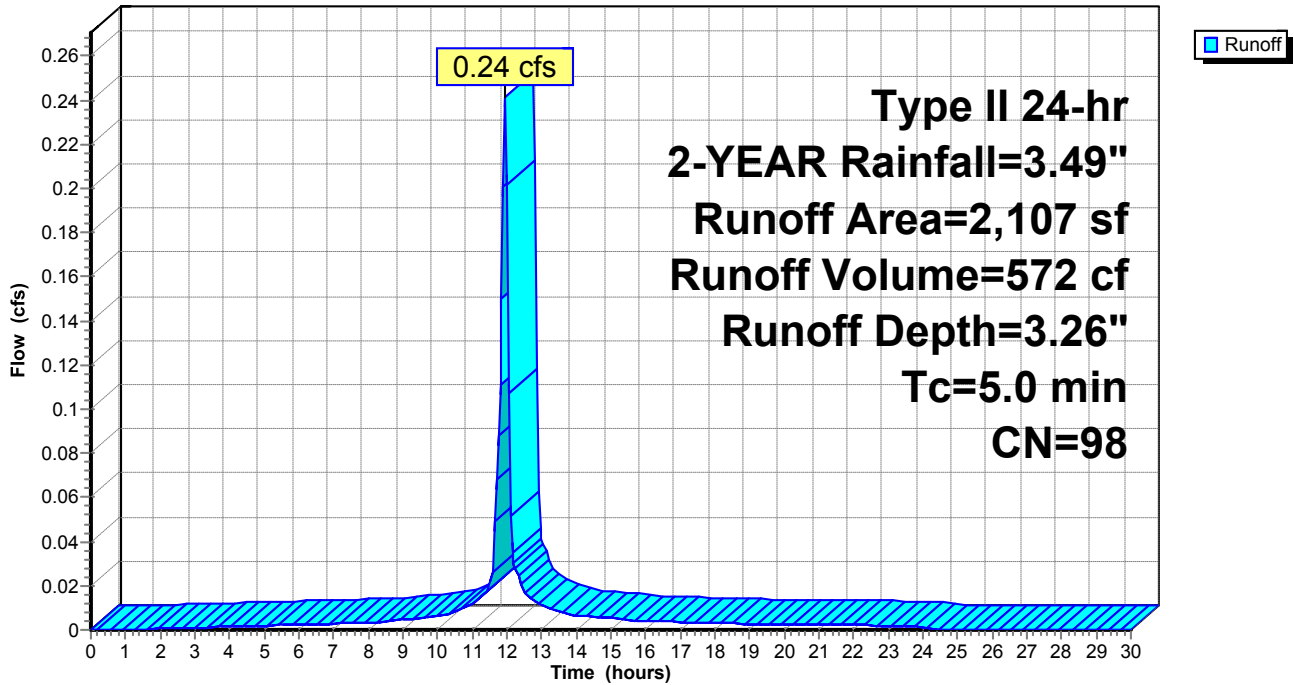
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-YEAR Rainfall=3.49"

Area (sf)	CN	Description
2,107	98	Paved parking, HSG C
2,107		100.00% Impervious Area

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

Subcatchment DA-17: DA-17

Hydrograph



Summary for Subcatchment DA-2: DA-2

Runoff = 3.35 cfs @ 12.23 hrs, Volume= 13,987 cf, Depth= 1.23"

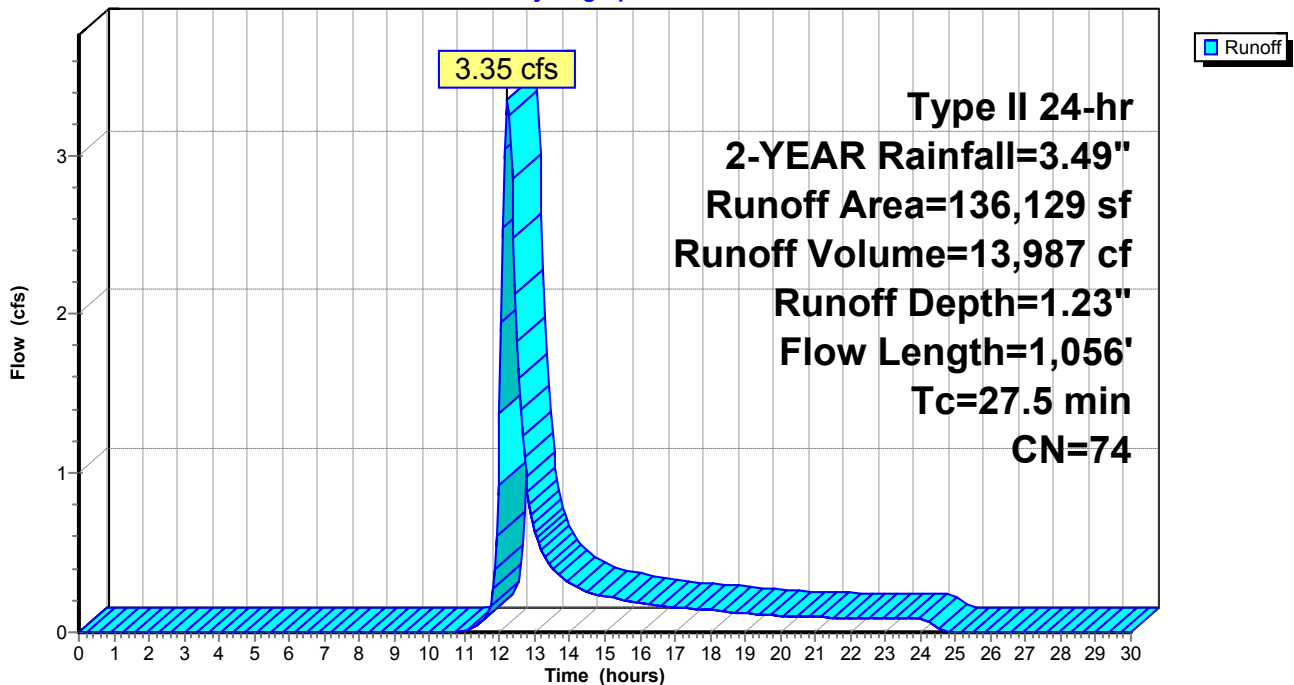
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-YEAR Rainfall=3.49"

Area (sf)	CN	Description
99,640	72	Woods/grass comb., Good, HSG C
29,188	74	>75% Grass cover, Good, HSG C
7,301	98	Paved parking, HSG C
136,129	74	Weighted Average
128,828		94.64% Pervious Area
7,301		5.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.2	250	0.1160	0.20		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
6.3	806	0.0940	2.15		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
27.5	1,056	Total			

Subcatchment DA-2: DA-2

Hydrograph



Summary for Subcatchment DA-3: DA-3

Runoff = 1.99 cfs @ 12.21 hrs, Volume= 7,956 cf, Depth= 1.11"

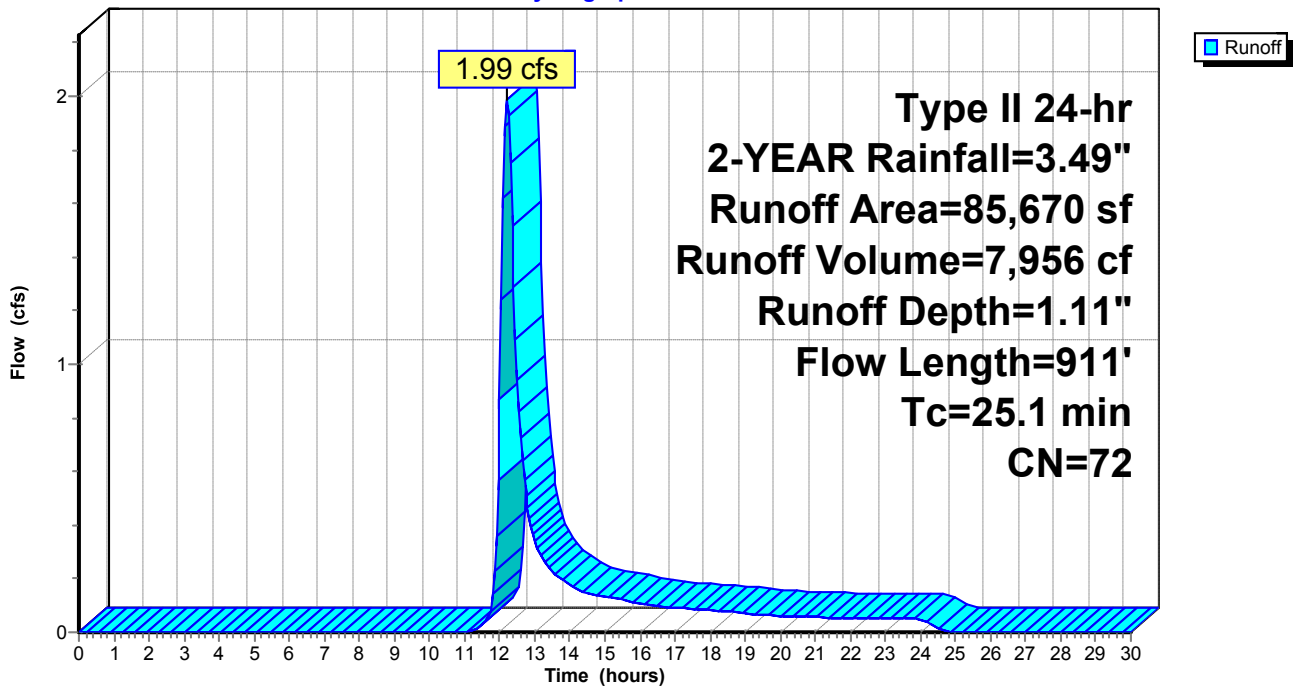
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-YEAR Rainfall=3.49"

Area (sf)	CN	Description
75,390	72	Woods/grass comb., Good, HSG C
9,461	74	>75% Grass cover, Good, HSG C
819	98	Paved parking, HSG C
85,670	72	Weighted Average
84,851		99.04% Pervious Area
819		0.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.4	250	0.1280	0.20		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
4.7	661	0.1120	2.34		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
25.1	911	Total			

Subcatchment DA-3: DA-3

Hydrograph



Summary for Subcatchment DA-4: DA-4

Runoff = 5.69 cfs @ 12.08 hrs, Volume= 16,656 cf, Depth= 1.29"

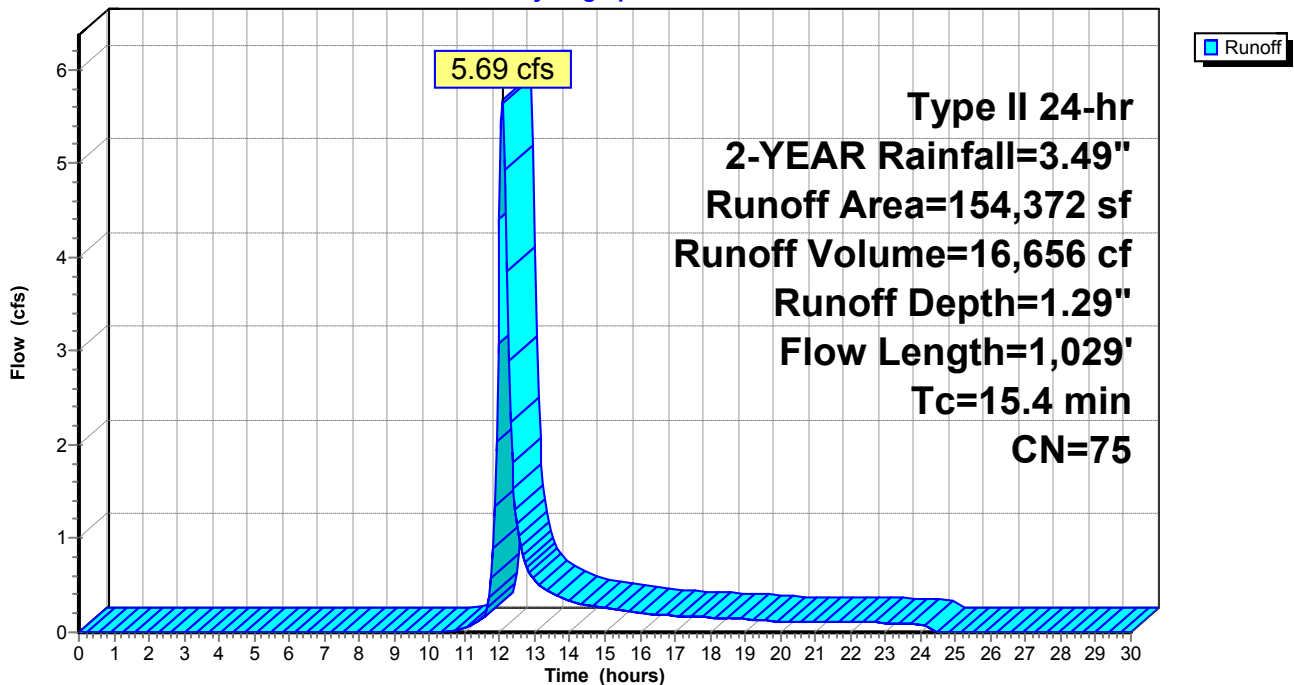
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-YEAR Rainfall=3.49"

Area (sf)	CN	Description
84,109	72	Woods/grass comb., Good, HSG C
54,184	74	>75% Grass cover, Good, HSG C
16,079	98	Paved parking, HSG C
154,372	75	Weighted Average
138,293		89.58% Pervious Area
16,079		10.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	250	0.1360	0.46		Sheet Flow, Grass: Short n= 0.150 P2= 3.49"
3.6	516	0.1160	2.38		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
2.7	263	0.0532	1.61		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
15.4	1,029	Total			

Subcatchment DA-4: DA-4

Hydrograph



Summary for Subcatchment DA-5: DA-5

Runoff = 4.41 cfs @ 12.21 hrs, Volume= 17,631 cf, Depth= 1.29"

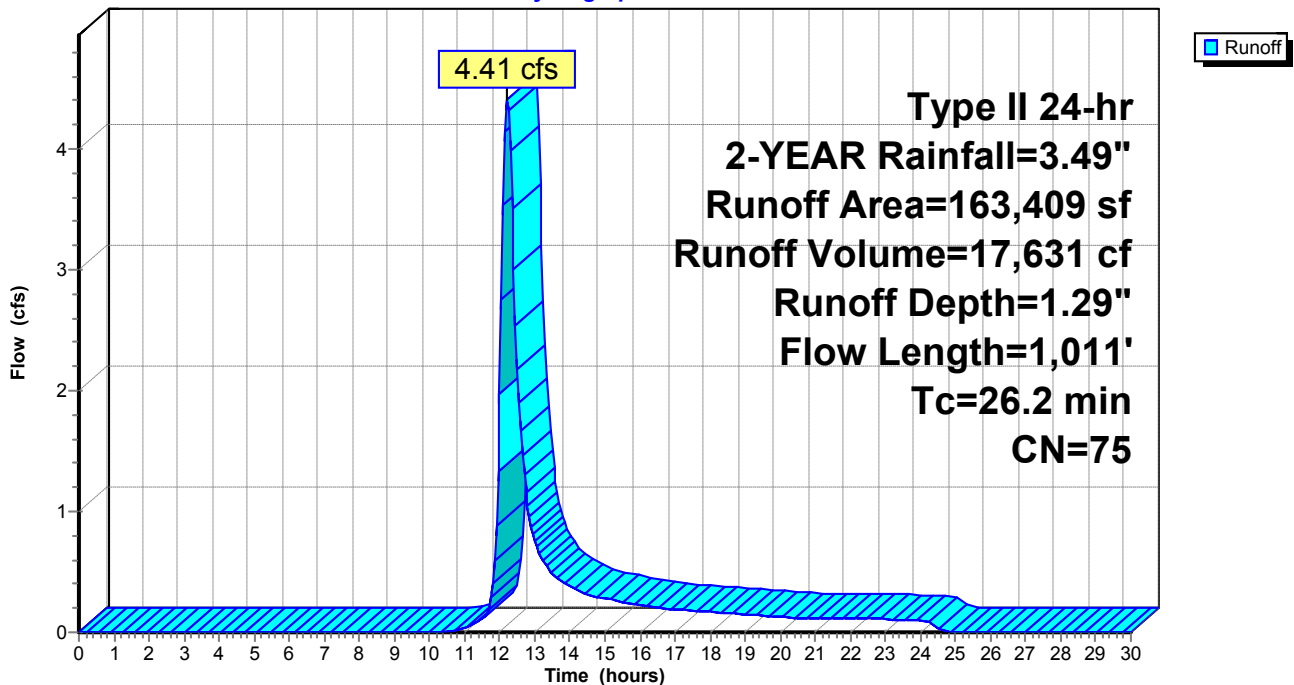
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-YEAR Rainfall=3.49"

Area (sf)	CN	Description
88,128	72	Woods/grass comb., Good, HSG C
63,546	74	>75% Grass cover, Good, HSG C
11,735	98	Paved parking, HSG C
163,409	75	Weighted Average
151,674		92.82% Pervious Area
11,735		7.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.6	250	0.1240	0.20		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
3.6	533	0.1220	2.44		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
2.0	228	0.0745	1.91		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
26.2	1,011	Total			

Subcatchment DA-5: DA-5

Hydrograph



Summary for Subcatchment DA-6: DA-6

Runoff = 5.52 cfs @ 12.21 hrs, Volume= 22,103 cf, Depth= 1.17"

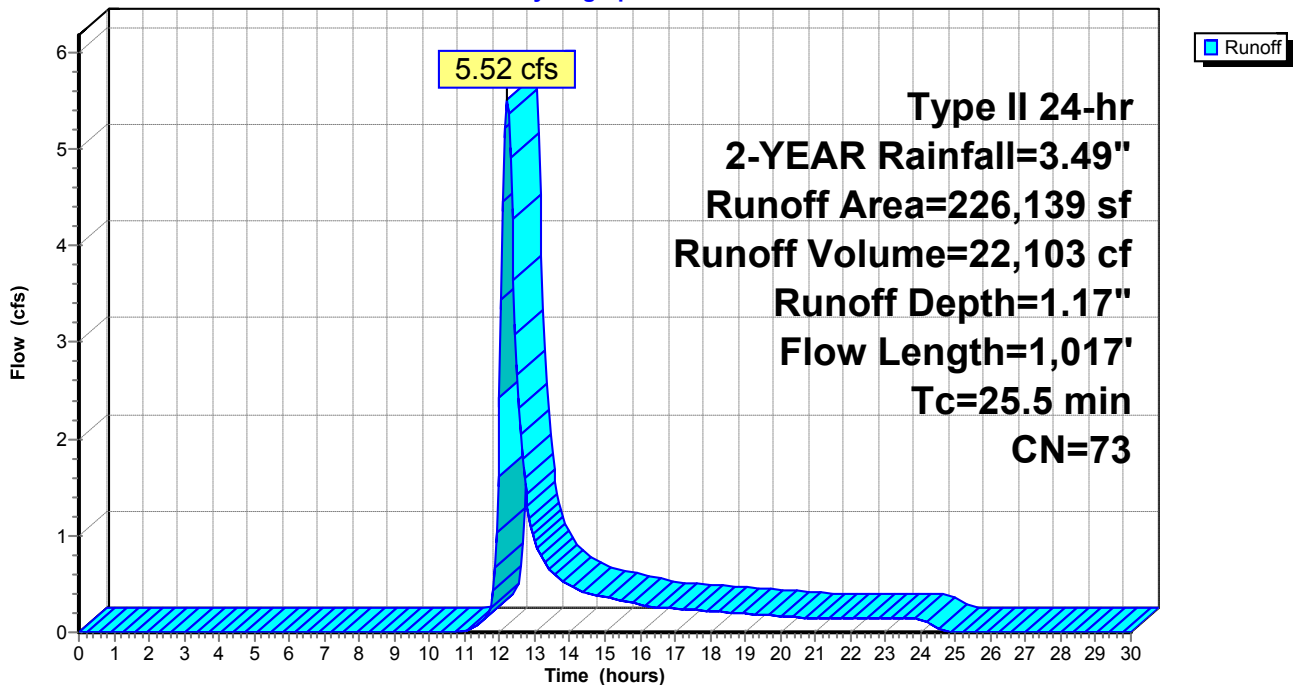
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-YEAR Rainfall=3.49"

Area (sf)	CN	Description
199,314	72	Woods/grass comb., Good, HSG C
20,613	74	>75% Grass cover, Good, HSG C
6,212	98	Paved parking, HSG C
226,139	73	Weighted Average
219,927		97.25% Pervious Area
6,212		2.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	250	0.1360	0.21		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
4.1	564	0.1060	2.28		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
1.5	203	0.0985	2.20		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
25.5	1,017	Total			

Subcatchment DA-6: DA-6

Hydrograph



Summary for Subcatchment DA-7: DA-7

Runoff = 1.35 cfs @ 12.20 hrs, Volume= 5,208 cf, Depth= 1.36"

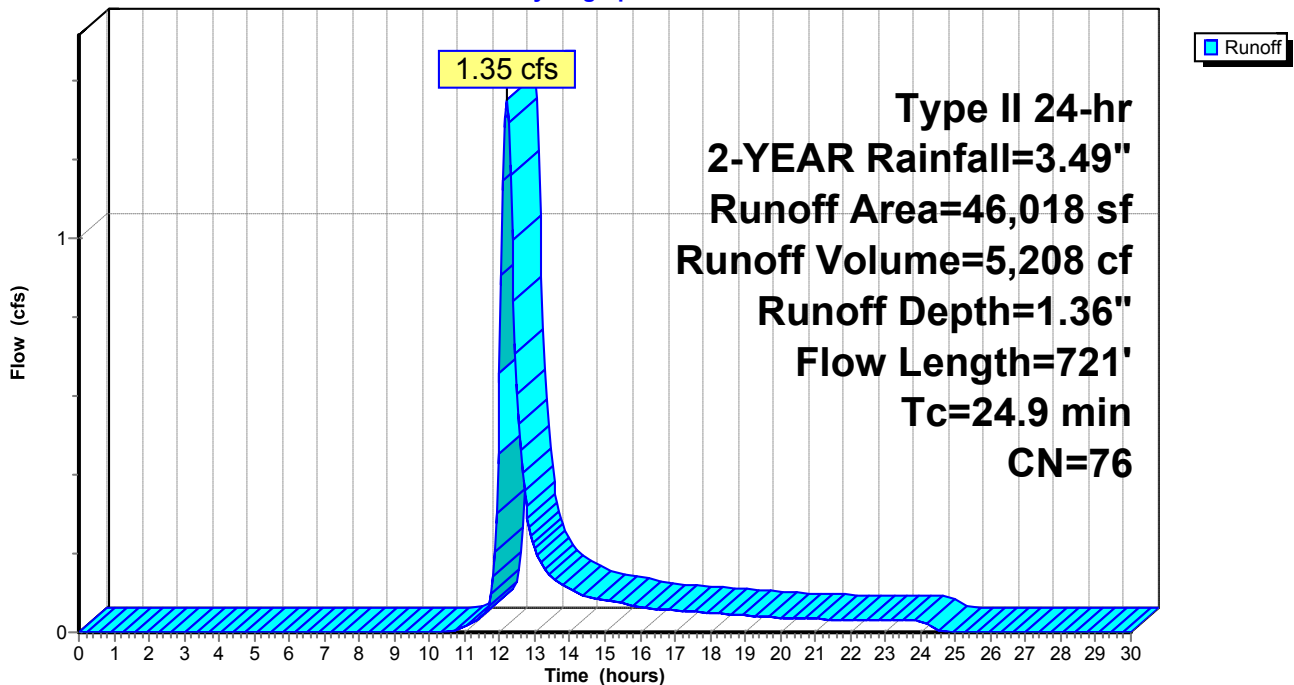
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-YEAR Rainfall=3.49"

Area (sf)	CN	Description
22,928	72	Woods/grass comb., Good, HSG C
17,529	74	>75% Grass cover, Good, HSG C
5,561	98	Paved parking, HSG C
46,018	76	Weighted Average
40,457		87.92% Pervious Area
5,561		12.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.5	250	0.1120	0.19		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
1.8	259	0.1160	2.38		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
1.6	212	0.1040	2.26		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
24.9	721	Total			

Subcatchment DA-7: DA-7

Hydrograph



Summary for Subcatchment DA-8: DA-8

Runoff = 0.68 cfs @ 12.18 hrs, Volume= 2,512 cf, Depth= 1.42"

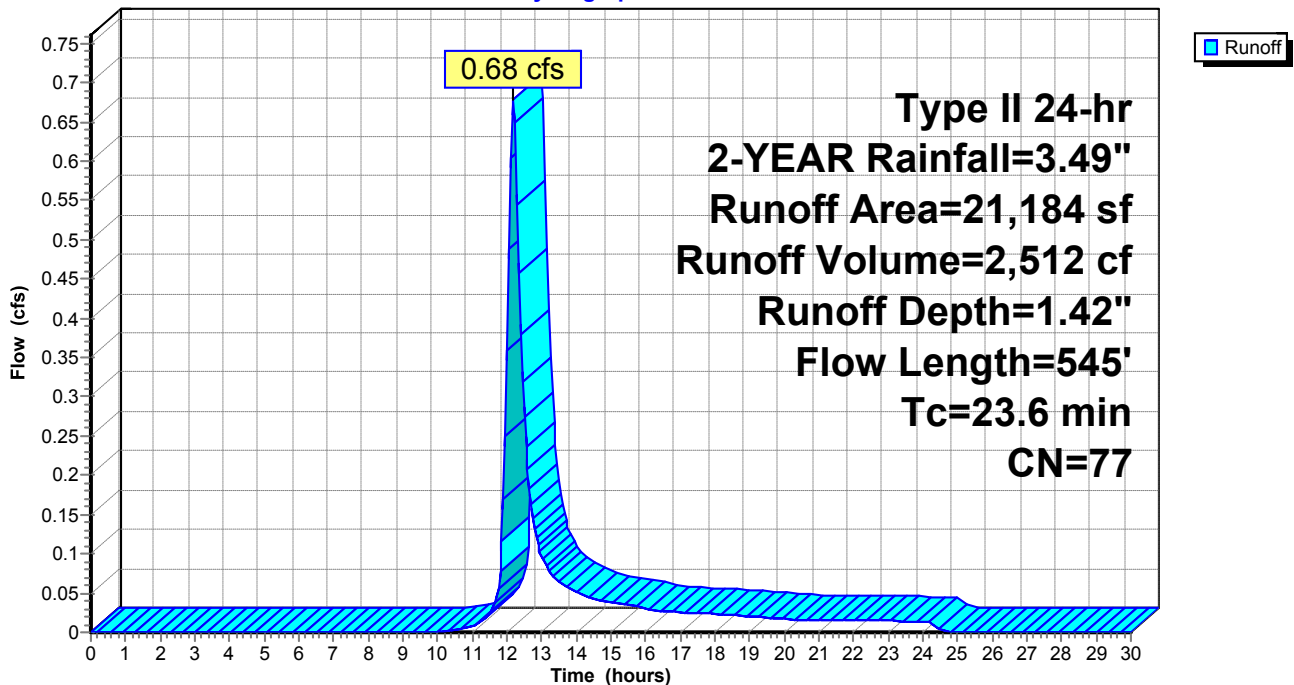
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-YEAR Rainfall=3.49"

Area (sf)	CN	Description
8,852	72	Woods/grass comb., Good, HSG C
9,279	74	>75% Grass cover, Good, HSG C
3,053	98	Paved parking, HSG C
21,184	77	Weighted Average
18,131		85.59% Pervious Area
3,053		14.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.5	250	0.1120	0.19		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
0.4	56	0.1070	2.29		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
1.7	239	0.1088	2.31		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
23.6	545	Total			

Subcatchment DA-8: DA-8

Hydrograph



Summary for Subcatchment DA-9: DA-9

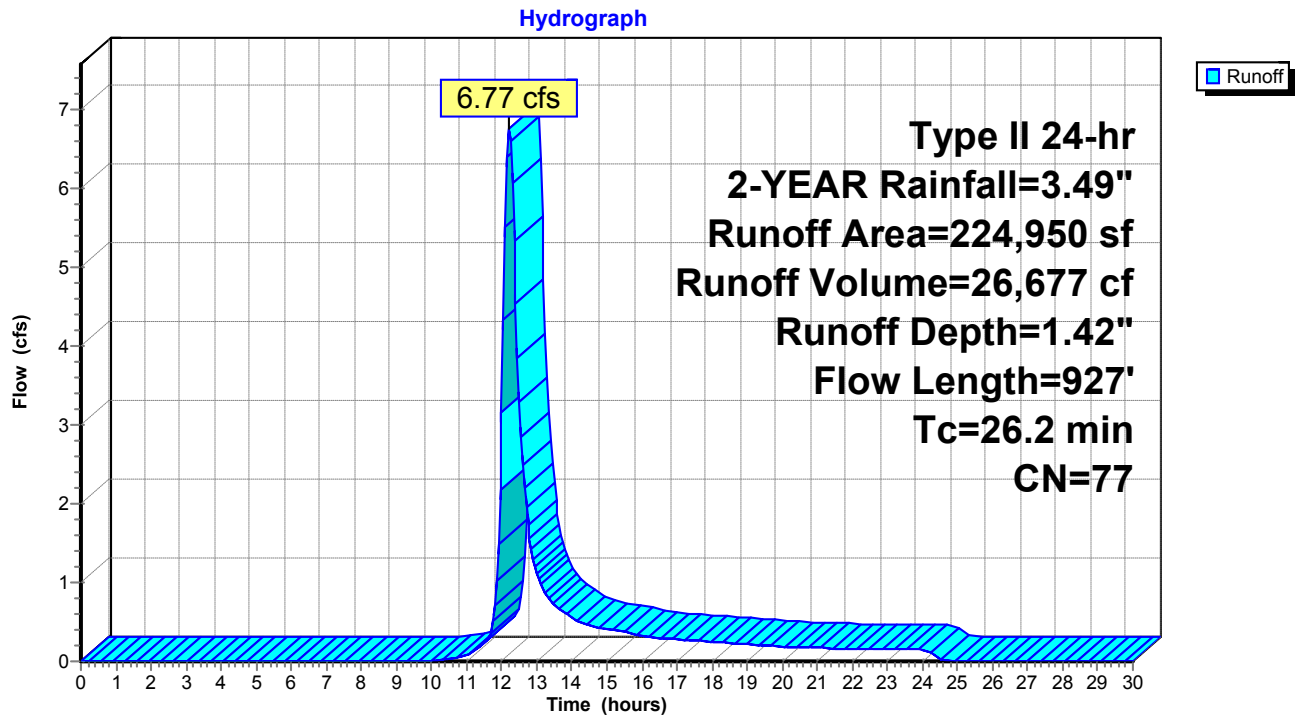
Runoff = 6.77 cfs @ 12.21 hrs, Volume= 26,677 cf, Depth= 1.42"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 2-YEAR Rainfall=3.49"

Area (sf)	CN	Description
54,875	72	Woods/grass comb., Good, HSG C
138,673	74	>75% Grass cover, Good, HSG C
31,402	98	Paved parking, HSG C
224,950	77	Weighted Average
193,548		86.04% Pervious Area
31,402		13.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.5	250	0.1120	0.19		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
0.3	50	0.1400	2.62		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
1.7	207	0.0870	2.06		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.3	100	0.7000	5.86		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
2.4	320	0.1000	2.21		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
26.2	927	Total			

Subcatchment DA-9: DA-9

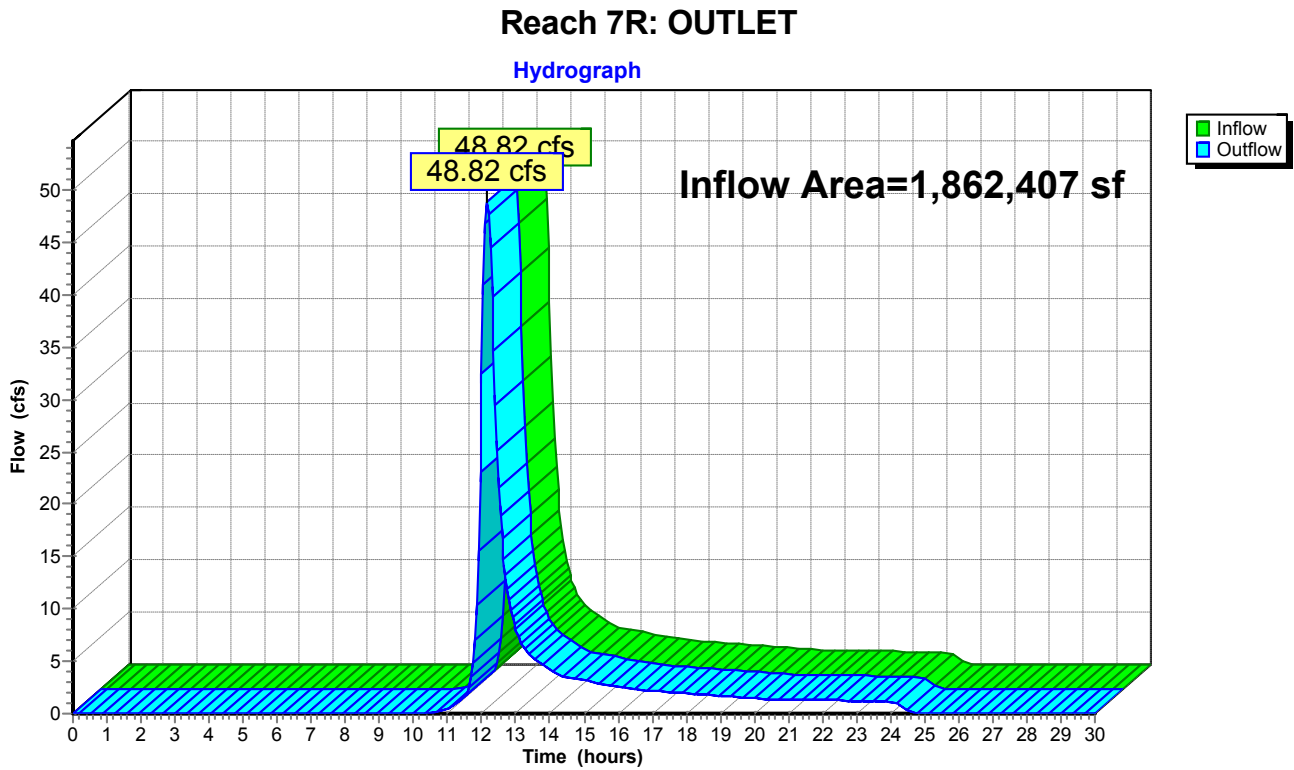


Summary for Reach 7R: OUTLET

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1,862,407 sf, 8.59% Impervious, Inflow Depth = 1.30" for 2-YEAR event
Inflow = 48.82 cfs @ 12.16 hrs, Volume= 201,605 cf
Outflow = 48.82 cfs @ 12.16 hrs, Volume= 201,605 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs



Summary for Pond CB-1: CB-1

Inflow Area = 165,148 sf, 6.20% Impervious, Inflow Depth = 1.23" for 2-YEAR event
 Inflow = 4.08 cfs @ 12.23 hrs, Volume= 16,969 cf
 Outflow = 4.08 cfs @ 12.23 hrs, Volume= 16,969 cf, Atten= 0%, Lag= 0.0 min
 Primary = 4.08 cfs @ 12.23 hrs, Volume= 16,969 cf

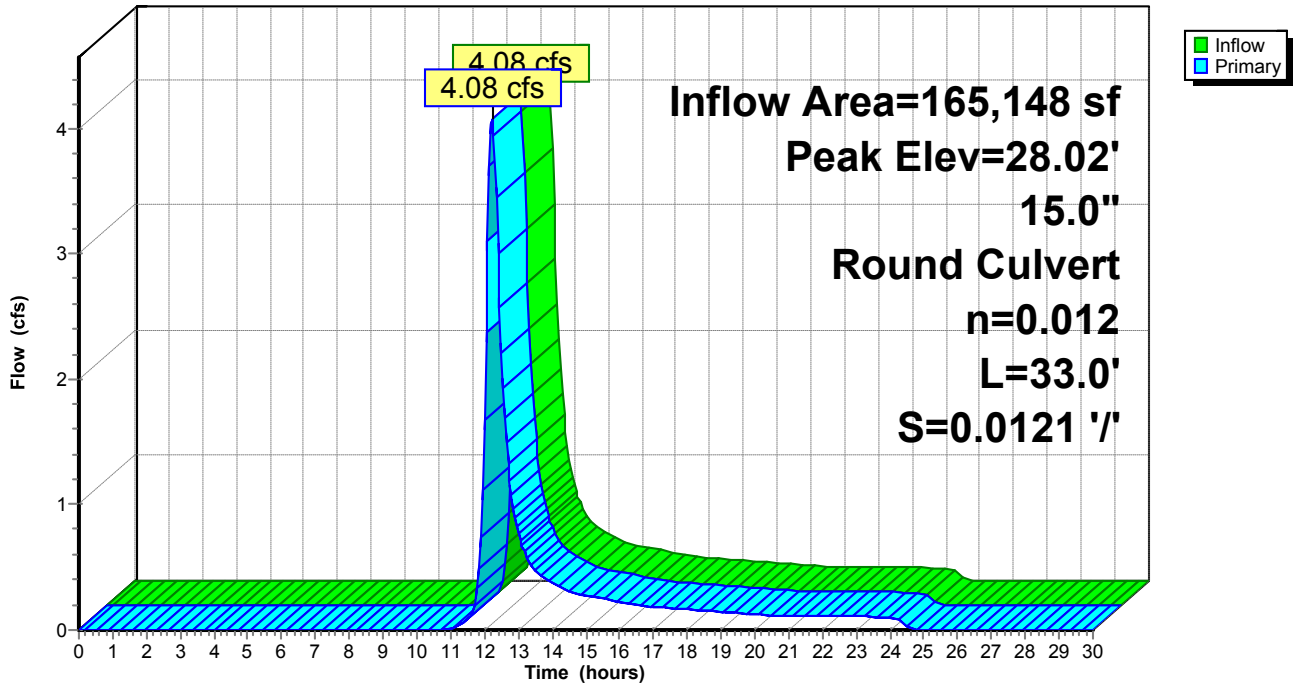
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 28.02' @ 12.23 hrs
 Flood Elev= 30.47'

Device	Routing	Invert	Outlet Devices
#1	Primary	26.90'	15.0" Round RCP_Round 15" L= 33.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 26.90' / 26.50' S= 0.0121 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.23 sf

Primary OutFlow Max=4.05 cfs @ 12.23 hrs HW=28.02' (Free Discharge)
 ↳1=RCP_Round 15" (Barrel Controls 4.05 cfs @ 4.64 fps)

Pond CB-1: CB-1

Hydrograph



Summary for Pond CB-10: CB-10

[58] Hint: Peaked 24.35' above defined flood level
 [81] Warning: Exceeded Pond CB-11 by 27.64' @ 12.15 hrs
 [81] Warning: Exceeded Pond CB-12 by 14.65' @ 12.15 hrs

Inflow Area = 925,644 sf, 10.98% Impervious, Inflow Depth = 1.36" for 2-YEAR event
 Inflow = 25.89 cfs @ 12.13 hrs, Volume= 104,703 cf
 Outflow = 25.89 cfs @ 12.13 hrs, Volume= 104,703 cf, Atten= 0%, Lag= 0.0 min
 Primary = 25.89 cfs @ 12.13 hrs, Volume= 104,703 cf

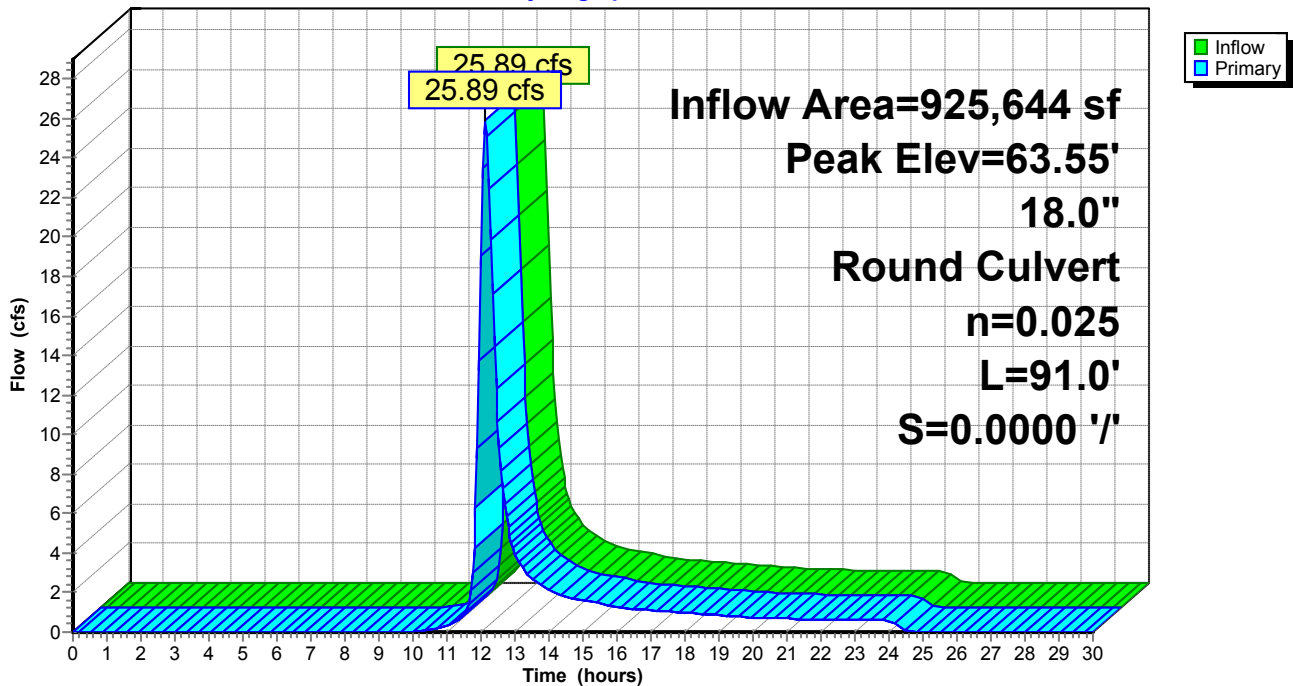
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 63.55' @ 12.13 hrs
 Flood Elev= 39.20'

Device	Routing	Invert	Outlet Devices
#1	Primary	35.20'	18.0" Round CMP_Round 18" L= 91.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 35.20' / 35.20' S= 0.0000 ' / ' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

Primary OutFlow Max=25.73 cfs @ 12.13 hrs HW=63.21' (Free Discharge)
 ↳=CMP_Round 18" (Barrel Controls 25.73 cfs @ 14.56 fps)

Pond CB-10: CB-10

Hydrograph



Summary for Pond CB-11: CB-11

Inflow Area = 6,316 sf, 100.00% Impervious, Inflow Depth = 3.26" for 2-YEAR event
 Inflow = 0.72 cfs @ 11.95 hrs, Volume= 1,714 cf
 Outflow = 0.72 cfs @ 11.95 hrs, Volume= 1,714 cf, Atten= 0%, Lag= 0.0 min
 Primary = 0.72 cfs @ 11.95 hrs, Volume= 1,714 cf

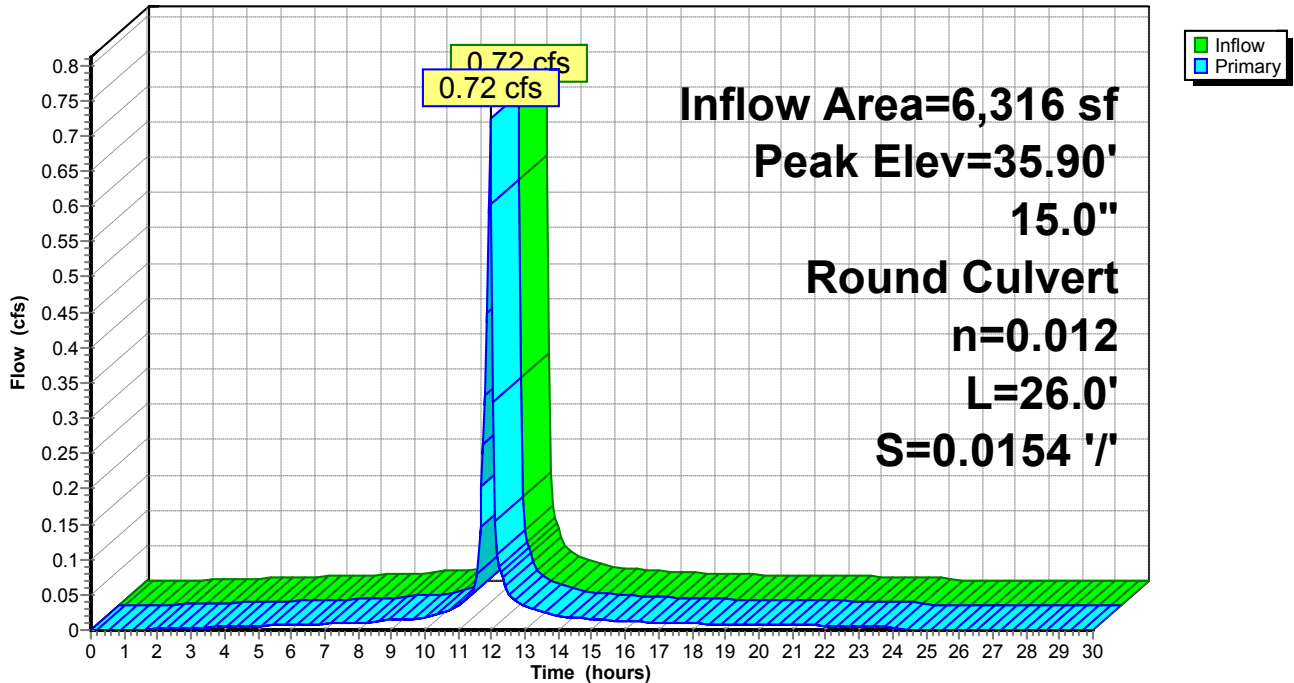
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 35.90' @ 11.95 hrs
 Flood Elev= 39.13'

Device	Routing	Invert	Outlet Devices
#1	Primary	35.50'	15.0" Round Culvert L= 26.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 35.50' / 35.10' S= 0.0154 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.23 sf

Primary OutFlow Max=0.72 cfs @ 11.95 hrs HW=35.90' (Free Discharge)
 ←1=Culvert (Inlet Controls 0.72 cfs @ 2.15 fps)

Pond CB-11: CB-11

Hydrograph



Summary for Pond CB-12: CB-12

[58] Hint: Peaked 6.02' above defined flood level
 [79] Warning: Submerged Pond CB-13 Primary device # 1 INLET by 5.36'

Inflow Area = 873,310 sf, 10.28% Impervious, Inflow Depth = 1.34" for 2-YEAR event
 Inflow = 24.64 cfs @ 12.12 hrs, Volume= 97,781 cf
 Outflow = 24.64 cfs @ 12.12 hrs, Volume= 97,781 cf, Atten= 0%, Lag= 0.0 min
 Primary = 24.64 cfs @ 12.12 hrs, Volume= 97,781 cf

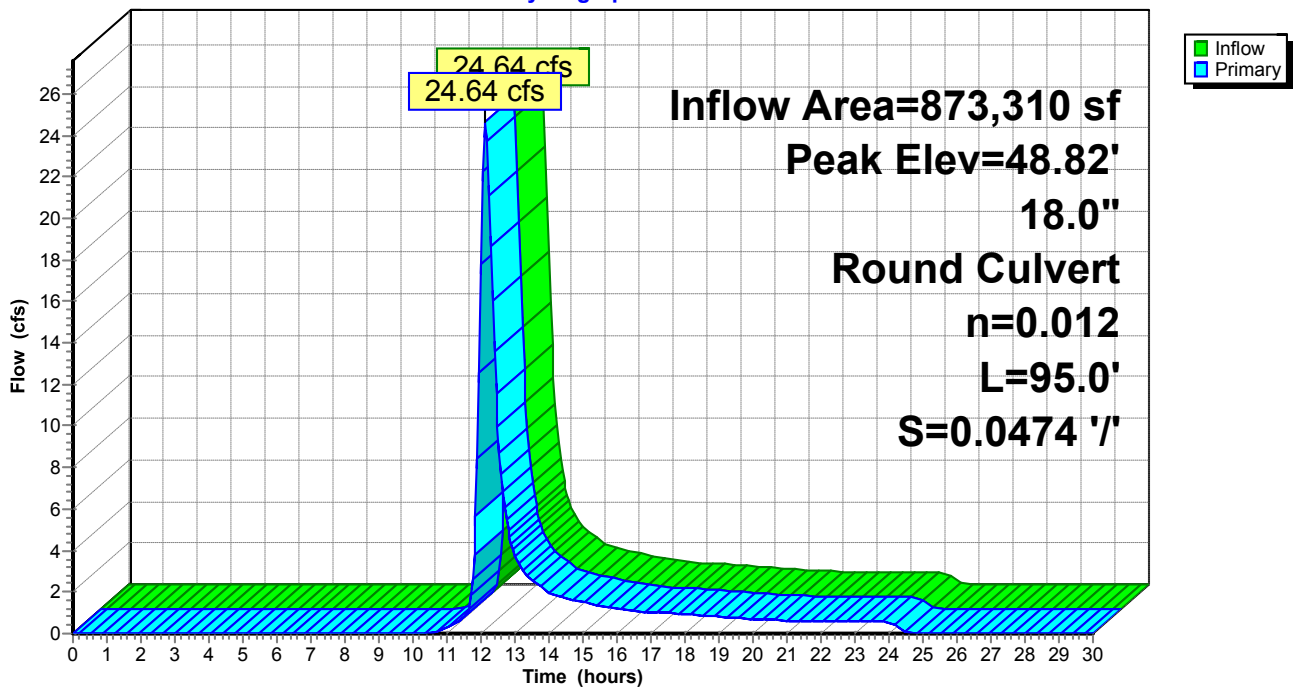
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 48.82' @ 12.12 hrs
 Flood Elev= 42.80'

Device	Routing	Invert	Outlet Devices
#1	Primary	39.70'	18.0" Round RCP_Round 18" L= 95.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 39.70' / 35.20' S= 0.0474 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=24.37 cfs @ 12.12 hrs HW=48.65' (Free Discharge)
 ↳1=RCP_Round 18" (Inlet Controls 24.37 cfs @ 13.79 fps)

Pond CB-12: CB-12

Hydrograph



Summary for Pond CB-13: CB-13

[58] Hint: Peaked 12.89' above defined flood level
 [81] Warning: Exceeded Pond CB-14 by 4.11' @ 12.15 hrs

Inflow Area = 852,126 sf, 10.17% Impervious, Inflow Depth = 1.34" for 2-YEAR event
 Inflow = 23.99 cfs @ 12.12 hrs, Volume= 95,268 cf
 Outflow = 23.99 cfs @ 12.12 hrs, Volume= 95,268 cf, Atten= 0%, Lag= 0.0 min
 Primary = 23.99 cfs @ 12.12 hrs, Volume= 95,268 cf

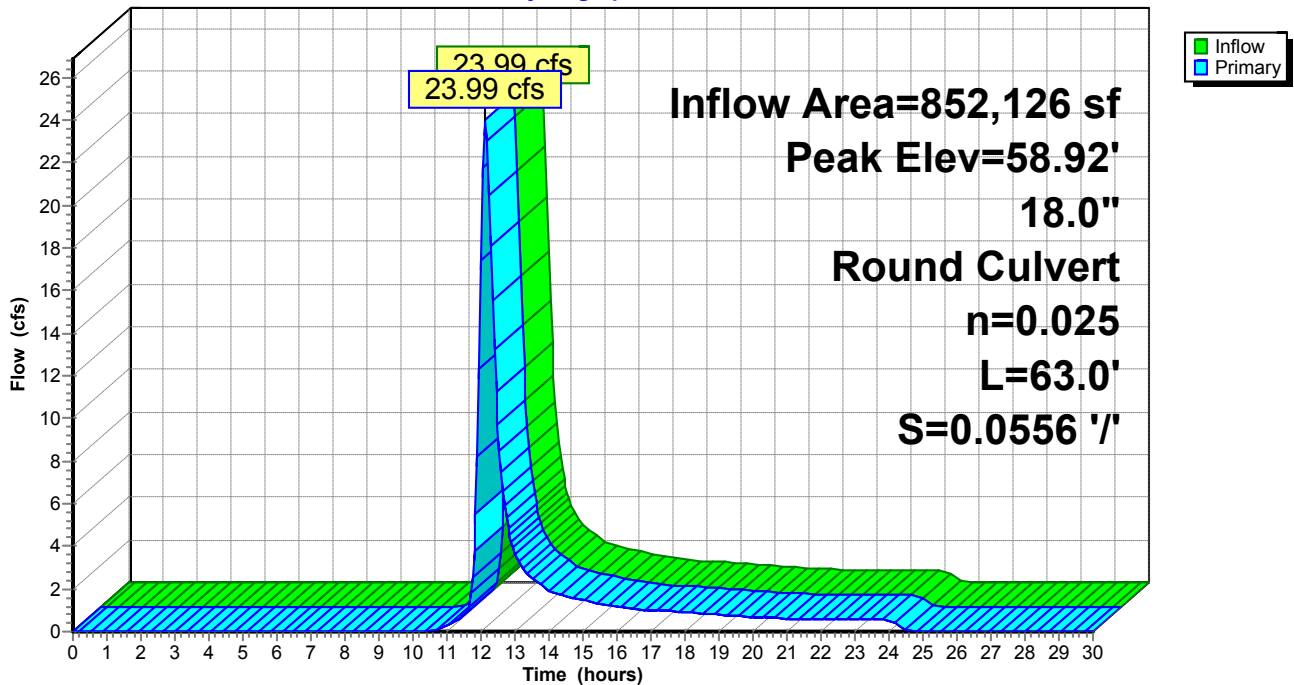
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 58.92' @ 12.12 hrs
 Flood Elev= 46.03'

Device	Routing	Invert	Outlet Devices
#1	Primary	43.30'	18.0" Round CMP_Round 18" L= 63.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 43.30' / 39.80' S= 0.0556 '/ Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

Primary OutFlow Max=23.73 cfs @ 12.12 hrs HW=58.56' (Free Discharge)
 ↳=CMP_Round 18" (Barrel Controls 23.73 cfs @ 13.43 fps)

Pond CB-13: CB-13

Hydrograph



Summary for Pond CB-14: CB-14

[58] Hint: Peaked 1.96' above defined flood level
 [79] Warning: Submerged Pond CB-15 Primary device # 1 INLET by 0.76'

Inflow Area = 627,176 sf, 8.81% Impervious, Inflow Depth = 1.31" for 2-YEAR event
 Inflow = 18.26 cfs @ 12.10 hrs, Volume= 68,592 cf
 Outflow = 18.26 cfs @ 12.10 hrs, Volume= 68,592 cf, Atten= 0%, Lag= 0.0 min
 Primary = 18.26 cfs @ 12.10 hrs, Volume= 68,592 cf

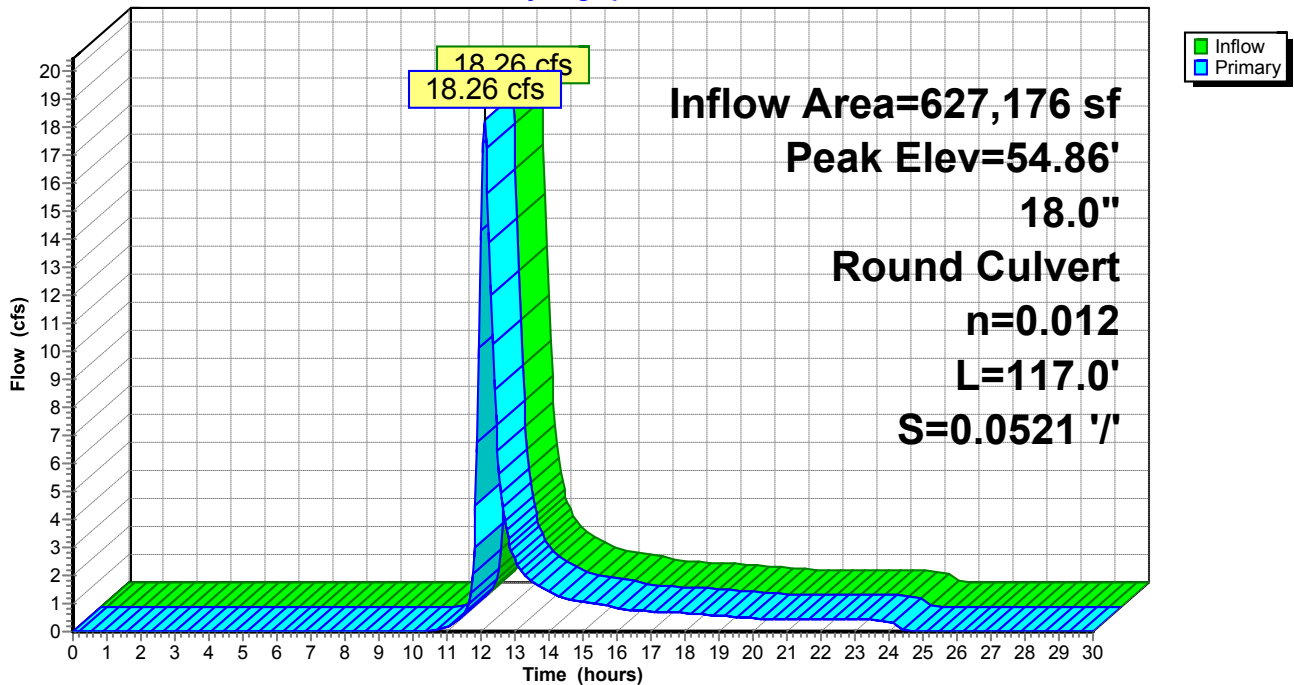
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 54.86' @ 12.10 hrs
 Flood Elev= 52.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	49.50'	18.0" Round RCP_Round 18" L= 117.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 49.50' / 43.40' S= 0.0521 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=18.23 cfs @ 12.10 hrs HW=54.84' (Free Discharge)
 ↑1=RCP_Round 18" (Inlet Controls 18.23 cfs @ 10.31 fps)

Pond CB-14: CB-14

Hydrograph



Summary for Pond CB-15: CB-15

[58] Hint: Peaked 0.87' above defined flood level
 [79] Warning: Submerged Pond CB-16 Primary device # 1 OUTLET by 4.83'

Inflow Area = 597,934 sf, 8.83% Impervious, Inflow Depth = 1.31" for 2-YEAR event
 Inflow = 17.20 cfs @ 12.11 hrs, Volume= 65,282 cf
 Outflow = 17.20 cfs @ 12.11 hrs, Volume= 65,282 cf, Atten= 0%, Lag= 0.0 min
 Primary = 17.20 cfs @ 12.11 hrs, Volume= 65,282 cf

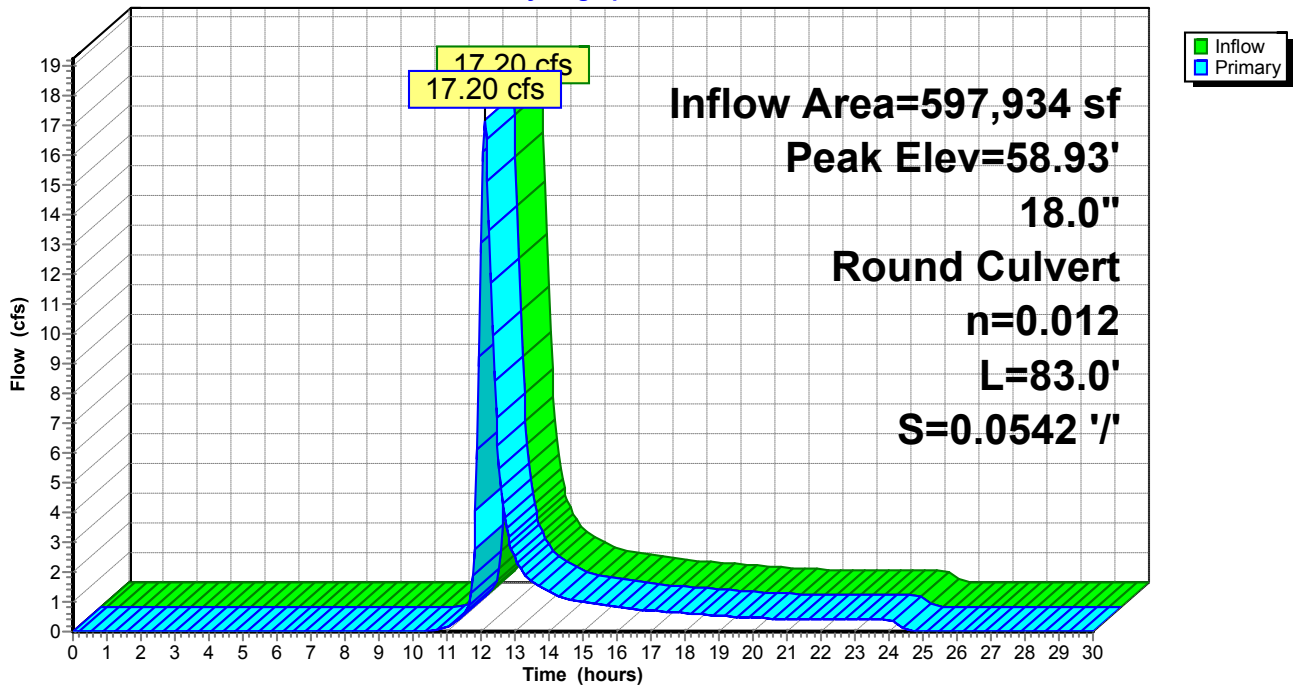
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 58.93' @ 12.11 hrs
 Flood Elev= 58.06'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.10'	18.0" Round RCP_Round 18" L= 83.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 54.10' / 49.60' S= 0.0542 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=17.11 cfs @ 12.11 hrs HW=58.89' (Free Discharge)
 ↳1=RCP_Round 18" (Inlet Controls 17.11 cfs @ 9.68 fps)

Pond CB-15: CB-15

Hydrograph



Summary for Pond CB-16: CB-16

[58] Hint: Peaked 0.07' above defined flood level
 [79] Warning: Submerged Pond CB-17 Primary device # 1 OUTLET by 3.75'

Inflow Area = 537,106 sf, 9.26% Impervious, Inflow Depth = 1.31" for 2-YEAR event
 Inflow = 15.12 cfs @ 12.12 hrs, Volume= 58,719 cf
 Outflow = 15.12 cfs @ 12.12 hrs, Volume= 58,719 cf, Atten= 0%, Lag= 0.0 min
 Primary = 15.12 cfs @ 12.12 hrs, Volume= 58,719 cf

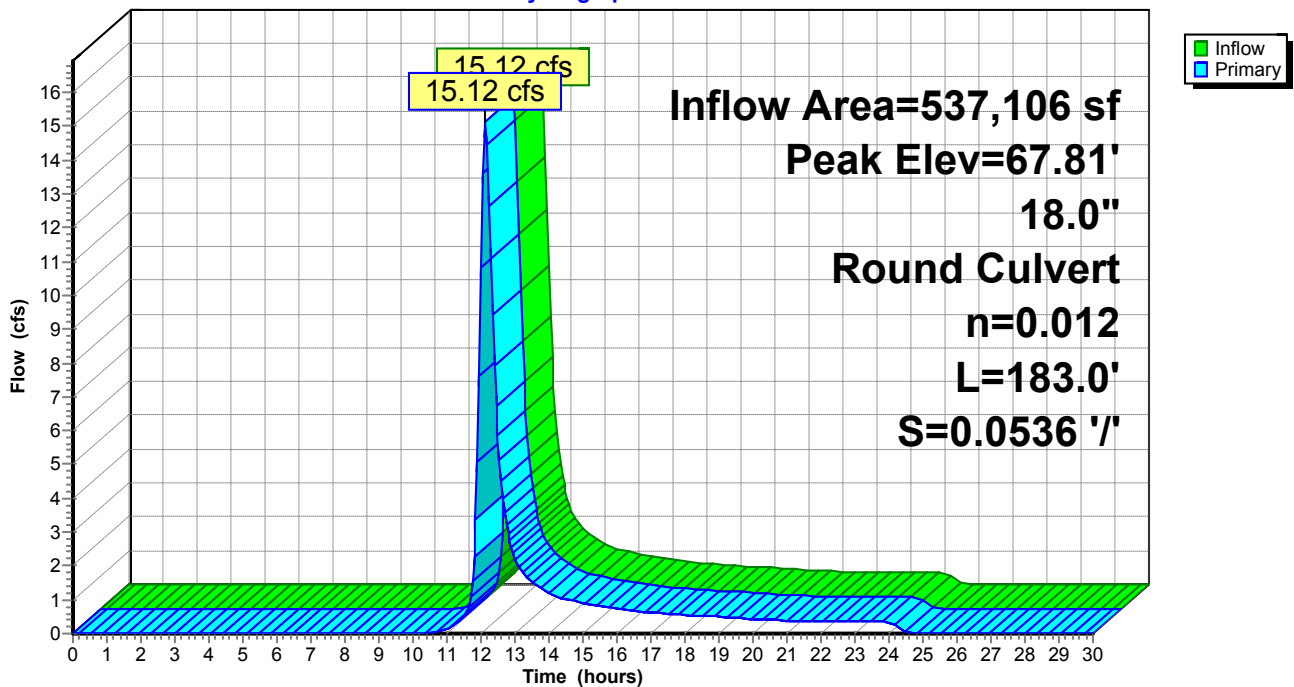
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 67.81' @ 12.12 hrs
 Flood Elev= 67.74'

Device	Routing	Invert	Outlet Devices
#1	Primary	63.90'	18.0" Round RCP_Round 18" L= 183.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 63.90' / 54.10' S= 0.0536 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=14.95 cfs @ 12.12 hrs HW=67.74' (Free Discharge)
 ↳1=RCP_Round 18" (Inlet Controls 14.95 cfs @ 8.46 fps)

Pond CB-16: CB-16

Hydrograph



Summary for Pond CB-17: CB-17

Inflow Area = 391,463 sf, 8.69% Impervious, Inflow Depth = 1.29" for 2-YEAR event
 Inflow = 10.99 cfs @ 12.19 hrs, Volume= 42,237 cf
 Outflow = 10.99 cfs @ 12.19 hrs, Volume= 42,237 cf, Atten= 0%, Lag= 0.0 min
 Primary = 10.99 cfs @ 12.19 hrs, Volume= 42,237 cf

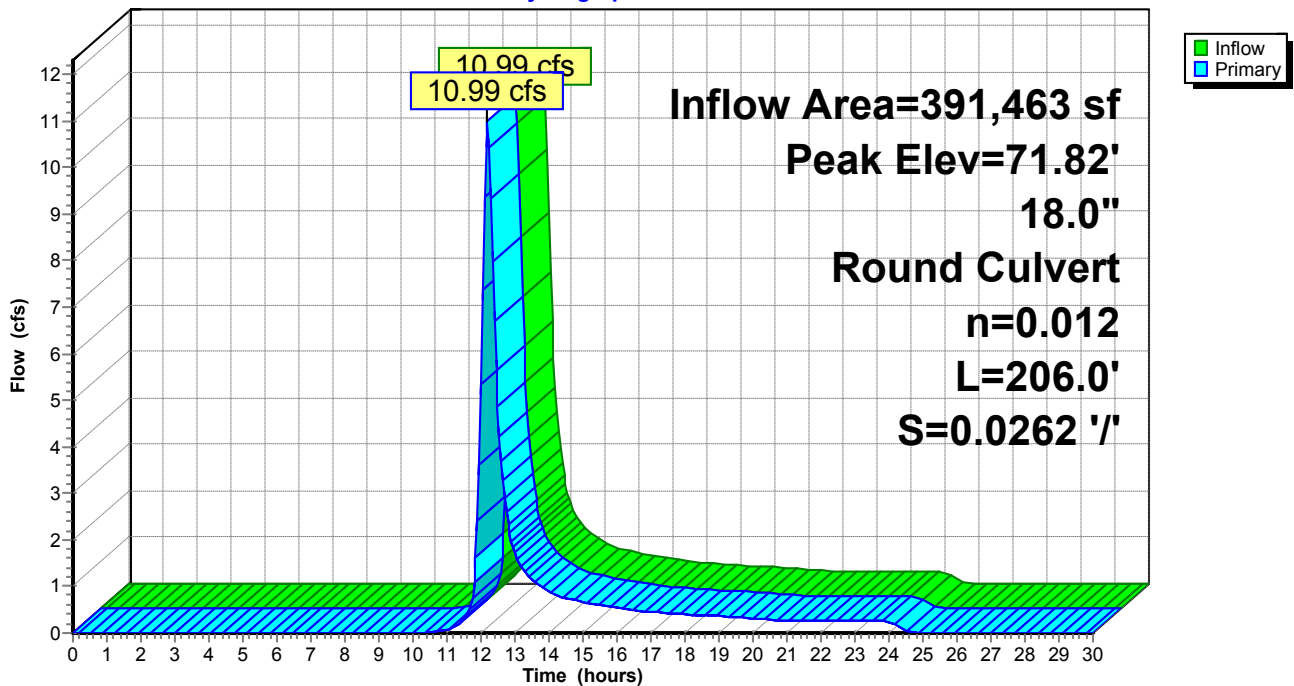
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 71.82' @ 12.19 hrs
 Flood Elev= 74.08'

Device	Routing	Invert	Outlet Devices
#1	Primary	69.40'	18.0" Round RCP_Round 18" L= 206.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 69.40' / 64.00' S= 0.0262 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=10.94 cfs @ 12.19 hrs HW=71.80' (Free Discharge)
 ↳1=RCP_Round 18" (Inlet Controls 10.94 cfs @ 6.19 fps)

Pond CB-17: CB-17

Hydrograph



Summary for Pond CB-2: CB-2

[81] Warning: Exceeded Pond CB-1 by 0.06' @ 12.25 hrs

Inflow Area = 167,255 sf, 7.38% Impervious, Inflow Depth = 1.26" for 2-YEAR event
 Inflow = 4.11 cfs @ 12.23 hrs, Volume= 17,541 cf
 Outflow = 4.11 cfs @ 12.23 hrs, Volume= 17,541 cf, Atten= 0%, Lag= 0.0 min
 Primary = 4.11 cfs @ 12.23 hrs, Volume= 17,541 cf

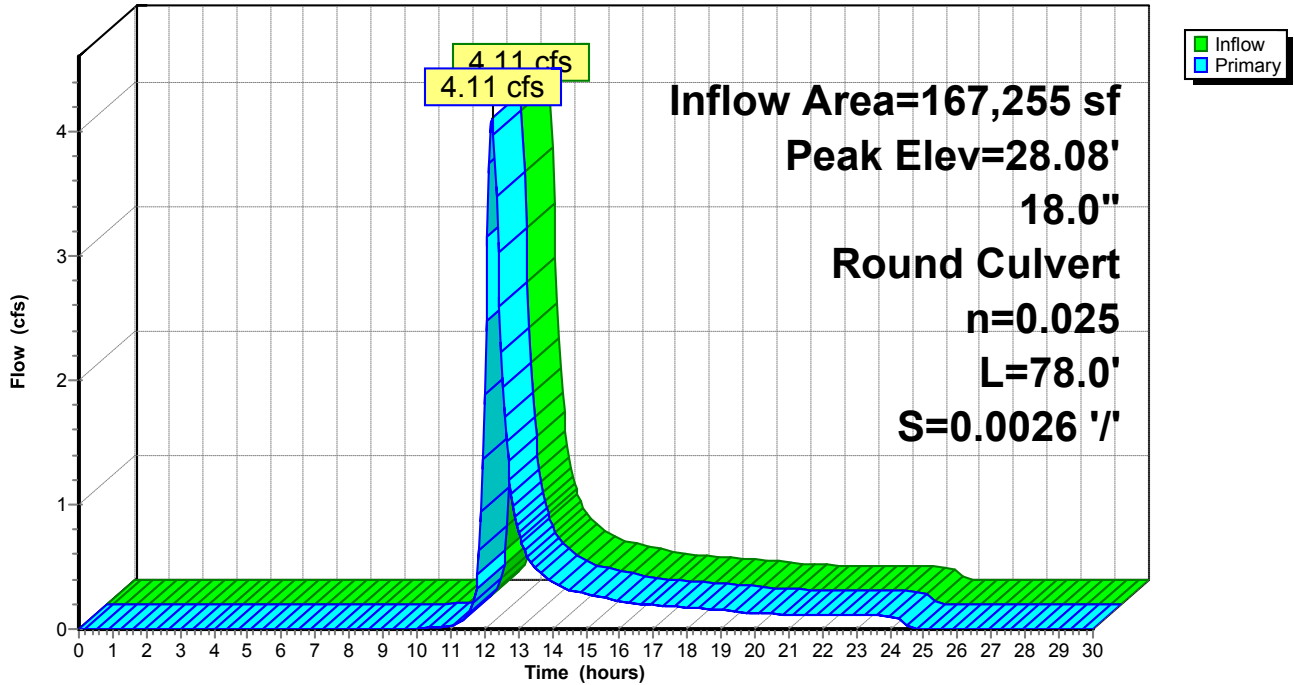
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 28.08' @ 12.23 hrs
 Flood Elev= 28.94'

Device	Routing	Invert	Outlet Devices
#1	Primary	26.40'	18.0" Round Culvert L= 78.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 26.40' / 26.20' S= 0.0026 '/ Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

Primary OutFlow Max=4.08 cfs @ 12.23 hrs HW=28.07' (Free Discharge)
 ←1=Culvert (Barrel Controls 4.08 cfs @ 2.58 fps)

Pond CB-2: CB-2

Hydrograph



Summary for Pond CB-3: CB-3

Inflow Area = 136,129 sf, 5.36% Impervious, Inflow Depth = 1.23" for 2-YEAR event
 Inflow = 3.35 cfs @ 12.23 hrs, Volume= 13,987 cf
 Outflow = 3.35 cfs @ 12.23 hrs, Volume= 13,987 cf, Atten= 0%, Lag= 0.0 min
 Primary = 3.35 cfs @ 12.23 hrs, Volume= 13,987 cf

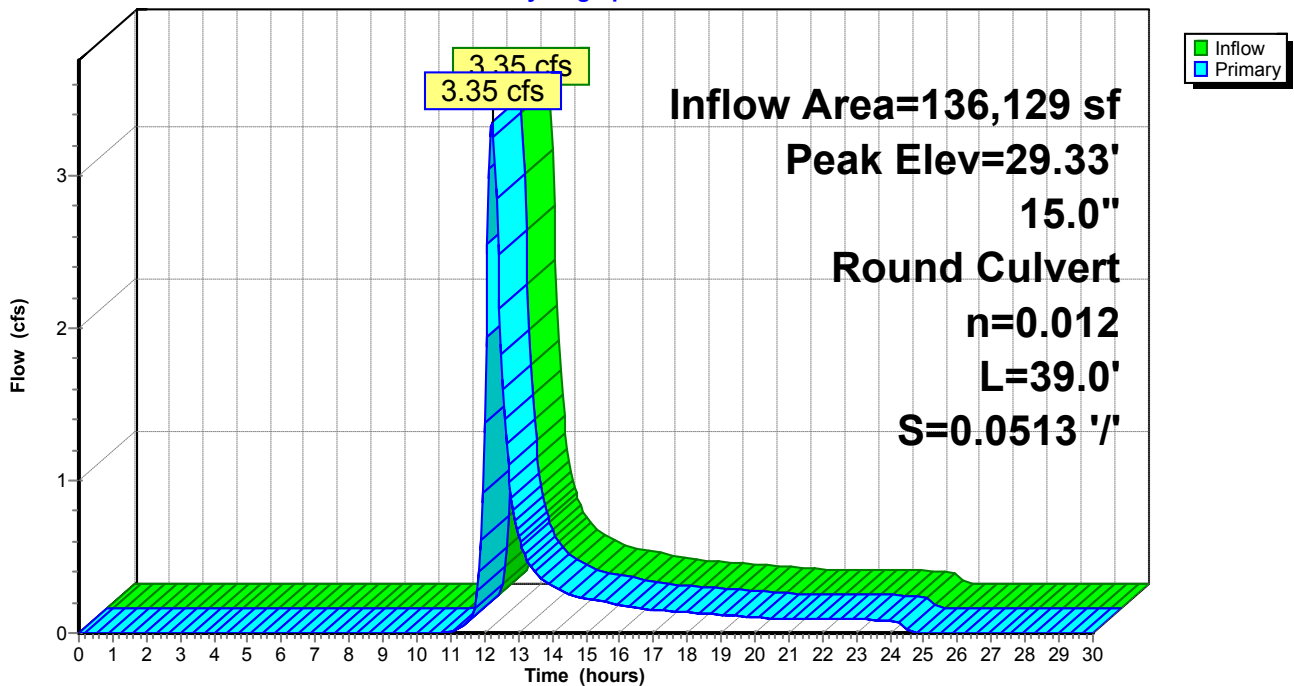
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 29.33' @ 12.23 hrs
 Flood Elev= 30.66'

Device	Routing	Invert	Outlet Devices
#1	Primary	28.20'	15.0" Round RCP_Round 15" L= 39.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 28.20' / 26.20' S= 0.0513 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.23 sf

Primary OutFlow Max=3.33 cfs @ 12.23 hrs HW=29.33' (Free Discharge)
 ↑1=RCP_Round 15" (Inlet Controls 3.33 cfs @ 2.86 fps)

Pond CB-3: CB-3

Hydrograph



Summary for Pond CB-4: CB-4

[79] Warning: Submerged Pond CB-2 Primary device # 1 INLET by 1.05'
 [79] Warning: Submerged Pond CB-3 Primary device # 1 OUTLET by 1.25'

Inflow Area = 305,014 sf, 6.98% Impervious, Inflow Depth = 1.26" for 2-YEAR event
 Inflow = 7.48 cfs @ 12.23 hrs, Volume= 31,971 cf
 Outflow = 7.48 cfs @ 12.23 hrs, Volume= 31,971 cf, Atten= 0%, Lag= 0.0 min
 Primary = 7.48 cfs @ 12.23 hrs, Volume= 31,971 cf

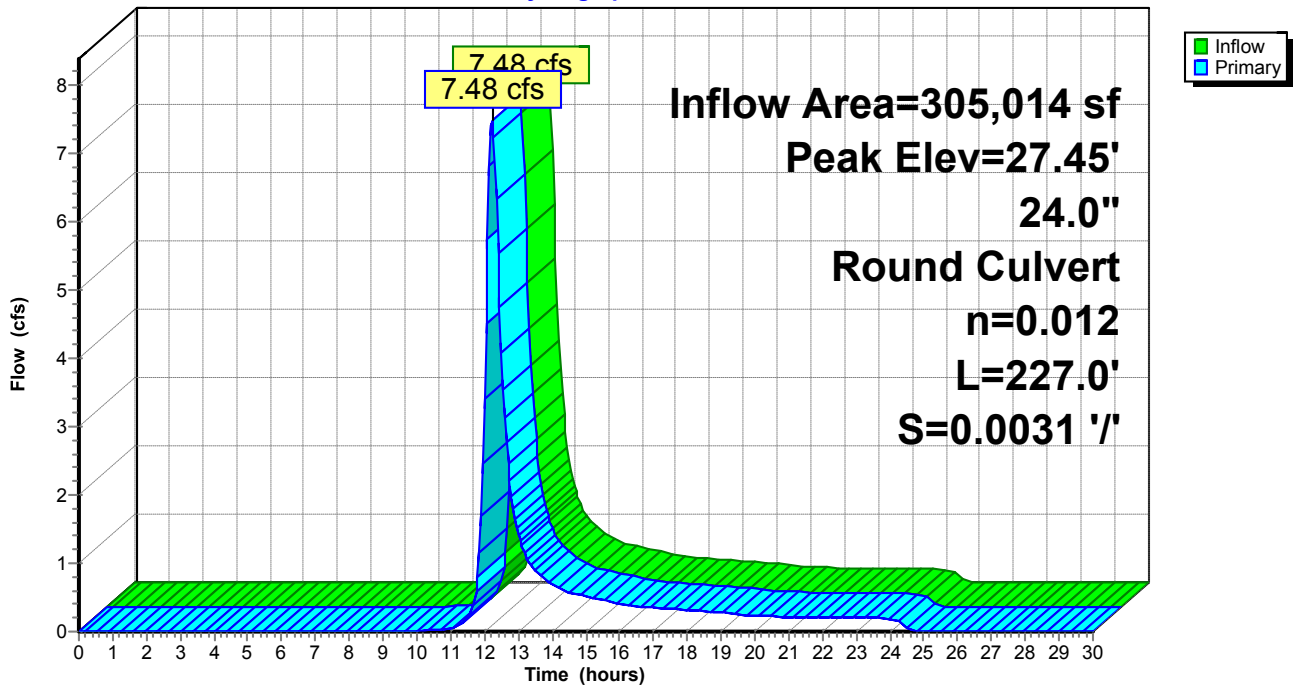
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 27.45' @ 12.23 hrs
 Flood Elev= 29.51'

Device	Routing	Invert	Outlet Devices
#1	Primary	26.00'	24.0" Round Culvert L= 227.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 26.00' / 25.30' S= 0.0031 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=7.43 cfs @ 12.23 hrs HW=27.45' (Free Discharge)
 ↳ **1=Culvert** (Barrel Controls 7.43 cfs @ 4.27 fps)

Pond CB-4: CB-4

Hydrograph



Summary for Pond CB-5: CB-5

Inflow Area = 85,670 sf, 0.96% Impervious, Inflow Depth = 1.11" for 2-YEAR event
 Inflow = 1.99 cfs @ 12.21 hrs, Volume= 7,956 cf
 Outflow = 1.99 cfs @ 12.21 hrs, Volume= 7,956 cf, Atten= 0%, Lag= 0.0 min
 Primary = 1.99 cfs @ 12.21 hrs, Volume= 7,956 cf

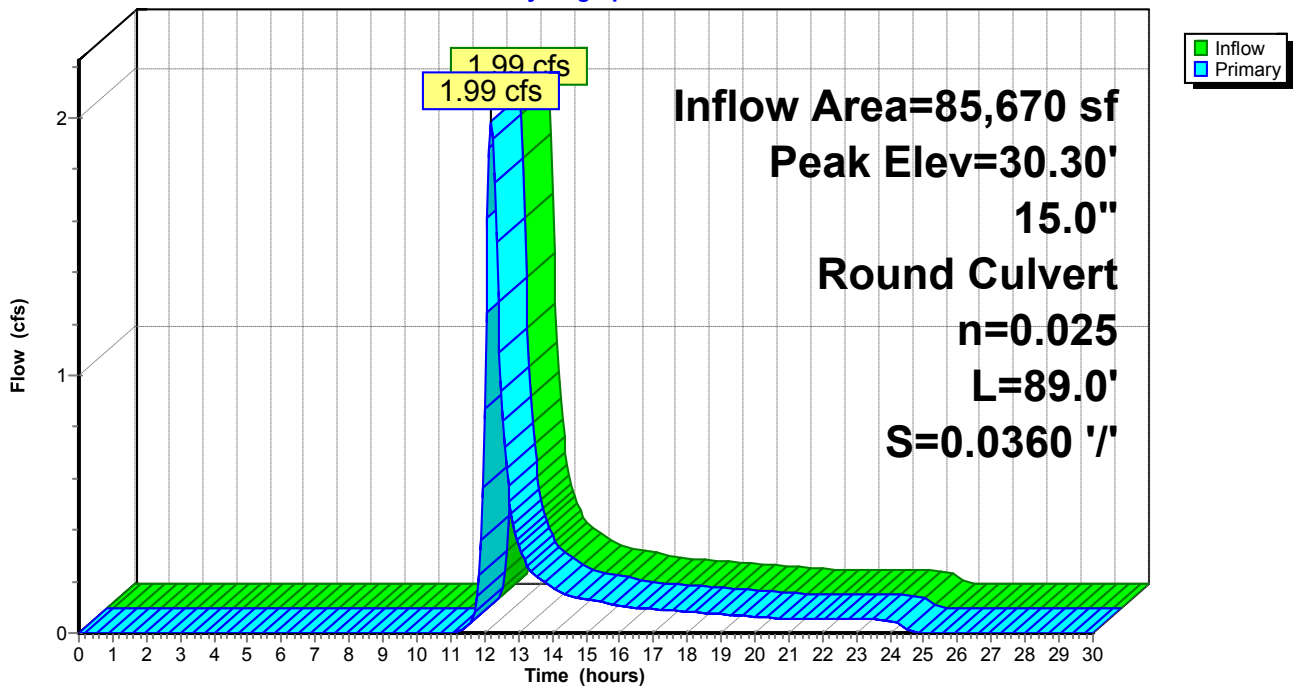
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 30.30' @ 12.21 hrs
 Flood Elev= 33.19'

Device	Routing	Invert	Outlet Devices
#1	Primary	29.50'	15.0" Round CMP_Round 15" L= 89.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 29.50' / 26.30' S= 0.0360 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.23 sf

Primary OutFlow Max=1.98 cfs @ 12.21 hrs HW=30.30' (Free Discharge)
 ↳1=CMP_Round 15" (Inlet Controls 1.98 cfs @ 2.40 fps)

Pond CB-5: CB-5

Hydrograph



Summary for Pond CB-6: CB-6

[58] Hint: Peaked 4.01' above defined flood level
 [81] Warning: Exceeded Pond CB-5 by 5.51' @ 12.15 hrs
 [79] Warning: Submerged Pond CB-8 Primary device # 1 INLET by 6.29'

Inflow Area = 1,555,234 sf, 8.77% Impervious, Inflow Depth = 1.30" for 2-YEAR event
 Inflow = 41.96 cfs @ 12.14 hrs, Volume= 169,048 cf
 Outflow = 41.96 cfs @ 12.14 hrs, Volume= 169,048 cf, Atten= 0%, Lag= 0.0 min
 Primary = 41.96 cfs @ 12.14 hrs, Volume= 169,048 cf

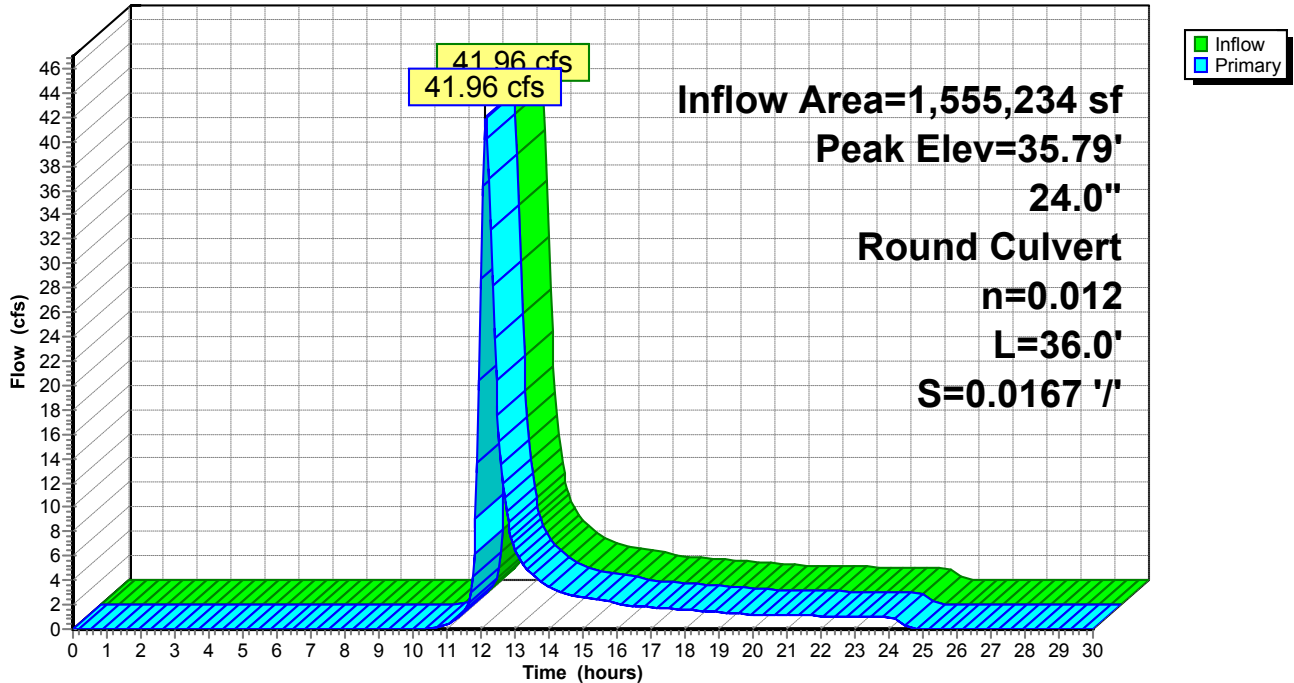
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 35.79' @ 12.14 hrs
 Flood Elev= 31.78'

Device	Routing	Invert	Outlet Devices
#1	Primary	27.10'	24.0" Round Culvert L= 36.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 27.10' / 26.50' S= 0.0167 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=41.81 cfs @ 12.14 hrs HW=35.74' (Free Discharge)
 ←1=Culvert (Inlet Controls 41.81 cfs @ 13.31 fps)

Pond CB-6: CB-6

Hydrograph



Summary for Pond CB-7: CB-7

[81] Warning: Exceeded Pond CB-4 by 3.24' @ 12.15 hrs
 [79] Warning: Submerged Pond CB-6 Primary device # 1 INLET by 3.51'

Inflow Area = 1,862,407 sf, 8.59% Impervious, Inflow Depth = 1.30" for 2-YEAR event
 Inflow = 48.82 cfs @ 12.16 hrs, Volume= 201,605 cf
 Outflow = 48.82 cfs @ 12.16 hrs, Volume= 201,605 cf, Atten= 0%, Lag= 0.0 min
 Primary = 48.82 cfs @ 12.16 hrs, Volume= 201,605 cf

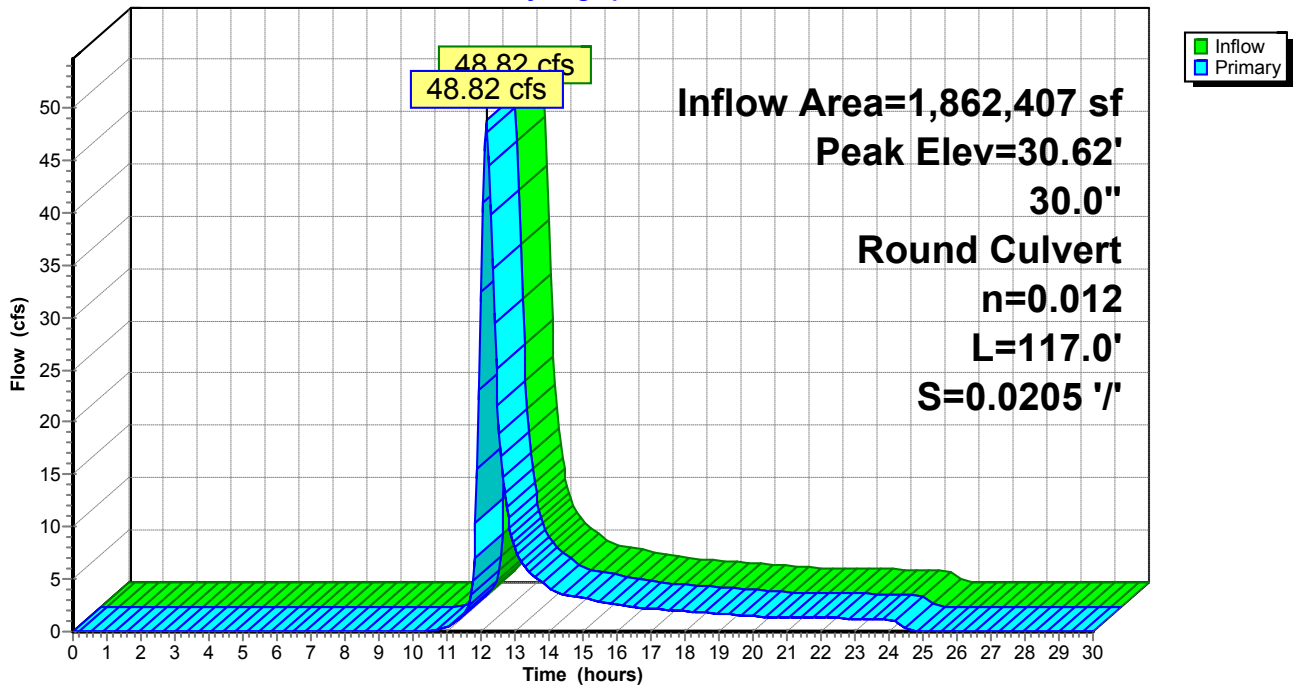
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 30.62' @ 12.16 hrs
 Flood Elev= 30.80'

Device	Routing	Invert	Outlet Devices
#1	Primary	25.10'	30.0" Round Culvert L= 117.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 25.10' / 22.70' S= 0.0205 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 4.91 sf

Primary OutFlow Max=48.62 cfs @ 12.16 hrs HW=30.58' (Free Discharge)
 ←1=Culvert (Inlet Controls 48.62 cfs @ 9.91 fps)

Pond CB-7: CB-7

Hydrograph



Summary for Pond CB-8: CB-8

[58] Hint: Peaked 21.07' above defined flood level
 [79] Warning: Submerged Pond CB-9 Primary device # 1 INLET by 20.05'

Inflow Area = 1,315,192 sf, 9.09% Impervious, Inflow Depth = 1.32" for 2-YEAR event
 Inflow = 35.16 cfs @ 12.16 hrs, Volume= 144,437 cf
 Outflow = 35.16 cfs @ 12.16 hrs, Volume= 144,437 cf, Atten= 0%, Lag= 0.0 min
 Primary = 35.16 cfs @ 12.16 hrs, Volume= 144,437 cf

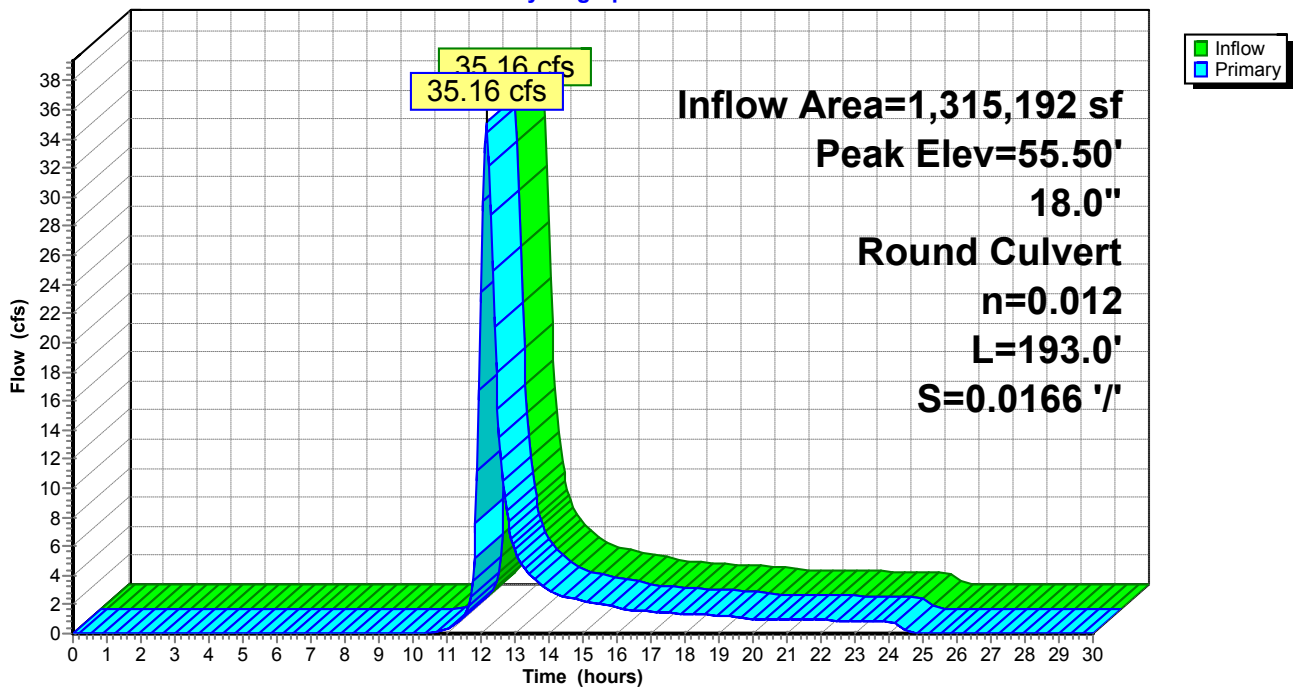
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 55.50' @ 12.16 hrs
 Flood Elev= 34.43'

Device	Routing	Invert	Outlet Devices
#1	Primary	29.50'	18.0" Round RCP_Round 18" L= 193.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 29.50' / 26.30' S= 0.0166 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=35.00 cfs @ 12.16 hrs HW=55.26' (Free Discharge)
 ↳1=RCP_Round 18" (Barrel Controls 35.00 cfs @ 19.81 fps)

Pond CB-8: CB-8

Hydrograph



Summary for Pond CB-9: CB-9

[58] Hint: Peaked 64.79' above defined flood level
 [81] Warning: Exceeded Pond CB-10 by 39.62' @ 12.15 hrs

Inflow Area = 1,151,783 sf, 9.36% Impervious, Inflow Depth = 1.32" for 2-YEAR event
 Inflow = 30.99 cfs @ 12.15 hrs, Volume= 126,806 cf
 Outflow = 30.99 cfs @ 12.15 hrs, Volume= 126,806 cf, Atten= 0%, Lag= 0.0 min
 Primary = 30.99 cfs @ 12.15 hrs, Volume= 126,806 cf

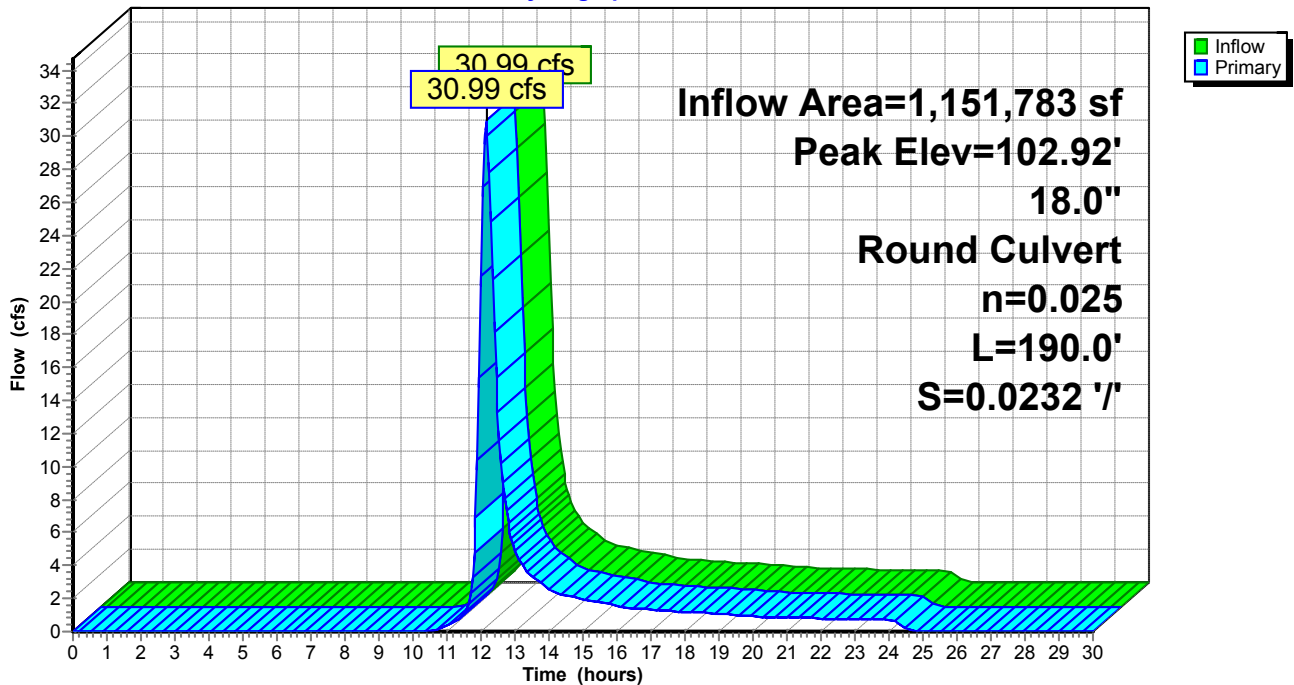
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 102.92' @ 12.15 hrs
 Flood Elev= 38.13'

Device	Routing	Invert	Outlet Devices
#1	Primary	35.40'	18.0" Round CMP_Round 18" L= 190.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 35.40' / 31.00' S= 0.0232 ' /' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

Primary OutFlow Max=30.96 cfs @ 12.15 hrs HW=102.79' (Free Discharge)
 ↳=CMP_Round 18" (Barrel Controls 30.96 cfs @ 17.52 fps)

Pond CB-9: CB-9

Hydrograph



Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 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 DA-1: DA-1	Runoff Area=165,148 sf 6.20% Impervious Runoff Depth=2.70" Flow Length=1,068' Tc=27.4 min CN=74 Runoff=9.34 cfs 37,095 cf
Subcatchment DA-10: DA-10	Runoff Area=29,242 sf 8.57% Impervious Runoff Depth=2.88" Flow Length=447' Tc=11.3 min CN=76 Runoff=2.80 cfs 7,011 cf
Subcatchment DA-11: DA-11	Runoff Area=60,828 sf 5.01% Impervious Runoff Depth=2.79" Flow Length=496' Tc=12.2 min CN=75 Runoff=5.49 cfs 14,121 cf
Subcatchment DA-12: DA-12	Runoff Area=145,643 sf 10.79% Impervious Runoff Depth=2.88" Flow Length=863' Tc=12.7 min CN=76 Runoff=13.35 cfs 34,919 cf
Subcatchment DA-13: DA-13	Runoff Area=391,463 sf 8.69% Impervious Runoff Depth=2.79" Flow Length=655' Tc=24.6 min CN=75 Runoff=24.47 cfs 90,875 cf
Subcatchment DA-14: DA-14	Runoff Area=6,316 sf 100.00% Impervious Runoff Depth=5.17" Tc=5.0 min CN=98 Runoff=1.13 cfs 2,722 cf
Subcatchment DA-15: DA-15	Runoff Area=2,159 sf 100.00% Impervious Runoff Depth=5.17" Tc=5.0 min CN=98 Runoff=0.39 cfs 931 cf
Subcatchment DA-16: DA-16	Runoff Area=1,630 sf 100.00% Impervious Runoff Depth=5.17" Tc=5.0 min CN=98 Runoff=0.29 cfs 703 cf
Subcatchment DA-17: DA-17	Runoff Area=2,107 sf 100.00% Impervious Runoff Depth=5.17" Tc=5.0 min CN=98 Runoff=0.38 cfs 908 cf
Subcatchment DA-2: DA-2	Runoff Area=136,129 sf 5.36% Impervious Runoff Depth=2.70" Flow Length=1,056' Tc=27.5 min CN=74 Runoff=7.68 cfs 30,577 cf
Subcatchment DA-3: DA-3	Runoff Area=85,670 sf 0.96% Impervious Runoff Depth=2.52" Flow Length=911' Tc=25.1 min CN=72 Runoff=4.75 cfs 17,978 cf
Subcatchment DA-4: DA-4	Runoff Area=154,372 sf 10.42% Impervious Runoff Depth=2.79" Flow Length=1,029' Tc=15.4 min CN=75 Runoff=12.50 cfs 35,836 cf
Subcatchment DA-5: DA-5	Runoff Area=163,409 sf 7.18% Impervious Runoff Depth=2.79" Flow Length=1,011' Tc=26.2 min CN=75 Runoff=9.84 cfs 37,934 cf
Subcatchment DA-6: DA-6	Runoff Area=226,139 sf 2.75% Impervious Runoff Depth=2.61" Flow Length=1,017' Tc=25.5 min CN=73 Runoff=12.88 cfs 49,115 cf
Subcatchment DA-7: DA-7	Runoff Area=46,018 sf 12.08% Impervious Runoff Depth=2.88" Flow Length=721' Tc=24.9 min CN=76 Runoff=2.95 cfs 11,033 cf
Subcatchment DA-8: DA-8	Runoff Area=21,184 sf 14.41% Impervious Runoff Depth=2.97" Flow Length=545' Tc=23.6 min CN=77 Runoff=1.45 cfs 5,242 cf

Subcatchment DA-9: DA-9	Runoff Area=224,950 sf 13.96% Impervious Runoff Depth=2.97" Flow Length=927' Tc=26.2 min CN=77 Runoff=14.47 cfs 55,666 cf
Reach 7R: OUTLET	Inflow=109.43 cfs 432,666 cf Outflow=109.43 cfs 432,666 cf
Pond CB-1: CB-1	Peak Elev=30.02' Inflow=9.34 cfs 37,095 cf 15.0" Round Culvert n=0.012 L=33.0' S=0.0121 '/' Outflow=9.34 cfs 37,095 cf
Pond CB-10: CB-10	Peak Elev=167.56' Inflow=57.18 cfs 221,589 cf 18.0" Round Culvert n=0.025 L=91.0' S=0.0000 '/' Outflow=57.18 cfs 221,589 cf
Pond CB-11: CB-11	Peak Elev=36.01' Inflow=1.13 cfs 2,722 cf 15.0" Round Culvert n=0.012 L=26.0' S=0.0154 '/' Outflow=1.13 cfs 2,722 cf
Pond CB-12: CB-12	Peak Elev=81.10' Inflow=54.26 cfs 207,834 cf 18.0" Round Culvert n=0.012 L=95.0' S=0.0474 '/' Outflow=54.26 cfs 207,834 cf
Pond CB-13: CB-13	Peak Elev=126.97' Inflow=52.89 cfs 202,592 cf 18.0" Round Culvert n=0.025 L=63.0' S=0.0556 '/' Outflow=52.89 cfs 202,592 cf
Pond CB-14: CB-14	Peak Elev=72.90' Inflow=40.50 cfs 146,925 cf 18.0" Round Culvert n=0.012 L=117.0' S=0.0521 '/' Outflow=40.50 cfs 146,925 cf
Pond CB-15: CB-15	Peak Elev=75.00' Inflow=38.19 cfs 139,914 cf 18.0" Round Culvert n=0.012 L=83.0' S=0.0542 '/' Outflow=38.19 cfs 139,914 cf
Pond CB-16: CB-16	Peak Elev=80.25' Inflow=33.62 cfs 125,794 cf 18.0" Round Culvert n=0.012 L=183.0' S=0.0536 '/' Outflow=33.62 cfs 125,794 cf
Pond CB-17: CB-17	Peak Elev=79.52' Inflow=24.47 cfs 90,875 cf 18.0" Round Culvert n=0.012 L=206.0' S=0.0262 '/' Outflow=24.47 cfs 90,875 cf
Pond CB-2: CB-2	Peak Elev=30.84' Inflow=9.38 cfs 38,004 cf 18.0" Round Culvert n=0.025 L=78.0' S=0.0026 '/' Outflow=9.38 cfs 38,004 cf
Pond CB-3: CB-3	Peak Elev=31.53' Inflow=7.68 cfs 30,577 cf 15.0" Round Culvert n=0.012 L=39.0' S=0.0513 '/' Outflow=7.68 cfs 30,577 cf
Pond CB-4: CB-4	Peak Elev=29.10' Inflow=17.09 cfs 69,283 cf 24.0" Round Culvert n=0.012 L=227.0' S=0.0031 '/' Outflow=17.09 cfs 69,283 cf
Pond CB-5: CB-5	Peak Elev=31.16' Inflow=4.75 cfs 17,978 cf 15.0" Round Culvert n=0.025 L=89.0' S=0.0360 '/' Outflow=4.75 cfs 17,978 cf
Pond CB-6: CB-6	Peak Elev=66.48' Inflow=93.72 cfs 362,452 cf 24.0" Round Culvert n=0.012 L=36.0' S=0.0167 '/' Outflow=93.72 cfs 362,452 cf
Pond CB-7: CB-7	Peak Elev=47.78' Inflow=109.43 cfs 432,666 cf 30.0" Round Culvert n=0.012 L=117.0' S=0.0205 '/' Outflow=109.43 cfs 432,666 cf
Pond CB-8: CB-8	Peak Elev=164.81' Inflow=78.19 cfs 308,638 cf 18.0" Round Culvert n=0.012 L=193.0' S=0.0166 '/' Outflow=78.19 cfs 308,638 cf

Pond CB-9: CB-9

Peak Elev=380.48' Inflow=68.89 cfs 270,704 cf
18.0" Round Culvert n=0.025 L=190.0' S=0.0232 '/' Outflow=68.89 cfs 270,704 cf

Total Runoff Area = 1,862,407 sf Runoff Volume = 432,666 cf Average Runoff Depth = 2.79"
91.41% Pervious = 1,702,510 sf 8.59% Impervious = 159,897 sf

Summary for Subcatchment DA-1: DA-1

Runoff = 9.34 cfs @ 12.22 hrs, Volume= 37,095 cf, Depth= 2.70"

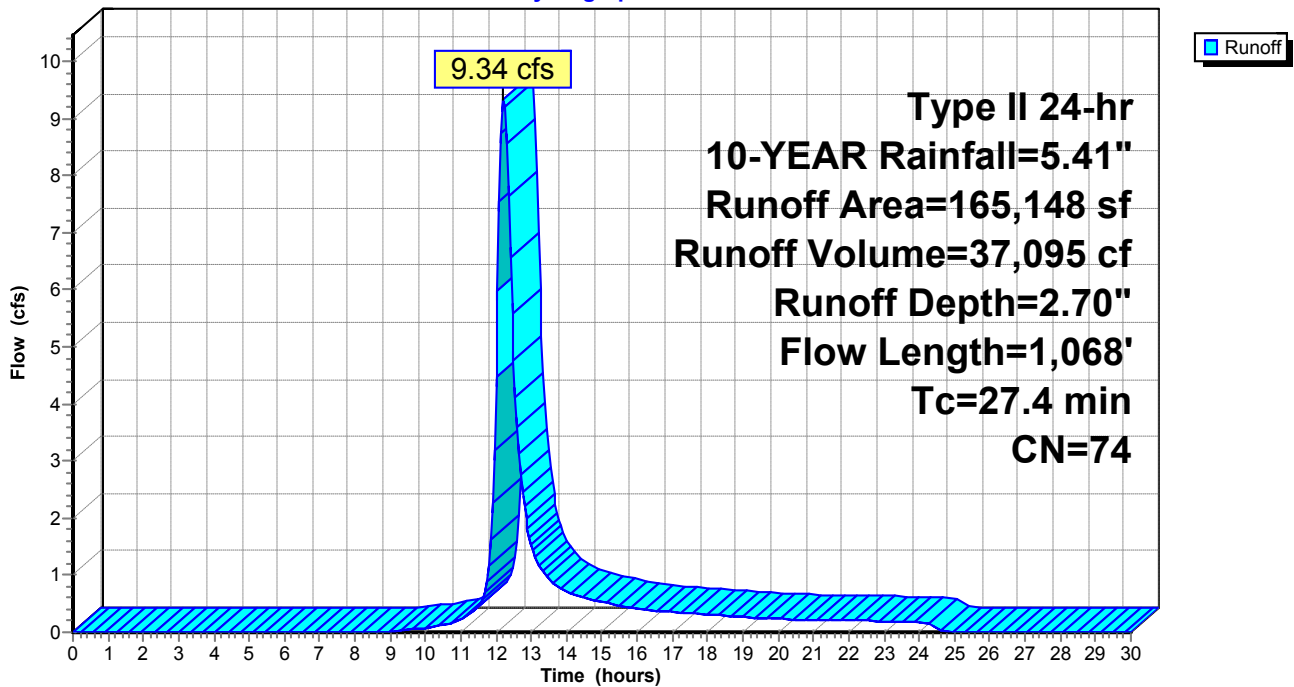
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-YEAR Rainfall=5.41"

Area (sf)	CN	Description
92,833	72	Woods/grass comb., Good, HSG C
62,071	74	>75% Grass cover, Good, HSG C
10,244	98	Paved parking, HSG C
165,148	74	Weighted Average
154,904		93.80% Pervious Area
10,244		6.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.9	250	0.1200	0.20		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
6.5	818	0.0890	2.09		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
27.4	1,068	Total			

Subcatchment DA-1: DA-1

Hydrograph



Summary for Subcatchment DA-10: DA-10

Runoff = 2.80 cfs @ 12.03 hrs, Volume= 7,011 cf, Depth= 2.88"

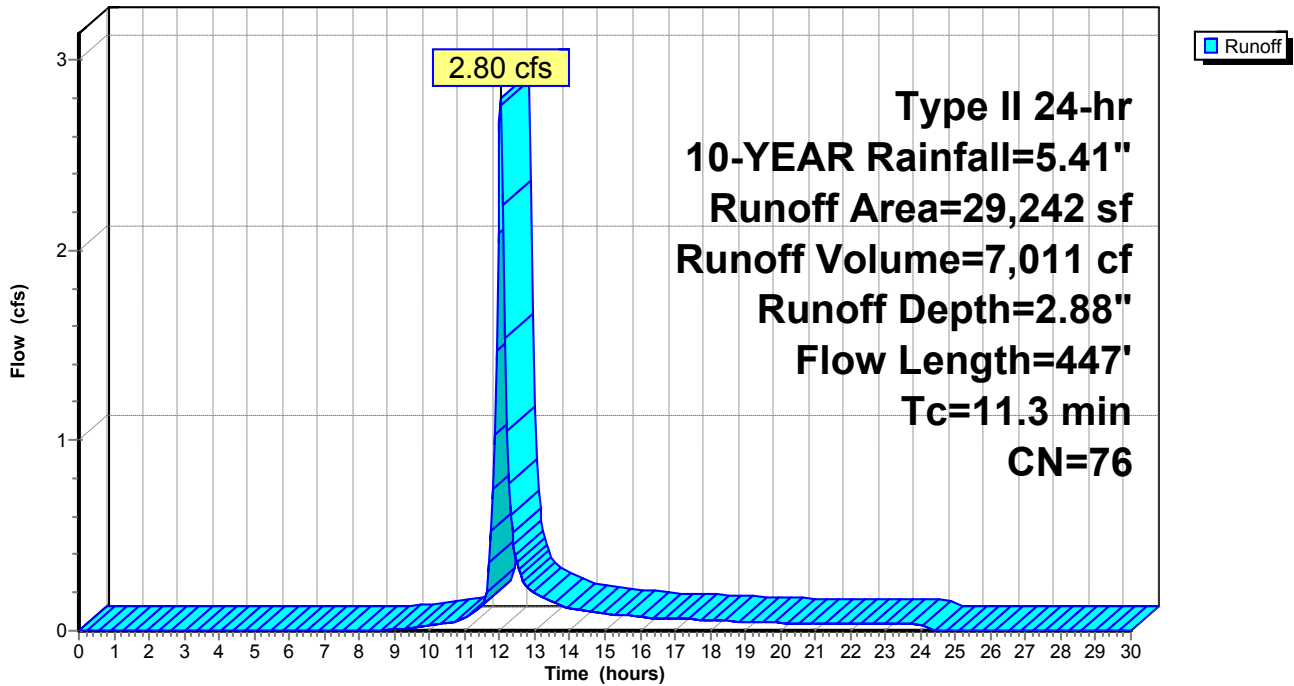
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-YEAR Rainfall=5.41"

Area (sf)	CN	Description
26,737	74	>75% Grass cover, Good, HSG C
2,505	98	Paved parking, HSG C
29,242	76	Weighted Average
26,737		91.43% Pervious Area
2,505		8.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.7	250	0.1160	0.43		Sheet Flow, Grass: Short n= 0.150 P2= 3.49"
1.6	197	0.0812	1.99		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
11.3	447	Total			

Subcatchment DA-10: DA-10

Hydrograph



Summary for Subcatchment DA-11: DA-11

Runoff = 5.49 cfs @ 12.04 hrs, Volume= 14,121 cf, Depth= 2.79"

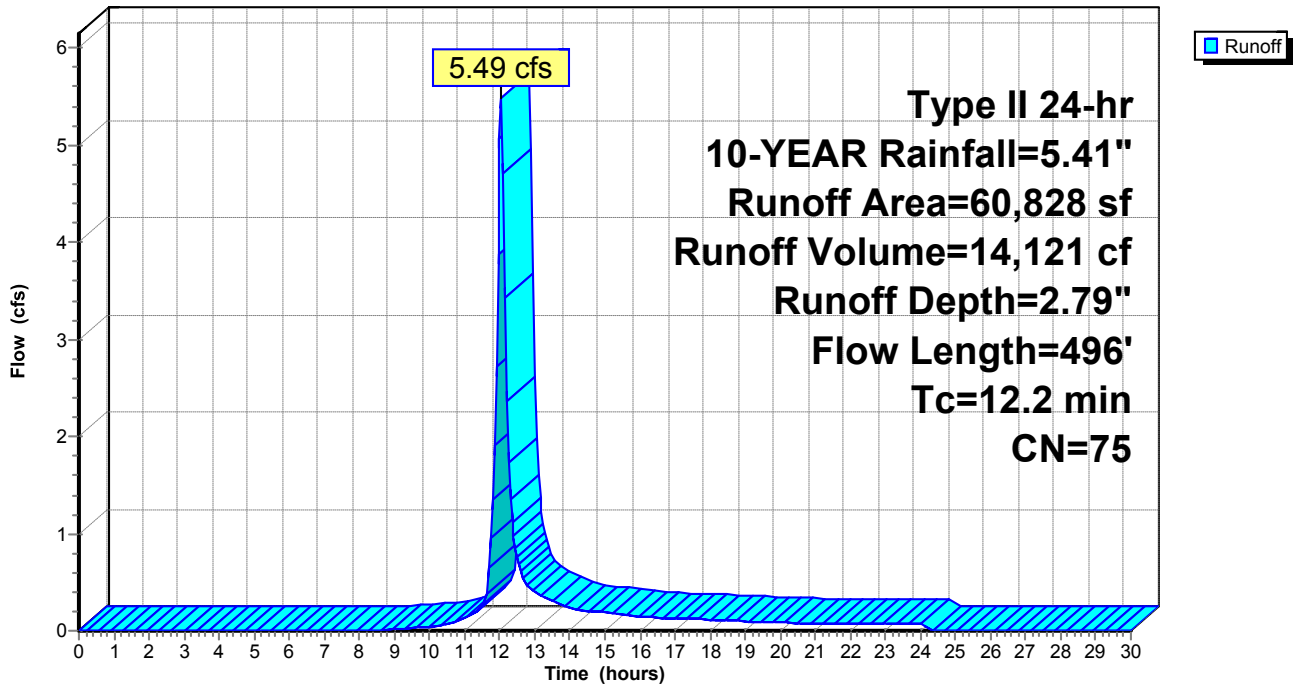
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-YEAR Rainfall=5.41"

Area (sf)	CN	Description
57,780	74	>75% Grass cover, Good, HSG C
3,048	98	Paved parking, HSG C
60,828	75	Weighted Average
57,780		94.99% Pervious Area
3,048		5.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8	250	0.1120	0.43		Sheet Flow, Grass: Short n= 0.150 P2= 3.49"
2.4	246	0.0610	1.73		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
12.2	496	Total			

Subcatchment DA-11: DA-11

Hydrograph



Summary for Subcatchment DA-12: DA-12

Runoff = 13.35 cfs @ 12.05 hrs, Volume= 34,919 cf, Depth= 2.88"

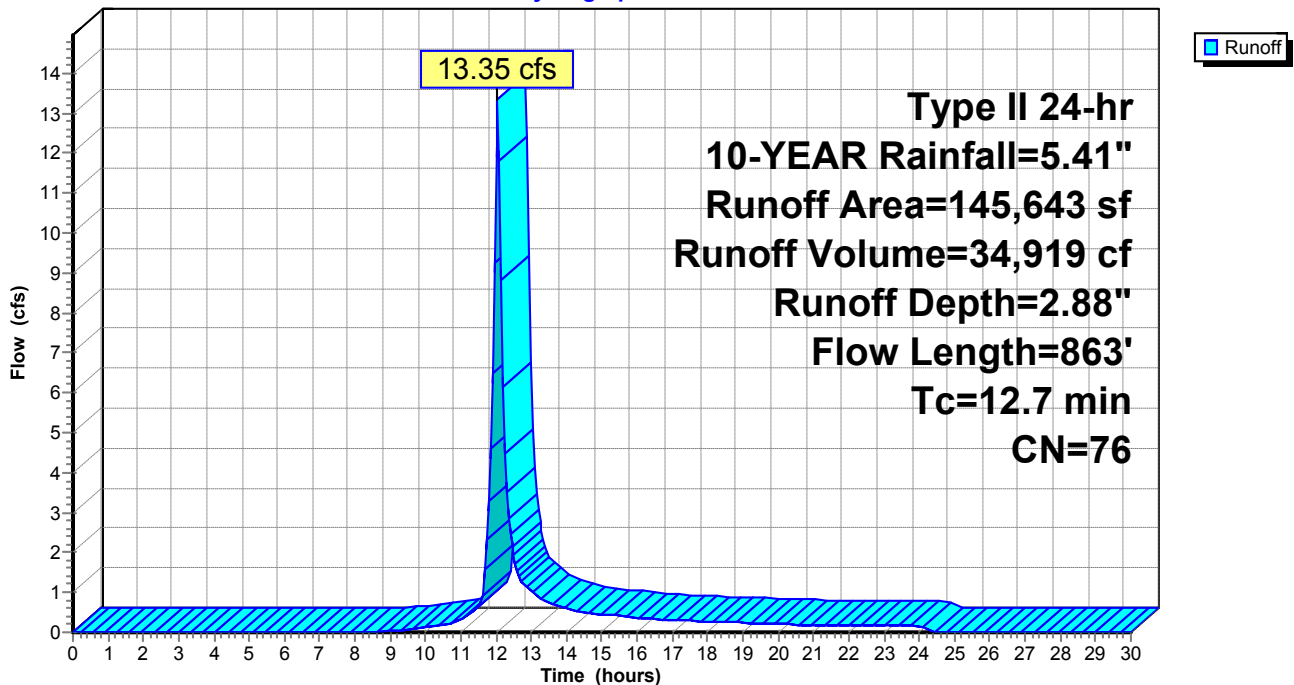
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-YEAR Rainfall=5.41"

Area (sf)	CN	Description
33,394	72	Woods/grass comb., Good, HSG C
96,537	74	>75% Grass cover, Good, HSG C
15,712	98	Paved parking, HSG C
145,643	76	Weighted Average
129,931		89.21% Pervious Area
15,712		10.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.2	147	0.1220	0.40		Sheet Flow, Grass: Short n= 0.150 P2= 3.49"
3.1	395	0.0911	2.11		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
3.4	321	0.0500	1.57		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
12.7	863	Total			

Subcatchment DA-12: DA-12

Hydrograph



Summary for Subcatchment DA-13: DA-13

Runoff = 24.47 cfs @ 12.18 hrs, Volume= 90,875 cf, Depth= 2.79"

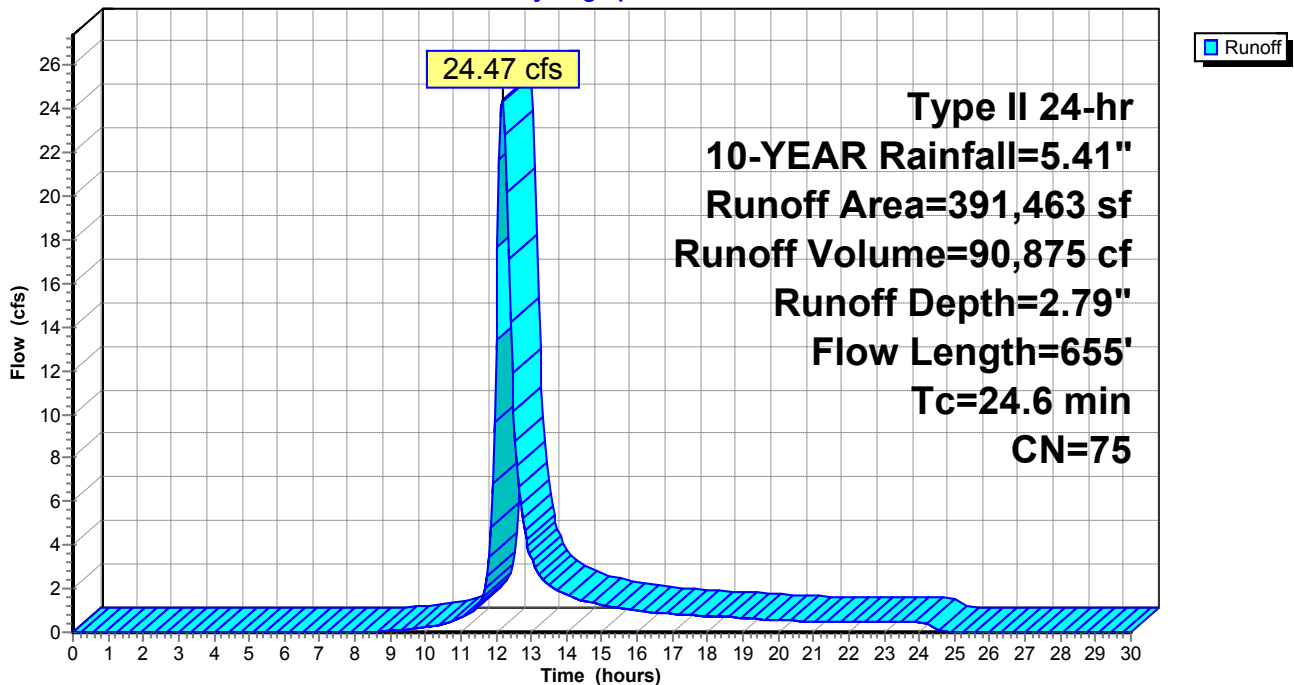
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-YEAR Rainfall=5.41"

Area (sf)	CN	Description
192,024	72	Woods/grass comb., Good, HSG C
165,425	74	>75% Grass cover, Good, HSG C
34,014	98	Paved parking, HSG C
391,463	75	Weighted Average
357,449		91.31% Pervious Area
34,014		8.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.5	250	0.1120	0.19		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
3.1	405	0.0938	2.14		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
24.6	655	Total			

Subcatchment DA-13: DA-13

Hydrograph



Summary for Subcatchment DA-14: DA-14

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 1.13 cfs @ 11.95 hrs, Volume= 2,722 cf, Depth= 5.17"

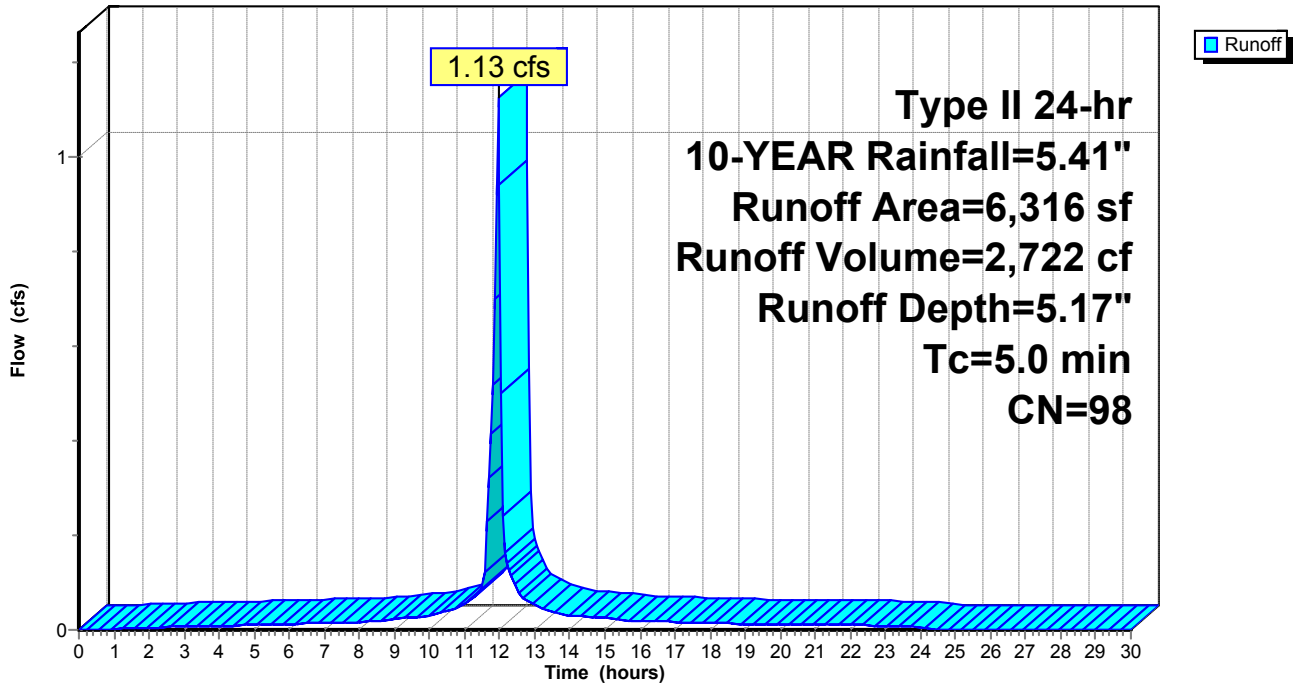
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-YEAR Rainfall=5.41"

Area (sf)	CN	Description
6,316	98	Paved parking, HSG C
6,316		100.00% Impervious Area

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

Subcatchment DA-14: DA-14

Hydrograph



Summary for Subcatchment DA-15: DA-15

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

Runoff = 0.39 cfs @ 11.95 hrs, Volume= 931 cf, Depth= 5.17"

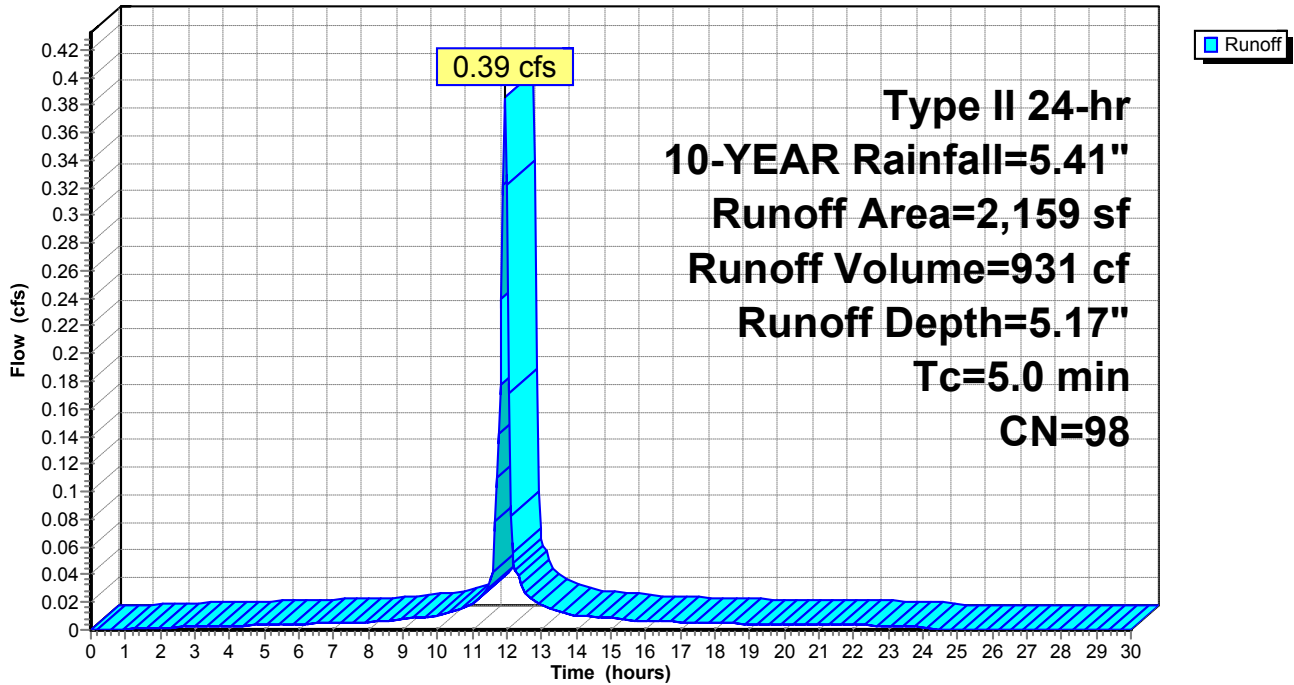
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-YEAR Rainfall=5.41"

Area (sf)	CN	Description
2,159	98	Paved parking, HSG C
2,159		100.00% Impervious Area

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

Subcatchment DA-15: DA-15

Hydrograph



Summary for Subcatchment DA-16: DA-16

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.29 cfs @ 11.95 hrs, Volume= 703 cf, Depth= 5.17"

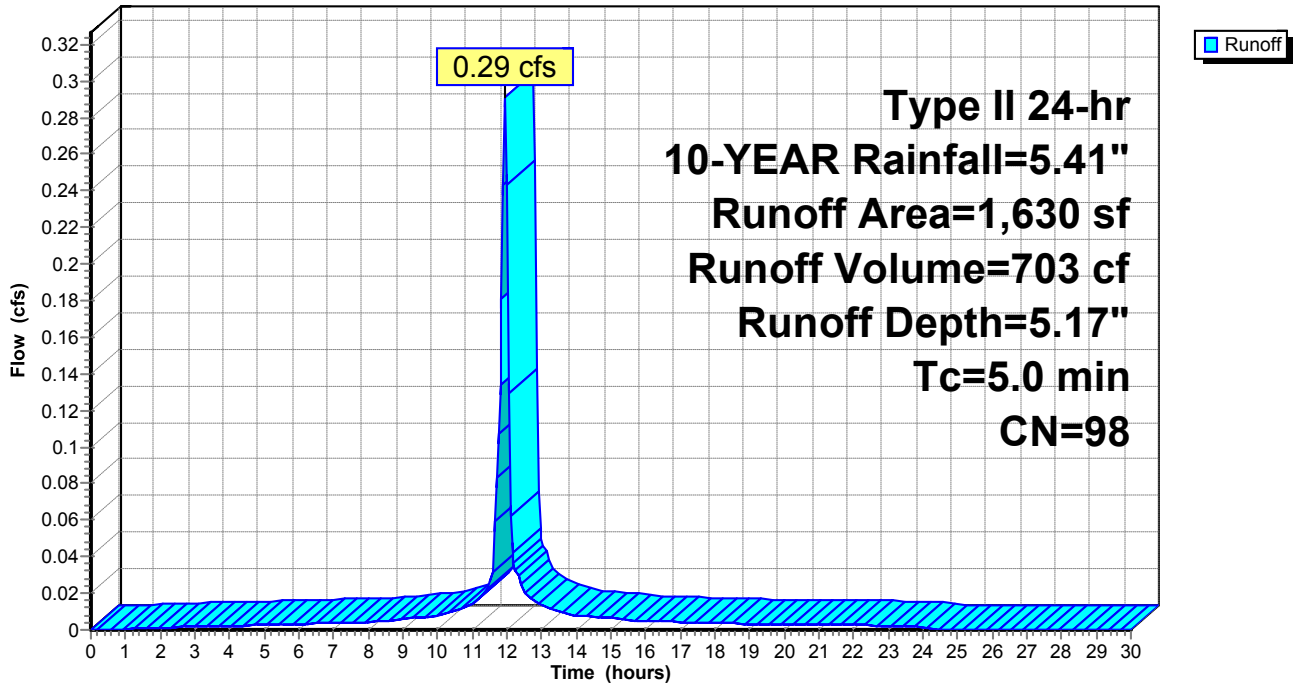
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-YEAR Rainfall=5.41"

Area (sf)	CN	Description
1,630	98	Paved parking, HSG C
1,630		100.00% Impervious Area

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

Subcatchment DA-16: DA-16

Hydrograph



Summary for Subcatchment DA-17: DA-17

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.38 cfs @ 11.95 hrs, Volume= 908 cf, Depth= 5.17"

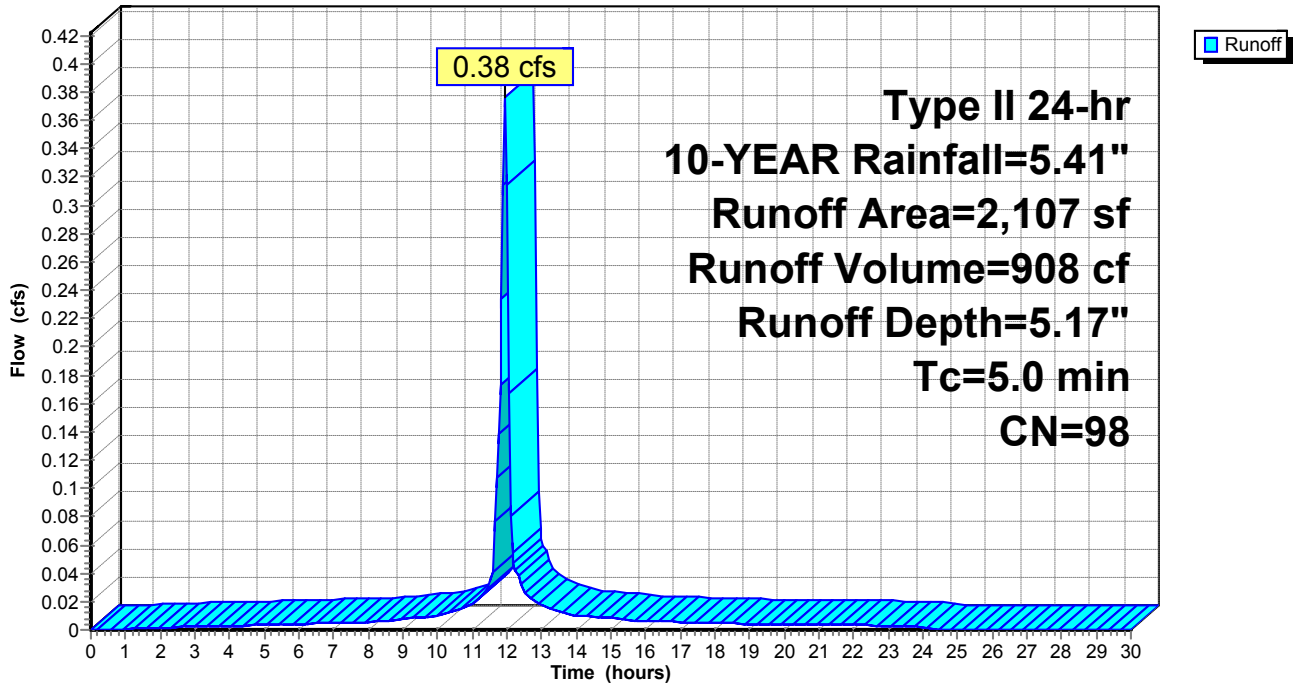
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-YEAR Rainfall=5.41"

Area (sf)	CN	Description
2,107	98	Paved parking, HSG C
2,107		100.00% Impervious Area

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

Subcatchment DA-17: DA-17

Hydrograph



Summary for Subcatchment DA-2: DA-2

Runoff = 7.68 cfs @ 12.22 hrs, Volume= 30,577 cf, Depth= 2.70"

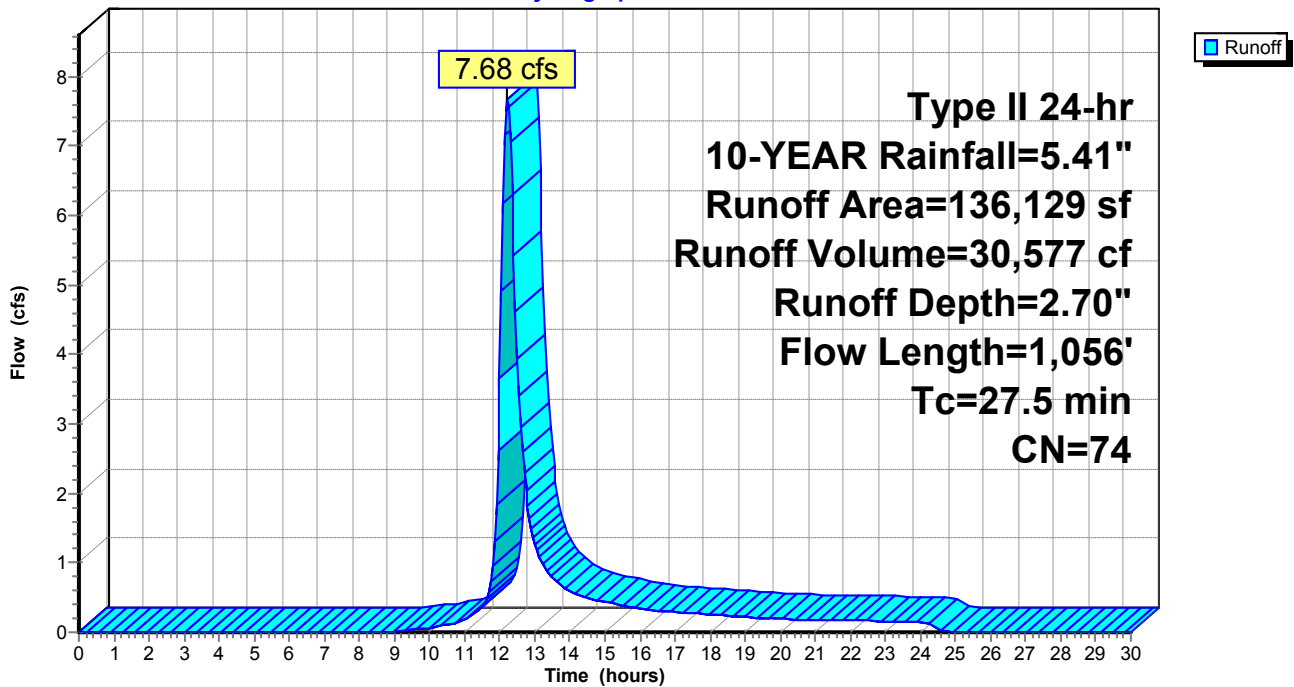
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-YEAR Rainfall=5.41"

Area (sf)	CN	Description
99,640	72	Woods/grass comb., Good, HSG C
29,188	74	>75% Grass cover, Good, HSG C
7,301	98	Paved parking, HSG C
136,129	74	Weighted Average
128,828		94.64% Pervious Area
7,301		5.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.2	250	0.1160	0.20		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
6.3	806	0.0940	2.15		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
27.5	1,056	Total			

Subcatchment DA-2: DA-2

Hydrograph



Summary for Subcatchment DA-3: DA-3

Runoff = 4.75 cfs @ 12.19 hrs, Volume= 17,978 cf, Depth= 2.52"

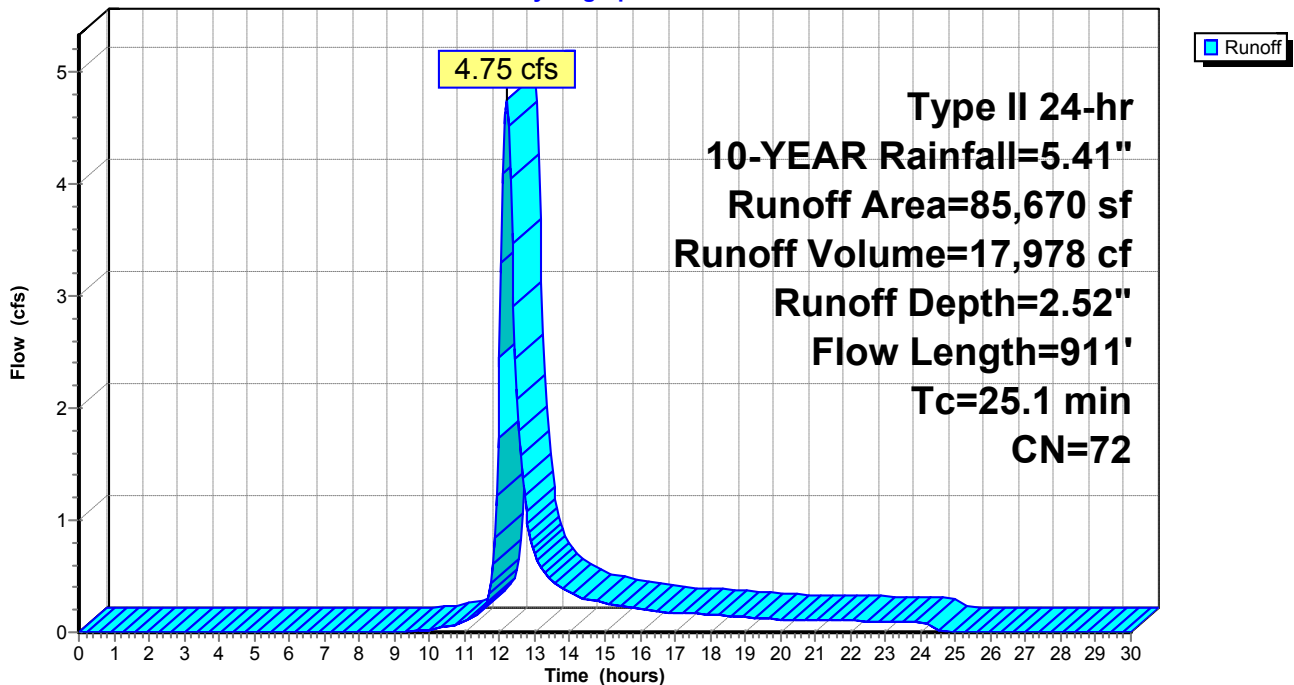
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-YEAR Rainfall=5.41"

Area (sf)	CN	Description
75,390	72	Woods/grass comb., Good, HSG C
9,461	74	>75% Grass cover, Good, HSG C
819	98	Paved parking, HSG C
85,670	72	Weighted Average
84,851		99.04% Pervious Area
819		0.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.4	250	0.1280	0.20		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
4.7	661	0.1120	2.34		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
25.1	911	Total			

Subcatchment DA-3: DA-3

Hydrograph



Summary for Subcatchment DA-4: DA-4

Runoff = 12.50 cfs @ 12.08 hrs, Volume= 35,836 cf, Depth= 2.79"

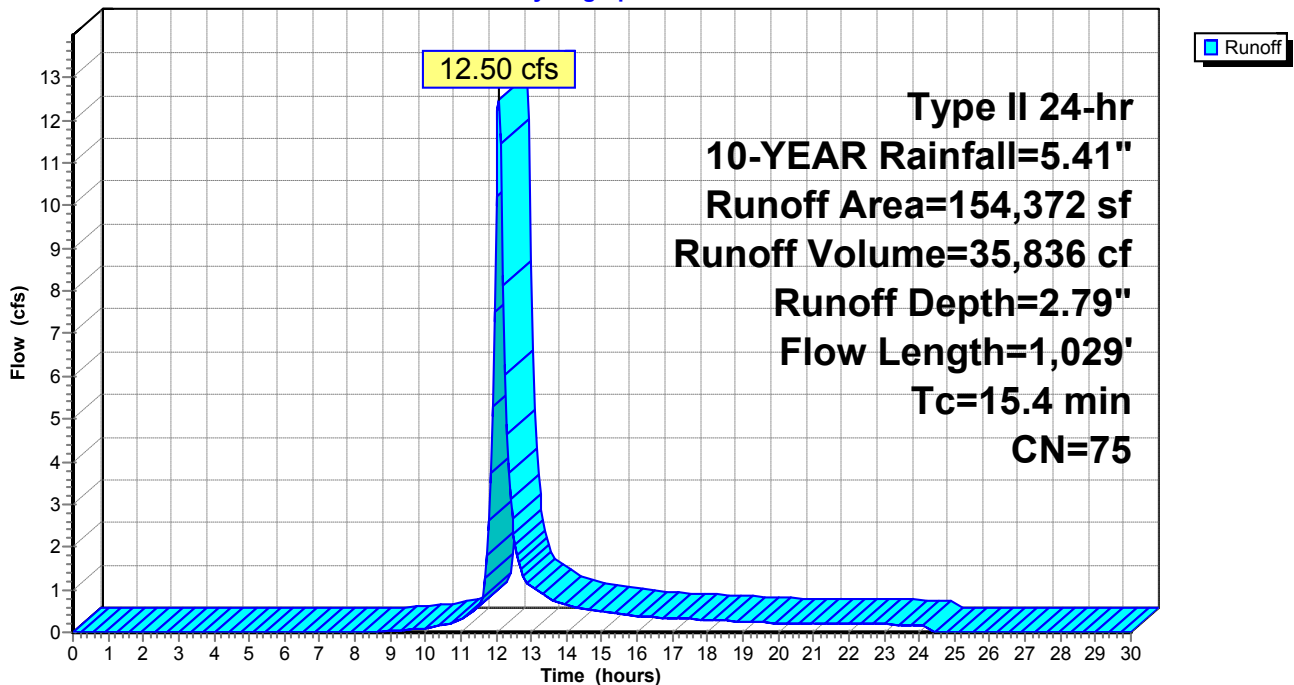
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-YEAR Rainfall=5.41"

Area (sf)	CN	Description
84,109	72	Woods/grass comb., Good, HSG C
54,184	74	>75% Grass cover, Good, HSG C
16,079	98	Paved parking, HSG C
154,372	75	Weighted Average
138,293		89.58% Pervious Area
16,079		10.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	250	0.1360	0.46		Sheet Flow, Grass: Short n= 0.150 P2= 3.49"
3.6	516	0.1160	2.38		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
2.7	263	0.0532	1.61		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
15.4	1,029	Total			

Subcatchment DA-4: DA-4

Hydrograph



Summary for Subcatchment DA-5: DA-5

Runoff = 9.84 cfs @ 12.20 hrs, Volume= 37,934 cf, Depth= 2.79"

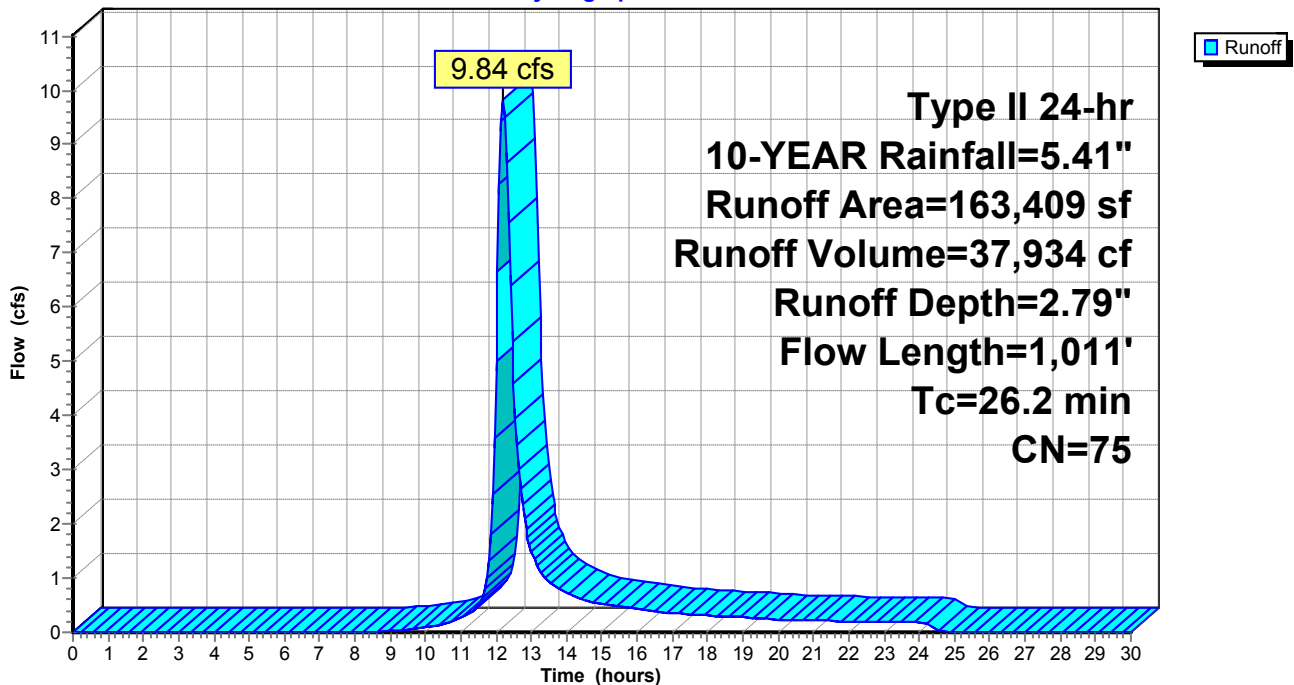
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-YEAR Rainfall=5.41"

Area (sf)	CN	Description
88,128	72	Woods/grass comb., Good, HSG C
63,546	74	>75% Grass cover, Good, HSG C
11,735	98	Paved parking, HSG C
163,409	75	Weighted Average
151,674		92.82% Pervious Area
11,735		7.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.6	250	0.1240	0.20		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
3.6	533	0.1220	2.44		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
2.0	228	0.0745	1.91		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
26.2	1,011	Total			

Subcatchment DA-5: DA-5

Hydrograph



Summary for Subcatchment DA-6: DA-6

Runoff = 12.88 cfs @ 12.20 hrs, Volume= 49,115 cf, Depth= 2.61"

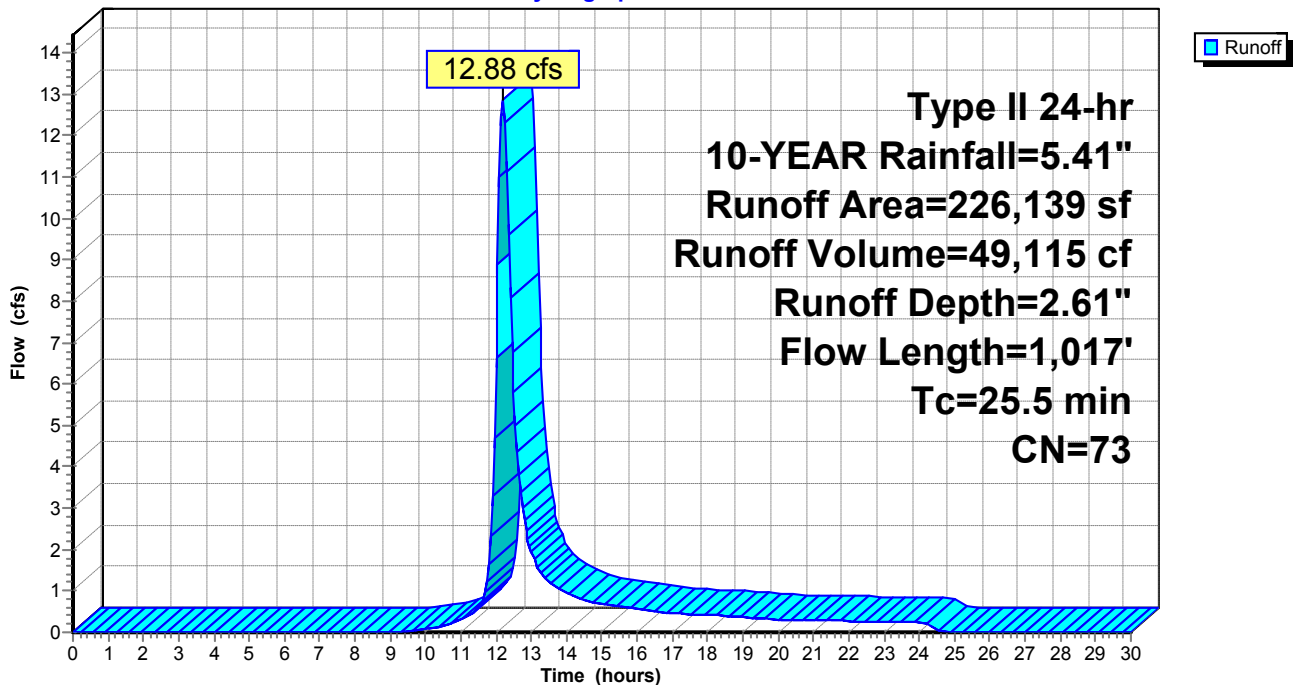
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-YEAR Rainfall=5.41"

Area (sf)	CN	Description
199,314	72	Woods/grass comb., Good, HSG C
20,613	74	>75% Grass cover, Good, HSG C
6,212	98	Paved parking, HSG C
226,139	73	Weighted Average
219,927		97.25% Pervious Area
6,212		2.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	250	0.1360	0.21		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
4.1	564	0.1060	2.28		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
1.5	203	0.0985	2.20		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
25.5	1,017	Total			

Subcatchment DA-6: DA-6

Hydrograph



Summary for Subcatchment DA-7: DA-7

Runoff = 2.95 cfs @ 12.19 hrs, Volume= 11,033 cf, Depth= 2.88"

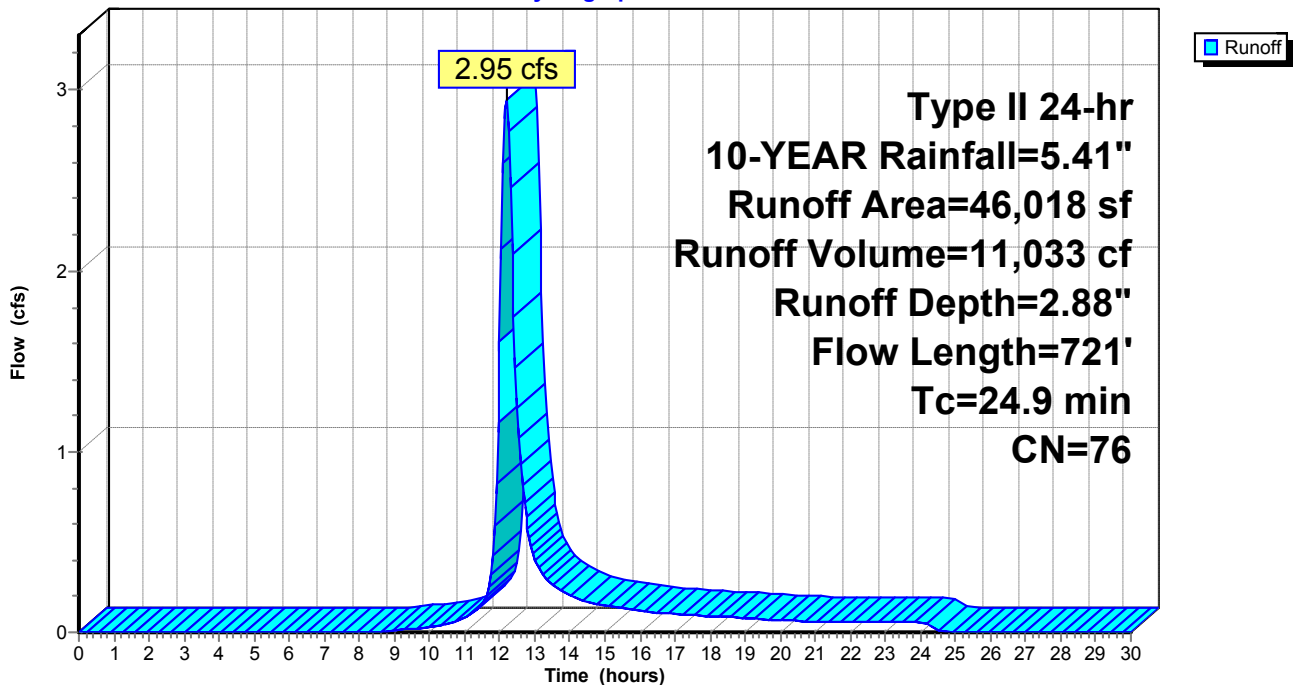
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-YEAR Rainfall=5.41"

Area (sf)	CN	Description
22,928	72	Woods/grass comb., Good, HSG C
17,529	74	>75% Grass cover, Good, HSG C
5,561	98	Paved parking, HSG C
46,018	76	Weighted Average
40,457		87.92% Pervious Area
5,561		12.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.5	250	0.1120	0.19		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
1.8	259	0.1160	2.38		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
1.6	212	0.1040	2.26		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
24.9	721	Total			

Subcatchment DA-7: DA-7

Hydrograph



Summary for Subcatchment DA-8: DA-8

Runoff = 1.45 cfs @ 12.17 hrs, Volume= 5,242 cf, Depth= 2.97"

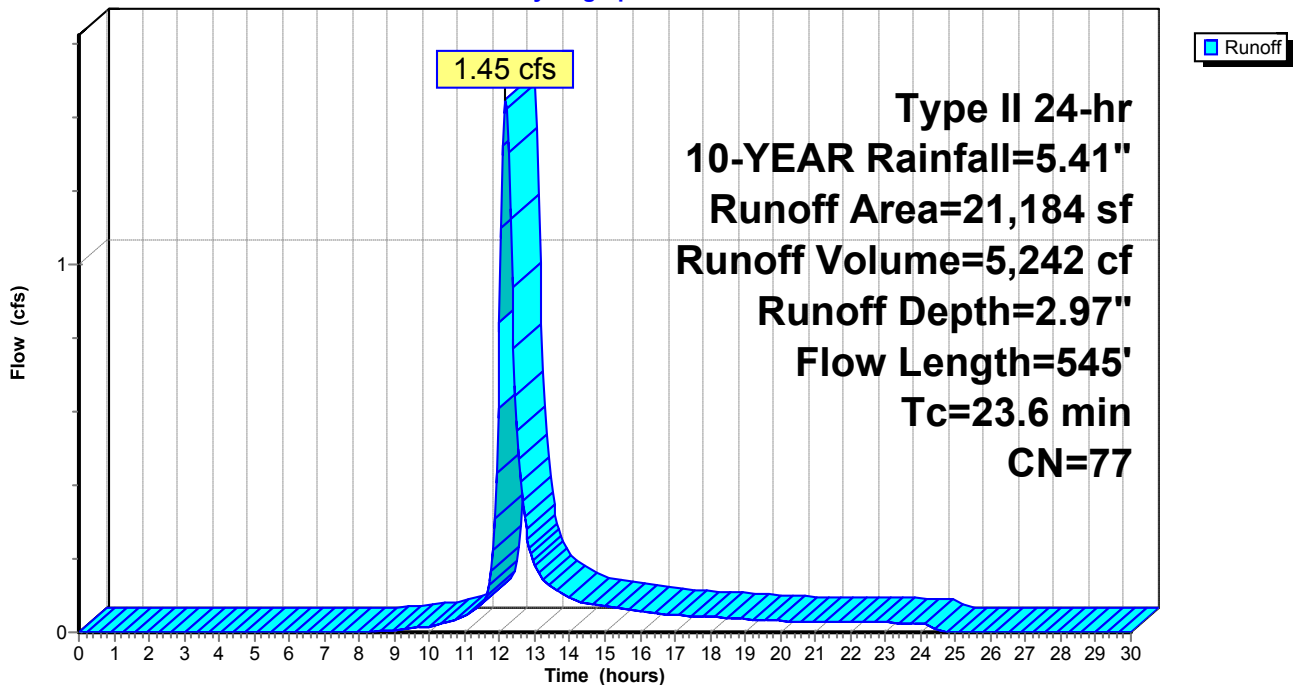
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-YEAR Rainfall=5.41"

Area (sf)	CN	Description
8,852	72	Woods/grass comb., Good, HSG C
9,279	74	>75% Grass cover, Good, HSG C
3,053	98	Paved parking, HSG C
21,184	77	Weighted Average
18,131		85.59% Pervious Area
3,053		14.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.5	250	0.1120	0.19		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
0.4	56	0.1070	2.29		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
1.7	239	0.1088	2.31		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
23.6	545	Total			

Subcatchment DA-8: DA-8

Hydrograph



Summary for Subcatchment DA-9: DA-9

Runoff = 14.47 cfs @ 12.20 hrs, Volume= 55,666 cf, Depth= 2.97"

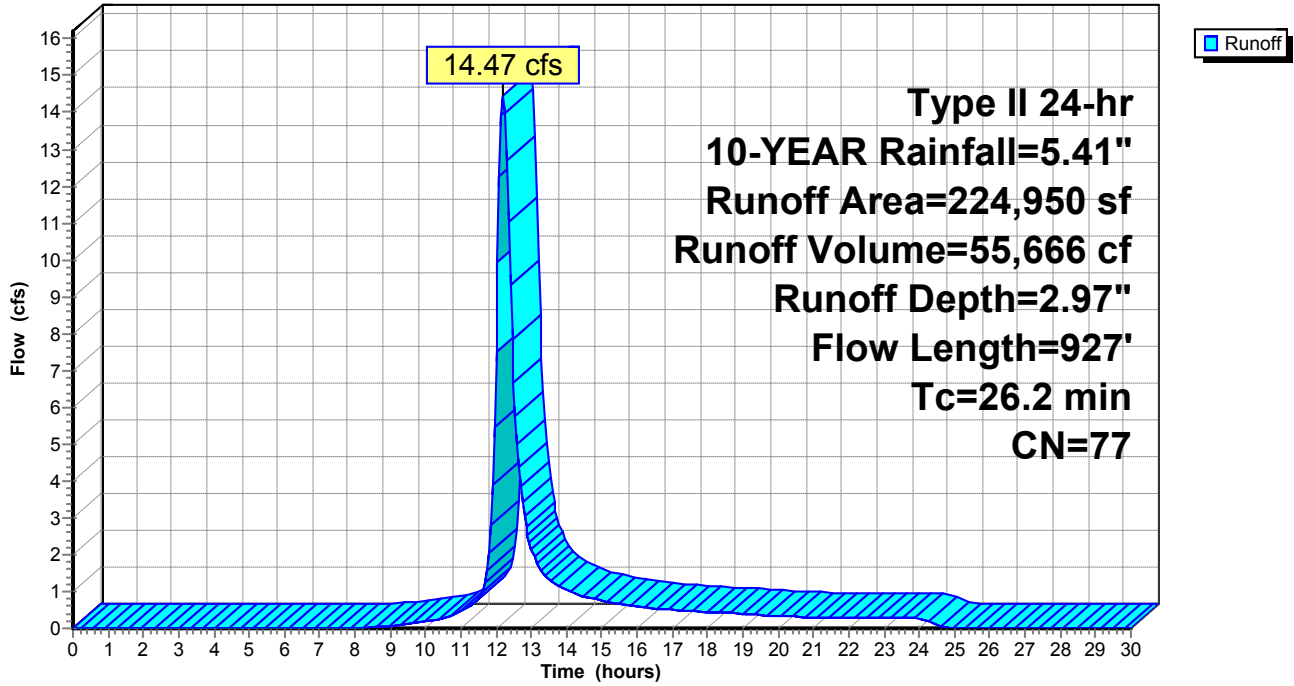
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 10-YEAR Rainfall=5.41"

Area (sf)	CN	Description
54,875	72	Woods/grass comb., Good, HSG C
138,673	74	>75% Grass cover, Good, HSG C
31,402	98	Paved parking, HSG C
224,950	77	Weighted Average
193,548		86.04% Pervious Area
31,402		13.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.5	250	0.1120	0.19		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
0.3	50	0.1400	2.62		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
1.7	207	0.0870	2.06		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.3	100	0.7000	5.86		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
2.4	320	0.1000	2.21		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
26.2	927	Total			

Subcatchment DA-9: DA-9

Hydrograph

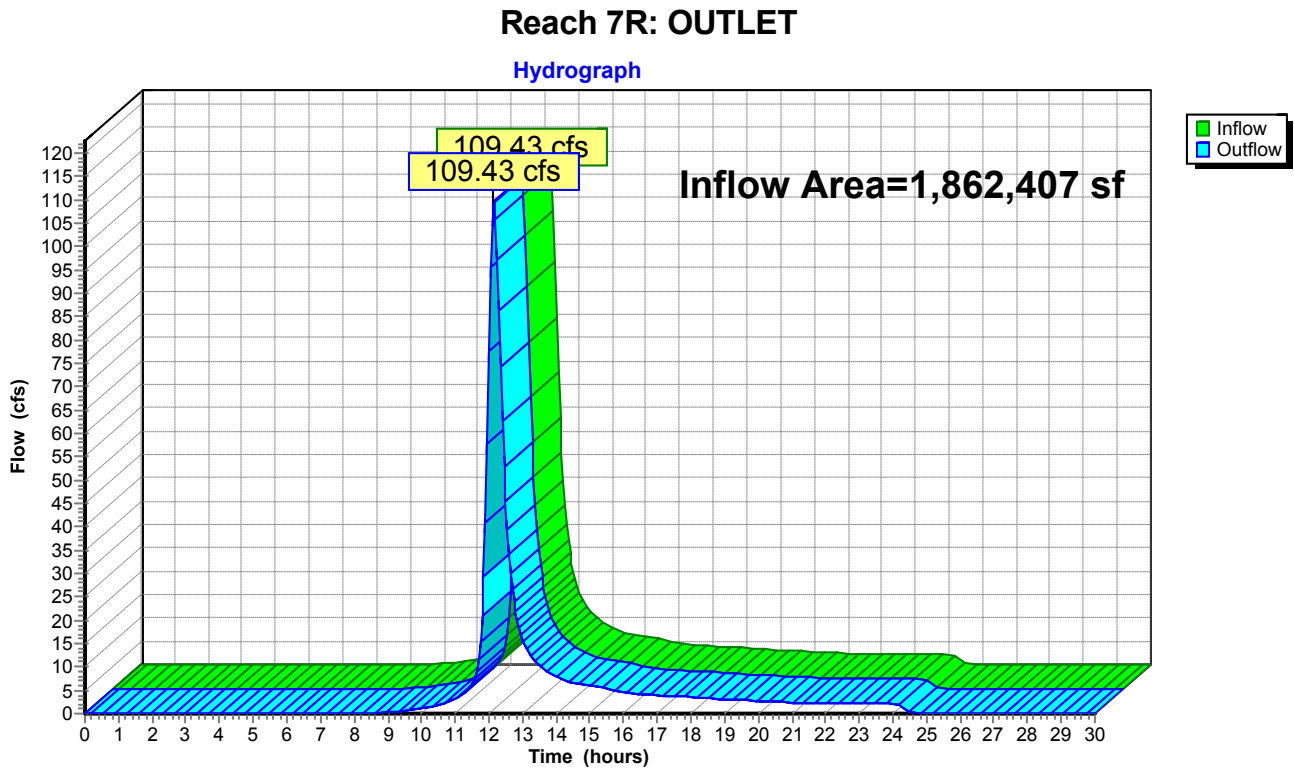


Summary for Reach 7R: OUTLET

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1,862,407 sf, 8.59% Impervious, Inflow Depth = 2.79" for 10-YEAR event
Inflow = 109.43 cfs @ 12.15 hrs, Volume= 432,666 cf
Outflow = 109.43 cfs @ 12.15 hrs, Volume= 432,666 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs



Summary for Pond CB-1: CB-1

Inflow Area = 165,148 sf, 6.20% Impervious, Inflow Depth = 2.70" for 10-YEAR event
 Inflow = 9.34 cfs @ 12.22 hrs, Volume= 37,095 cf
 Outflow = 9.34 cfs @ 12.22 hrs, Volume= 37,095 cf, Atten= 0%, Lag= 0.0 min
 Primary = 9.34 cfs @ 12.22 hrs, Volume= 37,095 cf

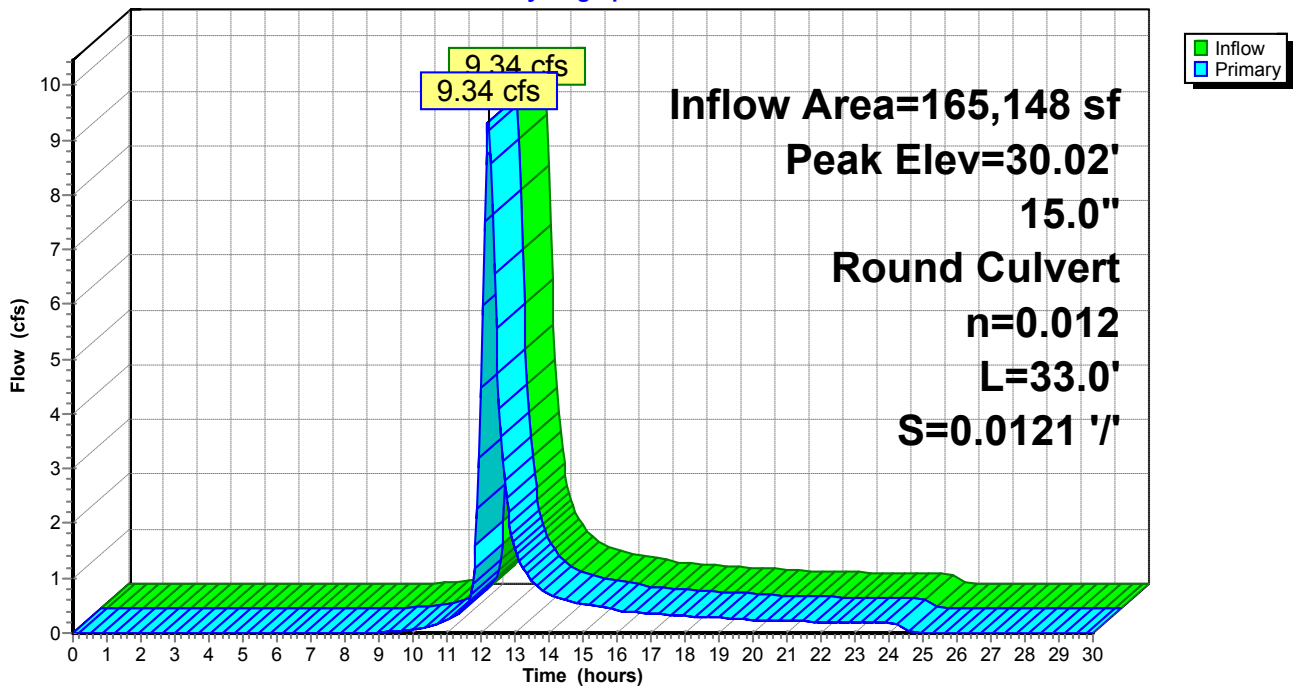
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 30.02' @ 12.22 hrs
 Flood Elev= 30.47'

Device	Routing	Invert	Outlet Devices
#1	Primary	26.90'	15.0" Round RCP_Round 15" L= 33.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 26.90' / 26.50' S= 0.0121 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.23 sf

Primary OutFlow Max=9.26 cfs @ 12.22 hrs HW=29.98' (Free Discharge)
 ↳1=RCP_Round 15" (Inlet Controls 9.26 cfs @ 7.55 fps)

Pond CB-1: CB-1

Hydrograph



Summary for Pond CB-10: CB-10

[58] Hint: Peaked 128.36' above defined flood level
 [81] Warning: Exceeded Pond CB-11 by 130.52' @ 12.10 hrs
 [81] Warning: Exceeded Pond CB-12 by 85.47' @ 12.10 hrs

Inflow Area = 925,644 sf, 10.98% Impervious, Inflow Depth = 2.87" for 10-YEAR event
 Inflow = 57.18 cfs @ 12.12 hrs, Volume= 221,589 cf
 Outflow = 57.18 cfs @ 12.12 hrs, Volume= 221,589 cf, Atten= 0%, Lag= 0.0 min
 Primary = 57.18 cfs @ 12.12 hrs, Volume= 221,589 cf

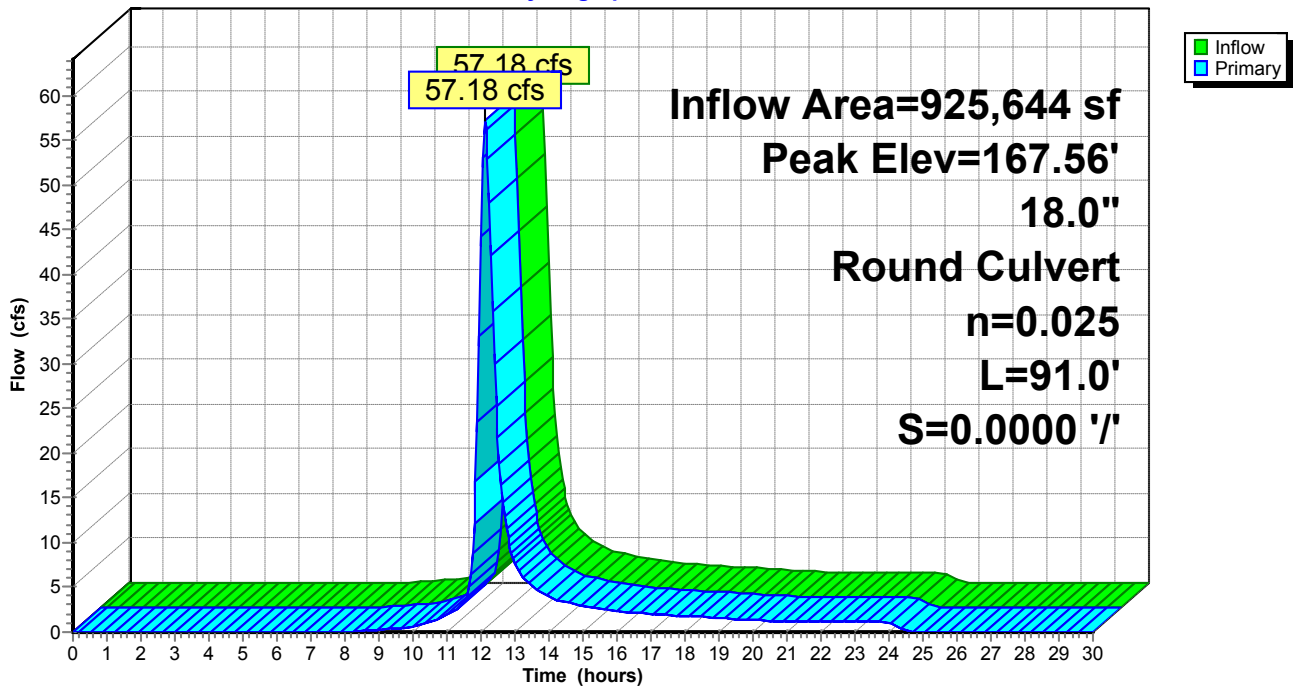
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 167.56' @ 12.12 hrs
 Flood Elev= 39.20'

Device	Routing	Invert	Outlet Devices
#1	Primary	35.20'	18.0" Round CMP_Round 18" L= 91.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 35.20' / 35.20' S= 0.0000 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

Primary OutFlow Max=56.66 cfs @ 12.12 hrs HW=165.26' (Free Discharge)
 ↳=CMP_Round 18" (Barrel Controls 56.66 cfs @ 32.06 fps)

Pond CB-10: CB-10

Hydrograph



Summary for Pond CB-11: CB-11

Inflow Area = 6,316 sf, 100.00% Impervious, Inflow Depth = 5.17" for 10-YEAR event
 Inflow = 1.13 cfs @ 11.95 hrs, Volume= 2,722 cf
 Outflow = 1.13 cfs @ 11.95 hrs, Volume= 2,722 cf, Atten= 0%, Lag= 0.0 min
 Primary = 1.13 cfs @ 11.95 hrs, Volume= 2,722 cf

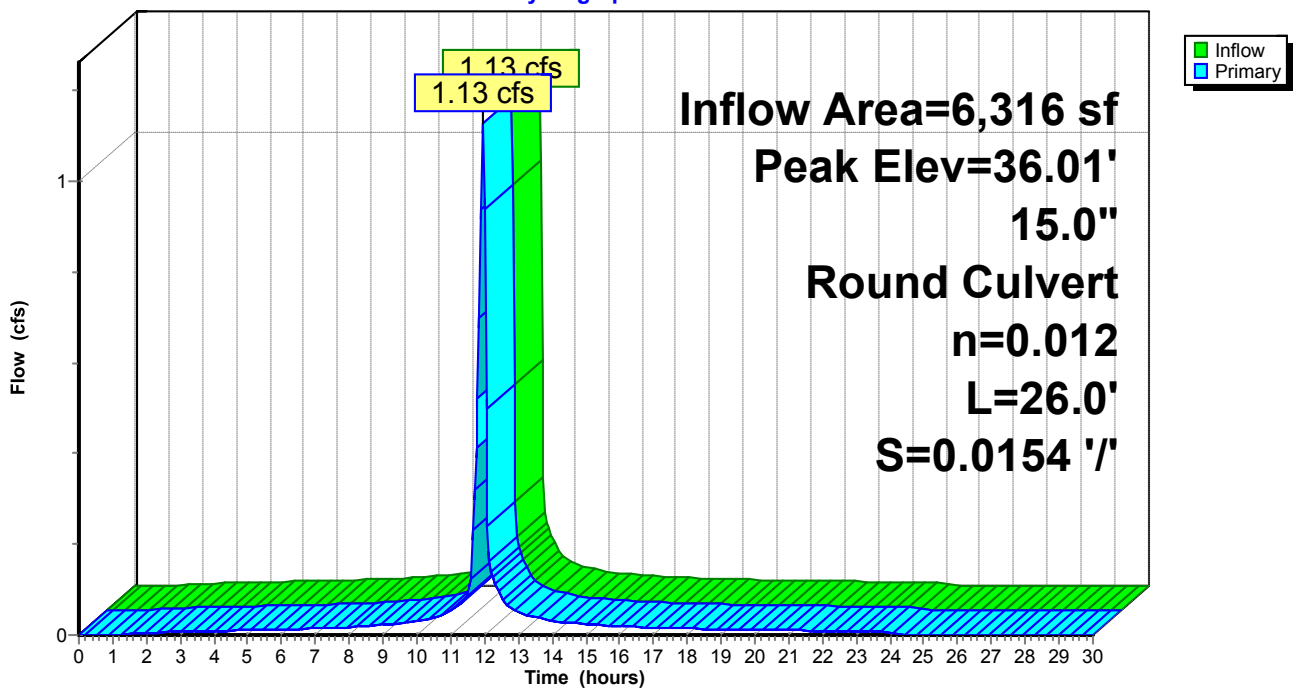
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 36.01' @ 11.95 hrs
 Flood Elev= 39.13'

Device	Routing	Invert	Outlet Devices
#1	Primary	35.50'	15.0" Round Culvert L= 26.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 35.50' / 35.10' S= 0.0154 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.23 sf

Primary OutFlow Max=1.13 cfs @ 11.95 hrs HW=36.01' (Free Discharge)
 ↳ **1=Culvert** (Inlet Controls 1.13 cfs @ 2.42 fps)

Pond CB-11: CB-11

Hydrograph



Summary for Pond CB-12: CB-12

[58] Hint: Peaked 38.30' above defined flood level
 [79] Warning: Submerged Pond CB-13 Primary device # 1 INLET by 37.48'

Inflow Area = 873,310 sf, 10.28% Impervious, Inflow Depth = 2.86" for 10-YEAR event
 Inflow = 54.26 cfs @ 12.12 hrs, Volume= 207,834 cf
 Outflow = 54.26 cfs @ 12.12 hrs, Volume= 207,834 cf, Atten= 0%, Lag= 0.0 min
 Primary = 54.26 cfs @ 12.12 hrs, Volume= 207,834 cf

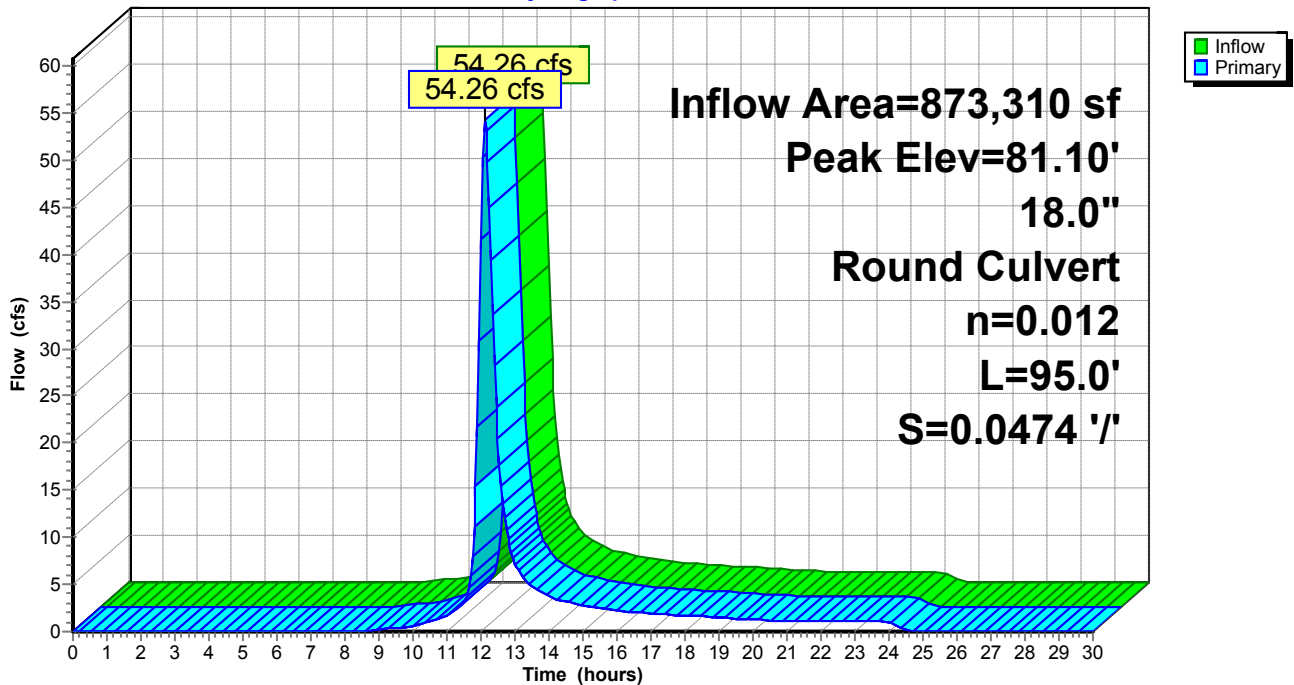
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 81.10' @ 12.12 hrs
 Flood Elev= 42.80'

Device	Routing	Invert	Outlet Devices
#1	Primary	39.70'	18.0" Round RCP_Round 18" L= 95.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 39.70' / 35.20' S= 0.0474 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=53.78 cfs @ 12.12 hrs HW=80.40' (Free Discharge)
 ↑1=RCP_Round 18" (Inlet Controls 53.78 cfs @ 30.43 fps)

Pond CB-12: CB-12

Hydrograph



Summary for Pond CB-13: CB-13

[58] Hint: Peaked 80.94' above defined flood level
 [81] Warning: Exceeded Pond CB-14 by 53.59' @ 12.10 hrs

Inflow Area = 852,126 sf, 10.17% Impervious, Inflow Depth = 2.85" for 10-YEAR event
 Inflow = 52.89 cfs @ 12.11 hrs, Volume= 202,592 cf
 Outflow = 52.89 cfs @ 12.11 hrs, Volume= 202,592 cf, Atten= 0%, Lag= 0.0 min
 Primary = 52.89 cfs @ 12.11 hrs, Volume= 202,592 cf

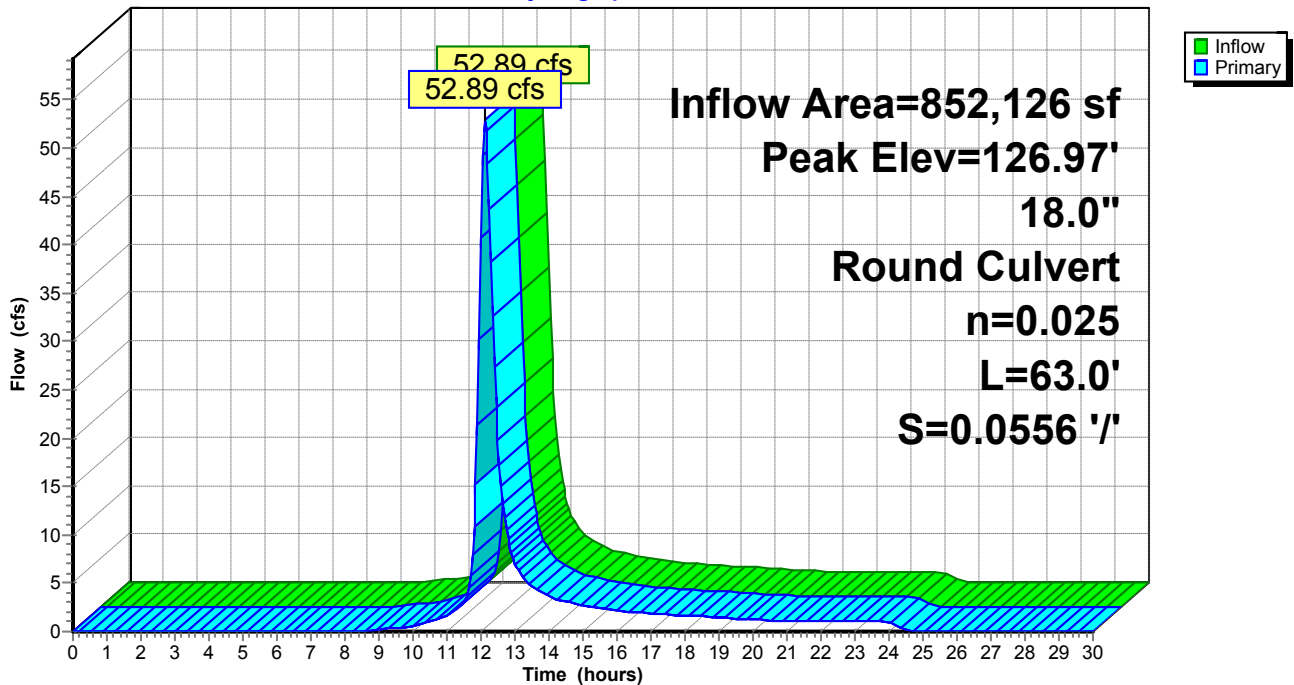
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 126.97' @ 12.11 hrs
 Flood Elev= 46.03'

Device	Routing	Invert	Outlet Devices
#1	Primary	43.30'	18.0" Round CMP_Round 18" L= 63.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 43.30' / 39.80' S= 0.0556 '/ Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

Primary OutFlow Max=52.44 cfs @ 12.11 hrs HW=125.56' (Free Discharge)
 ↳1=CMP_Round 18" (Barrel Controls 52.44 cfs @ 29.68 fps)

Pond CB-13: CB-13

Hydrograph



Summary for Pond CB-14: CB-14

[58] Hint: Peaked 20.00' above defined flood level
 [79] Warning: Submerged Pond CB-15 Primary device # 1 INLET by 18.72'

Inflow Area = 627,176 sf, 8.81% Impervious, Inflow Depth = 2.81" for 10-YEAR event
 Inflow = 40.50 cfs @ 12.09 hrs, Volume= 146,925 cf
 Outflow = 40.50 cfs @ 12.09 hrs, Volume= 146,925 cf, Atten= 0%, Lag= 0.0 min
 Primary = 40.50 cfs @ 12.09 hrs, Volume= 146,925 cf

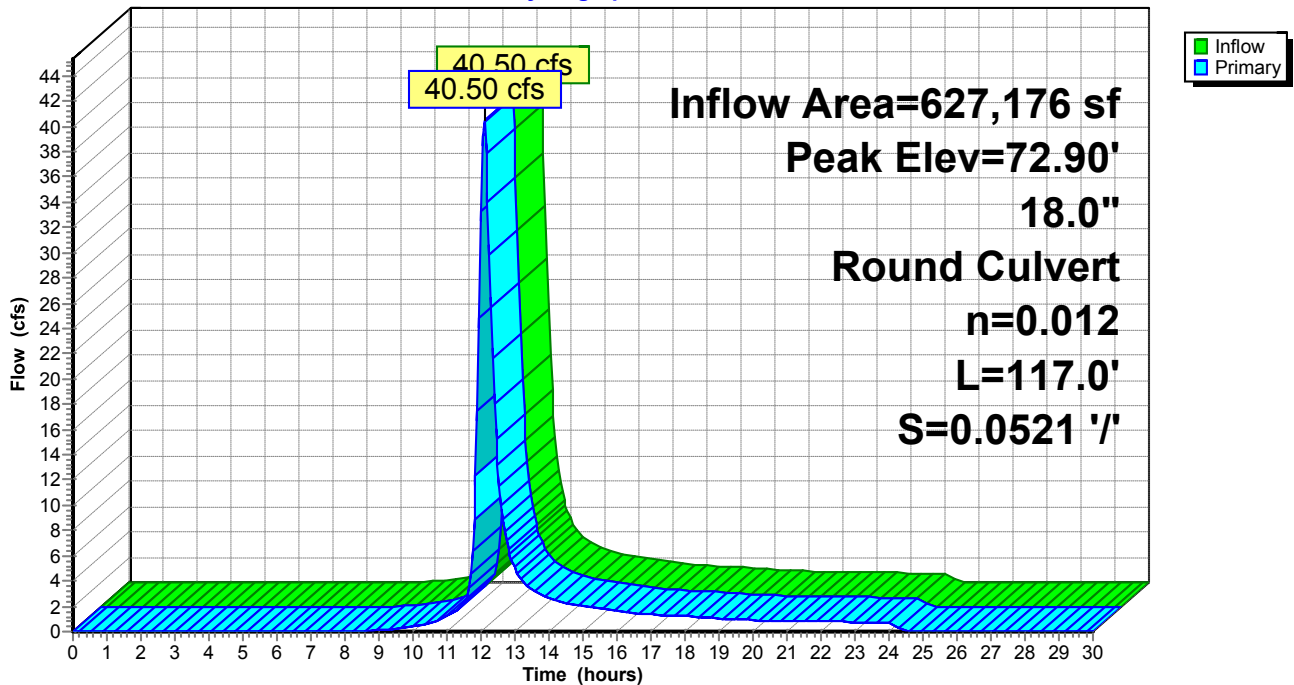
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 72.90' @ 12.09 hrs
 Flood Elev= 52.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	49.50'	18.0" Round RCP_Round 18" L= 117.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 49.50' / 43.40' S= 0.0521 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=40.21 cfs @ 12.09 hrs HW=72.58' (Free Discharge)
 ↳1=RCP_Round 18" (Inlet Controls 40.21 cfs @ 22.75 fps)

Pond CB-14: CB-14

Hydrograph



Summary for Pond CB-15: CB-15

[58] Hint: Peaked 16.94' above defined flood level
 [79] Warning: Submerged Pond CB-16 Primary device # 1 INLET by 11.09'

Inflow Area = 597,934 sf, 8.83% Impervious, Inflow Depth = 2.81" for 10-YEAR event
 Inflow = 38.19 cfs @ 12.10 hrs, Volume= 139,914 cf
 Outflow = 38.19 cfs @ 12.10 hrs, Volume= 139,914 cf, Atten= 0%, Lag= 0.0 min
 Primary = 38.19 cfs @ 12.10 hrs, Volume= 139,914 cf

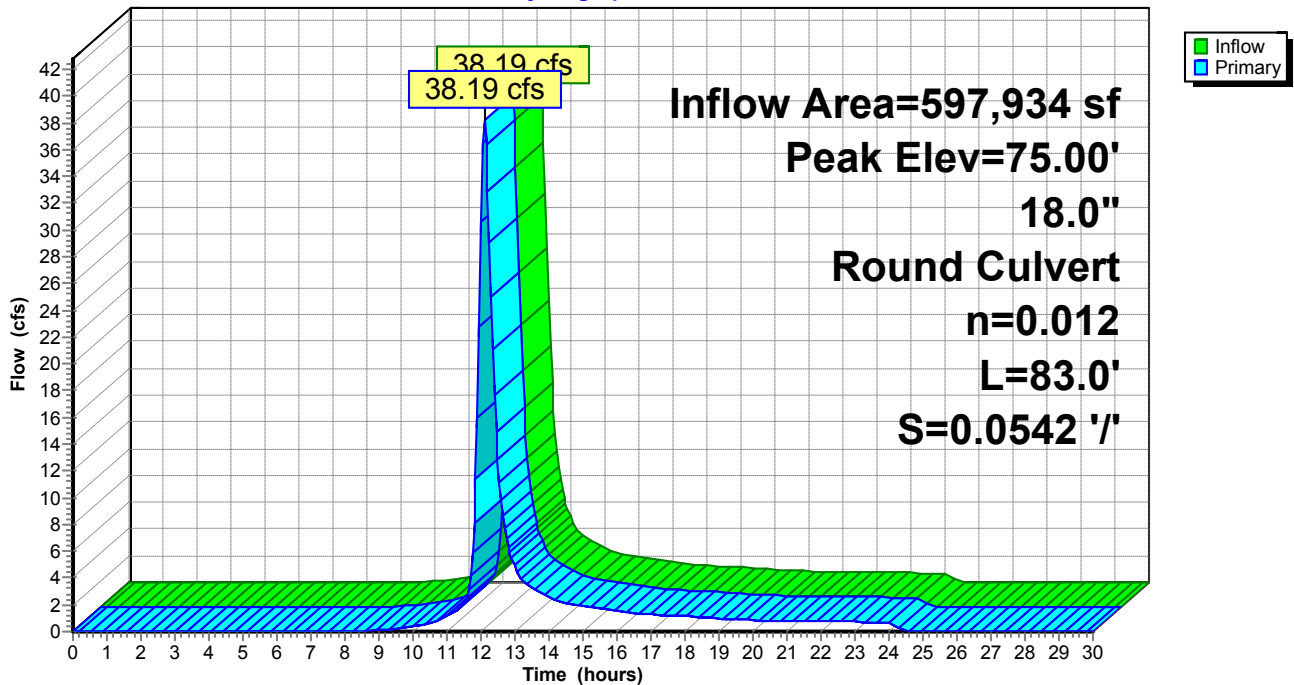
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 75.00' @ 12.10 hrs
 Flood Elev= 58.06'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.10'	18.0" Round RCP_Round 18" L= 83.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 54.10' / 49.60' S= 0.0542 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=38.14 cfs @ 12.10 hrs HW=74.94' (Free Discharge)
 ↑1=RCP_Round 18" (Inlet Controls 38.14 cfs @ 21.58 fps)

Pond CB-15: CB-15

Hydrograph



Summary for Pond CB-16: CB-16

[58] Hint: Peaked 12.51' above defined flood level
 [81] Warning: Exceeded Pond CB-17 by 3.49' @ 12.10 hrs

Inflow Area = 537,106 sf, 9.26% Impervious, Inflow Depth = 2.81" for 10-YEAR event
 Inflow = 33.62 cfs @ 12.12 hrs, Volume= 125,794 cf
 Outflow = 33.62 cfs @ 12.12 hrs, Volume= 125,794 cf, Atten= 0%, Lag= 0.0 min
 Primary = 33.62 cfs @ 12.12 hrs, Volume= 125,794 cf

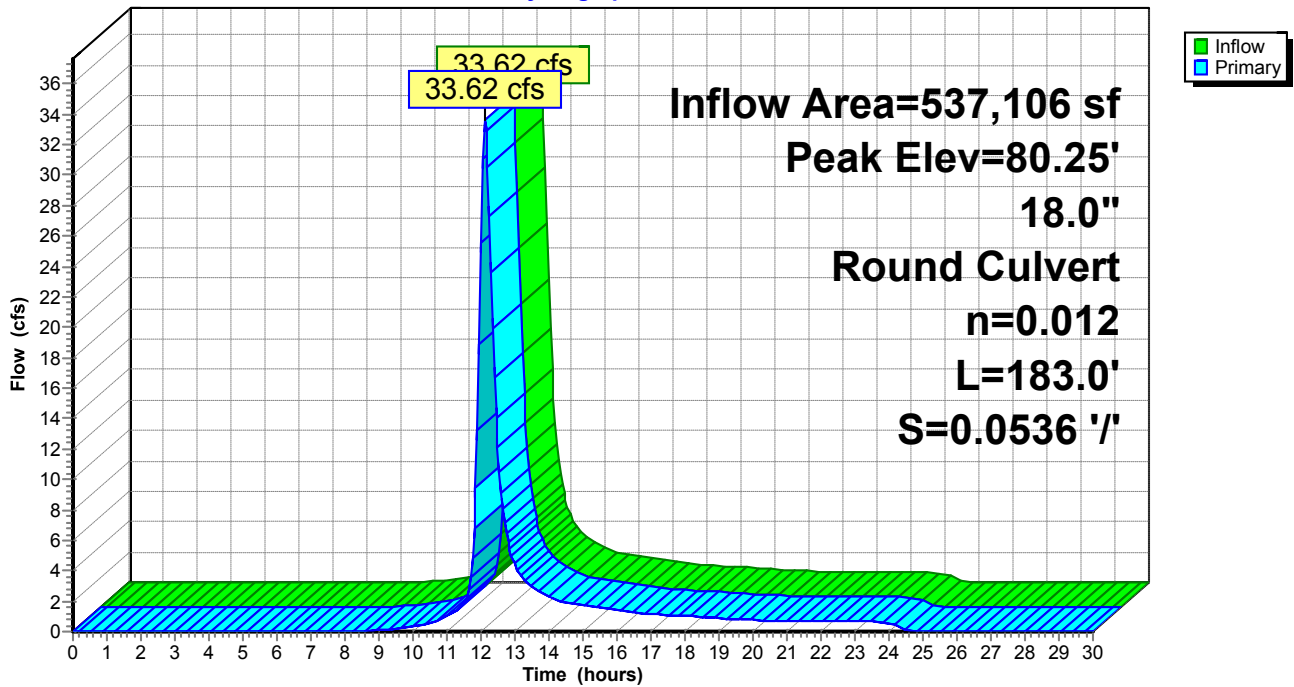
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 80.25' @ 12.11 hrs
 Flood Elev= 67.74'

Device	Routing	Invert	Outlet Devices
#1	Primary	63.90'	18.0" Round RCP_Round 18" L= 183.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 63.90' / 54.10' S= 0.0536 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=33.30 cfs @ 12.12 hrs HW=79.97' (Free Discharge)
 ↑1=RCP_Round 18" (Inlet Controls 33.30 cfs @ 18.84 fps)

Pond CB-16: CB-16

Hydrograph



Summary for Pond CB-17: CB-17

[58] Hint: Peaked 5.44' above defined flood level

Inflow Area = 391,463 sf, 8.69% Impervious, Inflow Depth = 2.79" for 10-YEAR event
 Inflow = 24.47 cfs @ 12.18 hrs, Volume= 90,875 cf
 Outflow = 24.47 cfs @ 12.18 hrs, Volume= 90,875 cf, Atten= 0%, Lag= 0.0 min
 Primary = 24.47 cfs @ 12.18 hrs, Volume= 90,875 cf

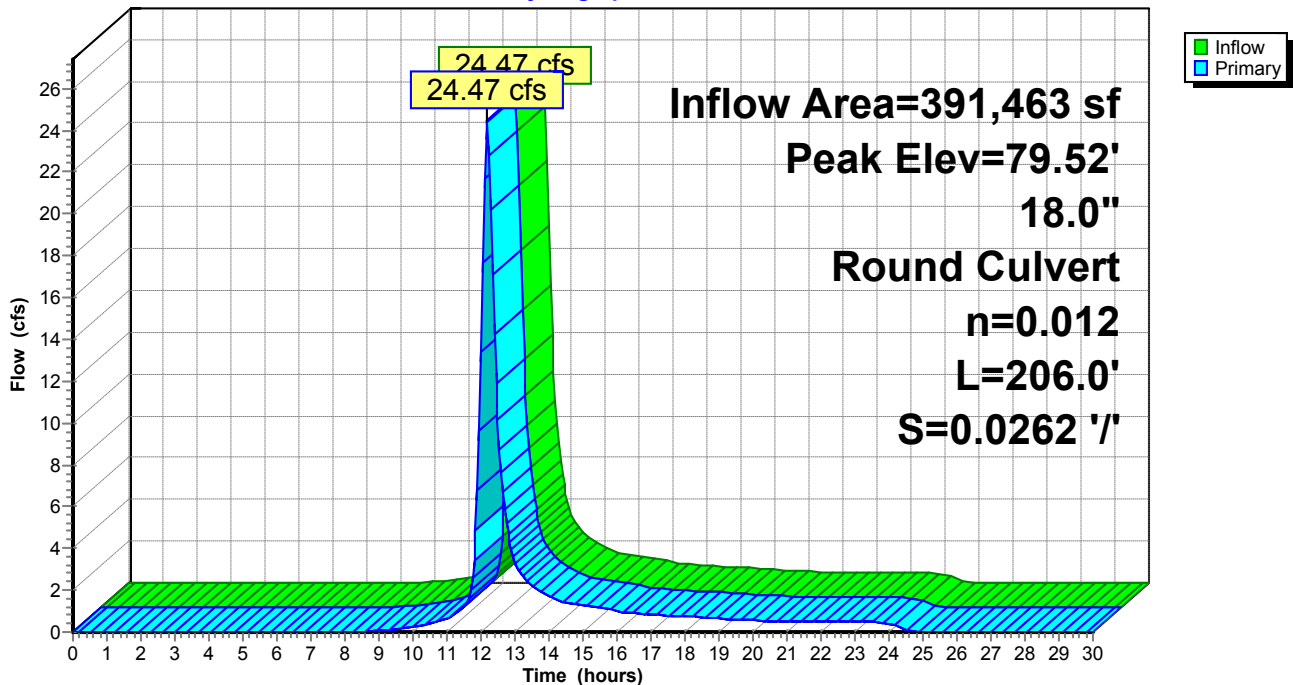
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 79.52' @ 12.18 hrs
 Flood Elev= 74.08'

Device	Routing	Invert	Outlet Devices
#1	Primary	69.40'	18.0" Round RCP_Round 18" L= 206.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 69.40' / 64.00' S= 0.0262 ' /' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=24.26 cfs @ 12.18 hrs HW=79.29' (Free Discharge)
 ↳1=RCP_Round 18" (Barrel Controls 24.26 cfs @ 13.73 fps)

Pond CB-17: CB-17

Hydrograph



Summary for Pond CB-2: CB-2

[58] Hint: Peaked 1.90' above defined flood level
 [81] Warning: Exceeded Pond CB-1 by 0.81' @ 12.20 hrs

Inflow Area = 167,255 sf, 7.38% Impervious, Inflow Depth = 2.73" for 10-YEAR event
 Inflow = 9.38 cfs @ 12.22 hrs, Volume= 38,004 cf
 Outflow = 9.38 cfs @ 12.22 hrs, Volume= 38,004 cf, Atten= 0%, Lag= 0.0 min
 Primary = 9.38 cfs @ 12.22 hrs, Volume= 38,004 cf

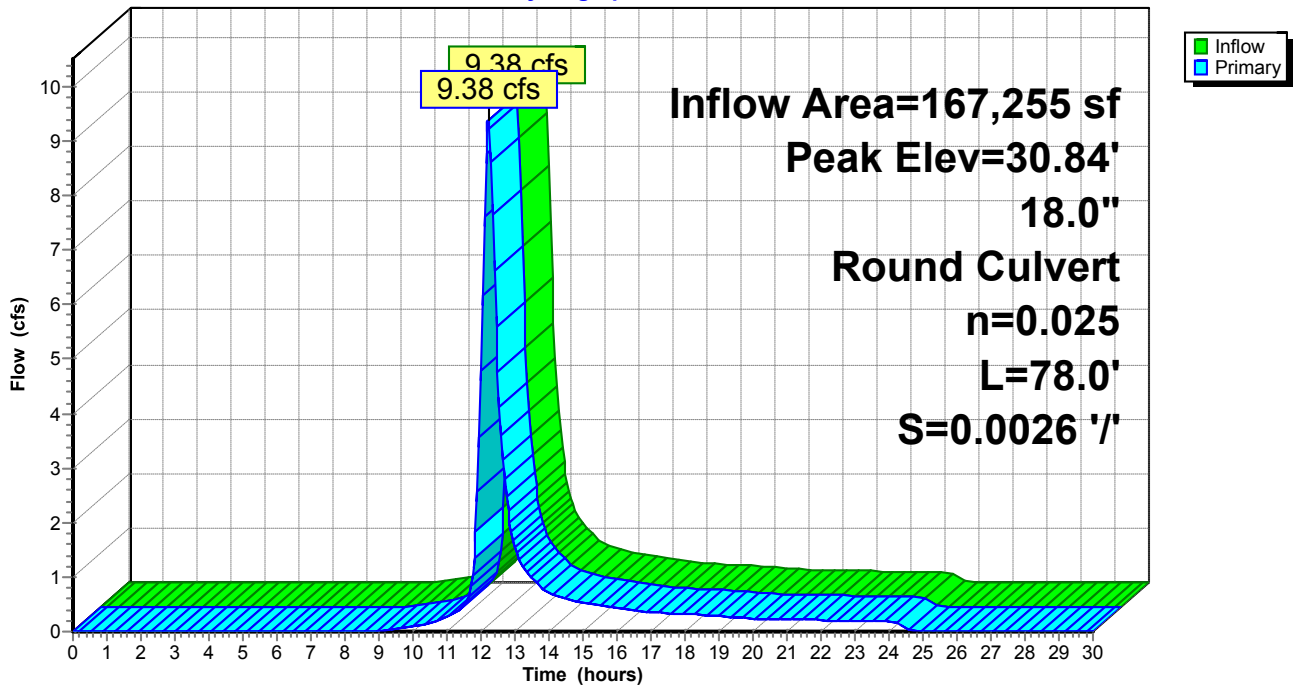
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 30.84' @ 12.22 hrs
 Flood Elev= 28.94'

Device	Routing	Invert	Outlet Devices
#1	Primary	26.40'	18.0" Round Culvert L= 78.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 26.40' / 26.20' S= 0.0026 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

Primary OutFlow Max=9.31 cfs @ 12.22 hrs HW=30.79' (Free Discharge)
 ↳ **1=Culvert** (Barrel Controls 9.31 cfs @ 5.27 fps)

Pond CB-2: CB-2

Hydrograph



Summary for Pond CB-3: CB-3

[58] Hint: Peaked 0.87' above defined flood level

Inflow Area = 136,129 sf, 5.36% Impervious, Inflow Depth = 2.70" for 10-YEAR event
 Inflow = 7.68 cfs @ 12.22 hrs, Volume= 30,577 cf
 Outflow = 7.68 cfs @ 12.22 hrs, Volume= 30,577 cf, Atten= 0%, Lag= 0.0 min
 Primary = 7.68 cfs @ 12.22 hrs, Volume= 30,577 cf

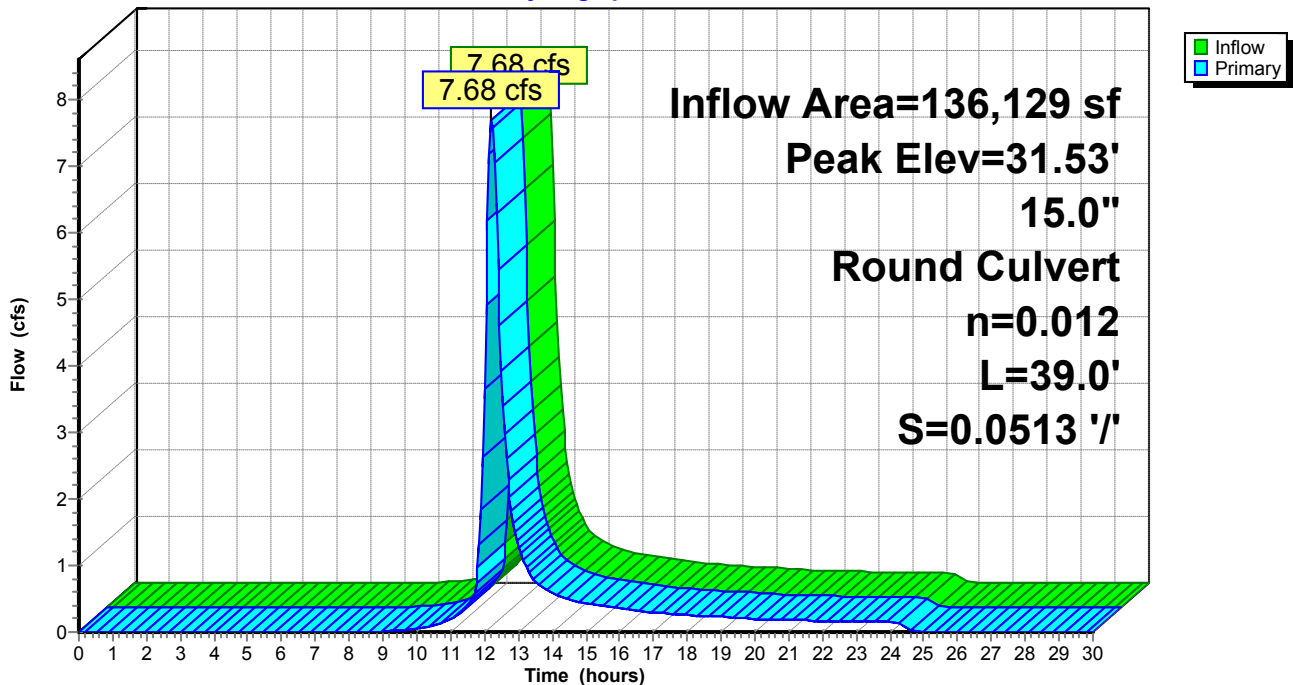
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 31.53' @ 12.22 hrs
 Flood Elev= 30.66'

Device	Routing	Invert	Outlet Devices
#1	Primary	28.20'	15.0" Round RCP_Round 15" L= 39.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 28.20' / 26.20' S= 0.0513 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.23 sf

Primary OutFlow Max=7.61 cfs @ 12.22 hrs HW=31.49' (Free Discharge)
 ↳1=RCP_Round 15" (Inlet Controls 7.61 cfs @ 6.20 fps)

Pond CB-3: CB-3

Hydrograph



Summary for Pond CB-4: CB-4

[79] Warning: Submerged Pond CB-2 Primary device # 1 INLET by 2.68'

[79] Warning: Submerged Pond CB-3 Primary device # 1 INLET by 0.88'

Inflow Area = 305,014 sf, 6.98% Impervious, Inflow Depth = 2.73" for 10-YEAR event
 Inflow = 17.09 cfs @ 12.22 hrs, Volume= 69,283 cf
 Outflow = 17.09 cfs @ 12.22 hrs, Volume= 69,283 cf, Atten= 0%, Lag= 0.0 min
 Primary = 17.09 cfs @ 12.22 hrs, Volume= 69,283 cf

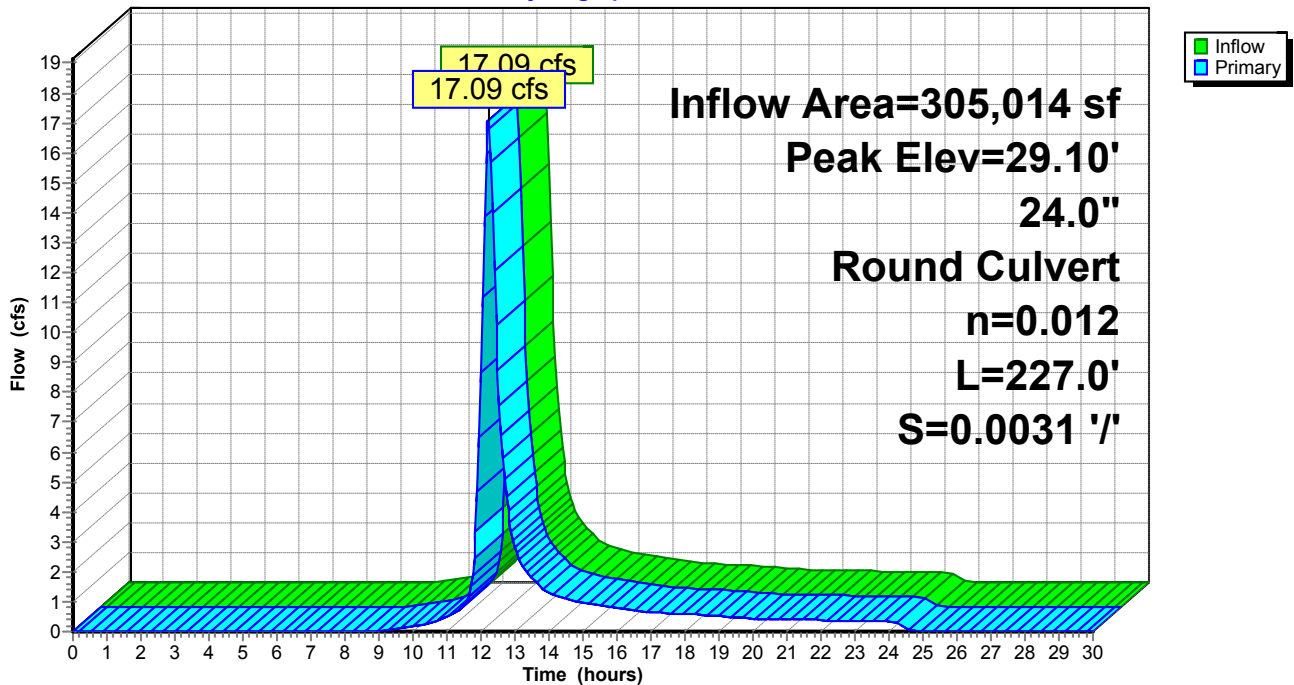
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 29.10' @ 12.22 hrs
 Flood Elev= 29.51'

Device	Routing	Invert	Outlet Devices
#1	Primary	26.00'	24.0" Round Culvert L= 227.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 26.00' / 25.30' S= 0.0031 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=16.96 cfs @ 12.22 hrs HW=29.07' (Free Discharge)
 ↑1=Culvert (Barrel Controls 16.96 cfs @ 5.40 fps)

Pond CB-4: CB-4

Hydrograph



Summary for Pond CB-5: CB-5

Inflow Area = 85,670 sf, 0.96% Impervious, Inflow Depth = 2.52" for 10-YEAR event
 Inflow = 4.75 cfs @ 12.19 hrs, Volume= 17,978 cf
 Outflow = 4.75 cfs @ 12.19 hrs, Volume= 17,978 cf, Atten= 0%, Lag= 0.0 min
 Primary = 4.75 cfs @ 12.19 hrs, Volume= 17,978 cf

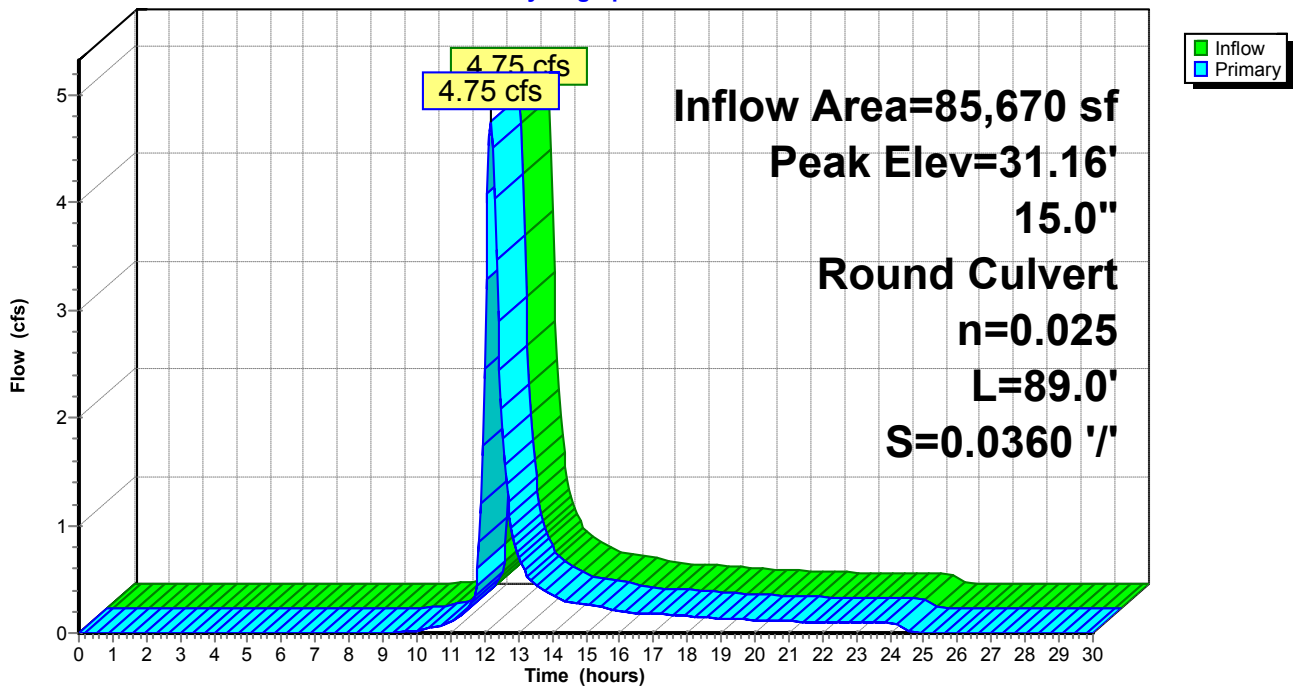
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 31.16' @ 12.19 hrs
 Flood Elev= 33.19'

Device	Routing	Invert	Outlet Devices
#1	Primary	29.50'	15.0" Round CMP_Round 15" L= 89.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 29.50' / 26.30' S= 0.0360 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.23 sf

Primary OutFlow Max=4.73 cfs @ 12.19 hrs HW=31.15' (Free Discharge)
 ↳1=CMP_Round 15" (Inlet Controls 4.73 cfs @ 3.85 fps)

Pond CB-5: CB-5

Hydrograph



Summary for Pond CB-6: CB-6

[58] Hint: Peaked 34.70' above defined flood level
 [81] Warning: Exceeded Pond CB-5 by 35.09' @ 12.15 hrs
 [79] Warning: Submerged Pond CB-8 Primary device # 1 INLET by 36.69'

Inflow Area = 1,555,234 sf, 8.77% Impervious, Inflow Depth = 2.80" for 10-YEAR event
 Inflow = 93.72 cfs @ 12.13 hrs, Volume= 362,452 cf
 Outflow = 93.72 cfs @ 12.13 hrs, Volume= 362,452 cf, Atten= 0%, Lag= 0.0 min
 Primary = 93.72 cfs @ 12.13 hrs, Volume= 362,452 cf

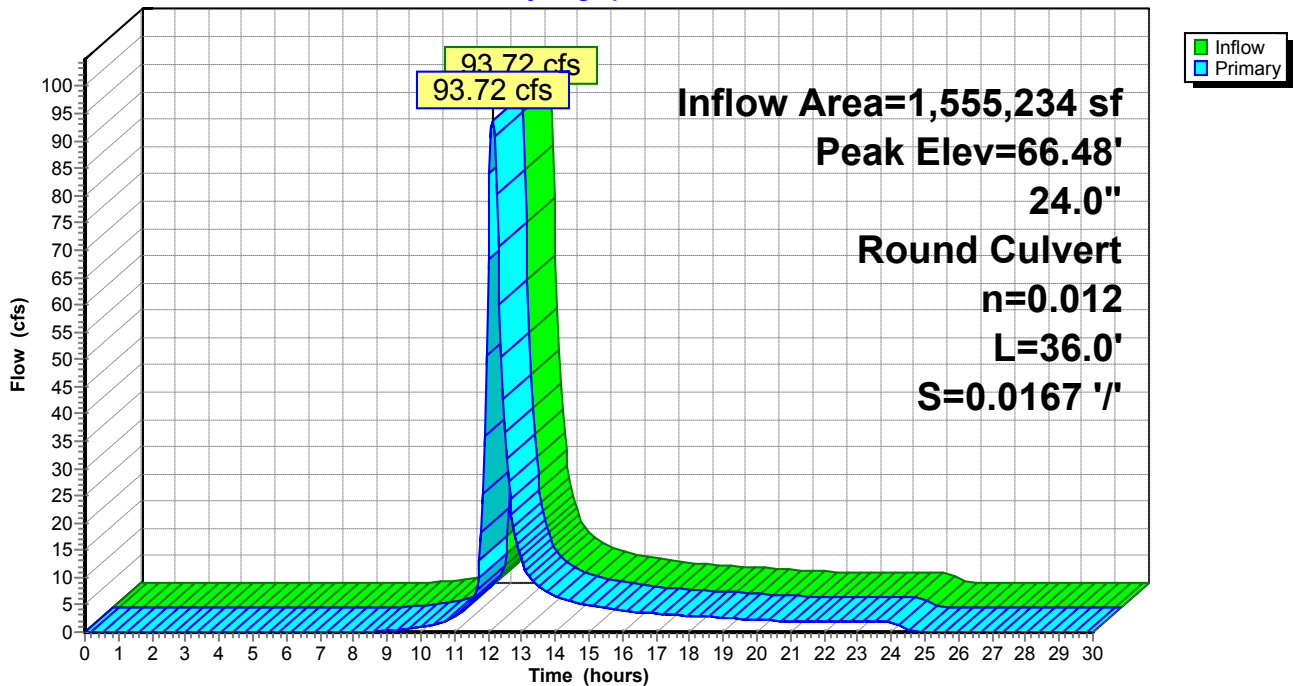
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 66.48' @ 12.13 hrs
 Flood Elev= 31.78'

Device	Routing	Invert	Outlet Devices
#1	Primary	27.10'	24.0" Round Culvert L= 36.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 27.10' / 26.50' S= 0.0167 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=93.07 cfs @ 12.13 hrs HW=65.96' (Free Discharge)
 ↑1=Culvert (Inlet Controls 93.07 cfs @ 29.63 fps)

Pond CB-6: CB-6

Hydrograph



Summary for Pond CB-7: CB-7

[58] Hint: Peaked 16.98' above defined flood level
 [81] Warning: Exceeded Pond CB-4 by 18.90' @ 12.15 hrs
 [79] Warning: Submerged Pond CB-6 Primary device # 1 INLET by 20.68'

Inflow Area = 1,862,407 sf, 8.59% Impervious, Inflow Depth = 2.79" for 10-YEAR event
 Inflow = 109.43 cfs @ 12.15 hrs, Volume= 432,666 cf
 Outflow = 109.43 cfs @ 12.15 hrs, Volume= 432,666 cf, Atten= 0%, Lag= 0.0 min
 Primary = 109.43 cfs @ 12.15 hrs, Volume= 432,666 cf

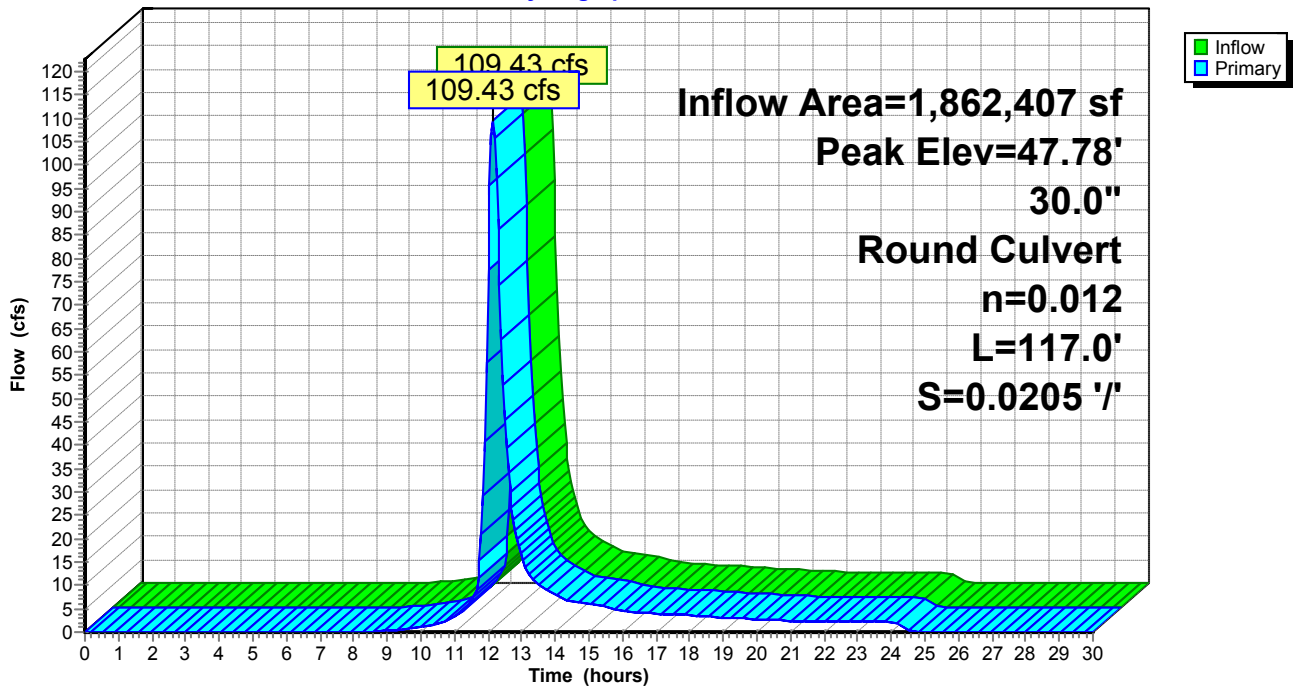
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 47.78' @ 12.15 hrs
 Flood Elev= 30.80'

Device	Routing	Invert	Outlet Devices
#1	Primary	25.10'	30.0" Round Culvert L= 117.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 25.10' / 22.70' S= 0.0205 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 4.91 sf

Primary OutFlow Max=109.22 cfs @ 12.15 hrs HW=47.70' (Free Discharge)
 ↑1=Culvert (Inlet Controls 109.22 cfs @ 22.25 fps)

Pond CB-7: CB-7

Hydrograph



Summary for Pond CB-8: CB-8

[58] Hint: Peaked 130.38' above defined flood level
 [79] Warning: Submerged Pond CB-9 Primary device # 1 INLET by 129.39'

Inflow Area = 1,315,192 sf, 9.09% Impervious, Inflow Depth = 2.82" for 10-YEAR event
 Inflow = 78.19 cfs @ 12.15 hrs, Volume= 308,638 cf
 Outflow = 78.19 cfs @ 12.15 hrs, Volume= 308,638 cf, Atten= 0%, Lag= 0.0 min
 Primary = 78.19 cfs @ 12.15 hrs, Volume= 308,638 cf

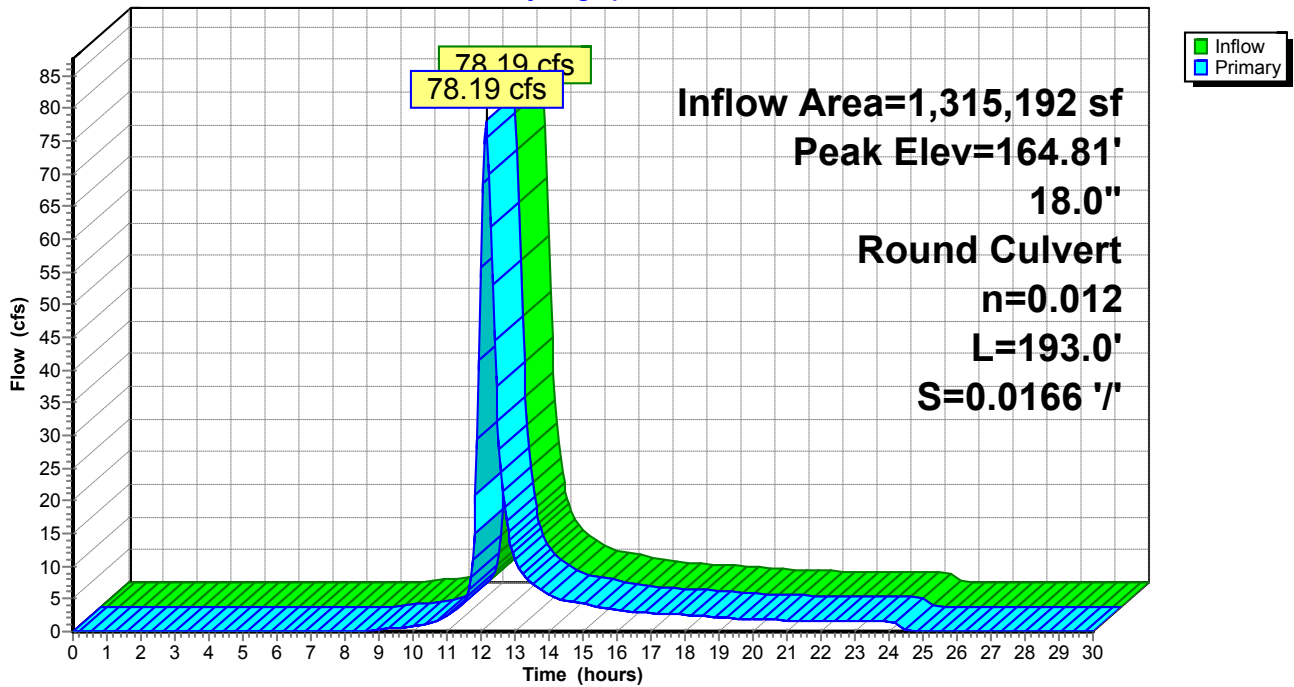
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 164.81' @ 12.15 hrs
 Flood Elev= 34.43'

Device	Routing	Invert	Outlet Devices
#1	Primary	29.50'	18.0" Round RCP_Round 18" L= 193.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 29.50' / 26.30' S= 0.0166 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=78.06 cfs @ 12.15 hrs HW=164.38' (Free Discharge)
 ↳1=RCP_Round 18" (Barrel Controls 78.06 cfs @ 44.17 fps)

Pond CB-8: CB-8

Hydrograph



Summary for Pond CB-9: CB-9

[58] Hint: Peaked 342.35' above defined flood level
 [81] Warning: Exceeded Pond CB-10 by 215.54' @ 12.15 hrs

Inflow Area = 1,151,783 sf, 9.36% Impervious, Inflow Depth = 2.82" for 10-YEAR event
 Inflow = 68.89 cfs @ 12.14 hrs, Volume= 270,704 cf
 Outflow = 68.89 cfs @ 12.14 hrs, Volume= 270,704 cf, Atten= 0%, Lag= 0.0 min
 Primary = 68.89 cfs @ 12.14 hrs, Volume= 270,704 cf

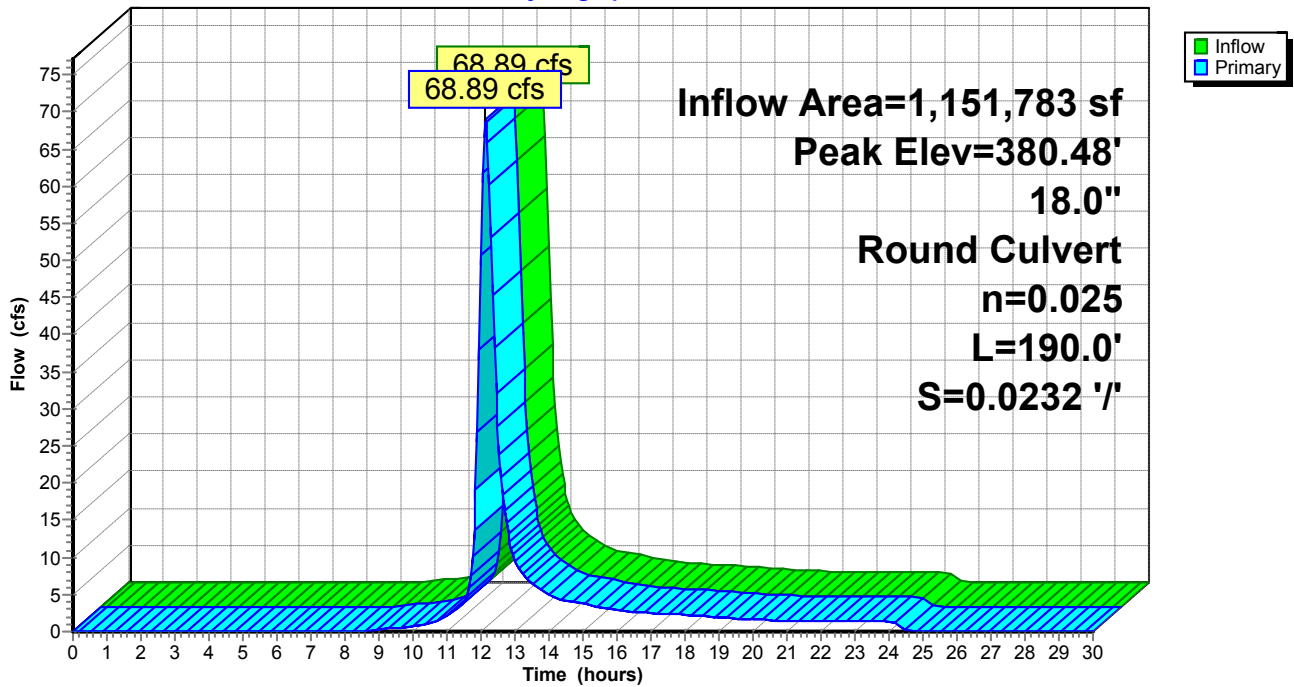
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 380.48' @ 12.14 hrs
 Flood Elev= 38.13'

Device	Routing	Invert	Outlet Devices
#1	Primary	35.40'	18.0" Round CMP_Round 18" L= 190.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 35.40' / 31.00' S= 0.0232 '/ Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

Primary OutFlow Max=68.51 cfs @ 12.14 hrs HW=376.72' (Free Discharge)
 ↳=CMP_Round 18" (Barrel Controls 68.51 cfs @ 38.77 fps)

Pond CB-9: CB-9

Hydrograph



Time span=0.00-30.00 hrs, dt=0.05 hrs, 601 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 DA-1: DA-1	Runoff Area=165,148 sf 6.20% Impervious Runoff Depth=3.70" Flow Length=1,068' Tc=27.4 min CN=74 Runoff=12.90 cfs 50,978 cf
Subcatchment DA-10: DA-10	Runoff Area=29,242 sf 8.57% Impervious Runoff Depth=3.91" Flow Length=447' Tc=11.3 min CN=76 Runoff=3.79 cfs 9,533 cf
Subcatchment DA-11: DA-11	Runoff Area=60,828 sf 5.01% Impervious Runoff Depth=3.81" Flow Length=496' Tc=12.2 min CN=75 Runoff=7.47 cfs 19,301 cf
Subcatchment DA-12: DA-12	Runoff Area=145,643 sf 10.79% Impervious Runoff Depth=3.91" Flow Length=863' Tc=12.7 min CN=76 Runoff=18.07 cfs 47,480 cf
Subcatchment DA-13: DA-13	Runoff Area=391,463 sf 8.69% Impervious Runoff Depth=3.81" Flow Length=655' Tc=24.6 min CN=75 Runoff=33.54 cfs 124,216 cf
Subcatchment DA-14: DA-14	Runoff Area=6,316 sf 100.00% Impervious Runoff Depth=6.37" Tc=5.0 min CN=98 Runoff=1.38 cfs 3,353 cf
Subcatchment DA-15: DA-15	Runoff Area=2,159 sf 100.00% Impervious Runoff Depth=6.37" Tc=5.0 min CN=98 Runoff=0.47 cfs 1,146 cf
Subcatchment DA-16: DA-16	Runoff Area=1,630 sf 100.00% Impervious Runoff Depth=6.37" Tc=5.0 min CN=98 Runoff=0.36 cfs 865 cf
Subcatchment DA-17: DA-17	Runoff Area=2,107 sf 100.00% Impervious Runoff Depth=6.37" Tc=5.0 min CN=98 Runoff=0.46 cfs 1,119 cf
Subcatchment DA-2: DA-2	Runoff Area=136,129 sf 5.36% Impervious Runoff Depth=3.70" Flow Length=1,056' Tc=27.5 min CN=74 Runoff=10.61 cfs 42,020 cf
Subcatchment DA-3: DA-3	Runoff Area=85,670 sf 0.96% Impervious Runoff Depth=3.50" Flow Length=911' Tc=25.1 min CN=72 Runoff=6.66 cfs 24,980 cf
Subcatchment DA-4: DA-4	Runoff Area=154,372 sf 10.42% Impervious Runoff Depth=3.81" Flow Length=1,029' Tc=15.4 min CN=75 Runoff=17.08 cfs 48,984 cf
Subcatchment DA-5: DA-5	Runoff Area=163,409 sf 7.18% Impervious Runoff Depth=3.81" Flow Length=1,011' Tc=26.2 min CN=75 Runoff=13.49 cfs 51,852 cf
Subcatchment DA-6: DA-6	Runoff Area=226,139 sf 2.75% Impervious Runoff Depth=3.60" Flow Length=1,017' Tc=25.5 min CN=73 Runoff=17.91 cfs 67,865 cf
Subcatchment DA-7: DA-7	Runoff Area=46,018 sf 12.08% Impervious Runoff Depth=3.91" Flow Length=721' Tc=24.9 min CN=76 Runoff=4.02 cfs 15,002 cf
Subcatchment DA-8: DA-8	Runoff Area=21,184 sf 14.41% Impervious Runoff Depth=4.02" Flow Length=545' Tc=23.6 min CN=77 Runoff=1.96 cfs 7,091 cf

Subcatchment DA-9: DA-9	Runoff Area=224,950 sf 13.96% Impervious Runoff Depth=4.02" Flow Length=927' Tc=26.2 min CN=77 Runoff=19.58 cfs 75,302 cf
Reach 7R: OUTLET	Inflow=150.31 cfs 591,089 cf Outflow=150.31 cfs 591,089 cf
Pond CB-1: CB-1	Peak Elev=32.29' Inflow=12.90 cfs 50,978 cf 15.0" Round Culvert n=0.012 L=33.0' S=0.0121 '/' Outflow=12.90 cfs 50,978 cf
Pond CB-10: CB-10	Peak Elev=280.73' Inflow=78.07 cfs 301,279 cf 18.0" Round Culvert n=0.025 L=91.0' S=0.0000 '/' Outflow=78.07 cfs 301,279 cf
Pond CB-11: CB-11	Peak Elev=36.07' Inflow=1.38 cfs 3,353 cf 15.0" Round Culvert n=0.012 L=26.0' S=0.0154 '/' Outflow=1.38 cfs 3,353 cf
Pond CB-12: CB-12	Peak Elev=118.09' Inflow=74.12 cfs 282,924 cf 18.0" Round Culvert n=0.012 L=95.0' S=0.0474 '/' Outflow=74.12 cfs 282,924 cf
Pond CB-13: CB-13	Peak Elev=201.23' Inflow=72.26 cfs 275,832 cf 18.0" Round Culvert n=0.025 L=63.0' S=0.0556 '/' Outflow=72.26 cfs 275,832 cf
Pond CB-14: CB-14	Peak Elev=95.65' Inflow=55.43 cfs 200,530 cf 18.0" Round Culvert n=0.012 L=117.0' S=0.0521 '/' Outflow=55.43 cfs 200,530 cf
Pond CB-15: CB-15	Peak Elev=92.62' Inflow=52.30 cfs 190,997 cf 18.0" Round Culvert n=0.012 L=83.0' S=0.0542 '/' Outflow=52.30 cfs 190,997 cf
Pond CB-16: CB-16	Peak Elev=101.46' Inflow=46.04 cfs 171,696 cf 18.0" Round Culvert n=0.012 L=183.0' S=0.0536 '/' Outflow=46.04 cfs 171,696 cf
Pond CB-17: CB-17	Peak Elev=91.83' Inflow=33.54 cfs 124,216 cf 18.0" Round Culvert n=0.012 L=206.0' S=0.0262 '/' Outflow=33.54 cfs 124,216 cf
Pond CB-2: CB-2	Peak Elev=33.69' Inflow=12.96 cfs 52,097 cf 18.0" Round Culvert n=0.025 L=78.0' S=0.0026 '/' Outflow=12.96 cfs 52,097 cf
Pond CB-3: CB-3	Peak Elev=33.99' Inflow=10.61 cfs 42,020 cf 15.0" Round Culvert n=0.012 L=39.0' S=0.0513 '/' Outflow=10.61 cfs 42,020 cf
Pond CB-4: CB-4	Peak Elev=30.73' Inflow=23.60 cfs 94,982 cf 24.0" Round Culvert n=0.012 L=227.0' S=0.0031 '/' Outflow=23.60 cfs 94,982 cf
Pond CB-5: CB-5	Peak Elev=32.16' Inflow=6.66 cfs 24,980 cf 15.0" Round Culvert n=0.025 L=89.0' S=0.0360 '/' Outflow=6.66 cfs 24,980 cf
Pond CB-6: CB-6	Peak Elev=100.35' Inflow=128.61 cfs 494,961 cf 24.0" Round Culvert n=0.012 L=36.0' S=0.0167 '/' Outflow=128.61 cfs 494,961 cf
Pond CB-7: CB-7	Peak Elev=66.79' Inflow=150.31 cfs 591,089 cf 30.0" Round Culvert n=0.012 L=117.0' S=0.0205 '/' Outflow=150.31 cfs 591,089 cf
Pond CB-8: CB-8	Peak Elev=285.07' Inflow=107.14 cfs 420,996 cf 18.0" Round Culvert n=0.012 L=193.0' S=0.0166 '/' Outflow=107.14 cfs 420,996 cf

Pond CB-9: CB-9

Peak Elev=685.78' Inflow=94.39 cfs 369,144 cf
18.0" Round Culvert n=0.025 L=190.0' S=0.0232 '/' Outflow=94.39 cfs 369,144 cf

Total Runoff Area = 1,862,407 sf Runoff Volume = 591,089 cf Average Runoff Depth = 3.81"
91.41% Pervious = 1,702,510 sf 8.59% Impervious = 159,897 sf

Summary for Subcatchment DA-1: DA-1

Runoff = 12.90 cfs @ 12.21 hrs, Volume= 50,978 cf, Depth= 3.70"

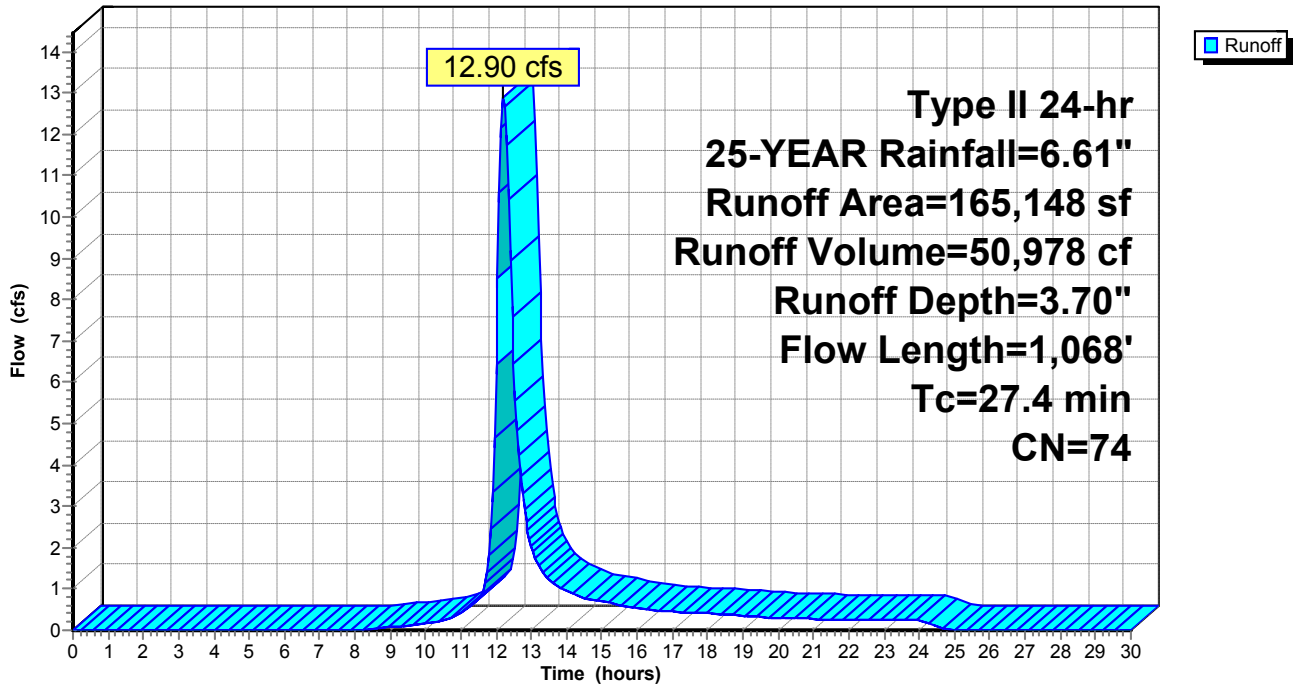
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25-YEAR Rainfall=6.61"

Area (sf)	CN	Description
92,833	72	Woods/grass comb., Good, HSG C
62,071	74	>75% Grass cover, Good, HSG C
10,244	98	Paved parking, HSG C
165,148	74	Weighted Average
154,904		93.80% Pervious Area
10,244		6.20% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.9	250	0.1200	0.20		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
6.5	818	0.0890	2.09		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
27.4	1,068	Total			

Subcatchment DA-1: DA-1

Hydrograph



Summary for Subcatchment DA-10: DA-10

Runoff = 3.79 cfs @ 12.03 hrs, Volume= 9,533 cf, Depth= 3.91"

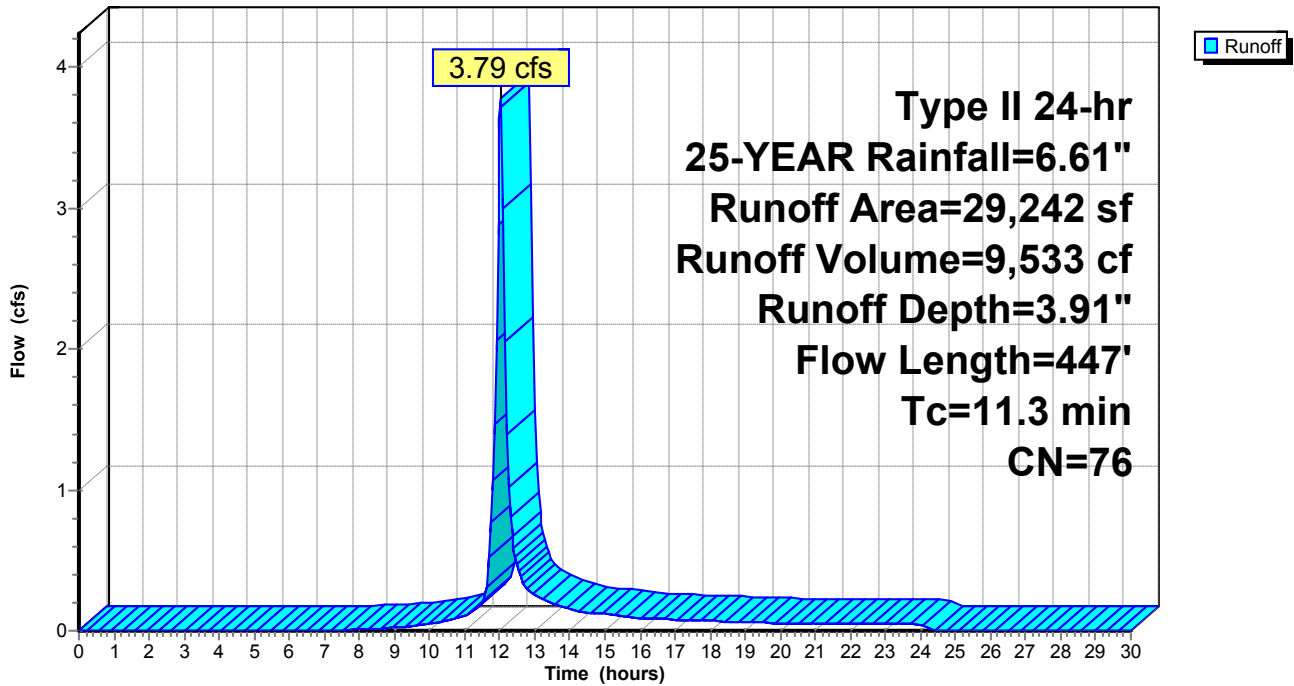
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25-YEAR Rainfall=6.61"

Area (sf)	CN	Description
26,737	74	>75% Grass cover, Good, HSG C
2,505	98	Paved parking, HSG C
29,242	76	Weighted Average
26,737		91.43% Pervious Area
2,505		8.57% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.7	250	0.1160	0.43		Sheet Flow, Grass: Short n= 0.150 P2= 3.49"
1.6	197	0.0812	1.99		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
11.3	447	Total			

Subcatchment DA-10: DA-10

Hydrograph



Summary for Subcatchment DA-11: DA-11

Runoff = 7.47 cfs @ 12.04 hrs, Volume= 19,301 cf, Depth= 3.81"

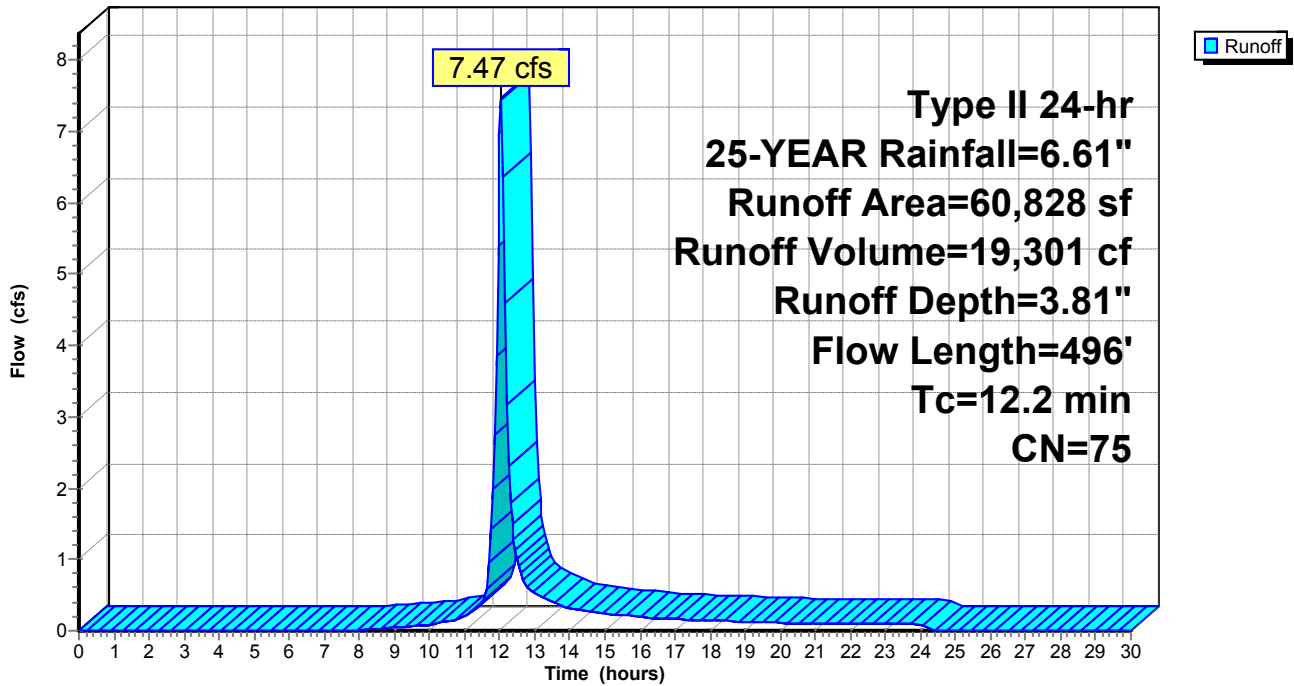
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25-YEAR Rainfall=6.61"

Area (sf)	CN	Description
57,780	74	>75% Grass cover, Good, HSG C
3,048	98	Paved parking, HSG C
60,828	75	Weighted Average
57,780		94.99% Pervious Area
3,048		5.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.8	250	0.1120	0.43		Sheet Flow, Grass: Short n= 0.150 P2= 3.49"
2.4	246	0.0610	1.73		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
12.2	496	Total			

Subcatchment DA-11: DA-11

Hydrograph



Summary for Subcatchment DA-12: DA-12

Runoff = 18.07 cfs @ 12.05 hrs, Volume= 47,480 cf, Depth= 3.91"

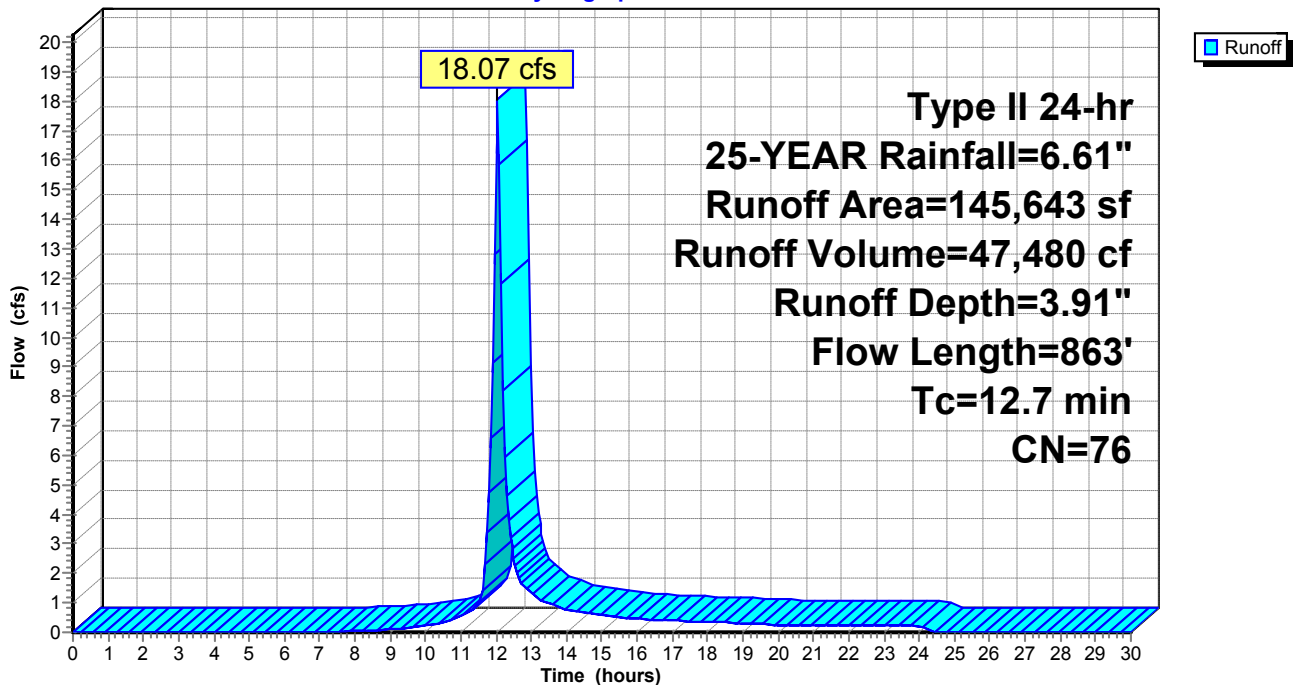
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25-YEAR Rainfall=6.61"

Area (sf)	CN	Description
33,394	72	Woods/grass comb., Good, HSG C
96,537	74	>75% Grass cover, Good, HSG C
15,712	98	Paved parking, HSG C
145,643	76	Weighted Average
129,931		89.21% Pervious Area
15,712		10.79% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.2	147	0.1220	0.40		Sheet Flow, Grass: Short n= 0.150 P2= 3.49"
3.1	395	0.0911	2.11		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
3.4	321	0.0500	1.57		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
12.7	863	Total			

Subcatchment DA-12: DA-12

Hydrograph



Summary for Subcatchment DA-13: DA-13

Runoff = 33.54 cfs @ 12.18 hrs, Volume= 124,216 cf, Depth= 3.81"

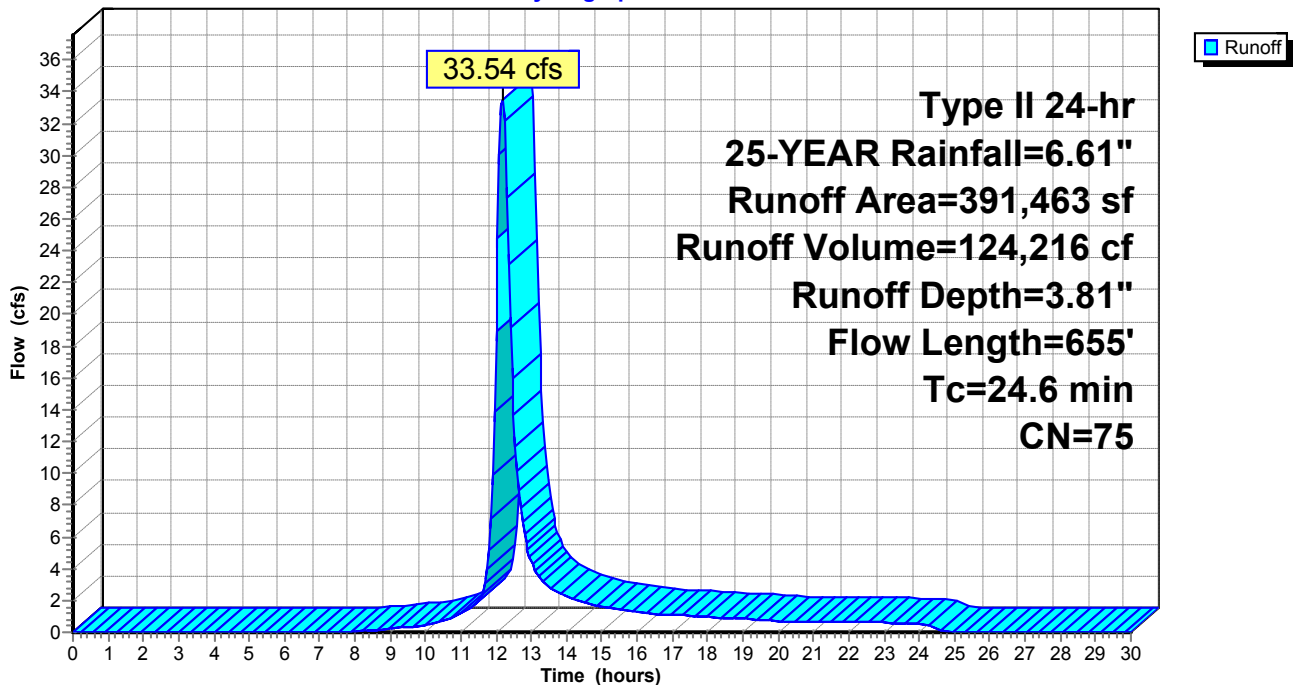
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25-YEAR Rainfall=6.61"

Area (sf)	CN	Description
192,024	72	Woods/grass comb., Good, HSG C
165,425	74	>75% Grass cover, Good, HSG C
34,014	98	Paved parking, HSG C
391,463	75	Weighted Average
357,449		91.31% Pervious Area
34,014		8.69% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.5	250	0.1120	0.19		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
3.1	405	0.0938	2.14		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
24.6	655	Total			

Subcatchment DA-13: DA-13

Hydrograph



Summary for Subcatchment DA-14: DA-14

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

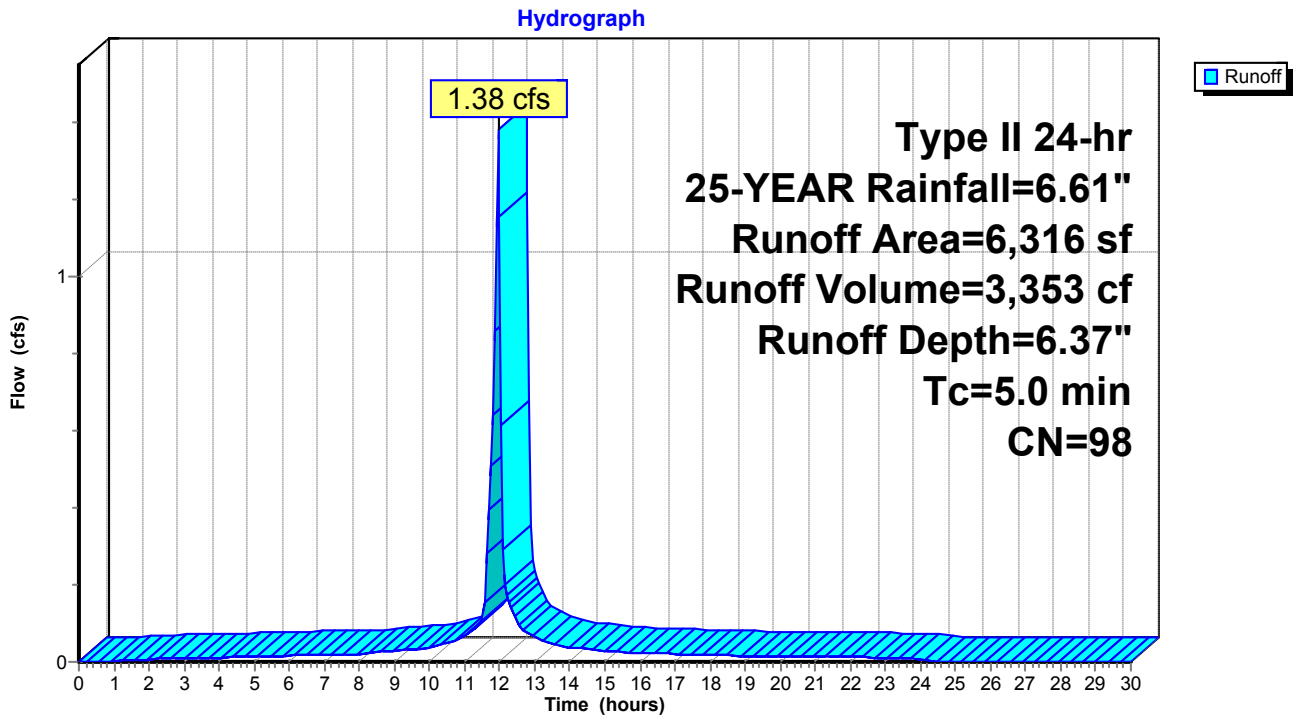
Runoff = 1.38 cfs @ 11.95 hrs, Volume= 3,353 cf, Depth= 6.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25-YEAR Rainfall=6.61"

Area (sf)	CN	Description
6,316	98	Paved parking, HSG C
6,316		100.00% Impervious Area

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

Subcatchment DA-14: DA-14



Summary for Subcatchment DA-15: DA-15

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

Runoff = 0.47 cfs @ 11.95 hrs, Volume= 1,146 cf, Depth= 6.37"

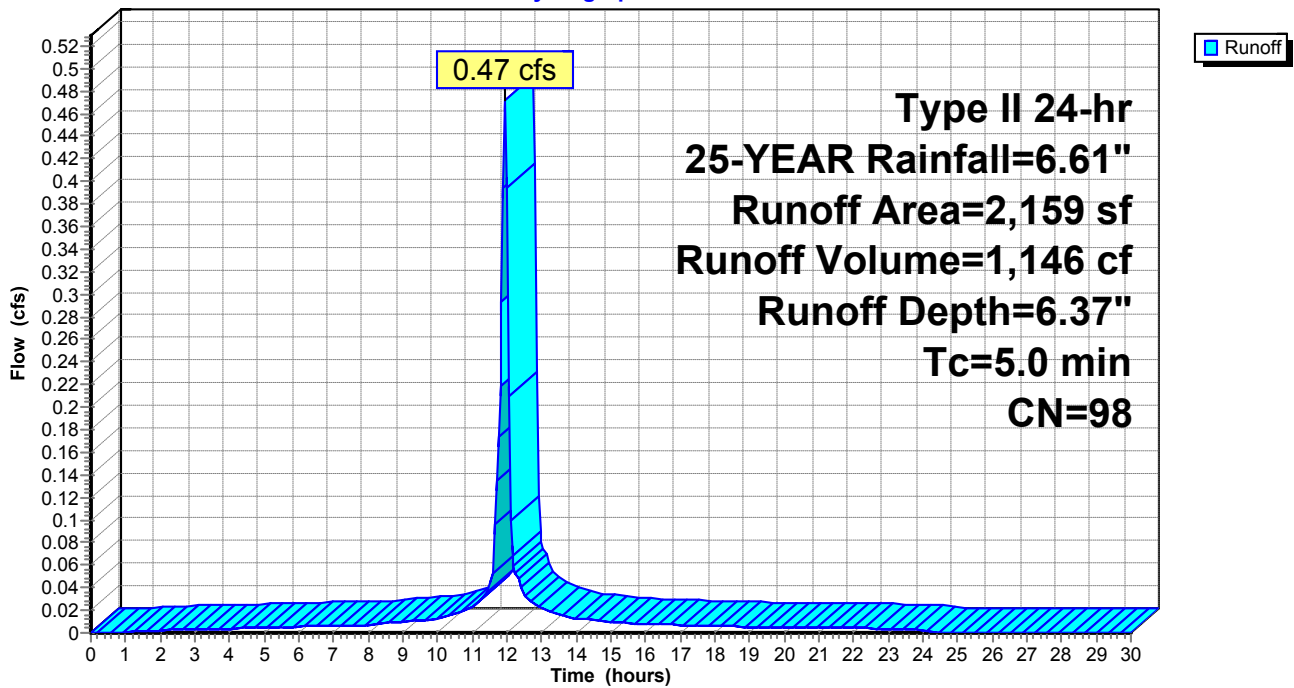
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25-YEAR Rainfall=6.61"

Area (sf)	CN	Description
2,159	98	Paved parking, HSG C
2,159		100.00% Impervious Area

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

Subcatchment DA-15: DA-15

Hydrograph



Summary for Subcatchment DA-16: DA-16

[49] Hint: $T_c < 2dt$ may require smaller dt

Runoff = 0.36 cfs @ 11.95 hrs, Volume= 865 cf, Depth= 6.37"

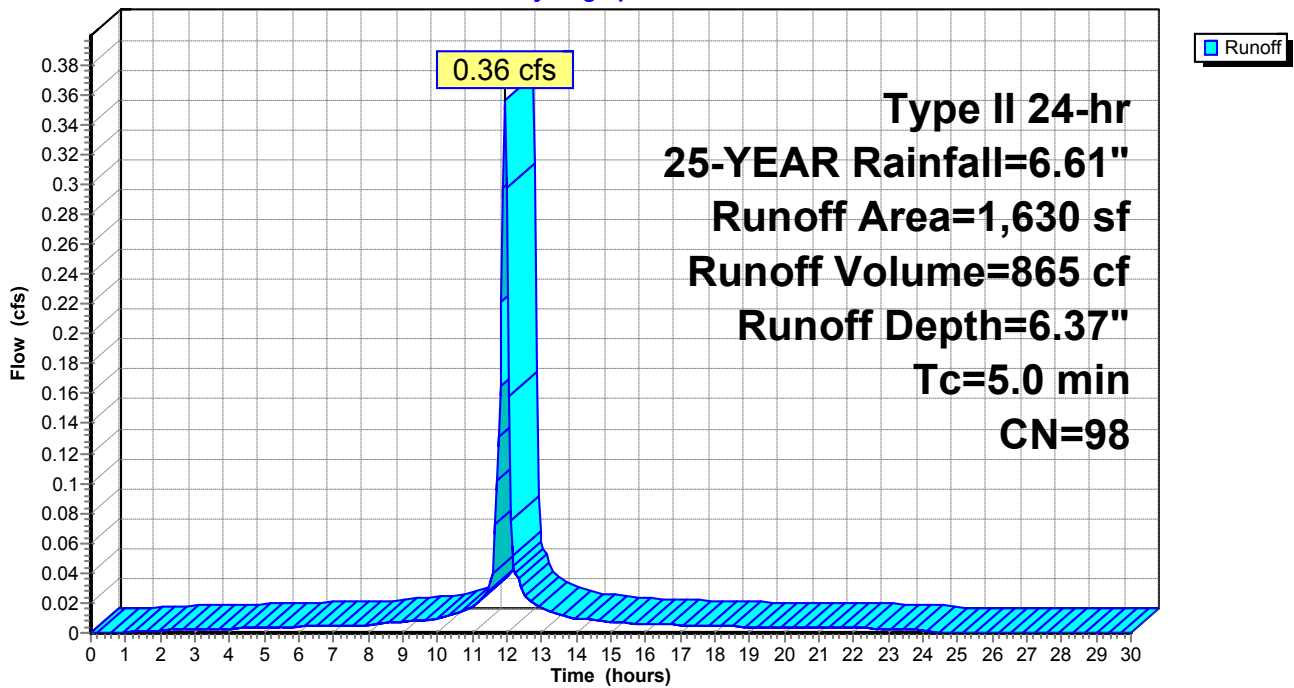
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25-YEAR Rainfall=6.61"

Area (sf)	CN	Description
1,630	98	Paved parking, HSG C
1,630		100.00% Impervious Area

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

Subcatchment DA-16: DA-16

Hydrograph



Summary for Subcatchment DA-17: DA-17

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

Runoff = 0.46 cfs @ 11.95 hrs, Volume= 1,119 cf, Depth= 6.37"

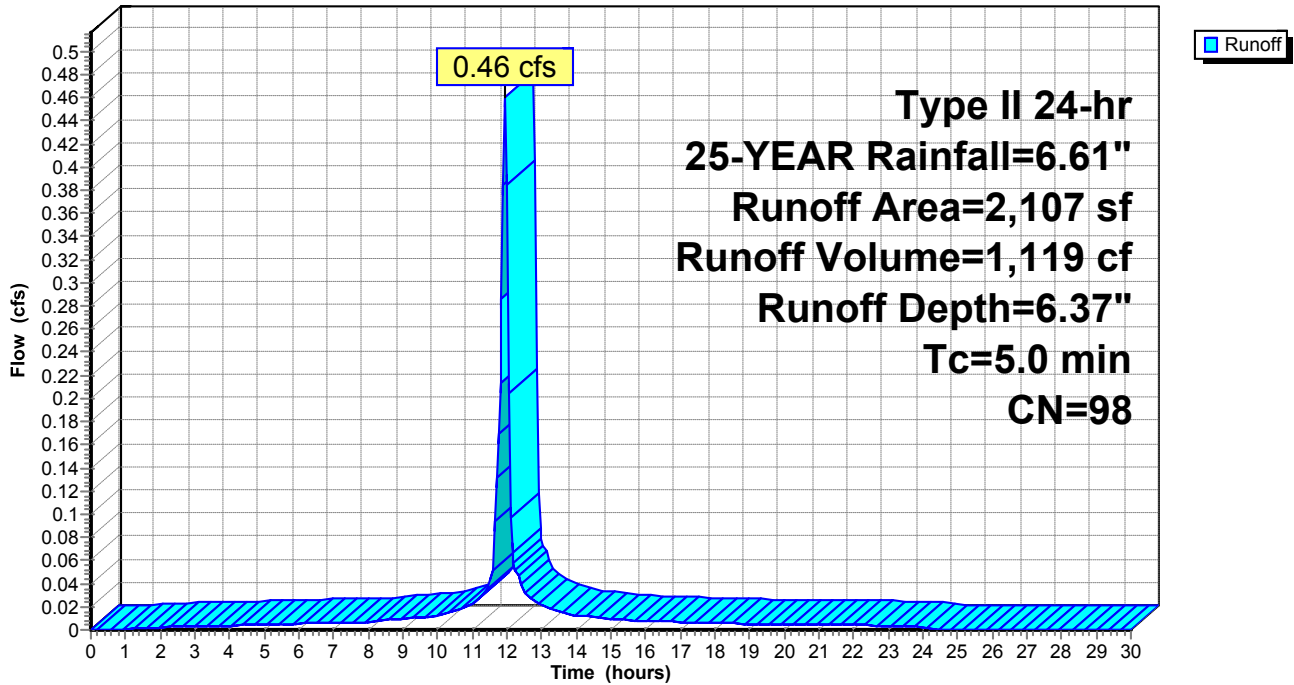
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25-YEAR Rainfall=6.61"

Area (sf)	CN	Description
2,107	98	Paved parking, HSG C
2,107		100.00% Impervious Area

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

Subcatchment DA-17: DA-17

Hydrograph



Summary for Subcatchment DA-2: DA-2

Runoff = 10.61 cfs @ 12.21 hrs, Volume= 42,020 cf, Depth= 3.70"

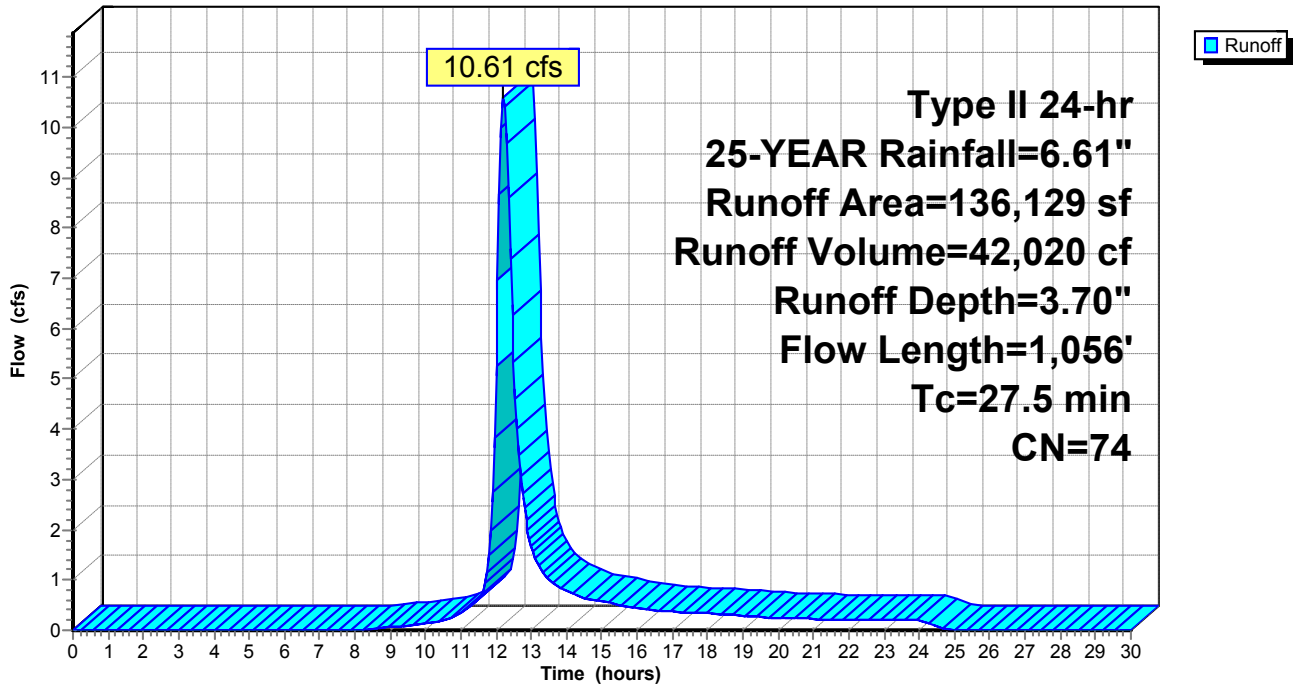
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25-YEAR Rainfall=6.61"

Area (sf)	CN	Description
99,640	72	Woods/grass comb., Good, HSG C
29,188	74	>75% Grass cover, Good, HSG C
7,301	98	Paved parking, HSG C
136,129	74	Weighted Average
128,828		94.64% Pervious Area
7,301		5.36% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.2	250	0.1160	0.20		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
6.3	806	0.0940	2.15		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
27.5	1,056	Total			

Subcatchment DA-2: DA-2

Hydrograph



Summary for Subcatchment DA-3: DA-3

Runoff = 6.66 cfs @ 12.19 hrs, Volume= 24,980 cf, Depth= 3.50"

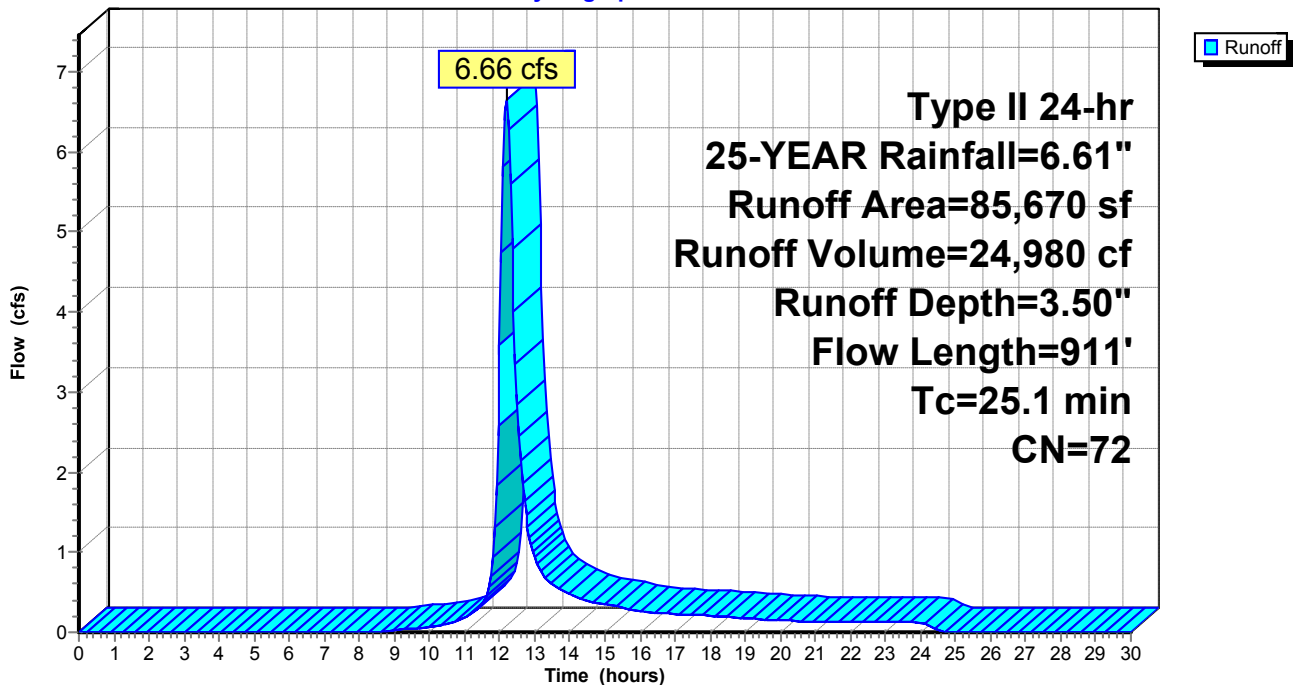
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25-YEAR Rainfall=6.61"

Area (sf)	CN	Description
75,390	72	Woods/grass comb., Good, HSG C
9,461	74	>75% Grass cover, Good, HSG C
819	98	Paved parking, HSG C
85,670	72	Weighted Average
84,851		99.04% Pervious Area
819		0.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.4	250	0.1280	0.20		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
4.7	661	0.1120	2.34		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
25.1	911	Total			

Subcatchment DA-3: DA-3

Hydrograph



Summary for Subcatchment DA-4: DA-4

Runoff = 17.08 cfs @ 12.07 hrs, Volume= 48,984 cf, Depth= 3.81"

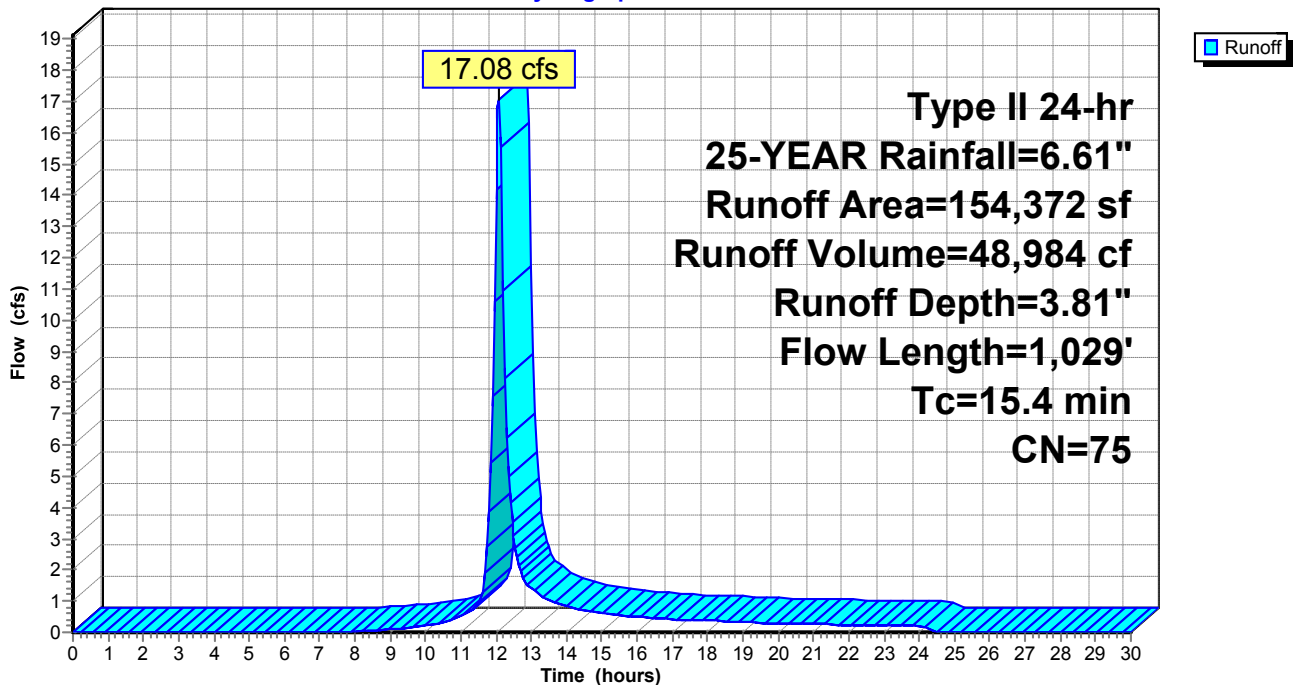
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25-YEAR Rainfall=6.61"

Area (sf)	CN	Description
84,109	72	Woods/grass comb., Good, HSG C
54,184	74	>75% Grass cover, Good, HSG C
16,079	98	Paved parking, HSG C
154,372	75	Weighted Average
138,293		89.58% Pervious Area
16,079		10.42% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.1	250	0.1360	0.46		Sheet Flow, Grass: Short n= 0.150 P2= 3.49"
3.6	516	0.1160	2.38		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
2.7	263	0.0532	1.61		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
15.4	1,029	Total			

Subcatchment DA-4: DA-4

Hydrograph



Summary for Subcatchment DA-5: DA-5

Runoff = 13.49 cfs @ 12.20 hrs, Volume= 51,852 cf, Depth= 3.81"

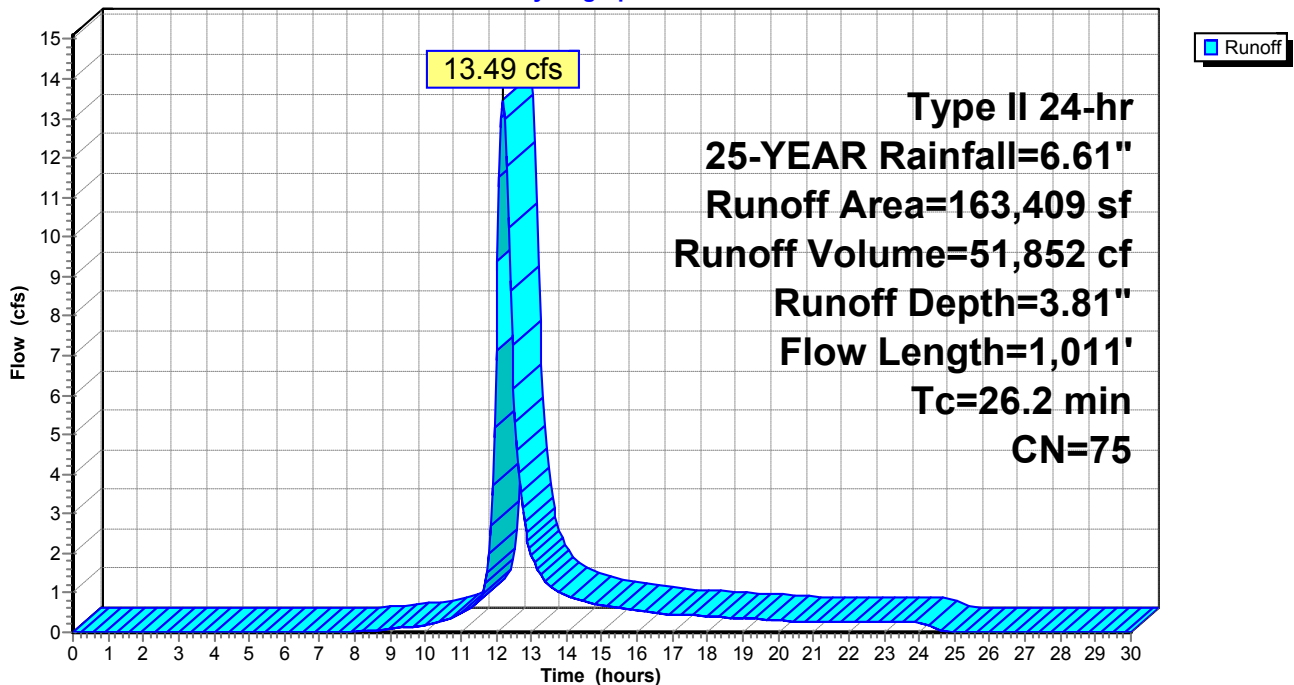
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25-YEAR Rainfall=6.61"

Area (sf)	CN	Description
88,128	72	Woods/grass comb., Good, HSG C
63,546	74	>75% Grass cover, Good, HSG C
11,735	98	Paved parking, HSG C
163,409	75	Weighted Average
151,674		92.82% Pervious Area
11,735		7.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.6	250	0.1240	0.20		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
3.6	533	0.1220	2.44		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
2.0	228	0.0745	1.91		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
26.2	1,011	Total			

Subcatchment DA-5: DA-5

Hydrograph



Summary for Subcatchment DA-6: DA-6

Runoff = 17.91 cfs @ 12.19 hrs, Volume= 67,865 cf, Depth= 3.60"

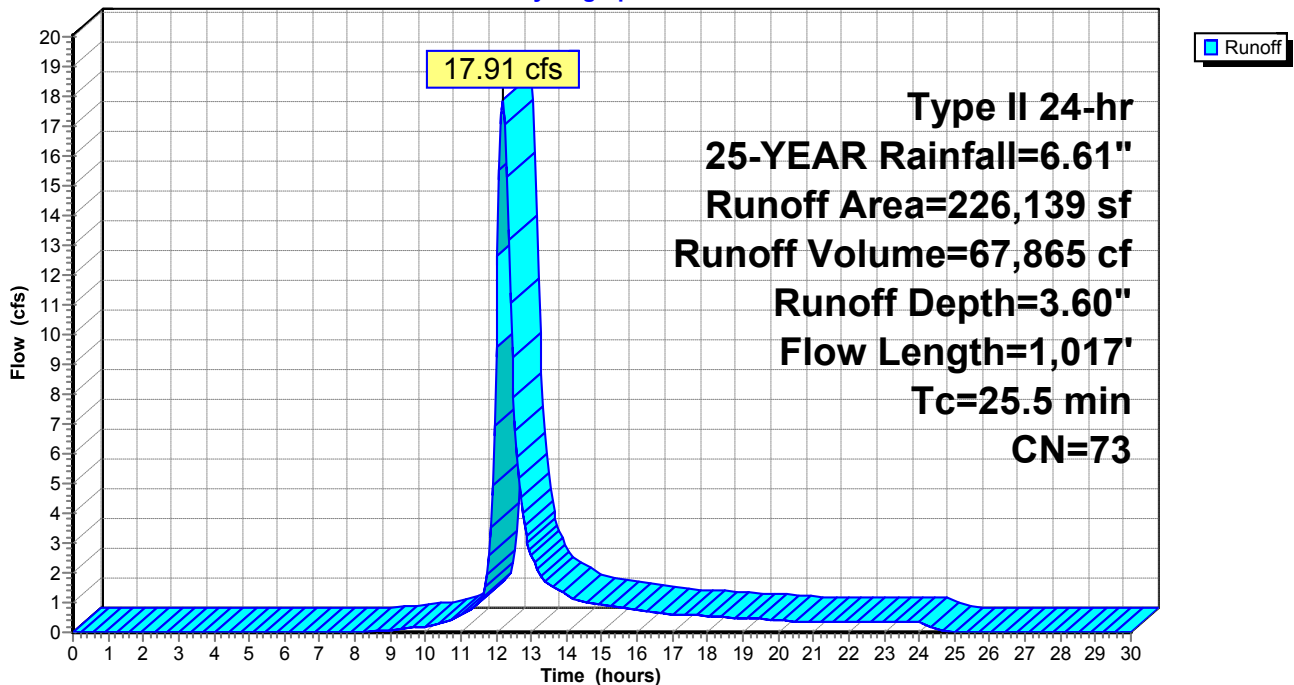
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25-YEAR Rainfall=6.61"

Area (sf)	CN	Description
199,314	72	Woods/grass comb., Good, HSG C
20,613	74	>75% Grass cover, Good, HSG C
6,212	98	Paved parking, HSG C
226,139	73	Weighted Average
219,927		97.25% Pervious Area
6,212		2.75% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.9	250	0.1360	0.21		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
4.1	564	0.1060	2.28		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
1.5	203	0.0985	2.20		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
25.5	1,017	Total			

Subcatchment DA-6: DA-6

Hydrograph



Summary for Subcatchment DA-7: DA-7

Runoff = 4.02 cfs @ 12.18 hrs, Volume= 15,002 cf, Depth= 3.91"

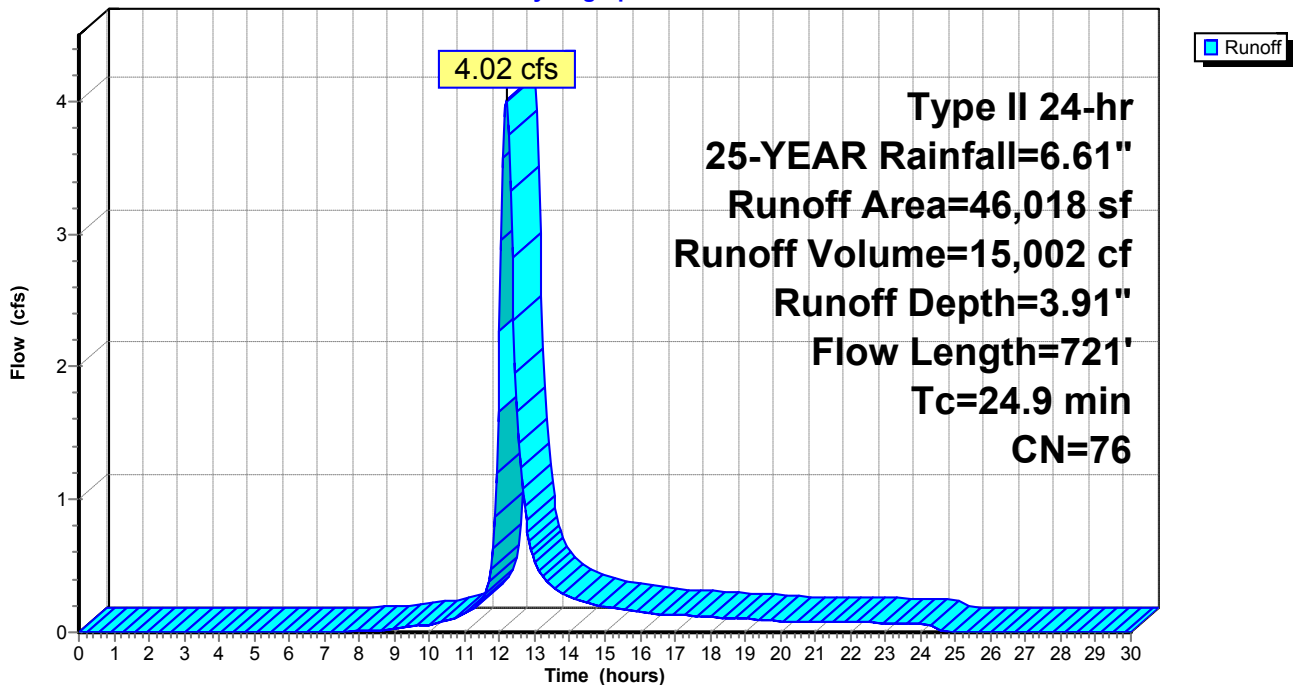
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25-YEAR Rainfall=6.61"

Area (sf)	CN	Description
22,928	72	Woods/grass comb., Good, HSG C
17,529	74	>75% Grass cover, Good, HSG C
5,561	98	Paved parking, HSG C
46,018	76	Weighted Average
40,457		87.92% Pervious Area
5,561		12.08% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.5	250	0.1120	0.19		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
1.8	259	0.1160	2.38		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
1.6	212	0.1040	2.26		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
24.9	721	Total			

Subcatchment DA-7: DA-7

Hydrograph



Summary for Subcatchment DA-8: DA-8

Runoff = 1.96 cfs @ 12.17 hrs, Volume= 7,091 cf, Depth= 4.02"

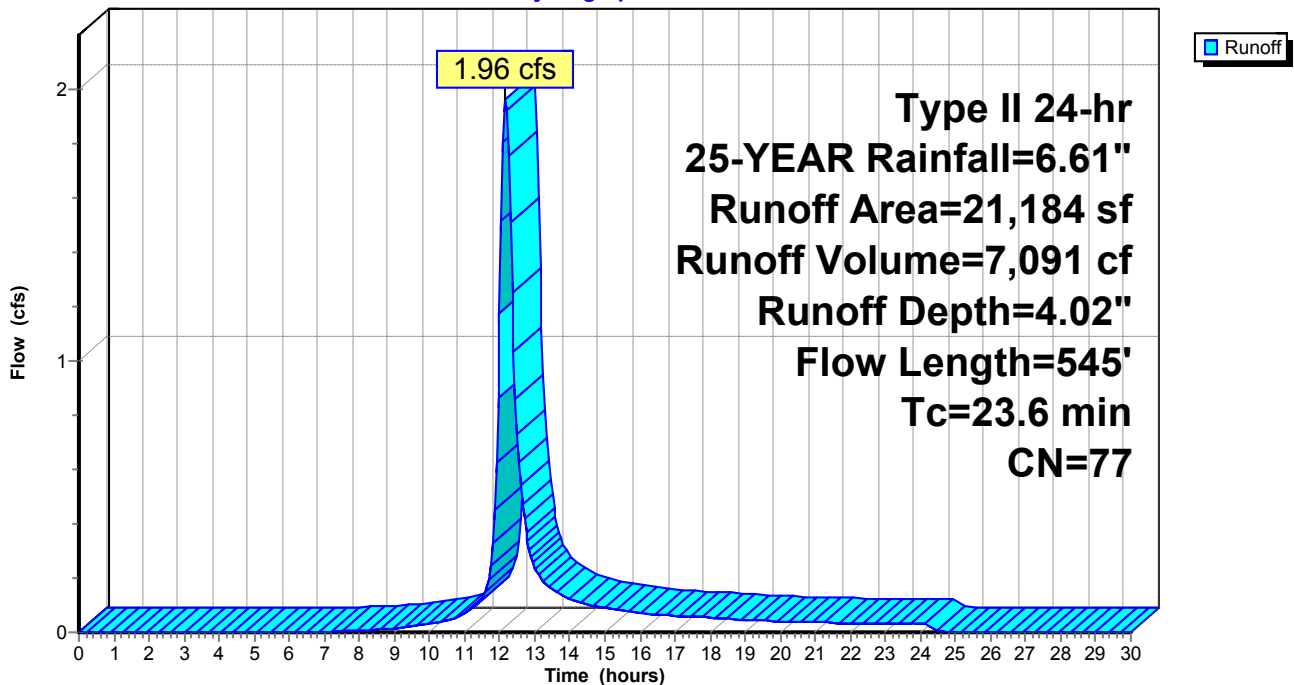
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25-YEAR Rainfall=6.61"

Area (sf)	CN	Description
8,852	72	Woods/grass comb., Good, HSG C
9,279	74	>75% Grass cover, Good, HSG C
3,053	98	Paved parking, HSG C
21,184	77	Weighted Average
18,131		85.59% Pervious Area
3,053		14.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.5	250	0.1120	0.19		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
0.4	56	0.1070	2.29		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
1.7	239	0.1088	2.31		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
23.6	545	Total			

Subcatchment DA-8: DA-8

Hydrograph



Summary for Subcatchment DA-9: DA-9

Runoff = 19.58 cfs @ 12.20 hrs, Volume= 75,302 cf, Depth= 4.02"

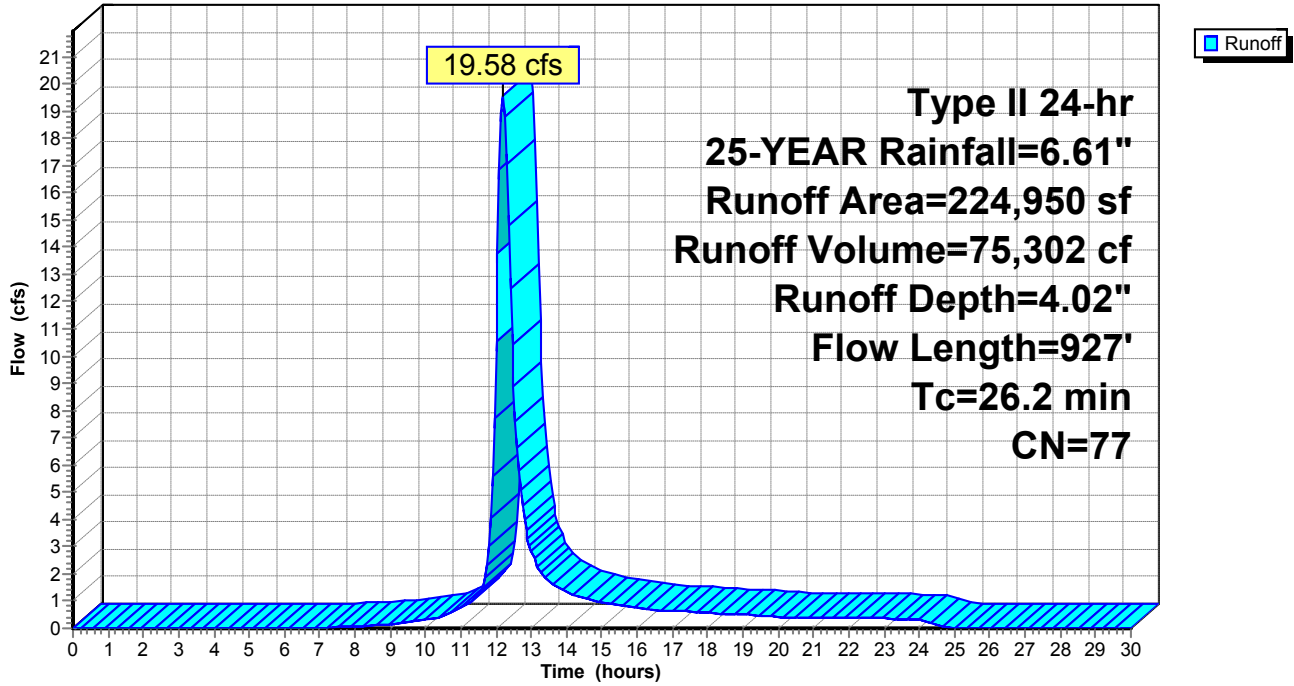
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Type II 24-hr 25-YEAR Rainfall=6.61"

Area (sf)	CN	Description
54,875	72	Woods/grass comb., Good, HSG C
138,673	74	>75% Grass cover, Good, HSG C
31,402	98	Paved parking, HSG C
224,950	77	Weighted Average
193,548		86.04% Pervious Area
31,402		13.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.5	250	0.1120	0.19		Sheet Flow, Woods: Light underbrush n= 0.400 P2= 3.49"
0.3	50	0.1400	2.62		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
1.7	207	0.0870	2.06		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.3	100	0.7000	5.86		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
2.4	320	0.1000	2.21		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
26.2	927	Total			

Subcatchment DA-9: DA-9

Hydrograph

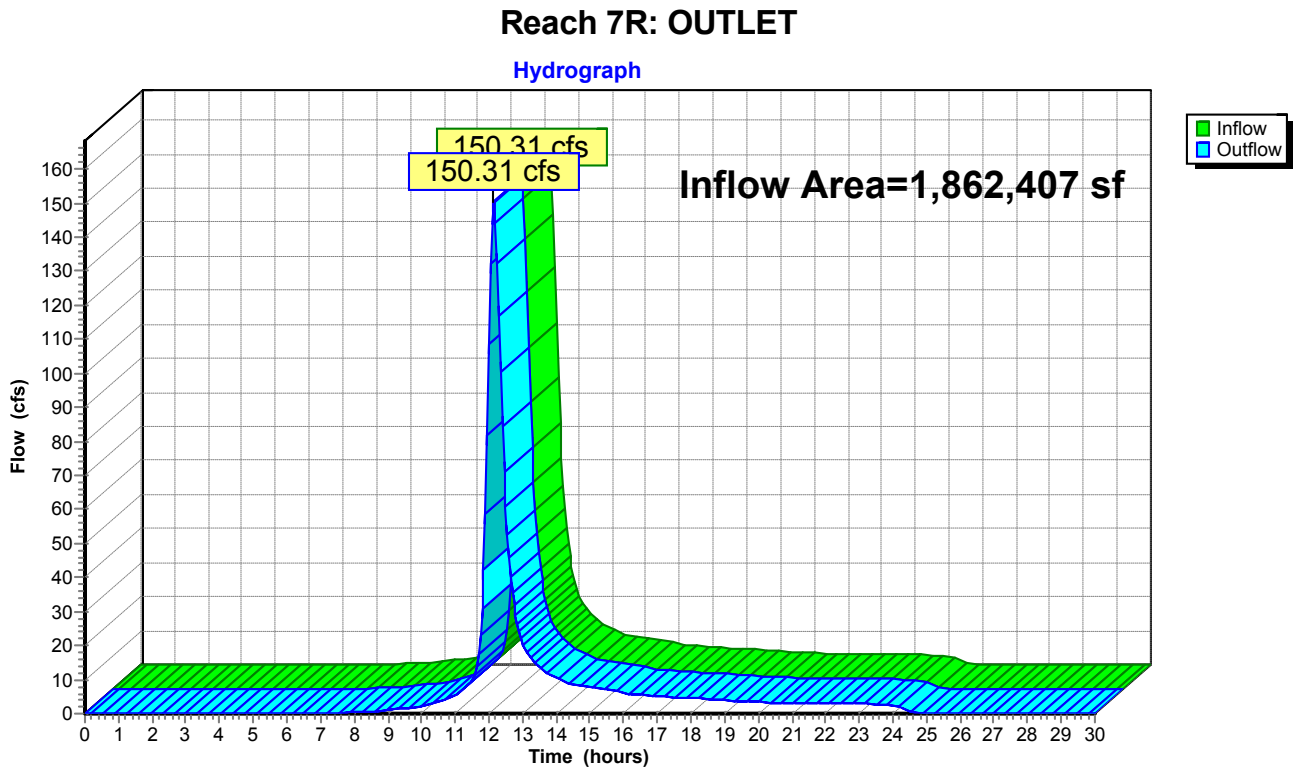


Summary for Reach 7R: OUTLET

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1,862,407 sf, 8.59% Impervious, Inflow Depth = 3.81" for 25-YEAR event
Inflow = 150.31 cfs @ 12.14 hrs, Volume= 591,089 cf
Outflow = 150.31 cfs @ 12.14 hrs, Volume= 591,089 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs



Summary for Pond CB-1: CB-1

[58] Hint: Peaked 1.82' above defined flood level

Inflow Area = 165,148 sf, 6.20% Impervious, Inflow Depth = 3.70" for 25-YEAR event
 Inflow = 12.90 cfs @ 12.21 hrs, Volume= 50,978 cf
 Outflow = 12.90 cfs @ 12.21 hrs, Volume= 50,978 cf, Atten= 0%, Lag= 0.0 min
 Primary = 12.90 cfs @ 12.21 hrs, Volume= 50,978 cf

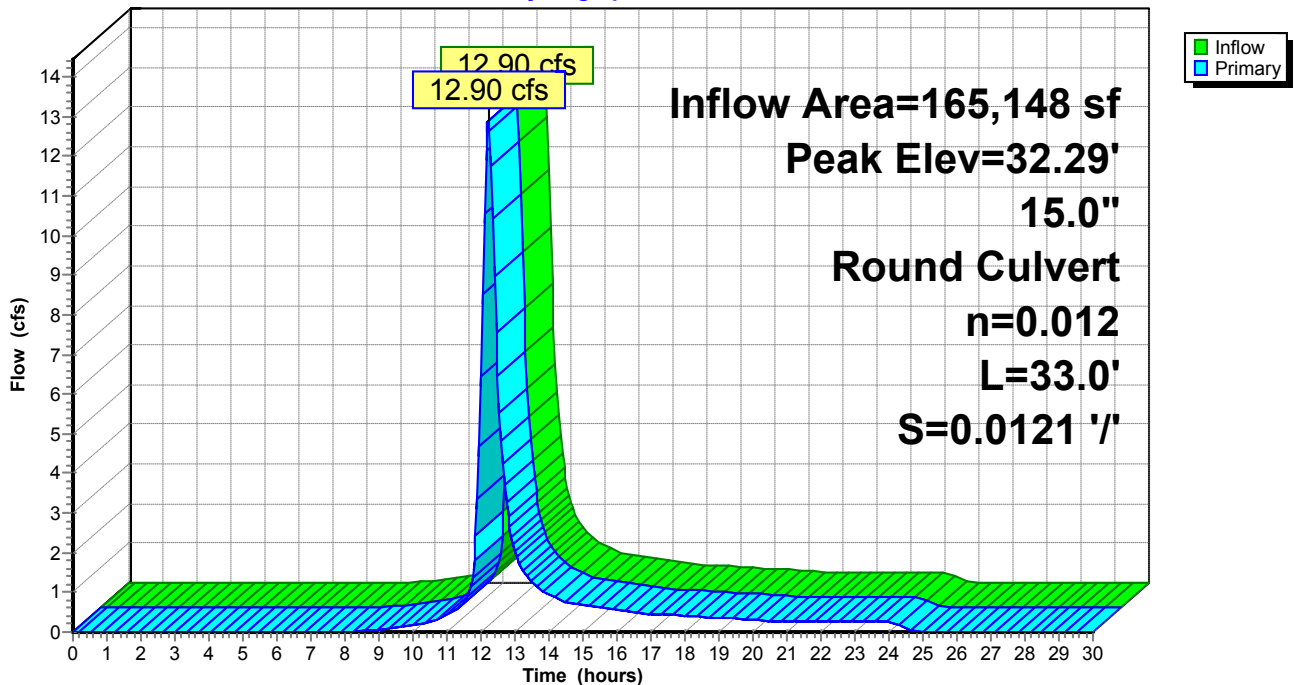
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 32.29' @ 12.21 hrs
 Flood Elev= 30.47'

Device	Routing	Invert	Outlet Devices
#1	Primary	26.90'	15.0" Round RCP_Round 15" L= 33.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 26.90' / 26.50' S= 0.0121 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.23 sf

Primary OutFlow Max=12.81 cfs @ 12.21 hrs HW=32.23' (Free Discharge)
 ↳1=RCP_Round 15" (Inlet Controls 12.81 cfs @ 10.44 fps)

Pond CB-1: CB-1

Hydrograph



Summary for Pond CB-10: CB-10

[58] Hint: Peaked 241.53' above defined flood level
 [81] Warning: Exceeded Pond CB-11 by 243.26' @ 12.10 hrs
 [81] Warning: Exceeded Pond CB-12 by 161.35' @ 12.10 hrs

Inflow Area = 925,644 sf, 10.98% Impervious, Inflow Depth = 3.91" for 25-YEAR event
 Inflow = 78.07 cfs @ 12.12 hrs, Volume= 301,279 cf
 Outflow = 78.07 cfs @ 12.12 hrs, Volume= 301,279 cf, Atten= 0%, Lag= 0.0 min
 Primary = 78.07 cfs @ 12.12 hrs, Volume= 301,279 cf

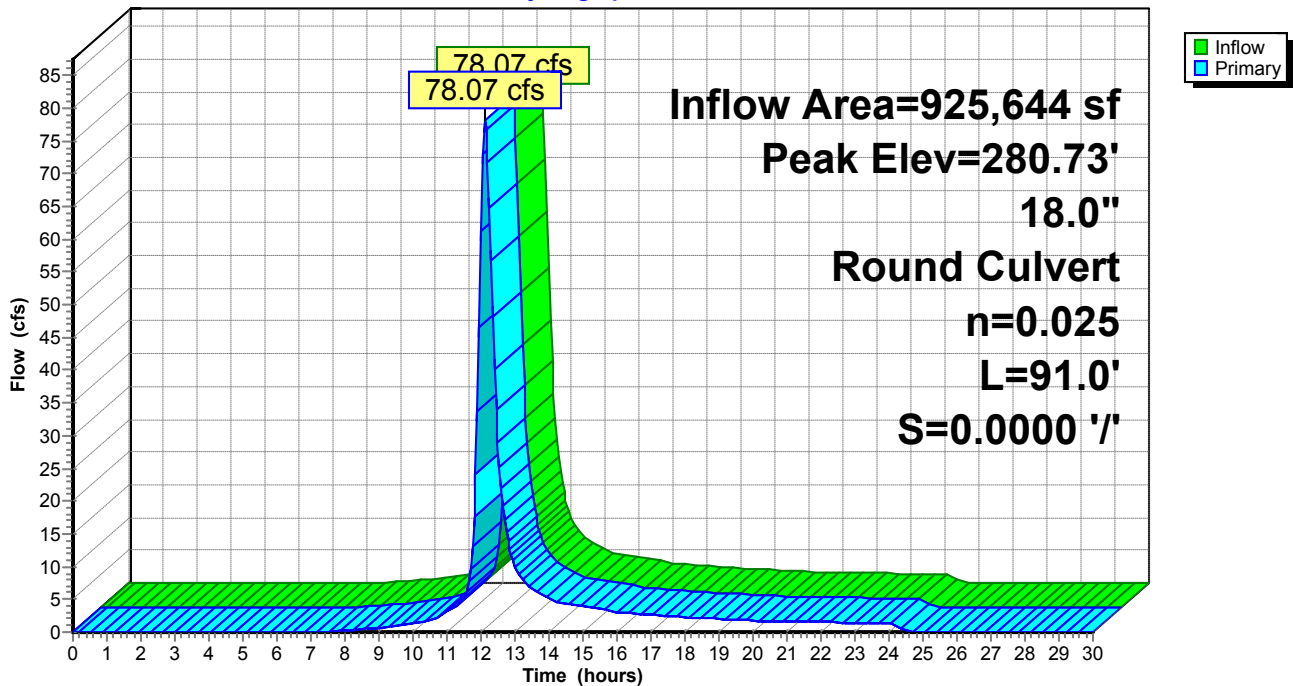
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 280.73' @ 12.12 hrs
 Flood Elev= 39.20'

Device	Routing	Invert	Outlet Devices
#1	Primary	35.20'	18.0" Round CMP_Round 18" L= 91.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 35.20' / 35.20' S= 0.0000 ' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

Primary OutFlow Max=77.43 cfs @ 12.12 hrs HW=276.81' (Free Discharge)
 ↳=CMP_Round 18" (Barrel Controls 77.43 cfs @ 43.82 fps)

Pond CB-10: CB-10

Hydrograph



Summary for Pond CB-11: CB-11

Inflow Area = 6,316 sf, 100.00% Impervious, Inflow Depth = 6.37" for 25-YEAR event
 Inflow = 1.38 cfs @ 11.95 hrs, Volume= 3,353 cf
 Outflow = 1.38 cfs @ 11.95 hrs, Volume= 3,353 cf, Atten= 0%, Lag= 0.0 min
 Primary = 1.38 cfs @ 11.95 hrs, Volume= 3,353 cf

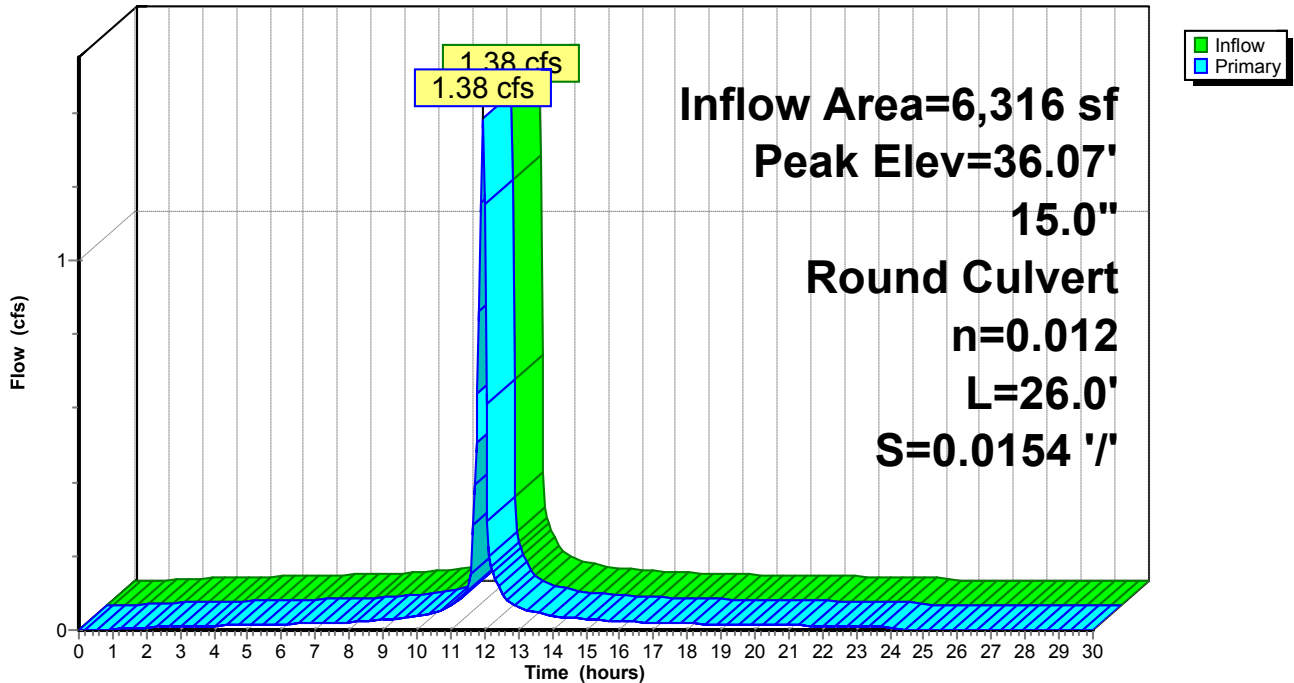
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 36.07' @ 11.95 hrs
 Flood Elev= 39.13'

Device	Routing	Invert	Outlet Devices
#1	Primary	35.50'	15.0" Round Culvert L= 26.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 35.50' / 35.10' S= 0.0154 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.23 sf

Primary OutFlow Max=1.38 cfs @ 11.95 hrs HW=36.07' (Free Discharge)
 ↳ **1=Culvert** (Inlet Controls 1.38 cfs @ 2.56 fps)

Pond CB-11: CB-11

Hydrograph



Summary for Pond CB-12: CB-12

[58] Hint: Peaked 75.29' above defined flood level
 [79] Warning: Submerged Pond CB-13 Primary device # 1 INLET by 74.36'

Inflow Area = 873,310 sf, 10.28% Impervious, Inflow Depth = 3.89" for 25-YEAR event
 Inflow = 74.12 cfs @ 12.11 hrs, Volume= 282,924 cf
 Outflow = 74.12 cfs @ 12.11 hrs, Volume= 282,924 cf, Atten= 0%, Lag= 0.0 min
 Primary = 74.12 cfs @ 12.11 hrs, Volume= 282,924 cf

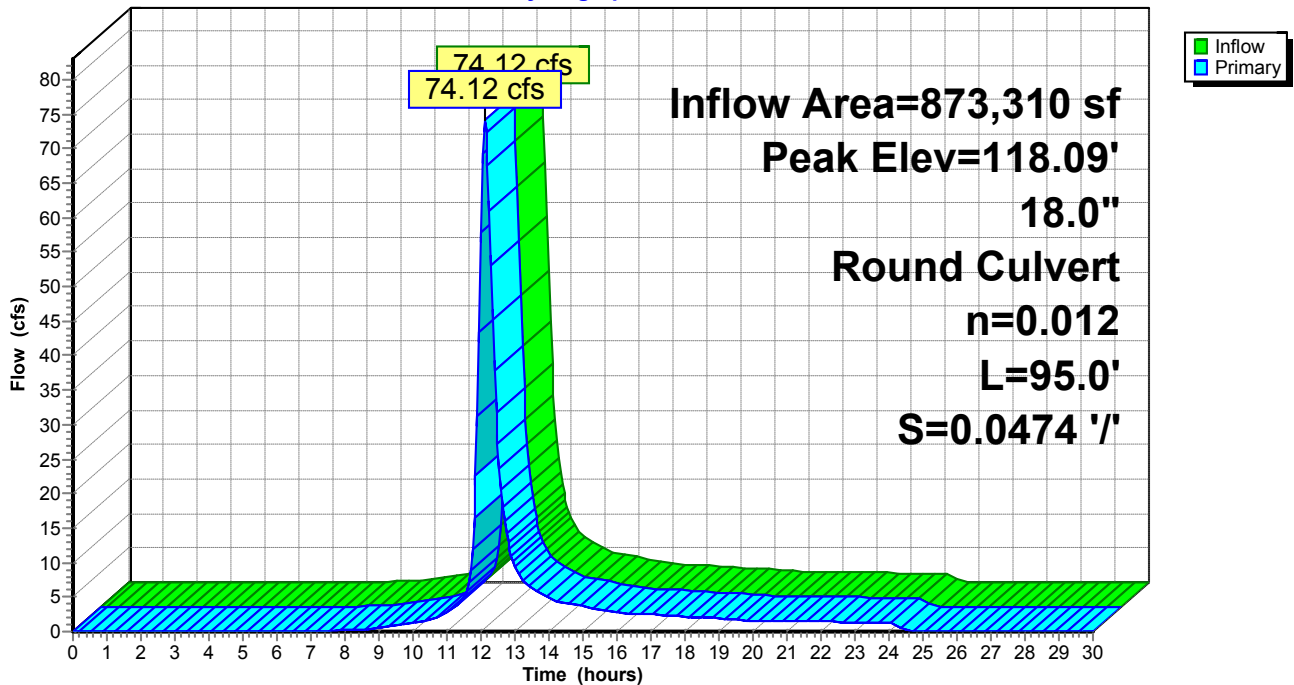
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 118.09' @ 12.11 hrs
 Flood Elev= 42.80'

Device	Routing	Invert	Outlet Devices
#1	Primary	39.70'	18.0" Round RCP_Round 18" L= 95.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 39.70' / 35.20' S= 0.0474 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=73.54 cfs @ 12.11 hrs HW=116.85' (Free Discharge)
 ↳1=RCP_Round 18" (Barrel Controls 73.54 cfs @ 41.62 fps)

Pond CB-12: CB-12

Hydrograph



Summary for Pond CB-13: CB-13

[58] Hint: Peaked 155.20' above defined flood level
 [81] Warning: Exceeded Pond CB-14 by 105.18' @ 12.10 hrs

Inflow Area = 852,126 sf, 10.17% Impervious, Inflow Depth = 3.88" for 25-YEAR event
 Inflow = 72.26 cfs @ 12.11 hrs, Volume= 275,832 cf
 Outflow = 72.26 cfs @ 12.11 hrs, Volume= 275,832 cf, Atten= 0%, Lag= 0.0 min
 Primary = 72.26 cfs @ 12.11 hrs, Volume= 275,832 cf

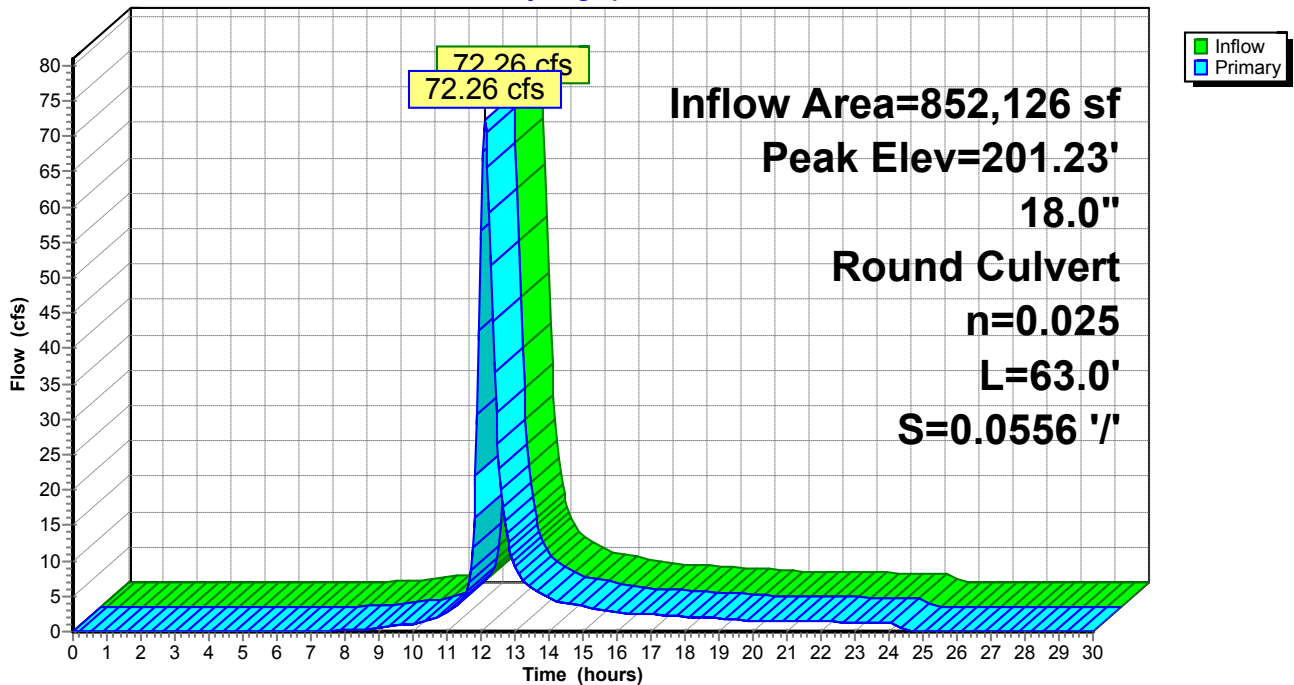
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 201.23' @ 12.11 hrs
 Flood Elev= 46.03'

Device	Routing	Invert	Outlet Devices
#1	Primary	43.30'	18.0" Round CMP_Round 18" L= 63.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 43.30' / 39.80' S= 0.0556 '/ Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

Primary OutFlow Max=71.74 cfs @ 12.11 hrs HW=198.97' (Free Discharge)
 ↳1=CMP_Round 18" (Barrel Controls 71.74 cfs @ 40.60 fps)

Pond CB-13: CB-13

Hydrograph



Summary for Pond CB-14: CB-14

[58] Hint: Peaked 42.75' above defined flood level
 [81] Warning: Exceeded Pond CB-15 by 3.33' @ 12.05 hrs

Inflow Area = 627,176 sf, 8.81% Impervious, Inflow Depth = 3.84" for 25-YEAR event
 Inflow = 55.43 cfs @ 12.09 hrs, Volume= 200,530 cf
 Outflow = 55.43 cfs @ 12.09 hrs, Volume= 200,530 cf, Atten= 0%, Lag= 0.0 min
 Primary = 55.43 cfs @ 12.09 hrs, Volume= 200,530 cf

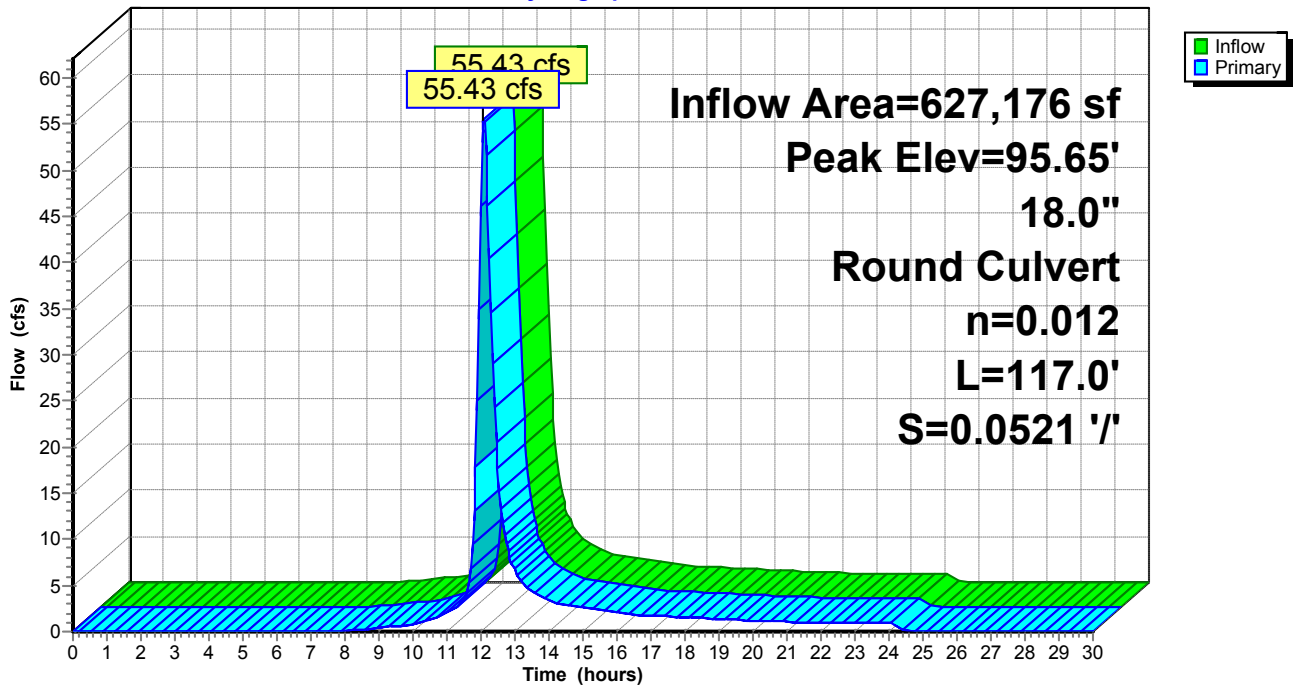
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 95.65' @ 12.09 hrs
 Flood Elev= 52.90'

Device	Routing	Invert	Outlet Devices
#1	Primary	49.50'	18.0" Round RCP_Round 18" L= 117.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 49.50' / 43.40' S= 0.0521 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=54.97 cfs @ 12.09 hrs HW=94.83' (Free Discharge)
 ↳1=RCP_Round 18" (Barrel Controls 54.97 cfs @ 31.11 fps)

Pond CB-14: CB-14

Hydrograph



Summary for Pond CB-15: CB-15

[58] Hint: Peaked 34.56' above defined flood level
 [79] Warning: Submerged Pond CB-16 Primary device # 1 INLET by 28.70'

Inflow Area = 597,934 sf, 8.83% Impervious, Inflow Depth = 3.83" for 25-YEAR event
 Inflow = 52.30 cfs @ 12.10 hrs, Volume= 190,997 cf
 Outflow = 52.30 cfs @ 12.10 hrs, Volume= 190,997 cf, Atten= 0%, Lag= 0.0 min
 Primary = 52.30 cfs @ 12.10 hrs, Volume= 190,997 cf

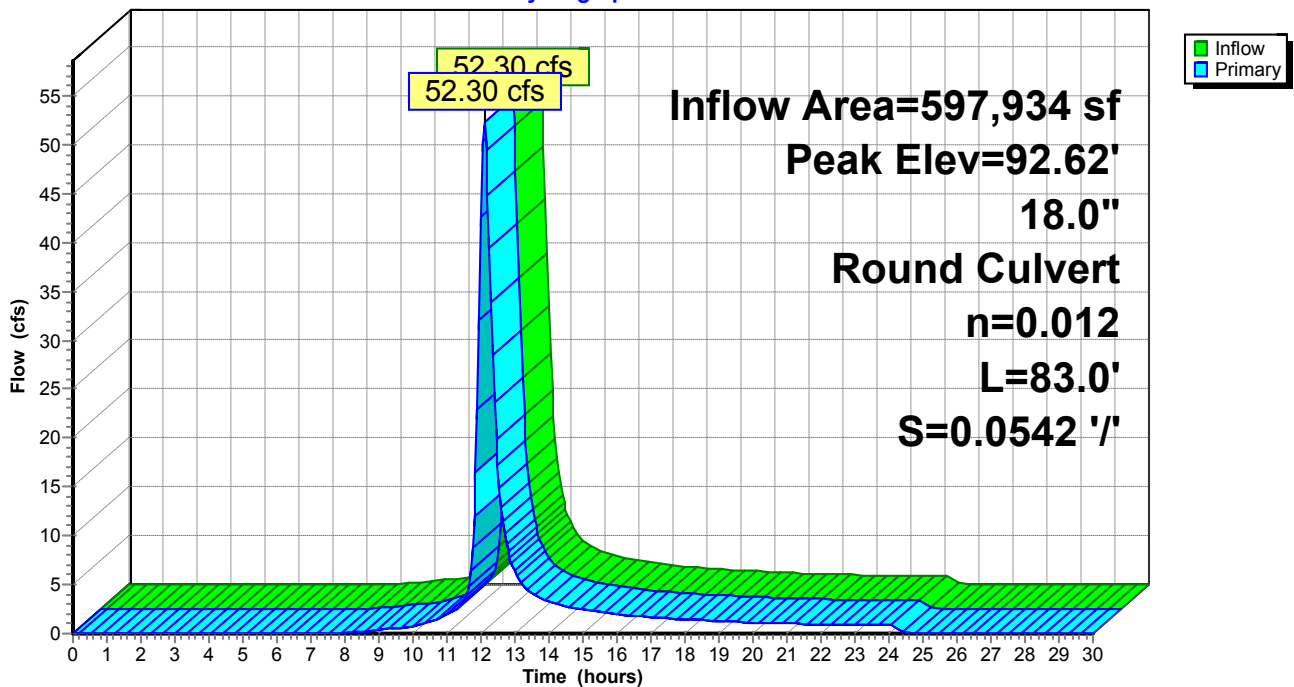
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 92.62' @ 12.10 hrs
 Flood Elev= 58.06'

Device	Routing	Invert	Outlet Devices
#1	Primary	54.10'	18.0" Round RCP_Round 18" L= 83.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 54.10' / 49.60' S= 0.0542 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=52.12 cfs @ 12.10 hrs HW=92.37' (Free Discharge)
 ↑1=RCP_Round 18" (Inlet Controls 52.12 cfs @ 29.49 fps)

Pond CB-15: CB-15

Hydrograph



Summary for Pond CB-16: CB-16

[58] Hint: Peaked 33.72' above defined flood level
 [81] Warning: Exceeded Pond CB-17 by 15.44' @ 12.05 hrs

Inflow Area = 537,106 sf, 9.26% Impervious, Inflow Depth = 3.84" for 25-YEAR event
 Inflow = 46.04 cfs @ 12.11 hrs, Volume= 171,696 cf
 Outflow = 46.04 cfs @ 12.11 hrs, Volume= 171,696 cf, Atten= 0%, Lag= 0.0 min
 Primary = 46.04 cfs @ 12.11 hrs, Volume= 171,696 cf

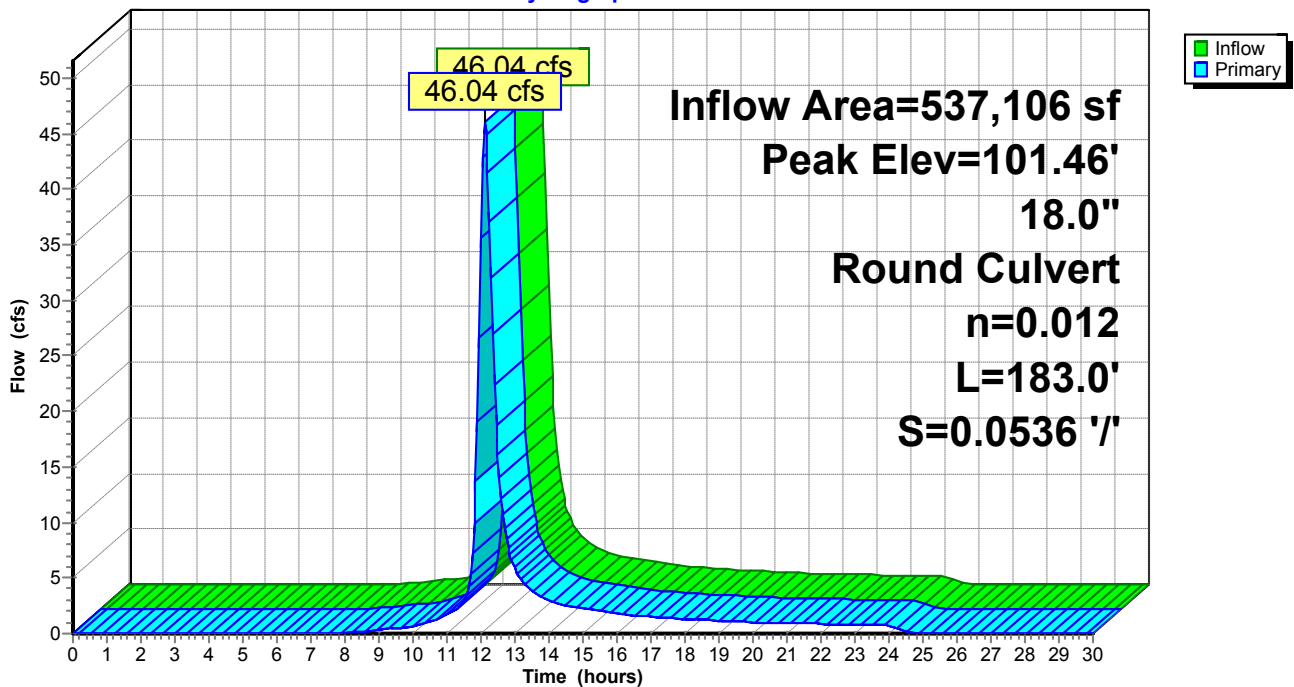
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 101.46' @ 12.11 hrs
 Flood Elev= 67.74'

Device	Routing	Invert	Outlet Devices
#1	Primary	63.90'	18.0" Round RCP_Round 18" L= 183.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 63.90' / 54.10' S= 0.0536 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=45.66 cfs @ 12.11 hrs HW=100.72' (Free Discharge)
 ↳1=RCP_Round 18" (Barrel Controls 45.66 cfs @ 25.84 fps)

Pond CB-16: CB-16

Hydrograph



Summary for Pond CB-17: CB-17

[58] Hint: Peaked 17.75' above defined flood level

Inflow Area = 391,463 sf, 8.69% Impervious, Inflow Depth = 3.81" for 25-YEAR event
 Inflow = 33.54 cfs @ 12.18 hrs, Volume= 124,216 cf
 Outflow = 33.54 cfs @ 12.18 hrs, Volume= 124,216 cf, Atten= 0%, Lag= 0.0 min
 Primary = 33.54 cfs @ 12.18 hrs, Volume= 124,216 cf

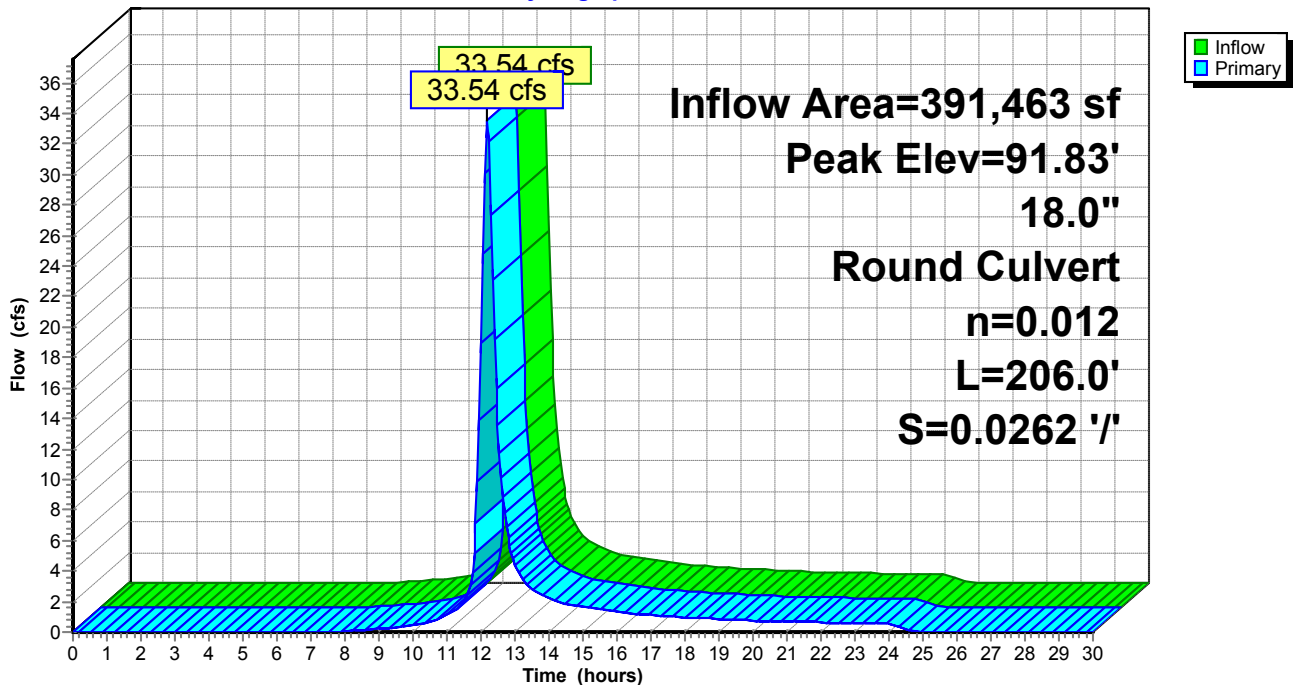
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 91.83' @ 12.18 hrs
 Flood Elev= 74.08'

Device	Routing	Invert	Outlet Devices
#1	Primary	69.40'	18.0" Round RCP_Round 18" L= 206.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 69.40' / 64.00' S= 0.0262 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=33.24 cfs @ 12.18 hrs HW=91.38' (Free Discharge)
 ↳1=RCP_Round 18" (Barrel Controls 33.24 cfs @ 18.81 fps)

Pond CB-17: CB-17

Hydrograph



Summary for Pond CB-2: CB-2

[58] Hint: Peaked 4.75' above defined flood level
 [81] Warning: Exceeded Pond CB-1 by 1.39' @ 12.20 hrs

Inflow Area = 167,255 sf, 7.38% Impervious, Inflow Depth = 3.74" for 25-YEAR event
 Inflow = 12.96 cfs @ 12.21 hrs, Volume= 52,097 cf
 Outflow = 12.96 cfs @ 12.21 hrs, Volume= 52,097 cf, Atten= 0%, Lag= 0.0 min
 Primary = 12.96 cfs @ 12.21 hrs, Volume= 52,097 cf

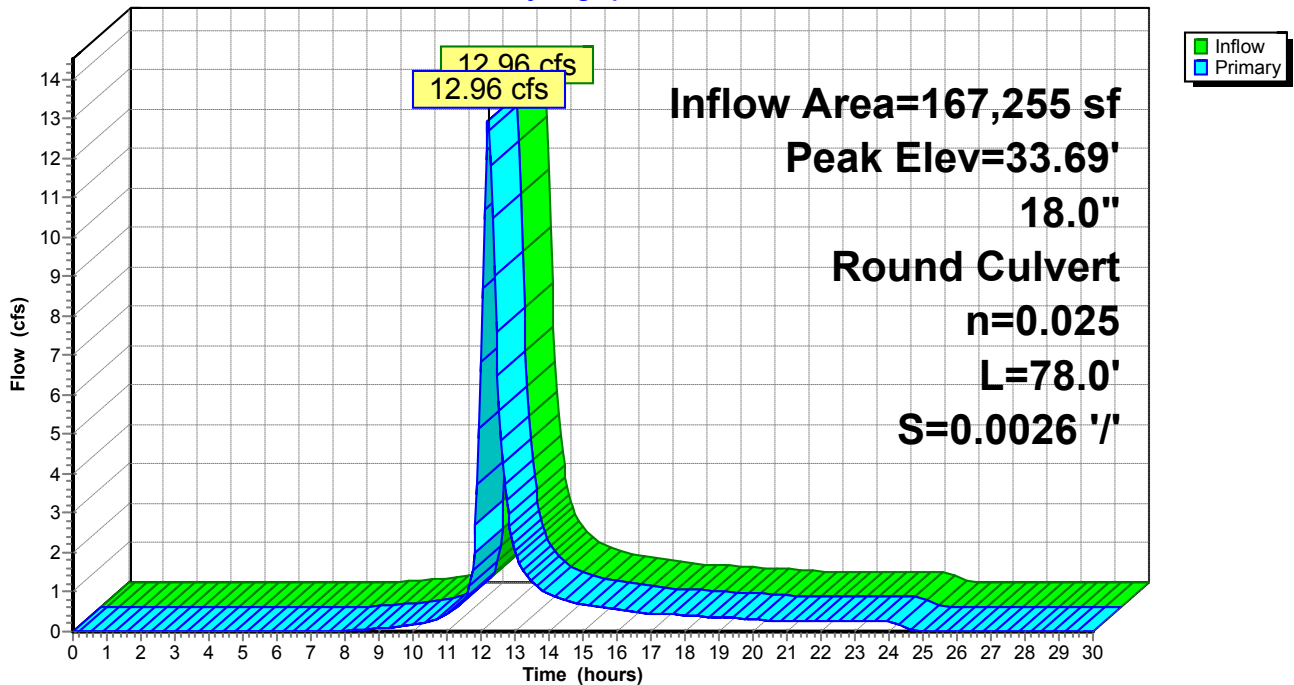
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 33.69' @ 12.21 hrs
 Flood Elev= 28.94'

Device	Routing	Invert	Outlet Devices
#1	Primary	26.40'	18.0" Round Culvert L= 78.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 26.40' / 26.20' S= 0.0026 '/ Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

Primary OutFlow Max=12.87 cfs @ 12.21 hrs HW=33.61' (Free Discharge)
 ←1=Culvert (Barrel Controls 12.87 cfs @ 7.28 fps)

Pond CB-2: CB-2

Hydrograph



Summary for Pond CB-3: CB-3

[58] Hint: Peaked 3.33' above defined flood level

Inflow Area = 136,129 sf, 5.36% Impervious, Inflow Depth = 3.70" for 25-YEAR event
 Inflow = 10.61 cfs @ 12.21 hrs, Volume= 42,020 cf
 Outflow = 10.61 cfs @ 12.21 hrs, Volume= 42,020 cf, Atten= 0%, Lag= 0.0 min
 Primary = 10.61 cfs @ 12.21 hrs, Volume= 42,020 cf

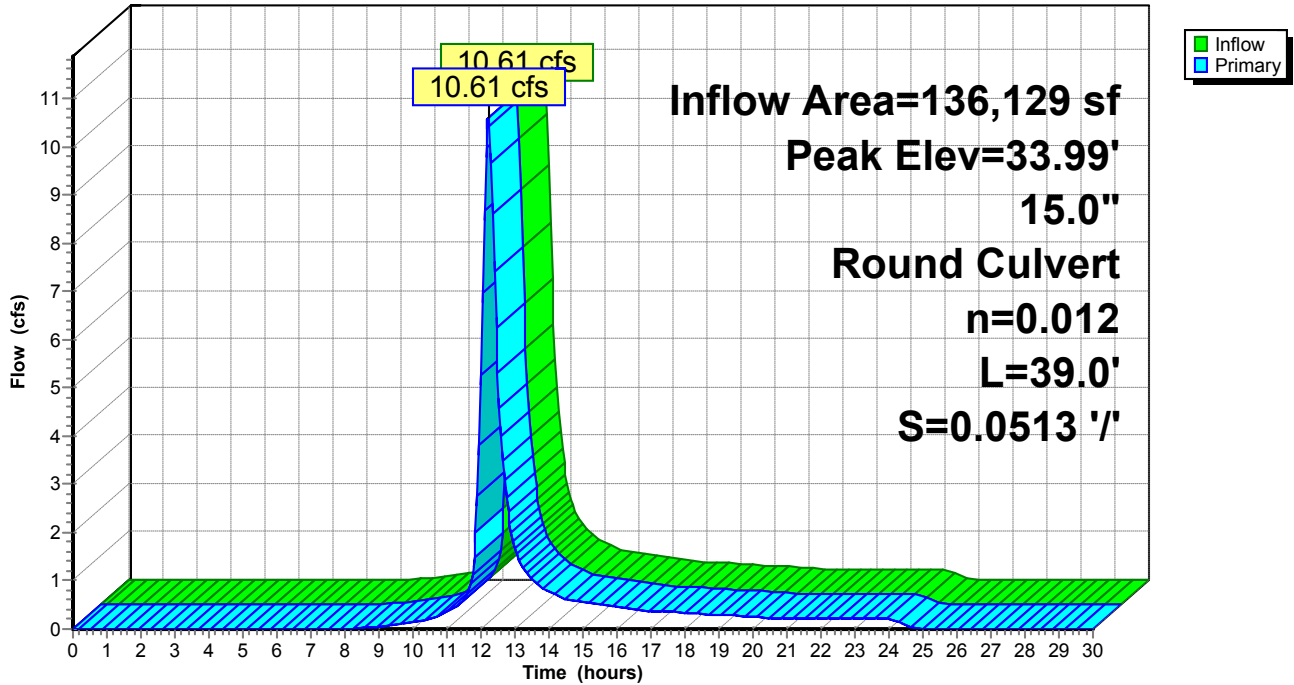
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 33.99' @ 12.21 hrs
 Flood Elev= 30.66'

Device	Routing	Invert	Outlet Devices
#1	Primary	28.20'	15.0" Round RCP_Round 15" L= 39.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 28.20' / 26.20' S= 0.0513 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.23 sf

Primary OutFlow Max=10.53 cfs @ 12.21 hrs HW=33.92' (Free Discharge)
 ↳1=RCP_Round 15" (Inlet Controls 10.53 cfs @ 8.58 fps)

Pond CB-3: CB-3

Hydrograph



Summary for Pond CB-4: CB-4

[58] Hint: Peaked 1.22' above defined flood level
 [79] Warning: Submerged Pond CB-2 Primary device # 1 INLET by 4.31'
 [79] Warning: Submerged Pond CB-3 Primary device # 1 INLET by 2.51'

Inflow Area = 305,014 sf, 6.98% Impervious, Inflow Depth = 3.74" for 25-YEAR event
 Inflow = 23.60 cfs @ 12.21 hrs, Volume= 94,982 cf
 Outflow = 23.60 cfs @ 12.21 hrs, Volume= 94,982 cf, Atten= 0%, Lag= 0.0 min
 Primary = 23.60 cfs @ 12.21 hrs, Volume= 94,982 cf

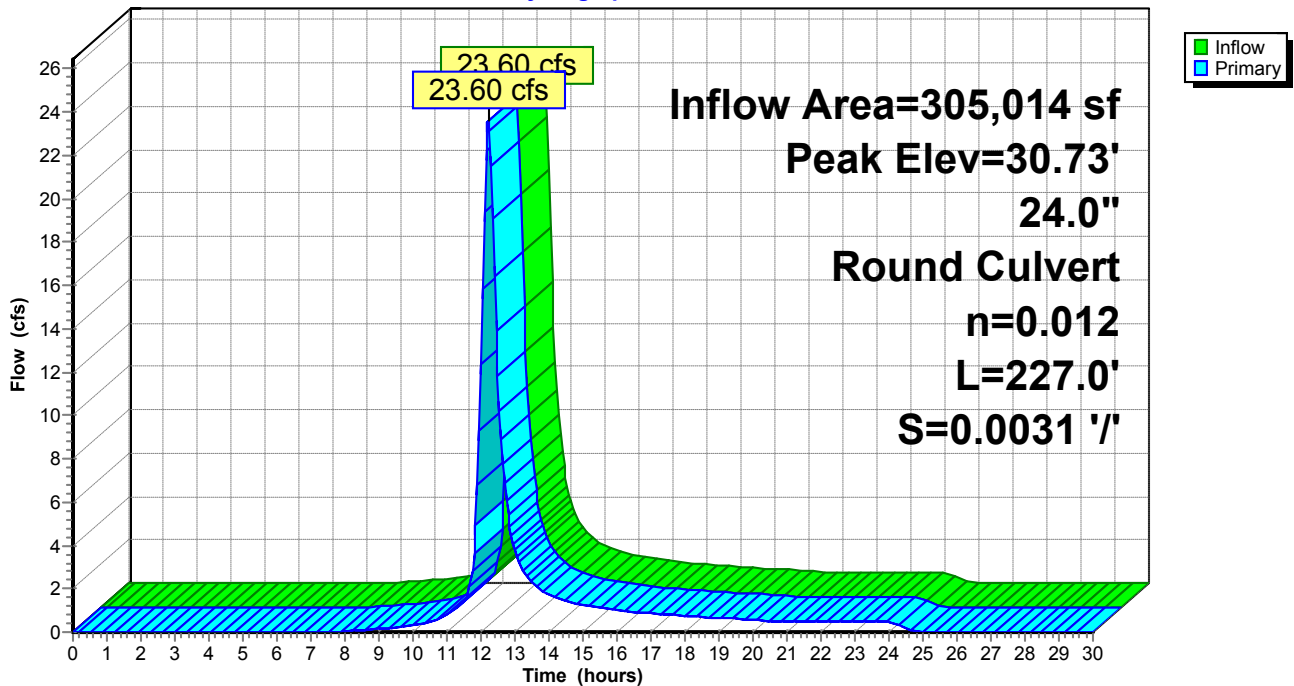
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 30.73' @ 12.21 hrs
 Flood Elev= 29.51'

Device	Routing	Invert	Outlet Devices
#1	Primary	26.00'	24.0" Round Culvert L= 227.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 26.00' / 25.30' S= 0.0031 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=23.44 cfs @ 12.21 hrs HW=30.68' (Free Discharge)
 ↑1=Culvert (Barrel Controls 23.44 cfs @ 7.46 fps)

Pond CB-4: CB-4

Hydrograph



Summary for Pond CB-5: CB-5

Inflow Area = 85,670 sf, 0.96% Impervious, Inflow Depth = 3.50" for 25-YEAR event
 Inflow = 6.66 cfs @ 12.19 hrs, Volume= 24,980 cf
 Outflow = 6.66 cfs @ 12.19 hrs, Volume= 24,980 cf, Atten= 0%, Lag= 0.0 min
 Primary = 6.66 cfs @ 12.19 hrs, Volume= 24,980 cf

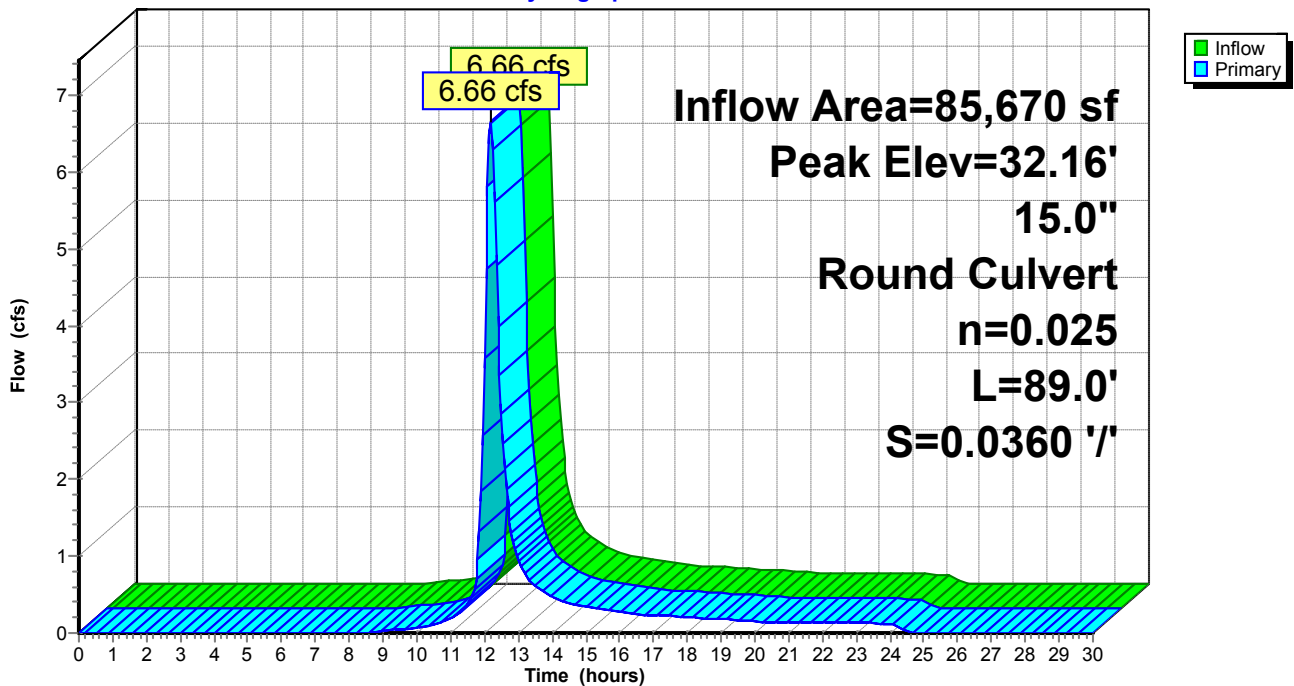
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 32.16' @ 12.19 hrs
 Flood Elev= 33.19'

Device	Routing	Invert	Outlet Devices
#1	Primary	29.50'	15.0" Round CMP_Round 15" L= 89.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 29.50' / 26.30' S= 0.0360 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.23 sf

Primary OutFlow Max=6.61 cfs @ 12.19 hrs HW=32.13' (Free Discharge)
 ↳1=CMP_Round 15" (Inlet Controls 6.61 cfs @ 5.39 fps)

Pond CB-5: CB-5

Hydrograph



Summary for Pond CB-6: CB-6

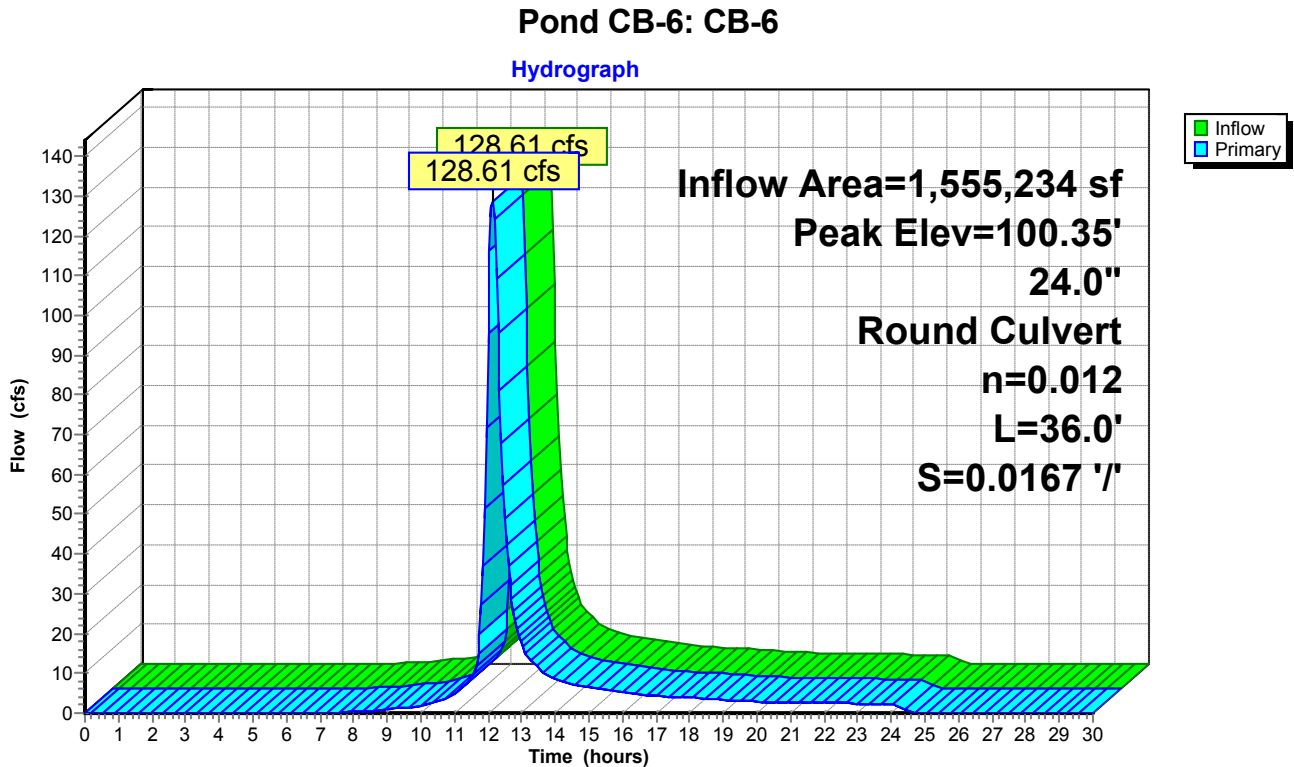
[58] Hint: Peaked 68.57' above defined flood level
 [81] Warning: Exceeded Pond CB-5 by 67.50' @ 12.15 hrs
 [79] Warning: Submerged Pond CB-8 Primary device # 1 INLET by 70.08'

Inflow Area = 1,555,234 sf, 8.77% Impervious, Inflow Depth = 3.82" for 25-YEAR event
 Inflow = 128.61 cfs @ 12.13 hrs, Volume= 494,961 cf
 Outflow = 128.61 cfs @ 12.13 hrs, Volume= 494,961 cf, Atten= 0%, Lag= 0.0 min
 Primary = 128.61 cfs @ 12.13 hrs, Volume= 494,961 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 100.35' @ 12.13 hrs
 Flood Elev= 31.78'

Device	Routing	Invert	Outlet Devices
#1	Primary	27.10'	24.0" Round Culvert L= 36.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 27.10' / 26.50' S= 0.0167 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 3.14 sf

Primary OutFlow Max=127.67 cfs @ 12.13 hrs HW=99.33' (Free Discharge)
 ↑**1=Culvert** (Inlet Controls 127.67 cfs @ 40.64 fps)



Summary for Pond CB-7: CB-7

[58] Hint: Peaked 35.99' above defined flood level
 [81] Warning: Exceeded Pond CB-4 by 36.39' @ 12.15 hrs
 [79] Warning: Submerged Pond CB-6 Primary device # 1 INLET by 39.64'

Inflow Area = 1,862,407 sf, 8.59% Impervious, Inflow Depth = 3.81" for 25-YEAR event
 Inflow = 150.31 cfs @ 12.14 hrs, Volume= 591,089 cf
 Outflow = 150.31 cfs @ 12.14 hrs, Volume= 591,089 cf, Atten= 0%, Lag= 0.0 min
 Primary = 150.31 cfs @ 12.14 hrs, Volume= 591,089 cf

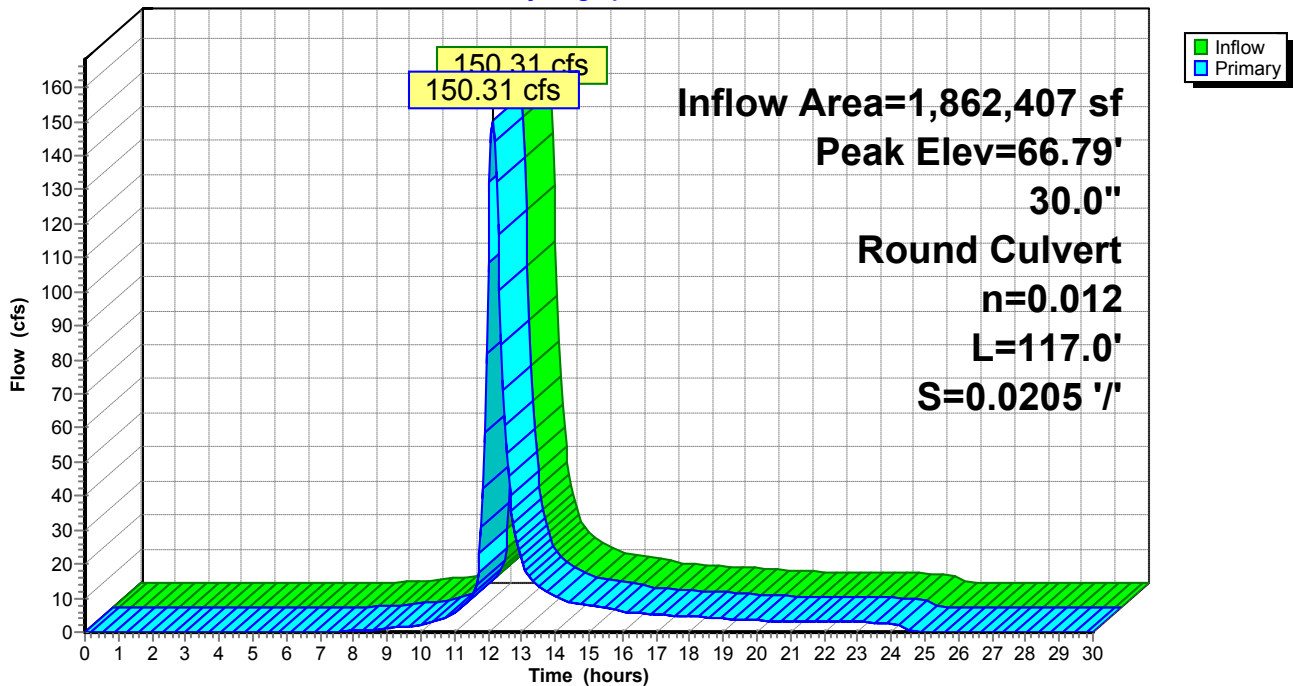
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 66.79' @ 12.14 hrs
 Flood Elev= 30.80'

Device	Routing	Invert	Outlet Devices
#1	Primary	25.10'	30.0" Round Culvert L= 117.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 25.10' / 22.70' S= 0.0205 '/' Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 4.91 sf

Primary OutFlow Max=149.76 cfs @ 12.14 hrs HW=66.50' (Free Discharge)
 ↑**1=Culvert** (Inlet Controls 149.76 cfs @ 30.51 fps)

Pond CB-7: CB-7

Hydrograph



Summary for Pond CB-8: CB-8

[58] Hint: Peaked 250.64' above defined flood level
 [79] Warning: Submerged Pond CB-9 Primary device # 1 INLET by 249.42'

Inflow Area = 1,315,192 sf, 9.09% Impervious, Inflow Depth = 3.84" for 25-YEAR event
 Inflow = 107.14 cfs @ 12.14 hrs, Volume= 420,996 cf
 Outflow = 107.14 cfs @ 12.14 hrs, Volume= 420,996 cf, Atten= 0%, Lag= 0.0 min
 Primary = 107.14 cfs @ 12.14 hrs, Volume= 420,996 cf

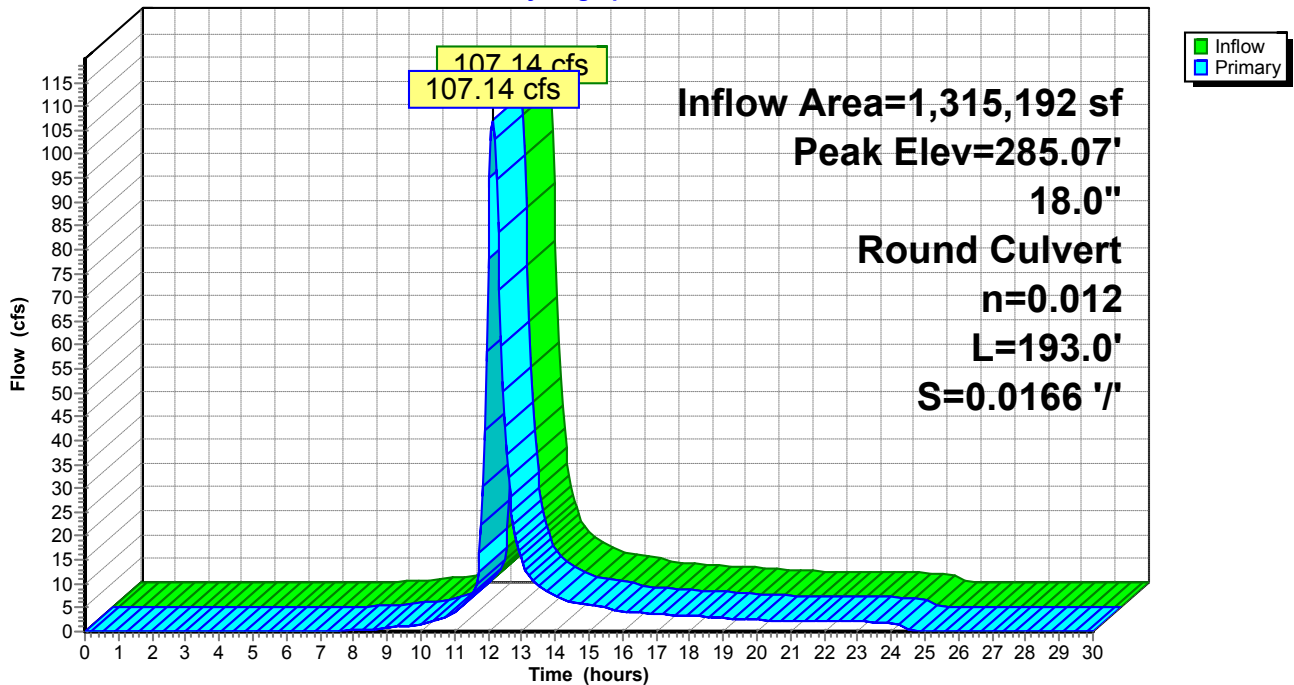
Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 285.07' @ 12.14 hrs
 Flood Elev= 34.43'

Device	Routing	Invert	Outlet Devices
#1	Primary	29.50'	18.0" Round RCP_Round 18" L= 193.0' RCP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 29.50' / 26.30' S= 0.0166 '/ Cc= 0.900 n= 0.012 Concrete pipe, finished, Flow Area= 1.77 sf

Primary OutFlow Max=106.78 cfs @ 12.14 hrs HW=283.37' (Free Discharge)
 ↳1=RCP_Round 18" (Barrel Controls 106.78 cfs @ 60.43 fps)

Pond CB-8: CB-8

Hydrograph



Summary for Pond CB-9: CB-9

[58] Hint: Peaked 647.65' above defined flood level
 [81] Warning: Exceeded Pond CB-10 by 409.59' @ 12.15 hrs

Inflow Area = 1,151,783 sf, 9.36% Impervious, Inflow Depth = 3.85" for 25-YEAR event
 Inflow = 94.39 cfs @ 12.13 hrs, Volume= 369,144 cf
 Outflow = 94.39 cfs @ 12.13 hrs, Volume= 369,144 cf, Atten= 0%, Lag= 0.0 min
 Primary = 94.39 cfs @ 12.13 hrs, Volume= 369,144 cf

Routing by Stor-Ind method, Time Span= 0.00-30.00 hrs, dt= 0.05 hrs
 Peak Elev= 685.78' @ 12.13 hrs
 Flood Elev= 38.13'

Device	Routing	Invert	Outlet Devices
#1	Primary	35.40'	18.0" Round CMP_Round 18" L= 190.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 35.40' / 31.00' S= 0.0232 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 1.77 sf

Primary OutFlow Max=93.80 cfs @ 12.13 hrs HW=677.83' (Free Discharge)
 ↳=CMP_Round 18" (Barrel Controls 93.80 cfs @ 53.08 fps)

Pond CB-9: CB-9

Hydrograph

