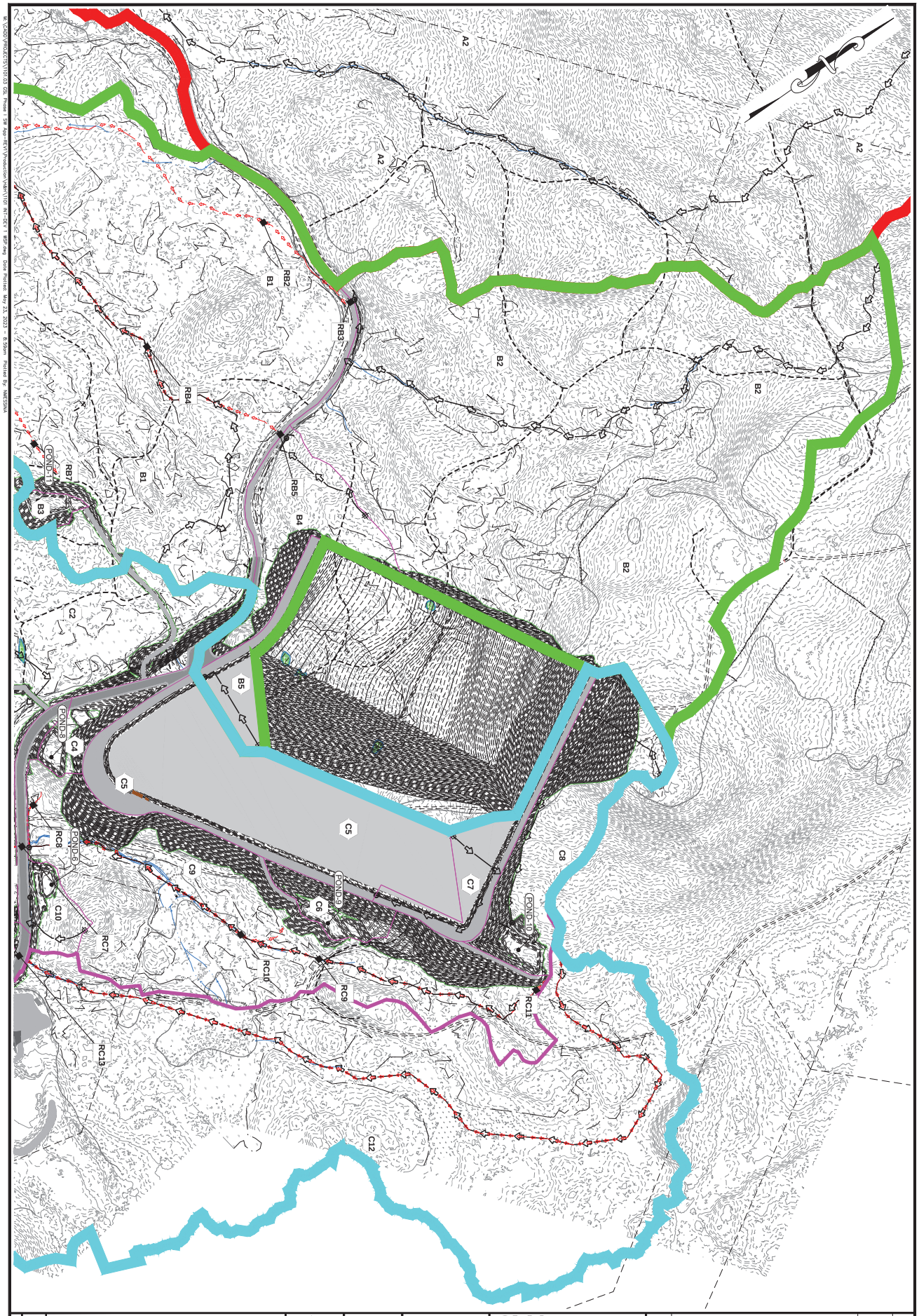
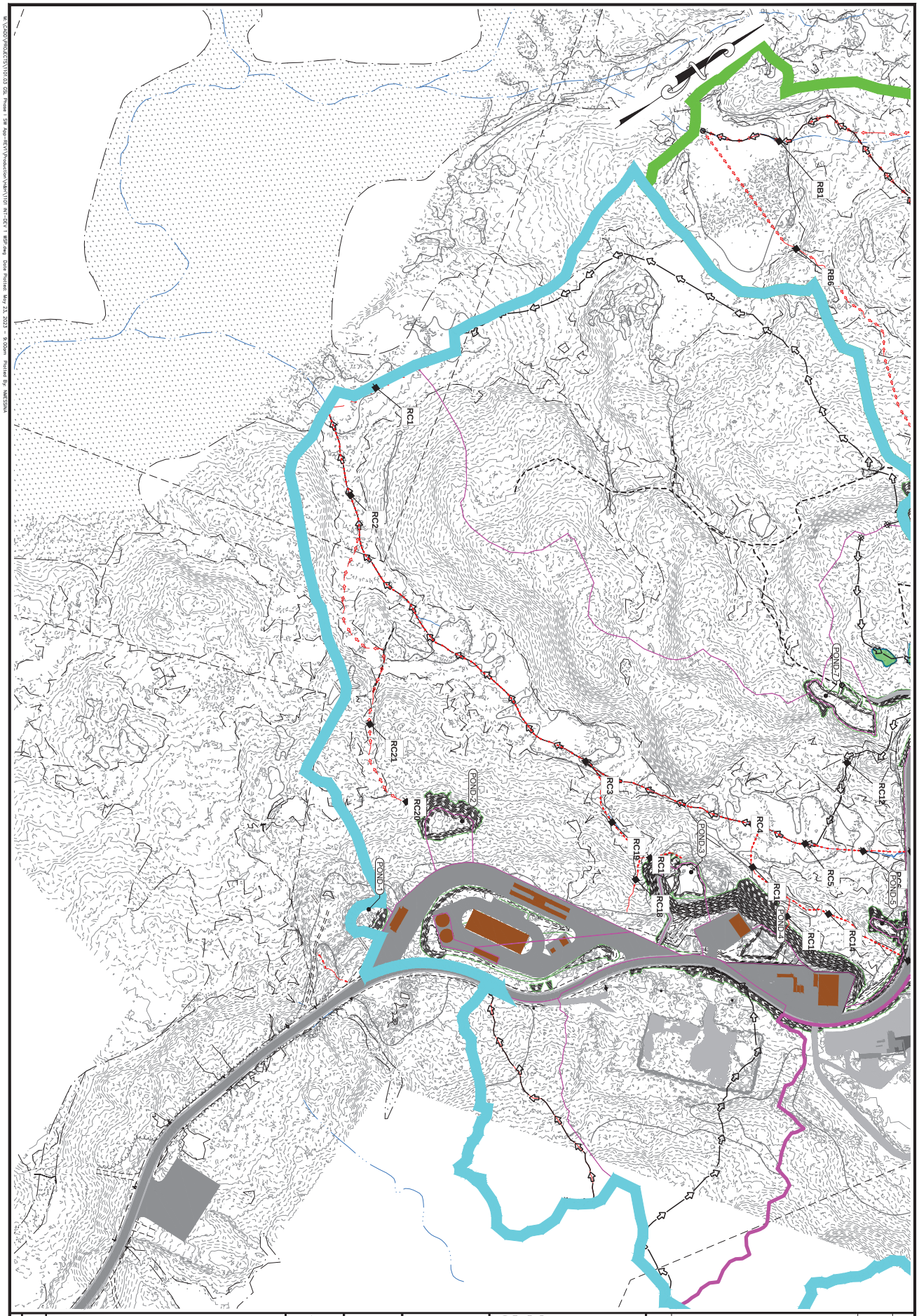


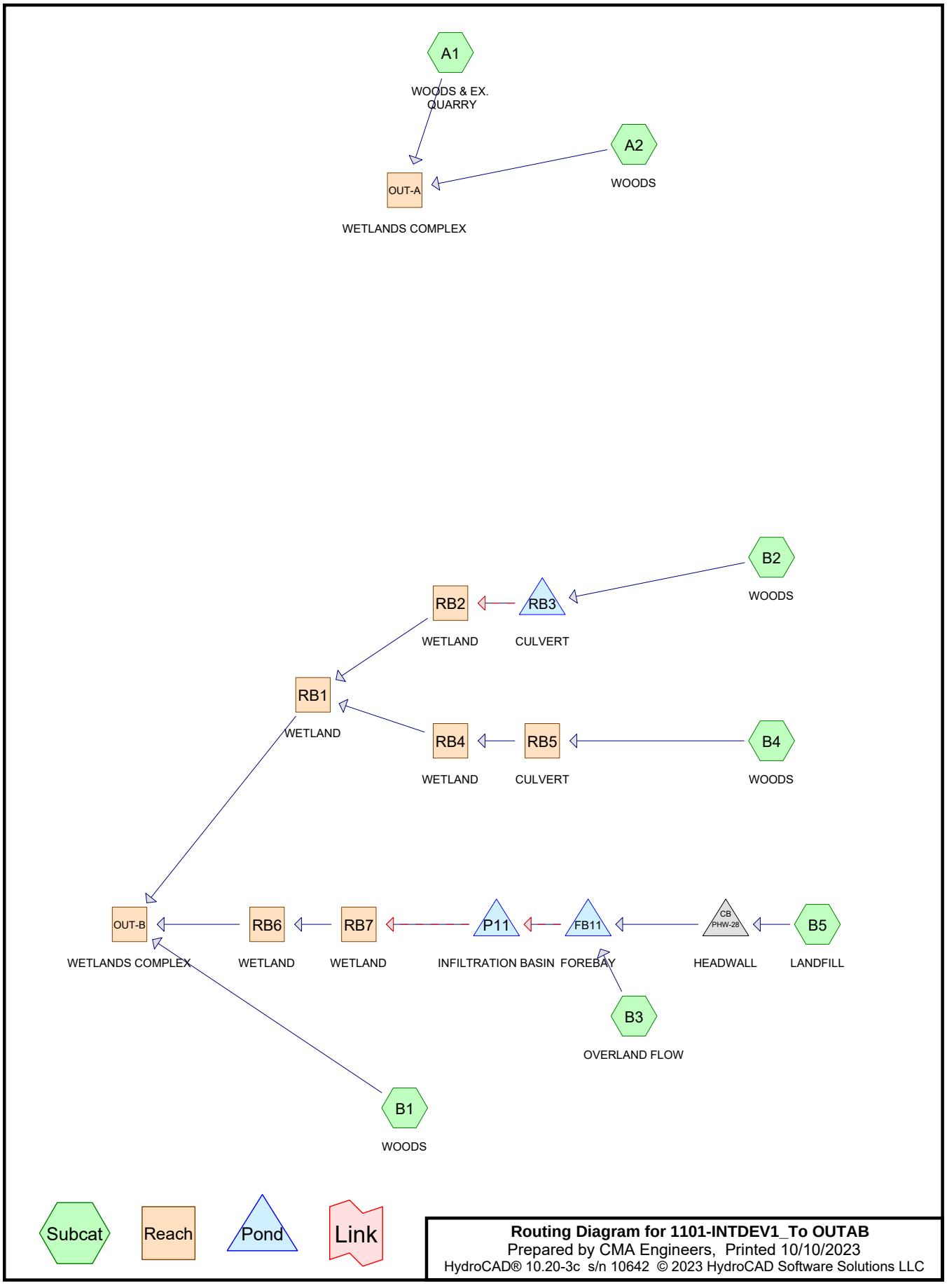
sheet 3 of 4	drawing no. INTDEV1-3	Granite State Landfill, LLC. Dalton, New Hampshire NHDES Alteration of Terrain Permit Application Intermediate-Development 1 Drainage Diagram	date: April 2023 project no: 1101 checked by: AJS scale: 0 150' 300' Scale: 1" = 150'	designed by: NJM drawn by: NJM approved by: AJS	CMA ENGINEERS Civil/Environmental/Structural Portsmouth, NH 603/431-6196 • Manchester, NH 603/627-0708 • Portland, ME 207/541-4223 cmaengineers.com	no.	revision / date / by



sheet 4 of 4	Granite State Landfill, LLC. Dalton, New Hampshire	date: April 2023	designed by: NJM	CMA ENGINEERS Civil/Environmental/Structural	no. / revision / date / by
drawing no. INTDEV1-4	NHDES Alteration of Terrain Permit Application	project no: 1101	drawn by: NJM	Portsmouth, NH 603/431-6196 • Manchester, NH 603/627-0708 • Portland, ME 207/541-4223	
	Intermediate-Devlopment 1 Drainage Diagram	checked by: AJS	approved by: AJS	cmaengineers.com	
		scale: 0 150' 300' Scale: 1" = 150'			

Appendix J.3.ii

10-Year, 24-Hour Storm Calculations (Full Calculations)



Routing Diagram for 1101-INTDEV1_To OUTAB
Prepared by CMA Engineers, Printed 10/10/2023
HydroCAD® 10.20-3c s/n 10642 © 2023 HydroCAD Software Solutions LLC

Project Notes

Rainfall events imported from "1101 Pre-development.hcp"

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	10-yr	Type II 24-hr		Default	24.00	1	3.31	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
12.560	86	Fallow, bare soil, HSG B (A1)
0.050	96	Gravel surface, HSG A (A2)
1.980	96	Gravel surface, HSG B (A1, A2, B1, B2, B4, B5)
1.720	96	Gravel surface, HSG C (A1, A2, B1, B2, B4, B5)
0.970	98	Landfill, Geomembrane (B5)
2.690	30	Meadow, non-grazed, HSG A (A2, B1)
8.810	58	Meadow, non-grazed, HSG B (A1, A2, B1, B2, B4)
15.040	71	Meadow, non-grazed, HSG C (A1, A2, B1, B2, B3, B4, B5)
0.980	78	Meadow, non-grazed, HSG D (B1)
0.020	98	Paved parking, HSG B (B4)
0.190	98	Paved parking, HSG C (B1, B4)
0.060	98	Unconnected roofs, HSG B (A1)
21.270	30	Woods, Good, HSG A (A2, B1)
90.730	55	Woods, Good, HSG B (A1, A2, B1, B2, B4)
124.060	70	Woods, Good, HSG C (A1, A2, B1, B2, B4)
2.860	77	Woods, Good, HSG D (A1, A2, B1, B2, B4)
283.990	**63**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
24.010	HSG A	A2, B1
114.160	HSG B	A1, A2, B1, B2, B4, B5
141.010	HSG C	A1, A2, B1, B2, B3, B4, B5
3.840	HSG D	A1, A2, B1, B2, B4
0.970	Other	B5
283.990		**TOTAL AREA**

Time span=0.00-27.00 hrs, dt=0.01 hrs, 2701 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment A1: WOODS & EX. QUARRY Runoff Area=89.280 ac 0.07% Impervious Runoff Depth>0.57"
Flow Length=5,225' Tc=85.7 min CN=63 Runoff=15.2 cfs 4.235 af

Subcatchment A2: WOODS Runoff Area=92.770 ac 0.00% Impervious Runoff Depth>0.65"
Flow Length=5,210' Tc=75.7 min CN=65 Runoff=20.9 cfs 5.060 af

Subcatchment B1: WOODS Runoff Area=47.910 ac 0.06% Impervious Runoff Depth=0.18"
Flow Length=3,520' Tc=51.0 min CN=51 Runoff=1.5 cfs 0.700 af

Subcatchment B2: WOODS Runoff Area=47.530 ac 0.00% Impervious Runoff Depth=0.79"
Flow Length=2,695' Tc=35.5 min CN=68 Runoff=24.7 cfs 3.142 af

Subcatchment B3: OVERLAND FLOW Runoff Area=0.590 ac 0.00% Impervious Runoff Depth=0.94"
Tc=6.0 min CN=71 Runoff=1.0 cfs 0.046 af

Subcatchment B4: WOODS Runoff Area=4.190 ac 4.30% Impervious Runoff Depth=1.05"
Flow Length=430' Tc=26.4 min CN=73 Runoff=3.9 cfs 0.368 af

Subcatchment B5: LANDFILL Runoff Area=1.720 ac 56.40% Impervious Runoff Depth=2.46"
Tc=6.0 min CN=92 Runoff=7.1 cfs 0.352 af

Reach OUT-A: WETLANDS COMPLEX Inflow=35.8 cfs 9.295 af
Outflow=35.8 cfs 9.295 af

Reach OUT-B: WETLANDS COMPLEX Inflow=24.8 cfs 4.205 af
Outflow=24.8 cfs 4.205 af

Reach RB1: WETLAND Avg. Flow Depth=0.39' Max Vel=1.96 fps Inflow=26.7 cfs 3.509 af
n=0.035 L=1,120.0' S=0.0129 '/' Capacity=184.3 cfs Outflow=23.8 cfs 3.505 af

Reach RB2: WETLAND Avg. Flow Depth=0.36' Max Vel=3.60 fps Inflow=24.6 cfs 3.142 af
n=0.035 L=1,055.0' S=0.0474 '/' Capacity=211.4 cfs Outflow=23.8 cfs 3.141 af

Reach RB4: WETLAND Avg. Flow Depth=0.17' Max Vel=1.85 fps Inflow=3.9 cfs 0.368 af
n=0.035 L=1,600.0' S=0.0358 '/' Capacity=142.7 cfs Outflow=2.9 cfs 0.367 af

Reach RB5: CULVERT Avg. Flow Depth=0.47' Max Vel=8.23 fps Inflow=3.9 cfs 0.368 af
18.0" Round Pipe n=0.013 L=24.6' S=0.0305 '/' Capacity=18.3 cfs Outflow=3.9 cfs 0.368 af

Reach RB6: WETLAND Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.035 L=475.0' S=0.0168 '/' Capacity=210.2 cfs Outflow=0.0 cfs 0.000 af

Reach RB7: WETLAND Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.035 L=1,050.0' S=0.0533 '/' Capacity=391.6 cfs Outflow=0.0 cfs 0.000 af

Pond FB11: FOREBAY Peak Elev=1,144.17' Storage=3,426 cf Inflow=8.1 cfs 0.398 af
Discarded=0.2 cfs 0.252 af Primary=7.8 cfs 0.147 af Outflow=8.0 cfs 0.398 af

Pond P11: INFILTRATION BASIN Peak Elev=1,141.67' Storage=4,055 cf Inflow=7.8 cfs 0.147 af
Discarded=0.7 cfs 0.147 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.7 cfs 0.147 af

Pond PHW-28: HEADWALL Peak Elev=1,176.18' Inflow=7.1 cfs 0.352 af
24.0" Round Culvert n=0.013 L=835.1' S=0.0371 '/' Outflow=7.1 cfs 0.352 af

Pond RB3: CULVERT Peak Elev=1,136.06' Storage=1,388 cf Inflow=24.7 cfs 3.142 af
Primary=8.7 cfs 2.520 af Secondary=15.9 cfs 0.621 af Outflow=24.6 cfs 3.142 af

Total Runoff Area = 283.990 ac Runoff Volume = 13.903 af Average Runoff Depth = 0.59"
99.56% Pervious = 282.750 ac 0.44% Impervious = 1.240 ac

Summary for Subcatchment A1: WOODS & EX. QUARRY

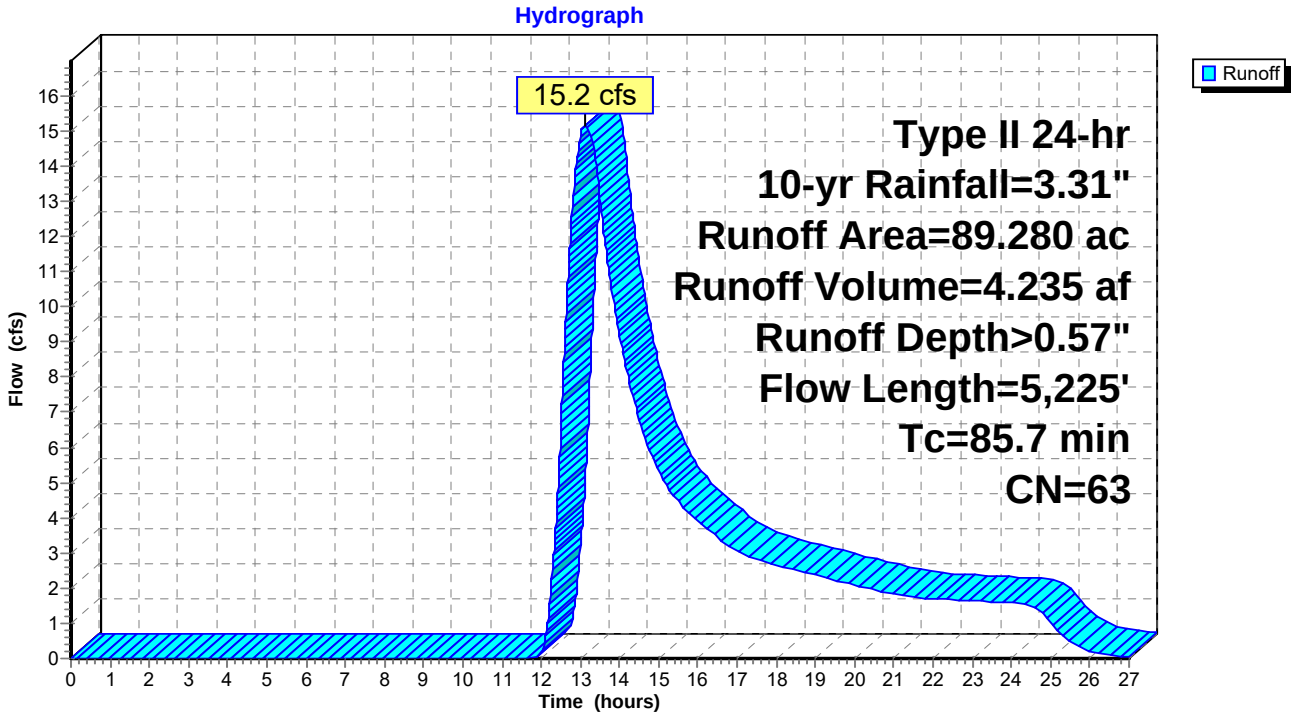
Runoff = 15.2 cfs @ 13.14 hrs, Volume= 4.235 af, Depth> 0.57"
Routed to Reach OUT-A : WETLANDS COMPLEX

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
54.380	55	Woods, Good, HSG B
18.160	70	Woods, Good, HSG C
0.130	77	Woods, Good, HSG D
1.240	96	Gravel surface, HSG B
12.560	86	Fallow, bare soil, HSG B
0.060	98	Unconnected roofs, HSG B
0.560	71	Meadow, non-grazed, HSG C
2.040	58	Meadow, non-grazed, HSG B
0.150	96	Gravel surface, HSG C
89.280	63	Weighted Average
89.220	63	99.93% Pervious Area
0.060	98	0.07% Impervious Area
0.060		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
33.3	100	0.0400	0.05		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 2.32"
49.5	3,400	0.2100	1.15		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
1.5	1,280	0.0800	14.12	282.43	**Parabolic Channel,** W=15.00' D=2.00' Area=20.0 sf Perim=15.7' n= 0.035 Earth, dense weeds
1.4	445	0.0250	5.12	136.46	**Parabolic Channel,** W=40.00' D=1.00' Area=26.7 sf Perim=40.1' n= 0.035
85.7	5,225	Total			

Subcatchment A1: WOODS & EX. QUARRY



Summary for Subcatchment A2: WOODS

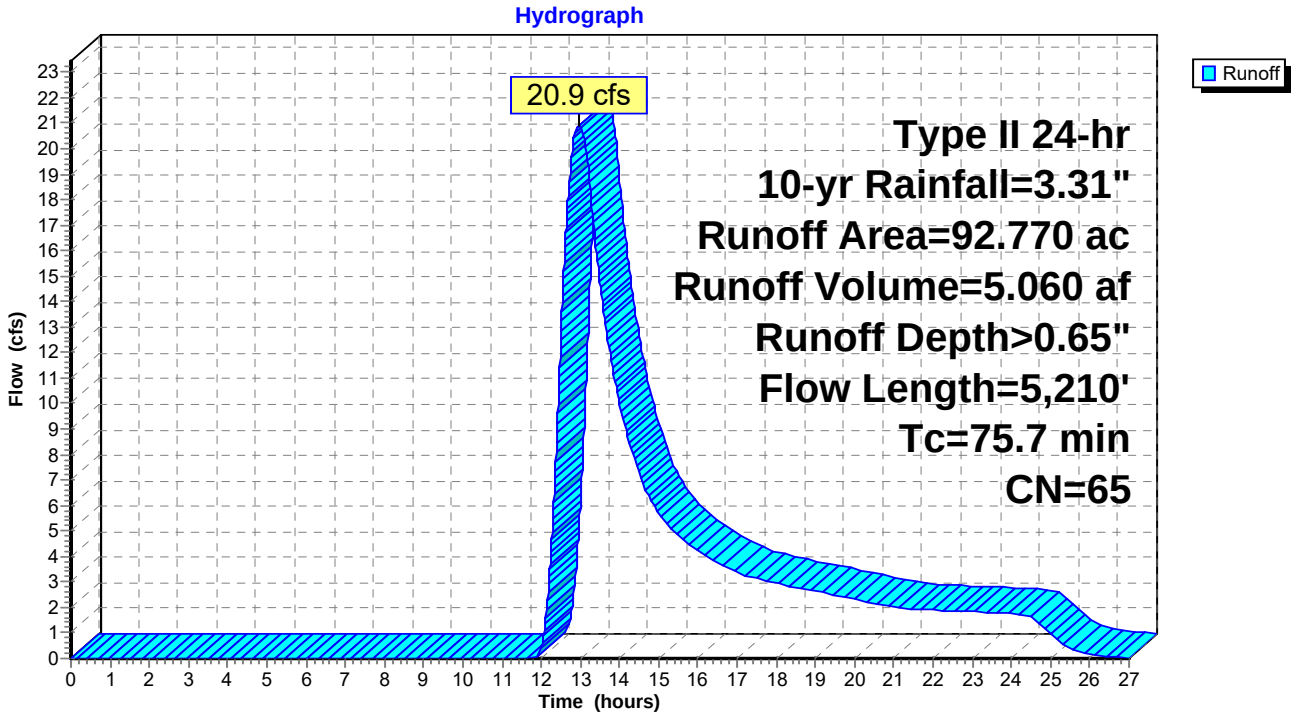
Runoff = 20.9 cfs @ 12.95 hrs, Volume= 5.060 af, Depth> 0.65"
Routed to Reach OUT-A : WETLANDS COMPLEX

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
0.480	30	Woods, Good, HSG A
30.030	55	Woods, Good, HSG B
56.130	70	Woods, Good, HSG C
0.520	77	Woods, Good, HSG D
1.530	58	Meadow, non-grazed, HSG B
0.460	30	Meadow, non-grazed, HSG A
2.710	71	Meadow, non-grazed, HSG C
0.050	96	Gravel surface, HSG A
0.560	96	Gravel surface, HSG B
0.300	96	Gravel surface, HSG C
92.770	65	Weighted Average
92.770	65	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.7	30	0.2000	0.07		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 2.32"
22.9	70	0.0500	0.05		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 2.32"
35.1	2,230	0.1790	1.06		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
1.5	1,520	0.1050	16.38	436.88	**Parabolic Channel,** W=20.00' D=2.00' Area=26.7 sf Perim=20.5' n= 0.035 Earth, dense weeds
1.5	735	0.0250	8.13	1,083.54	**Parabolic Channel,** W=100.00' D=2.00' Area=133.3 sf Perim=100.1' n= 0.035 Earth, dense weeds
8.0	625	0.0016	1.30	51.82	**Parabolic Channel,** W=60.00' D=1.00' Area=40.0 sf Perim=60.0' n= 0.035 Earth, dense weeds
75.7	5,210	Total			

Subcatchment A2: WOODS



Summary for Subcatchment B1: WOODS

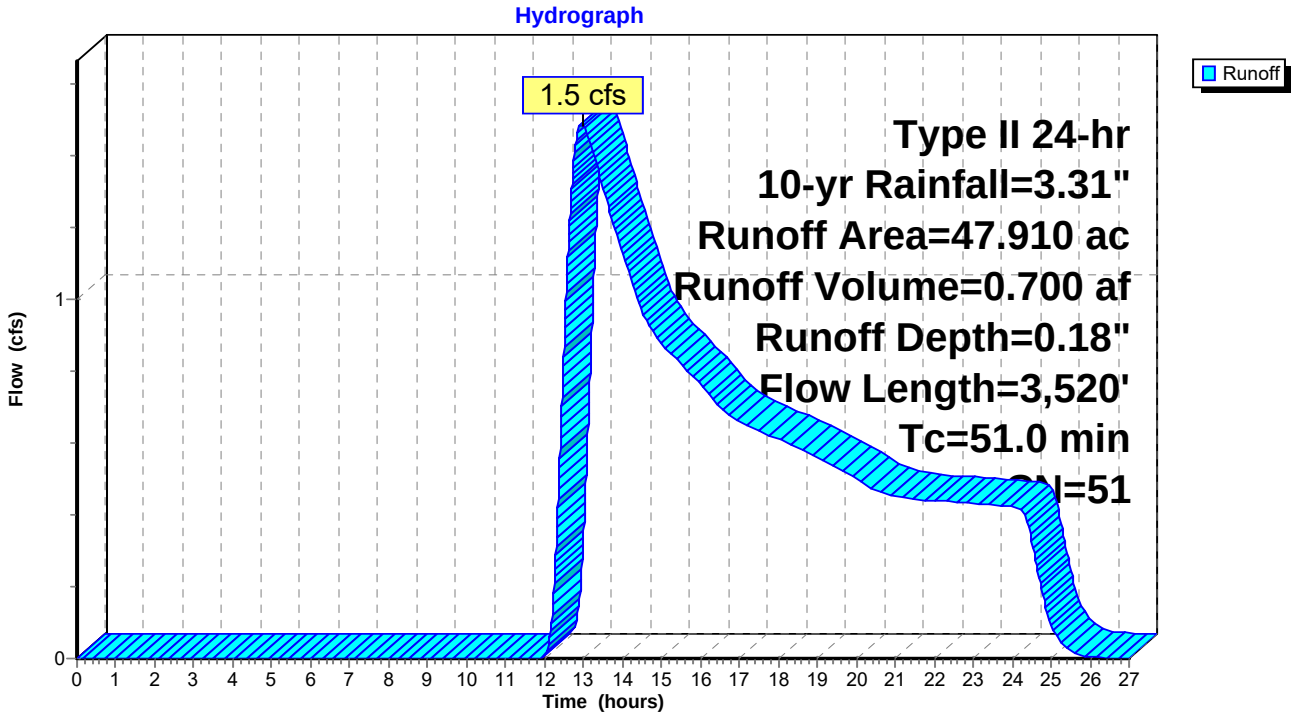
Runoff = 1.5 cfs @ 12.97 hrs, Volume= 0.700 af, Depth= 0.18"
Routed to Reach OUT-B : WETLANDS COMPLEX

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
0.010	96	Gravel surface, HSG B
0.590	96	Gravel surface, HSG C
0.030	98	Paved parking, HSG C
0.980	78	Meadow, non-grazed, HSG D
1.580	77	Woods, Good, HSG D
0.010	58	Meadow, non-grazed, HSG B
1.740	55	Woods, Good, HSG B
2.230	30	Meadow, non-grazed, HSG A
20.790	30	Woods, Good, HSG A
1.270	71	Meadow, non-grazed, HSG C
18.680	70	Woods, Good, HSG C
47.910	51	Weighted Average
47.880	51	99.94% Pervious Area
0.030	98	0.06% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
33.3	100	0.0400	0.05		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 2.32"
6.9	195	0.0350	0.47		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
5.7	2,105	0.0358	6.12	142.84	**Parabolic Channel,** W=35.00' D=1.00' Area=23.3 sf Perim=35.1' n= 0.035
5.1	1,120	0.0129	3.68	183.94	**Parabolic Channel,** W=75.00' D=1.00' Area=50.0 sf Perim=75.0' n= 0.035
51.0	3,520	Total			

Subcatchment B1: WOODS



Summary for Subcatchment B2: WOODS

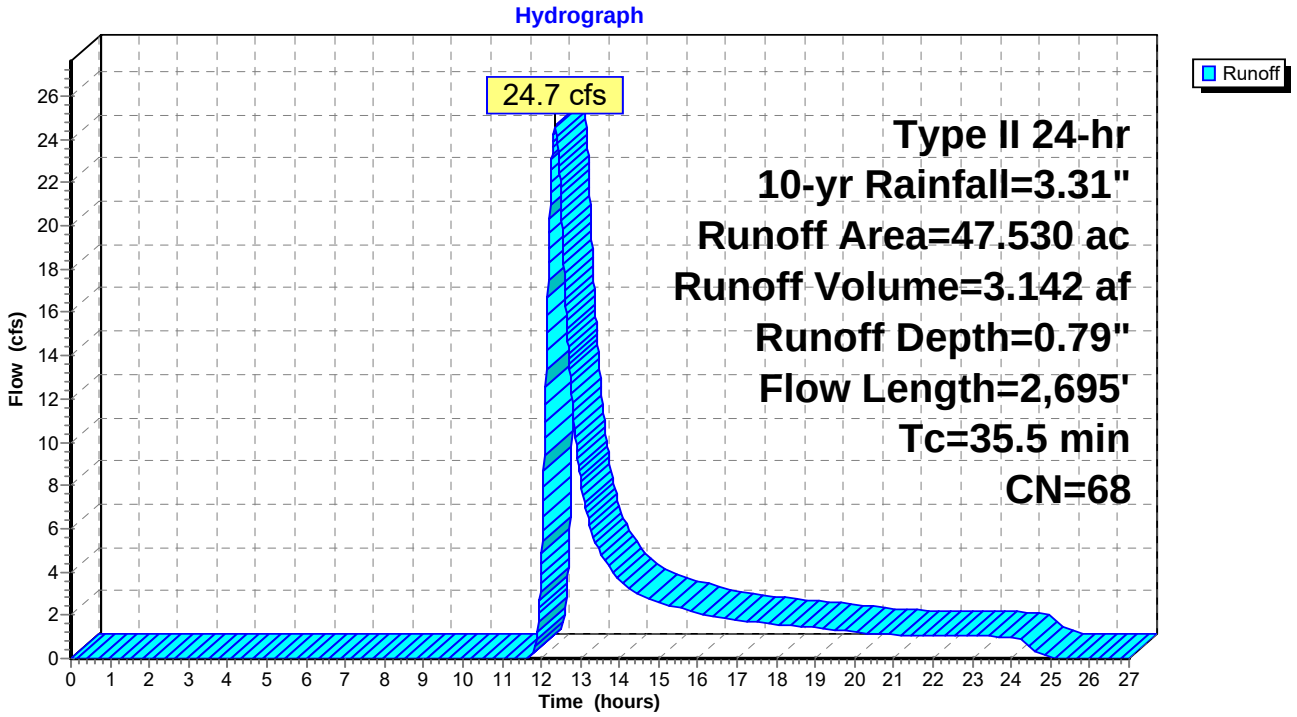
Runoff = 24.7 cfs @ 12.35 hrs, Volume= 3.142 af, Depth= 0.79"
Routed to Pond RB3 : CULVERT

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
0.080	96	Gravel surface, HSG C
0.130	96	Gravel surface, HSG B
0.340	77	Woods, Good, HSG D
8.340	71	Meadow, non-grazed, HSG C
5.110	58	Meadow, non-grazed, HSG B
4.520	55	Woods, Good, HSG B
29.010	70	Woods, Good, HSG C
47.530	68	Weighted Average
47.530	68	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.5	100	0.2700	0.11		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 2.32"
16.8	865	0.1175	0.86		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
2.5	1,505	0.0950	9.91	99.09	**Parabolic Channel,** W=15.00' D=1.00' Area=10.0 sf Perim=15.2' n= 0.035
0.7	225	0.0150	5.76	15.36	**Parabolic Channel,** W=4.00' D=1.00' Area=2.7 sf Perim=4.6' n= 0.022
35.5	2,695	Total			

Subcatchment B2: WOODS



Summary for Subcatchment B3: OVERLAND FLOW

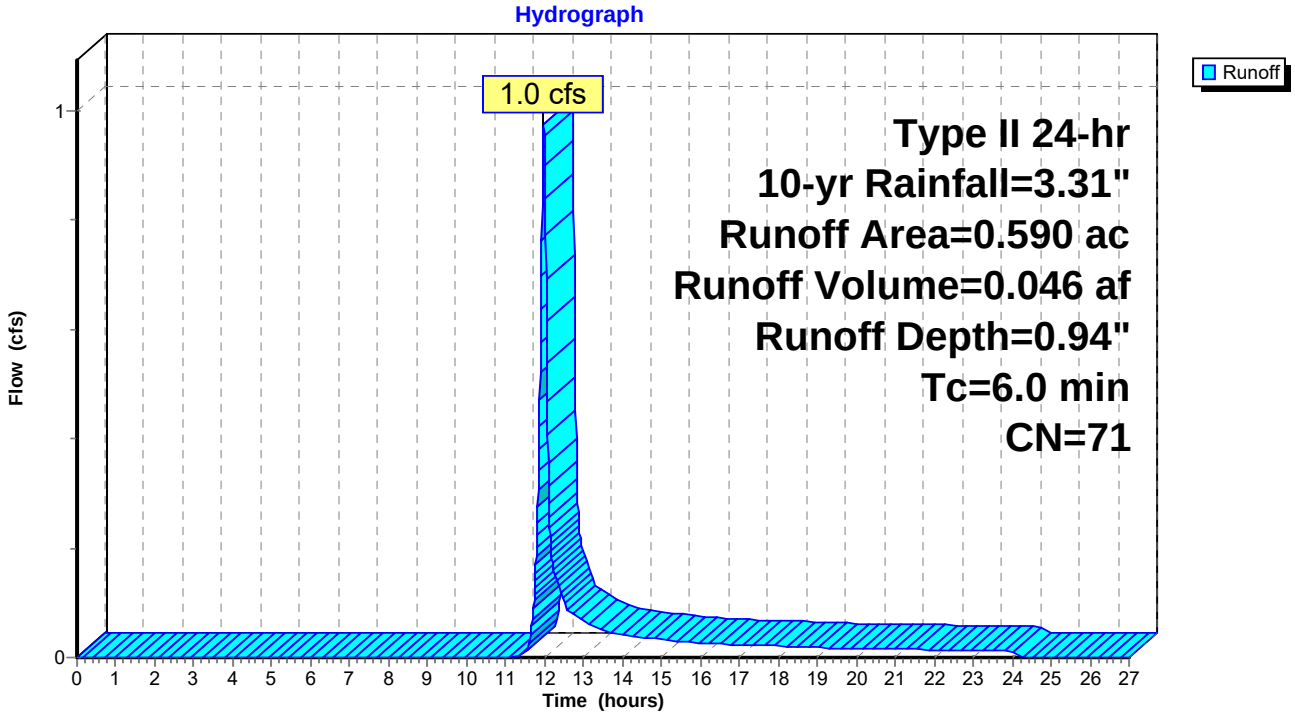
Runoff = 1.0 cfs @ 11.98 hrs, Volume= 0.046 af, Depth= 0.94"
Routed to Pond FB11 : FOREBAY

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
0.590	71	Meadow, non-grazed, HSG C
0.590	71	100.00% Pervious Area

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

Subcatchment B3: OVERLAND FLOW



Summary for Subcatchment B4: WOODS

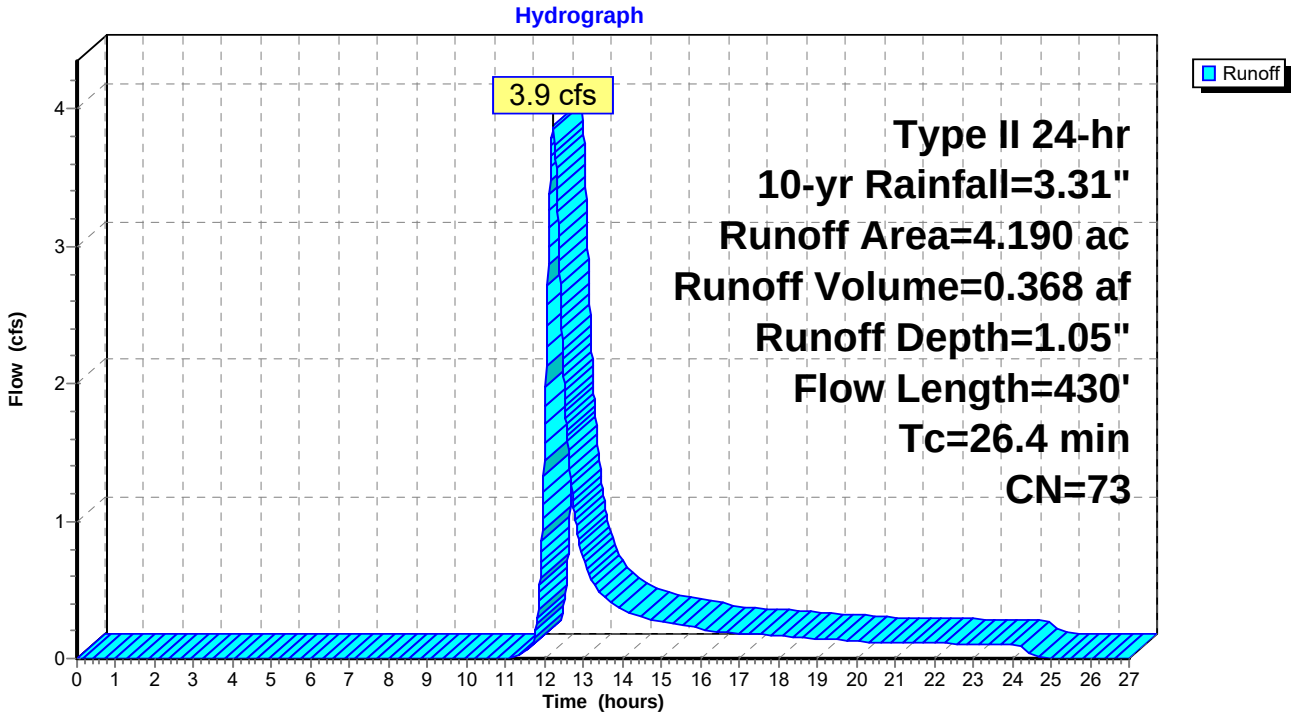
Runoff = 3.9 cfs @ 12.23 hrs, Volume= 0.368 af, Depth= 1.05"
Routed to Reach RB5 : CULVERT

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
0.060	55	Woods, Good, HSG B
0.120	58	Meadow, non-grazed, HSG B
0.010	96	Gravel surface, HSG B
0.020	98	Paved parking, HSG B
0.160	98	Paved parking, HSG C
0.220	96	Gravel surface, HSG C
1.230	71	Meadow, non-grazed, HSG C
2.080	70	Woods, Good, HSG C
0.290	77	Woods, Good, HSG D
4.190	73	Weighted Average
4.010	72	95.70% Pervious Area
0.180	98	4.30% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.1300	0.08		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 2.32"
5.4	280	0.1200	0.87		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
0.2	50	0.0125	5.26	14.02	**Parabolic Channel,** W=4.00' D=1.00' Area=2.7 sf Perim=4.6' n= 0.022
26.4	430	Total			

Subcatchment B4: WOODS



Summary for Subcatchment B5: LANDFILL

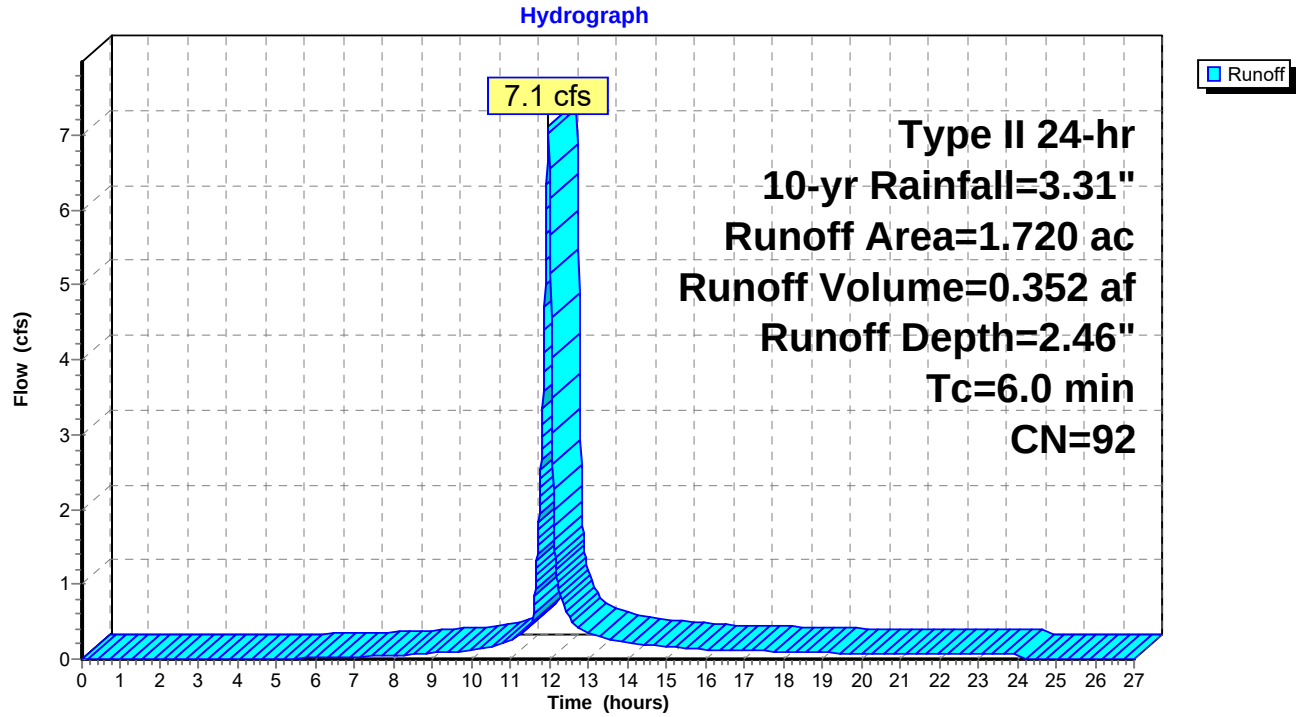
Runoff = 7.1 cfs @ 11.97 hrs, Volume= 0.352 af, Depth= 2.46"
Routed to Pond PHW-28 : HEADWALL

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

	Area (ac)	CN	Description
	0.380	96	Gravel surface, HSG C
	0.030	96	Gravel surface, HSG B
	0.340	71	Meadow, non-grazed, HSG C
*	0.970	98	Landfill, Geomembrane
	1.720	92	Weighted Average
	0.750	85	43.60% Pervious Area
	0.970	98	56.40% Impervious Area

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

Subcatchment B5: LANDFILL

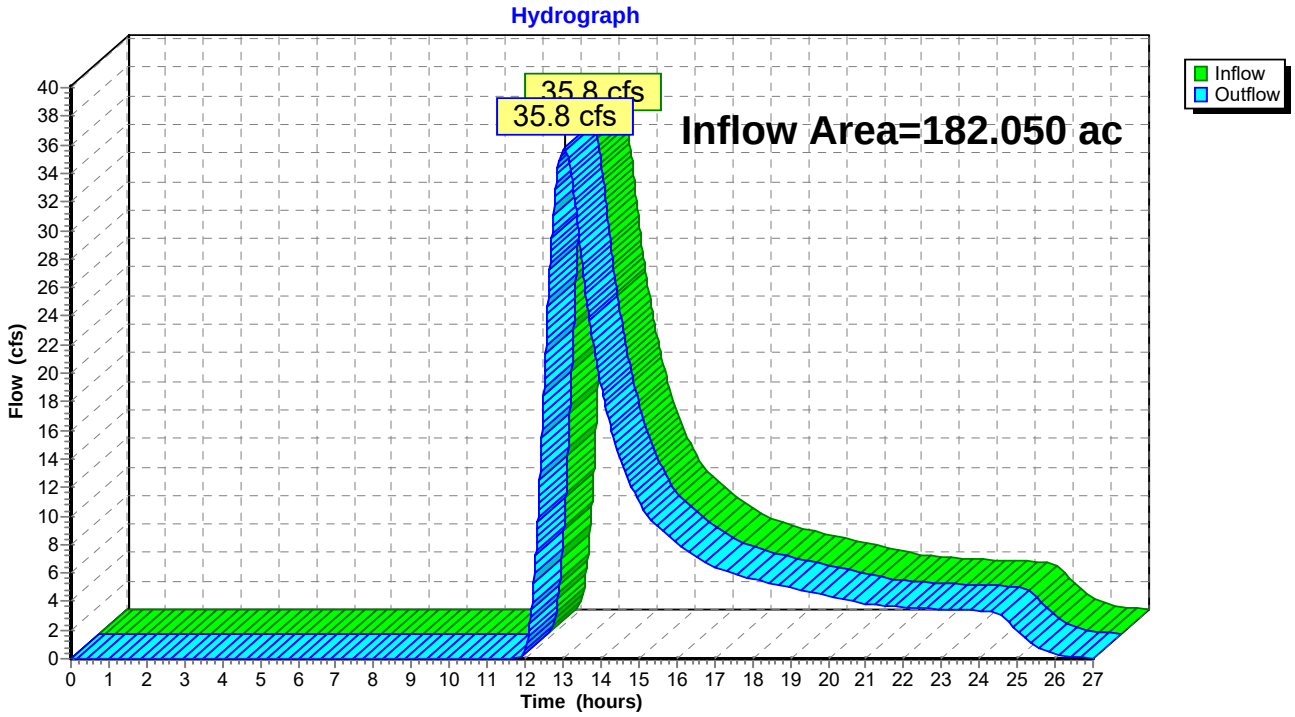


Summary for Reach OUT-A: WETLANDS COMPLEX

Inflow Area = 182.050 ac, 0.03% Impervious, Inflow Depth > 0.61" for 10-yr event
Inflow = 35.8 cfs @ 13.04 hrs, Volume= 9.295 af
Outflow = 35.8 cfs @ 13.04 hrs, Volume= 9.295 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs / 3

Reach OUT-A: WETLANDS COMPLEX

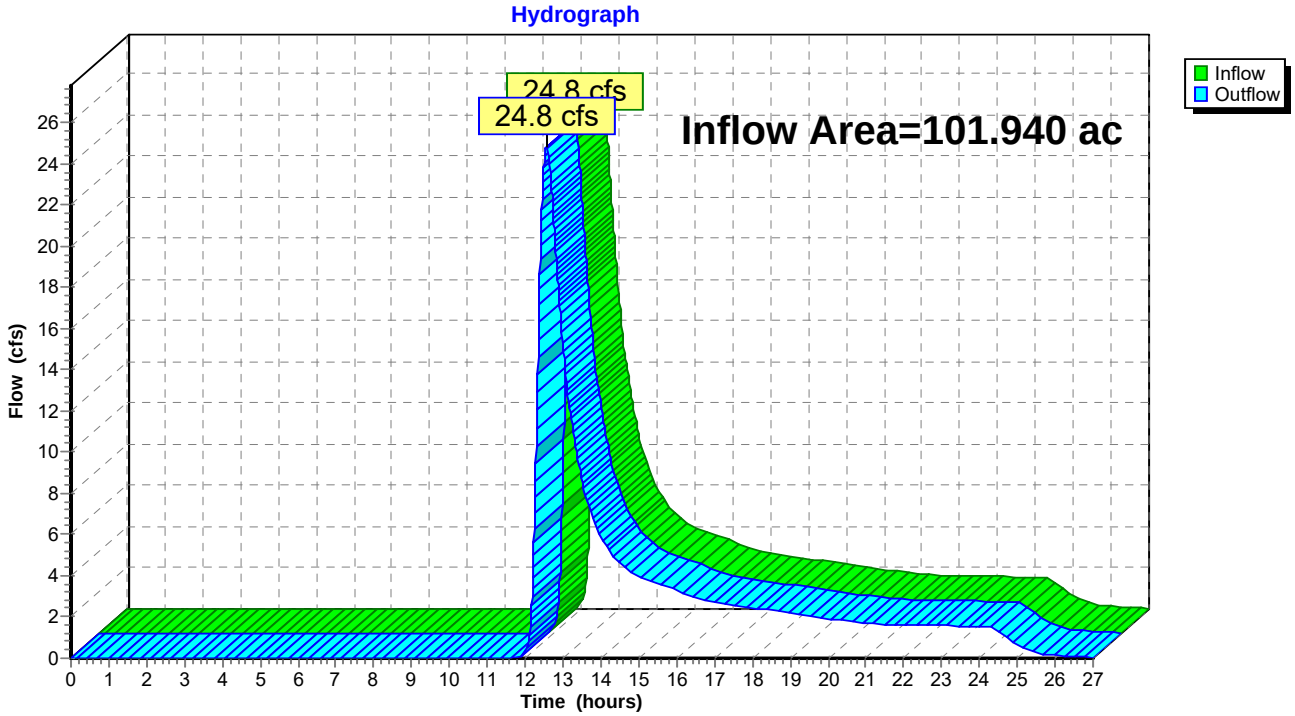


Summary for Reach OUT-B: WETLANDS COMPLEX

Inflow Area = 101.940 ac, 1.16% Impervious, Inflow Depth > 0.50" for 10-yr event
Inflow = 24.8 cfs @ 12.57 hrs, Volume= 4.205 af
Outflow = 24.8 cfs @ 12.57 hrs, Volume= 4.205 af, Atten= 0%, Lag= 0.0 min
Routed to nonexistent node FDGA

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs / 3

Reach OUT-B: WETLANDS COMPLEX



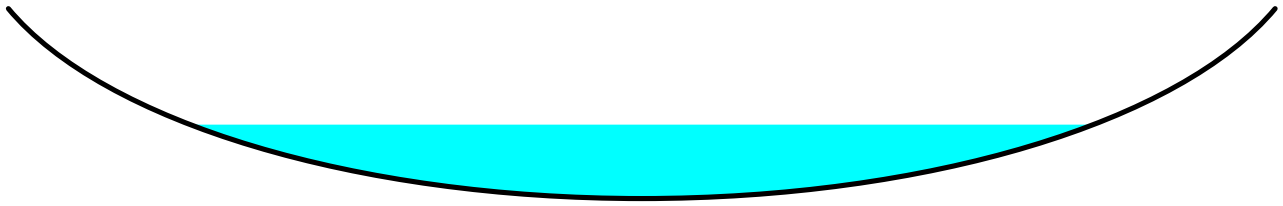
Summary for Reach RB1: WETLAND

Inflow Area = 51.720 ac, 0.35% Impervious, Inflow Depth > 0.81" for 10-yr event
Inflow = 26.7 cfs @ 12.43 hrs, Volume= 3.509 af
Outflow = 23.8 cfs @ 12.56 hrs, Volume= 3.505 af, Atten= 11%, Lag= 7.9 min
Routed to Reach OUT-B : WETLANDS COMPLEX

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs / 3
Max. Velocity= 1.96 fps, Min. Travel Time= 9.5 min
Avg. Velocity = 0.85 fps, Avg. Travel Time= 21.8 min

Peak Storage= 13,571 cf @ 12.56 hrs
Average Depth at Peak Storage= 0.39' , Surface Width= 46.76'
Bank-Full Depth= 1.00' Flow Area= 50.0 sf, Capacity= 184.3 cfs

75.00' x 1.00' deep Parabolic Channel, n= 0.035
Length= 1,120.0' Slope= 0.0129 '/'
Inlet Invert= 1,080.00', Outlet Invert= 1,065.50'



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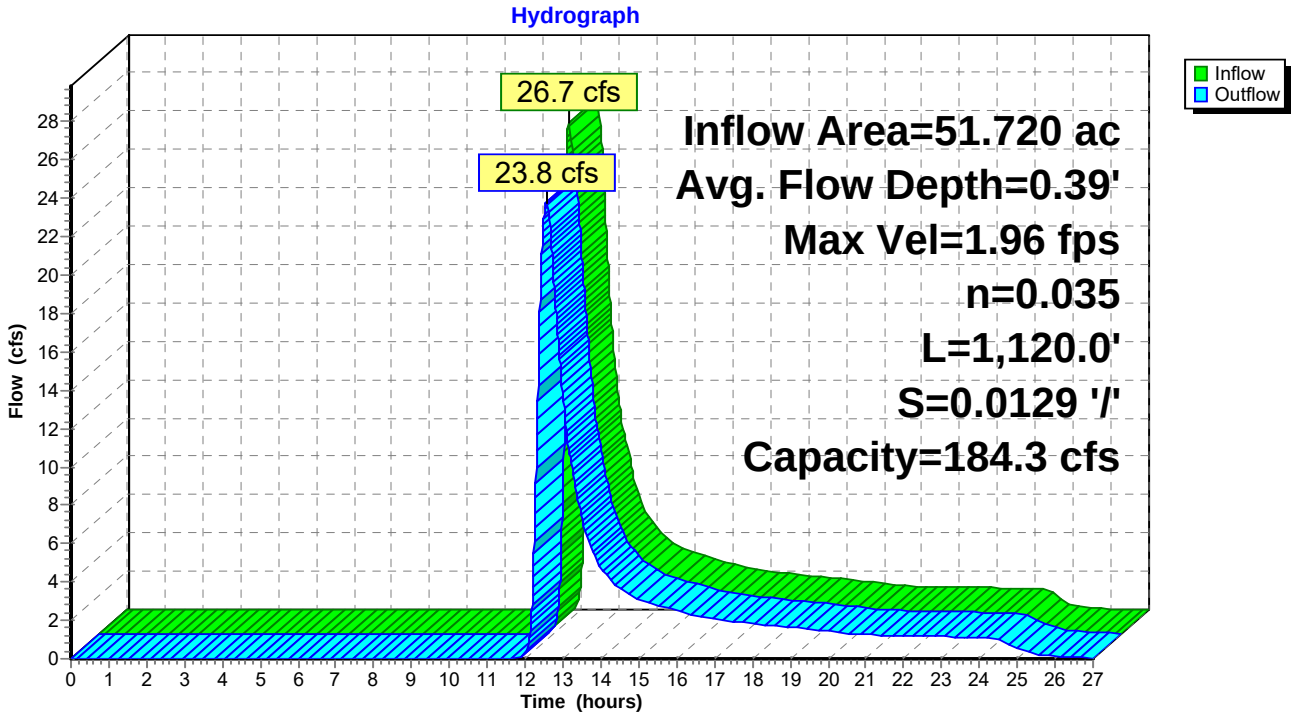
Reach RB1: WETLAND



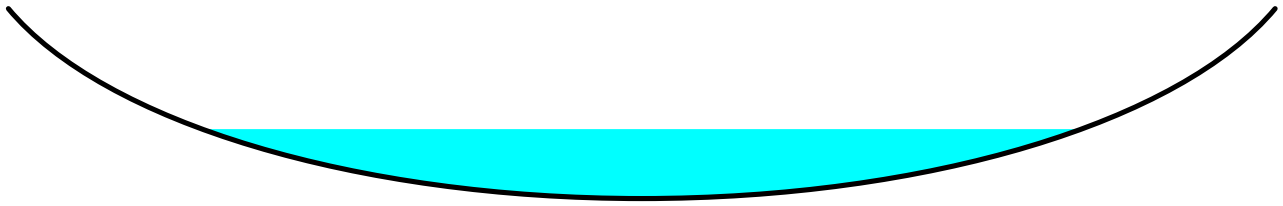
Summary for Reach RB2: WETLAND

Inflow Area = 47.530 ac, 0.00% Impervious, Inflow Depth = 0.79" for 10-yr event
Inflow = 24.6 cfs @ 12.36 hrs, Volume= 3.142 af
Outflow = 23.8 cfs @ 12.43 hrs, Volume= 3.141 af, Atten= 3%, Lag= 4.3 min
Routed to Reach RB1 : WETLAND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs / 3
Max. Velocity= 3.60 fps, Min. Travel Time= 4.9 min
Avg. Velocity = 1.51 fps, Avg. Travel Time= 11.6 min

Peak Storage= 6,976 cf @ 12.43 hrs
Average Depth at Peak Storage= 0.36' , Surface Width= 27.18'
Bank-Full Depth= 1.00' Flow Area= 30.0 sf, Capacity= 211.4 cfs

45.00' x 1.00' deep Parabolic Channel, n= 0.035
Length= 1,055.0' Slope= 0.0474 '/'
Inlet Invert= 1,130.00', Outlet Invert= 1,080.00'



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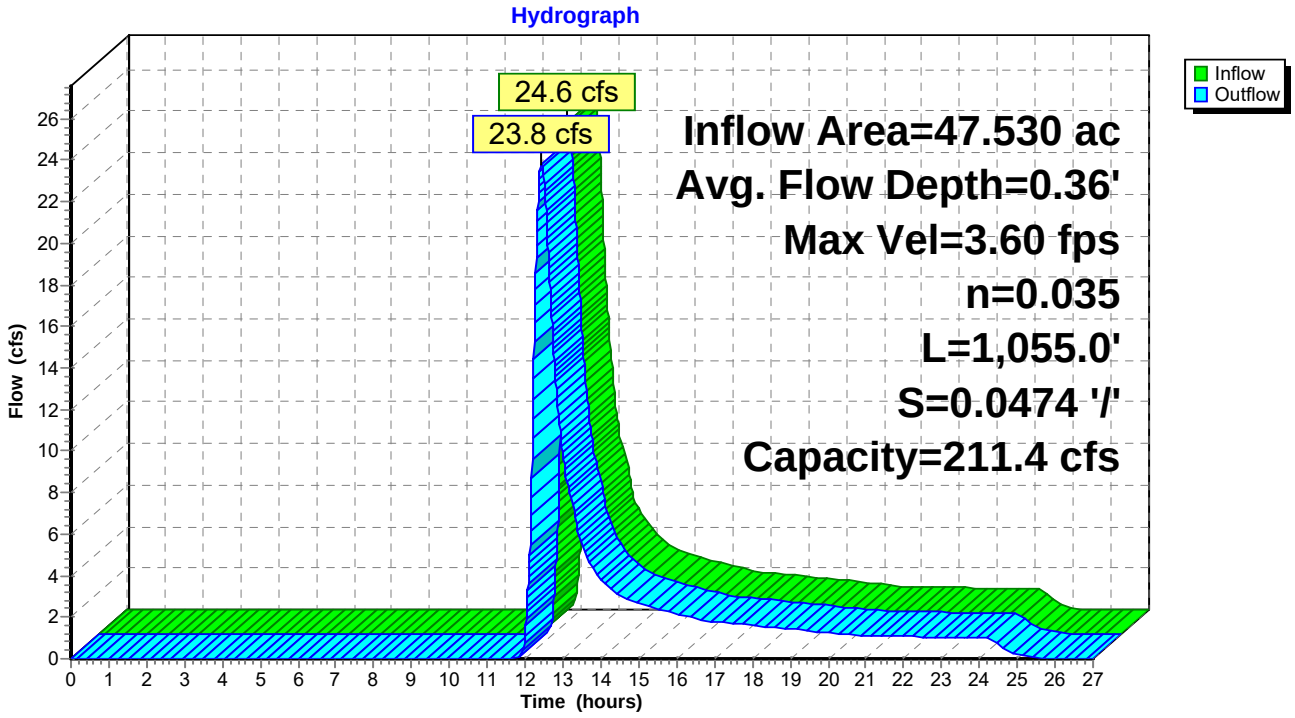
Reach RB2: WETLAND



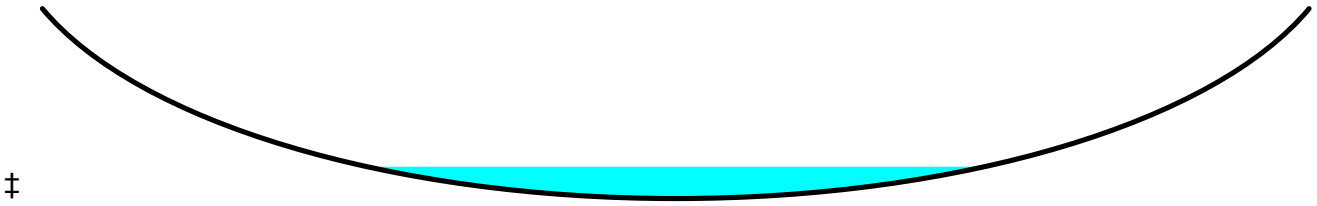
Summary for Reach RB4: WETLAND

Inflow Area = 4.190 ac, 4.30% Impervious, Inflow Depth = 1.05" for 10-yr event
Inflow = 3.9 cfs @ 12.23 hrs, Volume= 0.368 af
Outflow = 2.9 cfs @ 12.38 hrs, Volume= 0.367 af, Atten= 25%, Lag= 9.1 min
Routed to Reach RB1 : WETLAND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs / 3
Max. Velocity= 1.85 fps, Min. Travel Time= 14.4 min
Avg. Velocity = 0.76 fps, Avg. Travel Time= 35.0 min

Peak Storage= 2,523 cf @ 12.38 hrs
Average Depth at Peak Storage= 0.17' , Surface Width= 14.25'
Bank-Full Depth= 1.00' Flow Area= 23.3 sf, Capacity= 142.7 cfs

35.00' x 1.00' deep Parabolic Channel, n= 0.035
Length= 1,600.0' Slope= 0.0358 '/'
Inlet Invert= 1,137.20', Outlet Invert= 1,080.00'



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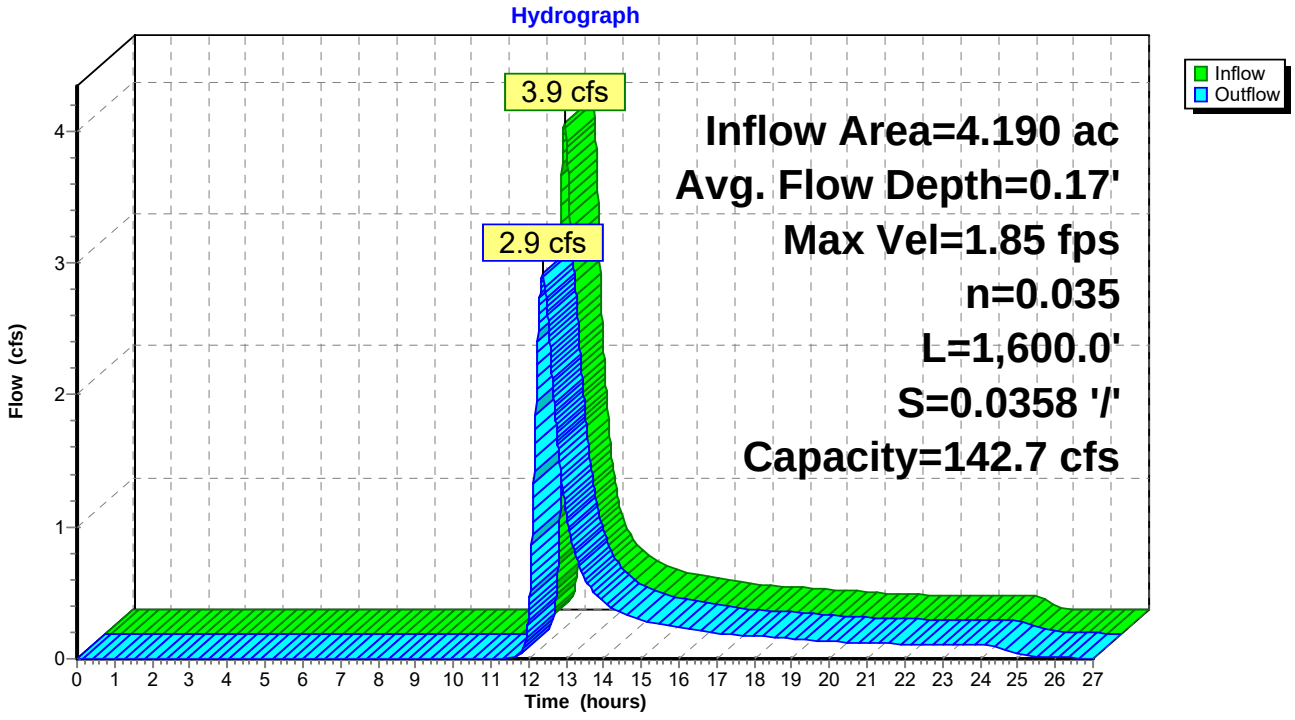
Reach RB4: WETLAND



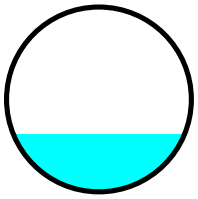
Summary for Reach RB5: CULVERT

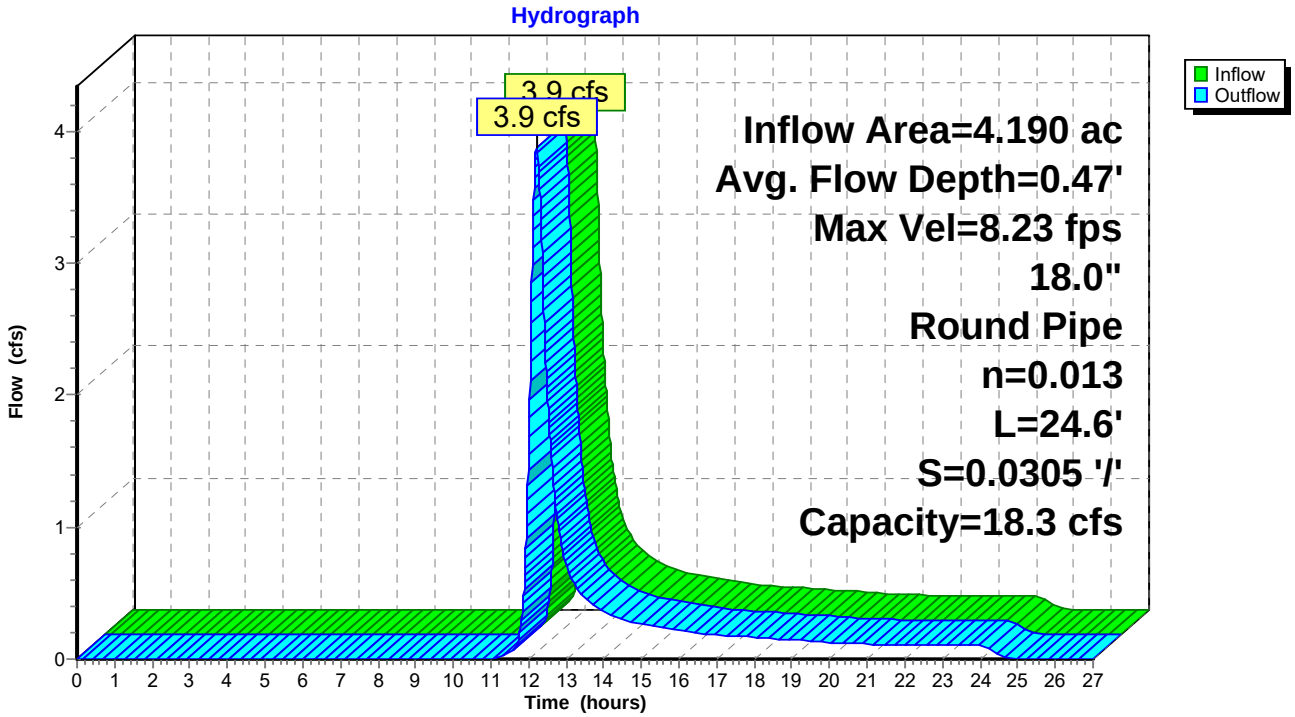
Inflow Area = 4.190 ac, 4.30% Impervious, Inflow Depth = 1.05" for 10-yr event
Inflow = 3.9 cfs @ 12.23 hrs, Volume= 0.368 af
Outflow = 3.9 cfs @ 12.23 hrs, Volume= 0.368 af, Atten= 0%, Lag= 0.0 min
Routed to Reach RB4 : WETLAND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs / 3
Max. Velocity= 8.23 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 3.32 fps, Avg. Travel Time= 0.1 min

Peak Storage= 12 cf @ 12.23 hrs
Average Depth at Peak Storage= 0.47' , Surface Width= 1.39'
Bank-Full Depth= 1.50' Flow Area= 1.8 sf, Capacity= 18.3 cfs

18.0" Round Pipe
n= 0.013
Length= 24.6' Slope= 0.0305 '/'
Inlet Invert= 1,137.25', Outlet Invert= 1,136.50'





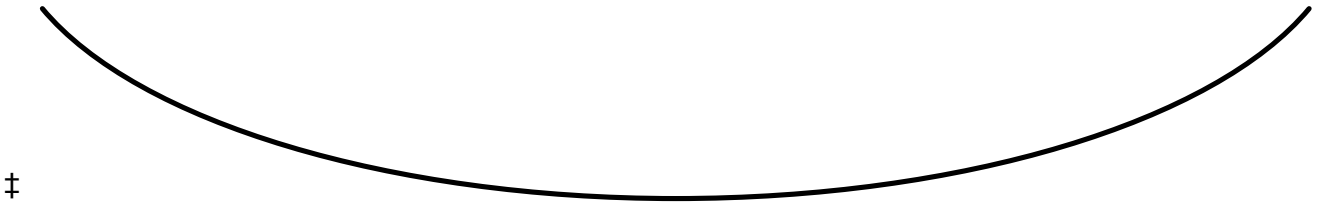
Summary for Reach RB6: WETLAND

Inflow Area = 2.310 ac, 41.99% Impervious, Inflow Depth = 0.00" for 10-yr event
Inflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Reach OUT-B : WETLANDS COMPLEX

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs / 3
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 1.00' Flow Area= 50.0 sf, Capacity= 210.2 cfs

75.00' x 1.00' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 475.0' Slope= 0.0168 '/'
Inlet Invert= 1,070.00', Outlet Invert= 1,062.00'



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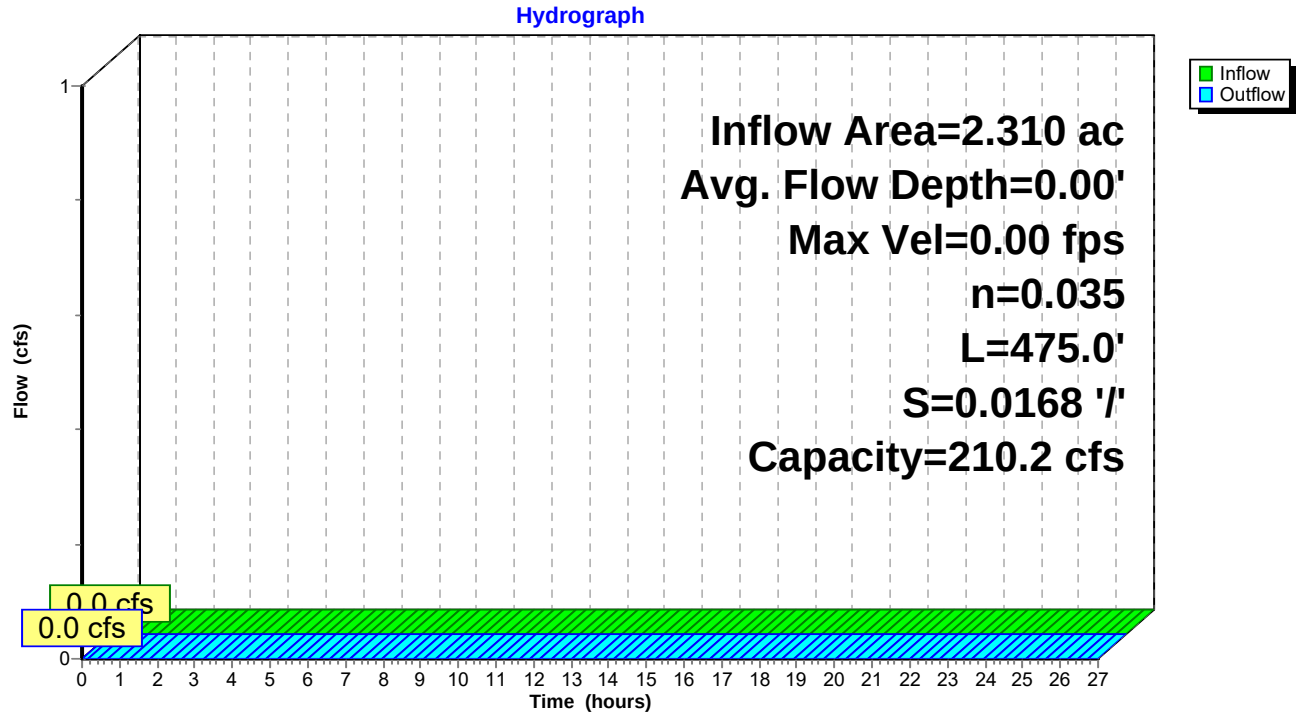
Reach RB6: WETLAND



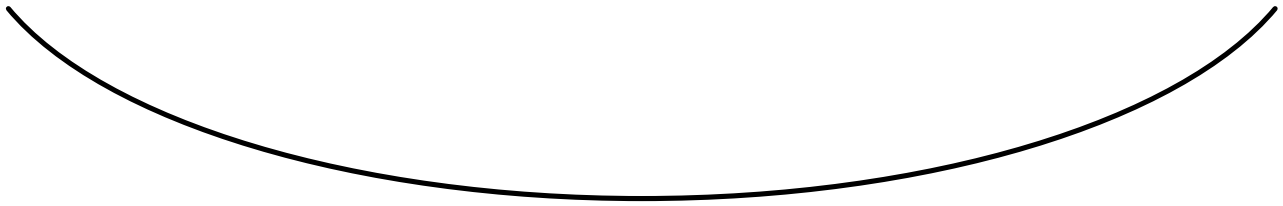
Summary for Reach RB7: WETLAND

Inflow Area = 2.310 ac, 41.99% Impervious, Inflow Depth = 0.00" for 10-yr event
Inflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Reach RB6 : WETLAND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs / 3
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 2.00' Flow Area= 33.3 sf, Capacity= 391.6 cfs

25.00' x 2.00' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 1,050.0' Slope= 0.0533 '/'
Inlet Invert= 1,126.00', Outlet Invert= 1,070.00'



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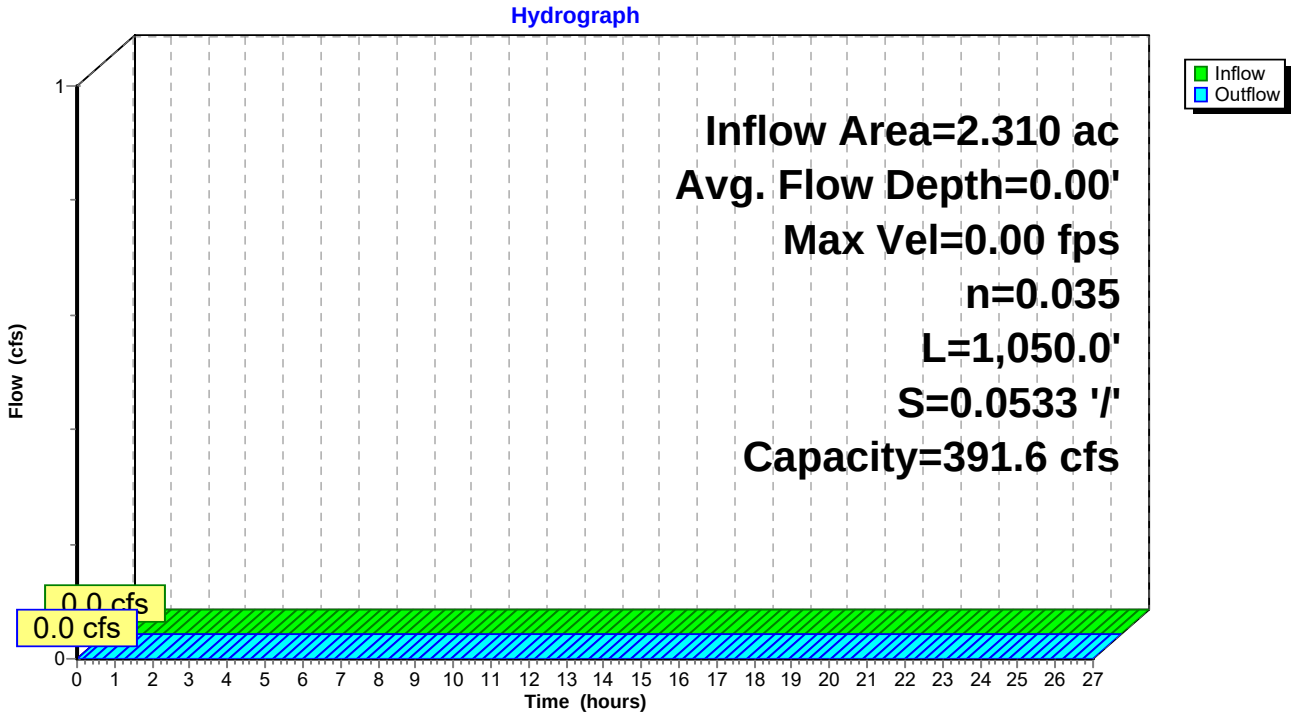
Reach RB7: WETLAND



Summary for Pond FB11: FOREBAY

Inflow Area = 2.310 ac, 41.99% Impervious, Inflow Depth = 2.07" for 10-yr event
Inflow = 8.1 cfs @ 11.97 hrs, Volume= 0.398 af
Outflow = 8.0 cfs @ 11.98 hrs, Volume= 0.398 af, Atten= 1%, Lag= 0.5 min
Discarded = 0.2 cfs @ 11.98 hrs, Volume= 0.252 af
Primary = 7.8 cfs @ 11.98 hrs, Volume= 0.147 af
Routed to Pond P11 : INFILTRATION BASIN

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 1,144.17' @ 11.98 hrs Surf.Area= 2,128 sf Storage= 3,426 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 89.2 min (891.1 - 801.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,142.00'	4,149 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

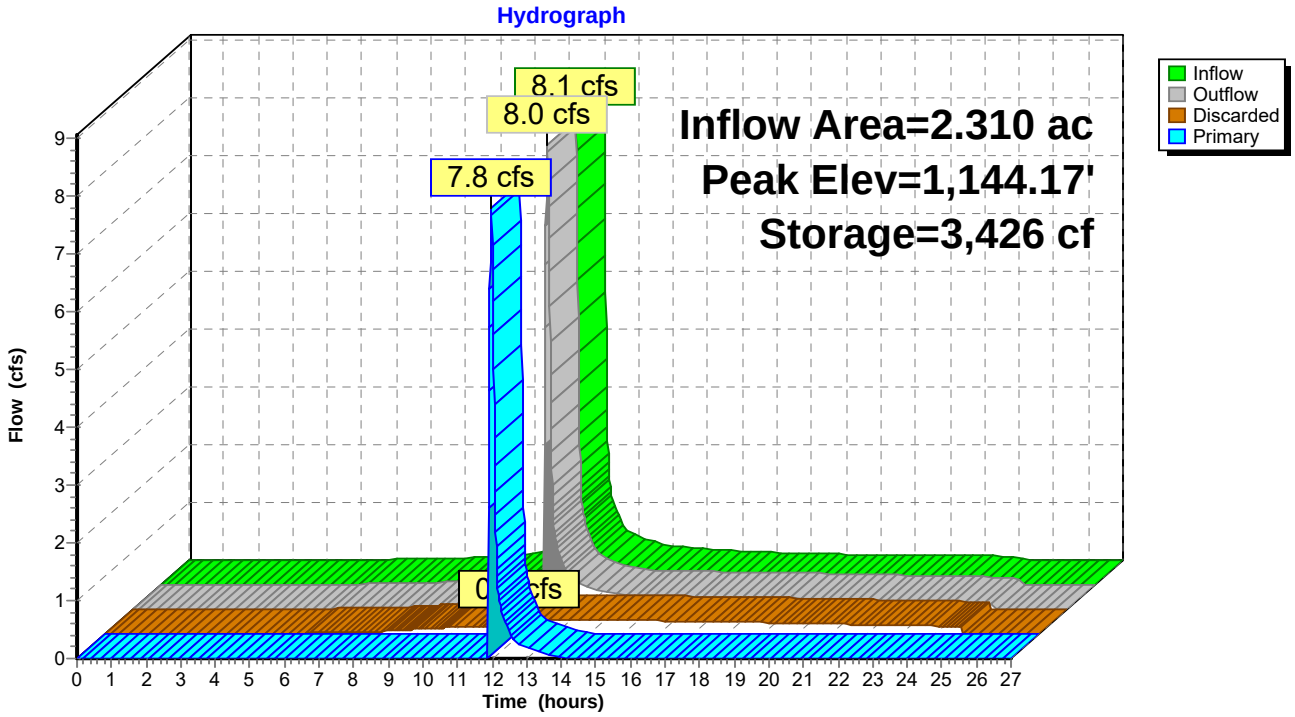
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,142.00	1,025	0	0
1,144.00	2,040	3,065	3,065
1,144.50	2,295	1,084	4,149

Device	Routing	Invert	Outlet Devices
#1	Primary	1,144.00'	**45.0' long + 3.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#2	Discarded	1,142.00'	**5.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.2 cfs @ 11.98 hrs HW=1,144.17' (Free Discharge)
└**2=Exfiltration** (Exfiltration Controls 0.2 cfs)

Primary OutFlow Max=7.8 cfs @ 11.98 hrs HW=1,144.17' TW=1,141.29' (Dynamic Tailwater)
└**1=Broad-Crested Rectangular Weir** (Weir Controls 7.8 cfs @ 0.99 fps)

Pond FB11: FOREBAY



Summary for Pond P11: INFILTRATION BASIN

Inflow Area = 2.310 ac, 41.99% Impervious, Inflow Depth = 0.76" for 10-yr event
Inflow = 7.8 cfs @ 11.98 hrs, Volume= 0.147 af
Outflow = 0.7 cfs @ 12.30 hrs, Volume= 0.147 af, Atten= 90%, Lag= 19.2 min
Discarded = 0.7 cfs @ 12.30 hrs, Volume= 0.147 af
Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach RB7 : WETLAND
Secondary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach RB7 : WETLAND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 1,141.67' @ 12.30 hrs Surf.Area= 6,430 sf Storage= 4,055 cf

Plug-Flow detention time= 56.9 min calculated for 0.147 af (100% of inflow)
Center-of-Mass det. time= 57.0 min (787.4 - 730.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,141.00'	22,080 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,141.00	5,680	0	0
1,144.00	9,040	22,080	22,080

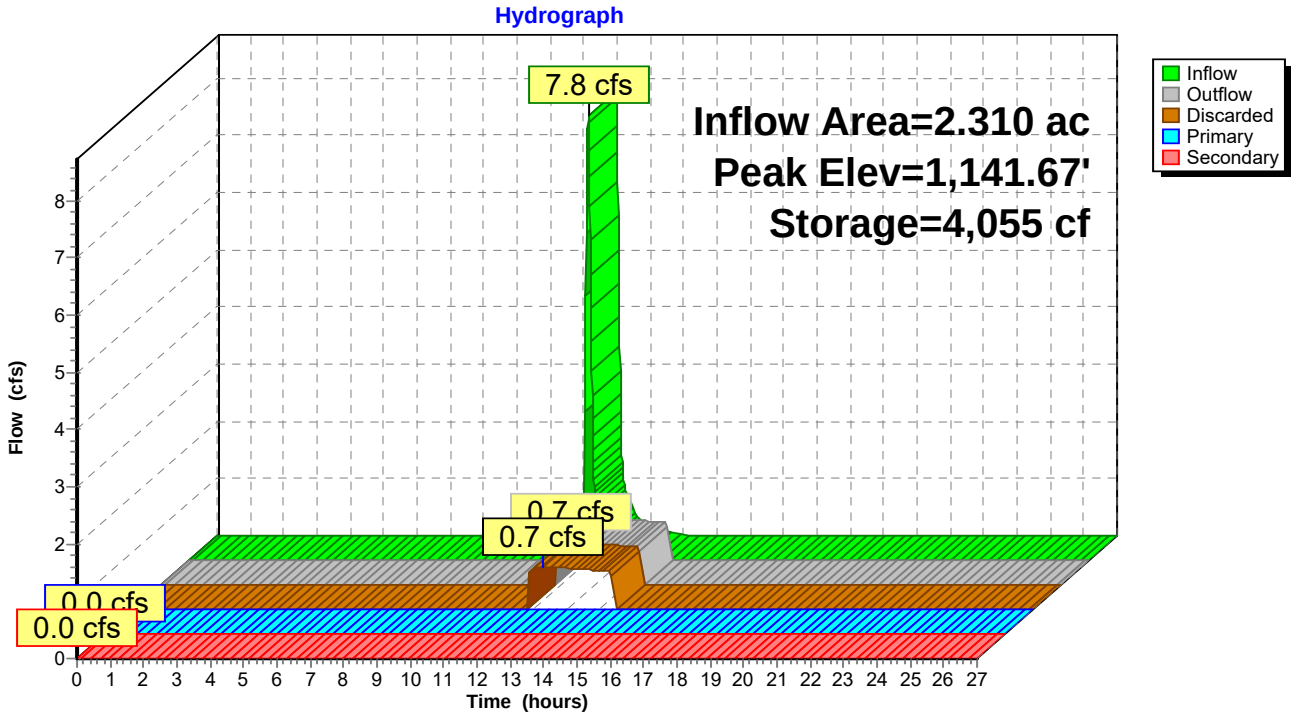
Device	Routing	Invert	Outlet Devices
#1	Discarded	1,141.00'	**5.000 in/hr Exfiltration over Surface area**
#2	Primary	1,125.00'	**24.0" Round Culvert** L= 110.9' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,125.00' / 1,122.00' S= 0.0271 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf
#3	Device 2	1,141.90'	**48.0" x 48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	1,143.50'	**10.0' long + 3.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Discarded OutFlow Max=0.7 cfs @ 12.30 hrs HW=1,141.67' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.7 cfs)

Primary OutFlow Max=0.0 cfs @ 0.00 hrs HW=1,141.00' TW=1,126.00' (Dynamic Tailwater)
└**2=Culvert** (Passes 0.0 cfs of 57.5 cfs potential flow)
└**3=Orifice/Grate** (Controls 0.0 cfs)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=1,141.00' TW=1,126.00' (Dynamic Tailwater)
└**4=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Pond P11: INFILTRATION BASIN



Summary for Pond PHW-28: HEADWALL

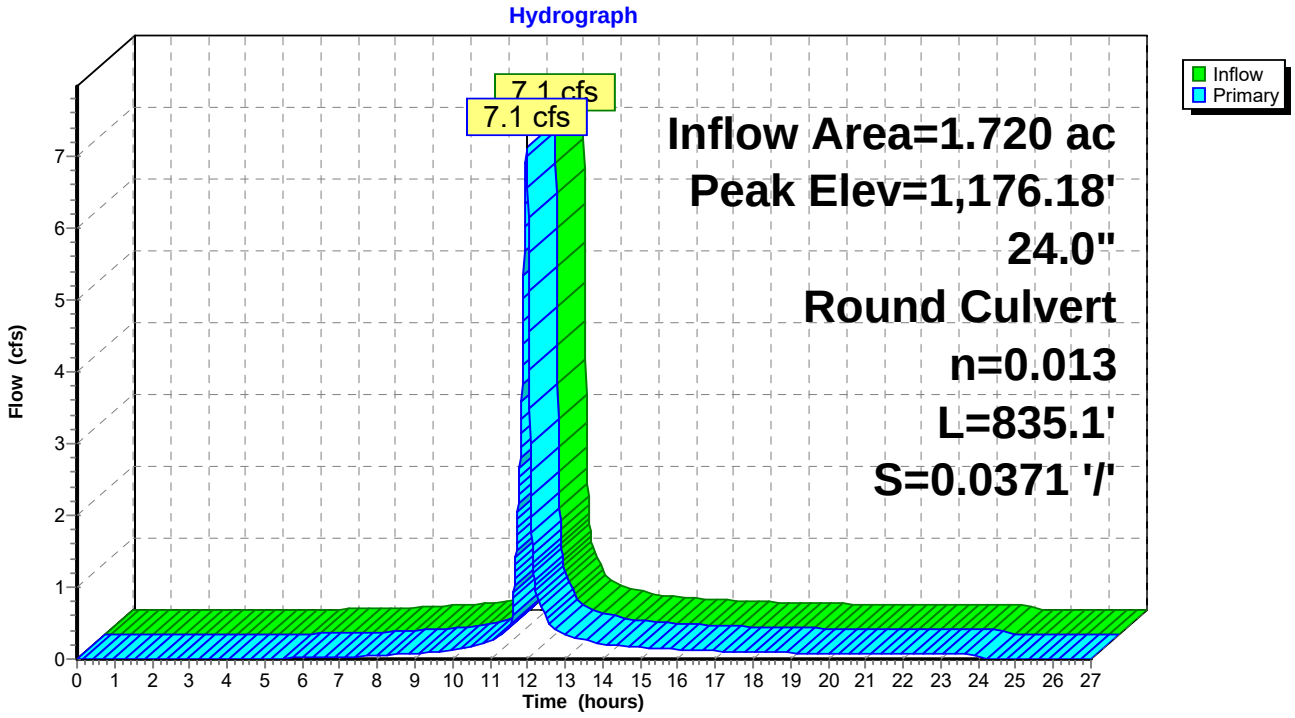
Inflow Area = 1.720 ac, 56.40% Impervious, Inflow Depth = 2.46" for 10-yr event
Inflow = 7.1 cfs @ 11.97 hrs, Volume= 0.352 af
Outflow = 7.1 cfs @ 11.97 hrs, Volume= 0.352 af, Atten= 0%, Lag= 0.0 min
Primary = 7.1 cfs @ 11.97 hrs, Volume= 0.352 af
Routed to Pond FB11 : FOREBAY

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 1,176.18' @ 11.97 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,175.00'	**24.0" Round Culvert** L= 835.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,175.00' / 1,144.00' S= 0.0371 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 3.14 sf

Primary OutFlow Max=7.1 cfs @ 11.97 hrs HW=1,176.18' TW=1,144.17' (Dynamic Tailwater)
1=Culvert (Inlet Controls 7.1 cfs @ 3.70 fps)

Pond PHW-28: HEADWALL



Summary for Pond RB3: CULVERT

Inflow Area = 47.530 ac, 0.00% Impervious, Inflow Depth = 0.79" for 10-yr event
Inflow = 24.7 cfs @ 12.35 hrs, Volume= 3.142 af
Outflow = 24.6 cfs @ 12.36 hrs, Volume= 3.142 af, Atten= 0%, Lag= 0.5 min
Primary = 8.7 cfs @ 12.36 hrs, Volume= 2.520 af
Routed to Reach RB2 : WETLAND
Secondary = 15.9 cfs @ 12.36 hrs, Volume= 0.621 af
Routed to Reach RB2 : WETLAND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs / 3
Peak Elev= 1,136.06' @ 12.36 hrs Surf.Area= 2,196 sf Storage= 1,388 cf

Plug-Flow detention time= 0.6 min calculated for 3.140 af (100% of inflow)
Center-of-Mass det. time= 0.6 min (905.3 - 904.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,133.25'	4,635 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

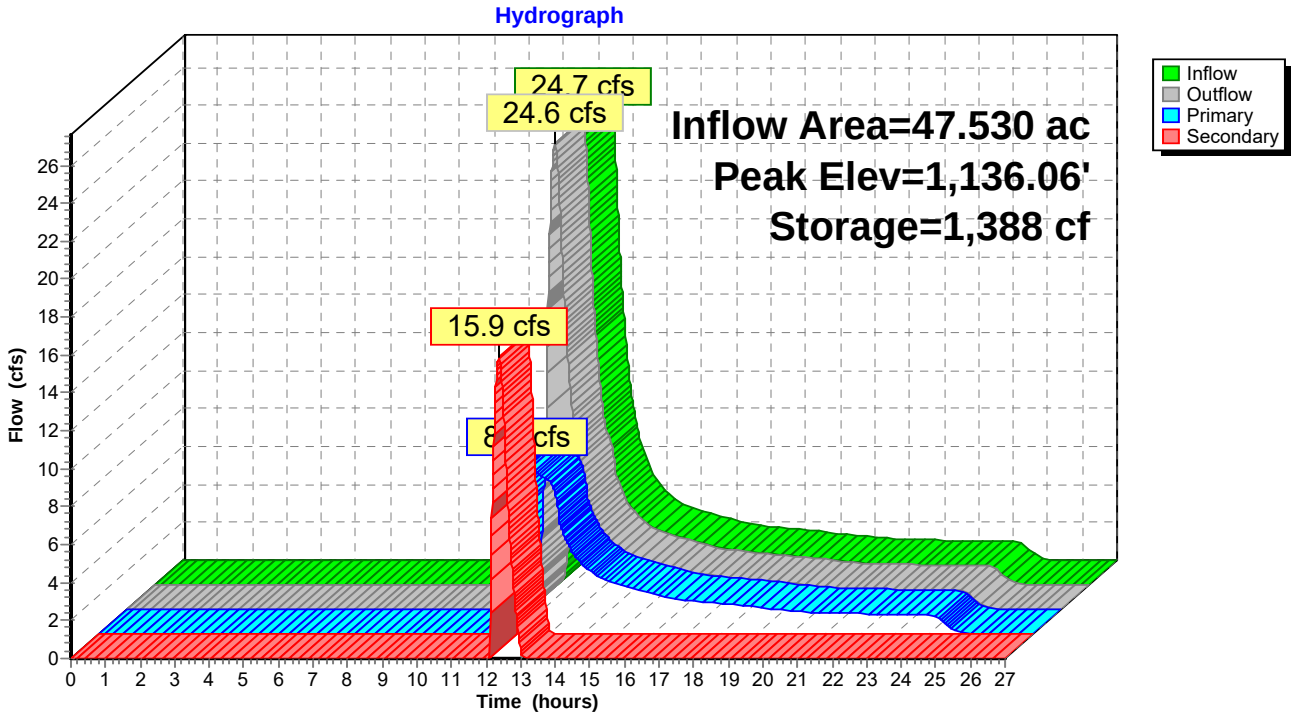
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,133.25	0	0	0
1,134.00	20	8	8
1,135.00	225	123	130
1,136.00	2,025	1,125	1,255
1,137.00	4,735	3,380	4,635

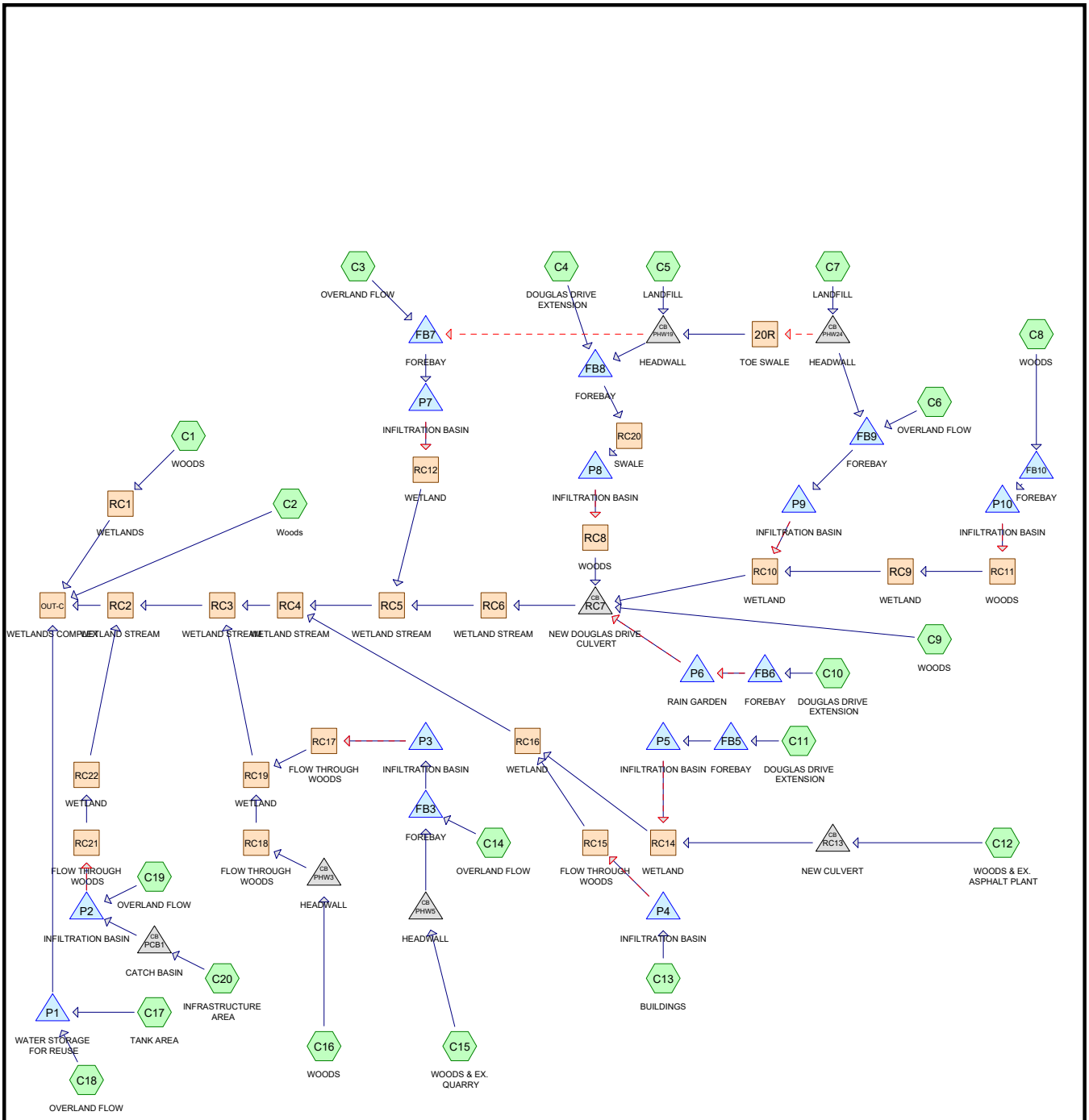
Device	Routing	Invert	Outlet Devices
#1	Primary	1,133.25'	**15.0" Round Culvert** L= 26.3' Ke= 0.500 Inlet / Outlet Invert= 1,133.25' / 1,132.00' S= 0.0475 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf
#2	Secondary	1,135.70'	**24.0' long + 10.0 '/' SideZ x 24.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Primary OutFlow Max=8.7 cfs @ 12.36 hrs HW=1,136.06' TW=1,130.36' (Dynamic Tailwater)
1=Culvert (Inlet Controls 8.7 cfs @ 7.12 fps)

Secondary OutFlow Max=15.9 cfs @ 12.36 hrs HW=1,136.06' TW=1,130.36' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Weir Controls 15.9 cfs @ 1.58 fps)

Pond RB3: CULVERT





Routing Diagram for 1101-INTDEV1_To OUTC
Prepared by CMA Engineers, Printed 10/17/2023
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Project Notes

Rainfall events imported from "1101 Pre-development.hcp"

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	10-yr	Type II 24-hr		Default	24.00	1	3.31	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.400	77	Fallow, bare soil, HSG A (C15)
9.740	86	Fallow, bare soil, HSG B (C12, C15)
0.640	96	Gravel surface, HSG A (C11, C12, C15)
2.050	96	Gravel surface, HSG B (C10, C11, C12, C15, C2, C7)
2.390	96	Gravel surface, HSG C (C10, C11, C14, C15, C16, C2, C20, C4, C5, C7)
0.080	96	Gravel surface, HSG D (C10, C5)
9.190	98	Landfill, Geomembrane (C5, C7)
1.970	30	Meadow, non-grazed, HSG A (C1, C11, C12, C13, C15, C2, C3)
8.530	58	Meadow, non-grazed, HSG B (C11, C12, C15, C16, C2, C7, C8, C9)
21.380	71	Meadow, non-grazed, HSG C (C1, C10, C11, C13, C14, C15, C16, C19, C2, C20, C3, C4, C5, C6, C7, C8, C9)
2.520	78	Meadow, non-grazed, HSG D (C1, C10, C2, C4, C5, C9)
0.600	98	Paved parking, HSG A (C11, C13, C15)
0.270	98	Paved parking, HSG B (C10, C11, C15, C2)
5.930	98	Paved parking, HSG C (C10, C11, C13, C15, C17, C2, C20, C4)
0.020	98	Paved parking, HSG D (C10)
0.010	98	Roofs, HSG A (C11)
0.610	98	Roofs, HSG C (C11, C13, C20)
0.020	98	Unconnected roofs, HSG A (C12)
0.090	98	Unconnected roofs, HSG B (C12)
0.270	98	Water Surface, HSG C (C18)
10.550	30	Woods, Good, HSG A (C1, C12, C2)
40.000	55	Woods, Good, HSG B (C10, C12, C15, C16, C2, C8, C9)
100.350	70	Woods, Good, HSG C (C1, C12, C2, C3, C8, C9)
10.280	77	Woods, Good, HSG D (C1, C12, C2, C9)
228.890	**69**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
15.190	HSG A	C1, C11, C12, C13, C15, C2, C3
60.680	HSG B	C10, C11, C12, C15, C16, C2, C7, C8, C9
130.930	HSG C	C1, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C2, C20, C3, C4, C5, C6, C7, C8, C9
12.900	HSG D	C1, C10, C12, C2, C4, C5, C9
9.190	Other	C5, C7
228.890		**TOTAL AREA**

Time span=0.00-27.00 hrs, dt=0.01 hrs, 2701 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment C1: WOODS Runoff Area=39.170 ac 0.00% Impervious Runoff Depth=0.61"
Flow Length=2,195' Tc=40.4 min CN=64 Runoff=12.7 cfs 1.995 af

Subcatchment C10: DOUGLAS DRIVE Runoff Area=2.010 ac 31.34% Impervious Runoff Depth=1.35"
Flow Length=210' Tc=17.3 min CN=78 Runoff=3.2 cfs 0.227 af

Subcatchment C11: DOUGLAS DRIVE Runoff Area=1.810 ac 75.14% Impervious Runoff Depth=2.27"
Tc=6.0 min CN=90 Runoff=7.1 cfs 0.342 af

Subcatchment C12: WOODS & EX. Runoff Area=54.070 ac 0.20% Impervious Runoff Depth=0.75"
Flow Length=3,290' Tc=43.9 min CN=67 Runoff=21.9 cfs 3.359 af

Subcatchment C13: BUILDINGS Runoff Area=0.970 ac 40.21% Impervious Runoff Depth=1.49"
Tc=6.0 min CN=80 Runoff=2.6 cfs 0.120 af

Subcatchment C14: OVERLAND FLOW Runoff Area=0.930 ac 0.00% Impervious Runoff Depth=1.00"
Tc=6.0 min CN=72 Runoff=1.6 cfs 0.077 af

Subcatchment C15: WOODS & EX. QUARRY Runoff Area=15.910 ac 2.77% Impervious Runoff Depth=0.75"
Flow Length=1,520' Tc=37.9 min CN=67 Runoff=7.2 cfs 0.988 af

Subcatchment C16: WOODS Runoff Area=6.130 ac 0.00% Impervious Runoff Depth=0.31"
Flow Length=950' Tc=39.0 min CN=56 Runoff=0.7 cfs 0.161 af

Subcatchment C17: TANK AREA Runoff Area=0.220 ac 100.00% Impervious Runoff Depth=3.08"
Tc=6.0 min CN=98 Runoff=1.0 cfs 0.056 af

Subcatchment C18: OVERLAND FLOW Runoff Area=0.270 ac 100.00% Impervious Runoff Depth=3.08"
Tc=6.0 min CN=98 Runoff=1.3 cfs 0.069 af

Subcatchment C19: OVERLAND FLOW Runoff Area=1.050 ac 0.00% Impervious Runoff Depth=0.94"
Tc=6.0 min CN=71 Runoff=1.7 cfs 0.083 af

Subcatchment C2: Woods Runoff Area=61.700 ac 0.26% Impervious Runoff Depth=0.75"
Flow Length=3,605' Tc=29.2 min CN=67 Runoff=33.6 cfs 3.833 af

Subcatchment C20: INFRASTRUCTURE Runoff Area=5.960 ac 66.44% Impervious Runoff Depth=2.18"
Tc=6.0 min CN=89 Runoff=22.6 cfs 1.084 af

Subcatchment C3: OVERLAND FLOW Runoff Area=0.780 ac 0.00% Impervious Runoff Depth=0.70"
Flow Length=100' Slope=0.1300 '/' Tc=20.8 min CN=66 Runoff=0.5 cfs 0.045 af

Subcatchment C4: DOUGLAS DRIVE Runoff Area=1.420 ac 19.72% Impervious Runoff Depth=1.35"
Tc=6.0 min CN=78 Runoff=3.4 cfs 0.160 af

Subcatchment C5: LANDFILL Runoff Area=10.430 ac 80.82% Impervious Runoff Depth=2.86"
Tc=6.0 min CN=96 Runoff=47.4 cfs 2.484 af

Subcatchment C6: OVERLAND FLOW Runoff Area=1.290 ac 0.00% Impervious Runoff Depth=0.94"
Tc=6.0 min CN=71 Runoff=2.1 cfs 0.102 af

Subcatchment C7: LANDFILL Runoff Area=2.390 ac 31.80% Impervious Runoff Depth=1.93"
Tc=6.0 min CN=86 Runoff=8.1 cfs 0.385 af

Subcatchment C8: WOODS Runoff Area=6.050 ac 0.00% Impervious Runoff Depth=0.65"
Flow Length=1,095' Tc=32.2 min CN=65 Runoff=2.6 cfs 0.330 af

Subcatchment C9: WOODS Runoff Area=16.330 ac 0.00% Impervious Runoff Depth=0.65"
Flow Length=1,960' Tc=32.0 min CN=65 Runoff=6.9 cfs 0.891 af

Reach 20R: TOE SWALE Avg. Flow Depth=0.28' Max Vel=1.65 fps Inflow=3.0 cfs 0.041 af
n=0.069 L=1,065.0' S=0.0423 '/' Capacity=78.3 cfs Outflow=1.7 cfs 0.041 af

Reach OUT-C: WETLANDS COMPLEX Inflow=62.7 cfs 10.756 af
Outflow=62.7 cfs 10.756 af

Reach RC1: WETLANDS Avg. Flow Depth=0.37' Max Vel=1.66 fps Inflow=12.7 cfs 1.995 af
n=0.035 L=525.0' S=0.0099 '/' Capacity=107.5 cfs Outflow=12.3 cfs 1.995 af

Reach RC10: WETLAND Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.035 L=1,010.0' S=0.0433 '/' Capacity=496.7 cfs Outflow=0.0 cfs 0.000 af

Reach RC11: WOODS Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.100 L=255.0' S=0.0784 '/' Capacity=31.5 cfs Outflow=0.0 cfs 0.000 af

Reach RC12: WETLAND Avg. Flow Depth=0.38' Max Vel=5.10 fps Inflow=11.5 cfs 0.246 af
n=0.035 L=310.0' S=0.0905 '/' Capacity=405.6 cfs Outflow=11.3 cfs 0.246 af

Reach RC14: WETLAND Avg. Flow Depth=0.43' Max Vel=4.14 fps Inflow=22.1 cfs 3.375 af
n=0.035 L=440.0' S=0.0500 '/' Capacity=610.7 cfs Outflow=22.1 cfs 3.375 af

Reach RC15: FLOW THROUGH WOODS Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.100 L=165.0' S=0.2000 '/' Capacity=33.2 cfs Outflow=0.0 cfs 0.000 af

Reach RC16: WETLAND Avg. Flow Depth=0.43' Max Vel=2.98 fps Inflow=22.1 cfs 3.375 af
n=0.035 L=319.0' S=0.0265 '/' Capacity=140.5 cfs Outflow=22.1 cfs 3.375 af

Reach RC17: FLOW THROUGH WOODS Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.100 L=158.1' S=0.1265 '/' Capacity=80.5 cfs Outflow=0.0 cfs 0.000 af

Reach RC18: FLOW THROUGH WOODS Avg. Flow Depth=0.11' Max Vel=1.07 fps Inflow=0.7 cfs 0.161 af
n=0.100 L=195.0' S=0.1641 '/' Capacity=76.3 cfs Outflow=0.7 cfs 0.161 af

Reach RC19: WETLAND Avg. Flow Depth=0.09' Max Vel=1.40 fps Inflow=0.7 cfs 0.161 af
n=0.035 L=545.0' S=0.0454 '/' Capacity=114.7 cfs Outflow=0.6 cfs 0.161 af

Reach RC2: WETLAND STREAM Avg. Flow Depth=0.36' Max Vel=2.98 fps Inflow=30.2 cfs 4.929 af
n=0.035 L=445.0' S=0.0332 '/' Capacity=1,248.5 cfs Outflow=30.1 cfs 4.927 af

Reach RC20: SWALE Avg. Flow Depth=0.24' Max Vel=3.19 fps Inflow=27.0 cfs 0.831 af
n=0.022 L=64.0' S=0.0156 '/' Capacity=994.2 cfs Outflow=27.0 cfs 0.831 af

Reach RC21: FLOW THROUGH WOODS Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.100 L=140.0' S=0.1000 '/' Capacity=47.6 cfs Outflow=0.0 cfs 0.000 af

Reach RC22: WETLAND Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.035 L=1,155.0' S=0.0515 '/' Capacity=306.0 cfs Outflow=0.0 cfs 0.000 af

Reach RC3: WETLAND STREAM Avg. Flow Depth=0.35' Max Vel=3.04 fps Inflow=31.2 cfs 4.932 af
n=0.035 L=1,160.0' S=0.0351 '/' Capacity=1,284.7 cfs Outflow=30.2 cfs 4.929 af

Reach RC4: WETLAND STREAM Avg. Flow Depth=0.63' Max Vel=4.60 fps Inflow=30.7 cfs 4.772 af
n=0.035 L=645.0' S=0.0376 '/' Capacity=1,660.9 cfs Outflow=30.6 cfs 4.771 af

Reach RC5: WETLAND STREAM Avg. Flow Depth=0.22' Max Vel=2.62 fps Inflow=12.8 cfs 1.398 af
n=0.035 L=205.0' S=0.0498 '/' Capacity=1,529.4 cfs Outflow=12.5 cfs 1.397 af

Reach RC6: WETLAND STREAM Avg. Flow Depth=0.23' Max Vel=1.40 fps Inflow=7.3 cfs 1.153 af
n=0.035 L=315.0' S=0.0135 '/' Capacity=795.1 cfs Outflow=7.2 cfs 1.152 af

Reach RC8: WOODS Avg. Flow Depth=0.12' Max Vel=0.60 fps Inflow=1.2 cfs 0.042 af
n=0.100 L=210.0' S=0.0464 '/' Capacity=97.7 cfs Outflow=1.0 cfs 0.042 af

Reach RC9: WETLAND Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.035 L=955.0' S=0.0335 '/' Capacity=436.9 cfs Outflow=0.0 cfs 0.000 af

Pond FB10: FOREBAY Peak Elev=1,212.04' Storage=2,856 cf Inflow=2.6 cfs 0.330 af
Discarded=0.2 cfs 0.243 af Primary=1.9 cfs 0.087 af Outflow=2.1 cfs 0.330 af

Pond FB3: FOREBAY Peak Elev=1,122.11' Storage=3,053 cf Inflow=7.4 cfs 1.066 af
Discarded=0.2 cfs 0.275 af Primary=7.2 cfs 0.762 af Outflow=7.4 cfs 1.038 af

Pond FB5: FOREBAY Peak Elev=1,133.39' Storage=1,429 cf Inflow=7.1 cfs 0.342 af
Discarded=0.2 cfs 0.154 af Primary=6.8 cfs 0.189 af Outflow=7.0 cfs 0.343 af

Pond FB6: FOREBAY Peak Elev=1,125.61' Storage=3,946 cf Inflow=3.2 cfs 0.227 af
Primary=0.0 cfs 0.000 af Secondary=0.4 cfs 0.227 af Outflow=0.4 cfs 0.227 af

Pond FB7: FOREBAY Peak Elev=1,142.27' Storage=4,446 cf Inflow=24.4 cfs 1.308 af
Discarded=0.3 cfs 0.460 af Primary=24.1 cfs 0.833 af Outflow=24.4 cfs 1.293 af

Pond FB8: FOREBAY Peak Elev=1,151.48' Storage=6,810 cf Inflow=27.7 cfs 1.423 af
Discarded=0.4 cfs 0.582 af Primary=27.0 cfs 0.831 af Outflow=27.4 cfs 1.413 af

Pond FB9: FOREBAY Peak Elev=1,177.13' Storage=4,255 cf Inflow=7.3 cfs 0.445 af
Discarded=0.3 cfs 0.314 af Primary=6.7 cfs 0.132 af Outflow=7.1 cfs 0.445 af

Pond P1: WATER STORAGE FOR REUSE Peak Elev=1,136.04' Storage=5,473 cf Inflow=2.3 cfs 0.126 af
Outflow=0.0 cfs 0.000 af

Pond P10: INFILTRATION BASIN Peak Elev=1,207.18' Storage=975 cf Inflow=1.9 cfs 0.087 af
Discarded=0.6 cfs 0.087 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.6 cfs 0.087 af

Pond P2: INFILTRATION BASIN Peak Elev=1,108.83' Storage=23,813 cf Inflow=24.3 cfs 1.167 af
Discarded=1.2 cfs 1.167 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=1.2 cfs 1.167 af

Pond P3: INFILTRATION BASIN Peak Elev=1,118.98' Storage=17,483 cf Inflow=7.2 cfs 0.762 af
Discarded=0.7 cfs 0.724 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.7 cfs 0.724 af

Pond P4: INFILTRATION BASIN Peak Elev=1,139.13' Storage=940 cf Inflow=2.6 cfs 0.120 af
Discarded=0.8 cfs 0.120 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.8 cfs 0.120 af

Pond P5: INFILTRATION BASIN Peak Elev=1,132.31' Storage=5,471 cf Inflow=6.8 cfs 0.189 af
Discarded=0.4 cfs 0.173 af Primary=0.7 cfs 0.016 af Secondary=0.0 cfs 0.000 af Outflow=1.1 cfs 0.189 af

Pond P6: RAIN GARDEN Peak Elev=1,124.44' Storage=1,820 cf Inflow=0.4 cfs 0.227 af
Primary=0.4 cfs 0.220 af Secondary=0.0 cfs 0.000 af Outflow=0.4 cfs 0.220 af

Pond P7: INFILTRATION BASIN Peak Elev=1,140.46' Storage=16,213 cf Inflow=24.1 cfs 0.833 af
Discarded=1.4 cfs 0.588 af Primary=11.5 cfs 0.246 af Secondary=0.0 cfs 0.000 af Outflow=12.9 cfs 0.834 af

Pond P8: INFILTRATION BASIN Peak Elev=1,148.28' Storage=25,161 cf Inflow=27.0 cfs 0.831 af
Discarded=1.1 cfs 0.789 af Primary=1.2 cfs 0.042 af Secondary=0.0 cfs 0.000 af Outflow=2.3 cfs 0.831 af

Pond P9: INFILTRATION BASIN Peak Elev=1,173.62' Storage=3,209 cf Inflow=6.7 cfs 0.132 af
Discarded=0.6 cfs 0.132 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.6 cfs 0.132 af

Pond PCB1: CATCH BASIN Peak Elev=1,147.19' Inflow=22.6 cfs 1.084 af
15.0" Round Culvert n=0.013 L=145.3' S=0.1445 '/' Outflow=22.6 cfs 1.084 af

Pond PHW19: HEADWALL Peak Elev=1,172.58' Inflow=48.6 cfs 2.525 af
Primary=24.3 cfs 1.262 af Secondary=24.3 cfs 1.262 af Outflow=48.6 cfs 2.525 af

Pond PHW24: HEADWALL Peak Elev=1,214.98' Inflow=8.1 cfs 0.385 af
Primary=5.1 cfs 0.344 af Secondary=3.0 cfs 0.041 af Outflow=8.1 cfs 0.385 af

Pond PHW3: HEADWALL Peak Elev=1,153.88' Inflow=0.7 cfs 0.161 af
15.0" Round Culvert n=0.013 L=541.7' S=0.0471 '/' Outflow=0.7 cfs 0.161 af

Pond PHW5: HEADWALL Peak Elev=1,145.60' Inflow=7.2 cfs 0.988 af
15.0" Round Culvert n=0.013 L=353.3' S=0.0609 '/' Outflow=7.2 cfs 0.988 af

Pond RC13: NEW CULVERT Peak Elev=1,127.20' Inflow=21.9 cfs 3.359 af
72.0" x 72.0" Box Culvert w/ 24.0" inside fill n=0.025 L=53.0' S=0.0189 '/' Outflow=21.9 cfs 3.359 af

Pond RC7: NEW DOUGLAS DRIVE CULVERT Peak Elev=1,110.65' Inflow=7.3 cfs 1.153 af
144.0" x 72.0" Box Culvert w/ 24.0" inside fill n=0.025 L=43.2' S=0.0058 '/' Outflow=7.3 cfs 1.153 af

Total Runoff Area = 228.890 ac Runoff Volume = 16.793 af Average Runoff Depth = 0.88"
92.57% Pervious = 211.880 ac 7.43% Impervious = 17.010 ac

Summary for Subcatchment C1: WOODS

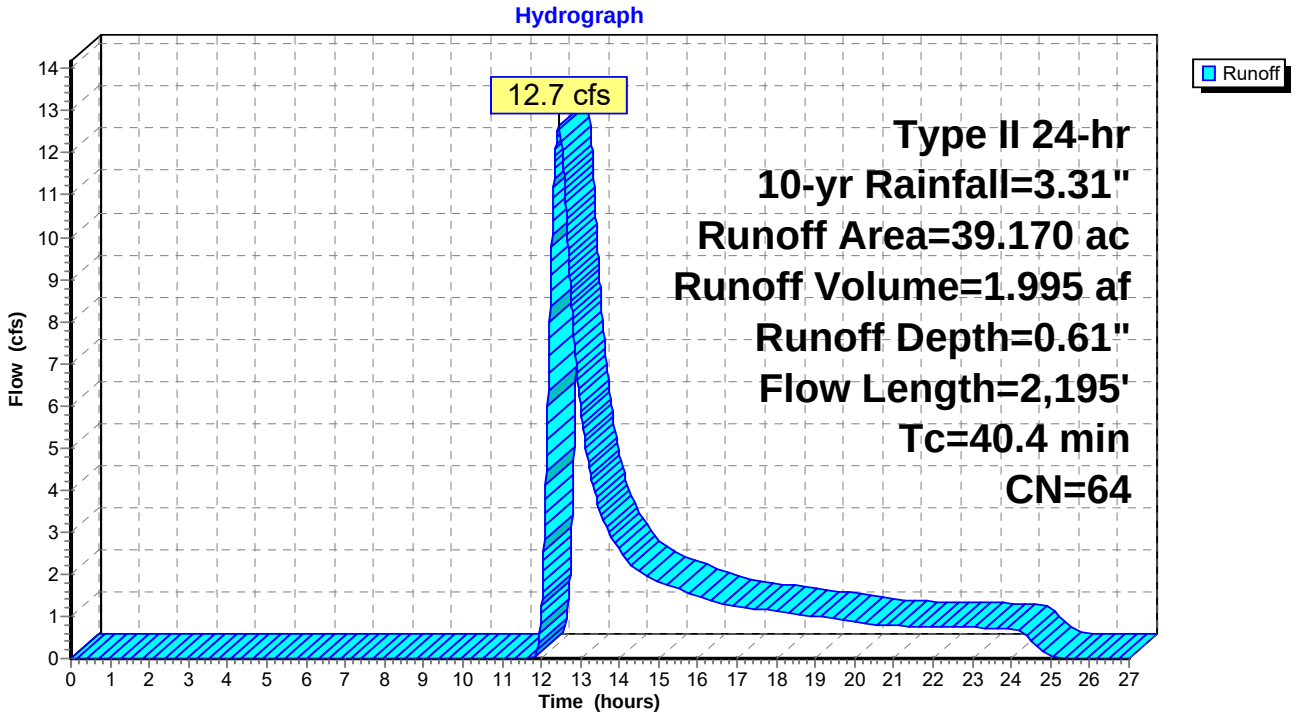
Runoff = 12.7 cfs @ 12.44 hrs, Volume= 1.995 af, Depth= 0.61"
Routed to Reach RC1 : WETLANDS

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
6.300	30	Woods, Good, HSG A
2.430	77	Woods, Good, HSG D
0.080	78	Meadow, non-grazed, HSG D
0.270	30	Meadow, non-grazed, HSG A
0.840	71	Meadow, non-grazed, HSG C
29.250	70	Woods, Good, HSG C
39.170	64	Weighted Average
39.170	64	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.0	100	0.2150	0.10		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 2.32"
20.3	835	0.0750	0.68		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
3.1	1,260	0.0450	6.87	228.95	**Parabolic Channel,** W=50.00' D=1.00' Area=33.3 sf Perim=50.1' n= 0.035 Earth, dense weeds
40.4	2,195	Total			

Subcatchment C1: WOODS



Summary for Subcatchment C10: DOUGLAS DRIVE EXTENSION

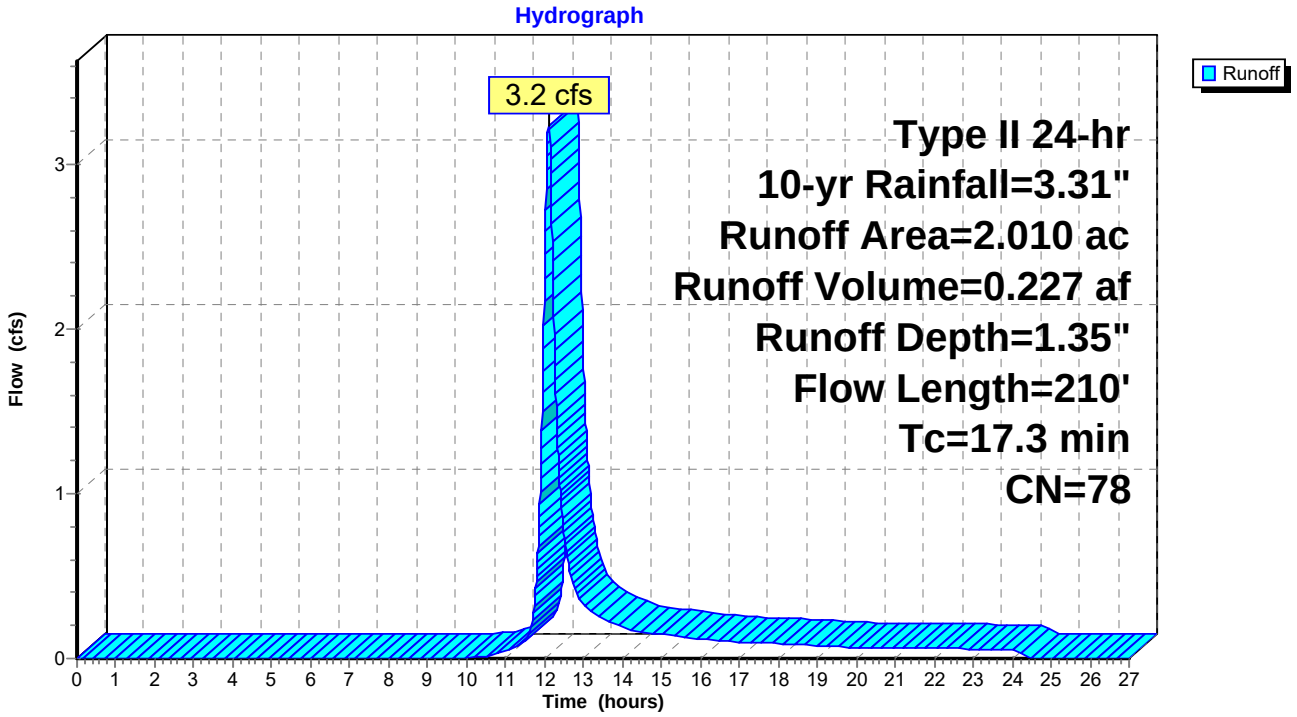
Runoff = 3.2 cfs @ 12.10 hrs, Volume= 0.227 af, Depth= 1.35"
Routed to Pond FB6 : FOREBAY

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
0.380	55	Woods, Good, HSG B
0.020	98	Paved parking, HSG D
0.010	96	Gravel surface, HSG D
0.120	98	Paved parking, HSG B
0.020	96	Gravel surface, HSG B
0.490	98	Paved parking, HSG C
0.090	96	Gravel surface, HSG C
0.870	71	Meadow, non-grazed, HSG C
0.010	78	Meadow, non-grazed, HSG D
2.010	78	Weighted Average
1.380	69	68.66% Pervious Area
0.630	98	31.34% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.3	100	0.2800	0.11		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 2.32"
2.0	110	0.1300	0.90		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
17.3	210	Total			

Subcatchment C10: DOUGLAS DRIVE EXTENSION



Summary for Subcatchment C11: DOUGLAS DRIVE EXTENSION

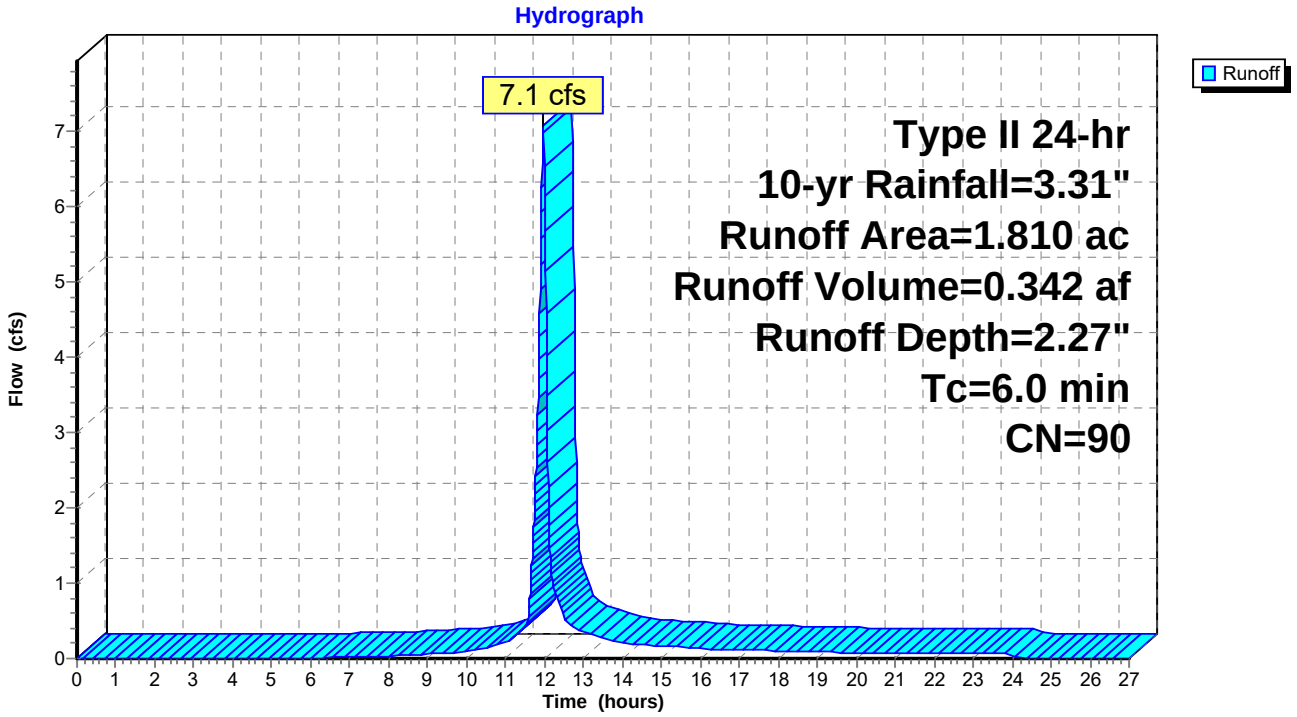
Runoff = 7.1 cfs @ 11.97 hrs, Volume= 0.342 af, Depth= 2.27"
Routed to Pond FB5 : FOREBAY

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
0.180	98	Roofs, HSG C
0.010	98	Roofs, HSG A
0.490	98	Paved parking, HSG A
0.040	96	Gravel surface, HSG A
0.590	98	Paved parking, HSG C
0.020	96	Gravel surface, HSG C
0.090	98	Paved parking, HSG B
0.010	96	Gravel surface, HSG B
0.080	30	Meadow, non-grazed, HSG A
0.020	58	Meadow, non-grazed, HSG B
0.280	71	Meadow, non-grazed, HSG C
1.810	90	Weighted Average
0.450	67	24.86% Pervious Area
1.360	98	75.14% Impervious Area

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

Subcatchment C11: DOUGLAS DRIVE EXTENSION



Summary for Subcatchment C12: WOODS & EX. ASPHALT PLANT

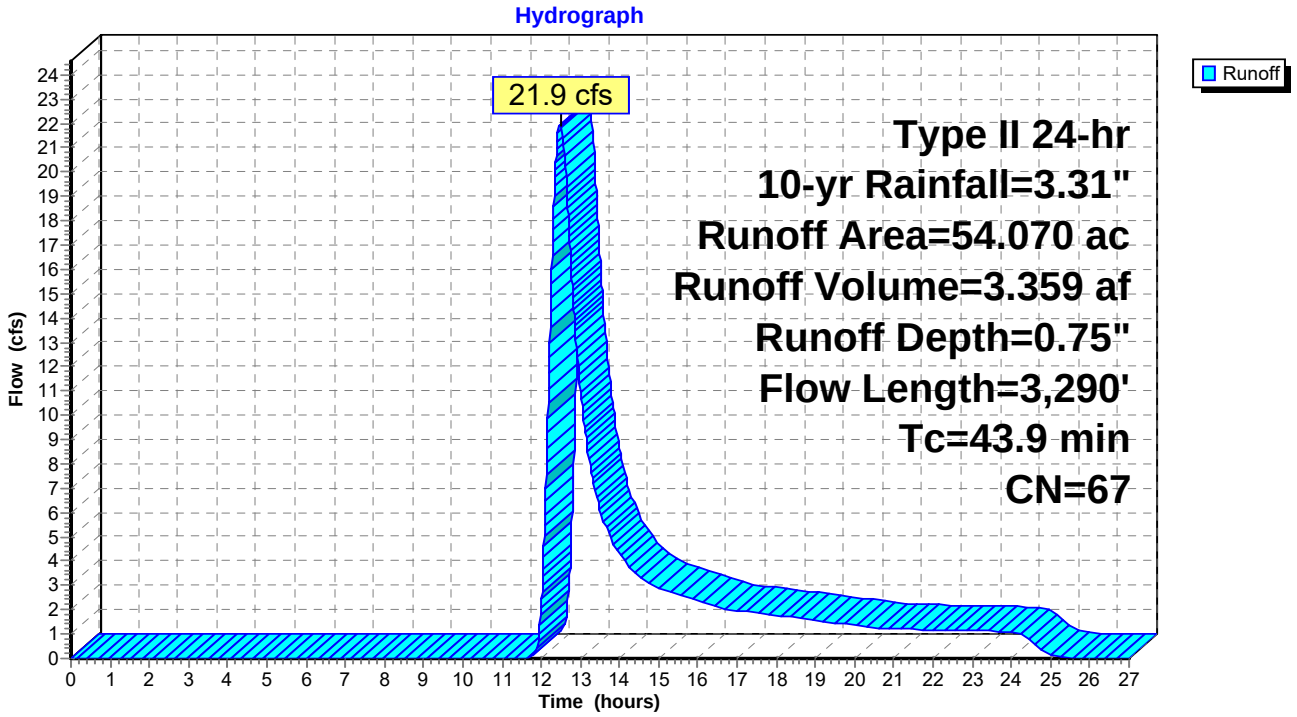
Runoff = 21.9 cfs @ 12.48 hrs, Volume= 3.359 af, Depth= 0.75"
Routed to Pond RC13 : NEW CULVERT

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
17.950	55	Woods, Good, HSG B
1.980	58	Meadow, non-grazed, HSG B
6.860	86	Fallow, bare soil, HSG B
0.490	30	Meadow, non-grazed, HSG A
0.730	30	Woods, Good, HSG A
0.090	98	Unconnected roofs, HSG B
0.020	98	Unconnected roofs, HSG A
0.510	96	Gravel surface, HSG A
1.100	96	Gravel surface, HSG B
3.700	77	Woods, Good, HSG D
20.640	70	Woods, Good, HSG C
54.070	67	Weighted Average
53.960	67	99.80% Pervious Area
0.110	98	0.20% Impervious Area
0.110		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.8	100	0.1150	0.08		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 2.32"
16.3	600	0.0600	0.61		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
5.5	2,400	0.0200	7.24	386.23	**Parabolic Channel, wetland** W=40.00' D=2.00' Area=53.3 sf Perim=40.3' n= 0.035
0.3	190	0.0400	11.89	79.24	**Parabolic Channel, stream** W=5.00' D=2.00' Area=6.7 sf Perim=6.7' n= 0.025
43.9	3,290	Total			

Subcatchment C12: WOODS & EX. ASPHALT PLANT



Summary for Subcatchment C13: BUILDINGS

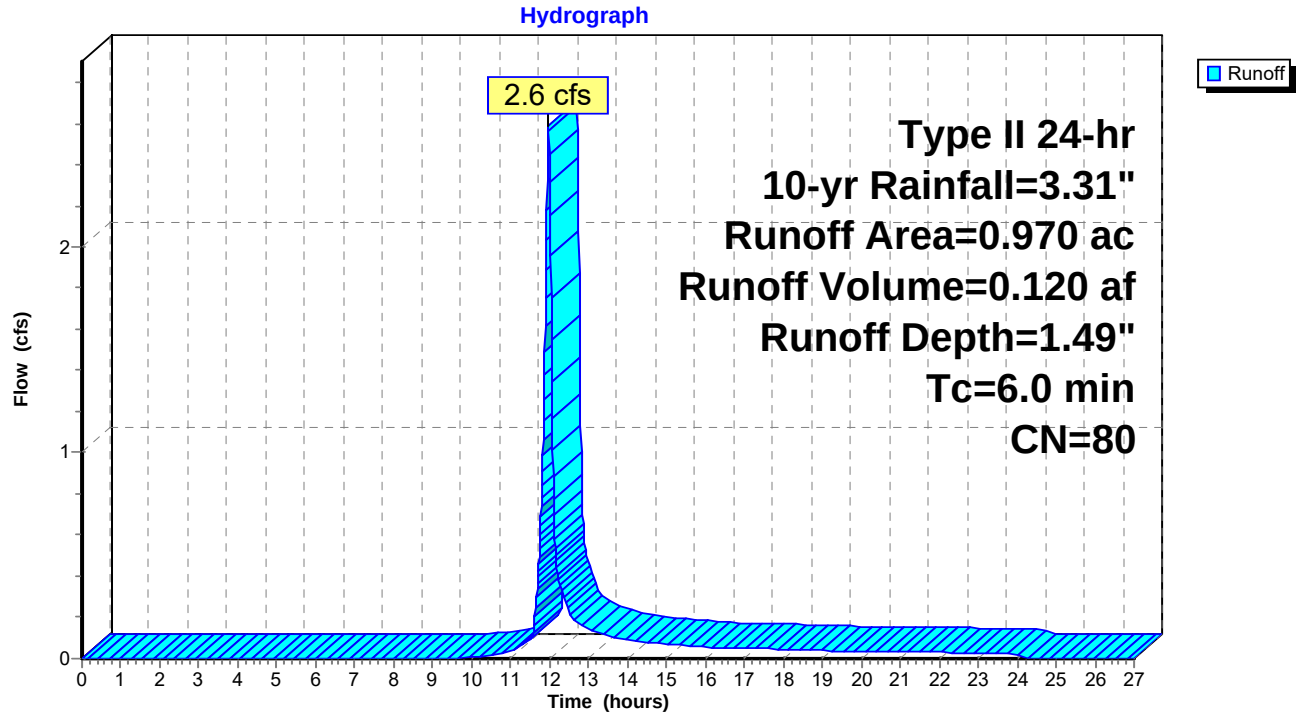
Runoff = 2.6 cfs @ 11.98 hrs, Volume= 0.120 af, Depth= 1.49"
Routed to Pond P4 : INFILTRATION BASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
0.310	98	Paved parking, HSG C
0.060	98	Roofs, HSG C
0.020	98	Paved parking, HSG A
0.050	30	Meadow, non-grazed, HSG A
0.530	71	Meadow, non-grazed, HSG C
0.970	80	Weighted Average
0.580	67	59.79% Pervious Area
0.390	98	40.21% Impervious Area

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

Subcatchment C13: BUILDINGS



Summary for Subcatchment C14: OVERLAND FLOW

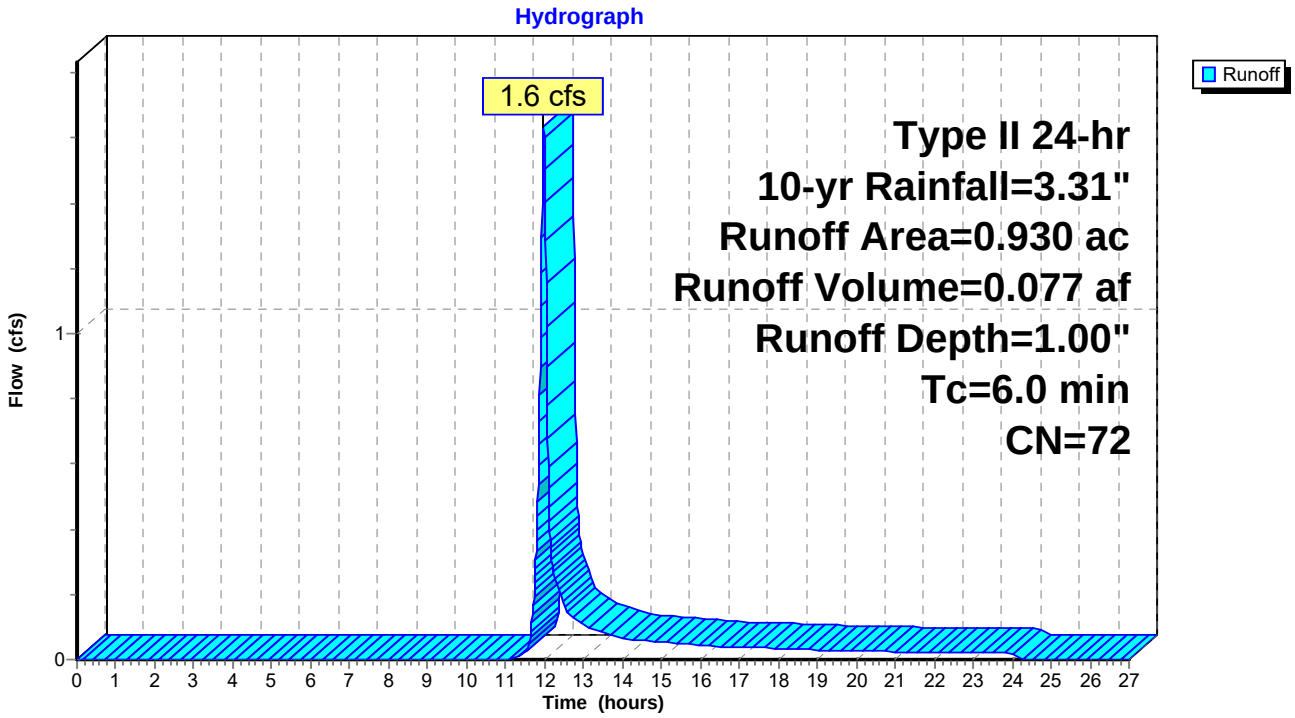
Runoff = 1.6 cfs @ 11.98 hrs, Volume= 0.077 af, Depth= 1.00"
Routed to Pond FB3 : FOREBAY

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
0.890	71	Meadow, non-grazed, HSG C
0.040	96	Gravel surface, HSG C
0.930	72	Weighted Average
0.930	72	100.00% Pervious Area

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

Subcatchment C14: OVERLAND FLOW



Summary for Subcatchment C15: WOODS & EX. QUARRY

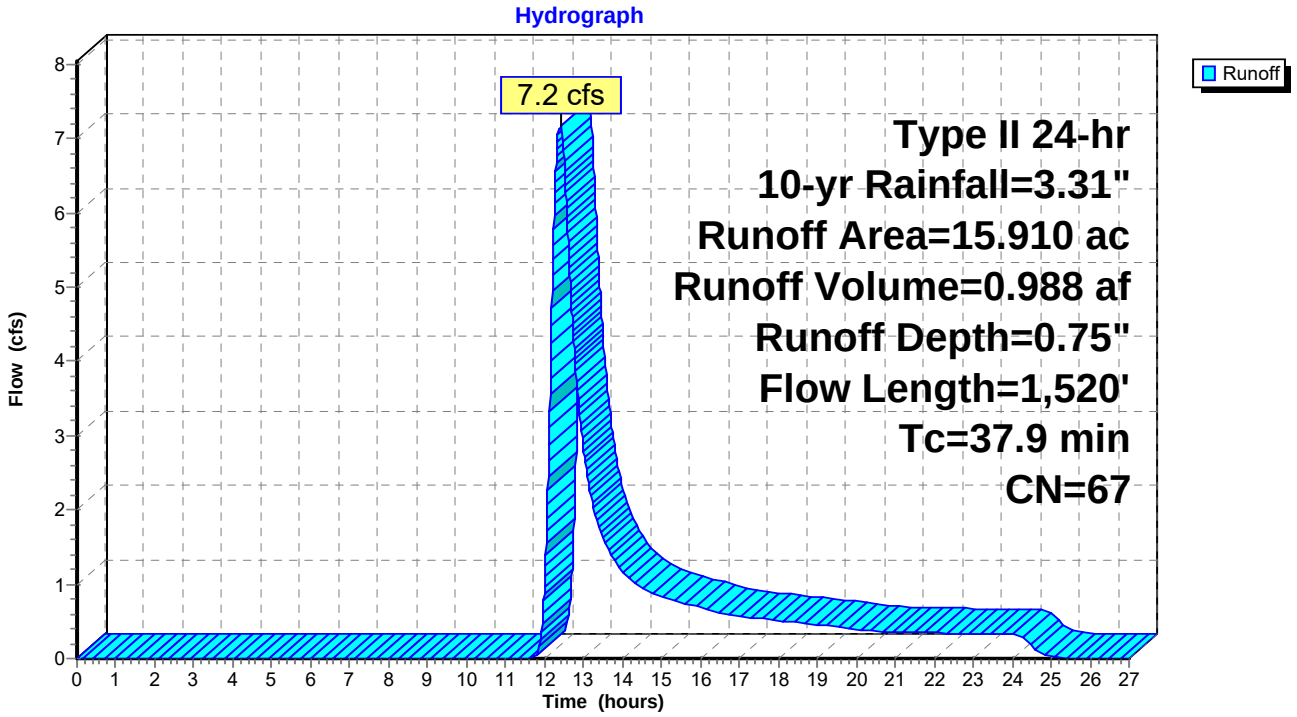
Runoff = 7.2 cfs @ 12.42 hrs, Volume= 0.988 af, Depth= 0.75"
Routed to Pond PHW5 : HEADWALL

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
6.680	55	Woods, Good, HSG B
3.050	58	Meadow, non-grazed, HSG B
2.880	86	Fallow, bare soil, HSG B
1.400	77	Fallow, bare soil, HSG A
0.090	96	Gravel surface, HSG A
0.730	96	Gravel surface, HSG B
0.050	96	Gravel surface, HSG C
0.320	98	Paved parking, HSG C
0.090	98	Paved parking, HSG A
0.030	98	Paved parking, HSG B
0.090	58	Meadow, non-grazed, HSG B
0.170	30	Meadow, non-grazed, HSG A
0.330	71	Meadow, non-grazed, HSG C
15.910	67	Weighted Average
15.470	66	97.23% Pervious Area
0.440	98	2.77% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.4	100	0.1750	0.09		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 2.32"
16.7	750	0.0900	0.75		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
2.1	505	0.0625	4.03		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.7	165	0.0100	4.11	12.32	**Trap/Vee/Rect Channel Flow,** Bot.W=0.00' D=1.00' Z= 3.0 '/' Top.W=6.00' n= 0.022 Earth, clean & straight
37.9	1,520	Total			

Subcatchment C15: WOODS & EX. QUARRY



Summary for Subcatchment C16: WOODS

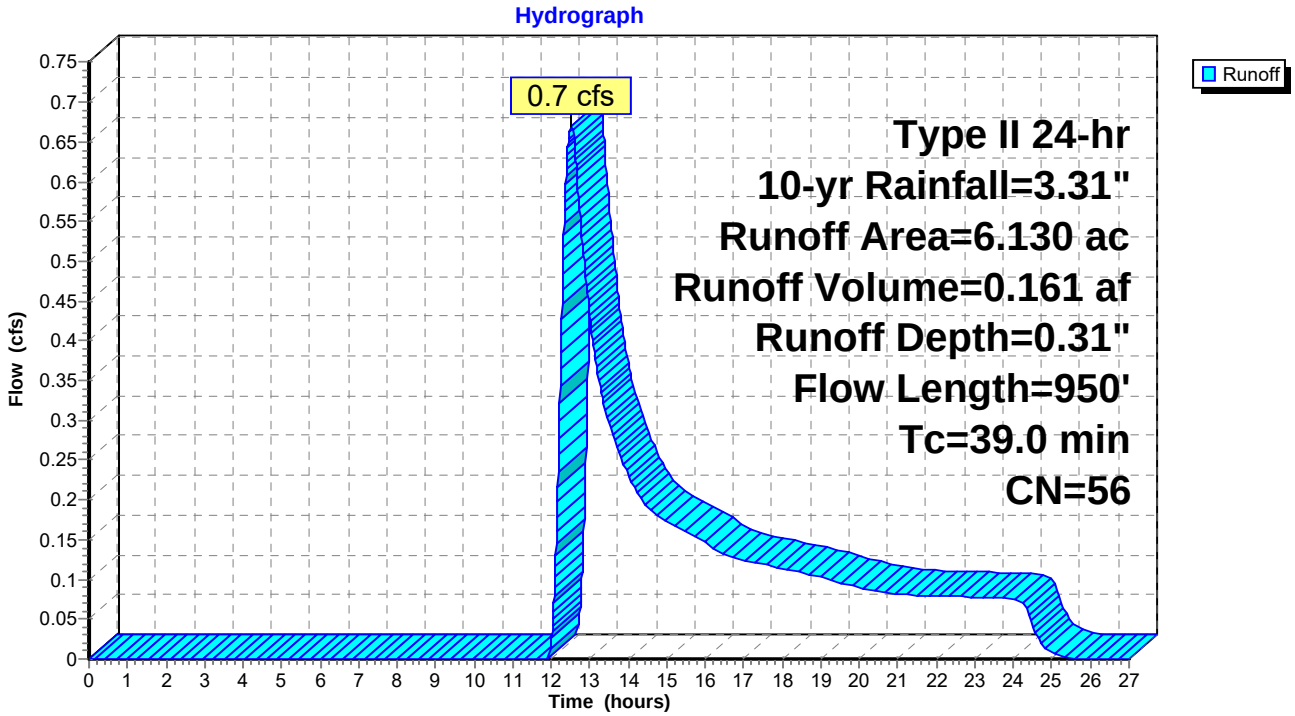
Runoff = 0.7 cfs @ 12.52 hrs, Volume= 0.161 af, Depth= 0.31"
Routed to Pond PHW3 : HEADWALL

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
0.030	96	Gravel surface, HSG C
4.350	55	Woods, Good, HSG B
1.630	58	Meadow, non-grazed, HSG B
0.120	71	Meadow, non-grazed, HSG C
6.130	56	Weighted Average
6.130	56	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.6	100	0.0850	0.07		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 2.32"
12.0	540	0.0900	0.75		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
2.4	310	0.0925	2.13		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
39.0	950	Total			

Subcatchment C16: WOODS



Summary for Subcatchment C17: TANK AREA

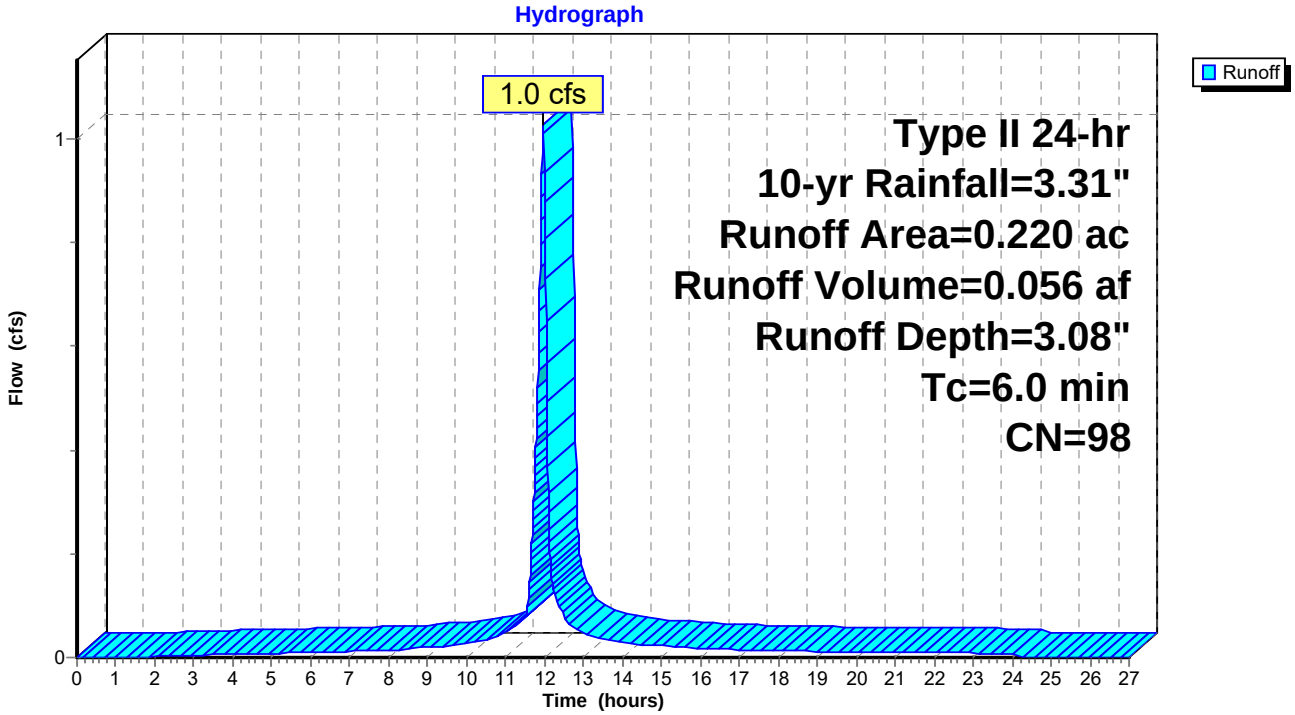
Runoff = 1.0 cfs @ 11.97 hrs, Volume= 0.056 af, Depth= 3.08"
Routed to Pond P1 : WATER STORAGE FOR REUSE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
0.220	98	Paved parking, HSG C
0.220	98	100.00% Impervious Area

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

Subcatchment C17: TANK AREA



Summary for Subcatchment C18: OVERLAND FLOW

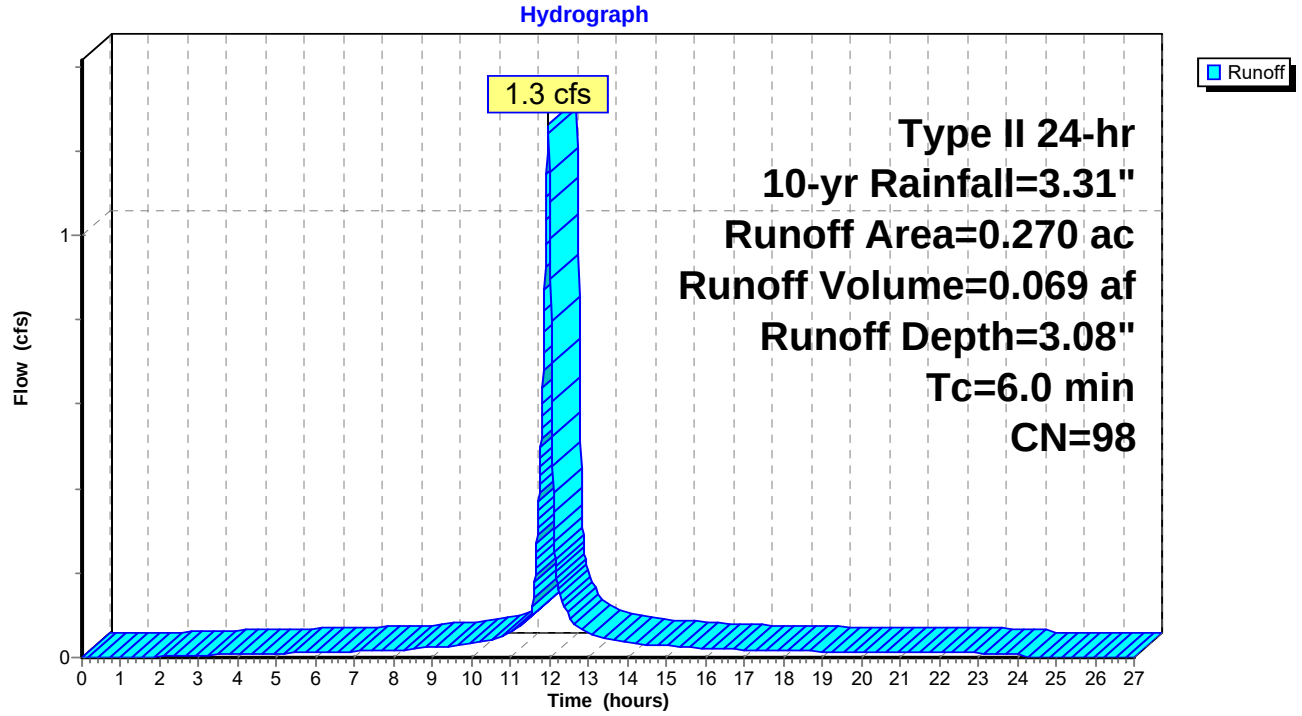
Runoff = 1.3 cfs @ 11.97 hrs, Volume= 0.069 af, Depth= 3.08"
Routed to Pond P1 : WATER STORAGE FOR REUSE

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
0.270	98	Water Surface, HSG C
0.270	98	100.00% Impervious Area

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

Subcatchment C18: OVERLAND FLOW



Summary for Subcatchment C19: OVERLAND FLOW

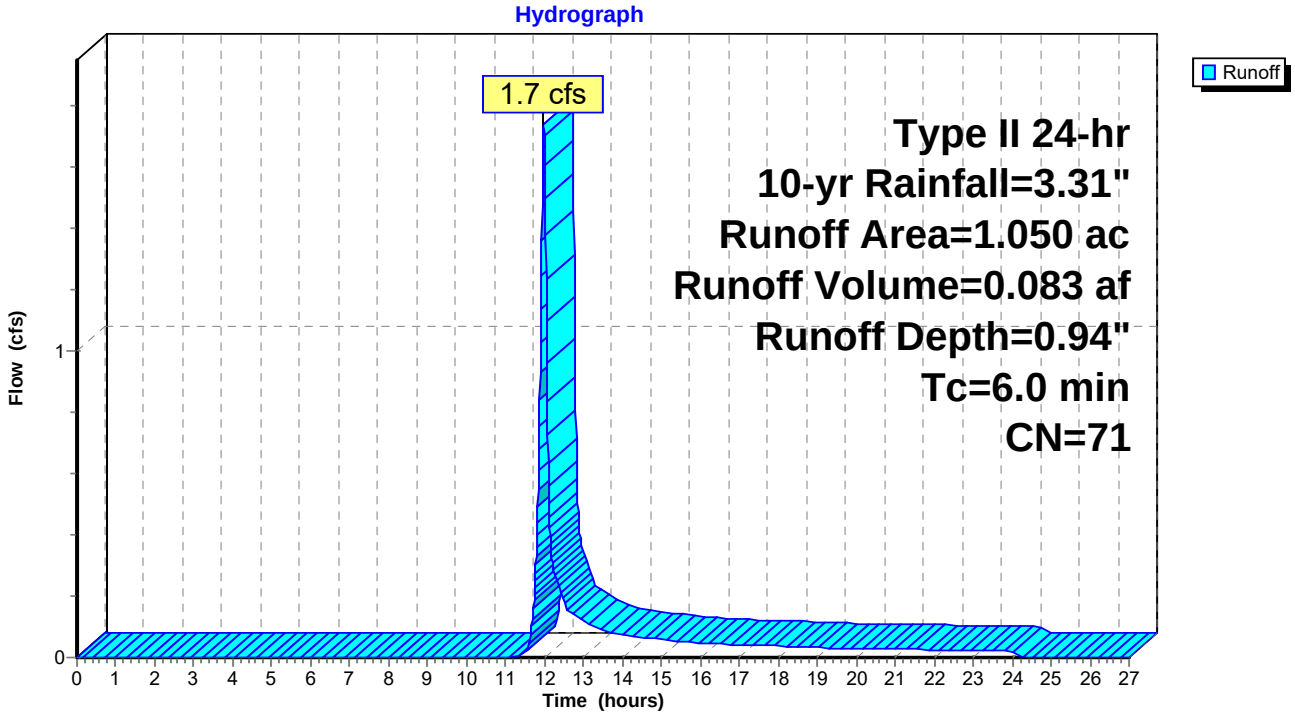
Runoff = 1.7 cfs @ 11.98 hrs, Volume= 0.083 af, Depth= 0.94"
Routed to Pond P2 : INFILTRATION BASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
1.050	71	Meadow, non-grazed, HSG C
1.050	71	100.00% Pervious Area

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

Subcatchment C19: OVERLAND FLOW



Summary for Subcatchment C2: Woods

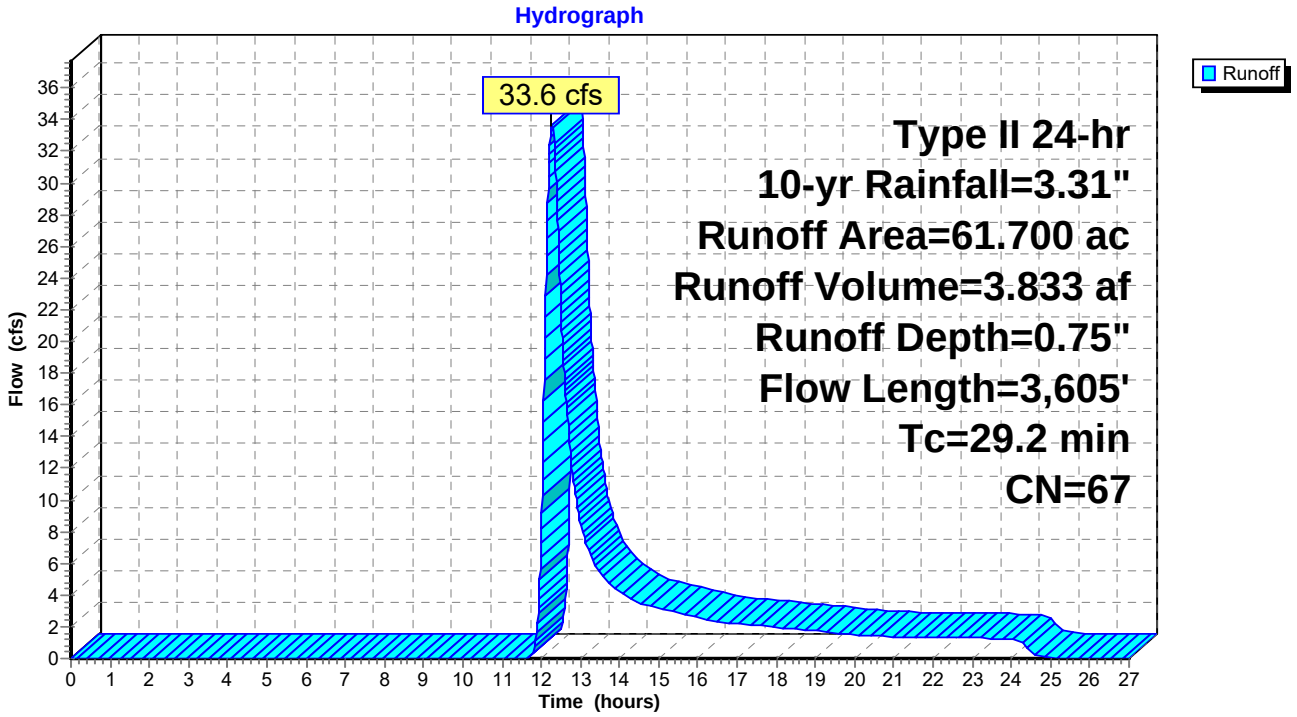
Runoff = 33.6 cfs @ 12.27 hrs, Volume= 3.833 af, Depth= 0.75"
Routed to Reach OUT-C : WETLANDS COMPLEX

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
3.520	30	Woods, Good, HSG A
0.830	30	Meadow, non-grazed, HSG A
3.210	55	Woods, Good, HSG B
0.690	58	Meadow, non-grazed, HSG B
3.540	77	Woods, Good, HSG D
2.000	78	Meadow, non-grazed, HSG D
4.920	71	Meadow, non-grazed, HSG C
0.130	98	Paved parking, HSG C
0.030	98	Paved parking, HSG B
0.400	96	Gravel surface, HSG C
0.020	96	Gravel surface, HSG B
42.410	70	Woods, Good, HSG C
61.700	67	Weighted Average
61.540	67	99.74% Pervious Area
0.160	98	0.26% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.2	100	0.1400	0.08		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 2.32"
3.4	190	0.1350	0.92		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
1.0	660	0.0500	11.37	379.12	**Parabolic Channel,** W=25.00' D=2.00' Area=33.3 sf Perim=25.4' n= 0.035 Earth, dense weeds
4.6	2,655	0.0350	9.62	1,282.06	**Parabolic Channel,** W=100.00' D=2.00' Area=133.3 sf Perim=100.1' n= 0.035 Earth, dense weeds
29.2	3,605	Total			

Subcatchment C2: Woods



Summary for Subcatchment C20: INFRASTRUCTURE AREA

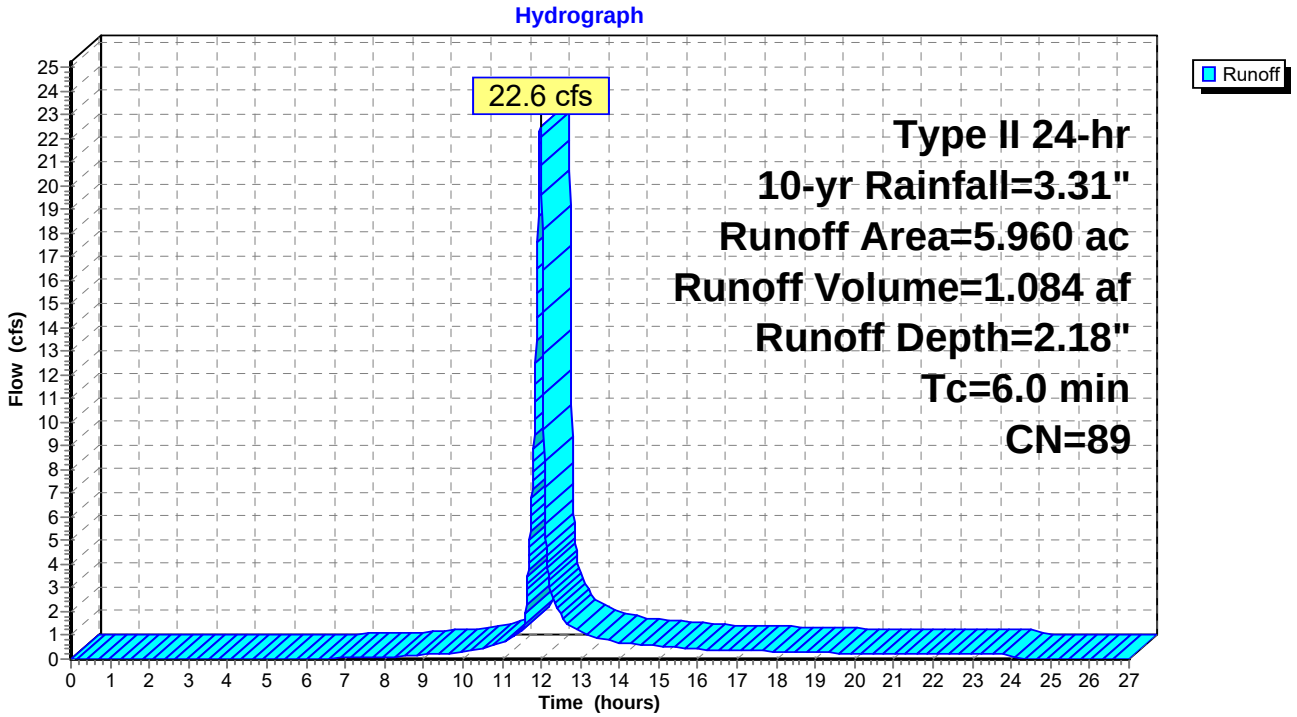
Runoff = 22.6 cfs @ 11.97 hrs, Volume= 1.084 af, Depth= 2.18"
Routed to Pond PCB1 : CATCH BASIN

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
3.590	98	Paved parking, HSG C
0.370	98	Roofs, HSG C
0.070	96	Gravel surface, HSG C
1.930	71	Meadow, non-grazed, HSG C
5.960	89	Weighted Average
2.000	72	33.56% Pervious Area
3.960	98	66.44% Impervious Area

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

Subcatchment C20: INFRASTRUCTURE AREA



Summary for Subcatchment C3: OVERLAND FLOW

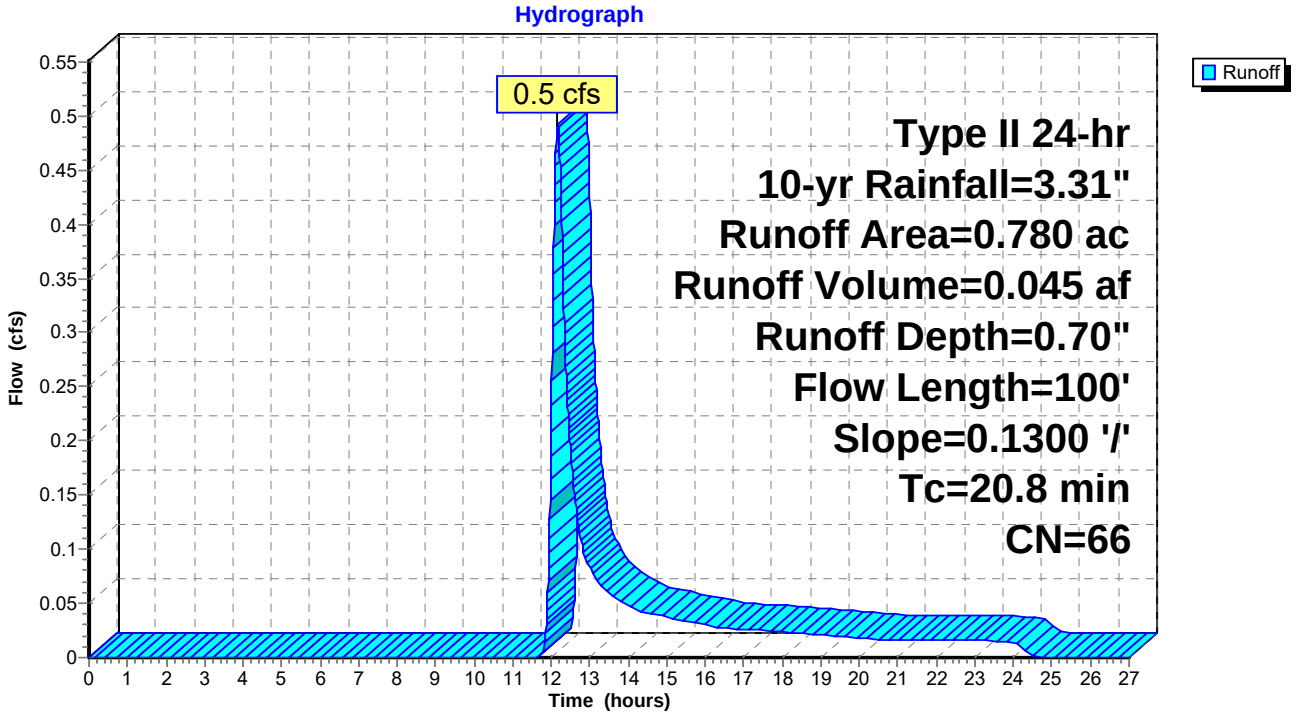
Runoff = 0.5 cfs @ 12.17 hrs, Volume= 0.045 af, Depth= 0.70"
Routed to Pond FB7 : FOREBAY

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
0.300	70	Woods, Good, HSG C
0.080	30	Meadow, non-grazed, HSG A
0.400	71	Meadow, non-grazed, HSG C
0.780	66	Weighted Average
0.780	66	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.8	100	0.1300	0.08		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 2.32"

Subcatchment C3: OVERLAND FLOW



Summary for Subcatchment C4: DOUGLAS DRIVE EXTENSION

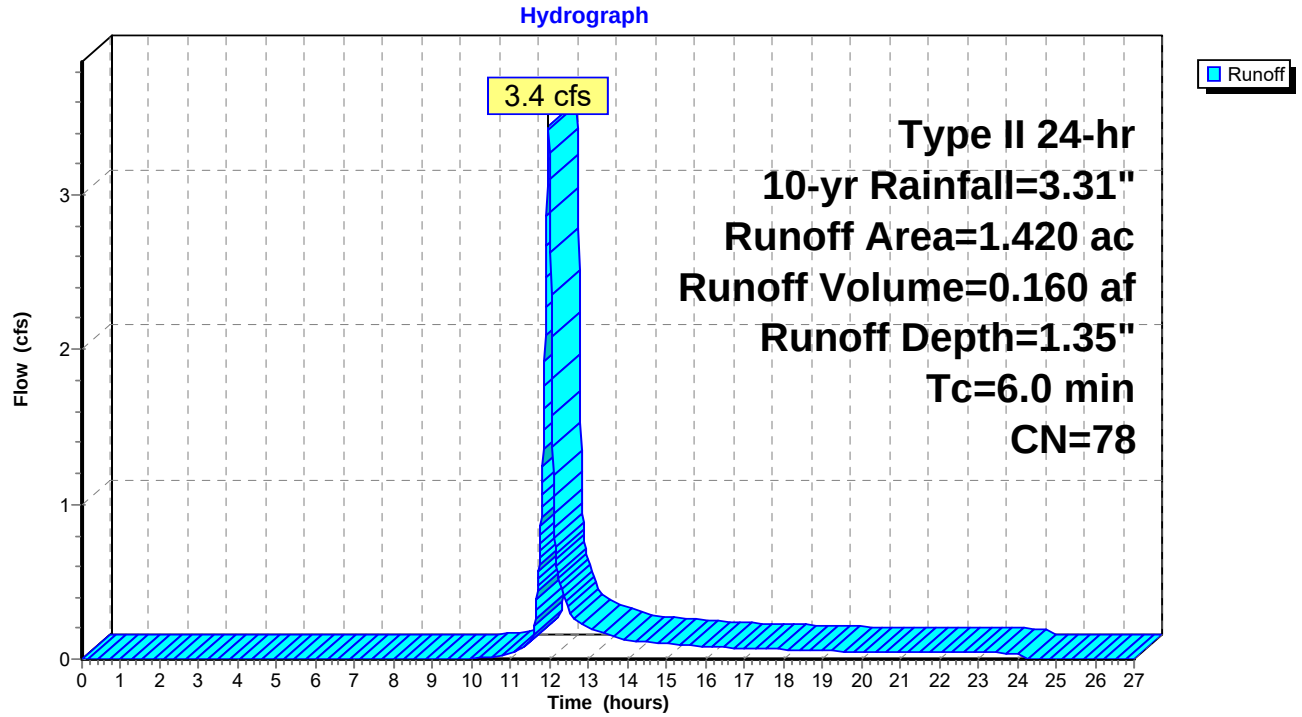
Runoff = 3.4 cfs @ 11.98 hrs, Volume= 0.160 af, Depth= 1.35"
Routed to Pond FB8 : FOREBAY

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
0.280	98	Paved parking, HSG C
0.070	96	Gravel surface, HSG C
0.150	78	Meadow, non-grazed, HSG D
0.920	71	Meadow, non-grazed, HSG C
1.420	78	Weighted Average
1.140	73	80.28% Pervious Area
0.280	98	19.72% Impervious Area

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

Subcatchment C4: DOUGLAS DRIVE EXTENSION



Summary for Subcatchment C5: LANDFILL

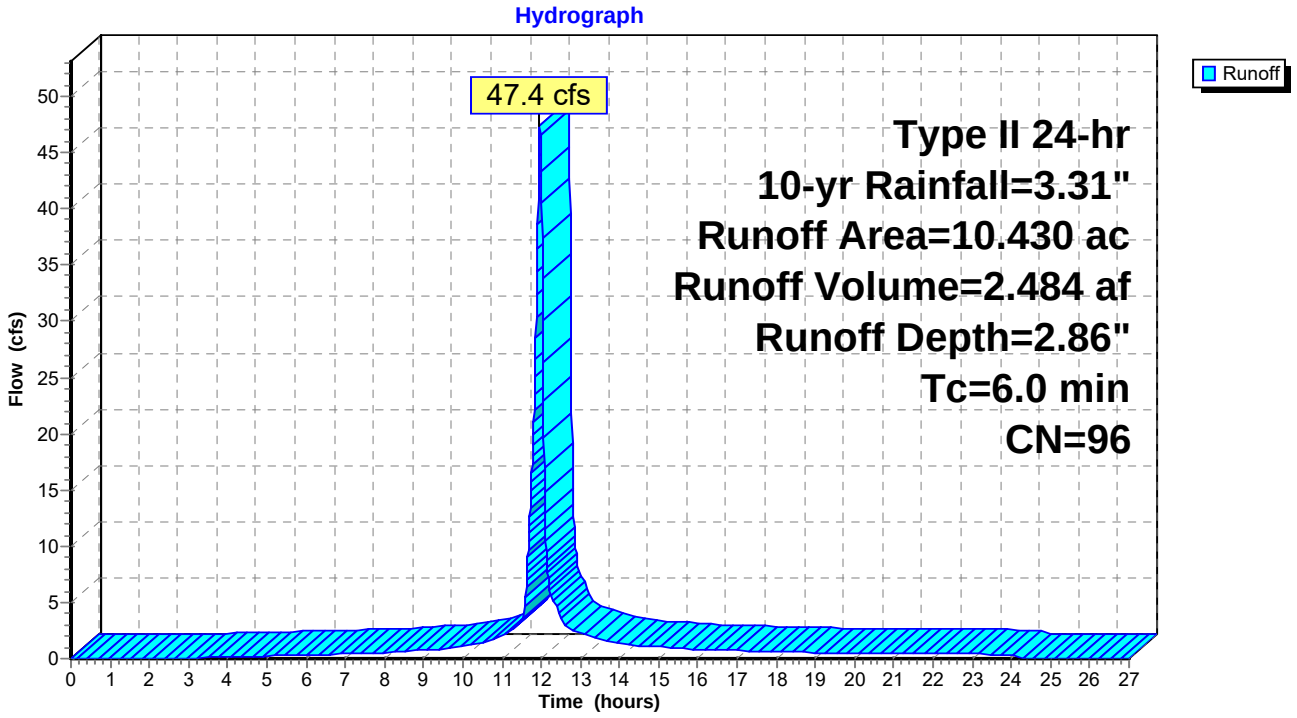
Runoff = 47.4 cfs @ 11.97 hrs, Volume= 2.484 af, Depth= 2.86"
Routed to Pond PHW19 : HEADWALL

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

	Area (ac)	CN	Description
	1.090	96	Gravel surface, HSG C
	0.070	96	Gravel surface, HSG D
	0.010	78	Meadow, non-grazed, HSG D
*	8.430	98	Landfill, Geomembrane
	0.830	71	Meadow, non-grazed, HSG C
	10.430	96	Weighted Average
	2.000	86	19.18% Pervious Area
	8.430	98	80.82% Impervious Area

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

Subcatchment C5: LANDFILL



Summary for Subcatchment C6: OVERLAND FLOW

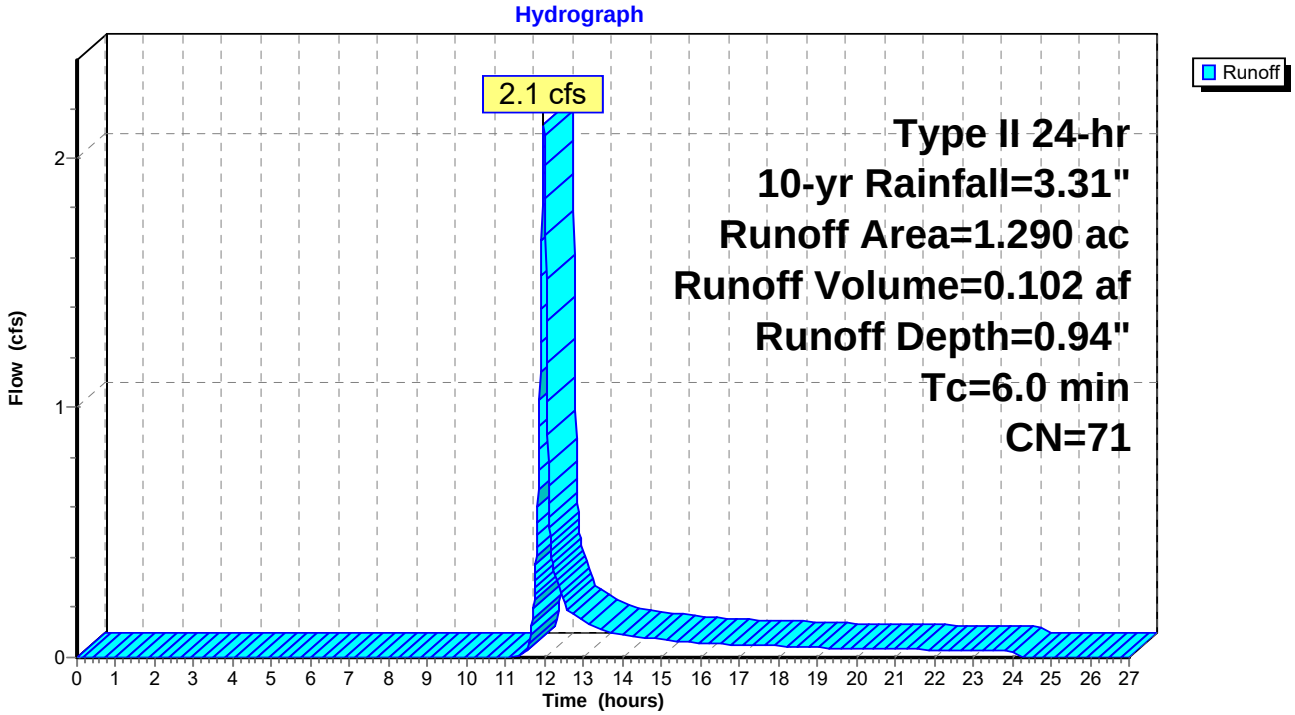
Runoff = 2.1 cfs @ 11.98 hrs, Volume= 0.102 af, Depth= 0.94"
Routed to Pond FB9 : FOREBAY

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
1.290	71	Meadow, non-grazed, HSG C
1.290	71	100.00% Pervious Area

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

Subcatchment C6: OVERLAND FLOW



Summary for Subcatchment C7: LANDFILL

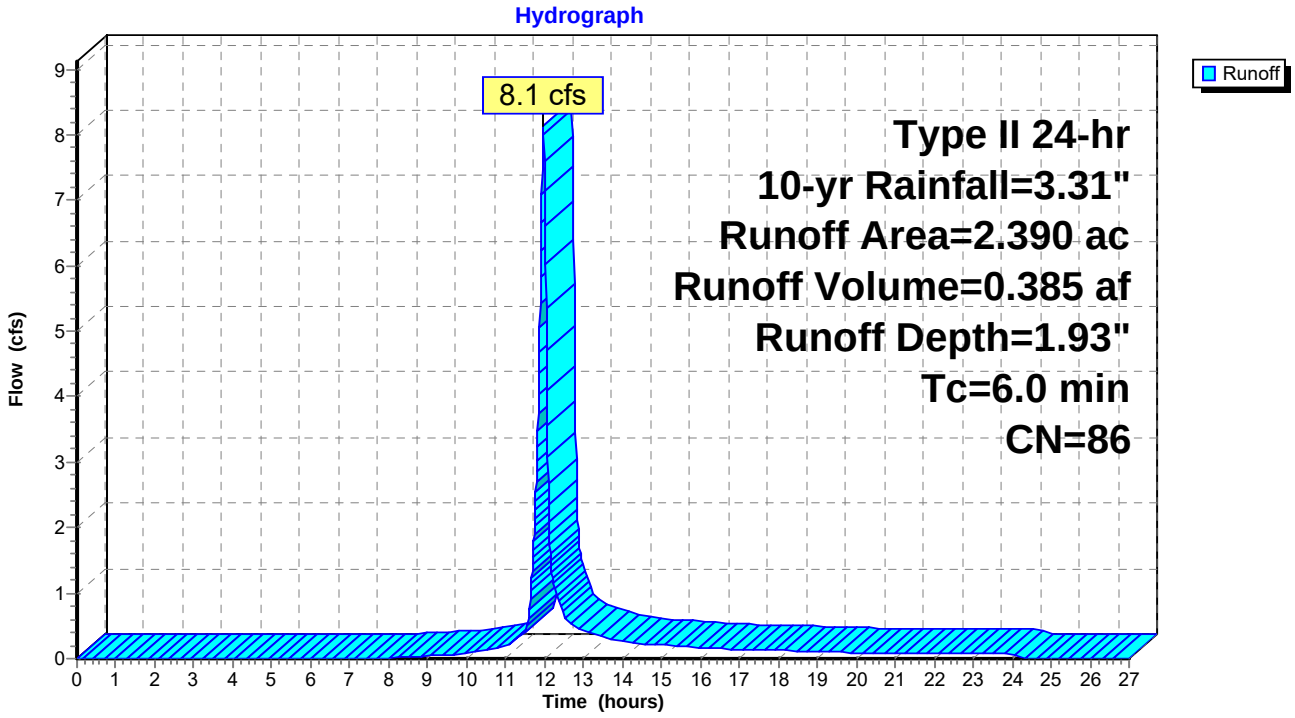
Runoff = 8.1 cfs @ 11.97 hrs, Volume= 0.385 af, Depth= 1.93"
Routed to Pond PHW24 : HEADWALL

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

	Area (ac)	CN	Description
	0.170	96	Gravel surface, HSG B
	0.530	96	Gravel surface, HSG C
	0.120	58	Meadow, non-grazed, HSG B
	0.810	71	Meadow, non-grazed, HSG C
*	0.760	98	Landfill, Geomembrane
	2.390	86	Weighted Average
	1.630	81	68.20% Pervious Area
	0.760	98	31.80% Impervious Area

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

Subcatchment C7: LANDFILL



Summary for Subcatchment C8: WOODS

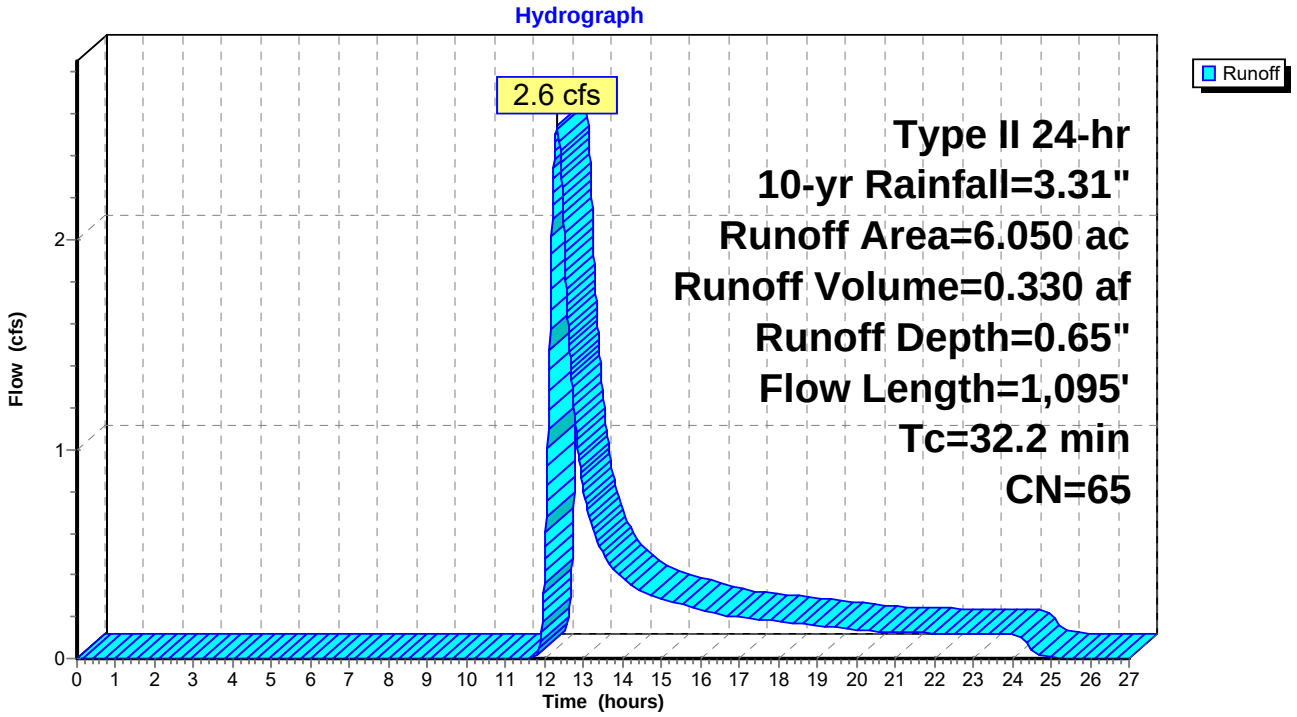
Runoff = 2.6 cfs @ 12.34 hrs, Volume= 0.330 af, Depth= 0.65"
Routed to Pond FB10 : FOREBAY

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
1.660	55	Woods, Good, HSG B
0.500	58	Meadow, non-grazed, HSG B
2.820	71	Meadow, non-grazed, HSG C
1.070	70	Woods, Good, HSG C
6.050	65	Weighted Average
6.050	65	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.4	100	0.0650	0.06		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 2.32"
1.7	50	0.0400	0.50		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
1.3	150	0.0750	1.92		**Shallow Concentrated Flow,** Short Grass Pasture Kv= 7.0 fps
1.8	795	0.1000	7.53	120.43	**Trap/Vee/Rect Channel Flow,** Bot.W=3.00' D=2.00' Z= 2.5 '/' Top.W=13.00' n= 0.069 Riprap, 6-inch
32.2	1,095	Total			

Subcatchment C8: WOODS



Summary for Subcatchment C9: WOODS

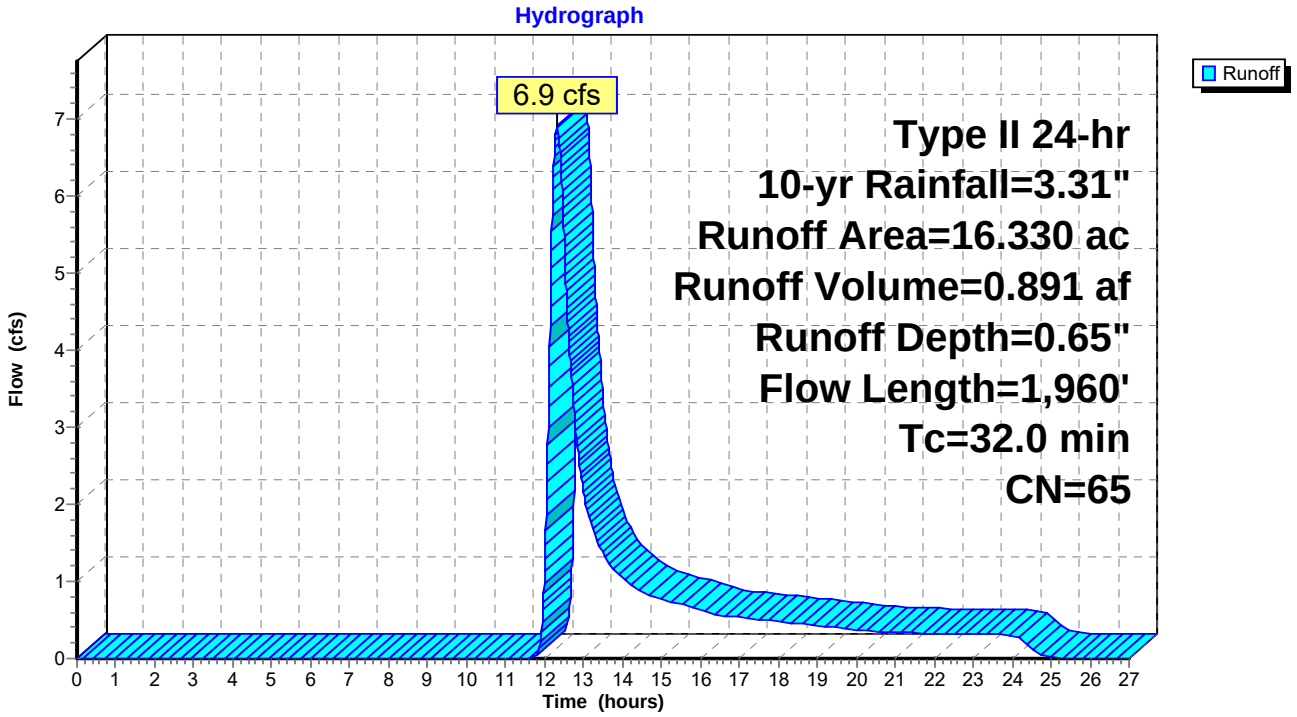
Runoff = 6.9 cfs @ 12.33 hrs, Volume= 0.891 af, Depth= 0.65"
Routed to Pond RC7 : NEW DOUGLAS DRIVE CULVERT

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=3.31"

Area (ac)	CN	Description
5.770	55	Woods, Good, HSG B
0.450	58	Meadow, non-grazed, HSG B
0.610	77	Woods, Good, HSG D
0.270	78	Meadow, non-grazed, HSG D
2.550	71	Meadow, non-grazed, HSG C
6.680	70	Woods, Good, HSG C
16.330	65	Weighted Average
16.330	65	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.3	100	0.0600	0.06		**Sheet Flow,** Woods: Dense underbrush n= 0.800 P2= 2.32"
0.8	50	0.1900	1.09		**Shallow Concentrated Flow,** Forest w/Heavy Litter Kv= 2.5 fps
2.9	1,810	0.0400	10.23	477.30	**Parabolic Channel,** W=35.00' D=2.00' Area=46.7 sf Perim=35.3' n= 0.035
32.0	1,960	Total			

Subcatchment C9: WOODS



Summary for Reach 20R: TOE SWALE

[80] Warning: Exceeded Pond PHW24 by 0.50' @ 24.34 hrs (0.0 cfs 0.018 af)

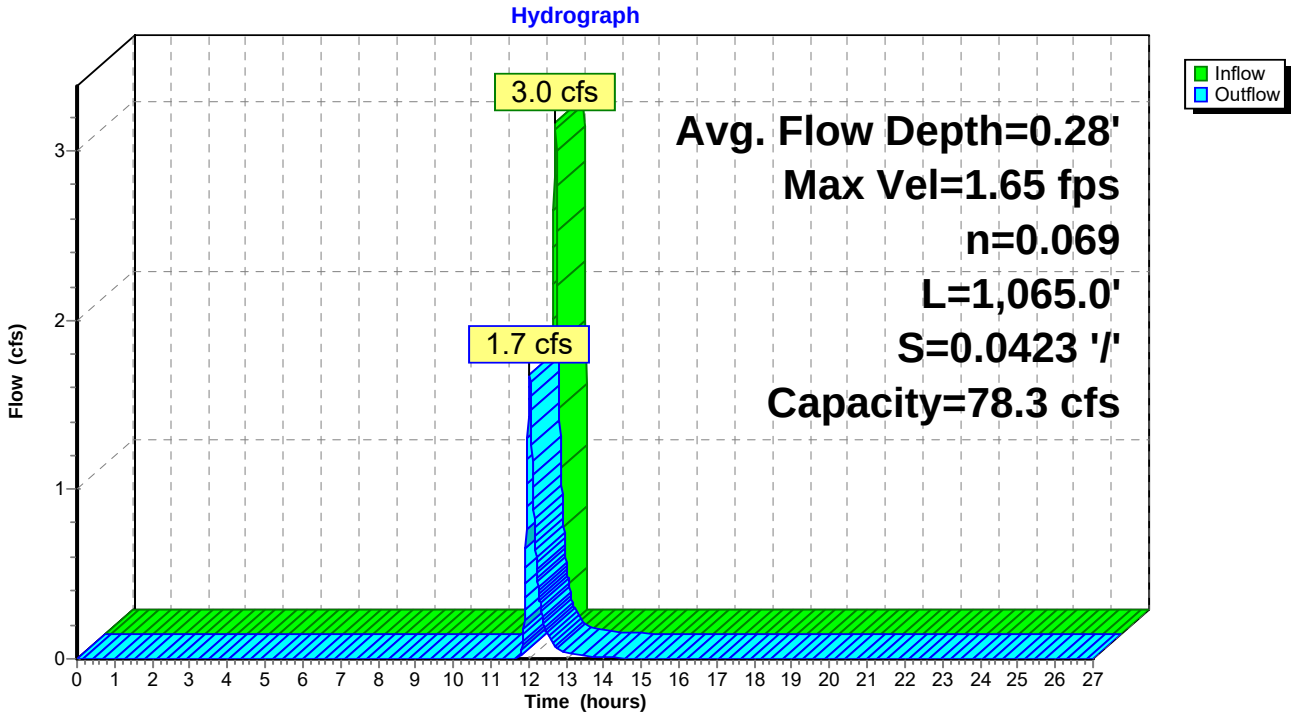
Inflow = 3.0 cfs @ 11.97 hrs, Volume= 0.041 af
Outflow = 1.7 cfs @ 12.03 hrs, Volume= 0.041 af, Atten= 45%, Lag= 3.7 min
Routed to Pond PHW19 : HEADWALL

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.65 fps, Min. Travel Time= 10.8 min
Avg. Velocity = 0.41 fps, Avg. Travel Time= 43.4 min

Peak Storage= 1,082 cf @ 12.03 hrs
Average Depth at Peak Storage= 0.28' , Surface Width= 4.38'
Bank-Full Depth= 2.00' Flow Area= 16.0 sf, Capacity= 78.3 cfs

3.00' x 2.00' deep channel, n= 0.069 Riprap, 6-inch
Side Slope Z-value= 2.5 '/' Top Width= 13.00'
Length= 1,065.0' Slope= 0.0423 '/'
Inlet Invert= 1,214.50', Outlet Invert= 1,169.50'

Reach 20R: TOE SWALE



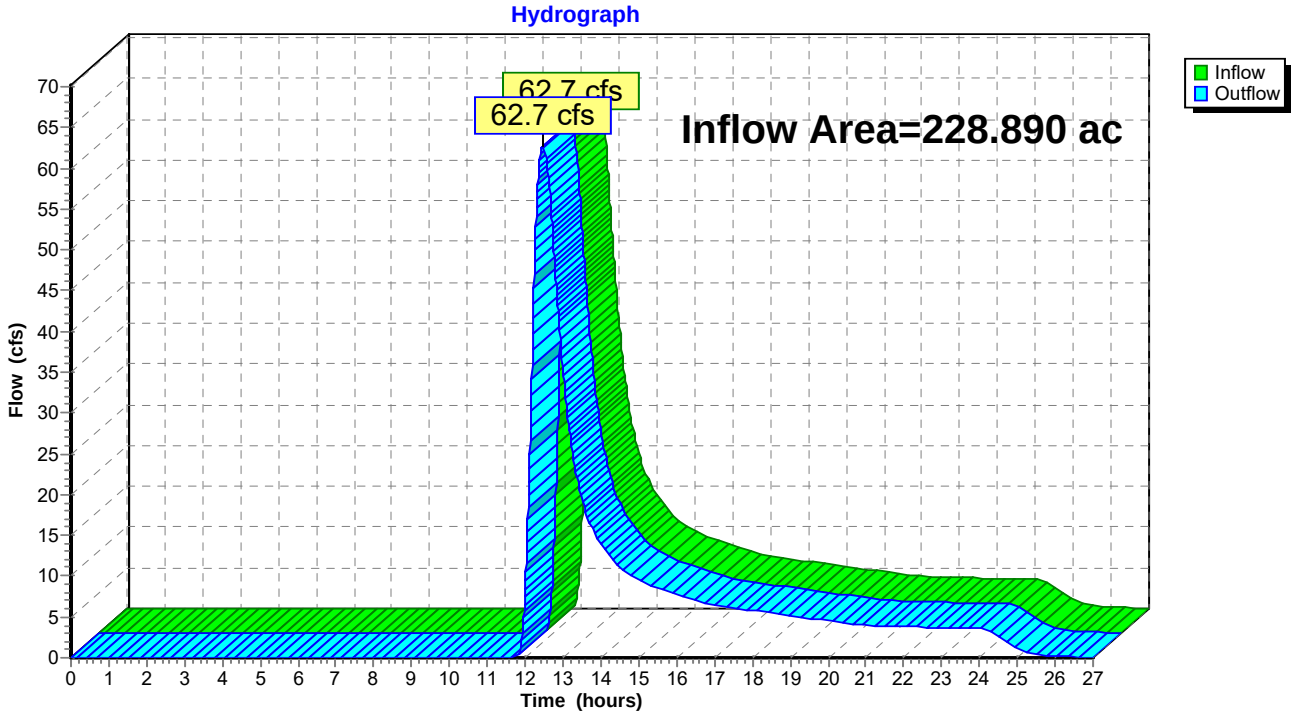
Summary for Reach OUT-C: WETLANDS COMPLEX

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

Inflow Area = 228.890 ac, 7.43% Impervious, Inflow Depth > 0.56" for 10-yr event
Inflow = 62.7 cfs @ 12.45 hrs, Volume= 10.756 af
Outflow = 62.7 cfs @ 12.45 hrs, Volume= 10.756 af, Atten= 0%, Lag= 0.0 min

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs

Reach OUT-C: WETLANDS COMPLEX



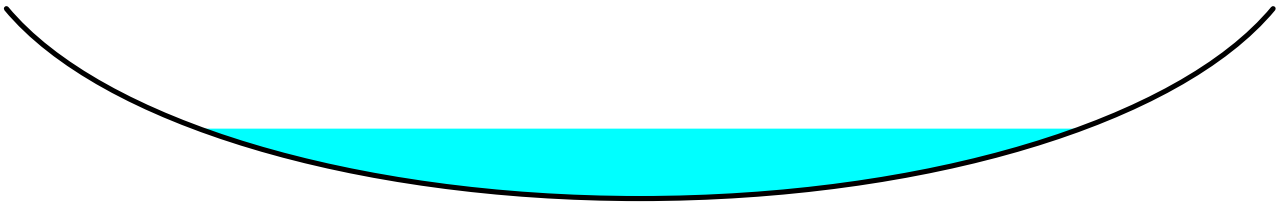
Summary for Reach RC1: WETLANDS

Inflow Area = 39.170 ac, 0.00% Impervious, Inflow Depth = 0.61" for 10-yr event
Inflow = 12.7 cfs @ 12.44 hrs, Volume= 1.995 af
Outflow = 12.3 cfs @ 12.52 hrs, Volume= 1.995 af, Atten= 3%, Lag= 5.0 min
Routed to Reach OUT-C : WETLANDS COMPLEX

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.66 fps, Min. Travel Time= 5.3 min
Avg. Velocity = 0.76 fps, Avg. Travel Time= 11.5 min

Peak Storage= 3,900 cf @ 12.52 hrs
Average Depth at Peak Storage= 0.37' , Surface Width= 30.31'
Bank-Full Depth= 1.00' Flow Area= 33.3 sf, Capacity= 107.5 cfs

50.00' x 1.00' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 525.0' Slope= 0.0099 '/'
Inlet Invert= 1,020.94', Outlet Invert= 1,015.73'



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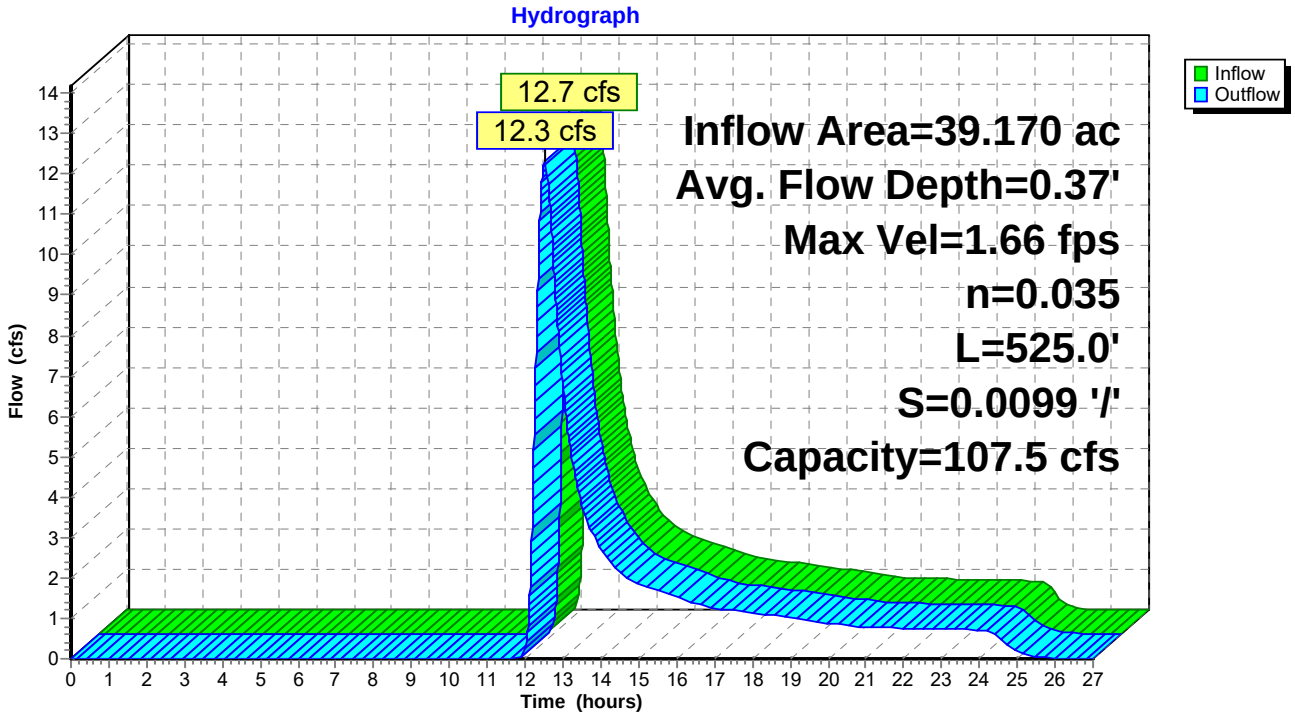
Reach RC1: WETLANDS



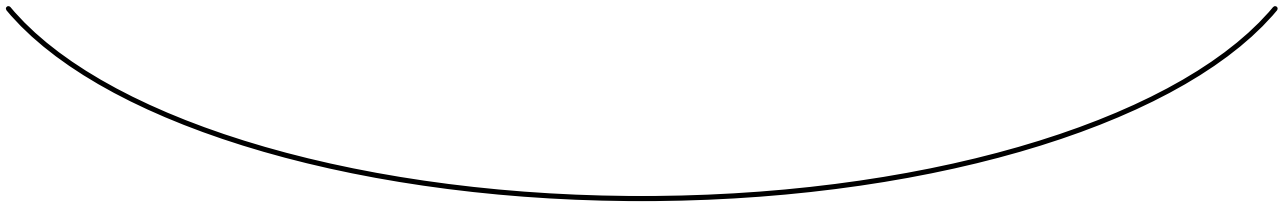
Summary for Reach RC10: WETLAND

Inflow Area = 9.730 ac, 7.81% Impervious, Inflow Depth = 0.00" for 10-yr event
Inflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond RC7 : NEW DOUGLAS DRIVE CULVERT

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 2.00' Flow Area= 46.7 sf, Capacity= 496.7 cfs

35.00' x 2.00' deep Parabolic Channel, n= 0.035
Length= 1,010.0' Slope= 0.0433 '/'
Inlet Invert= 1,154.00', Outlet Invert= 1,110.25'



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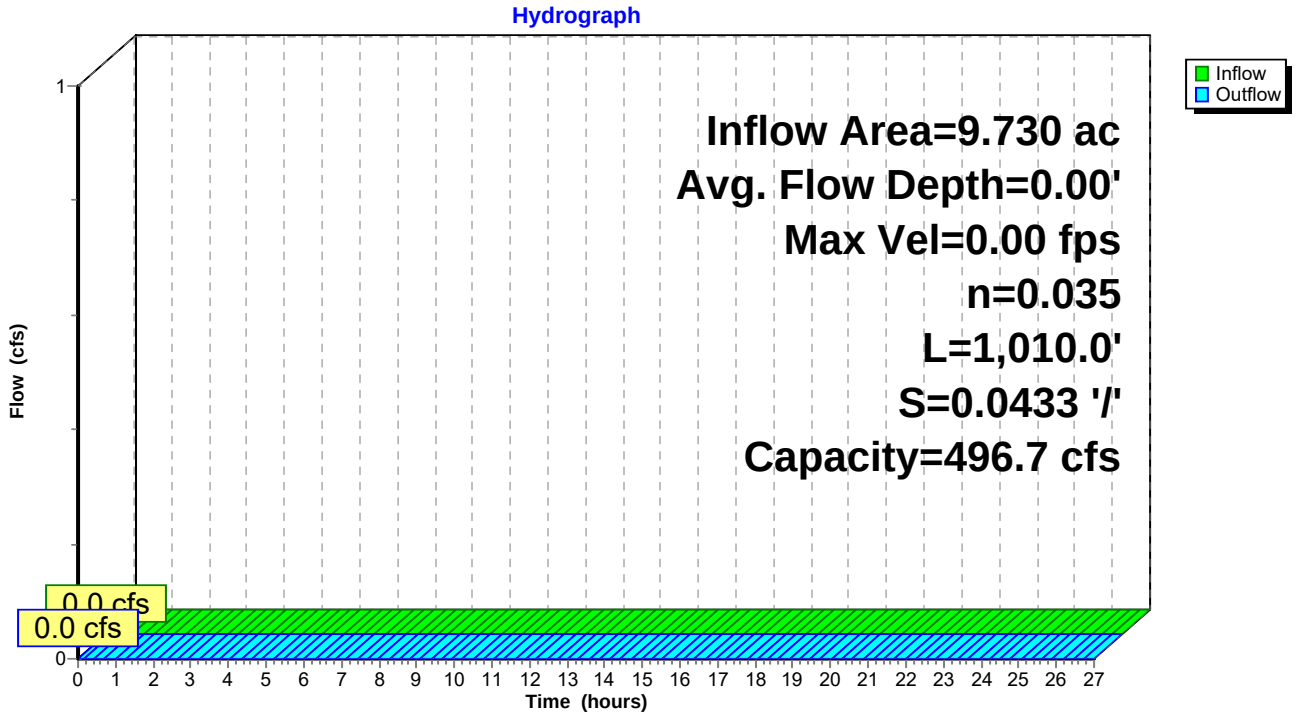
Reach RC10: WETLAND



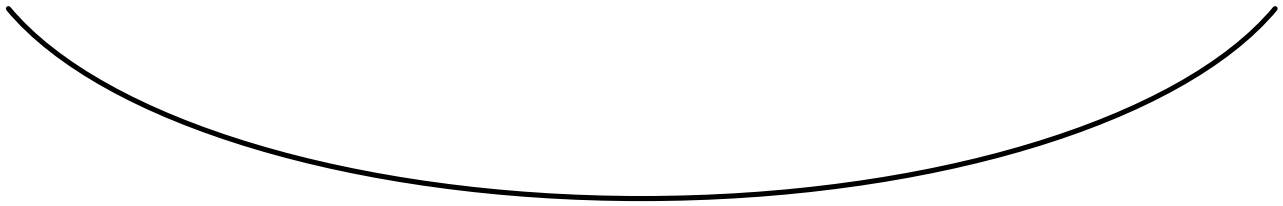
Summary for Reach RC11: WOODS

Inflow Area = 6.050 ac, 0.00% Impervious, Inflow Depth = 0.00" for 10-yr event
Inflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Reach RC9 : WETLAND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 1.00' Flow Area= 10.0 sf, Capacity= 31.5 cfs

15.00' x 1.00' deep Parabolic Channel, n= 0.100 Earth, dense brush, high stage
Length= 255.0' Slope= 0.0784 '/'
Inlet Invert= 1,206.00', Outlet Invert= 1,186.00'



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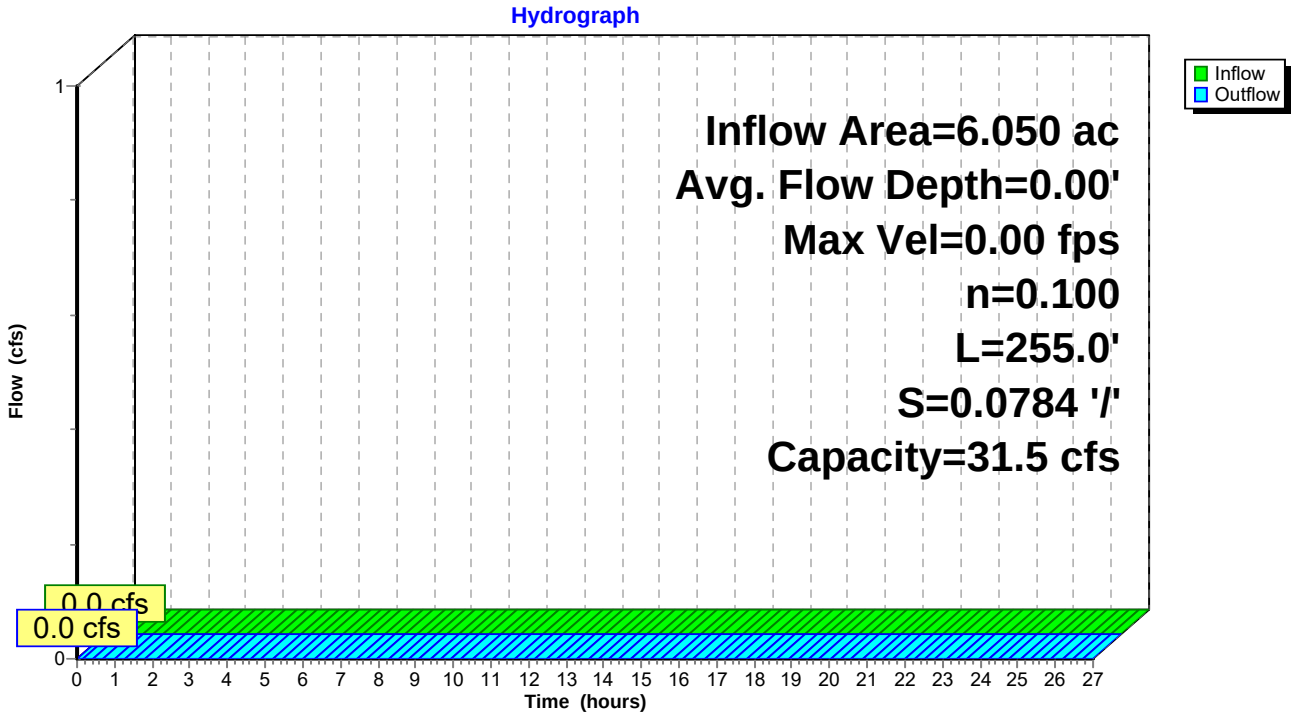
Reach RC11: WOODS



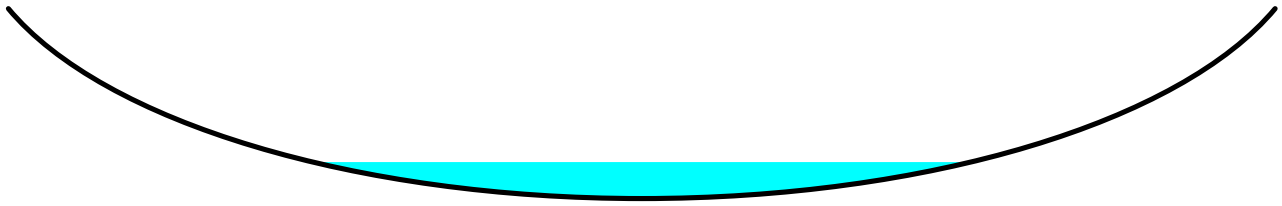
Summary for Reach RC12: WETLAND

Inflow Area = 0.780 ac, 0.00% Impervious, Inflow Depth = 3.78" for 10-yr event
Inflow = 11.5 cfs @ 12.06 hrs, Volume= 0.246 af
Outflow = 11.3 cfs @ 12.08 hrs, Volume= 0.246 af, Atten= 2%, Lag= 0.8 min
Routed to Reach RC5 : WETLAND STREAM

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Max. Velocity= 5.10 fps, Min. Travel Time= 1.0 min
Avg. Velocity = 1.97 fps, Avg. Travel Time= 2.6 min

Peak Storage= 686 cf @ 12.08 hrs
Average Depth at Peak Storage= 0.38' , Surface Width= 8.73'
Bank-Full Depth= 2.00' Flow Area= 26.7 sf, Capacity= 405.6 cfs

20.00' x 2.00' deep Parabolic Channel, n= 0.035
Length= 310.0' Slope= 0.0905 '/'
Inlet Invert= 1,133.81', Outlet Invert= 1,105.76'



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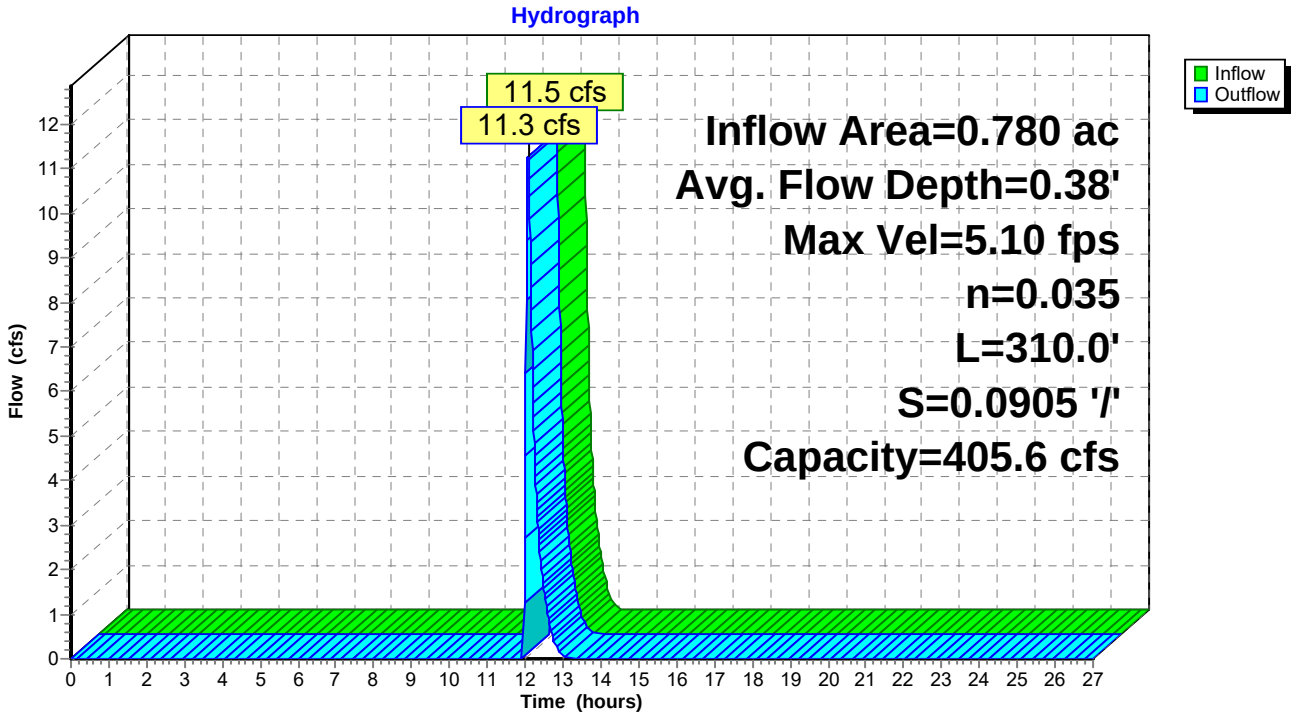
Reach RC12: WETLAND



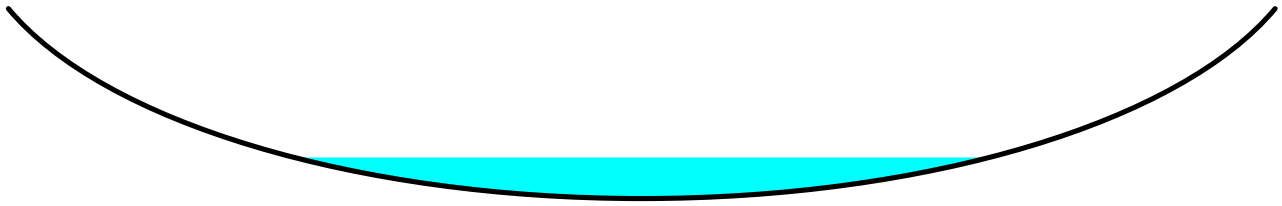
Summary for Reach RC14: WETLAND

Inflow Area = 55.880 ac, 2.63% Impervious, Inflow Depth = 0.72" for 10-yr event
Inflow = 22.1 cfs @ 12.48 hrs, Volume= 3.375 af
Outflow = 22.1 cfs @ 12.49 hrs, Volume= 3.375 af, Atten= 0%, Lag= 1.0 min
Routed to Reach RC16 : WETLAND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Max. Velocity= 4.14 fps, Min. Travel Time= 1.8 min
Avg. Velocity = 1.84 fps, Avg. Travel Time= 4.0 min

Peak Storage= 2,353 cf @ 12.49 hrs
Average Depth at Peak Storage= 0.43' , Surface Width= 18.58'
Bank-Full Depth= 2.00' Flow Area= 53.3 sf, Capacity= 610.7 cfs

40.00' x 2.00' deep Parabolic Channel, n= 0.035
Length= 440.0' Slope= 0.0500 '/'
Inlet Invert= 1,126.00', Outlet Invert= 1,104.00'



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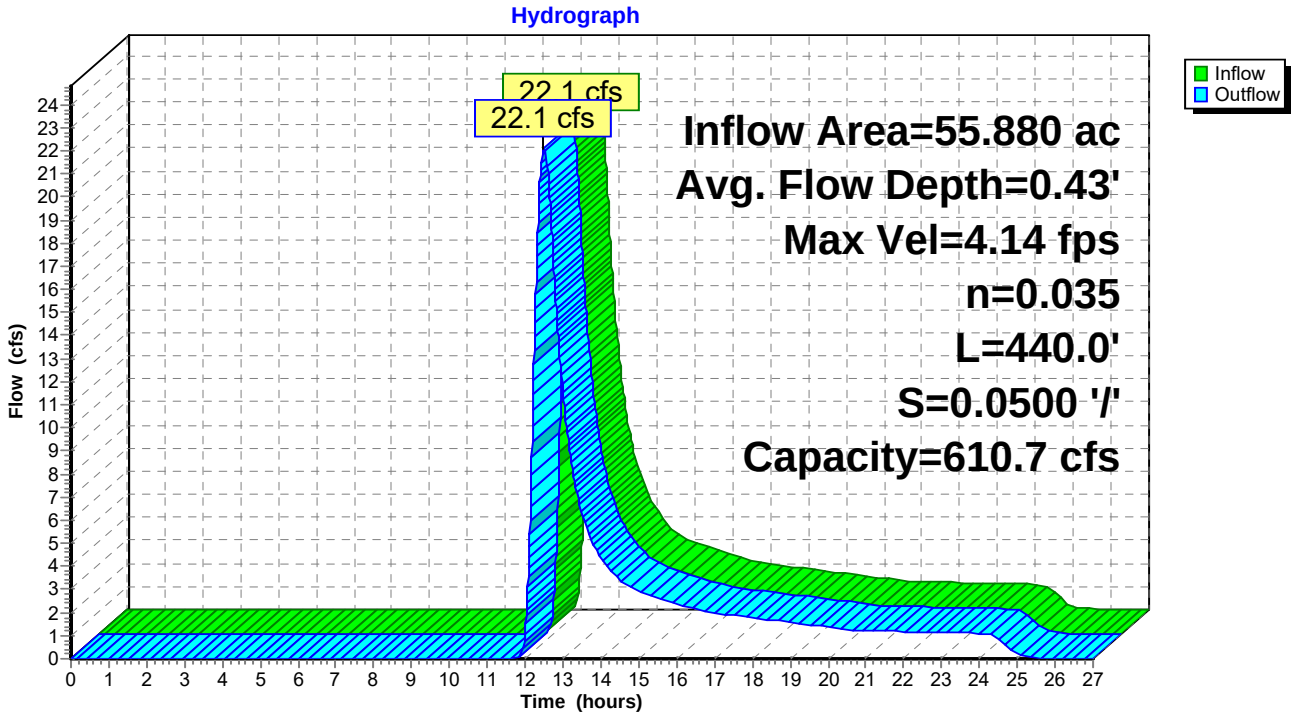
Reach RC14: WETLAND



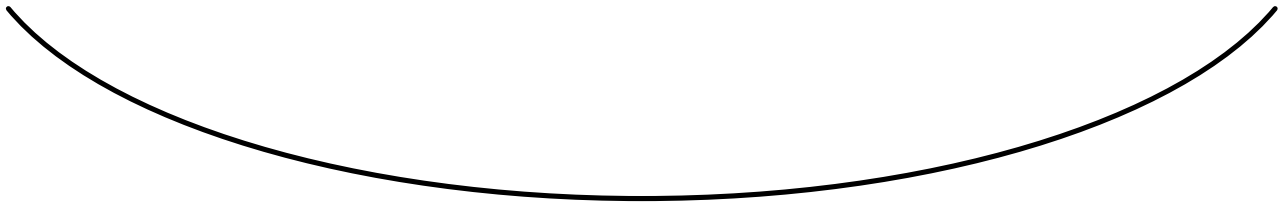
Summary for Reach RC15: FLOW THROUGH WOODS

Inflow Area = 0.970 ac, 40.21% Impervious, Inflow Depth = 0.00" for 10-yr event
Inflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Reach RC16 : WETLAND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 1.00' Flow Area= 6.7 sf, Capacity= 33.2 cfs

10.00' x 1.00' deep Parabolic Channel, n= 0.100 Earth, dense brush, high stage
Length= 165.0' Slope= 0.2000 '/'
Inlet Invert= 1,137.00', Outlet Invert= 1,104.00'



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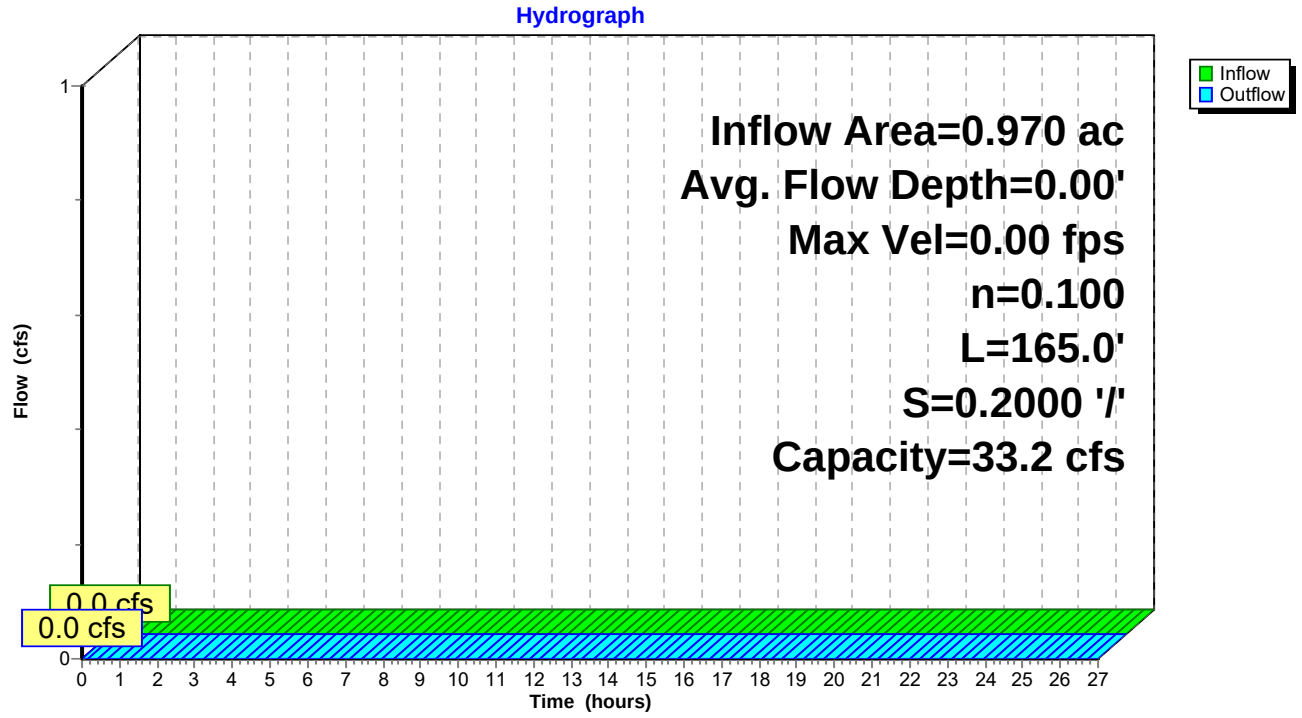
Reach RC15: FLOW THROUGH WOODS



Summary for Reach RC16: WETLAND

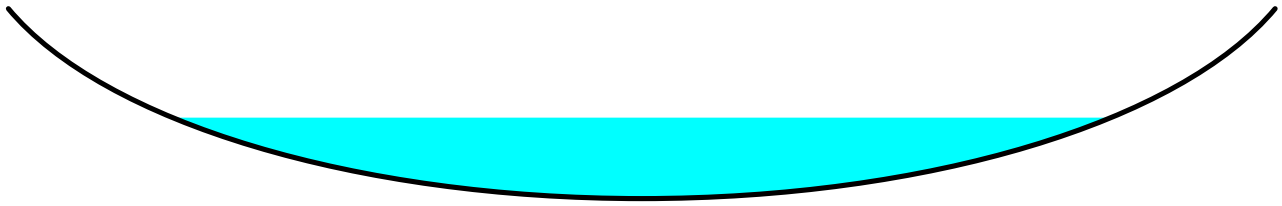
[62] Hint: Exceeded Reach RC14 OUTLET depth by 0.01' @ 26.29 hrs
[62] Hint: Exceeded Reach RC15 OUTLET depth by 0.43' @ 12.52 hrs

Inflow Area = 56.850 ac, 3.27% Impervious, Inflow Depth = 0.71" for 10-yr event
Inflow = 22.1 cfs @ 12.49 hrs, Volume= 3.375 af
Outflow = 22.1 cfs @ 12.52 hrs, Volume= 3.375 af, Atten= 0%, Lag= 1.3 min
Routed to Reach RC4 : WETLAND STREAM

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.98 fps, Min. Travel Time= 1.8 min
Avg. Velocity = 1.32 fps, Avg. Travel Time= 4.0 min

Peak Storage= 2,360 cf @ 12.52 hrs
Average Depth at Peak Storage= 0.43' , Surface Width= 26.09'
Bank-Full Depth= 1.00' Flow Area= 26.7 sf, Capacity= 140.5 cfs

40.00' x 1.00' deep Parabolic Channel, n= 0.035
Length= 319.0' Slope= 0.0265 '/'
Inlet Invert= 1,104.00', Outlet Invert= 1,095.55'



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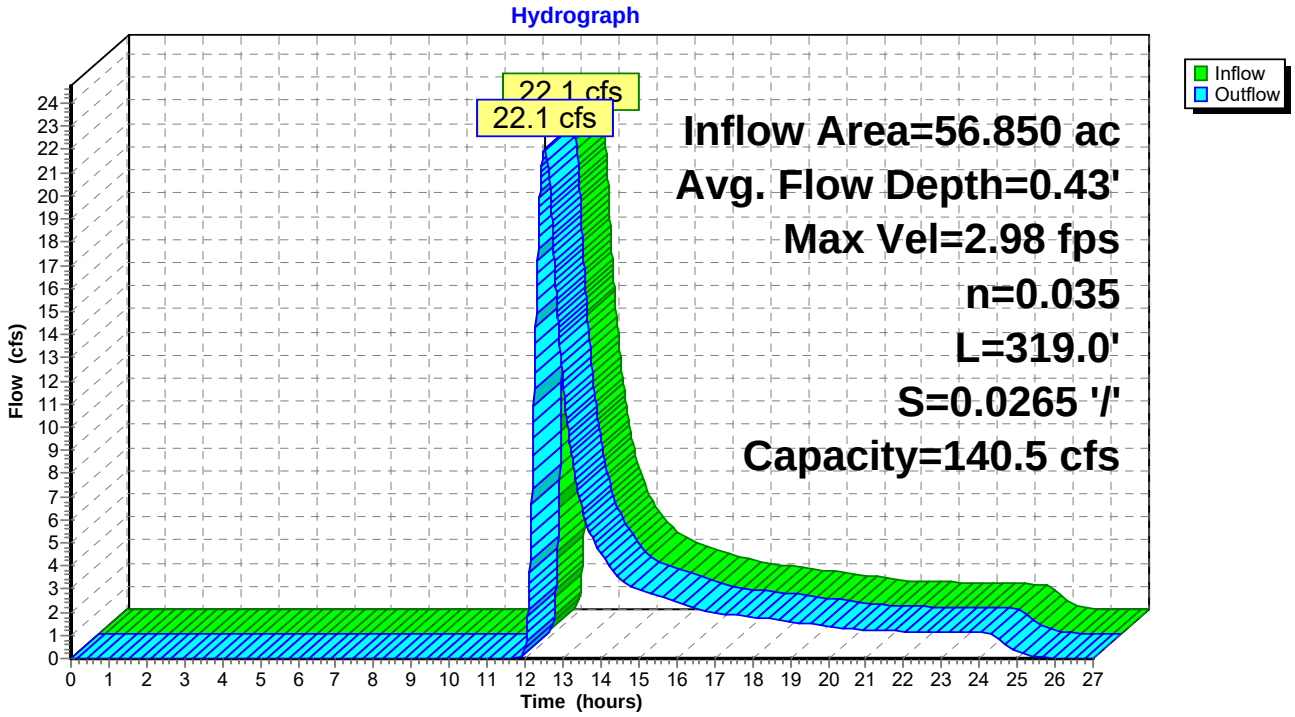
Reach RC16: WETLAND



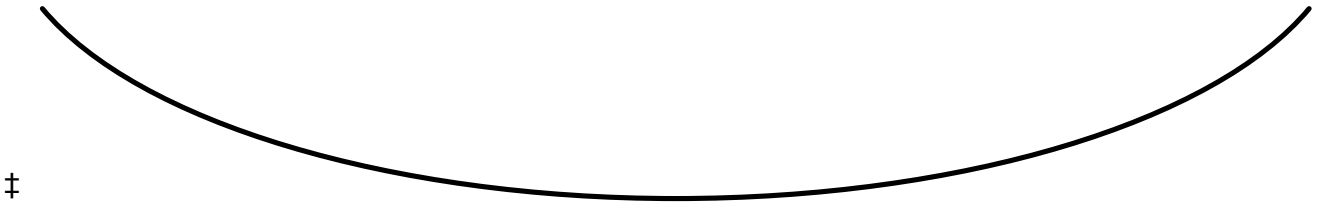
Summary for Reach RC17: FLOW THROUGH WOODS

Inflow Area = 16.840 ac, 2.61% Impervious, Inflow Depth = 0.00" for 10-yr event
Inflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Reach RC19 : WETLAND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 1.00' Flow Area= 20.0 sf, Capacity= 80.5 cfs

30.00' x 1.00' deep Parabolic Channel, n= 0.100 Earth, dense brush, high stage
Length= 158.1' Slope= 0.1265 '/'
Inlet Invert= 1,116.00', Outlet Invert= 1,096.00'



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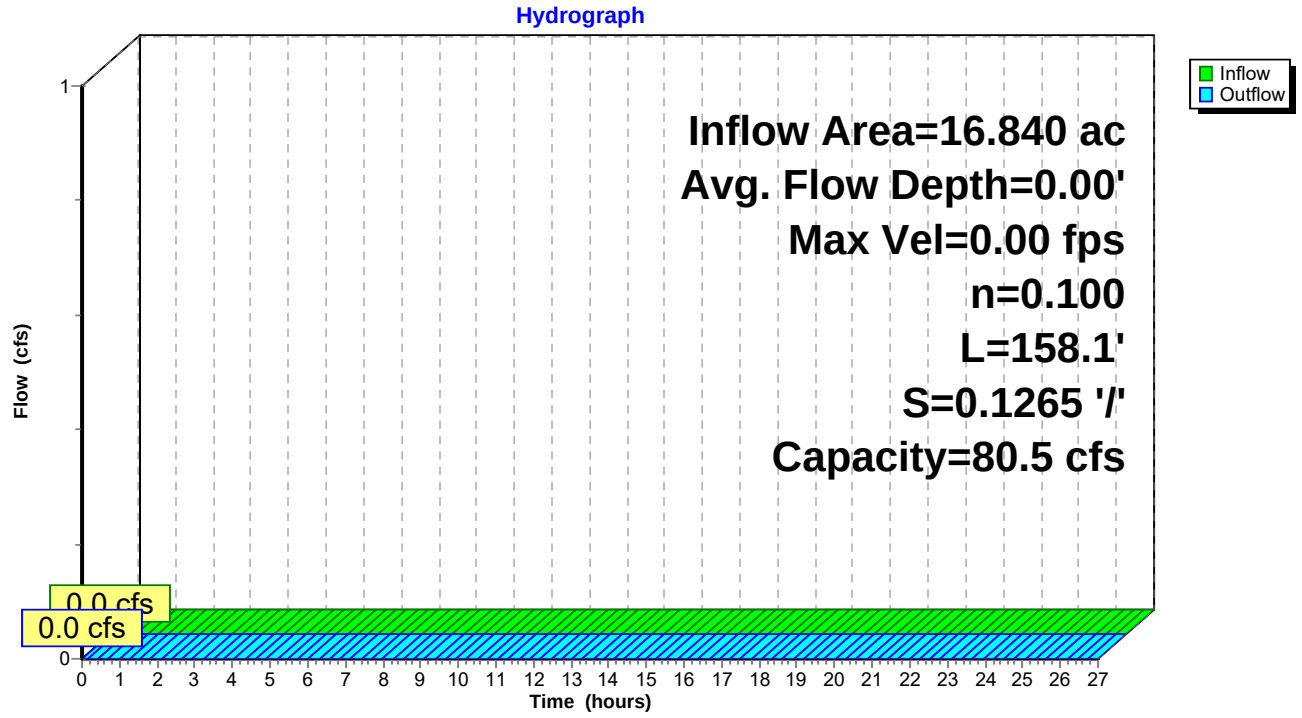
Reach RC17: FLOW THROUGH WOODS



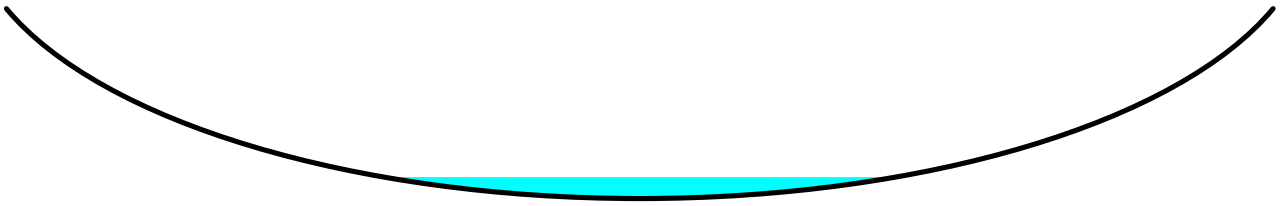
Summary for Reach RC18: FLOW THROUGH WOODS

Inflow Area = 6.130 ac, 0.00% Impervious, Inflow Depth = 0.31" for 10-yr event
Inflow = 0.7 cfs @ 12.52 hrs, Volume= 0.161 af
Outflow = 0.7 cfs @ 12.56 hrs, Volume= 0.161 af, Atten= 1%, Lag= 2.3 min
Routed to Reach RC19 : WETLAND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.07 fps, Min. Travel Time= 3.0 min
Avg. Velocity = 0.59 fps, Avg. Travel Time= 5.5 min

Peak Storage= 122 cf @ 12.56 hrs
Average Depth at Peak Storage= 0.11' , Surface Width= 8.36'
Bank-Full Depth= 1.00' Flow Area= 16.7 sf, Capacity= 76.3 cfs

25.00' x 1.00' deep Parabolic Channel, n= 0.100 Very weedy reaches w/pools
Length= 195.0' Slope= 0.1641 '/'
Inlet Invert= 1,128.00', Outlet Invert= 1,096.00'



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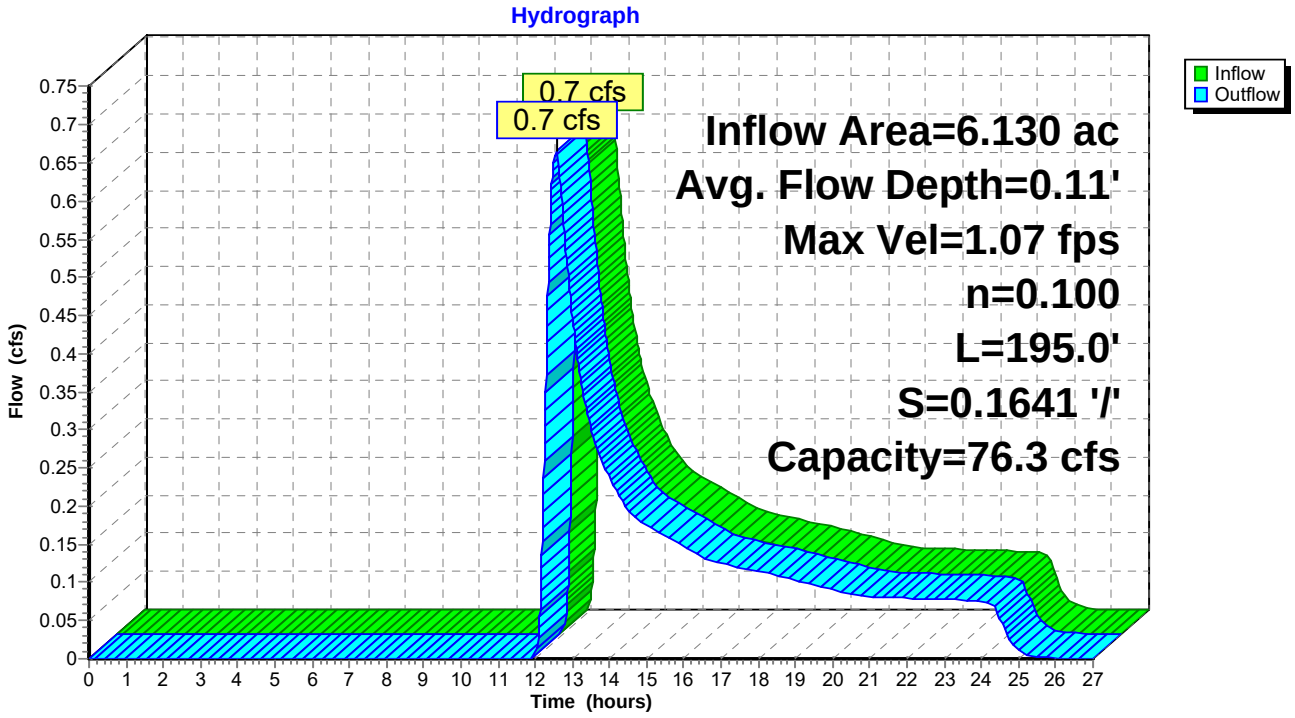
Reach RC18: FLOW THROUGH WOODS



Summary for Reach RC19: WETLAND

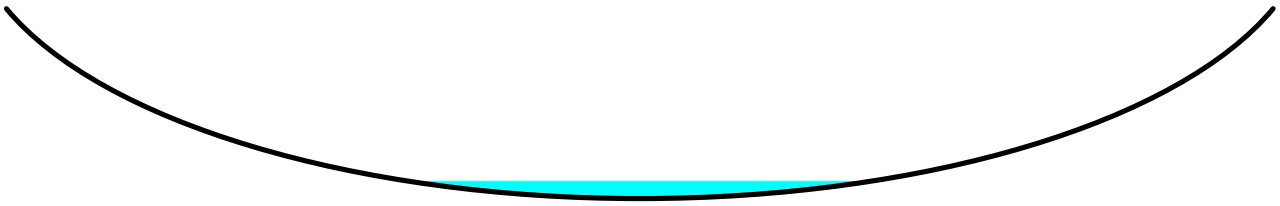
[62] Hint: Exceeded Reach RC17 OUTLET depth by 0.09' @ 12.65 hrs
[61] Hint: Exceeded Reach RC18 outlet invert by 0.09' @ 12.65 hrs

Inflow Area = 22.970 ac, 1.92% Impervious, Inflow Depth = 0.08" for 10-yr event
Inflow = 0.7 cfs @ 12.56 hrs, Volume= 0.161 af
Outflow = 0.6 cfs @ 12.65 hrs, Volume= 0.161 af, Atten= 3%, Lag= 5.1 min
Routed to Reach RC3 : WETLAND STREAM

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.40 fps, Min. Travel Time= 6.5 min
Avg. Velocity = 0.78 fps, Avg. Travel Time= 11.6 min

Peak Storage= 250 cf @ 12.65 hrs
Average Depth at Peak Storage= 0.09' , Surface Width= 7.55'
Bank-Full Depth= 1.00' Flow Area= 16.7 sf, Capacity= 114.7 cfs

25.00' x 1.00' deep Parabolic Channel, n= 0.035
Length= 545.0' Slope= 0.0454 '/'
Inlet Invert= 1,096.00', Outlet Invert= 1,071.27'



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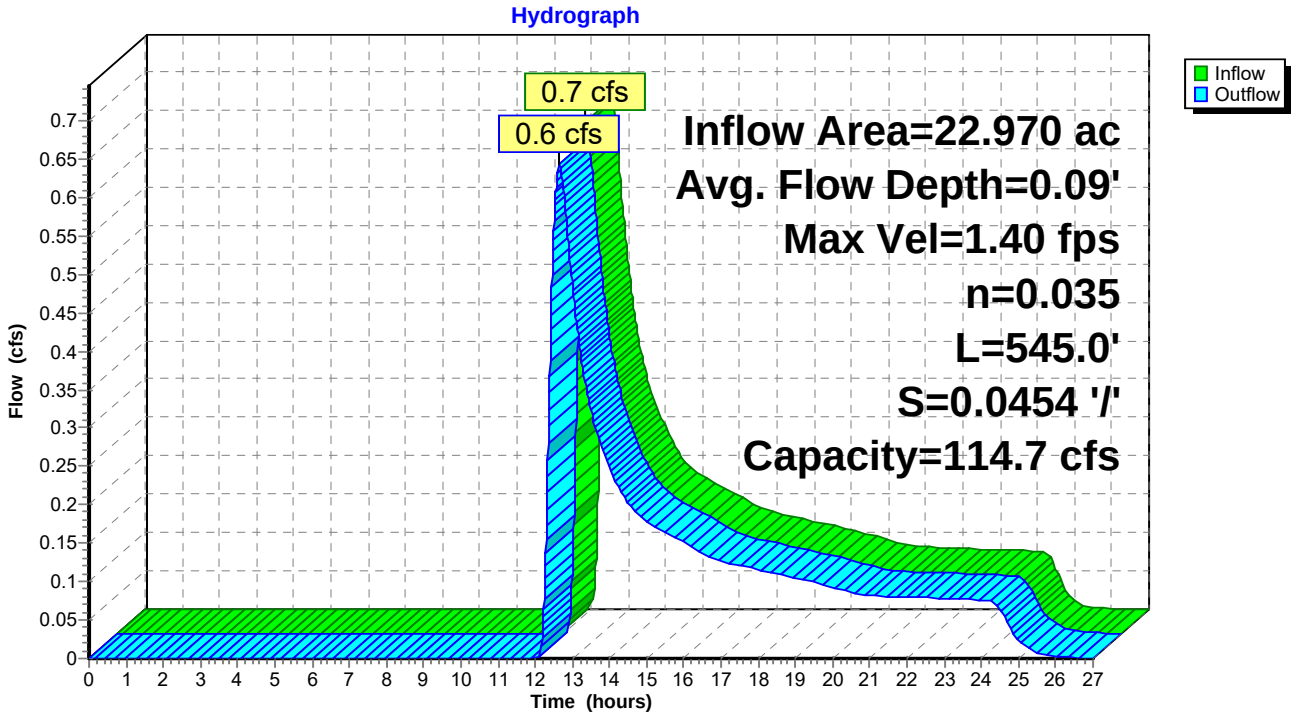
Reach RC19: WETLAND



Summary for Reach RC2: WETLAND STREAM

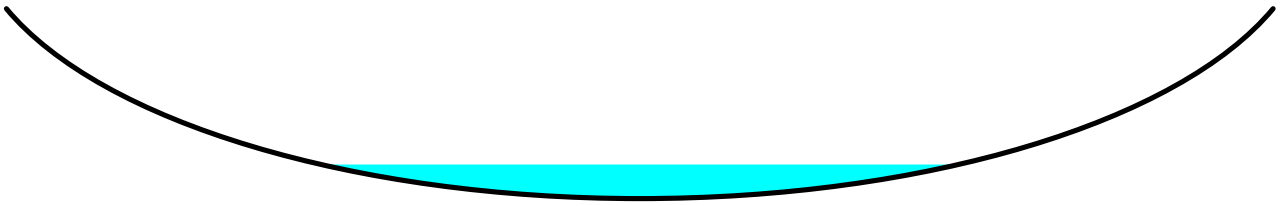
[62] Hint: Exceeded Reach RC22 OUTLET depth by 0.36' @ 12.62 hrs
[62] Hint: Exceeded Reach RC3 OUTLET depth by 0.01' @ 12.89 hrs

Inflow Area = 127.530 ac, 12.83% Impervious, Inflow Depth > 0.46" for 10-yr event
Inflow = 30.2 cfs @ 12.59 hrs, Volume= 4.929 af
Outflow = 30.1 cfs @ 12.62 hrs, Volume= 4.927 af, Atten= 0%, Lag= 1.8 min
Routed to Reach OUT-C : WETLANDS COMPLEX

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.98 fps, Min. Travel Time= 2.5 min
Avg. Velocity = 1.31 fps, Avg. Travel Time= 5.6 min

Peak Storage= 4,494 cf @ 12.62 hrs
Average Depth at Peak Storage= 0.36' , Surface Width= 42.31'
Bank-Full Depth= 2.00' Flow Area= 133.3 sf, Capacity= 1,248.5 cfs

100.00' x 2.00' deep Parabolic Channel, n= 0.035
Length= 445.0' Slope= 0.0332 '/'
Inlet Invert= 1,030.50', Outlet Invert= 1,015.73'



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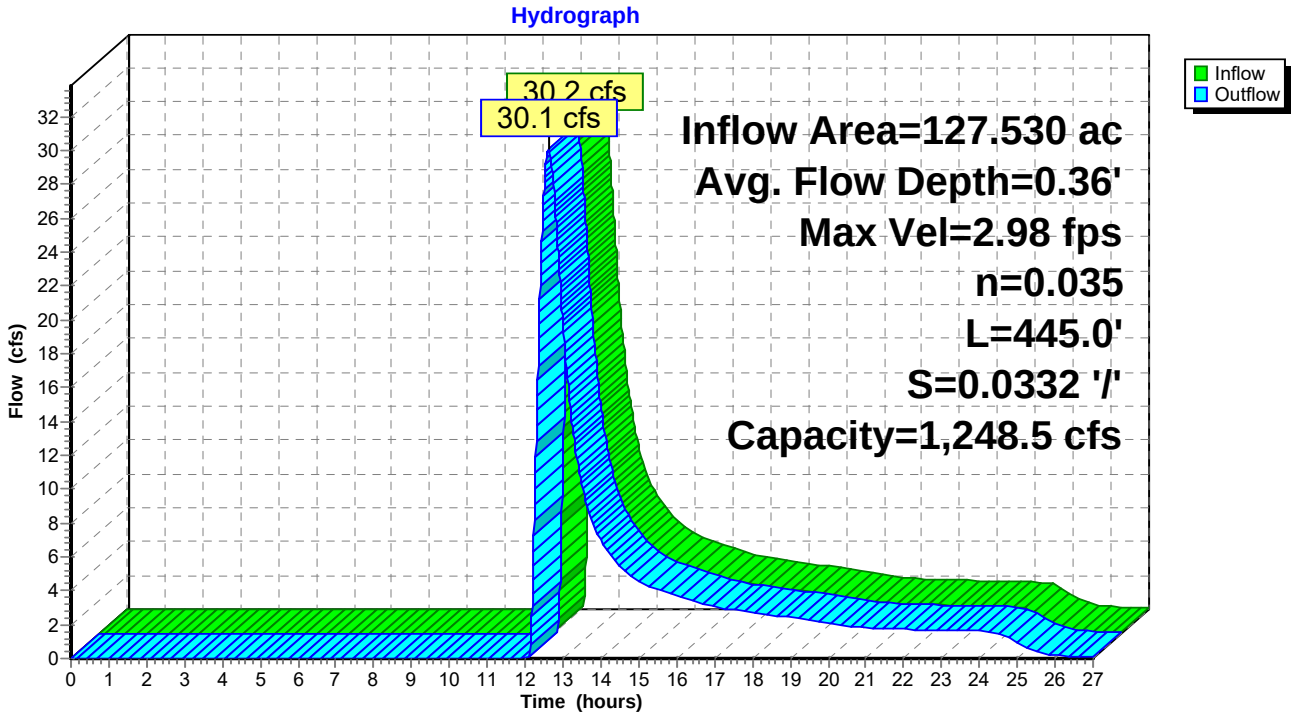
Reach RC2: WETLAND STREAM



Summary for Reach RC20: SWALE

[80] Warning: Exceeded Pond FB8 by 0.01' @ 18.83 hrs (0.0 cfs 0.000 af)

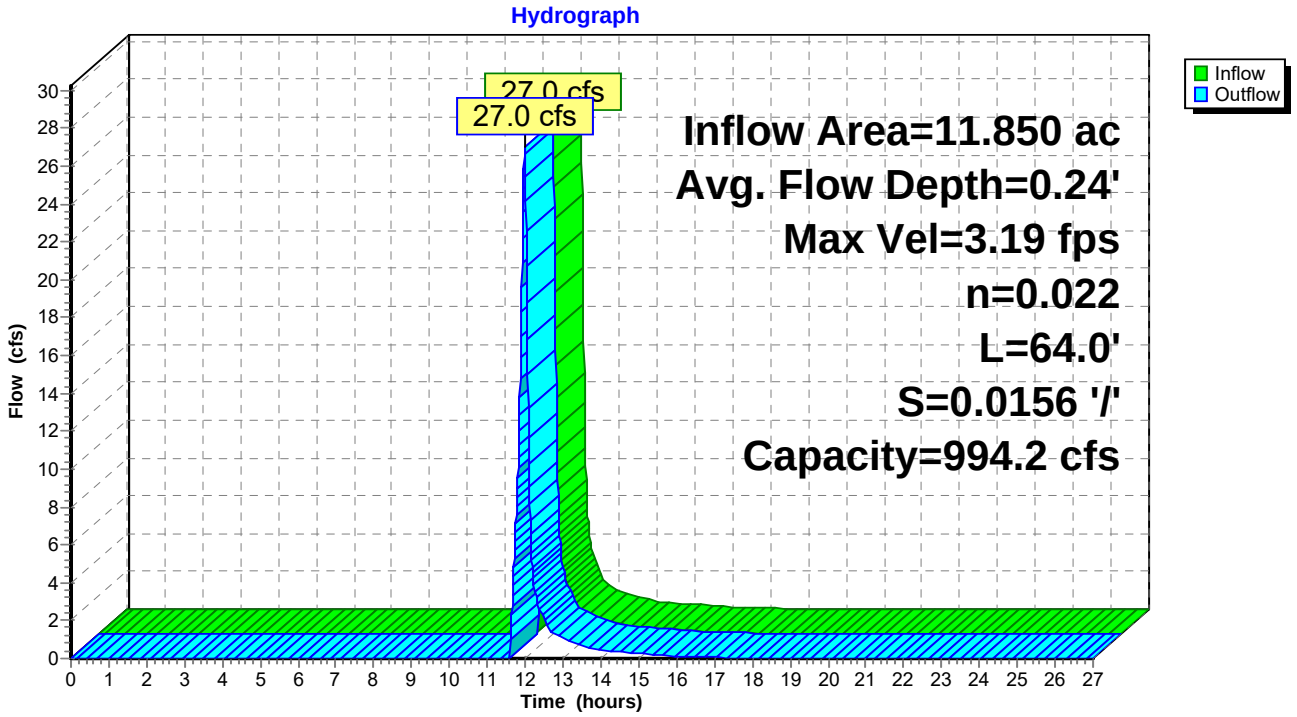
Inflow Area = 11.850 ac, 73.50% Impervious, Inflow Depth = 0.84" for 10-yr event
Inflow = 27.0 cfs @ 11.98 hrs, Volume= 0.831 af
Outflow = 27.0 cfs @ 11.98 hrs, Volume= 0.831 af, Atten= 0%, Lag= 0.2 min
Routed to Pond P8 : INFILTRATION BASIN

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Max. Velocity= 3.19 fps, Min. Travel Time= 0.3 min
Avg. Velocity = 0.84 fps, Avg. Travel Time= 1.3 min

Peak Storage= 542 cf @ 11.98 hrs
Average Depth at Peak Storage= 0.24' , Surface Width= 36.42'
Bank-Full Depth= 2.00' Flow Area= 82.0 sf, Capacity= 994.2 cfs

35.00' x 2.00' deep channel, n= 0.022
Side Slope Z-value= 3.0 '/' Top Width= 47.00'
Length= 64.0' Slope= 0.0156 '/'
Inlet Invert= 1,151.00', Outlet Invert= 1,150.00'

Reach RC20: SWALE



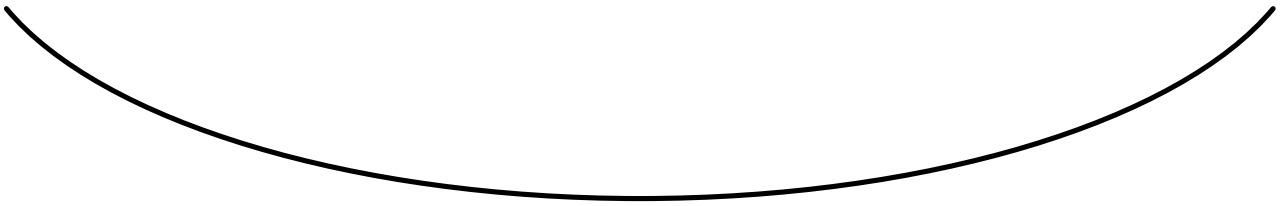
Summary for Reach RC21: FLOW THROUGH WOODS

Inflow Area = 7.010 ac, 56.49% Impervious, Inflow Depth = 0.00" for 10-yr event
Inflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Reach RC22 : WETLAND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 1.00' Flow Area= 13.3 sf, Capacity= 47.6 cfs

20.00' x 1.00' deep Parabolic Channel, n= 0.100 Earth, dense brush, high stage
Length= 140.0' Slope= 0.1000 '/'
Inlet Invert= 1,104.00', Outlet Invert= 1,090.00'



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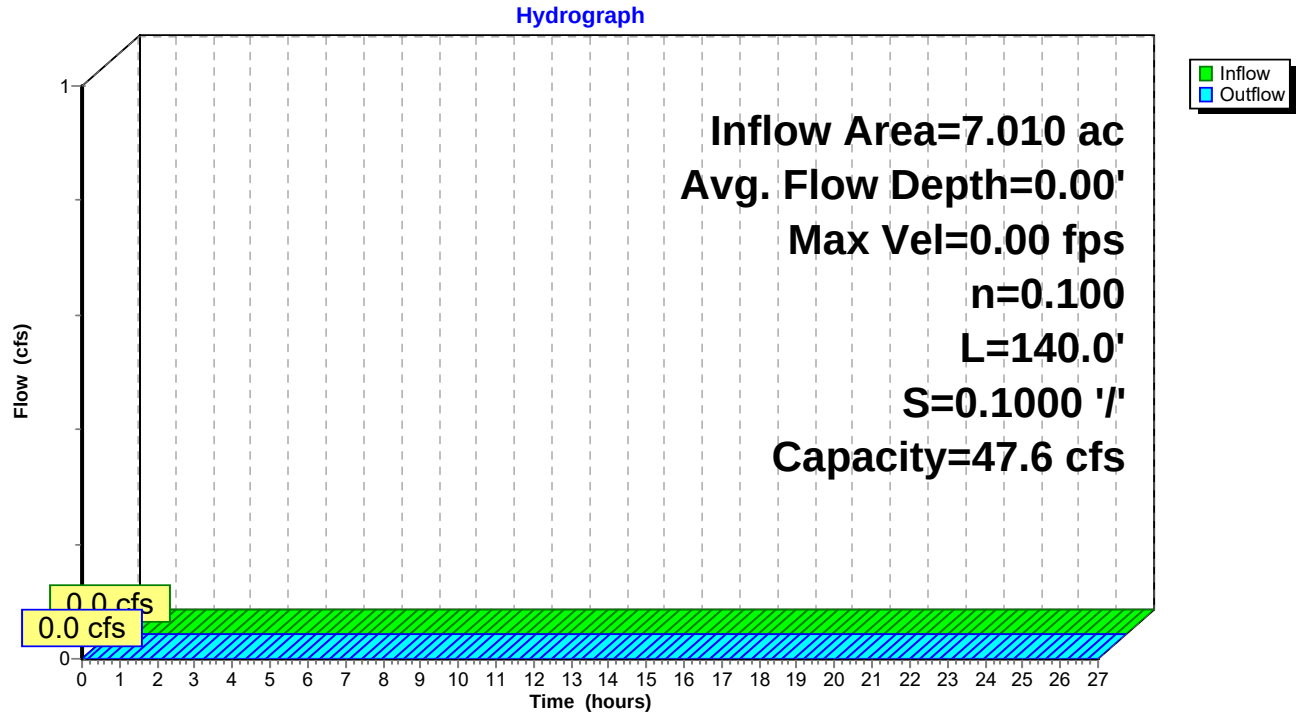
Reach RC21: FLOW THROUGH WOODS



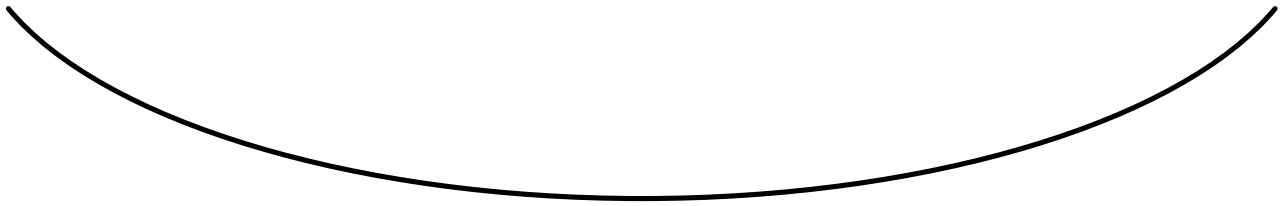
Summary for Reach RC22: WETLAND

Inflow Area = 7.010 ac, 56.49% Impervious, Inflow Depth = 0.00" for 10-yr event
Inflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Reach RC2 : WETLAND STREAM

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 2.00' Flow Area= 26.7 sf, Capacity= 306.0 cfs

20.00' x 2.00' deep Parabolic Channel, n= 0.035
Length= 1,155.0' Slope= 0.0515 '/'
Inlet Invert= 1,090.00', Outlet Invert= 1,030.50'



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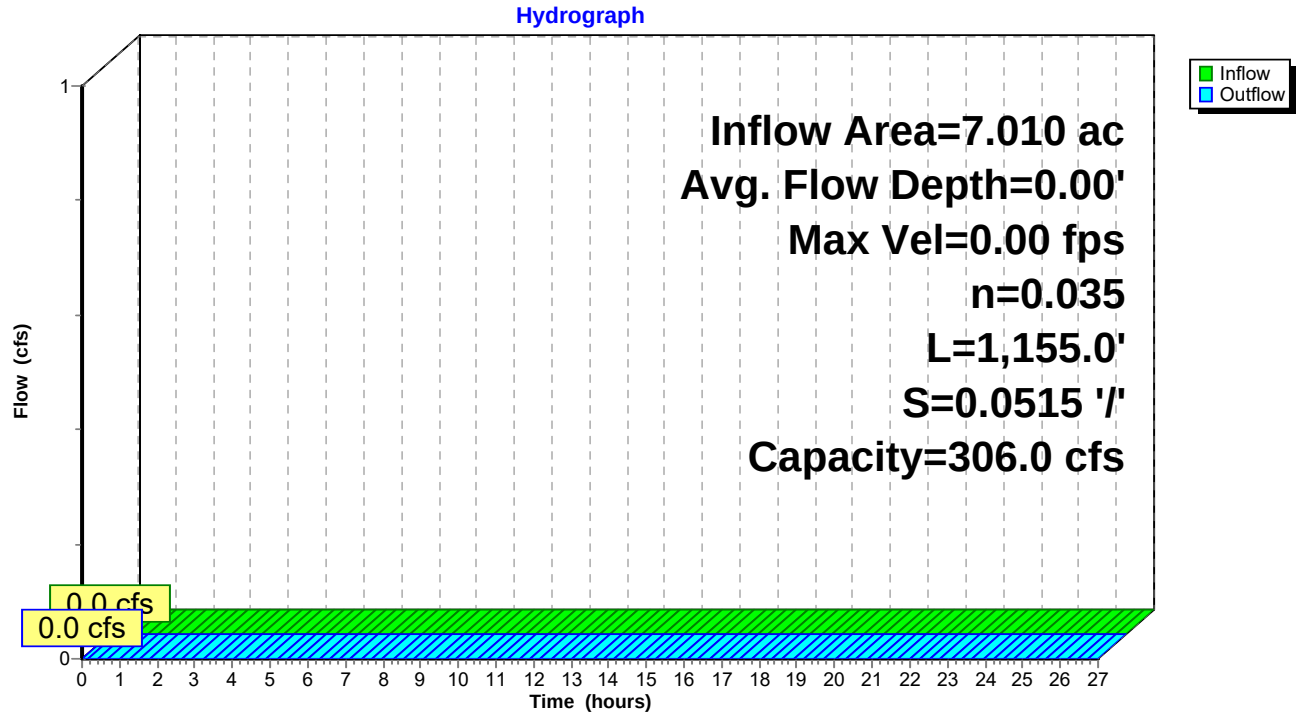
Reach RC22: WETLAND



Summary for Reach RC3: WETLAND STREAM

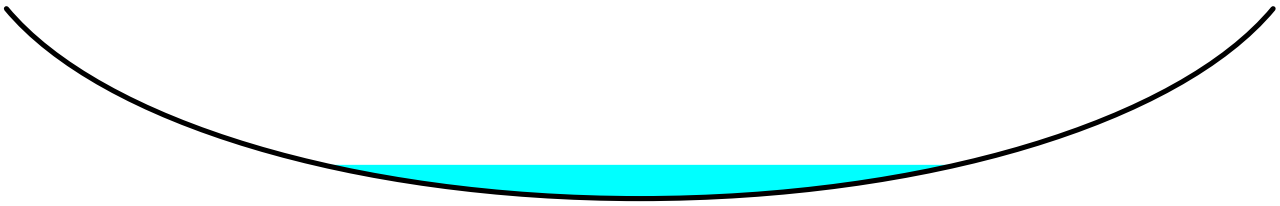
[62] Hint: Exceeded Reach RC19 OUTLET depth by 0.26' @ 12.56 hrs
[61] Hint: Exceeded Reach RC4 outlet invert by 0.35' @ 12.59 hrs

Inflow Area = 120.520 ac, 10.29% Impervious, Inflow Depth > 0.49" for 10-yr event
Inflow = 31.2 cfs @ 12.51 hrs, Volume= 4.932 af
Outflow = 30.2 cfs @ 12.59 hrs, Volume= 4.929 af, Atten= 3%, Lag= 4.9 min
Routed to Reach RC2 : WETLAND STREAM

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Max. Velocity= 3.04 fps, Min. Travel Time= 6.4 min
Avg. Velocity = 1.33 fps, Avg. Travel Time= 14.5 min

Peak Storage= 11,518 cf @ 12.59 hrs
Average Depth at Peak Storage= 0.35' , Surface Width= 42.07'
Bank-Full Depth= 2.00' Flow Area= 133.3 sf, Capacity= 1,284.7 cfs

100.00' x 2.00' deep Parabolic Channel, n= 0.035
Length= 1,160.0' Slope= 0.0351 '/'
Inlet Invert= 1,071.27', Outlet Invert= 1,030.50'



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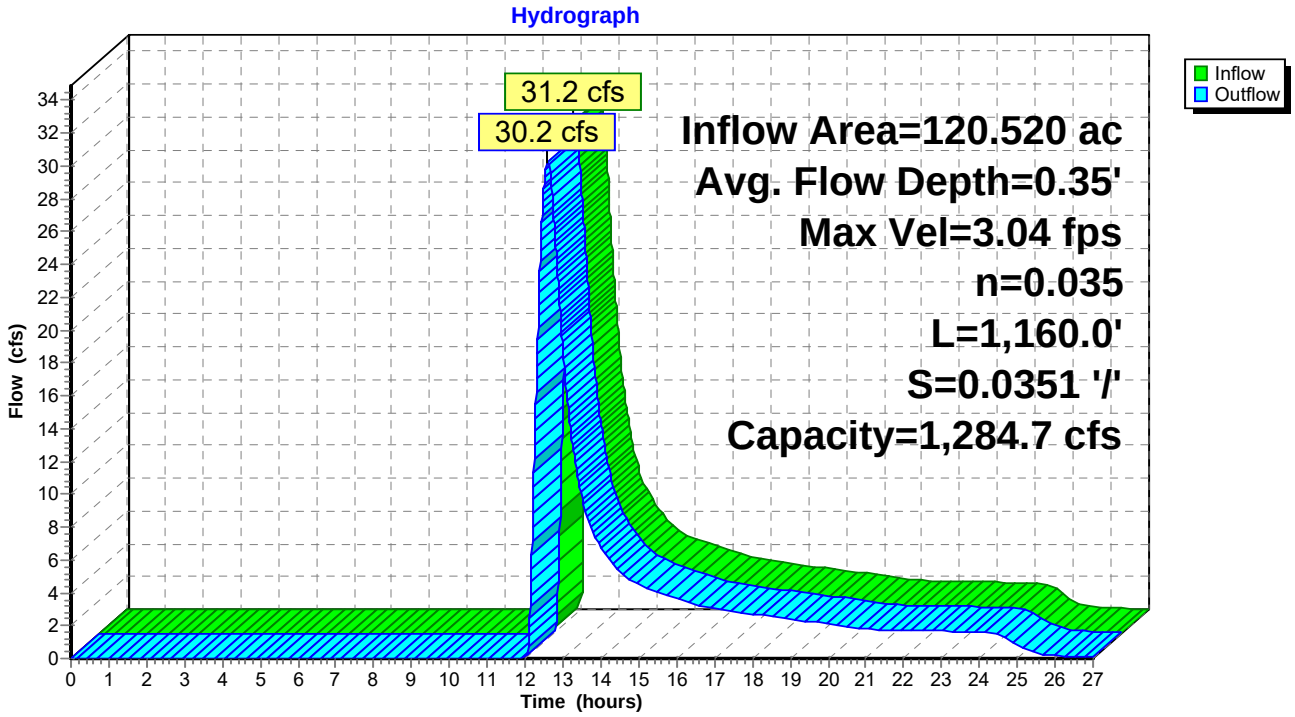
Reach RC3: WETLAND STREAM



Summary for Reach RC4: WETLAND STREAM

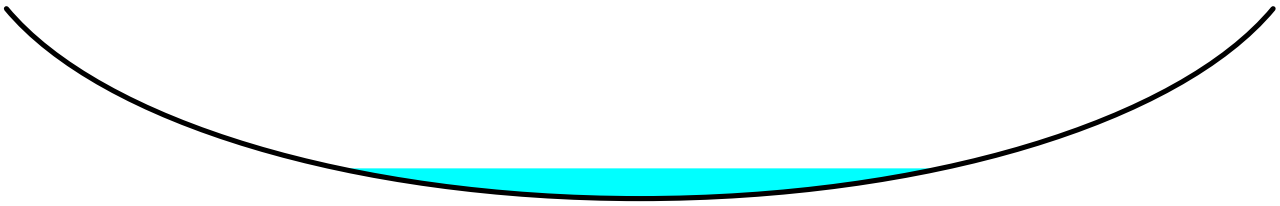
[62] Hint: Exceeded Reach RC16 OUTLET depth by 0.23' @ 12.14 hrs
[62] Hint: Exceeded Reach RC5 OUTLET depth by 0.45' @ 12.56 hrs

Inflow Area = 97.550 ac, 12.26% Impervious, Inflow Depth > 0.59" for 10-yr event
Inflow = 30.7 cfs @ 12.47 hrs, Volume= 4.772 af
Outflow = 30.6 cfs @ 12.50 hrs, Volume= 4.771 af, Atten= 0%, Lag= 1.7 min
Routed to Reach RC3 : WETLAND STREAM

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Max. Velocity= 4.60 fps, Min. Travel Time= 2.3 min
Avg. Velocity = 1.96 fps, Avg. Travel Time= 5.5 min

Peak Storage= 4,286 cf @ 12.50 hrs
Average Depth at Peak Storage= 0.63' , Surface Width= 15.86'
Bank-Full Depth= 4.00' Flow Area= 106.7 sf, Capacity= 1,660.9 cfs

40.00' x 4.00' deep Parabolic Channel, n= 0.035
Length= 645.0' Slope= 0.0376 '/'
Inlet Invert= 1,095.55', Outlet Invert= 1,071.27'



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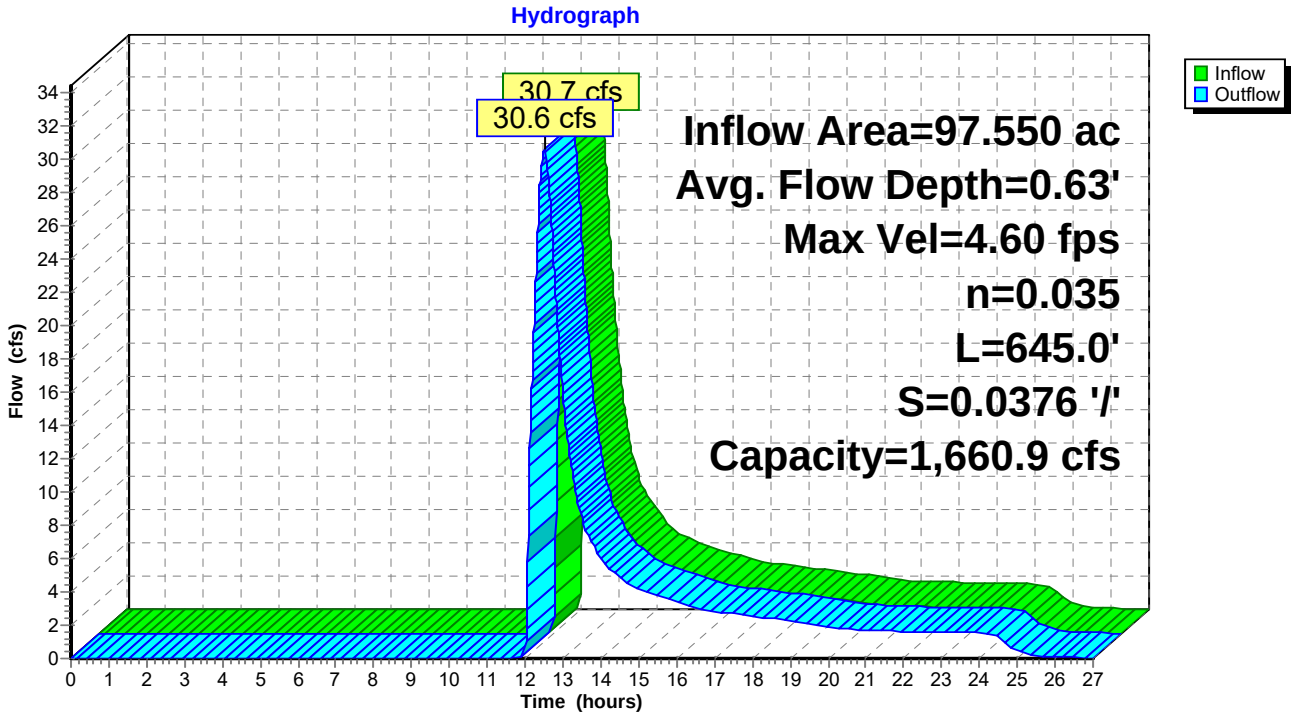
Reach RC4: WETLAND STREAM



Summary for Reach RC5: WETLAND STREAM

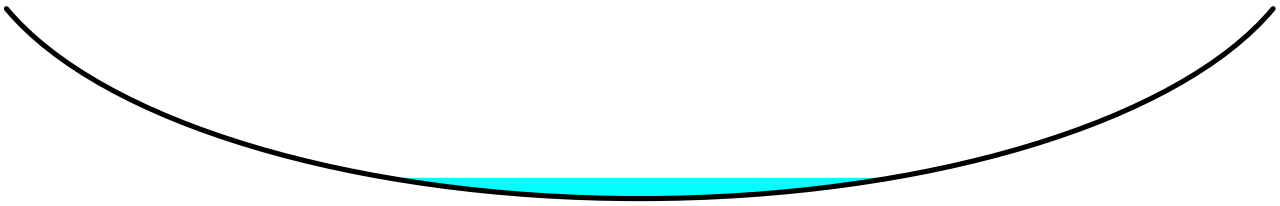
[62] Hint: Exceeded Reach RC12 OUTLET depth by 0.09' @ 13.18 hrs
[62] Hint: Exceeded Reach RC6 OUTLET depth by 0.10' @ 12.07 hrs

Inflow Area = 40.700 ac, 24.82% Impervious, Inflow Depth > 0.41" for 10-yr event
Inflow = 12.8 cfs @ 12.09 hrs, Volume= 1.398 af
Outflow = 12.5 cfs @ 12.11 hrs, Volume= 1.397 af, Atten= 2%, Lag= 1.2 min
Routed to Reach RC4 : WETLAND STREAM

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Max. Velocity= 2.62 fps, Min. Travel Time= 1.3 min
Avg. Velocity = 1.02 fps, Avg. Travel Time= 3.3 min

Peak Storage= 981 cf @ 12.11 hrs
Average Depth at Peak Storage= 0.22' , Surface Width= 32.99'
Bank-Full Depth= 2.00' Flow Area= 133.3 sf, Capacity= 1,529.4 cfs

100.00' x 2.00' deep Parabolic Channel, n= 0.035
Length= 205.0' Slope= 0.0498 '/'
Inlet Invert= 1,105.76', Outlet Invert= 1,095.55'



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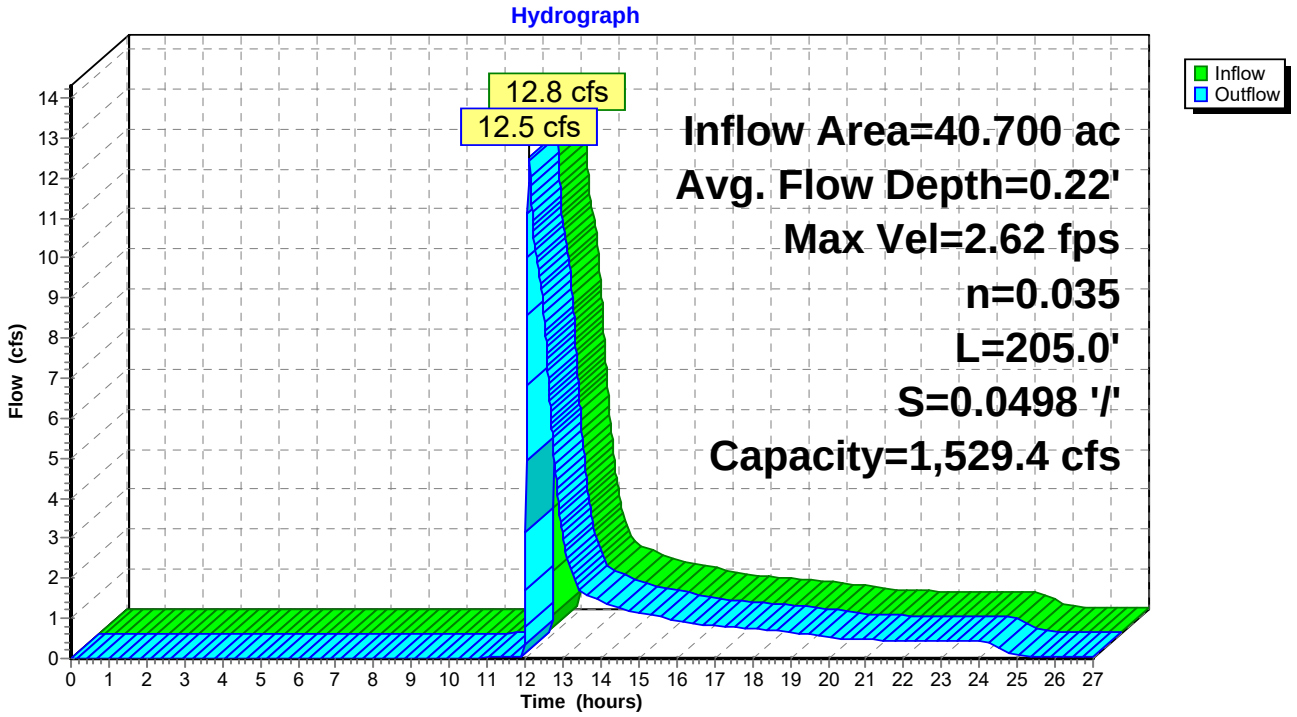
Reach RC5: WETLAND STREAM



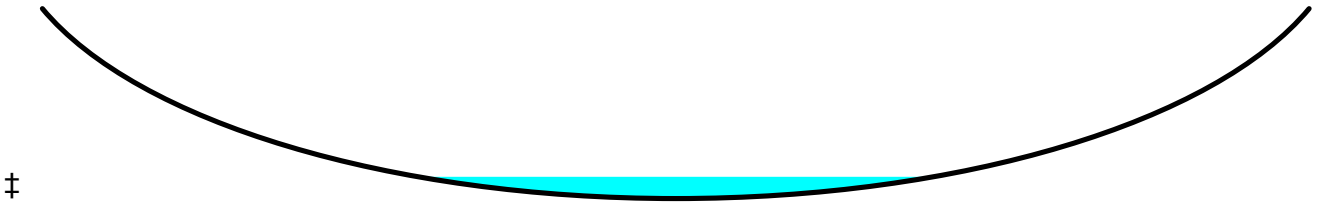
Summary for Reach RC6: WETLAND STREAM

Inflow Area = 39.920 ac, 25.30% Impervious, Inflow Depth > 0.35" for 10-yr event
Inflow = 7.3 cfs @ 12.38 hrs, Volume= 1.153 af
Outflow = 7.2 cfs @ 12.42 hrs, Volume= 1.152 af, Atten= 1%, Lag= 2.7 min
Routed to Reach RC5 : WETLAND STREAM

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Max. Velocity= 1.40 fps, Min. Travel Time= 3.7 min
Avg. Velocity = 0.62 fps, Avg. Travel Time= 8.5 min

Peak Storage= 1,610 cf @ 12.42 hrs
Average Depth at Peak Storage= 0.23' , Surface Width= 33.71'
Bank-Full Depth= 2.00' Flow Area= 133.3 sf, Capacity= 795.1 cfs

100.00' x 2.00' deep Parabolic Channel, n= 0.035 Earth, dense weeds
Length= 315.0' Slope= 0.0135 '/'
Inlet Invert= 1,110.00', Outlet Invert= 1,105.76'



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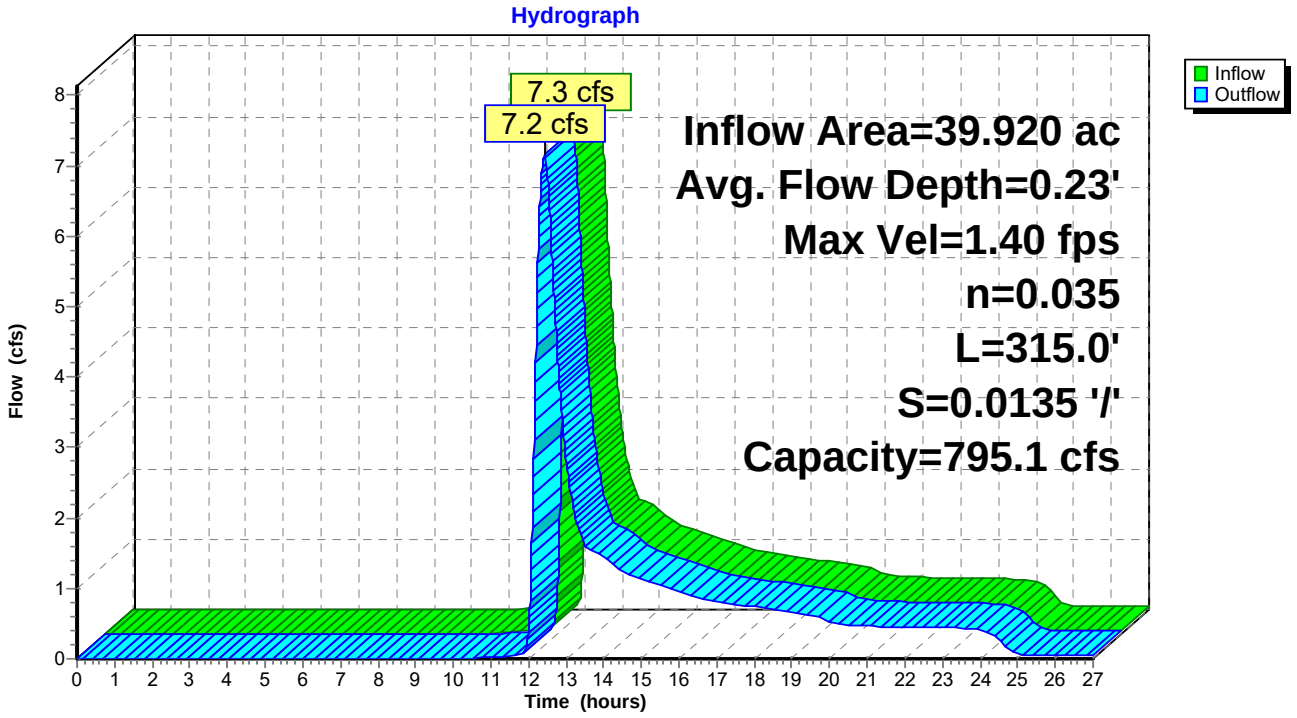
Reach RC6: WETLAND STREAM



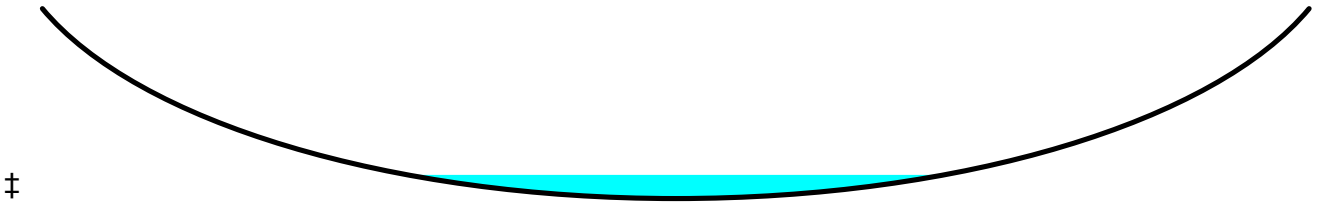
Summary for Reach RC8: WOODS

Inflow Area = 11.850 ac, 73.50% Impervious, Inflow Depth = 0.04" for 10-yr event
Inflow = 1.2 cfs @ 12.45 hrs, Volume= 0.042 af
Outflow = 1.0 cfs @ 12.54 hrs, Volume= 0.042 af, Atten= 10%, Lag= 5.3 min
Routed to Pond RC7 : NEW DOUGLAS DRIVE CULVERT

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.60 fps, Min. Travel Time= 5.8 min
Avg. Velocity = 0.19 fps, Avg. Travel Time= 18.2 min

Peak Storage= 362 cf @ 12.54 hrs
Average Depth at Peak Storage= 0.12' , Surface Width= 21.02'
Bank-Full Depth= 1.00' Flow Area= 40.0 sf, Capacity= 97.7 cfs

60.00' x 1.00' deep Parabolic Channel, n= 0.100 Earth, dense brush, high stage
Length= 210.0' Slope= 0.0464 '/'
Inlet Invert= 1,120.00', Outlet Invert= 1,110.25'



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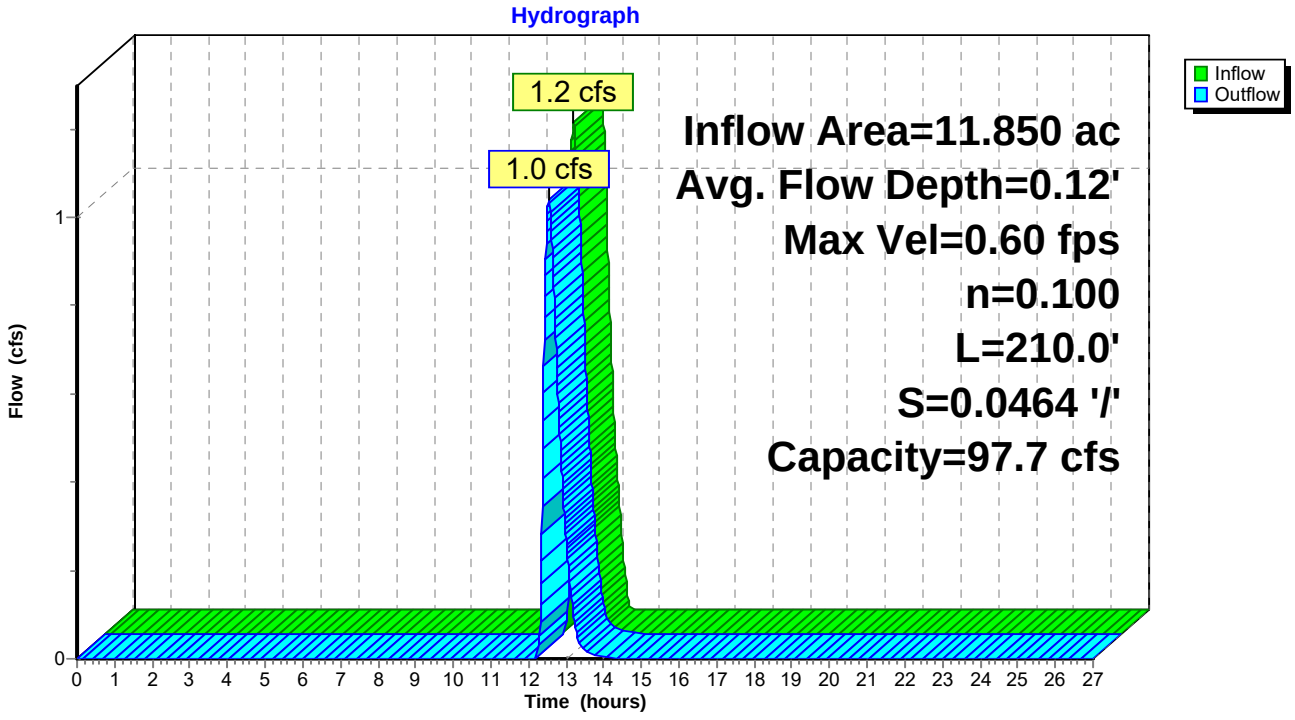
Reach RC8: WOODS



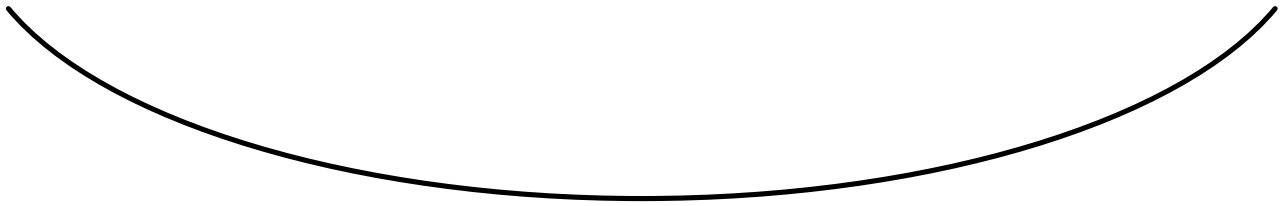
Summary for Reach RC9: WETLAND

Inflow Area = 6.050 ac, 0.00% Impervious, Inflow Depth = 0.00" for 10-yr event
Inflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Reach RC10 : WETLAND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 0.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 2.00' Flow Area= 46.7 sf, Capacity= 436.9 cfs

35.00' x 2.00' deep Parabolic Channel, n= 0.035
Length= 955.0' Slope= 0.0335 '/'
Inlet Invert= 1,186.00', Outlet Invert= 1,154.00'



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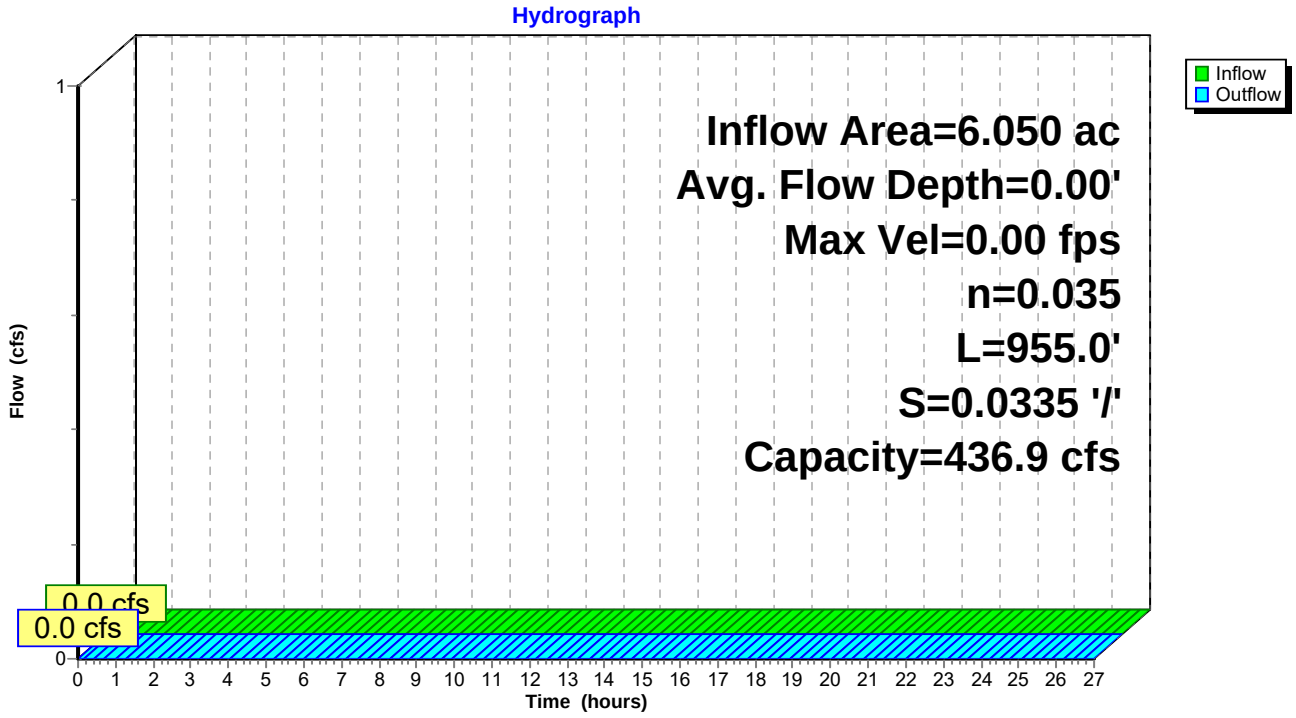
Reach RC9: WETLAND



Summary for Pond FB10: FOREBAY

Inflow Area = 6.050 ac, 0.00% Impervious, Inflow Depth = 0.65" for 10-yr event
Inflow = 2.6 cfs @ 12.34 hrs, Volume= 0.330 af
Outflow = 2.1 cfs @ 12.48 hrs, Volume= 0.330 af, Atten= 16%, Lag= 8.6 min
Discarded = 0.2 cfs @ 12.48 hrs, Volume= 0.243 af
Primary = 1.9 cfs @ 12.48 hrs, Volume= 0.087 af
Routed to Pond P10 : INFILTRATION BASIN

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,212.04' @ 12.48 hrs Surf.Area= 2,077 sf Storage= 2,856 cf

Plug-Flow detention time= 119.6 min calculated for 0.330 af (100% of inflow)
Center-of-Mass det. time= 119.7 min (1,033.5 - 913.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,210.00'	5,423 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

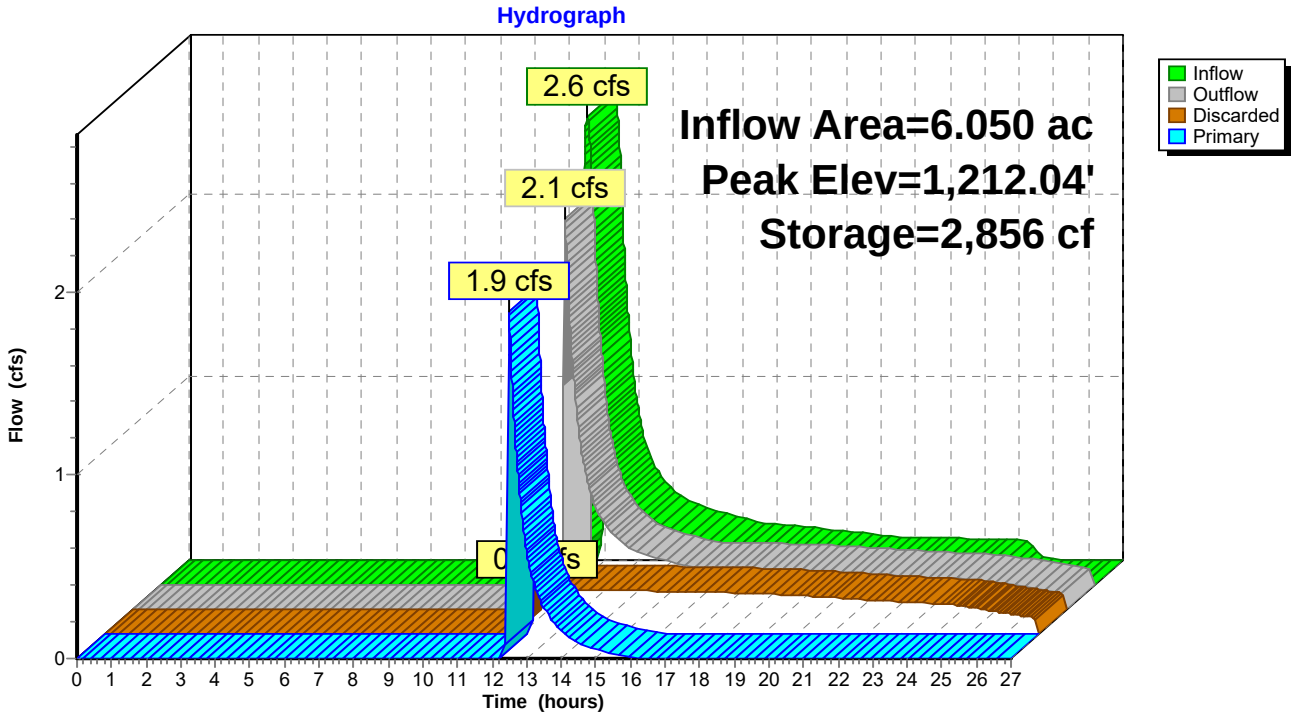
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,210.00	745	0	0
1,212.00	2,020	2,765	2,765
1,213.00	3,295	2,658	5,423

Device	Routing	Invert	Outlet Devices
#1	Primary	1,212.00'	**85.0' long + 3.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#2	Discarded	1,210.00'	**5.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.2 cfs @ 12.48 hrs HW=1,212.04' (Free Discharge)
↑**2=Exfiltration** (Exfiltration Controls 0.2 cfs)

Primary OutFlow Max=1.9 cfs @ 12.48 hrs HW=1,212.04' TW=1,207.02' (Dynamic Tailwater)
↑**1=Broad-Crested Rectangular Weir** (Weir Controls 1.9 cfs @ 0.50 fps)

Pond FB10: FOREBAY



Summary for Pond FB3: FOREBAY

Inflow Area = 16.840 ac, 2.61% Impervious, Inflow Depth = 0.76" for 10-yr event
Inflow = 7.4 cfs @ 12.39 hrs, Volume= 1.066 af
Outflow = 7.4 cfs @ 12.40 hrs, Volume= 1.038 af, Atten= 0%, Lag= 0.6 min
Discarded = 0.2 cfs @ 12.40 hrs, Volume= 0.275 af
Primary = 7.2 cfs @ 12.40 hrs, Volume= 0.762 af
Routed to Pond P3 : INFILTRATION BASIN

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,122.11' @ 12.40 hrs Surf.Area= 1,983 sf Storage= 3,053 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 35.0 min (942.4 - 907.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,120.00'	3,865 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

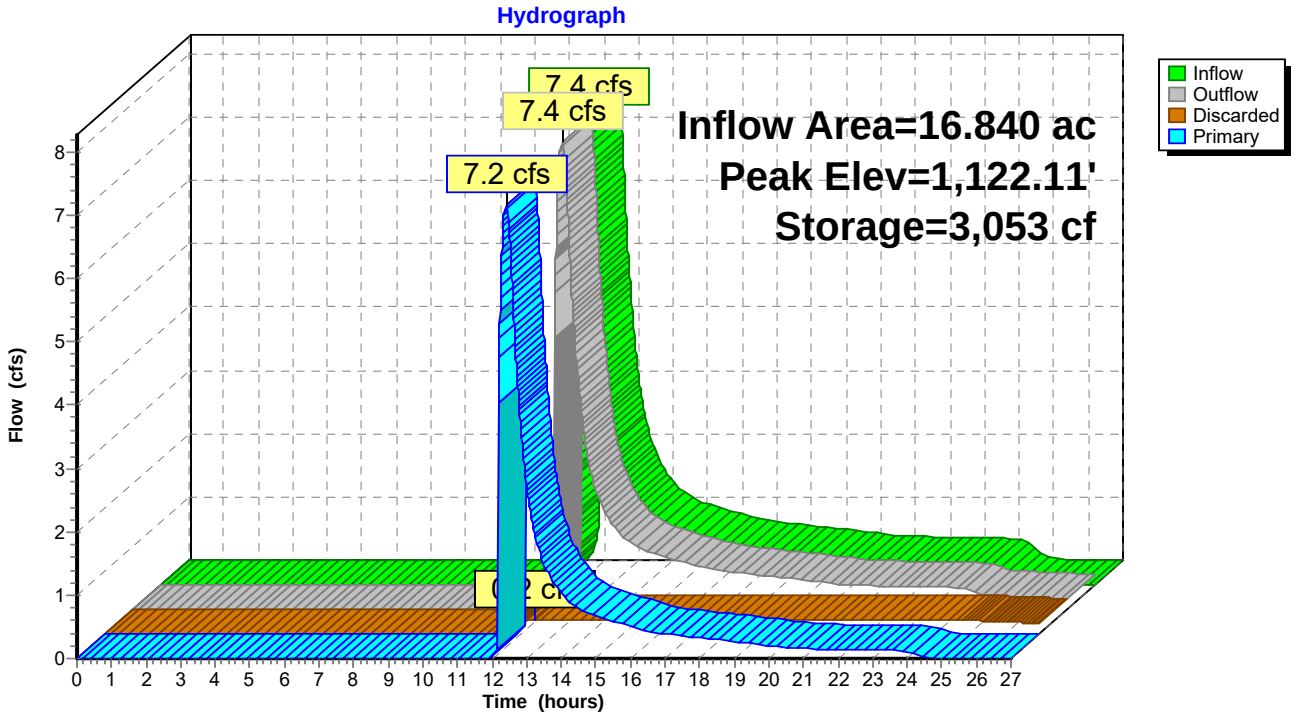
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,120.00	915	0	0
1,122.00	1,920	2,835	2,835
1,122.50	2,200	1,030	3,865

Device	Routing	Invert	Outlet Devices
#1	Primary	1,122.00'	**80.0' long + 3.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#2	Discarded	1,120.00'	**5.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.2 cfs @ 12.40 hrs HW=1,122.11' (Free Discharge)
└**2=Exfiltration** (Exfiltration Controls 0.2 cfs)

Primary OutFlow Max=7.2 cfs @ 12.40 hrs HW=1,122.11' TW=1,116.44' (Dynamic Tailwater)
└**1=Broad-Crested Rectangular Weir** (Weir Controls 7.2 cfs @ 0.80 fps)

Pond FB3: FOREBAY



Summary for Pond FB5: FOREBAY

Inflow Area = 1.810 ac, 75.14% Impervious, Inflow Depth = 2.27" for 10-yr event
Inflow = 7.1 cfs @ 11.97 hrs, Volume= 0.342 af
Outflow = 7.0 cfs @ 11.98 hrs, Volume= 0.343 af, Atten= 1%, Lag= 0.7 min
Discarded = 0.2 cfs @ 11.98 hrs, Volume= 0.154 af
Primary = 6.8 cfs @ 11.98 hrs, Volume= 0.189 af
Routed to Pond P5 : INFILTRATION BASIN

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,133.39' @ 11.98 hrs Surf.Area= 1,322 sf Storage= 1,429 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 36.9 min (839.5 - 802.5)

Volume	Invert	Avail.Storage	Storage Description
#1	1,132.00'	3,153 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

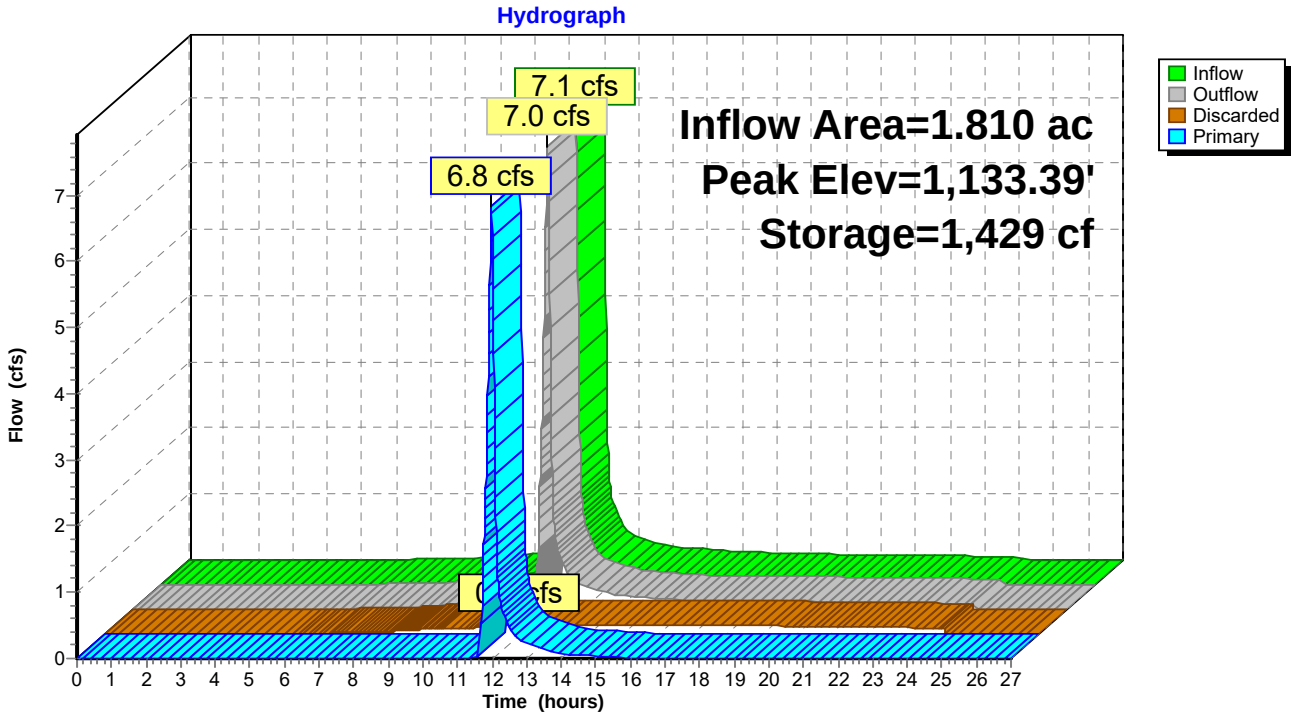
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,132.00	730	0	0
1,134.00	1,580	2,310	2,310
1,134.50	1,792	843	3,153

Device	Routing	Invert	Outlet Devices
#1	Primary	1,133.00'	**10.0' long + 3.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#2	Discarded	1,132.00'	**5.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.2 cfs @ 11.98 hrs HW=1,133.39' (Free Discharge)
↑**2=Exfiltration** (Exfiltration Controls 0.2 cfs)

Primary OutFlow Max=6.8 cfs @ 11.98 hrs HW=1,133.39' TW=1,131.53' (Dynamic Tailwater)
↑**1=Broad-Crested Rectangular Weir** (Weir Controls 6.8 cfs @ 1.55 fps)

Pond FB5: FOREBAY



Summary for Pond FB6: FOREBAY

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=240)

Inflow Area = 2.010 ac, 31.34% Impervious, Inflow Depth = 1.35" for 10-yr event
Inflow = 3.2 cfs @ 12.10 hrs, Volume= 0.227 af
Outflow = 0.4 cfs @ 12.84 hrs, Volume= 0.227 af, Atten= 88%, Lag= 44.2 min
Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond P6 : RAIN GARDEN
Secondary = 0.4 cfs @ 12.84 hrs, Volume= 0.227 af
Routed to Pond P6 : RAIN GARDEN

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,125.61' @ 12.84 hrs Surf.Area= 3,302 sf Storage= 3,946 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 99.5 min (954.0 - 854.5)

Volume	Invert	Avail.Storage	Storage Description
#1	1,124.00'	7,305 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

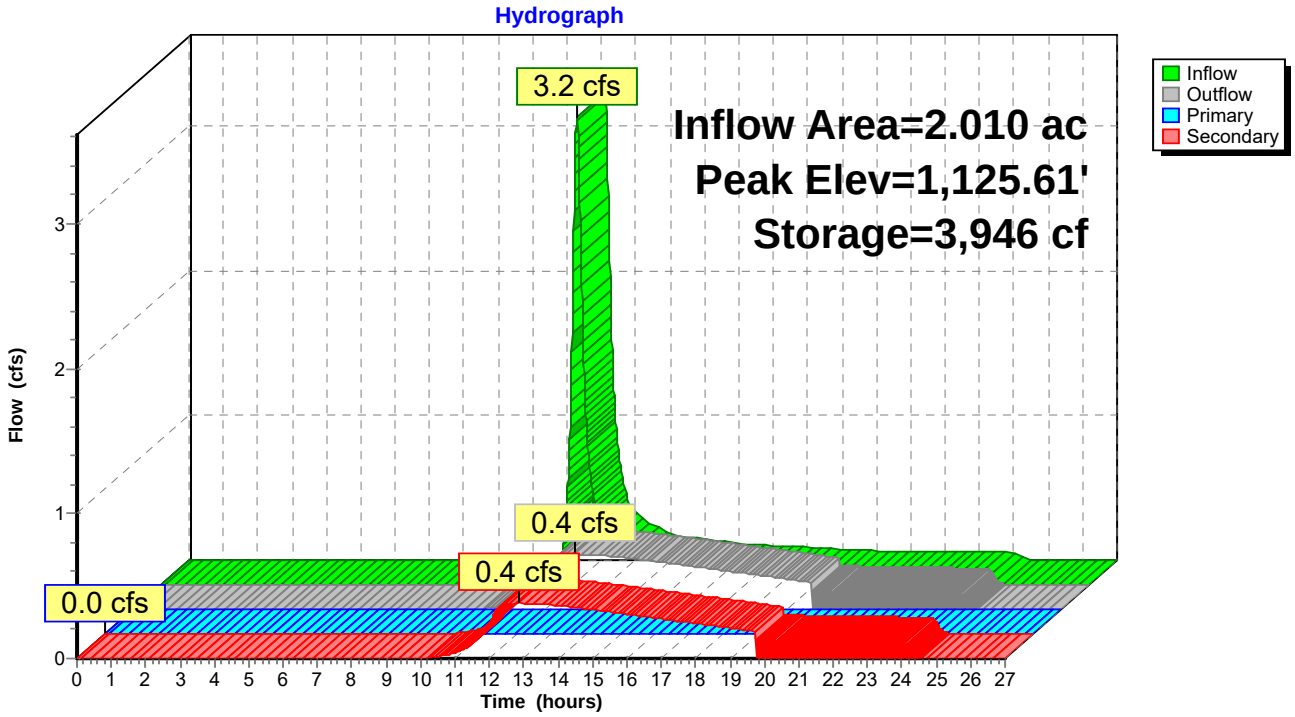
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,124.00	1,600	0	0
1,126.00	3,715	5,315	5,315
1,126.50	4,245	1,990	7,305

Device	Routing	Invert	Outlet Devices
#1	Primary	1,126.00'	**90.0' long + 3.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#2	Secondary	1,124.00'	**5.000 in/hr Exfiltration over Surface area**

Primary OutFlow Max=0.0 cfs @ 0.00 hrs HW=1,124.00' TW=1,122.25' (Dynamic Tailwater)
└**1=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Secondary OutFlow Max=0.4 cfs @ 12.84 hrs HW=1,125.61' TW=1,124.15' (Dynamic Tailwater)
└**2=Exfiltration** (Exfiltration Controls 0.4 cfs)

Pond FB6: FOREBAY



Summary for Pond FB7: FOREBAY

Inflow Area = 0.780 ac, 0.00% Impervious, Inflow Depth = 20.12" for 10-yr event
Inflow = 24.4 cfs @ 11.97 hrs, Volume= 1.308 af
Outflow = 24.4 cfs @ 11.98 hrs, Volume= 1.293 af, Atten= 0%, Lag= 0.3 min
Discarded = 0.3 cfs @ 11.98 hrs, Volume= 0.460 af
Primary = 24.1 cfs @ 11.98 hrs, Volume= 0.833 af
Routed to Pond P7 : INFILTRATION BASIN

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,142.27' @ 11.98 hrs Surf.Area= 2,622 sf Storage= 4,446 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 51.8 min (825.3 - 773.5)

Volume	Invert	Avail.Storage	Storage Description
#1	1,140.00'	5,066 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

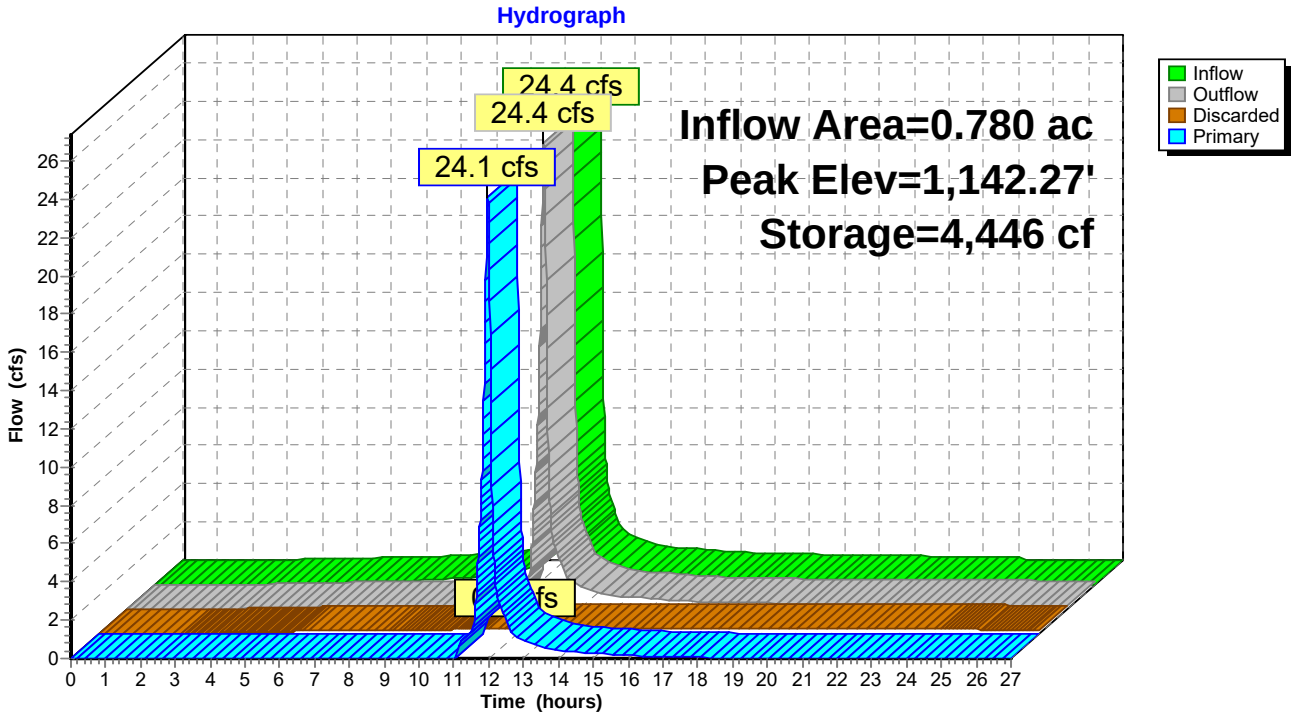
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,140.00	1,295	0	0
1,142.00	2,465	3,760	3,760
1,142.50	2,757	1,306	5,066

Device	Routing	Invert	Outlet Devices
#1	Primary	1,142.00'	**70.0' long + 3.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#2	Discarded	1,140.00'	**5.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.3 cfs @ 11.98 hrs HW=1,142.27' (Free Discharge)
↑**2=Exfiltration** (Exfiltration Controls 0.3 cfs)

Primary OutFlow Max=24.0 cfs @ 11.98 hrs HW=1,142.27' TW=1,140.19' (Dynamic Tailwater)
↑**1=Broad-Crested Rectangular Weir** (Weir Controls 24.0 cfs @ 1.26 fps)

Pond FB7: FOREBAY



Summary for Pond FB8: FOREBAY

Inflow Area = 11.850 ac, 73.50% Impervious, Inflow Depth = 1.44" for 10-yr event
Inflow = 27.7 cfs @ 11.97 hrs, Volume= 1.423 af
Outflow = 27.4 cfs @ 11.98 hrs, Volume= 1.413 af, Atten= 1%, Lag= 0.6 min
Discarded = 0.4 cfs @ 11.98 hrs, Volume= 0.582 af
Primary = 27.0 cfs @ 11.98 hrs, Volume= 0.831 af
Routed to Reach RC20 : SWALE

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,151.48' @ 11.98 hrs Surf.Area= 3,495 sf Storage= 6,810 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 64.2 min (841.7 - 777.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,149.00'	6,869 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

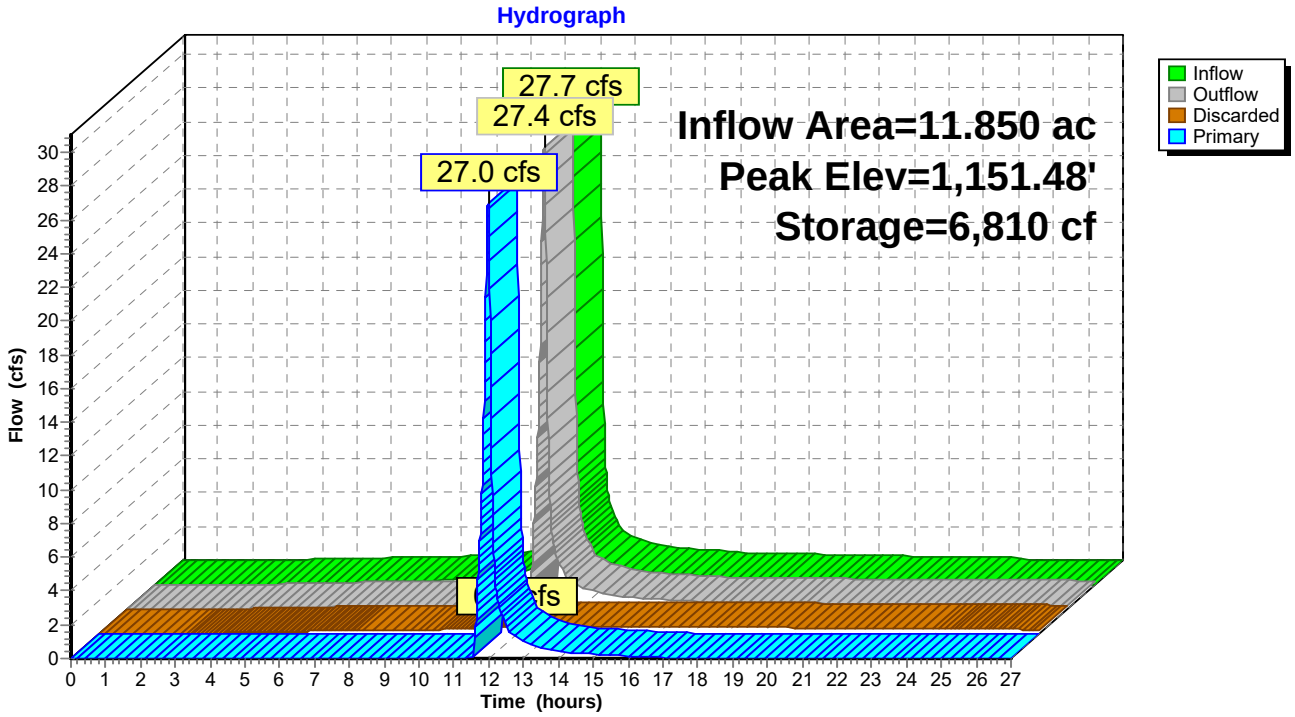
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,149.00	1,990	0	0
1,151.00	3,202	5,192	5,192
1,151.50	3,505	1,677	6,869

Device	Routing	Invert	Outlet Devices
#1	Primary	1,151.00'	**35.0' long + 3.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#2	Discarded	1,149.00'	**5.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.4 cfs @ 11.98 hrs HW=1,151.48' (Free Discharge)
↑**2=Exfiltration** (Exfiltration Controls 0.4 cfs)

Primary OutFlow Max=26.9 cfs @ 11.98 hrs HW=1,151.48' TW=1,151.24' (Dynamic Tailwater)
↑**1=Broad-Crested Rectangular Weir** (Weir Controls 26.9 cfs @ 1.53 fps)

Pond FB8: FOREBAY



Summary for Pond FB9: FOREBAY

Inflow Area = 3.680 ac, 20.65% Impervious, Inflow Depth = 1.45" for 10-yr event
Inflow = 7.3 cfs @ 11.98 hrs, Volume= 0.445 af
Outflow = 7.1 cfs @ 12.00 hrs, Volume= 0.445 af, Atten= 3%, Lag= 1.2 min
Discarded = 0.3 cfs @ 12.00 hrs, Volume= 0.314 af
Primary = 6.7 cfs @ 12.00 hrs, Volume= 0.132 af
Routed to Pond P9 : INFILTRATION BASIN

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,177.13' @ 12.00 hrs Surf.Area= 2,735 sf Storage= 4,255 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 106.4 min (944.8 - 838.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,175.00'	5,314 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

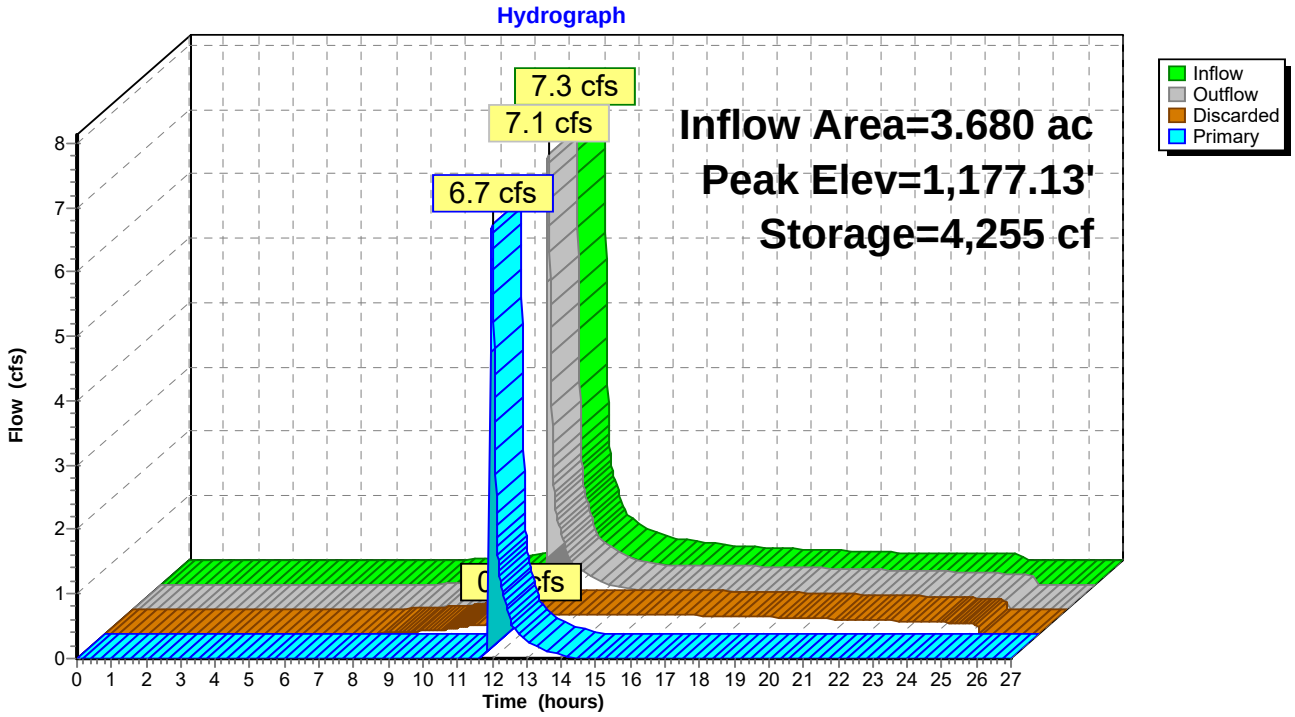
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,175.00	1,260	0	0
1,177.00	2,645	3,905	3,905
1,177.50	2,990	1,409	5,314

Device	Routing	Invert	Outlet Devices
#1	Discarded	1,175.00'	**5.000 in/hr Exfiltration over Surface area**
#2	Primary	1,177.00'	**60.0' long + 3.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Discarded OutFlow Max=0.3 cfs @ 12.00 hrs HW=1,177.13' (Free Discharge)
1=Exfiltration (Exfiltration Controls 0.3 cfs)

Primary OutFlow Max=6.7 cfs @ 12.00 hrs HW=1,177.13' TW=1,173.15' (Dynamic Tailwater)
2=Broad-Crested Rectangular Weir (Weir Controls 6.7 cfs @ 0.86 fps)

Pond FB9: FOREBAY



Summary for Pond P1: WATER STORAGE FOR REUSE

Inflow Area = 0.490 ac,100.00% Impervious, Inflow Depth = 3.08" for 10-yr event
Inflow = 2.3 cfs @ 11.97 hrs, Volume= 0.126 af
Outflow = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach OUT-C : WETLANDS COMPLEX

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,136.04' @ 24.34 hrs Surf.Area= 5,763 sf Storage= 5,473 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

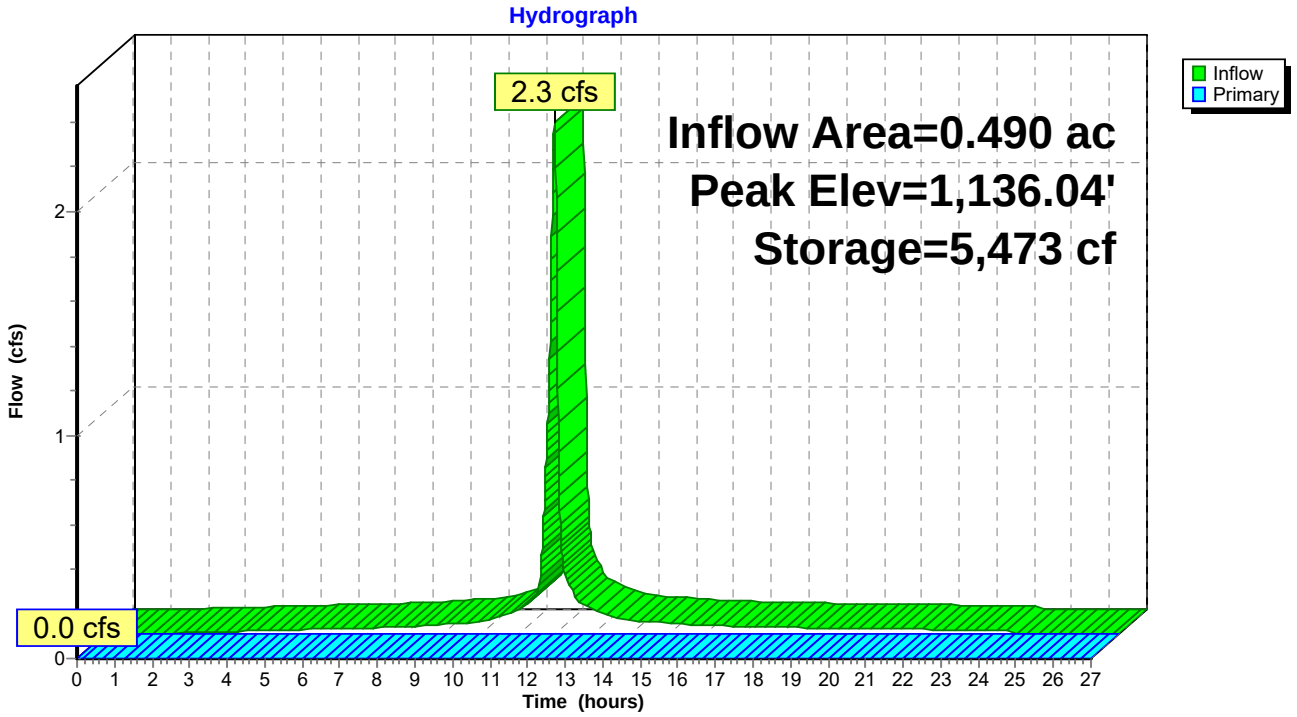
Volume	Invert	Avail.Storage	Storage Description
#1	1,135.00'	18,638 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,135.00	4,740	0	0
1,138.00	7,685	18,638	18,638

Device	Routing	Invert	Outlet Devices
#1	Primary	1,137.50'	**10.0' long + 3.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=0.0 cfs @ 0.00 hrs HW=1,135.00' TW=0.00' (Dynamic Tailwater)
↑—**1=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Pond P1: WATER STORAGE FOR REUSE



Summary for Pond P10: INFILTRATION BASIN

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=107)

Inflow Area = 6.050 ac, 0.00% Impervious, Inflow Depth = 0.17" for 10-yr event
Inflow = 1.9 cfs @ 12.48 hrs, Volume= 0.087 af
Outflow = 0.6 cfs @ 12.95 hrs, Volume= 0.087 af, Atten= 66%, Lag= 28.1 min
Discarded = 0.6 cfs @ 12.95 hrs, Volume= 0.087 af
Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach RC11 : WOODS
Secondary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach RC11 : WOODS

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,207.18' @ 12.95 hrs Surf.Area= 5,603 sf Storage= 975 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 14.2 min (800.3 - 786.2)

Volume	Invert	Avail.Storage	Storage Description
#1	1,207.00'	31,150 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,207.00	5,390	0	0
1,211.00	10,185	31,150	31,150

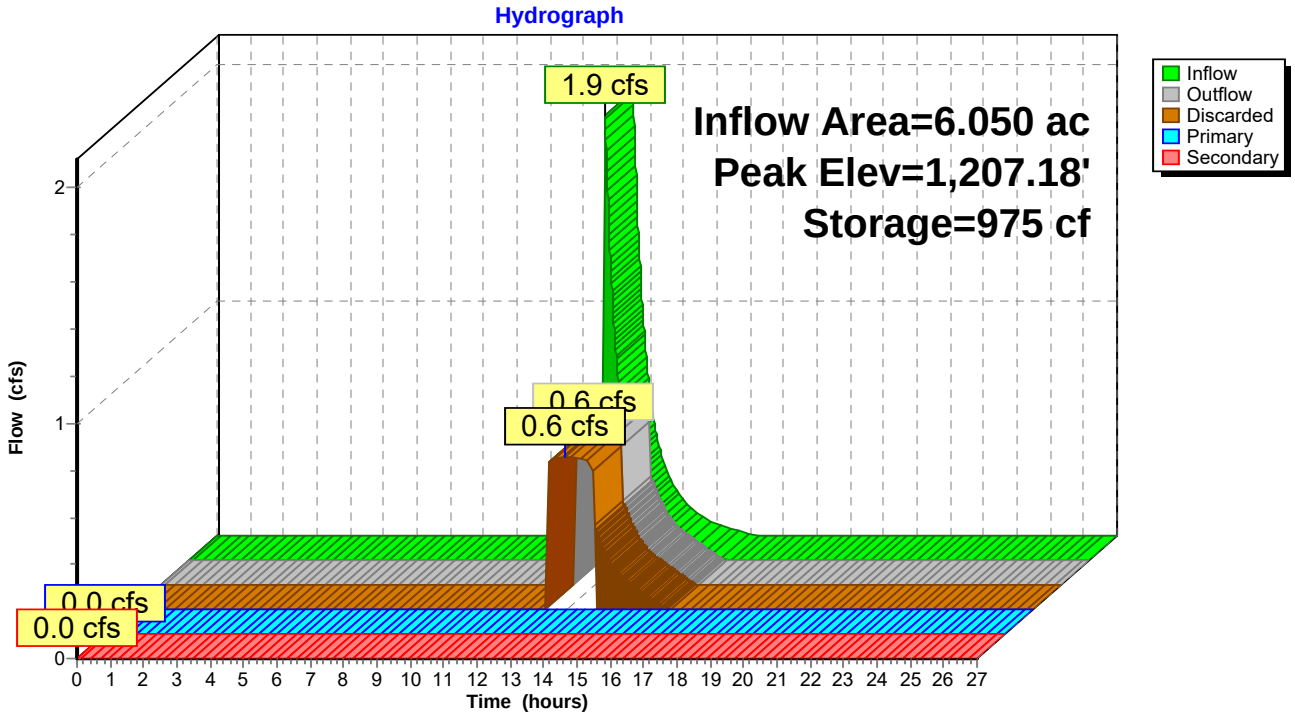
Device	Routing	Invert	Outlet Devices
#1	Primary	1,206.50'	**24.0" Round Culvert** L= 56.3' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,206.50' / 1,206.00' S= 0.0089 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#2	Device 1	1,209.20'	**48.0" x 48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	1,210.50'	**10.0' long + 3.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#4	Discarded	1,207.00'	**5.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.6 cfs @ 12.95 hrs HW=1,207.18' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.6 cfs)

Primary OutFlow Max=0.0 cfs @ 0.00 hrs HW=1,207.00' TW=1,206.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.0 cfs of 1.4 cfs potential flow)
└**2=Orifice/Grate** (Controls 0.0 cfs)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=1,207.00' TW=1,206.00' (Dynamic Tailwater)
└**3=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Pond P10: INFILTRATION BASIN



Summary for Pond P2: INFILTRATION BASIN

Inflow Area = 7.010 ac, 56.49% Impervious, Inflow Depth = 2.00" for 10-yr event
Inflow = 24.3 cfs @ 11.97 hrs, Volume= 1.167 af
Outflow = 1.2 cfs @ 13.10 hrs, Volume= 1.167 af, Atten= 95%, Lag= 67.5 min
Discarded = 1.2 cfs @ 13.10 hrs, Volume= 1.167 af
Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach RC21 : FLOW THROUGH WOODS
Secondary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach RC21 : FLOW THROUGH WOODS

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,108.83' @ 13.10 hrs Surf.Area= 10,192 sf Storage= 23,813 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 198.3 min (1,009.2 - 810.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,106.00'	48,913 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,106.00	6,655	0	0
1,111.00	12,910	48,913	48,913

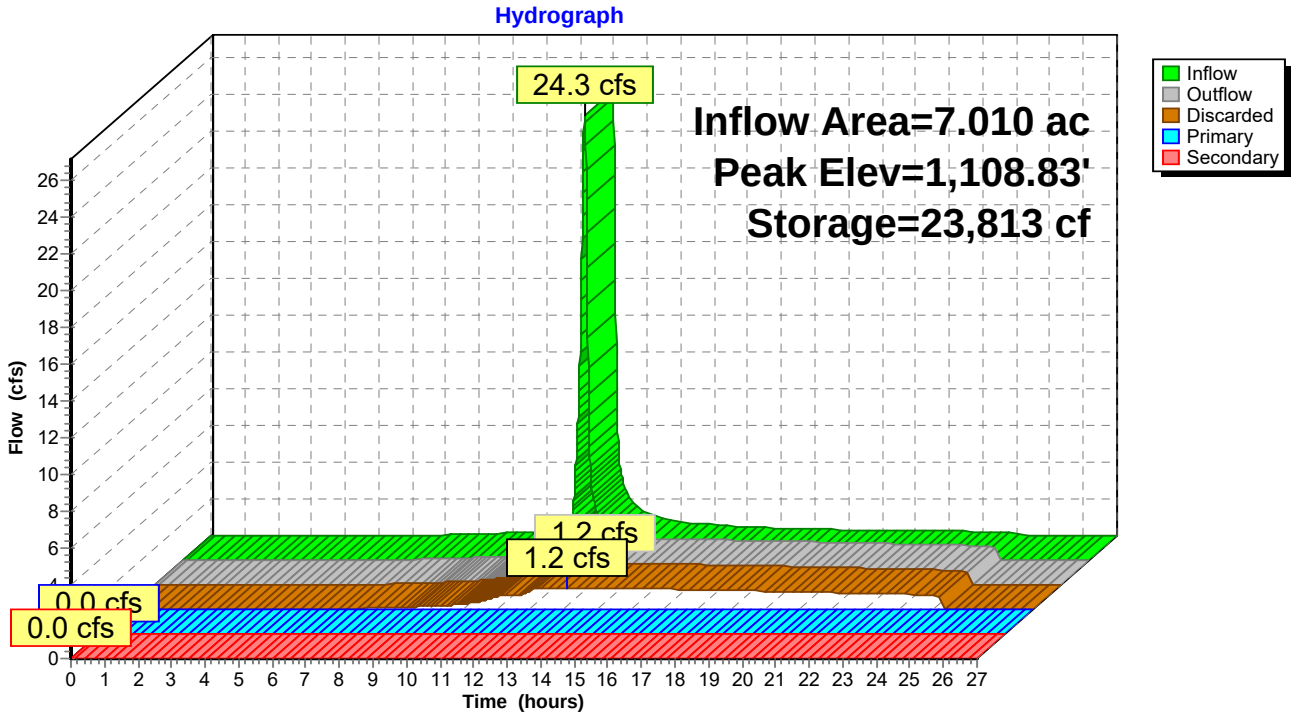
Device	Routing	Invert	Outlet Devices
#1	Primary	1,105.00'	**24.0" Round Culvert** L= 46.2' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,105.00' / 1,104.00' S= 0.0216 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#2	Secondary	1,110.50'	**10.0' long + 3.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#3	Device 1	1,109.40'	**48.0" x 48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Discarded	1,106.00'	**5.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=1.2 cfs @ 13.10 hrs HW=1,108.83' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 1.2 cfs)

Primary OutFlow Max=0.0 cfs @ 0.00 hrs HW=1,106.00' TW=1,104.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.0 cfs of 5.3 cfs potential flow)
└**3=Orifice/Grate** (Controls 0.0 cfs)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=1,106.00' TW=1,104.00' (Dynamic Tailwater)
└**2=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Pond P2: INFILTRATION BASIN



Summary for Pond P3: INFILTRATION BASIN

Inflow Area = 16.840 ac, 2.61% Impervious, Inflow Depth = 0.54" for 10-yr event
Inflow = 7.2 cfs @ 12.40 hrs, Volume= 0.762 af
Outflow = 0.7 cfs @ 14.74 hrs, Volume= 0.724 af, Atten= 90%, Lag= 140.4 min
Discarded = 0.7 cfs @ 14.74 hrs, Volume= 0.724 af
Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach RC17 : FLOW THROUGH WOODS
Secondary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach RC17 : FLOW THROUGH WOODS

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,118.98' @ 14.74 hrs Surf.Area= 6,233 sf Storage= 17,483 cf

Plug-Flow detention time= 297.5 min calculated for 0.723 af (95% of inflow)
Center-of-Mass det. time= 271.6 min (1,137.3 - 865.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,115.00'	40,520 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,115.00	2,552	0	0
1,122.00	9,025	40,520	40,520

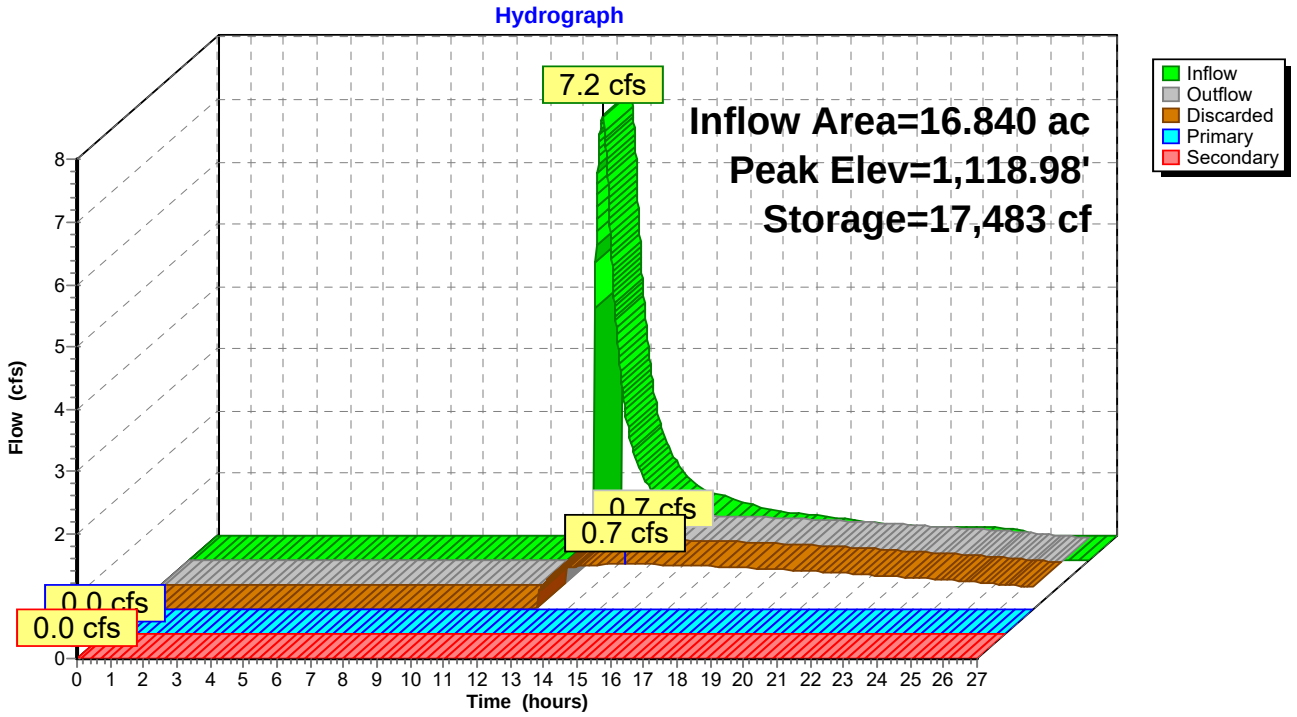
Device	Routing	Invert	Outlet Devices
#1	Secondary	1,121.50'	**10.0' long + 3.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#2	Primary	1,117.50'	**24.0" Round Culvert** L= 61.2' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,117.50' / 1,116.50' S= 0.0163 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#3	Device 2	1,120.35'	**48.0" x 48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Discarded	1,115.00'	**5.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.7 cfs @ 14.74 hrs HW=1,118.98' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.7 cfs)

Primary OutFlow Max=0.0 cfs @ 0.00 hrs HW=1,115.00' TW=1,116.00' (Dynamic Tailwater)
└**2=Culvert** (Controls 0.0 cfs)
└**3=Orifice/Grate** (Controls 0.0 cfs)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=1,115.00' TW=1,116.00' (Dynamic Tailwater)
└**1=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Pond P3: INFILTRATION BASIN



Summary for Pond P4: INFILTRATION BASIN

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=575)

Inflow Area = 0.970 ac, 40.21% Impervious, Inflow Depth = 1.49" for 10-yr event
Inflow = 2.6 cfs @ 11.98 hrs, Volume= 0.120 af
Outflow = 0.8 cfs @ 12.09 hrs, Volume= 0.120 af, Atten= 68%, Lag= 7.1 min
Discarded = 0.8 cfs @ 12.09 hrs, Volume= 0.120 af
Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach RC15 : FLOW THROUGH WOODS
Secondary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach RC15 : FLOW THROUGH WOODS

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,139.13' @ 12.09 hrs Surf.Area= 7,226 sf Storage= 940 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 4.7 min (842.4 - 837.8)

Volume	Invert	Avail.Storage	Storage Description
#1	1,139.00'	26,553 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,139.00	7,070	0	0
1,142.00	10,632	26,553	26,553

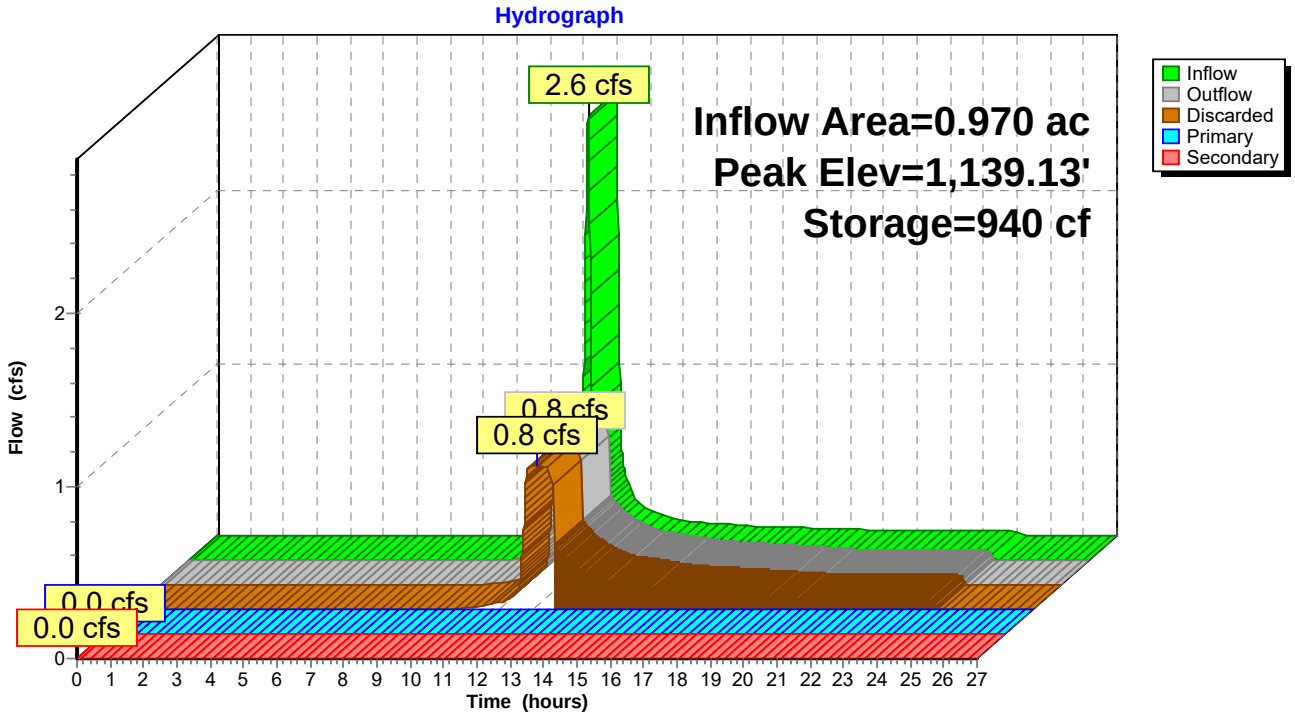
Device	Routing	Invert	Outlet Devices
#1	Primary	1,138.00'	**12.0" Round Culvert** L= 37.3' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,138.00' / 1,137.50' S= 0.0134 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	1,141.40'	**48.0" x 48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	1,141.50'	**10.0' long + 3.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#4	Discarded	1,139.00'	**5.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.8 cfs @ 12.09 hrs HW=1,139.13' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 0.8 cfs)

Primary OutFlow Max=0.0 cfs @ 0.00 hrs HW=1,139.00' TW=1,137.00' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.0 cfs of 2.7 cfs potential flow)
└**2=Orifice/Grate** (Controls 0.0 cfs)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=1,139.00' TW=1,137.00' (Dynamic Tailwater)
└**3=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Pond P4: INFILTRATION BASIN



Summary for Pond P5: INFILTRATION BASIN

Inflow Area = 1.810 ac, 75.14% Impervious, Inflow Depth = 1.25" for 10-yr event
Inflow = 6.8 cfs @ 11.98 hrs, Volume= 0.189 af
Outflow = 1.1 cfs @ 12.18 hrs, Volume= 0.189 af, Atten= 84%, Lag= 12.1 min
Discarded = 0.4 cfs @ 12.18 hrs, Volume= 0.173 af
Primary = 0.7 cfs @ 12.18 hrs, Volume= 0.016 af
Routed to Reach RC14 : WETLAND
Secondary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach RC14 : WETLAND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,132.31' @ 12.18 hrs Surf.Area= 3,126 sf Storage= 5,471 cf

Plug-Flow detention time= 159.2 min calculated for 0.189 af (100% of inflow)
Center-of-Mass det. time= 159.2 min (892.8 - 733.6)

Volume	Invert	Avail.Storage	Storage Description
#1	1,129.75'	11,864 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,129.75	1,150	0	0
1,134.00	4,433	11,864	11,864

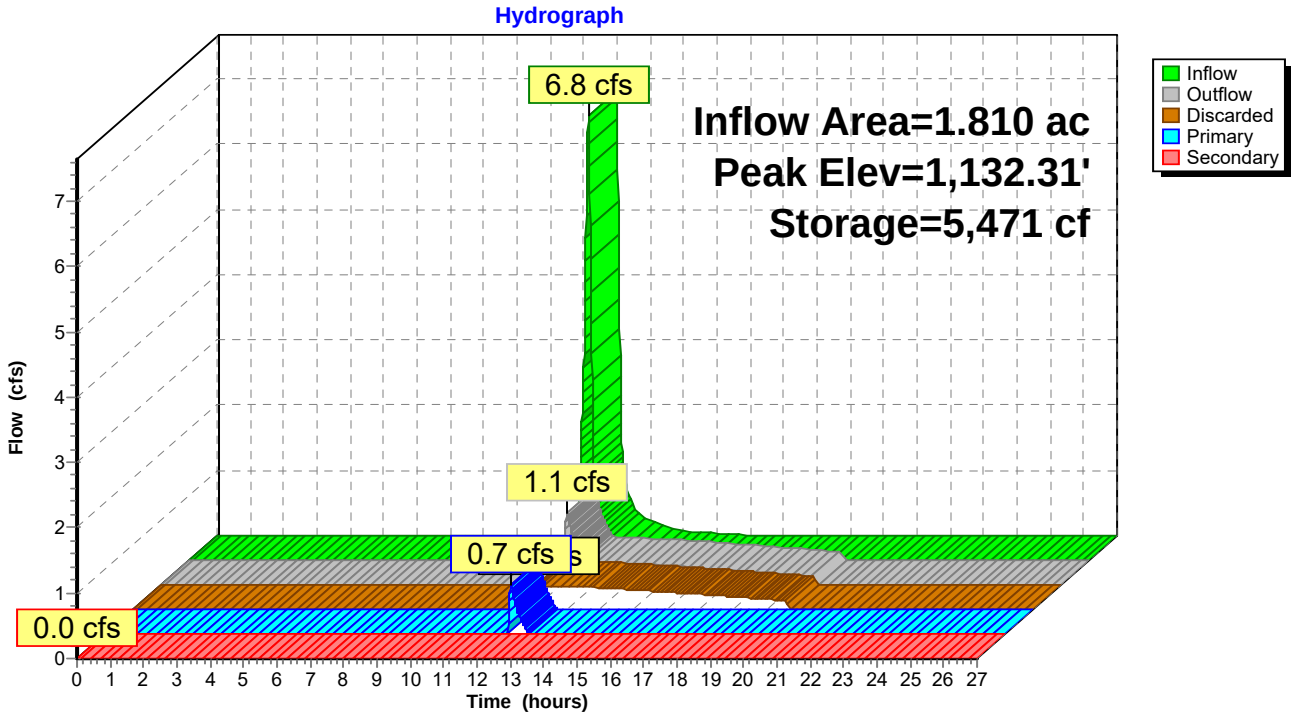
Device	Routing	Invert	Outlet Devices
#1	Primary	1,127.00'	**12.0" Round Culvert** L= 39.8' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,127.00' / 1,126.00' S= 0.0251 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	1,132.25'	**48.0" x 48.0" Horiz. GRATE** C= 0.600 Limited to weir flow at low heads
#3	Discarded	1,129.75'	**5.000 in/hr Exfiltration over Surface area**
#4	Secondary	1,133.50'	**10.0' long + 3.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Discarded OutFlow Max=0.4 cfs @ 12.18 hrs HW=1,132.31' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.4 cfs)

Primary OutFlow Max=0.7 cfs @ 12.18 hrs HW=1,132.31' TW=1,126.29' (Dynamic Tailwater)
└**1=Culvert** (Passes 0.7 cfs of 8.3 cfs potential flow)
└**2=GRATE** (Weir Controls 0.7 cfs @ 0.79 fps)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=1,129.75' TW=1,126.00' (Dynamic Tailwater)
└**4=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Pond P5: INFILTRATION BASIN



Summary for Pond P6: RAIN GARDEN

[78] Warning: Submerged Pond FB6 Secondary device # 2 by 0.44'
[80] Warning: Exceeded Pond FB6 by 0.42' @ 19.79 hrs (0.2 cfs 0.104 af)

Inflow Area = 2.010 ac, 31.34% Impervious, Inflow Depth = 1.35" for 10-yr event
Inflow = 0.4 cfs @ 12.84 hrs, Volume= 0.227 af
Outflow = 0.4 cfs @ 13.97 hrs, Volume= 0.220 af, Atten= 4%, Lag= 67.7 min
Primary = 0.4 cfs @ 13.97 hrs, Volume= 0.220 af
Routed to Pond RC7 : NEW DOUGLAS DRIVE CULVERT
Secondary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Pond RC7 : NEW DOUGLAS DRIVE CULVERT

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,124.44' @ 13.97 hrs Surf.Area= 6,930 sf Storage= 1,820 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 102.9 min (1,056.9 - 954.0)

Volume	Invert	Avail.Storage	Storage Description
#1	1,124.00'	5,775 cf	**Open Water (Prismatic)** Listed below (Recalc)
#2	1,123.75'	111 cf	**Mulch (Prismatic)** Listed below (Recalc) 553 cf Overall x 20.0% Voids
#3	1,122.25'	663 cf	**Media (Prismatic)** Listed below (Recalc) 3,315 cf Overall x 20.0% Voids
		6,549 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,124.00	2,210	0	0
1,126.00	3,565	5,775	5,775

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,123.75	2,210	0	0
1,124.00	2,210	553	553

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,122.25	2,210	0	0
1,123.75	2,210	3,315	3,315

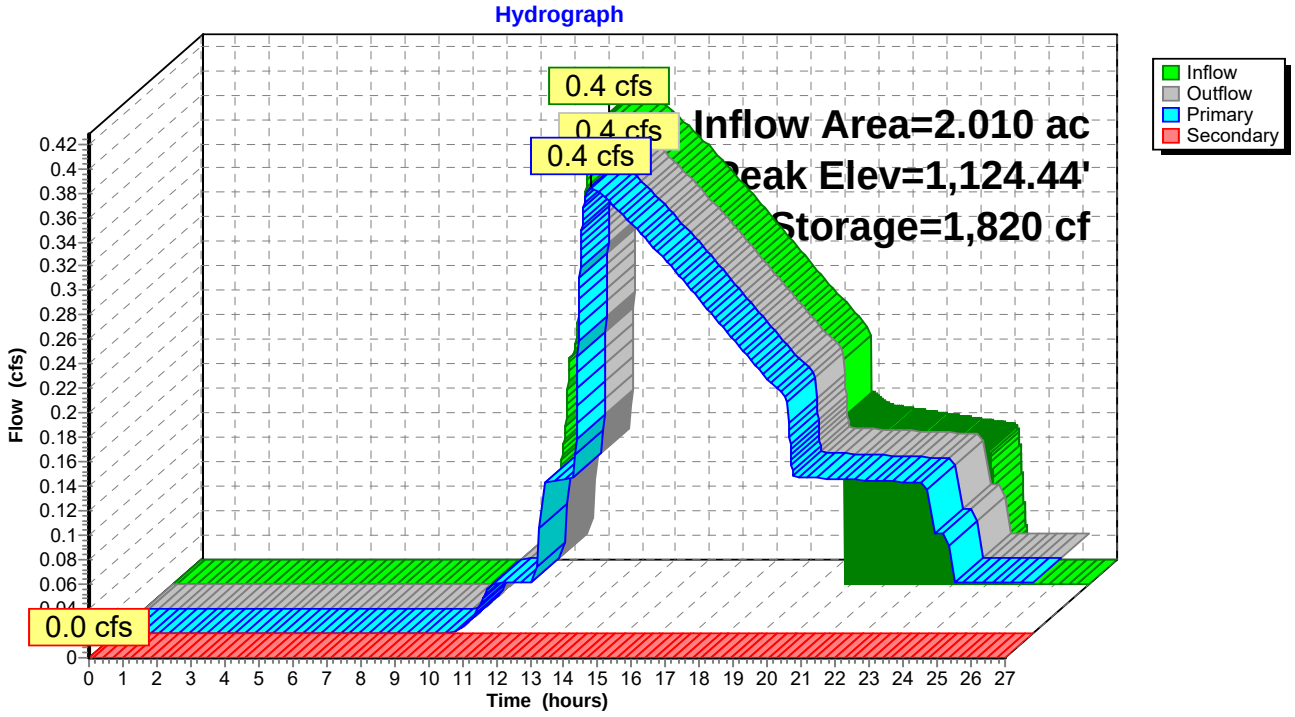
Device	Routing	Invert	Outlet Devices
#1	Primary	1,121.25'	**12.0" Round Culvert** L= 55.9' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,121.25' / 1,118.00' S= 0.0581 '/' Cc= 0.900 n= 0.013, Flow Area= 0.79 sf
#2	Device 1	1,124.40'	**24.0" x 24.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Device 1	1,122.25'	**0.800 in/hr Exfiltration over Surface area**
#4	Secondary	1,125.50'	**10.0' long + 3.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir**

Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50
Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Primary OutFlow Max=0.4 cfs @ 13.97 hrs HW=1,124.44' TW=1,110.40' (Dynamic Tailwater)
└─**1=Culvert** (Passes 0.4 cfs of 6.2 cfs potential flow)
└─**2=Orifice/Grate** (Weir Controls 0.2 cfs @ 0.68 fps)
└─**3=Exfiltration** (Exfiltration Controls 0.1 cfs)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=1,122.25' TW=1,110.25' (Dynamic Tailwater)
└─**4=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Pond P6: RAIN GARDEN



Summary for Pond P7: INFILTRATION BASIN

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=88)

Inflow Area = 0.780 ac, 0.00% Impervious, Inflow Depth = 12.82" for 10-yr event
Inflow = 24.1 cfs @ 11.98 hrs, Volume= 0.833 af
Outflow = 12.9 cfs @ 12.06 hrs, Volume= 0.834 af, Atten= 46%, Lag= 5.3 min
Discarded = 1.4 cfs @ 12.06 hrs, Volume= 0.588 af
Primary = 11.5 cfs @ 12.06 hrs, Volume= 0.246 af
Routed to Reach RC12 : WETLAND
Secondary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach RC12 : WETLAND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,140.46' @ 12.06 hrs Surf.Area= 12,455 sf Storage= 16,213 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 63.8 min (805.3 - 741.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,139.00'	37,569 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,139.00	9,696	0	0
1,142.00	15,350	37,569	37,569

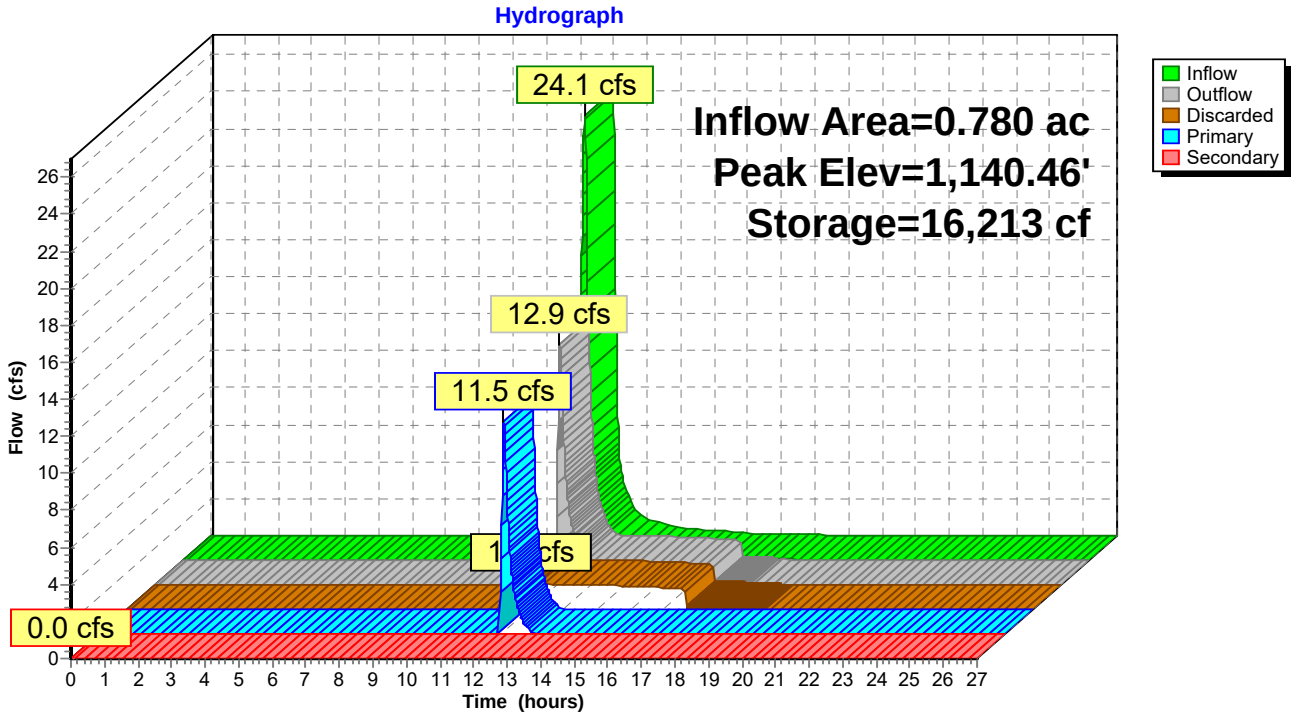
Device	Routing	Invert	Outlet Devices
#1	Primary	1,137.25'	**24.0" Round Culvert** L= 33.2' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,137.25' / 1,136.75' S= 0.0151 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#2	Device 1	1,140.10'	**48.0" x 48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Secondary	1,141.50'	**10.0' long + 3.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32
#4	Discarded	1,139.00'	**5.000 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=1.4 cfs @ 12.06 hrs HW=1,140.46' (Free Discharge)
└**4=Exfiltration** (Exfiltration Controls 1.4 cfs)

Primary OutFlow Max=11.5 cfs @ 12.06 hrs HW=1,140.46' TW=1,134.19' (Dynamic Tailwater)
└**1=Culvert** (Passes 11.5 cfs of 22.5 cfs potential flow)
└**2=Orifice/Grate** (Weir Controls 11.5 cfs @ 1.97 fps)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=1,139.00' TW=1,133.81' (Dynamic Tailwater)
└**3=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Pond P7: INFILTRATION BASIN



Summary for Pond P8: INFILTRATION BASIN

Inflow Area = 11.850 ac, 73.50% Impervious, Inflow Depth = 0.84" for 10-yr event
Inflow = 27.0 cfs @ 11.98 hrs, Volume= 0.831 af
Outflow = 2.3 cfs @ 12.45 hrs, Volume= 0.831 af, Atten= 92%, Lag= 28.1 min
Discarded = 1.1 cfs @ 12.45 hrs, Volume= 0.789 af
Primary = 1.2 cfs @ 12.45 hrs, Volume= 0.042 af
Routed to Reach RC8 : WOODS
Secondary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach RC8 : WOODS

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,148.28' @ 12.45 hrs Surf.Area= 9,572 sf Storage= 25,161 cf

Plug-Flow detention time= 233.2 min calculated for 0.831 af (100% of inflow)
Center-of-Mass det. time= 233.2 min (974.0 - 740.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,145.00'	43,350 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,145.00	5,775	0	0
1,150.00	11,565	43,350	43,350

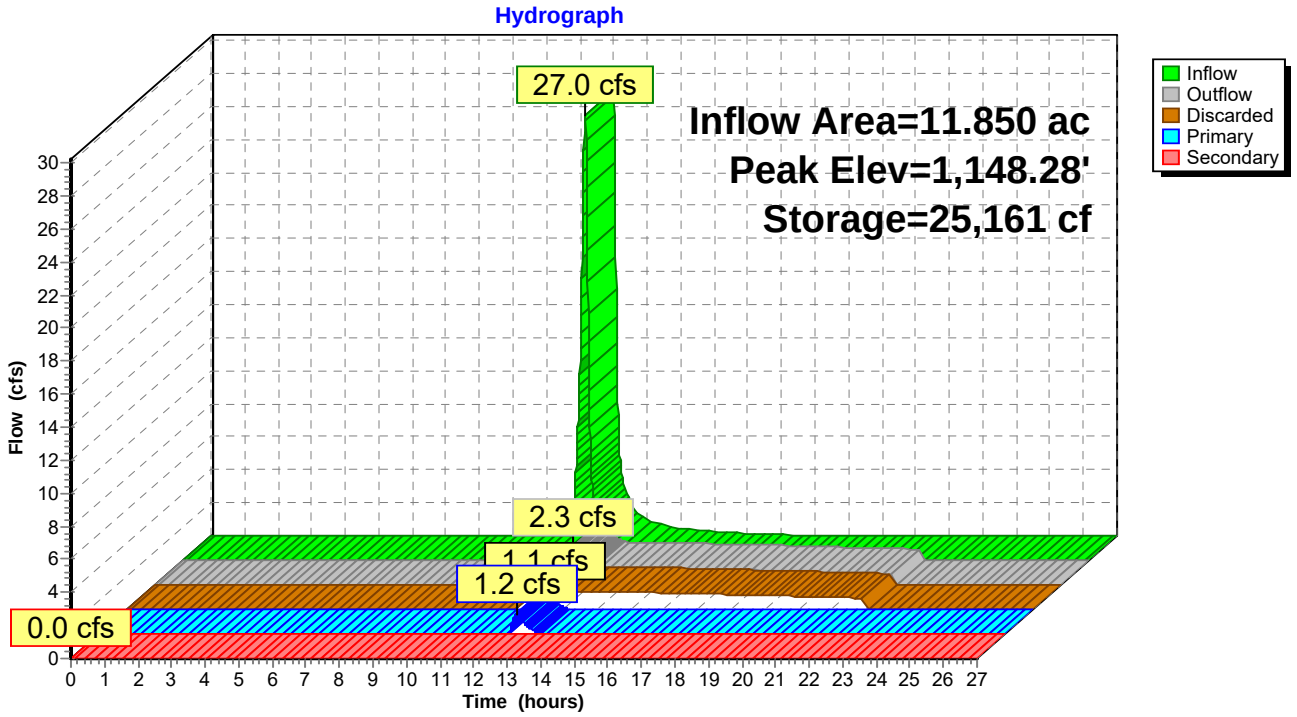
Device	Routing	Invert	Outlet Devices
#1	Discarded	1,145.00'	**5.000 in/hr Exfiltration over Surface area**
#2	Primary	1,145.00'	**24.0" Round Culvert** L= 36.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,145.00' / 1,144.50' S= 0.0139 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#3	Device 2	1,148.20'	**48.0" x 48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	1,149.50'	**10.0' long + 3.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Discarded OutFlow Max=1.1 cfs @ 12.45 hrs HW=1,148.28' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 1.1 cfs)

Primary OutFlow Max=1.2 cfs @ 12.45 hrs HW=1,148.28' TW=1,120.11' (Dynamic Tailwater)
└**2=Culvert** (Passes 1.2 cfs of 22.8 cfs potential flow)
└**3=Orifice/Grate** (Weir Controls 1.2 cfs @ 0.92 fps)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=1,145.00' TW=1,120.00' (Dynamic Tailwater)
└**4=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Pond P8: INFILTRATION BASIN



Summary for Pond P9: INFILTRATION BASIN

Inflow Area = 3.680 ac, 20.65% Impervious, Inflow Depth = 0.43" for 10-yr event
Inflow = 6.7 cfs @ 12.00 hrs, Volume= 0.132 af
Outflow = 0.6 cfs @ 12.50 hrs, Volume= 0.132 af, Atten= 90%, Lag= 30.3 min
Discarded = 0.6 cfs @ 12.50 hrs, Volume= 0.132 af
Primary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach RC10 : WETLAND
Secondary = 0.0 cfs @ 0.00 hrs, Volume= 0.000 af
Routed to Reach RC10 : WETLAND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,173.62' @ 12.50 hrs Surf.Area= 5,560 sf Storage= 3,209 cf

Plug-Flow detention time= 54.7 min calculated for 0.132 af (100% of inflow)
Center-of-Mass det. time= 54.8 min (794.1 - 739.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,173.00'	29,410 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,173.00	4,750	0	0
1,177.00	9,955	29,410	29,410

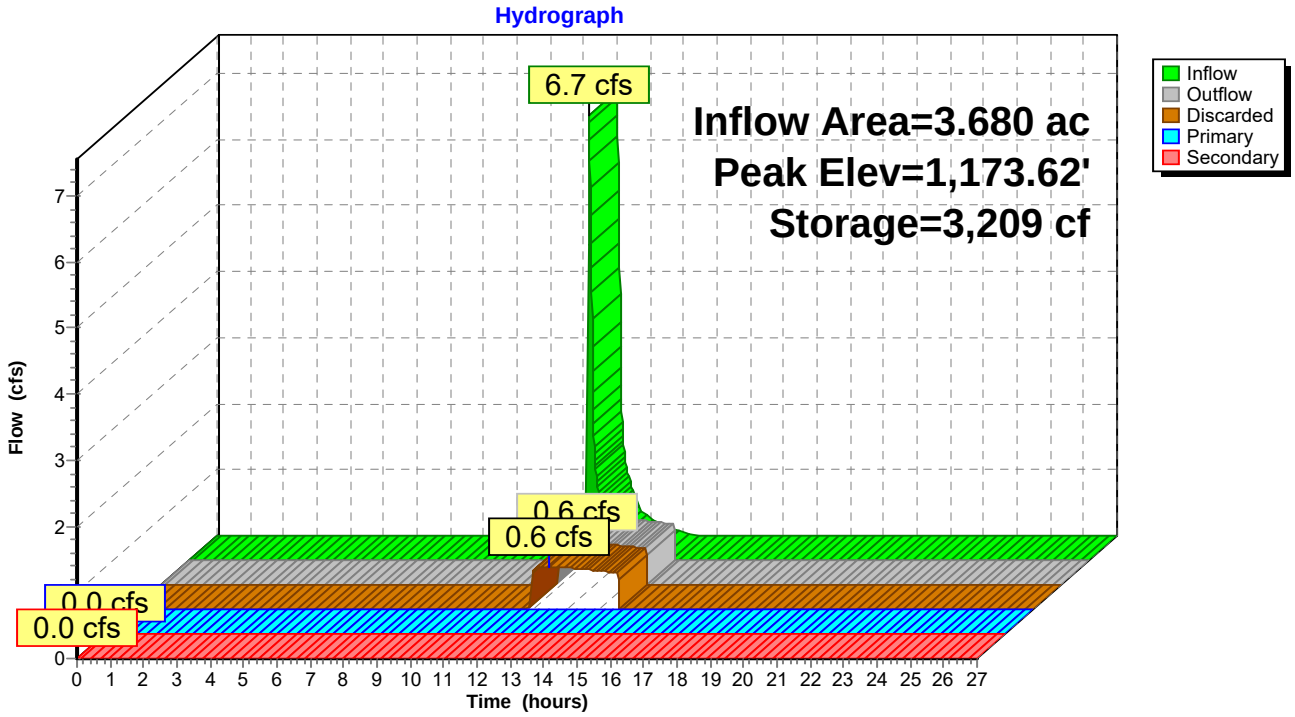
Device	Routing	Invert	Outlet Devices
#1	Discarded	1,173.00'	**5.000 in/hr Exfiltration over Surface area**
#2	Primary	1,172.00'	**24.0" Round Culvert** L= 88.1' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,172.00' / 1,155.50' S= 0.1873 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#3	Device 2	1,175.10'	**48.0" x 48.0" Horiz. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#4	Secondary	1,176.50'	**10.0' long + 3.0 '/' SideZ x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Discarded OutFlow Max=0.6 cfs @ 12.50 hrs HW=1,173.62' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.6 cfs)

Primary OutFlow Max=0.0 cfs @ 0.00 hrs HW=1,173.00' TW=1,154.00' (Dynamic Tailwater)
└**2=Culvert** (Passes 0.0 cfs of 5.3 cfs potential flow)
└**3=Orifice/Grate** (Controls 0.0 cfs)

Secondary OutFlow Max=0.0 cfs @ 0.00 hrs HW=1,173.00' TW=1,154.00' (Dynamic Tailwater)
└**4=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Pond P9: INFILTRATION BASIN



Summary for Pond PCB1: CATCH BASIN

[57] Hint: Peaked at 1,147.19' (Flood elevation advised)

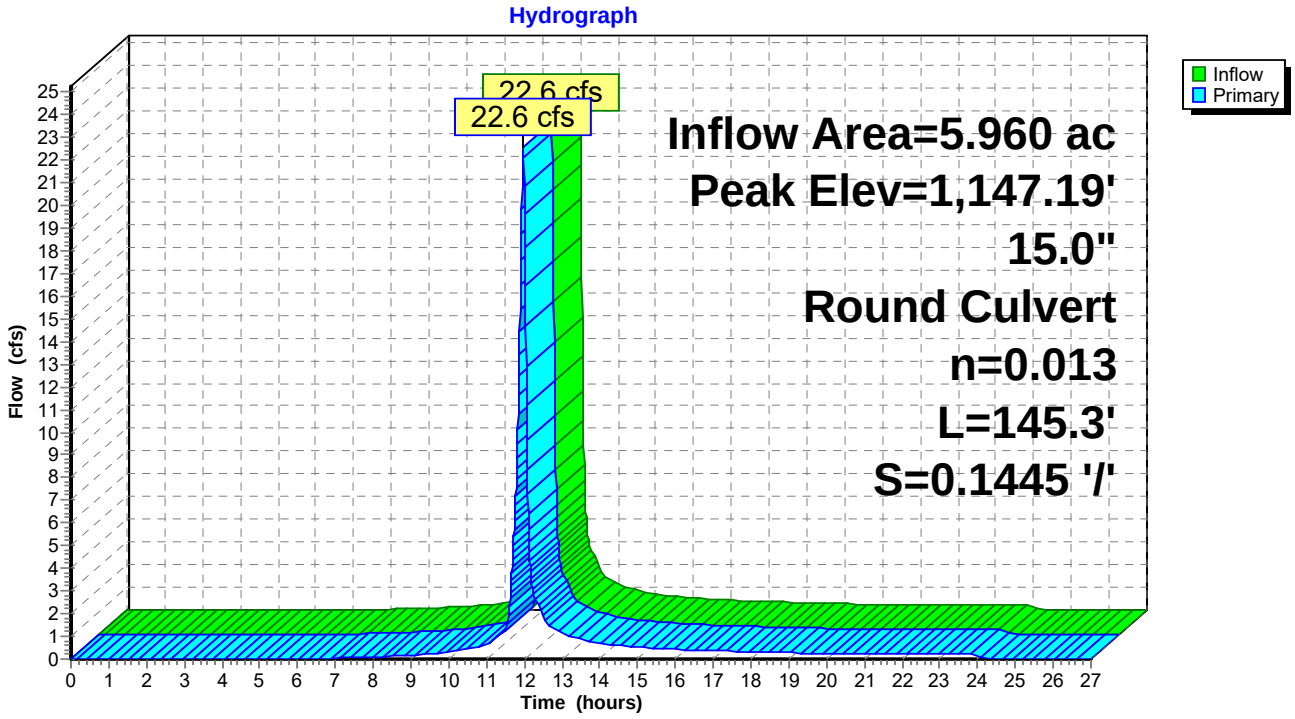
Inflow Area = 5.960 ac, 66.44% Impervious, Inflow Depth = 2.18" for 10-yr event
Inflow = 22.6 cfs @ 11.97 hrs, Volume= 1.084 af
Outflow = 22.6 cfs @ 11.97 hrs, Volume= 1.084 af, Atten= 0%, Lag= 0.0 min
Primary = 22.6 cfs @ 11.97 hrs, Volume= 1.084 af
Routed to Pond P2 : INFILTRATION BASIN

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,147.19' @ 11.97 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,132.00'	**15.0" Round Culvert** L= 145.3' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,132.00' / 1,111.00' S= 0.1445 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf

Primary OutFlow Max=22.5 cfs @ 11.97 hrs HW=1,147.17' TW=1,107.69' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 22.5 cfs @ 18.36 fps)

Pond PCB1: CATCH BASIN



Summary for Pond PHW19: HEADWALL

[57] Hint: Peaked at 1,172.58' (Flood elevation advised)
[62] Hint: Exceeded Reach 20R OUTLET depth by 2.85' @ 11.97 hrs
[64] Warning: Exceeded Reach 20R outlet bank by 1.08' @ 11.97 hrs

Inflow Area = 10.430 ac, 80.82% Impervious, Inflow Depth = 2.90" for 10-yr event
Inflow = 48.6 cfs @ 11.97 hrs, Volume= 2.525 af
Outflow = 48.6 cfs @ 11.97 hrs, Volume= 2.525 af, Atten= 0%, Lag= 0.0 min
Primary = 24.3 cfs @ 11.97 hrs, Volume= 1.262 af
Routed to Pond FB8 : FOREBAY
Secondary = 24.3 cfs @ 11.97 hrs, Volume= 1.262 af
Routed to Pond FB7 : FOREBAY

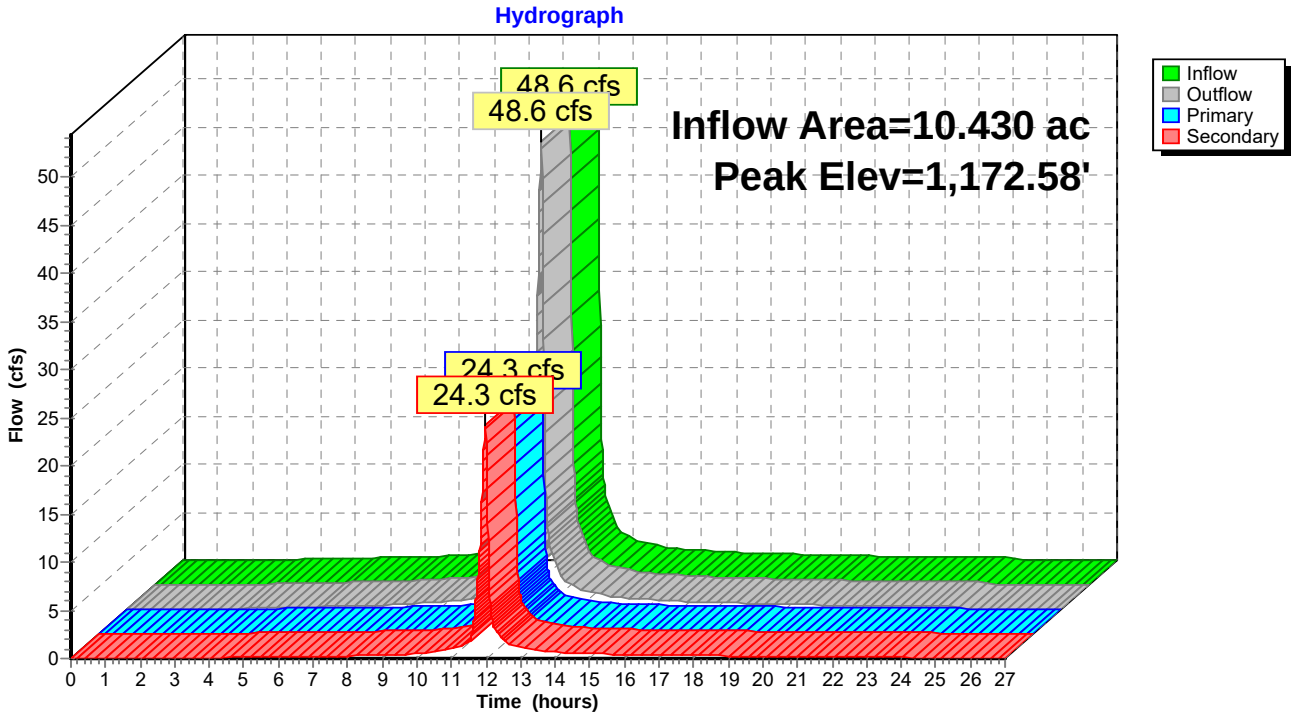
Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,172.58' @ 11.97 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,169.00'	**24.0" Round Culvert** L= 130.7' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,169.00' / 1,150.00' S= 0.1454 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#2	Secondary	1,169.00'	**24.0" Round Culvert** L= 630.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,169.00' / 1,142.00' S= 0.0429 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf

Primary OutFlow Max=24.3 cfs @ 11.97 hrs HW=1,172.58' TW=1,151.48' (Dynamic Tailwater)
1=Culvert (Inlet Controls 24.3 cfs @ 7.73 fps)

Secondary OutFlow Max=24.3 cfs @ 11.97 hrs HW=1,172.58' TW=1,142.27' (Dynamic Tailwater)
2=Culvert (Inlet Controls 24.3 cfs @ 7.73 fps)

Pond PHW19: HEADWALL



Summary for Pond PHW24: HEADWALL

[57] Hint: Peaked at 1,214.98' (Flood elevation advised)

Inflow Area = 2.390 ac, 31.80% Impervious, Inflow Depth = 1.93" for 10-yr event
Inflow = 8.1 cfs @ 11.97 hrs, Volume= 0.385 af
Outflow = 8.1 cfs @ 11.97 hrs, Volume= 0.385 af, Atten= 0%, Lag= 0.0 min
Primary = 5.1 cfs @ 11.98 hrs, Volume= 0.344 af
Routed to Pond FB9 : FOREBAY
Secondary = 3.0 cfs @ 11.97 hrs, Volume= 0.041 af
Routed to Reach 20R : TOE SWALE

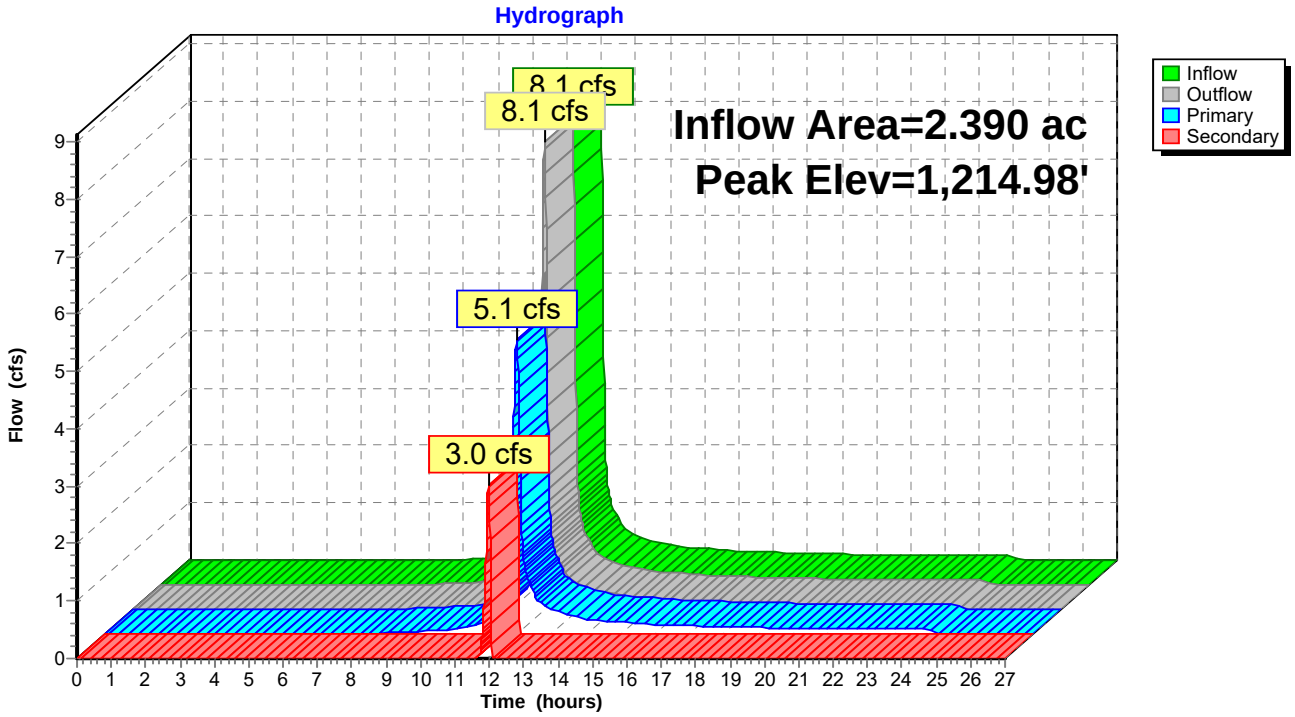
Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,214.98' @ 11.98 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,214.00'	**24.0" Round Culvert** L= 134.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,214.00' / 1,177.00' S= 0.2761 '/' Cc= 0.900 n= 0.013, Flow Area= 3.14 sf
#2	Secondary	1,214.50'	**3.0' long + 2.5 '/' SideZ x 2.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 Coef. (English) 2.54 2.61 2.61 2.60 2.66 2.70 2.77 2.89 2.88 2.85 3.07 3.20 3.32

Primary OutFlow Max=5.1 cfs @ 11.98 hrs HW=1,214.98' TW=1,177.11' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 5.1 cfs @ 3.36 fps)

Secondary OutFlow Max=3.0 cfs @ 11.97 hrs HW=1,214.98' TW=1,214.72' (Dynamic Tailwater)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 3.0 cfs @ 1.49 fps)

Pond PHW24: HEADWALL



Summary for Pond PHW3: HEADWALL

[57] Hint: Peaked at 1,153.88' (Flood elevation advised)

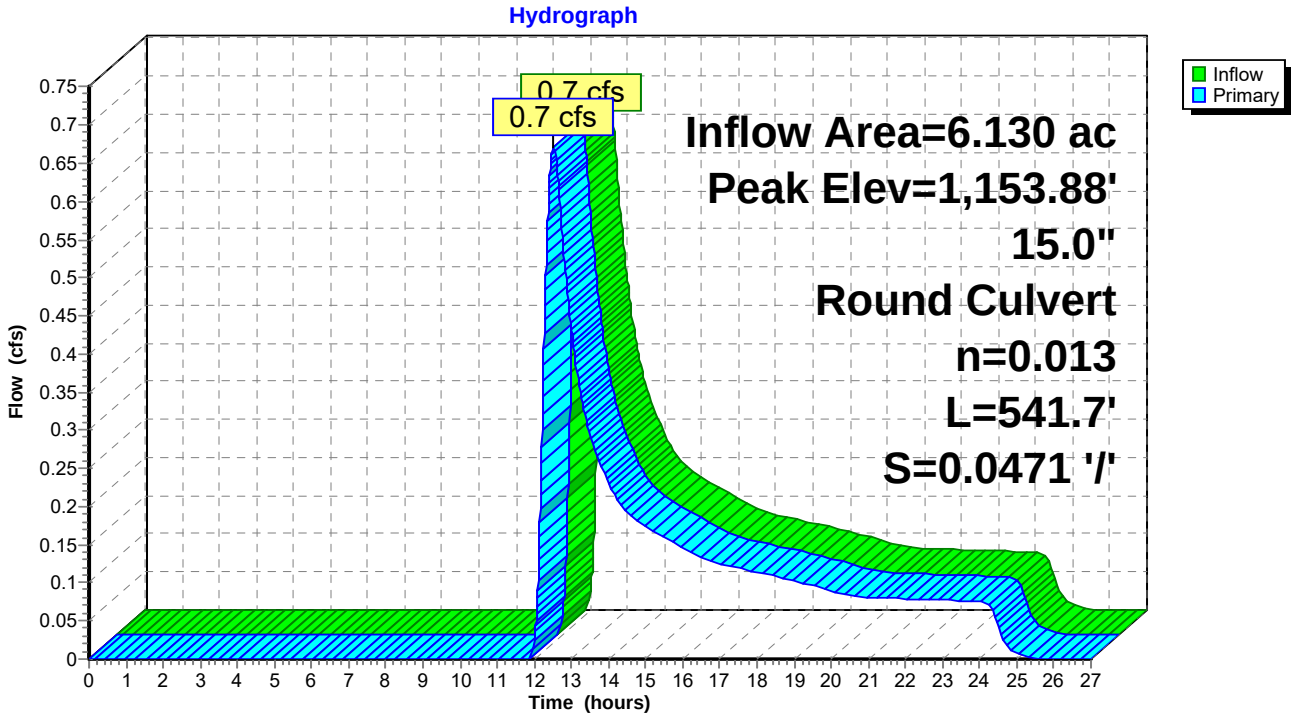
Inflow Area = 6.130 ac, 0.00% Impervious, Inflow Depth = 0.31" for 10-yr event
Inflow = 0.7 cfs @ 12.52 hrs, Volume= 0.161 af
Outflow = 0.7 cfs @ 12.52 hrs, Volume= 0.161 af, Atten= 0%, Lag= 0.0 min
Primary = 0.7 cfs @ 12.52 hrs, Volume= 0.161 af
Routed to Reach RC18 : FLOW THROUGH WOODS

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,153.88' @ 12.52 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,153.50'	**15.0" Round Culvert** L= 541.7' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,153.50' / 1,128.00' S= 0.0471 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf

Primary OutFlow Max=0.7 cfs @ 12.52 hrs HW=1,153.88' TW=1,128.11' (Dynamic Tailwater)
1=Culvert (Inlet Controls 0.7 cfs @ 2.11 fps)

Pond PHW3: HEADWALL



Summary for Pond PHW5: HEADWALL

[57] Hint: Peaked at 1,145.60' (Flood elevation advised)

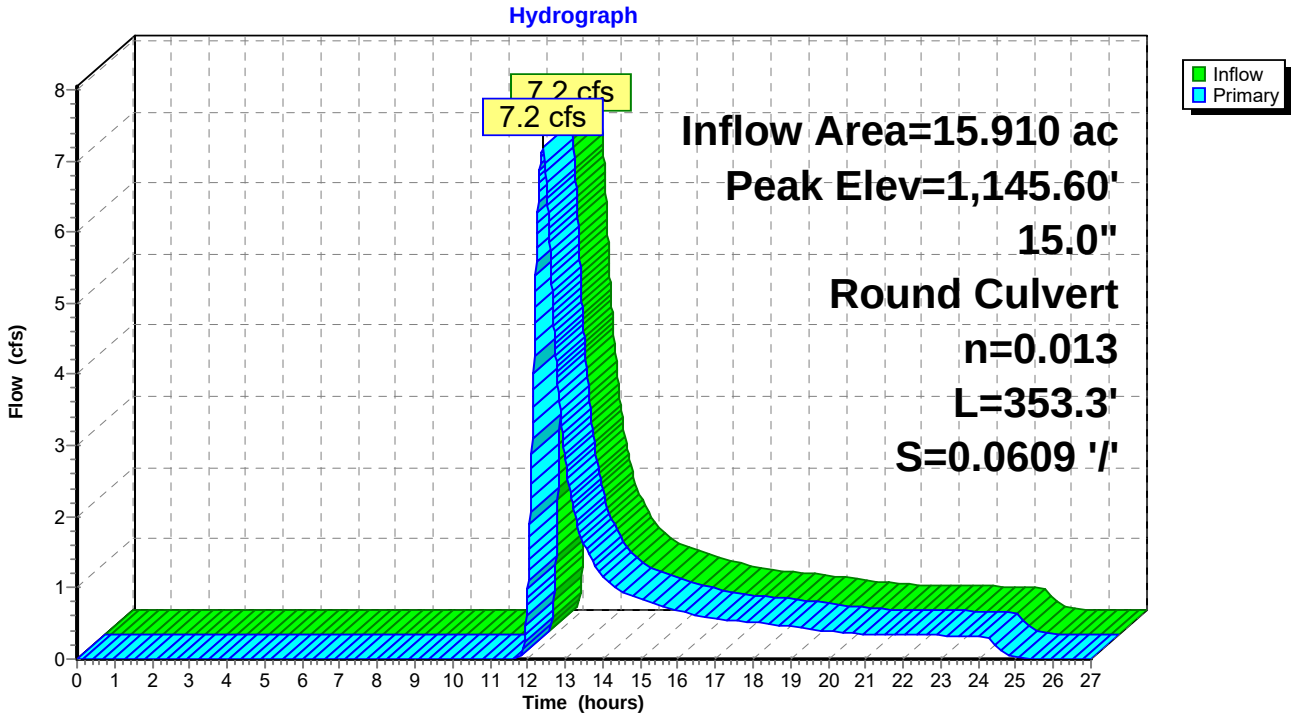
Inflow Area = 15.910 ac, 2.77% Impervious, Inflow Depth = 0.75" for 10-yr event
Inflow = 7.2 cfs @ 12.42 hrs, Volume= 0.988 af
Outflow = 7.2 cfs @ 12.42 hrs, Volume= 0.988 af, Atten= 0%, Lag= 0.0 min
Primary = 7.2 cfs @ 12.42 hrs, Volume= 0.988 af
Routed to Pond FB3 : FOREBAY

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,145.60' @ 12.42 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,143.50'	**15.0" Round Culvert** L= 353.3' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 1,143.50' / 1,122.00' S= 0.0609 '/' Cc= 0.900 n= 0.013, Flow Area= 1.23 sf

Primary OutFlow Max=7.2 cfs @ 12.42 hrs HW=1,145.60' TW=1,122.11' (Dynamic Tailwater)
└**1=Culvert** (Inlet Controls 7.2 cfs @ 5.85 fps)

Pond PHW5: HEADWALL



Summary for Pond RC13: NEW CULVERT

[57] Hint: Peaked at 1,127.20' (Flood elevation advised)

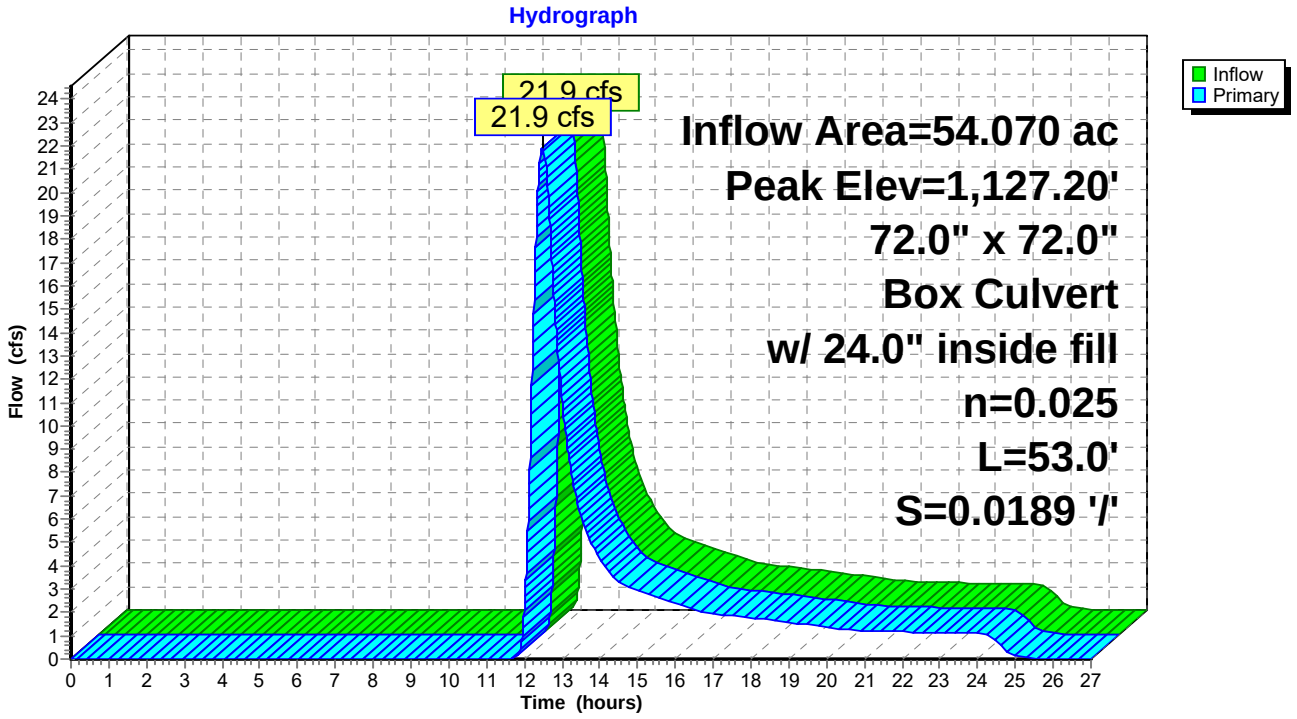
Inflow Area = 54.070 ac, 0.20% Impervious, Inflow Depth = 0.75" for 10-yr event
Inflow = 21.9 cfs @ 12.48 hrs, Volume= 3.359 af
Outflow = 21.9 cfs @ 12.48 hrs, Volume= 3.359 af, Atten= 0%, Lag= 0.0 min
Primary = 21.9 cfs @ 12.48 hrs, Volume= 3.359 af
Routed to Reach RC14 : WETLAND

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,127.20' @ 12.49 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,126.00'	**72.0" W x 72.0" H Box Culvert w/ 24.0" inside fill** L= 53.0' Box, 30-75° wingwalls, square crown, Ke= 0.400 Inlet / Outlet Invert= 1,124.00' / 1,123.00' S= 0.0189 '/' Cc= 0.900 n= 0.025, Flow Area= 24.00 sf

Primary OutFlow Max=21.9 cfs @ 12.48 hrs HW=1,127.20' TW=1,126.43' (Dynamic Tailwater)
1=Culvert (Outlet Controls 21.9 cfs @ 4.07 fps)

Pond RC13: NEW CULVERT



Summary for Pond RC7: NEW DOUGLAS DRIVE CULVERT

[57] Hint: Peaked at 1,110.65' (Flood elevation advised)
[62] Hint: Exceeded Reach RC10 OUTLET depth by 0.40' @ 12.38 hrs
[62] Hint: Exceeded Reach RC8 OUTLET depth by 0.38' @ 12.26 hrs

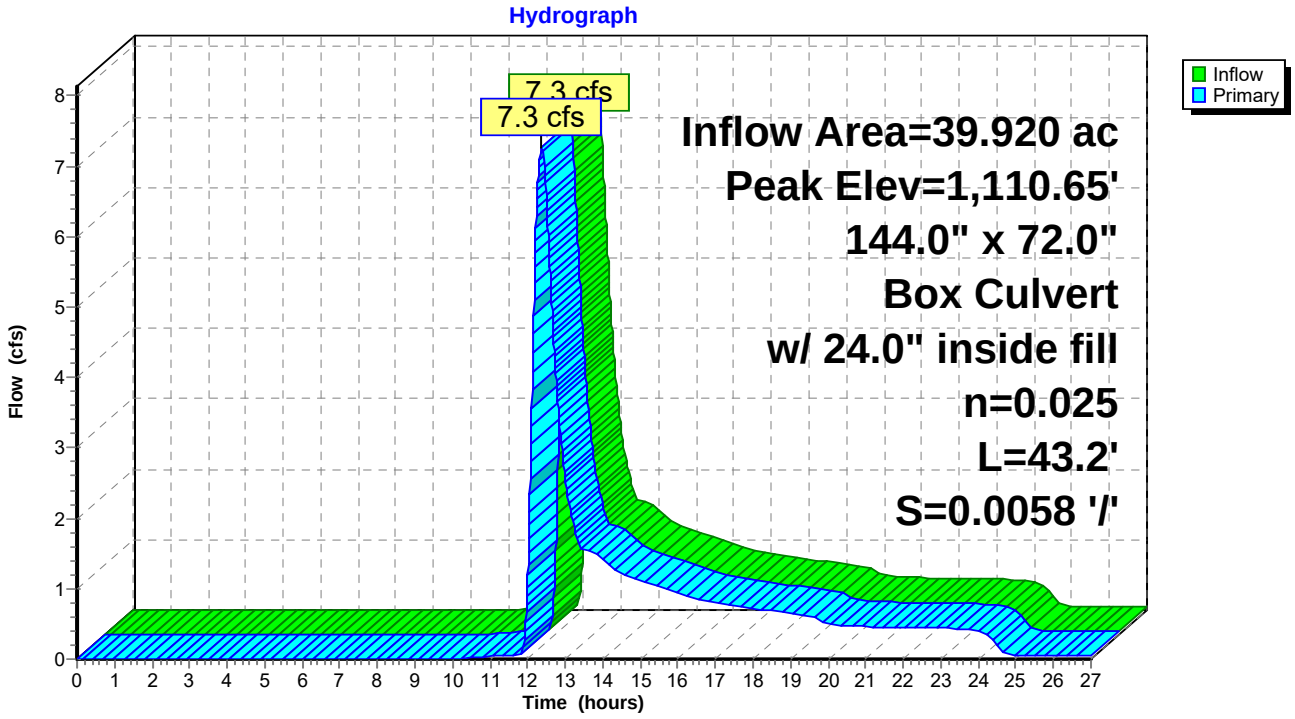
Inflow Area = 39.920 ac, 25.30% Impervious, Inflow Depth > 0.35" for 10-yr event
Inflow = 7.3 cfs @ 12.38 hrs, Volume= 1.153 af
Outflow = 7.3 cfs @ 12.38 hrs, Volume= 1.153 af, Atten= 0%, Lag= 0.0 min
Primary = 7.3 cfs @ 12.38 hrs, Volume= 1.153 af
Routed to Reach RC6 : WETLAND STREAM

Routing by Dyn-Stor-Ind method, Time Span= 0.00-27.00 hrs, dt= 0.01 hrs
Peak Elev= 1,110.65' @ 12.38 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	1,110.25'	**144.0" W x 72.0" H Box Culvert w/ 24.0" inside fill** L= 43.2' Box, 30-75° wingwalls, square crown, Ke= 0.400 Inlet / Outlet Invert= 1,108.25' / 1,108.00' S= 0.0058 '/' Cc= 0.900 n= 0.025 Earth, clean & winding, Flow Area= 48.00 sf

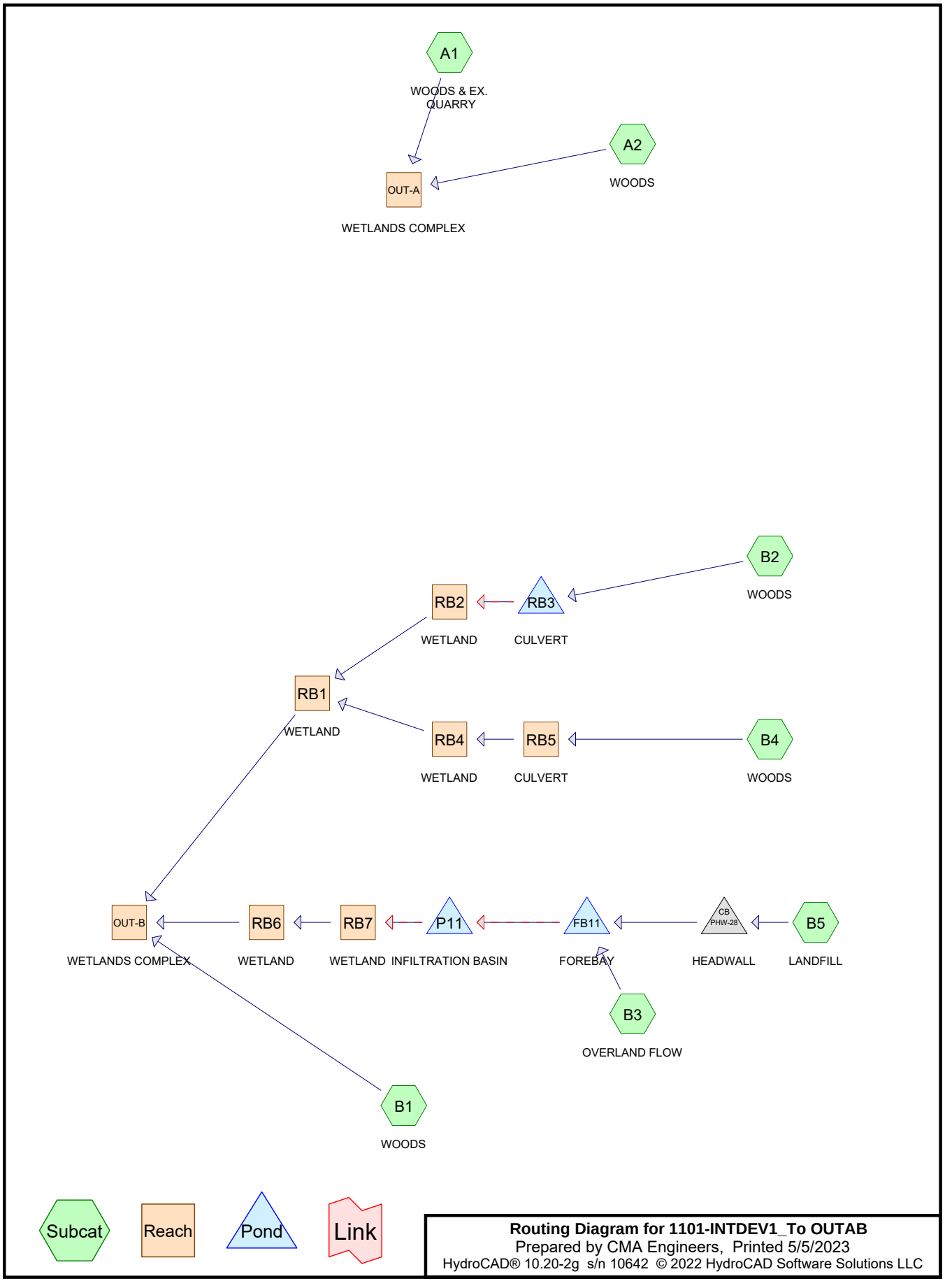
Primary OutFlow Max=7.3 cfs @ 12.38 hrs HW=1,110.65' TW=1,110.23' (Dynamic Tailwater)
↳**1=Culvert** (Barrel Controls 7.3 cfs @ 2.01 fps)

Pond RC7: NEW DOUGLAS DRIVE CULVERT



Appendix J.3.iii

2, 10, 25, and 50-Year, 24-Hour Storm Calculation Summaries



Routing Diagram for 1101-INTDEV1_To OUTAB
Prepared by CMA Engineers, Printed 5/5/2023
HydroCAD® 10.20-2g s/n 10642 © 2022 HydroCAD Software Solutions LLC

Project Notes

Rainfall events imported from "1101 Pre-development.hcp"

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-yr	Type II 24-hr		Default	24.00	1	2.32	2
2	10-yr	Type II 24-hr		Default	24.00	1	3.31	2
3	25-yr	Type II 24-hr		Default	24.00	1	4.06	2
4	50-yr	Type II 24-hr		Default	24.00	1	4.73	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
12.560	86	Fallow, bare soil, HSG B (A1)
0.050	96	Gravel surface, HSG A (A2)
1.980	96	Gravel surface, HSG B (A1, A2, B1, B2, B4, B5)
1.720	96	Gravel surface, HSG C (A1, A2, B1, B2, B4, B5)
2.690	30	Meadow, non-grazed, HSG A (A2, B1)
8.810	58	Meadow, non-grazed, HSG B (A1, A2, B1, B2, B4)
15.040	71	Meadow, non-grazed, HSG C (A1, A2, B1, B2, B3, B4, B5)
0.980	78	Meadow, non-grazed, HSG D (B1)
0.020	98	Paved parking, HSG B (B4)
0.190	98	Paved parking, HSG C (B1, B4)
0.970	98	Unconnected pavement, HSG C (B5)
0.060	98	Unconnected roofs, HSG B (A1)
21.270	30	Woods, Good, HSG A (A2, B1)
90.730	55	Woods, Good, HSG B (A1, A2, B1, B2, B4)
124.060	70	Woods, Good, HSG C (A1, A2, B1, B2, B4)
2.860	77	Woods, Good, HSG D (A1, A2, B1, B2, B4)
283.990	**63**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
24.010	HSG A	A2, B1
114.160	HSG B	A1, A2, B1, B2, B4, B5
141.980	HSG C	A1, A2, B1, B2, B3, B4, B5
3.840	HSG D	A1, A2, B1, B2, B4
0.000	Other	
283.990		**TOTAL AREA**

Time span=0.00-27.00 hrs, dt=0.01 hrs, 2701 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment A1: WOODS & EX. QUARRY Runoff Area=89.280 ac 0.07% Impervious Runoff Depth>0.19"
Flow Length=5,225' Tc=85.7 min CN=63 Runoff=3.3 cfs 1.390 af

Subcatchment A2: WOODS Runoff Area=92.770 ac 0.00% Impervious Runoff Depth>0.23"
Flow Length=5,210' Tc=75.7 min CN=65 Runoff=5.2 cfs 1.802 af

Subcatchment B1: WOODS Runoff Area=47.910 ac 0.06% Impervious Runoff Depth=0.02"
Flow Length=3,520' Tc=51.0 min CN=51 Runoff=0.1 cfs 0.063 af

Subcatchment B2: WOODS Runoff Area=47.530 ac 0.00% Impervious Runoff Depth=0.31"
Flow Length=2,695' Tc=35.5 min CN=68 Runoff=7.1 cfs 1.238 af

Subcatchment B3: OVERLAND FLOW Runoff Area=0.590 ac 0.00% Impervious Runoff Depth=0.40"
Tc=6.0 min CN=71 Runoff=0.4 cfs 0.020 af

Subcatchment B4: WOODS Runoff Area=4.190 ac 4.30% Impervious Runoff Depth=0.47"
Flow Length=430' Tc=26.4 min CN=73 Runoff=1.5 cfs 0.165 af

Subcatchment B5: LANDFILL Runoff Area=1.720 ac 56.40% Impervious Runoff Depth=1.53"
Tc=6.0 min CN=92 Runoff=4.6 cfs 0.219 af

Reach OUT-A: WETLANDS COMPLEX Inflow=8.4 cfs 3.192 af
Outflow=8.4 cfs 3.192 af

Reach OUT-B: WETLANDS COMPLEX Inflow=6.4 cfs 1.462 af
Outflow=6.4 cfs 1.462 af

Reach RB1: WETLAND Avg. Flow Depth=0.21' Max Vel=1.31 fps Inflow=7.6 cfs 1.402 af
n=0.035 L=1,120.0' S=0.0129 '/' Capacity=184.3 cfs Outflow=6.4 cfs 1.399 af

Reach RB2: WETLAND Avg. Flow Depth=0.20' Max Vel=2.44 fps Inflow=7.0 cfs 1.238 af
n=0.035 L=1,055.0' S=0.0474 '/' Capacity=211.4 cfs Outflow=6.7 cfs 1.237 af

Reach RB4: WETLAND Avg. Flow Depth=0.10' Max Vel=1.31 fps Inflow=1.5 cfs 0.165 af
n=0.035 L=1,600.0' S=0.0358 '/' Capacity=142.7 cfs Outflow=1.0 cfs 0.165 af

Reach RB5: CULVERT Avg. Flow Depth=0.29' Max Vel=6.25 fps Inflow=1.5 cfs 0.165 af
18.0" Round Pipe n=0.013 L=24.6' S=0.0305 '/' Capacity=18.3 cfs Outflow=1.5 cfs 0.165 af

Reach RB6: WETLAND Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.035 L=475.0' S=0.0168 '/' Capacity=210.2 cfs Outflow=0.0 cfs 0.000 af

Reach RB7: WETLAND Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.035 L=1,050.0' S=0.0533 '/' Capacity=391.6 cfs Outflow=0.0 cfs 0.000 af

Pond FB11: FOREBAY Peak Elev=1,144.10' Storage=3,275 cf Inflow=4.9 cfs 0.239 af
Discarded=0.2 cfs 0.197 af Primary=3.5 cfs 0.042 af Outflow=3.7 cfs 0.239 af

Pond P11: INFILTRATION BASIN Peak Elev=1,141.13' Storage=770 cf Inflow=3.5 cfs 0.042 af
Discarded=0.7 cfs 0.042 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.7 cfs 0.042 af

Pond PHW-28: HEADWALL Peak Elev=1,175.91' Inflow=4.6 cfs 0.219 af
24.0" Round Culvert n=0.013 L=835.1' S=0.0371 '/' Outflow=4.6 cfs 0.219 af

Pond RB3: CULVERT Peak Elev=1,135.28' Storage=260 cf Inflow=7.1 cfs 1.238 af
Primary=7.0 cfs 1.238 af Secondary=0.0 cfs 0.000 af Outflow=7.0 cfs 1.238 af

Total Runoff Area = 283.990 ac Runoff Volume = 4.897 af Average Runoff Depth = 0.21"
99.56% Pervious = 282.750 ac 0.44% Impervious = 1.240 ac

Time span=0.00-27.00 hrs, dt=0.01 hrs, 2701 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment A1: WOODS & EX. QUARRY Runoff Area=89.280 ac 0.07% Impervious Runoff Depth>0.57"
Flow Length=5,225' Tc=85.7 min CN=63 Runoff=15.2 cfs 4.235 af

Subcatchment A2: WOODS Runoff Area=92.770 ac 0.00% Impervious Runoff Depth>0.65"
Flow Length=5,210' Tc=75.7 min CN=65 Runoff=20.9 cfs 5.060 af

Subcatchment B1: WOODS Runoff Area=47.910 ac 0.06% Impervious Runoff Depth=0.18"
Flow Length=3,520' Tc=51.0 min CN=51 Runoff=1.5 cfs 0.700 af

Subcatchment B2: WOODS Runoff Area=47.530 ac 0.00% Impervious Runoff Depth=0.79"
Flow Length=2,695' Tc=35.5 min CN=68 Runoff=24.7 cfs 3.142 af

Subcatchment B3: OVERLAND FLOW Runoff Area=0.590 ac 0.00% Impervious Runoff Depth=0.94"
Tc=6.0 min CN=71 Runoff=1.0 cfs 0.046 af

Subcatchment B4: WOODS Runoff Area=4.190 ac 4.30% Impervious Runoff Depth=1.05"
Flow Length=430' Tc=26.4 min CN=73 Runoff=3.9 cfs 0.368 af

Subcatchment B5: LANDFILL Runoff Area=1.720 ac 56.40% Impervious Runoff Depth=2.46"
Tc=6.0 min CN=92 Runoff=7.1 cfs 0.352 af

Reach OUT-A: WETLANDS COMPLEX Inflow=35.8 cfs 9.295 af
Outflow=35.8 cfs 9.295 af

Reach OUT-B: WETLANDS COMPLEX Inflow=24.8 cfs 4.205 af
Outflow=24.8 cfs 4.205 af

Reach RB1: WETLAND Avg. Flow Depth=0.39' Max Vel=1.96 fps Inflow=26.7 cfs 3.509 af
n=0.035 L=1,120.0' S=0.0129 '/' Capacity=184.3 cfs Outflow=23.8 cfs 3.505 af

Reach RB2: WETLAND Avg. Flow Depth=0.36' Max Vel=3.60 fps Inflow=24.6 cfs 3.142 af
n=0.035 L=1,055.0' S=0.0474 '/' Capacity=211.4 cfs Outflow=23.8 cfs 3.141 af

Reach RB4: WETLAND Avg. Flow Depth=0.17' Max Vel=1.85 fps Inflow=3.9 cfs 0.368 af
n=0.035 L=1,600.0' S=0.0358 '/' Capacity=142.7 cfs Outflow=2.9 cfs 0.367 af

Reach RB5: CULVERT Avg. Flow Depth=0.47' Max Vel=8.23 fps Inflow=3.9 cfs 0.368 af
18.0" Round Pipe n=0.013 L=24.6' S=0.0305 '/' Capacity=18.3 cfs Outflow=3.9 cfs 0.368 af

Reach RB6: WETLAND Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.035 L=475.0' S=0.0168 '/' Capacity=210.2 cfs Outflow=0.0 cfs 0.000 af

Reach RB7: WETLAND Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.035 L=1,050.0' S=0.0533 '/' Capacity=391.6 cfs Outflow=0.0 cfs 0.000 af

Pond FB11: FOREBAY Peak Elev=1,144.17' Storage=3,426 cf Inflow=8.1 cfs 0.398 af
Discarded=0.2 cfs 0.252 af Primary=7.8 cfs 0.147 af Outflow=8.0 cfs 0.398 af

Pond P11: INFILTRATION BASIN Peak Elev=1,141.67' Storage=4,055 cf Inflow=7.8 cfs 0.147 af
Discarded=0.7 cfs 0.147 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.7 cfs 0.147 af

Pond PHW-28: HEADWALL Peak Elev=1,176.18' Inflow=7.1 cfs 0.352 af
24.0" Round Culvert n=0.013 L=835.1' S=0.0371 '/' Outflow=7.1 cfs 0.352 af

Pond RB3: CULVERT Peak Elev=1,136.06' Storage=1,388 cf Inflow=24.7 cfs 3.142 af
Primary=8.7 cfs 2.520 af Secondary=15.9 cfs 0.621 af Outflow=24.6 cfs 3.142 af

Total Runoff Area = 283.990 ac Runoff Volume = 13.903 af Average Runoff Depth = 0.59"
99.56% Pervious = 282.750 ac 0.44% Impervious = 1.240 ac

Time span=0.00-27.00 hrs, dt=0.01 hrs, 2701 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment A1: WOODS & EX. QUARRY Runoff Area=89.280 ac 0.07% Impervious Runoff Depth>0.95"
Flow Length=5,225' Tc=85.7 min CN=63 Runoff=28.8 cfs 7.070 af

Subcatchment A2: WOODS Runoff Area=92.770 ac 0.00% Impervious Runoff Depth>1.06"
Flow Length=5,210' Tc=75.7 min CN=65 Runoff=38.0 cfs 8.221 af

Subcatchment B1: WOODS Runoff Area=47.910 ac 0.06% Impervious Runoff Depth=0.39"
Flow Length=3,520' Tc=51.0 min CN=51 Runoff=5.6 cfs 1.554 af

Subcatchment B2: WOODS Runoff Area=47.530 ac 0.00% Impervious Runoff Depth=1.24"
Flow Length=2,695' Tc=35.5 min CN=68 Runoff=41.9 cfs 4.924 af

Subcatchment B3: OVERLAND FLOW Runoff Area=0.590 ac 0.00% Impervious Runoff Depth=1.44"
Tc=6.0 min CN=71 Runoff=1.5 cfs 0.071 af

Subcatchment B4: WOODS Runoff Area=4.190 ac 4.30% Impervious Runoff Depth=1.57"
Flow Length=430' Tc=26.4 min CN=73 Runoff=6.0 cfs 0.548 af

Subcatchment B5: LANDFILL Runoff Area=1.720 ac 56.40% Impervious Runoff Depth=3.18"
Tc=6.0 min CN=92 Runoff=9.1 cfs 0.455 af

Reach OUT-A: WETLANDS COMPLEX Inflow=65.8 cfs 15.291 af
Outflow=65.8 cfs 15.291 af

Reach OUT-B: WETLANDS COMPLEX Inflow=46.8 cfs 7.022 af
Outflow=46.8 cfs 7.022 af

Reach RB1: WETLAND Avg. Flow Depth=0.51' Max Vel=2.34 fps Inflow=45.6 cfs 5.471 af
n=0.035 L=1,120.0' S=0.0129 '/' Capacity=184.3 cfs Outflow=42.0 cfs 5.467 af

Reach RB2: WETLAND Avg. Flow Depth=0.47' Max Vel=4.25 fps Inflow=41.9 cfs 4.924 af
n=0.035 L=1,055.0' S=0.0474 '/' Capacity=211.4 cfs Outflow=40.9 cfs 4.923 af

Reach RB4: WETLAND Avg. Flow Depth=0.21' Max Vel=2.16 fps Inflow=6.0 cfs 0.548 af
n=0.035 L=1,600.0' S=0.0358 '/' Capacity=142.7 cfs Outflow=4.8 cfs 0.548 af

Reach RB5: CULVERT Avg. Flow Depth=0.59' Max Vel=9.28 fps Inflow=6.0 cfs 0.548 af
18.0" Round Pipe n=0.013 L=24.6' S=0.0305 '/' Capacity=18.3 cfs Outflow=6.0 cfs 0.548 af

Reach RB6: WETLAND Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.035 L=475.0' S=0.0168 '/' Capacity=210.2 cfs Outflow=0.0 cfs 0.000 af

Reach RB7: WETLAND Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.035 L=1,050.0' S=0.0533 '/' Capacity=391.6 cfs Outflow=0.0 cfs 0.000 af

Pond FB11: FOREBAY Peak Elev=1,144.21' Storage=3,499 cf Inflow=10.6 cfs 0.526 af
Discarded=0.2 cfs 0.287 af Primary=10.3 cfs 0.239 af Outflow=10.5 cfs 0.526 af

Pond P11: INFILTRATION BASIN Peak Elev=1,142.10' Storage=6,937 cf Inflow=10.3 cfs 0.239 af
Discarded=0.8 cfs 0.239 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.8 cfs 0.239 af

Pond PHW-28: HEADWALL Peak Elev=1,176.36' Inflow=9.1 cfs 0.455 af
24.0" Round Culvert n=0.013 L=835.1' S=0.0371 '/' Outflow=9.1 cfs 0.455 af

Pond RB3: CULVERT Peak Elev=1,136.27' Storage=1,888 cf Inflow=41.9 cfs 4.924 af
Primary=9.1 cfs 3.370 af Secondary=32.7 cfs 1.554 af Outflow=41.9 cfs 4.924 af

Total Runoff Area = 283.990 ac Runoff Volume = 22.843 af Average Runoff Depth = 0.97"
99.56% Pervious = 282.750 ac 0.44% Impervious = 1.240 ac

Time span=0.00-27.00 hrs, dt=0.01 hrs, 2701 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment A1: WOODS & EX. QUARRY Runoff Area=89.280 ac 0.07% Impervious Runoff Depth>1.34"
Flow Length=5,225' Tc=85.7 min CN=63 Runoff=43.3 cfs 9.972 af

Subcatchment A2: WOODS Runoff Area=92.770 ac 0.00% Impervious Runoff Depth>1.48"
Flow Length=5,210' Tc=75.7 min CN=65 Runoff=55.8 cfs 11.414 af

Subcatchment B1: WOODS Runoff Area=47.910 ac 0.06% Impervious Runoff Depth=0.64"
Flow Length=3,520' Tc=51.0 min CN=51 Runoff=11.5 cfs 2.536 af

Subcatchment B2: WOODS Runoff Area=47.530 ac 0.00% Impervious Runoff Depth=1.69"
Flow Length=2,695' Tc=35.5 min CN=68 Runoff=59.0 cfs 6.693 af

Subcatchment B3: OVERLAND FLOW Runoff Area=0.590 ac 0.00% Impervious Runoff Depth=1.91"
Tc=6.0 min CN=71 Runoff=2.0 cfs 0.094 af

Subcatchment B4: WOODS Runoff Area=4.190 ac 4.30% Impervious Runoff Depth=2.07"
Flow Length=430' Tc=26.4 min CN=73 Runoff=8.0 cfs 0.723 af

Subcatchment B5: LANDFILL Runoff Area=1.720 ac 56.40% Impervious Runoff Depth=3.83"
Tc=6.0 min CN=92 Runoff=10.8 cfs 0.548 af

Reach OUT-A: WETLANDS COMPLEX Inflow=97.7 cfs 21.387 af
Outflow=97.7 cfs 21.387 af

Reach OUT-B: WETLANDS COMPLEX Inflow=70.5 cfs 9.948 af
Outflow=70.5 cfs 9.948 af

Reach RB1: WETLAND Avg. Flow Depth=0.60' Max Vel=2.61 fps Inflow=64.4 cfs 7.415 af
n=0.035 L=1,120.0' S=0.0129 '/' Capacity=184.3 cfs Outflow=60.4 cfs 7.411 af

Reach RB2: WETLAND Avg. Flow Depth=0.55' Max Vel=4.73 fps Inflow=59.0 cfs 6.693 af
n=0.035 L=1,055.0' S=0.0474 '/' Capacity=211.4 cfs Outflow=57.9 cfs 6.693 af

Reach RB4: WETLAND Avg. Flow Depth=0.24' Max Vel=2.38 fps Inflow=8.0 cfs 0.723 af
n=0.035 L=1,600.0' S=0.0358 '/' Capacity=142.7 cfs Outflow=6.6 cfs 0.722 af

Reach RB5: CULVERT Avg. Flow Depth=0.69' Max Vel=10.03 fps Inflow=8.0 cfs 0.723 af
18.0" Round Pipe n=0.013 L=24.6' S=0.0305 '/' Capacity=18.3 cfs Outflow=8.0 cfs 0.723 af

Reach RB6: WETLAND Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.035 L=475.0' S=0.0168 '/' Capacity=210.2 cfs Outflow=0.0 cfs 0.000 af

Reach RB7: WETLAND Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.035 L=1,050.0' S=0.0533 '/' Capacity=391.6 cfs Outflow=0.0 cfs 0.000 af

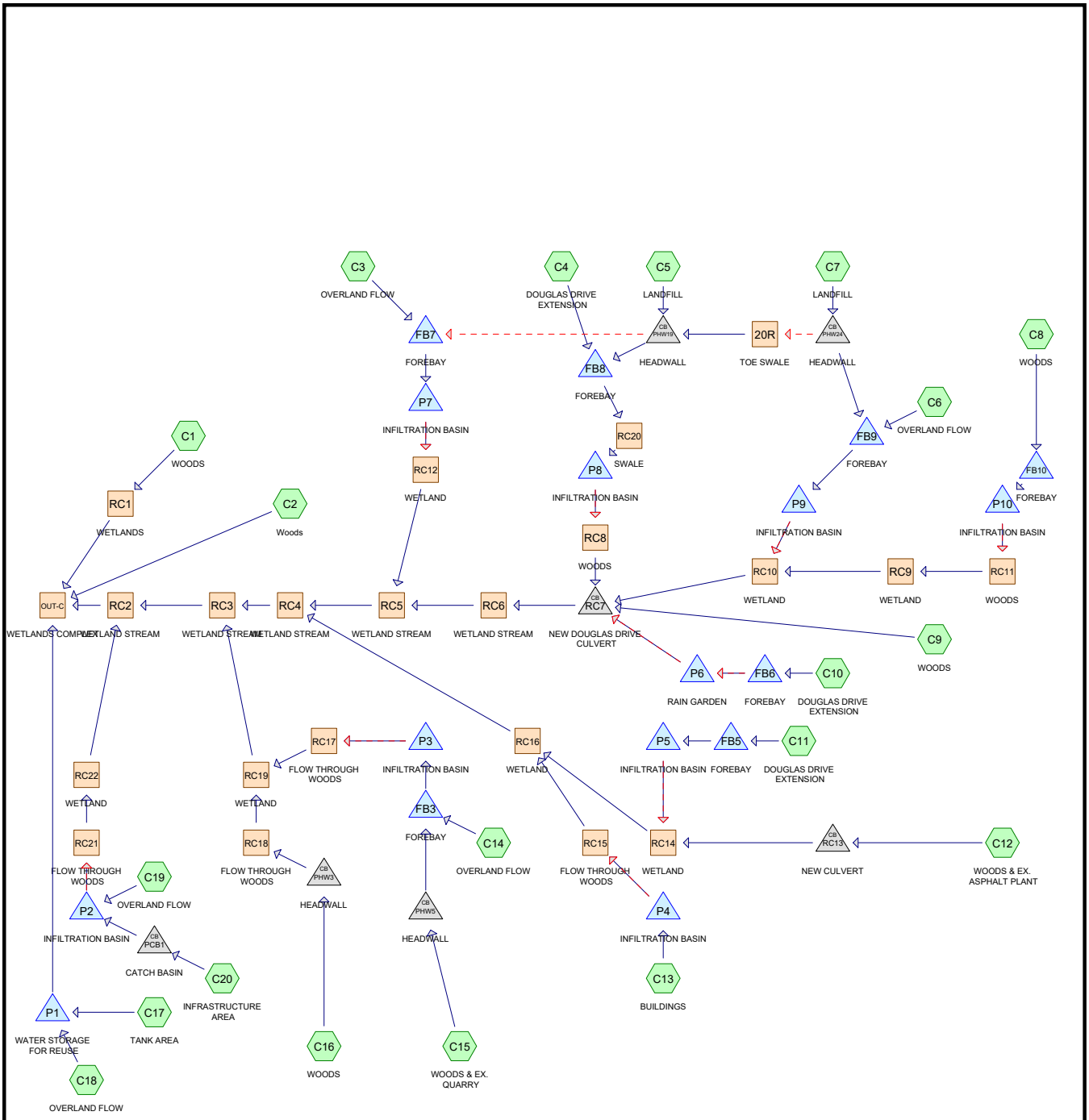
Pond FB11: FOREBAY Peak Elev=1,144.23' Storage=3,558 cf Inflow=12.8 cfs 0.643 af
Discarded=0.2 cfs 0.314 af Primary=12.5 cfs 0.328 af Outflow=12.7 cfs 0.643 af

Pond P11: INFILTRATION BASIN Peak Elev=1,142.49' Storage=9,715 cf Inflow=12.5 cfs 0.328 af
Discarded=0.9 cfs 0.328 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.9 cfs 0.328 af

Pond PHW-28: HEADWALL Peak Elev=1,176.52' Inflow=10.8 cfs 0.548 af
24.0" Round Culvert n=0.013 L=835.1' S=0.0371 '/' Outflow=10.8 cfs 0.548 af

Pond RB3: CULVERT Peak Elev=1,136.43' Storage=2,377 cf Inflow=59.0 cfs 6.693 af
Primary=9.4 cfs 4.106 af Secondary=49.5 cfs 2.587 af Outflow=59.0 cfs 6.693 af

Total Runoff Area = 283.990 ac Runoff Volume = 31.982 af Average Runoff Depth = 1.35"
99.56% Pervious = 282.750 ac 0.44% Impervious = 1.240 ac



Routing Diagram for 1101-INTDEV1_To OUTC
Prepared by CMA Engineers, Printed 10/17/2023
HydroCAD® 10.20-3c s/n 10642 © 2023 HydroCAD Software Solutions LLC

Project Notes

Rainfall events imported from "1101 Pre-development.hcp"

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-yr	Type II 24-hr		Default	24.00	1	2.32	2
2	10-yr	Type II 24-hr		Default	24.00	1	3.31	2
3	25-yr	Type II 24-hr		Default	24.00	1	4.06	2
4	50-yr	Type II 24-hr		Default	24.00	1	4.73	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.400	77	Fallow, bare soil, HSG A (C15)
9.740	86	Fallow, bare soil, HSG B (C12, C15)
0.640	96	Gravel surface, HSG A (C11, C12, C15)
2.050	96	Gravel surface, HSG B (C10, C11, C12, C15, C2, C7)
2.390	96	Gravel surface, HSG C (C10, C11, C14, C15, C16, C2, C20, C4, C5, C7)
0.080	96	Gravel surface, HSG D (C10, C5)
9.190	98	Landfill, Geomembrane (C5, C7)
1.970	30	Meadow, non-grazed, HSG A (C1, C11, C12, C13, C15, C2, C3)
8.530	58	Meadow, non-grazed, HSG B (C11, C12, C15, C16, C2, C7, C8, C9)
21.380	71	Meadow, non-grazed, HSG C (C1, C10, C11, C13, C14, C15, C16, C19, C2, C20, C3, C4, C5, C6, C7, C8, C9)
2.520	78	Meadow, non-grazed, HSG D (C1, C10, C2, C4, C5, C9)
0.600	98	Paved parking, HSG A (C11, C13, C15)
0.270	98	Paved parking, HSG B (C10, C11, C15, C2)
5.930	98	Paved parking, HSG C (C10, C11, C13, C15, C17, C2, C20, C4)
0.020	98	Paved parking, HSG D (C10)
0.010	98	Roofs, HSG A (C11)
0.610	98	Roofs, HSG C (C11, C13, C20)
0.020	98	Unconnected roofs, HSG A (C12)
0.090	98	Unconnected roofs, HSG B (C12)
0.270	98	Water Surface, HSG C (C18)
10.550	30	Woods, Good, HSG A (C1, C12, C2)
40.000	55	Woods, Good, HSG B (C10, C12, C15, C16, C2, C8, C9)
100.350	70	Woods, Good, HSG C (C1, C12, C2, C3, C8, C9)
10.280	77	Woods, Good, HSG D (C1, C12, C2, C9)
228.890	**69**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
15.190	HSG A	C1, C11, C12, C13, C15, C2, C3
60.680	HSG B	C10, C11, C12, C15, C16, C2, C7, C8, C9
130.930	HSG C	C1, C10, C11, C12, C13, C14, C15, C16, C17, C18, C19, C2, C20, C3, C4, C5, C6, C7, C8, C9
12.900	HSG D	C1, C10, C12, C2, C4, C5, C9
9.190	Other	C5, C7
228.890		**TOTAL AREA**

Time span=0.00-27.00 hrs, dt=0.01 hrs, 2701 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment C1: WOODS Runoff Area=39.170 ac 0.00% Impervious Runoff Depth=0.21"
Flow Length=2,195' Tc=40.4 min CN=64 Runoff=2.7 cfs 0.683 af

Subcatchment C10: DOUGLAS DRIVE Runoff Area=2.010 ac 31.34% Impervious Runoff Depth=0.67"
Flow Length=210' Tc=17.3 min CN=78 Runoff=1.5 cfs 0.113 af

Subcatchment C11: DOUGLAS DRIVE Runoff Area=1.810 ac 75.14% Impervious Runoff Depth=1.37"
Tc=6.0 min CN=90 Runoff=4.4 cfs 0.207 af

Subcatchment C12: WOODS & EX. Runoff Area=54.070 ac 0.20% Impervious Runoff Depth=0.28"
Flow Length=3,290' Tc=43.9 min CN=67 Runoff=6.0 cfs 1.283 af

Subcatchment C13: BUILDINGS Runoff Area=0.970 ac 40.21% Impervious Runoff Depth=0.77"
Tc=6.0 min CN=80 Runoff=1.3 cfs 0.062 af

Subcatchment C14: OVERLAND FLOW Runoff Area=0.930 ac 0.00% Impervious Runoff Depth=0.44"
Tc=6.0 min CN=72 Runoff=0.7 cfs 0.034 af

Subcatchment C15: WOODS & EX. QUARRY Runoff Area=15.910 ac 2.77% Impervious Runoff Depth=0.28"
Flow Length=1,520' Tc=37.9 min CN=67 Runoff=1.9 cfs 0.377 af

Subcatchment C16: WOODS Runoff Area=6.130 ac 0.00% Impervious Runoff Depth=0.07"
Flow Length=950' Tc=39.0 min CN=56 Runoff=0.0 cfs 0.033 af

Subcatchment C17: TANK AREA Runoff Area=0.220 ac 100.00% Impervious Runoff Depth=2.09"
Tc=6.0 min CN=98 Runoff=0.7 cfs 0.038 af

Subcatchment C18: OVERLAND FLOW Runoff Area=0.270 ac 100.00% Impervious Runoff Depth=2.09"
Tc=6.0 min CN=98 Runoff=0.9 cfs 0.047 af

Subcatchment C19: OVERLAND FLOW Runoff Area=1.050 ac 0.00% Impervious Runoff Depth=0.40"
Tc=6.0 min CN=71 Runoff=0.7 cfs 0.035 af

Subcatchment C2: Woods Runoff Area=61.700 ac 0.26% Impervious Runoff Depth=0.28"
Flow Length=3,605' Tc=29.2 min CN=67 Runoff=9.0 cfs 1.464 af

Subcatchment C20: INFRASTRUCTURE Runoff Area=5.960 ac 66.44% Impervious Runoff Depth=1.30"
Tc=6.0 min CN=89 Runoff=13.7 cfs 0.645 af

Subcatchment C3: OVERLAND FLOW Runoff Area=0.780 ac 0.00% Impervious Runoff Depth=0.26"
Flow Length=100' Slope=0.1300 '/' Tc=20.8 min CN=66 Runoff=0.1 cfs 0.017 af

Subcatchment C4: DOUGLAS DRIVE Runoff Area=1.420 ac 19.72% Impervious Runoff Depth=0.67"
Tc=6.0 min CN=78 Runoff=1.7 cfs 0.080 af

Subcatchment C5: LANDFILL Runoff Area=10.430 ac 80.82% Impervious Runoff Depth=1.89"
Tc=6.0 min CN=96 Runoff=32.2 cfs 1.639 af

Subcatchment C6: OVERLAND FLOW Runoff Area=1.290 ac 0.00% Impervious Runoff Depth=0.40"
Tc=6.0 min CN=71 Runoff=0.8 cfs 0.043 af

Subcatchment C7: LANDFILL Runoff Area=2.390 ac 31.80% Impervious Runoff Depth=1.10"
Tc=6.0 min CN=86 Runoff=4.7 cfs 0.219 af

Subcatchment C8: WOODS Runoff Area=6.050 ac 0.00% Impervious Runoff Depth=0.23"
Flow Length=1,095' Tc=32.2 min CN=65 Runoff=0.6 cfs 0.118 af

Subcatchment C9: WOODS Runoff Area=16.330 ac 0.00% Impervious Runoff Depth=0.23"
Flow Length=1,960' Tc=32.0 min CN=65 Runoff=1.6 cfs 0.317 af

Reach 20R: TOE SWALE Avg. Flow Depth=0.13' Max Vel=1.06 fps Inflow=1.3 cfs 0.014 af
n=0.069 L=1,065.0' S=0.0423 '/' Capacity=78.3 cfs Outflow=0.5 cfs 0.014 af

Reach OUT-C: WETLANDS COMPLEX Inflow=13.7 cfs 3.892 af
Outflow=13.7 cfs 3.892 af

Reach RC1: WETLANDS Avg. Flow Depth=0.18' Max Vel=1.02 fps Inflow=2.7 cfs 0.683 af
n=0.035 L=525.0' S=0.0099 '/' Capacity=107.5 cfs Outflow=2.5 cfs 0.683 af

Reach RC10: WETLAND Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.035 L=1,010.0' S=0.0433 '/' Capacity=496.7 cfs Outflow=0.0 cfs 0.000 af

Reach RC11: WOODS Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.100 L=255.0' S=0.0784 '/' Capacity=31.5 cfs Outflow=0.0 cfs 0.000 af

Reach RC12: WETLAND Avg. Flow Depth=0.08' Max Vel=1.81 fps Inflow=0.4 cfs 0.010 af
n=0.035 L=310.0' S=0.0905 '/' Capacity=405.6 cfs Outflow=0.4 cfs 0.010 af

Reach RC14: WETLAND Avg. Flow Depth=0.24' Max Vel=2.77 fps Inflow=6.0 cfs 1.283 af
n=0.035 L=440.0' S=0.0500 '/' Capacity=610.7 cfs Outflow=6.0 cfs 1.283 af

Reach RC15: FLOW THROUGH WOODS Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.100 L=165.0' S=0.2000 '/' Capacity=33.2 cfs Outflow=0.0 cfs 0.000 af

Reach RC16: WETLAND Avg. Flow Depth=0.23' Max Vel=1.99 fps Inflow=6.0 cfs 1.283 af
n=0.035 L=319.0' S=0.0265 '/' Capacity=140.5 cfs Outflow=6.0 cfs 1.283 af

Reach RC17: FLOW THROUGH WOODS Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.100 L=158.1' S=0.1265 '/' Capacity=80.5 cfs Outflow=0.0 cfs 0.000 af

Reach RC18: FLOW THROUGH WOODS Avg. Flow Depth=0.03' Max Vel=0.47 fps Inflow=0.0 cfs 0.033 af
n=0.100 L=195.0' S=0.1641 '/' Capacity=76.3 cfs Outflow=0.0 cfs 0.033 af

Reach RC19: WETLAND Avg. Flow Depth=0.03' Max Vel=0.63 fps Inflow=0.0 cfs 0.033 af
n=0.035 L=545.0' S=0.0454 '/' Capacity=114.7 cfs Outflow=0.0 cfs 0.033 af

Reach RC2: WETLAND STREAM Avg. Flow Depth=0.18' Max Vel=1.88 fps Inflow=6.9 cfs 1.747 af
n=0.035 L=445.0' S=0.0332 '/' Capacity=1,248.5 cfs Outflow=6.8 cfs 1.745 af

Reach RC20: SWALE Avg. Flow Depth=0.18' Max Vel=2.67 fps Inflow=17.2 cfs 0.419 af
n=0.022 L=64.0' S=0.0156 '/' Capacity=994.2 cfs Outflow=17.2 cfs 0.419 af

Reach RC21: FLOW THROUGH WOODS Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.100 L=140.0' S=0.1000 '/' Capacity=47.6 cfs Outflow=0.0 cfs 0.000 af

Reach RC22: WETLAND Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.035 L=1,155.0' S=0.0515 '/' Capacity=306.0 cfs Outflow=0.0 cfs 0.000 af

Reach RC3: WETLAND STREAM Avg. Flow Depth=0.18' Max Vel=1.93 fps Inflow=7.5 cfs 1.750 af
n=0.035 L=1,160.0' S=0.0351 '/' Capacity=1,284.7 cfs Outflow=6.9 cfs 1.747 af

Reach RC4: WETLAND STREAM Avg. Flow Depth=0.33' Max Vel=2.99 fps Inflow=7.6 cfs 1.718 af
n=0.035 L=645.0' S=0.0376 '/' Capacity=1,660.9 cfs Outflow=7.5 cfs 1.717 af

Reach RC5: WETLAND STREAM Avg. Flow Depth=0.09' Max Vel=1.45 fps Inflow=1.8 cfs 0.435 af
n=0.035 L=205.0' S=0.0498 '/' Capacity=1,529.4 cfs Outflow=1.8 cfs 0.435 af

Reach RC6: WETLAND STREAM Avg. Flow Depth=0.11' Max Vel=0.87 fps Inflow=1.6 cfs 0.426 af
n=0.035 L=315.0' S=0.0135 '/' Capacity=795.1 cfs Outflow=1.5 cfs 0.425 af

Reach RC8: WOODS Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.100 L=210.0' S=0.0464 '/' Capacity=97.7 cfs Outflow=0.0 cfs 0.000 af

Reach RC9: WETLAND Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.035 L=955.0' S=0.0335 '/' Capacity=436.9 cfs Outflow=0.0 cfs 0.000 af

Pond FB10: FOREBAY Peak Elev=1,211.05' Storage=1,128 cf Inflow=0.6 cfs 0.118 af
Discarded=0.2 cfs 0.118 af Primary=0.0 cfs 0.000 af Outflow=0.2 cfs 0.118 af

Pond FB3: FOREBAY Peak Elev=1,122.04' Storage=2,914 cf Inflow=2.0 cfs 0.411 af
Discarded=0.2 cfs 0.262 af Primary=1.6 cfs 0.133 af Outflow=1.8 cfs 0.395 af

Pond FB5: FOREBAY Peak Elev=1,133.29' Storage=1,298 cf Inflow=4.4 cfs 0.207 af
Discarded=0.1 cfs 0.118 af Primary=4.1 cfs 0.089 af Outflow=4.3 cfs 0.207 af

Pond FB6: FOREBAY Peak Elev=1,124.75' Storage=1,496 cf Inflow=1.5 cfs 0.113 af
Primary=0.0 cfs 0.000 af Secondary=0.3 cfs 0.113 af Outflow=0.3 cfs 0.113 af

Pond FB7: FOREBAY Peak Elev=1,142.21' Storage=4,283 cf Inflow=16.2 cfs 0.843 af
Discarded=0.3 cfs 0.396 af Primary=15.9 cfs 0.447 af Outflow=16.2 cfs 0.843 af

Pond FB8: FOREBAY Peak Elev=1,151.37' Storage=6,411 cf Inflow=17.9 cfs 0.906 af
Discarded=0.4 cfs 0.487 af Primary=17.2 cfs 0.419 af Outflow=17.6 cfs 0.906 af

Pond FB9: FOREBAY Peak Elev=1,177.02' Storage=3,955 cf Inflow=4.2 cfs 0.248 af
Discarded=0.3 cfs 0.238 af Primary=0.4 cfs 0.011 af Outflow=0.7 cfs 0.248 af

Pond P1: WATER STORAGE FOR REUSE Peak Elev=1,135.73' Storage=3,721 cf Inflow=1.6 cfs 0.085 af
Outflow=0.0 cfs 0.000 af

Pond P10: INFILTRATION BASIN Peak Elev=1,207.00' Storage=0 cf Inflow=0.0 cfs 0.000 af
Discarded=0.0 cfs 0.000 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.0 cfs 0.000 af

Pond P2: INFILTRATION BASIN Peak Elev=1,107.59' Storage=12,160 cf Inflow=14.4 cfs 0.680 af
Discarded=1.0 cfs 0.680 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=1.0 cfs 0.680 af

Pond P3: INFILTRATION BASIN Peak Elev=1,115.68' Storage=1,950 cf Inflow=1.6 cfs 0.133 af
Discarded=0.4 cfs 0.133 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.4 cfs 0.133 af

Pond P4: INFILTRATION BASIN Peak Elev=1,139.02' Storage=166 cf Inflow=1.3 cfs 0.062 af
Discarded=0.8 cfs 0.062 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.8 cfs 0.062 af

Pond P5: INFILTRATION BASIN Peak Elev=1,131.35' Storage=2,825 cf Inflow=4.1 cfs 0.089 af
Discarded=0.3 cfs 0.089 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.3 cfs 0.089 af

Pond P6: RAIN GARDEN Peak Elev=1,124.42' Storage=1,763 cf Inflow=0.3 cfs 0.113 af
Primary=0.2 cfs 0.109 af Secondary=0.0 cfs 0.000 af Outflow=0.2 cfs 0.109 af

Pond P7: INFILTRATION BASIN Peak Elev=1,140.14' Storage=12,264 cf Inflow=15.9 cfs 0.447 af
Discarded=1.4 cfs 0.437 af Primary=0.4 cfs 0.010 af Secondary=0.0 cfs 0.000 af Outflow=1.8 cfs 0.448 af

Pond P8: INFILTRATION BASIN Peak Elev=1,146.90' Storage=13,088 cf Inflow=17.2 cfs 0.419 af
Discarded=0.9 cfs 0.419 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.9 cfs 0.419 af

Pond P9: INFILTRATION BASIN Peak Elev=1,173.00' Storage=0 cf Inflow=0.4 cfs 0.011 af
Discarded=0.4 cfs 0.011 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.4 cfs 0.011 af

Pond PCB1: CATCH BASIN Peak Elev=1,138.01' Inflow=13.7 cfs 0.645 af
15.0" Round Culvert n=0.013 L=145.3' S=0.1445 '/' Outflow=13.7 cfs 0.645 af

Pond PHW19: HEADWALL Peak Elev=1,171.15' Inflow=32.4 cfs 1.653 af
Primary=16.2 cfs 0.826 af Secondary=16.2 cfs 0.826 af Outflow=32.4 cfs 1.653 af

Pond PHW24: HEADWALL Peak Elev=1,214.78' Inflow=4.7 cfs 0.219 af
Primary=3.4 cfs 0.205 af Secondary=1.3 cfs 0.014 af Outflow=4.7 cfs 0.219 af

Pond PHW3: HEADWALL Peak Elev=1,153.60' Inflow=0.0 cfs 0.033 af
15.0" Round Culvert n=0.013 L=541.7' S=0.0471 '/' Outflow=0.0 cfs 0.033 af

Pond PHW5: HEADWALL Peak Elev=1,144.19' Inflow=1.9 cfs 0.377 af
15.0" Round Culvert n=0.013 L=353.3' S=0.0609 '/' Outflow=1.9 cfs 0.377 af

Pond RC13: NEW CULVERT Peak Elev=1,126.60' Inflow=6.0 cfs 1.283 af
72.0" x 72.0" Box Culvert w/ 24.0" inside fill n=0.025 L=53.0' S=0.0189 '/' Outflow=6.0 cfs 1.283 af

Pond RC7: NEW DOUGLAS DRIVE CULVERT Peak Elev=1,110.41' Inflow=1.6 cfs 0.426 af
144.0" x 72.0" Box Culvert w/ 24.0" inside fill n=0.025 L=43.2' S=0.0058 '/' Outflow=1.6 cfs 0.426 af

Total Runoff Area = 228.890 ac Runoff Volume = 7.454 af Average Runoff Depth = 0.39"
92.57% Pervious = 211.880 ac 7.43% Impervious = 17.010 ac

Time span=0.00-27.00 hrs, dt=0.01 hrs, 2701 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment C1: WOODS Runoff Area=39.170 ac 0.00% Impervious Runoff Depth=0.61"
Flow Length=2,195' Tc=40.4 min CN=64 Runoff=12.7 cfs 1.995 af

Subcatchment C10: DOUGLAS DRIVE Runoff Area=2.010 ac 31.34% Impervious Runoff Depth=1.35"
Flow Length=210' Tc=17.3 min CN=78 Runoff=3.2 cfs 0.227 af

Subcatchment C11: DOUGLAS DRIVE Runoff Area=1.810 ac 75.14% Impervious Runoff Depth=2.27"
Tc=6.0 min CN=90 Runoff=7.1 cfs 0.342 af

Subcatchment C12: WOODS & EX. Runoff Area=54.070 ac 0.20% Impervious Runoff Depth=0.75"
Flow Length=3,290' Tc=43.9 min CN=67 Runoff=21.9 cfs 3.359 af

Subcatchment C13: BUILDINGS Runoff Area=0.970 ac 40.21% Impervious Runoff Depth=1.49"
Tc=6.0 min CN=80 Runoff=2.6 cfs 0.120 af

Subcatchment C14: OVERLAND FLOW Runoff Area=0.930 ac 0.00% Impervious Runoff Depth=1.00"
Tc=6.0 min CN=72 Runoff=1.6 cfs 0.077 af

Subcatchment C15: WOODS & EX. QUARRY Runoff Area=15.910 ac 2.77% Impervious Runoff Depth=0.75"
Flow Length=1,520' Tc=37.9 min CN=67 Runoff=7.2 cfs 0.988 af

Subcatchment C16: WOODS Runoff Area=6.130 ac 0.00% Impervious Runoff Depth=0.31"
Flow Length=950' Tc=39.0 min CN=56 Runoff=0.7 cfs 0.161 af

Subcatchment C17: TANK AREA Runoff Area=0.220 ac 100.00% Impervious Runoff Depth=3.08"
Tc=6.0 min CN=98 Runoff=1.0 cfs 0.056 af

Subcatchment C18: OVERLAND FLOW Runoff Area=0.270 ac 100.00% Impervious Runoff Depth=3.08"
Tc=6.0 min CN=98 Runoff=1.3 cfs 0.069 af

Subcatchment C19: OVERLAND FLOW Runoff Area=1.050 ac 0.00% Impervious Runoff Depth=0.94"
Tc=6.0 min CN=71 Runoff=1.7 cfs 0.083 af

Subcatchment C2: Woods Runoff Area=61.700 ac 0.26% Impervious Runoff Depth=0.75"
Flow Length=3,605' Tc=29.2 min CN=67 Runoff=33.6 cfs 3.833 af

Subcatchment C20: INFRASTRUCTURE Runoff Area=5.960 ac 66.44% Impervious Runoff Depth=2.18"
Tc=6.0 min CN=89 Runoff=22.6 cfs 1.084 af

Subcatchment C3: OVERLAND FLOW Runoff Area=0.780 ac 0.00% Impervious Runoff Depth=0.70"
Flow Length=100' Slope=0.1300 '/' Tc=20.8 min CN=66 Runoff=0.5 cfs 0.045 af

Subcatchment C4: DOUGLAS DRIVE Runoff Area=1.420 ac 19.72% Impervious Runoff Depth=1.35"
Tc=6.0 min CN=78 Runoff=3.4 cfs 0.160 af

Subcatchment C5: LANDFILL Runoff Area=10.430 ac 80.82% Impervious Runoff Depth=2.86"
Tc=6.0 min CN=96 Runoff=47.4 cfs 2.484 af

Subcatchment C6: OVERLAND FLOW Runoff Area=1.290 ac 0.00% Impervious Runoff Depth=0.94"
Tc=6.0 min CN=71 Runoff=2.1 cfs 0.102 af

Subcatchment C7: LANDFILL Runoff Area=2.390 ac 31.80% Impervious Runoff Depth=1.93"
Tc=6.0 min CN=86 Runoff=8.1 cfs 0.385 af

Subcatchment C8: WOODS Runoff Area=6.050 ac 0.00% Impervious Runoff Depth=0.65"
Flow Length=1,095' Tc=32.2 min CN=65 Runoff=2.6 cfs 0.330 af

Subcatchment C9: WOODS Runoff Area=16.330 ac 0.00% Impervious Runoff Depth=0.65"
Flow Length=1,960' Tc=32.0 min CN=65 Runoff=6.9 cfs 0.891 af

Reach 20R: TOE SWALE Avg. Flow Depth=0.28' Max Vel=1.65 fps Inflow=3.0 cfs 0.041 af
n=0.069 L=1,065.0' S=0.0423 '/' Capacity=78.3 cfs Outflow=1.7 cfs 0.041 af

Reach OUT-C: WETLANDS COMPLEX Inflow=62.7 cfs 10.756 af
Outflow=62.7 cfs 10.756 af

Reach RC1: WETLANDS Avg. Flow Depth=0.37' Max Vel=1.66 fps Inflow=12.7 cfs 1.995 af
n=0.035 L=525.0' S=0.0099 '/' Capacity=107.5 cfs Outflow=12.3 cfs 1.995 af

Reach RC10: WETLAND Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.035 L=1,010.0' S=0.0433 '/' Capacity=496.7 cfs Outflow=0.0 cfs 0.000 af

Reach RC11: WOODS Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.100 L=255.0' S=0.0784 '/' Capacity=31.5 cfs Outflow=0.0 cfs 0.000 af

Reach RC12: WETLAND Avg. Flow Depth=0.38' Max Vel=5.10 fps Inflow=11.5 cfs 0.246 af
n=0.035 L=310.0' S=0.0905 '/' Capacity=405.6 cfs Outflow=11.3 cfs 0.246 af

Reach RC14: WETLAND Avg. Flow Depth=0.43' Max Vel=4.14 fps Inflow=22.1 cfs 3.375 af
n=0.035 L=440.0' S=0.0500 '/' Capacity=610.7 cfs Outflow=22.1 cfs 3.375 af

Reach RC15: FLOW THROUGH WOODS Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.100 L=165.0' S=0.2000 '/' Capacity=33.2 cfs Outflow=0.0 cfs 0.000 af

Reach RC16: WETLAND Avg. Flow Depth=0.43' Max Vel=2.98 fps Inflow=22.1 cfs 3.375 af
n=0.035 L=319.0' S=0.0265 '/' Capacity=140.5 cfs Outflow=22.1 cfs 3.375 af

Reach RC17: FLOW THROUGH WOODS Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.100 L=158.1' S=0.1265 '/' Capacity=80.5 cfs Outflow=0.0 cfs 0.000 af

Reach RC18: FLOW THROUGH WOODS Avg. Flow Depth=0.11' Max Vel=1.07 fps Inflow=0.7 cfs 0.161 af
n=0.100 L=195.0' S=0.1641 '/' Capacity=76.3 cfs Outflow=0.7 cfs 0.161 af

Reach RC19: WETLAND Avg. Flow Depth=0.09' Max Vel=1.40 fps Inflow=0.7 cfs 0.161 af
n=0.035 L=545.0' S=0.0454 '/' Capacity=114.7 cfs Outflow=0.6 cfs 0.161 af

Reach RC2: WETLAND STREAM Avg. Flow Depth=0.36' Max Vel=2.98 fps Inflow=30.2 cfs 4.929 af
n=0.035 L=445.0' S=0.0332 '/' Capacity=1,248.5 cfs Outflow=30.1 cfs 4.927 af

Reach RC20: SWALE Avg. Flow Depth=0.24' Max Vel=3.19 fps Inflow=27.0 cfs 0.831 af
n=0.022 L=64.0' S=0.0156 '/' Capacity=994.2 cfs Outflow=27.0 cfs 0.831 af

Reach RC21: FLOW THROUGH WOODS Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.100 L=140.0' S=0.1000 '/' Capacity=47.6 cfs Outflow=0.0 cfs 0.000 af

Reach RC22: WETLAND Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.035 L=1,155.0' S=0.0515 '/' Capacity=306.0 cfs Outflow=0.0 cfs 0.000 af

Reach RC3: WETLAND STREAM Avg. Flow Depth=0.35' Max Vel=3.04 fps Inflow=31.2 cfs 4.932 af
n=0.035 L=1,160.0' S=0.0351 '/' Capacity=1,284.7 cfs Outflow=30.2 cfs 4.929 af

Reach RC4: WETLAND STREAM Avg. Flow Depth=0.63' Max Vel=4.60 fps Inflow=30.7 cfs 4.772 af
n=0.035 L=645.0' S=0.0376 '/' Capacity=1,660.9 cfs Outflow=30.6 cfs 4.771 af

Reach RC5: WETLAND STREAM Avg. Flow Depth=0.22' Max Vel=2.62 fps Inflow=12.8 cfs 1.398 af
n=0.035 L=205.0' S=0.0498 '/' Capacity=1,529.4 cfs Outflow=12.5 cfs 1.397 af

Reach RC6: WETLAND STREAM Avg. Flow Depth=0.23' Max Vel=1.40 fps Inflow=7.3 cfs 1.153 af
n=0.035 L=315.0' S=0.0135 '/' Capacity=795.1 cfs Outflow=7.2 cfs 1.152 af

Reach RC8: WOODS Avg. Flow Depth=0.12' Max Vel=0.60 fps Inflow=1.2 cfs 0.042 af
n=0.100 L=210.0' S=0.0464 '/' Capacity=97.7 cfs Outflow=1.0 cfs 0.042 af

Reach RC9: WETLAND Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.035 L=955.0' S=0.0335 '/' Capacity=436.9 cfs Outflow=0.0 cfs 0.000 af

Pond FB10: FOREBAY Peak Elev=1,212.04' Storage=2,856 cf Inflow=2.6 cfs 0.330 af
Discarded=0.2 cfs 0.243 af Primary=1.9 cfs 0.087 af Outflow=2.1 cfs 0.330 af

Pond FB3: FOREBAY Peak Elev=1,122.11' Storage=3,053 cf Inflow=7.4 cfs 1.066 af
Discarded=0.2 cfs 0.275 af Primary=7.2 cfs 0.762 af Outflow=7.4 cfs 1.038 af

Pond FB5: FOREBAY Peak Elev=1,133.39' Storage=1,429 cf Inflow=7.1 cfs 0.342 af
Discarded=0.2 cfs 0.154 af Primary=6.8 cfs 0.189 af Outflow=7.0 cfs 0.343 af

Pond FB6: FOREBAY Peak Elev=1,125.61' Storage=3,946 cf Inflow=3.2 cfs 0.227 af
Primary=0.0 cfs 0.000 af Secondary=0.4 cfs 0.227 af Outflow=0.4 cfs 0.227 af

Pond FB7: FOREBAY Peak Elev=1,142.27' Storage=4,446 cf Inflow=24.4 cfs 1.308 af
Discarded=0.3 cfs 0.460 af Primary=24.1 cfs 0.833 af Outflow=24.4 cfs 1.293 af

Pond FB8: FOREBAY Peak Elev=1,151.48' Storage=6,810 cf Inflow=27.7 cfs 1.423 af
Discarded=0.4 cfs 0.582 af Primary=27.0 cfs 0.831 af Outflow=27.4 cfs 1.413 af

Pond FB9: FOREBAY Peak Elev=1,177.13' Storage=4,255 cf Inflow=7.3 cfs 0.445 af
Discarded=0.3 cfs 0.314 af Primary=6.7 cfs 0.132 af Outflow=7.1 cfs 0.445 af

Pond P1: WATER STORAGE FOR REUSE Peak Elev=1,136.04' Storage=5,473 cf Inflow=2.3 cfs 0.126 af
Outflow=0.0 cfs 0.000 af

Pond P10: INFILTRATION BASIN Peak Elev=1,207.18' Storage=975 cf Inflow=1.9 cfs 0.087 af
Discarded=0.6 cfs 0.087 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.6 cfs 0.087 af

Pond P2: INFILTRATION BASIN Peak Elev=1,108.83' Storage=23,813 cf Inflow=24.3 cfs 1.167 af
Discarded=1.2 cfs 1.167 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=1.2 cfs 1.167 af

Pond P3: INFILTRATION BASIN Peak Elev=1,118.98' Storage=17,483 cf Inflow=7.2 cfs 0.762 af
Discarded=0.7 cfs 0.724 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.7 cfs 0.724 af

Pond P4: INFILTRATION BASIN Peak Elev=1,139.13' Storage=940 cf Inflow=2.6 cfs 0.120 af
Discarded=0.8 cfs 0.120 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.8 cfs 0.120 af

Pond P5: INFILTRATION BASIN Peak Elev=1,132.31' Storage=5,471 cf Inflow=6.8 cfs 0.189 af
Discarded=0.4 cfs 0.173 af Primary=0.7 cfs 0.016 af Secondary=0.0 cfs 0.000 af Outflow=1.1 cfs 0.189 af

Pond P6: RAIN GARDEN Peak Elev=1,124.44' Storage=1,820 cf Inflow=0.4 cfs 0.227 af
Primary=0.4 cfs 0.220 af Secondary=0.0 cfs 0.000 af Outflow=0.4 cfs 0.220 af

Pond P7: INFILTRATION BASIN Peak Elev=1,140.46' Storage=16,213 cf Inflow=24.1 cfs 0.833 af
Discarded=1.4 cfs 0.588 af Primary=11.5 cfs 0.246 af Secondary=0.0 cfs 0.000 af Outflow=12.9 cfs 0.834 af

Pond P8: INFILTRATION BASIN Peak Elev=1,148.28' Storage=25,161 cf Inflow=27.0 cfs 0.831 af
Discarded=1.1 cfs 0.789 af Primary=1.2 cfs 0.042 af Secondary=0.0 cfs 0.000 af Outflow=2.3 cfs 0.831 af

Pond P9: INFILTRATION BASIN Peak Elev=1,173.62' Storage=3,209 cf Inflow=6.7 cfs 0.132 af
Discarded=0.6 cfs 0.132 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.6 cfs 0.132 af

Pond PCB1: CATCH BASIN Peak Elev=1,147.19' Inflow=22.6 cfs 1.084 af
15.0" Round Culvert n=0.013 L=145.3' S=0.1445 '/' Outflow=22.6 cfs 1.084 af

Pond PHW19: HEADWALL Peak Elev=1,172.58' Inflow=48.6 cfs 2.525 af
Primary=24.3 cfs 1.262 af Secondary=24.3 cfs 1.262 af Outflow=48.6 cfs 2.525 af

Pond PHW24: HEADWALL Peak Elev=1,214.98' Inflow=8.1 cfs 0.385 af
Primary=5.1 cfs 0.344 af Secondary=3.0 cfs 0.041 af Outflow=8.1 cfs 0.385 af

Pond PHW3: HEADWALL Peak Elev=1,153.88' Inflow=0.7 cfs 0.161 af
15.0" Round Culvert n=0.013 L=541.7' S=0.0471 '/' Outflow=0.7 cfs 0.161 af

Pond PHW5: HEADWALL Peak Elev=1,145.60' Inflow=7.2 cfs 0.988 af
15.0" Round Culvert n=0.013 L=353.3' S=0.0609 '/' Outflow=7.2 cfs 0.988 af

Pond RC13: NEW CULVERT Peak Elev=1,127.20' Inflow=21.9 cfs 3.359 af
72.0" x 72.0" Box Culvert w/ 24.0" inside fill n=0.025 L=53.0' S=0.0189 '/' Outflow=21.9 cfs 3.359 af

Pond RC7: NEW DOUGLAS DRIVE CULVERT Peak Elev=1,110.65' Inflow=7.3 cfs 1.153 af
144.0" x 72.0" Box Culvert w/ 24.0" inside fill n=0.025 L=43.2' S=0.0058 '/' Outflow=7.3 cfs 1.153 af

Total Runoff Area = 228.890 ac Runoff Volume = 16.793 af Average Runoff Depth = 0.88"
92.57% Pervious = 211.880 ac 7.43% Impervious = 17.010 ac

Time span=0.00-27.00 hrs, dt=0.01 hrs, 2701 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment C1: WOODS Runoff Area=39.170 ac 0.00% Impervious Runoff Depth=1.01"
Flow Length=2,195' Tc=40.4 min CN=64 Runoff=23.8 cfs 3.285 af

Subcatchment C10: DOUGLAS DRIVE Runoff Area=2.010 ac 31.34% Impervious Runoff Depth=1.93"
Flow Length=210' Tc=17.3 min CN=78 Runoff=4.7 cfs 0.324 af

Subcatchment C11: DOUGLAS DRIVE Runoff Area=1.810 ac 75.14% Impervious Runoff Depth=2.98"
Tc=6.0 min CN=90 Runoff=9.1 cfs 0.449 af

Subcatchment C12: WOODS & EX. Runoff Area=54.070 ac 0.20% Impervious Runoff Depth=1.18"
Flow Length=3,290' Tc=43.9 min CN=67 Runoff=38.3 cfs 5.325 af

Subcatchment C13: BUILDINGS Runoff Area=0.970 ac 40.21% Impervious Runoff Depth=2.09"
Tc=6.0 min CN=80 Runoff=3.6 cfs 0.169 af

Subcatchment C14: OVERLAND FLOW Runoff Area=0.930 ac 0.00% Impervious Runoff Depth=1.50"
Tc=6.0 min CN=72 Runoff=2.5 cfs 0.116 af

Subcatchment C15: WOODS & EX. QUARRY Runoff Area=15.910 ac 2.77% Impervious Runoff Depth=1.18"
Flow Length=1,520' Tc=37.9 min CN=67 Runoff=12.5 cfs 1.567 af

Subcatchment C16: WOODS Runoff Area=6.130 ac 0.00% Impervious Runoff Depth=0.60"
Flow Length=950' Tc=39.0 min CN=56 Runoff=1.8 cfs 0.306 af

Subcatchment C17: TANK AREA Runoff Area=0.220 ac 100.00% Impervious Runoff Depth=3.82"
Tc=6.0 min CN=98 Runoff=1.3 cfs 0.070 af

Subcatchment C18: OVERLAND FLOW Runoff Area=0.270 ac 100.00% Impervious Runoff Depth=3.82"
Tc=6.0 min CN=98 Runoff=1.6 cfs 0.086 af

Subcatchment C19: OVERLAND FLOW Runoff Area=1.050 ac 0.00% Impervious Runoff Depth=1.44"
Tc=6.0 min CN=71 Runoff=2.7 cfs 0.126 af

Subcatchment C2: Woods Runoff Area=61.700 ac 0.26% Impervious Runoff Depth=1.18"
Flow Length=3,605' Tc=29.2 min CN=67 Runoff=58.3 cfs 6.077 af

Subcatchment C20: INFRASTRUCTURE Runoff Area=5.960 ac 66.44% Impervious Runoff Depth=2.88"
Tc=6.0 min CN=89 Runoff=29.3 cfs 1.430 af

Subcatchment C3: OVERLAND FLOW Runoff Area=0.780 ac 0.00% Impervious Runoff Depth=1.12"
Flow Length=100' Slope=0.1300 '/' Tc=20.8 min CN=66 Runoff=0.9 cfs 0.073 af

Subcatchment C4: DOUGLAS DRIVE Runoff Area=1.420 ac 19.72% Impervious Runoff Depth=1.93"
Tc=6.0 min CN=78 Runoff=4.9 cfs 0.229 af

Subcatchment C5: LANDFILL Runoff Area=10.430 ac 80.82% Impervious Runoff Depth=3.60"
Tc=6.0 min CN=96 Runoff=58.9 cfs 3.129 af

Subcatchment C6: OVERLAND FLOW Runoff Area=1.290 ac 0.00% Impervious Runoff Depth=1.44"
Tc=6.0 min CN=71 Runoff=3.3 cfs 0.154 af

Subcatchment C7: LANDFILL Runoff Area=2.390 ac 31.80% Impervious Runoff Depth=2.60"
Tc=6.0 min CN=86 Runoff=10.8 cfs 0.518 af

Subcatchment C8: WOODS Runoff Area=6.050 ac 0.00% Impervious Runoff Depth=1.06"
Flow Length=1,095' Tc=32.2 min CN=65 Runoff=4.6 cfs 0.536 af

Subcatchment C9: WOODS Runoff Area=16.330 ac 0.00% Impervious Runoff Depth=1.06"
Flow Length=1,960' Tc=32.0 min CN=65 Runoff=12.6 cfs 1.447 af

Reach 20R: TOE SWALE Avg. Flow Depth=0.37' Max Vel=1.94 fps Inflow=4.5 cfs 0.066 af
n=0.069 L=1,065.0' S=0.0423 '/' Capacity=78.3 cfs Outflow=2.8 cfs 0.066 af

Reach OUT-C: WETLANDS COMPLEX Inflow=124.8 cfs 17.840 af
Outflow=124.8 cfs 17.840 af

Reach RC1: WETLANDS Avg. Flow Depth=0.49' Max Vel=2.01 fps Inflow=23.8 cfs 3.285 af
n=0.035 L=525.0' S=0.0099 '/' Capacity=107.5 cfs Outflow=23.3 cfs 3.285 af

Reach RC10: WETLAND Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.035 L=1,010.0' S=0.0433 '/' Capacity=496.7 cfs Outflow=0.0 cfs 0.000 af

Reach RC11: WOODS Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.100 L=255.0' S=0.0784 '/' Capacity=31.5 cfs Outflow=0.0 cfs 0.000 af

Reach RC12: WETLAND Avg. Flow Depth=0.49' Max Vel=6.07 fps Inflow=20.1 cfs 0.442 af
n=0.035 L=310.0' S=0.0905 '/' Capacity=405.6 cfs Outflow=19.9 cfs 0.442 af

Reach RC14: WETLAND Avg. Flow Depth=0.56' Max Vel=4.91 fps Inflow=38.7 cfs 5.404 af
n=0.035 L=440.0' S=0.0500 '/' Capacity=610.7 cfs Outflow=38.6 cfs 5.404 af

Reach RC15: FLOW THROUGH WOODS Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.100 L=165.0' S=0.2000 '/' Capacity=33.2 cfs Outflow=0.0 cfs 0.000 af

Reach RC16: WETLAND Avg. Flow Depth=0.55' Max Vel=3.54 fps Inflow=38.6 cfs 5.404 af
n=0.035 L=319.0' S=0.0265 '/' Capacity=140.5 cfs Outflow=38.5 cfs 5.404 af

Reach RC17: FLOW THROUGH WOODS Avg. Flow Depth=0.20' Max Vel=1.39 fps Inflow=2.6 cfs 0.191 af
n=0.100 L=158.1' S=0.1265 '/' Capacity=80.5 cfs Outflow=2.6 cfs 0.191 af

Reach RC18: FLOW THROUGH WOODS Avg. Flow Depth=0.17' Max Vel=1.43 fps Inflow=1.8 cfs 0.306 af
n=0.100 L=195.0' S=0.1641 '/' Capacity=76.3 cfs Outflow=1.7 cfs 0.306 af

Reach RC19: WETLAND Avg. Flow Depth=0.19' Max Vel=2.29 fps Inflow=3.3 cfs 0.497 af
n=0.035 L=545.0' S=0.0454 '/' Capacity=114.7 cfs Outflow=3.2 cfs 0.497 af

Reach RC2: WETLAND STREAM Avg. Flow Depth=0.49' Max Vel=3.65 fps Inflow=58.5 cfs 8.480 af
n=0.035 L=445.0' S=0.0332 '/' Capacity=1,248.5 cfs Outflow=58.4 cfs 8.478 af

Reach RC20: SWALE Avg. Flow Depth=0.28' Max Vel=3.53 fps Inflow=35.4 cfs 1.179 af
n=0.022 L=64.0' S=0.0156 '/' Capacity=994.2 cfs Outflow=35.0 cfs 1.179 af

Reach RC21: FLOW THROUGH WOODS Avg. Flow Depth=0.22' Max Vel=1.30 fps Inflow=1.8 cfs 0.091 af
n=0.100 L=140.0' S=0.1000 '/' Capacity=47.6 cfs Outflow=1.8 cfs 0.091 af

Reach RC22: WETLAND Avg. Flow Depth=0.17' Max Vel=2.26 fps Inflow=1.8 cfs 0.091 af
n=0.035 L=1,155.0' S=0.0515 '/' Capacity=306.0 cfs Outflow=1.5 cfs 0.091 af

Reach RC3: WETLAND STREAM Avg. Flow Depth=0.48' Max Vel=3.70 fps Inflow=58.1 cfs 8.393 af
n=0.035 L=1,160.0' S=0.0351 '/' Capacity=1,284.7 cfs Outflow=57.2 cfs 8.389 af

Reach RC4: WETLAND STREAM Avg. Flow Depth=0.84' Max Vel=5.56 fps Inflow=56.7 cfs 7.897 af
n=0.035 L=645.0' S=0.0376 '/' Capacity=1,660.9 cfs Outflow=56.6 cfs 7.896 af

Reach RC5: WETLAND STREAM Avg. Flow Depth=0.32' Max Vel=3.37 fps Inflow=28.6 cfs 2.493 af
n=0.035 L=205.0' S=0.0498 '/' Capacity=1,529.4 cfs Outflow=28.5 cfs 2.493 af

Reach RC6: WETLAND STREAM Avg. Flow Depth=0.36' Max Vel=1.91 fps Inflow=20.3 cfs 2.053 af
n=0.035 L=315.0' S=0.0135 '/' Capacity=795.1 cfs Outflow=19.7 cfs 2.052 af

Reach RC8: WOODS Avg. Flow Depth=0.36' Max Vel=1.24 fps Inflow=12.6 cfs 0.292 af
n=0.100 L=210.0' S=0.0464 '/' Capacity=97.7 cfs Outflow=10.7 cfs 0.292 af

Reach RC9: WETLAND Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.035 L=955.0' S=0.0335 '/' Capacity=436.9 cfs Outflow=0.0 cfs 0.000 af

Pond FB10: FOREBAY Peak Elev=1,212.08' Storage=2,926 cf Inflow=4.6 cfs 0.536 af
Discarded=0.2 cfs 0.271 af Primary=4.4 cfs 0.253 af Outflow=4.6 cfs 0.525 af

Pond FB3: FOREBAY Peak Elev=1,122.16' Storage=3,155 cf Inflow=12.8 cfs 1.683 af
Discarded=0.2 cfs 0.280 af Primary=12.6 cfs 1.374 af Outflow=12.8 cfs 1.654 af

Pond FB5: FOREBAY Peak Elev=1,133.46' Storage=1,515 cf Inflow=9.1 cfs 0.449 af
Discarded=0.2 cfs 0.176 af Primary=8.9 cfs 0.273 af Outflow=9.0 cfs 0.449 af

Pond FB6: FOREBAY Peak Elev=1,126.03' Storage=5,417 cf Inflow=4.7 cfs 0.324 af
Primary=1.0 cfs 0.020 af Secondary=0.4 cfs 0.304 af Outflow=1.4 cfs 0.324 af

Pond FB7: FOREBAY Peak Elev=1,142.31' Storage=4,558 cf Inflow=30.9 cfs 1.670 af
Discarded=0.3 cfs 0.490 af Primary=30.5 cfs 1.155 af Outflow=30.8 cfs 1.645 af

Pond FB8: FOREBAY Peak Elev=1,151.57' Storage=6,869 cf Inflow=35.4 cfs 1.826 af
Discarded=0.4 cfs 0.622 af Primary=35.4 cfs 1.179 af Outflow=35.9 cfs 1.800 af

Pond FB9: FOREBAY Peak Elev=1,177.16' Storage=4,340 cf Inflow=9.7 cfs 0.606 af
Discarded=0.3 cfs 0.361 af Primary=9.3 cfs 0.246 af Outflow=9.6 cfs 0.606 af

Pond P1: WATER STORAGE FOR REUSE Peak Elev=1,136.27' Storage=6,803 cf Inflow=2.8 cfs 0.156 af
Outflow=0.0 cfs 0.000 af

Pond P10: INFILTRATION BASIN Peak Elev=1,207.88' Storage=5,189 cf Inflow=4.4 cfs 0.253 af
Discarded=0.7 cfs 0.254 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.7 cfs 0.254 af

Pond P2: INFILTRATION BASIN Peak Elev=1,109.50' Storage=31,007 cf Inflow=32.0 cfs 1.556 af
Discarded=1.3 cfs 1.465 af Primary=1.8 cfs 0.091 af Secondary=0.0 cfs 0.000 af Outflow=3.0 cfs 1.556 af

Pond P3: INFILTRATION BASIN Peak Elev=1,120.48' Storage=27,901 cf Inflow=12.6 cfs 1.374 af
Discarded=0.9 cfs 0.958 af Primary=2.6 cfs 0.191 af Secondary=0.0 cfs 0.000 af Outflow=3.5 cfs 1.149 af

Pond P4: INFILTRATION BASIN Peak Elev=1,139.24' Storage=1,739 cf Inflow=3.6 cfs 0.169 af
Discarded=0.9 cfs 0.169 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.9 cfs 0.169 af

Pond P5: INFILTRATION BASIN Peak Elev=1,132.48' Storage=6,004 cf Inflow=8.9 cfs 0.273 af
Discarded=0.4 cfs 0.195 af Primary=5.6 cfs 0.079 af Secondary=0.0 cfs 0.000 af Outflow=6.0 cfs 0.273 af

Pond P6: RAIN GARDEN Peak Elev=1,124.47' Storage=1,894 cf Inflow=1.4 cfs 0.324 af
Primary=0.6 cfs 0.313 af Secondary=0.0 cfs 0.000 af Outflow=0.6 cfs 0.313 af

Pond P7: INFILTRATION BASIN Peak Elev=1,140.63' Storage=18,296 cf Inflow=30.5 cfs 1.155 af
Discarded=1.5 cfs 0.713 af Primary=20.1 cfs 0.442 af Secondary=0.0 cfs 0.000 af Outflow=21.6 cfs 1.155 af

Pond P8: INFILTRATION BASIN Peak Elev=1,148.59' Storage=28,156 cf Inflow=35.0 cfs 1.179 af
Discarded=1.1 cfs 0.886 af Primary=12.6 cfs 0.292 af Secondary=0.0 cfs 0.000 af Outflow=13.7 cfs 1.179 af

Pond P9: INFILTRATION BASIN Peak Elev=1,174.19' Storage=6,563 cf Inflow=9.3 cfs 0.246 af
Discarded=0.7 cfs 0.246 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.7 cfs 0.246 af

Pond PCB1: CATCH BASIN Peak Elev=1,157.22' Inflow=29.3 cfs 1.430 af
15.0" Round Culvert n=0.013 L=145.3' S=0.1445 '/' Outflow=29.3 cfs 1.430 af

Pond PHW19: HEADWALL Peak Elev=1,174.07' Inflow=61.0 cfs 3.195 af
Primary=30.5 cfs 1.597 af Secondary=30.5 cfs 1.597 af Outflow=61.0 cfs 3.195 af

Pond PHW24: HEADWALL Peak Elev=1,215.10' Inflow=10.8 cfs 0.518 af
Primary=6.4 cfs 0.452 af Secondary=4.5 cfs 0.066 af Outflow=10.8 cfs 0.518 af

Pond PHW3: HEADWALL Peak Elev=1,154.15' Inflow=1.8 cfs 0.306 af
15.0" Round Culvert n=0.013 L=541.7' S=0.0471 '/' Outflow=1.8 cfs 0.306 af

Pond PHW5: HEADWALL Peak Elev=1,148.59' Inflow=12.5 cfs 1.567 af
15.0" Round Culvert n=0.013 L=353.3' S=0.0609 '/' Outflow=12.5 cfs 1.567 af

Pond RC13: NEW CULVERT Peak Elev=1,127.64' Inflow=38.3 cfs 5.325 af
72.0" x 72.0" Box Culvert w/ 24.0" inside fill n=0.025 L=53.0' S=0.0189 '/' Outflow=38.3 cfs 5.325 af

Pond RC7: NEW DOUGLAS DRIVE CULVERT Peak Elev=1,111.01' Inflow=20.3 cfs 2.053 af
144.0" x 72.0" Box Culvert w/ 24.0" inside fill n=0.025 L=43.2' S=0.0058 '/' Outflow=20.3 cfs 2.053 af

Total Runoff Area = 228.890 ac Runoff Volume = 25.416 af Average Runoff Depth = 1.33"
92.57% Pervious = 211.880 ac 7.43% Impervious = 17.010 ac

Time span=0.00-27.00 hrs, dt=0.01 hrs, 2701 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment C1: WOODS Runoff Area=39.170 ac 0.00% Impervious Runoff Depth=1.41"
Flow Length=2,195' Tc=40.4 min CN=64 Runoff=35.2 cfs 4.596 af

Subcatchment C10: DOUGLAS DRIVE Runoff Area=2.010 ac 31.34% Impervious Runoff Depth=2.48"
Flow Length=210' Tc=17.3 min CN=78 Runoff=6.0 cfs 0.416 af

Subcatchment C11: DOUGLAS DRIVE Runoff Area=1.810 ac 75.14% Impervious Runoff Depth=3.62"
Tc=6.0 min CN=90 Runoff=10.9 cfs 0.545 af

Subcatchment C12: WOODS & EX. Runoff Area=54.070 ac 0.20% Impervious Runoff Depth=1.62"
Flow Length=3,290' Tc=43.9 min CN=67 Runoff=54.8 cfs 7.288 af

Subcatchment C13: BUILDINGS Runoff Area=0.970 ac 40.21% Impervious Runoff Depth=2.66"
Tc=6.0 min CN=80 Runoff=4.6 cfs 0.215 af

Subcatchment C14: OVERLAND FLOW Runoff Area=0.930 ac 0.00% Impervious Runoff Depth=1.99"
Tc=6.0 min CN=72 Runoff=3.3 cfs 0.154 af

Subcatchment C15: WOODS & EX. QUARRY Runoff Area=15.910 ac 2.77% Impervious Runoff Depth=1.62"
Flow Length=1,520' Tc=37.9 min CN=67 Runoff=17.8 cfs 2.145 af

Subcatchment C16: WOODS Runoff Area=6.130 ac 0.00% Impervious Runoff Depth=0.91"
Flow Length=950' Tc=39.0 min CN=56 Runoff=3.1 cfs 0.463 af

Subcatchment C17: TANK AREA Runoff Area=0.220 ac 100.00% Impervious Runoff Depth=4.49"
Tc=6.0 min CN=98 Runoff=1.5 cfs 0.082 af

Subcatchment C18: OVERLAND FLOW Runoff Area=0.270 ac 100.00% Impervious Runoff Depth=4.49"
Tc=6.0 min CN=98 Runoff=1.8 cfs 0.101 af

Subcatchment C19: OVERLAND FLOW Runoff Area=1.050 ac 0.00% Impervious Runoff Depth=1.91"
Tc=6.0 min CN=71 Runoff=3.6 cfs 0.168 af

Subcatchment C2: Woods Runoff Area=61.700 ac 0.26% Impervious Runoff Depth=1.62"
Flow Length=3,605' Tc=29.2 min CN=67 Runoff=83.0 cfs 8.317 af

Subcatchment C20: INFRASTRUCTURE Runoff Area=5.960 ac 66.44% Impervious Runoff Depth=3.51"
Tc=6.0 min CN=89 Runoff=35.3 cfs 1.745 af

Subcatchment C3: OVERLAND FLOW Runoff Area=0.780 ac 0.00% Impervious Runoff Depth=1.55"
Flow Length=100' Slope=0.1300 '/' Tc=20.8 min CN=66 Runoff=1.2 cfs 0.101 af

Subcatchment C4: DOUGLAS DRIVE Runoff Area=1.420 ac 19.72% Impervious Runoff Depth=2.48"
Tc=6.0 min CN=78 Runoff=6.3 cfs 0.294 af

Subcatchment C5: LANDFILL Runoff Area=10.430 ac 80.82% Impervious Runoff Depth=4.26"
Tc=6.0 min CN=96 Runoff=69.1 cfs 3.706 af

Subcatchment C6: OVERLAND FLOW Runoff Area=1.290 ac 0.00% Impervious Runoff Depth=1.91"
Tc=6.0 min CN=71 Runoff=4.4 cfs 0.206 af

Subcatchment C7: LANDFILL Runoff Area=2.390 ac 31.80% Impervious Runoff Depth=3.22"
Tc=6.0 min CN=86 Runoff=13.2 cfs 0.640 af

Subcatchment C8: WOODS Runoff Area=6.050 ac 0.00% Impervious Runoff Depth=1.48"
Flow Length=1,095' Tc=32.2 min CN=65 Runoff=6.8 cfs 0.744 af

Subcatchment C9: WOODS Runoff Area=16.330 ac 0.00% Impervious Runoff Depth=1.48"
Flow Length=1,960' Tc=32.0 min CN=65 Runoff=18.4 cfs 2.009 af

Reach 20R: TOE SWALE Avg. Flow Depth=0.45' Max Vel=2.16 fps Inflow=5.8 cfs 0.091 af
n=0.069 L=1,065.0' S=0.0423 '/' Capacity=78.3 cfs Outflow=4.0 cfs 0.091 af

Reach OUT-C: WETLANDS COMPLEX Inflow=190.6 cfs 25.361 af
Outflow=190.6 cfs 25.361 af

Reach RC1: WETLANDS Avg. Flow Depth=0.59' Max Vel=2.28 fps Inflow=35.2 cfs 4.596 af
n=0.035 L=525.0' S=0.0099 '/' Capacity=107.5 cfs Outflow=34.8 cfs 4.596 af

Reach RC10: WETLAND Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.035 L=1,010.0' S=0.0433 '/' Capacity=496.7 cfs Outflow=0.0 cfs 0.000 af

Reach RC11: WOODS Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.100 L=255.0' S=0.0784 '/' Capacity=31.5 cfs Outflow=0.0 cfs 0.000 af

Reach RC12: WETLAND Avg. Flow Depth=0.54' Max Vel=6.43 fps Inflow=24.1 cfs 0.630 af
n=0.035 L=310.0' S=0.0905 '/' Capacity=405.6 cfs Outflow=24.0 cfs 0.630 af

Reach RC14: WETLAND Avg. Flow Depth=0.66' Max Vel=5.48 fps Inflow=55.4 cfs 7.426 af
n=0.035 L=440.0' S=0.0500 '/' Capacity=610.7 cfs Outflow=55.2 cfs 7.426 af

Reach RC15: FLOW THROUGH WOODS Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.100 L=165.0' S=0.2000 '/' Capacity=33.2 cfs Outflow=0.0 cfs 0.000 af

Reach RC16: WETLAND Avg. Flow Depth=0.65' Max Vel=3.95 fps Inflow=55.2 cfs 7.426 af
n=0.035 L=319.0' S=0.0265 '/' Capacity=140.5 cfs Outflow=55.1 cfs 7.426 af

Reach RC17: FLOW THROUGH WOODS Avg. Flow Depth=0.39' Max Vel=2.15 fps Inflow=10.6 cfs 0.674 af
n=0.100 L=158.1' S=0.1265 '/' Capacity=80.5 cfs Outflow=10.5 cfs 0.674 af

Reach RC18: FLOW THROUGH WOODS Avg. Flow Depth=0.23' Max Vel=1.70 fps Inflow=3.1 cfs 0.463 af
n=0.100 L=195.0' S=0.1641 '/' Capacity=76.3 cfs Outflow=3.1 cfs 0.463 af

Reach RC19: WETLAND Avg. Flow Depth=0.36' Max Vel=3.48 fps Inflow=12.8 cfs 1.137 af
n=0.035 L=545.0' S=0.0454 '/' Capacity=114.7 cfs Outflow=12.4 cfs 1.137 af

Reach RC2: WETLAND STREAM Avg. Flow Depth=0.59' Max Vel=4.14 fps Inflow=88.0 cfs 12.451 af
n=0.035 L=445.0' S=0.0332 '/' Capacity=1,248.5 cfs Outflow=87.8 cfs 12.449 af

Reach RC20: SWALE Avg. Flow Depth=0.31' Max Vel=3.78 fps Inflow=42.8 cfs 1.506 af
n=0.022 L=64.0' S=0.0156 '/' Capacity=994.2 cfs Outflow=41.9 cfs 1.506 af

Reach RC21: FLOW THROUGH WOODS Avg. Flow Depth=0.50' Max Vel=2.25 fps Inflow=10.7 cfs 0.325 af
n=0.100 L=140.0' S=0.1000 '/' Capacity=47.6 cfs Outflow=10.5 cfs 0.325 af

Reach RC22: WETLAND Avg. Flow Depth=0.36' Max Vel=3.72 fps Inflow=10.5 cfs 0.325 af
n=0.035 L=1,155.0' S=0.0515 '/' Capacity=306.0 cfs Outflow=7.6 cfs 0.325 af

Reach RC3: WETLAND STREAM Avg. Flow Depth=0.57' Max Vel=4.17 fps Inflow=85.3 cfs 12.131 af
n=0.035 L=1,160.0' S=0.0351 '/' Capacity=1,284.7 cfs Outflow=84.2 cfs 12.126 af

Reach RC4: WETLAND STREAM Avg. Flow Depth=0.99' Max Vel=6.24 fps Inflow=82.6 cfs 10.995 af
n=0.035 L=645.0' S=0.0376 '/' Capacity=1,660.9 cfs Outflow=82.5 cfs 10.994 af

Reach RC5: WETLAND STREAM Avg. Flow Depth=0.42' Max Vel=4.04 fps Inflow=52.0 cfs 3.570 af
n=0.035 L=205.0' S=0.0498 '/' Capacity=1,529.4 cfs Outflow=51.5 cfs 3.570 af

Reach RC6: WETLAND STREAM Avg. Flow Depth=0.45' Max Vel=2.22 fps Inflow=33.4 cfs 2.941 af
n=0.035 L=315.0' S=0.0135 '/' Capacity=795.1 cfs Outflow=32.0 cfs 2.940 af

Reach RC8: WOODS Avg. Flow Depth=0.51' Max Vel=1.55 fps Inflow=24.8 cfs 0.529 af
n=0.100 L=210.0' S=0.0464 '/' Capacity=97.7 cfs Outflow=22.4 cfs 0.529 af

Reach RC9: WETLAND Avg. Flow Depth=0.00' Max Vel=0.00 fps Inflow=0.0 cfs 0.000 af
n=0.035 L=955.0' S=0.0335 '/' Capacity=436.9 cfs Outflow=0.0 cfs 0.000 af

Pond FB10: FOREBAY Peak Elev=1,212.10' Storage=2,976 cf Inflow=6.8 cfs 0.744 af
Discarded=0.2 cfs 0.285 af Primary=6.5 cfs 0.439 af Outflow=6.8 cfs 0.724 af

Pond FB3: FOREBAY Peak Elev=1,122.21' Storage=3,243 cf Inflow=18.2 cfs 2.299 af
Discarded=0.2 cfs 0.286 af Primary=18.0 cfs 1.983 af Outflow=18.2 cfs 2.269 af

Pond FB5: FOREBAY Peak Elev=1,133.51' Storage=1,586 cf Inflow=10.9 cfs 0.545 af
Discarded=0.2 cfs 0.191 af Primary=10.7 cfs 0.354 af Outflow=10.9 cfs 0.545 af

Pond FB6: FOREBAY Peak Elev=1,126.07' Storage=5,570 cf Inflow=6.0 cfs 0.416 af
Primary=3.8 cfs 0.076 af Secondary=0.4 cfs 0.340 af Outflow=4.2 cfs 0.416 af

Pond FB7: FOREBAY Peak Elev=1,142.35' Storage=4,652 cf Inflow=36.7 cfs 1.999 af
Discarded=0.3 cfs 0.508 af Primary=36.3 cfs 1.463 af Outflow=36.6 cfs 1.971 af

Pond FB8: FOREBAY Peak Elev=1,151.64' Storage=6,869 cf Inflow=42.4 cfs 2.193 af
Discarded=0.4 cfs 0.649 af Primary=42.8 cfs 1.506 af Outflow=43.2 cfs 2.155 af

Pond FB9: FOREBAY Peak Elev=1,177.19' Storage=4,407 cf Inflow=11.8 cfs 0.755 af
Discarded=0.3 cfs 0.396 af Primary=11.5 cfs 0.358 af Outflow=11.8 cfs 0.754 af

Pond P1: WATER STORAGE FOR REUSE Peak Elev=1,136.46' Storage=7,993 cf Inflow=3.3 cfs 0.183 af
Outflow=0.0 cfs 0.000 af

Pond P10: INFILTRATION BASIN Peak Elev=1,208.59' Storage=10,120 cf Inflow=6.5 cfs 0.439 af
Discarded=0.8 cfs 0.439 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.8 cfs 0.439 af

Pond P2: INFILTRATION BASIN Peak Elev=1,109.75' Storage=33,727 cf Inflow=38.9 cfs 1.913 af
Discarded=1.3 cfs 1.587 af Primary=10.7 cfs 0.325 af Secondary=0.0 cfs 0.000 af Outflow=12.0 cfs 1.912 af

Pond P3: INFILTRATION BASIN Peak Elev=1,120.69' Storage=29,521 cf Inflow=18.0 cfs 1.983 af
Discarded=0.9 cfs 1.008 af Primary=10.6 cfs 0.674 af Secondary=0.0 cfs 0.000 af Outflow=11.5 cfs 1.682 af

Pond P4: INFILTRATION BASIN Peak Elev=1,139.35' Storage=2,554 cf Inflow=4.6 cfs 0.215 af
Discarded=0.9 cfs 0.215 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.9 cfs 0.215 af

Pond P5: INFILTRATION BASIN Peak Elev=1,132.57' Storage=6,318 cf Inflow=10.7 cfs 0.354 af
Discarded=0.4 cfs 0.216 af Primary=8.5 cfs 0.138 af Secondary=0.0 cfs 0.000 af Outflow=8.9 cfs 0.354 af

Pond P6: RAIN GARDEN Peak Elev=1,124.60' Storage=2,218 cf Inflow=4.2 cfs 0.416 af
Primary=2.4 cfs 0.403 af Secondary=0.0 cfs 0.000 af Outflow=2.4 cfs 0.403 af

Pond P7: INFILTRATION BASIN Peak Elev=1,140.78' Storage=20,227 cf Inflow=36.3 cfs 1.463 af
Discarded=1.5 cfs 0.833 af Primary=24.1 cfs 0.630 af Secondary=0.0 cfs 0.000 af Outflow=25.6 cfs 1.463 af

Pond P8: INFILTRATION BASIN Peak Elev=1,148.81' Storage=30,379 cf Inflow=41.9 cfs 1.506 af
Discarded=1.2 cfs 0.978 af Primary=24.8 cfs 0.529 af Secondary=0.0 cfs 0.000 af Outflow=25.9 cfs 1.506 af

Pond P9: INFILTRATION BASIN Peak Elev=1,174.68' Storage=9,818 cf Inflow=11.5 cfs 0.358 af
Discarded=0.8 cfs 0.358 af Primary=0.0 cfs 0.000 af Secondary=0.0 cfs 0.000 af Outflow=0.8 cfs 0.358 af

Pond PCB1: CATCH BASIN Peak Elev=1,175.15' Inflow=35.3 cfs 1.745 af
15.0" Round Culvert n=0.013 L=145.3' S=0.1445 '/' Outflow=35.3 cfs 1.745 af

Pond PHW19: HEADWALL Peak Elev=1,175.70' Inflow=72.2 cfs 3.797 af
Primary=36.1 cfs 1.899 af Secondary=36.1 cfs 1.899 af Outflow=72.2 cfs 3.797 af

Pond PHW24: HEADWALL Peak Elev=1,215.21' Inflow=13.2 cfs 0.640 af
Primary=7.4 cfs 0.549 af Secondary=5.8 cfs 0.091 af Outflow=13.2 cfs 0.640 af

Pond PHW3: HEADWALL Peak Elev=1,154.40' Inflow=3.1 cfs 0.463 af
15.0" Round Culvert n=0.013 L=541.7' S=0.0471 '/' Outflow=3.1 cfs 0.463 af

Pond PHW5: HEADWALL Peak Elev=1,155.17' Inflow=17.8 cfs 2.145 af
15.0" Round Culvert n=0.013 L=353.3' S=0.0609 '/' Outflow=17.8 cfs 2.145 af

Pond RC13: NEW CULVERT Peak Elev=1,128.01' Inflow=54.8 cfs 7.288 af
72.0" x 72.0" Box Culvert w/ 24.0" inside fill n=0.025 L=53.0' S=0.0189 '/' Outflow=54.8 cfs 7.288 af

Pond RC7: NEW DOUGLAS DRIVE CULVERT Peak Elev=1,111.31' Inflow=33.4 cfs 2.941 af
144.0" x 72.0" Box Culvert w/ 24.0" inside fill n=0.025 L=43.2' S=0.0058 '/' Outflow=33.4 cfs 2.941 af

Total Runoff Area = 228.890 ac Runoff Volume = 33.936 af Average Runoff Depth = 1.78"
92.57% Pervious = 211.880 ac 7.43% Impervious = 17.010 ac

Appendix J.4

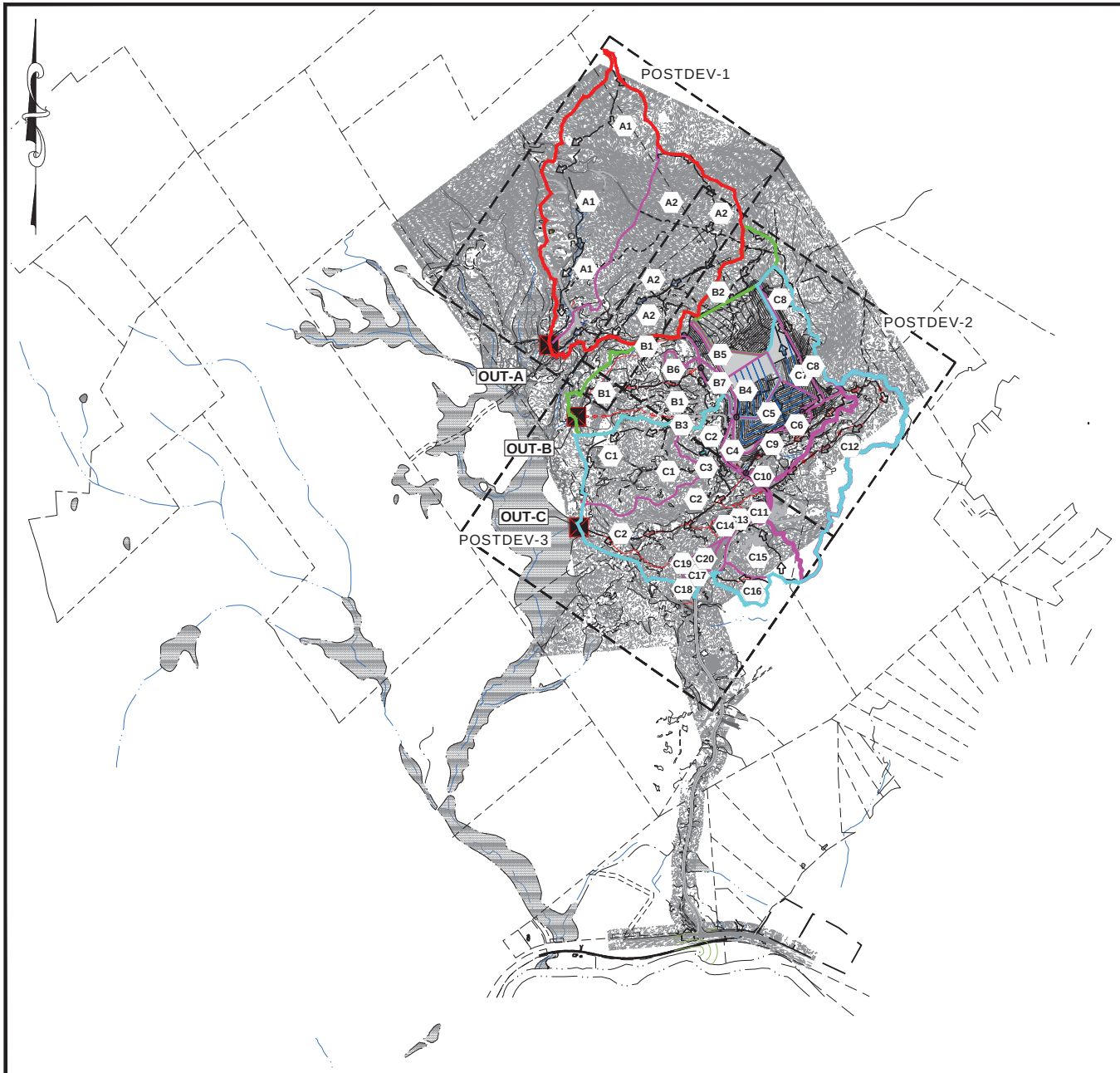
Intermediate-Development Drainage Analysis (Stage 2, Cell 1)

J.4 Intermediate-Development Drainage Analysis

i. Drainage Diagrams

ii. 10-year, 24-Hour Storm Calculations (Full Calculations)

iii. 2, 10, 25 and 50 -year, 24-Hour Storm Calculation Summaries



POST-DEVELOPMENT WATERSHED PLAN LEGEND

PROPOSED CONTOUR (2')	1100
PROPOSED CONTOUR (10')	1100
OUTFALL (OUT) A WATERSHED BOUNDARY	
OUTFALL (OUT) B WATERSHED BOUNDARY	
OUTFALL (OUT) C WATERSHED BOUNDARY	
SUBCATCHMENT BOUNDARY	
SUBBASIN ID	C1
SUBBASIN TIME OF CONCENTRATION	Tc
MODEL REACH	
IMPERVIOUS SURFACE	
OUTFALL	
EXISTING WETLAND	

NOTES:
1. FOR CLARITY Tc FLOW PATHS WITH TIMES LESS THAN OR APPROXIMATELY 6 MINUTES ARE NOT SHOWN.
2. DARK GREY SYMBOLIZES PAVEMENT, LIGHT GREY GRAVEL SURFACES, AND LIGHT GREY SYMBOLIZES EXPOSED GEOMEMBRANE LINER.
3. THIS MODEL ASSUMED UP TO 10 ACRES OF EXPOSED GEOMEMBRANE.

OUT-A

A1	AREA: 89.3 AC.
A2	AREA: 92.8 AC.

OUT-B

B1	B2	B3	B4	B5	B6
AREA: 46.2 AC.	AREA: 17.7 AC.	AREA: 0.6 AC.	AREA: 10.4 AC.	AREA: 4.2 AC.	AREA: 1.7 AC.

B7
AREA: 2.9 AC.

OUT-C

C1	C2	C3	C4	C5	C6
AREA: 39.2 AC.	AREA: 62.1 AC.	AREA: 0.8 AC.	AREA: 1.5 AC.	AREA: 12.5 AC.	AREA: 1.3 AC.
C7	C8	C9	C10	C11	C12
AREA: 9.4 AC.	AREA: 14.1 AC.	AREA: 16.3 AC.	AREA: 2.0 AC.	AREA: 1.9 AC.	AREA: 54.1 AC.
C13	C14	C15	C16	C17	C18
AREA: 1.0 AC.	AREA: 0.9 AC.	AREA: 15.9 AC.	AREA: 6.1 AC.	AREA: 0.2 AC.	AREA: 0.3 AC.
C19	C20				
AREA: 0.6 AC.	AREA: 6.0 AC.				

no.	revision	date	by

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designed by: NJM
drawn by: NJM
approved by: AJS
date: April 2023
project no: 1101
checked by: AJS
scale: 0 750' 1500'
Scale: 1" = 750'

Granite State Landfill, LLC.
Dalton, New Hampshire
NHDES Alteration of Terrain
Permit Application
Intermediate-Development 2 Diagram
Index

drawing no. INTDEV2-1
sheet: 1 of 4

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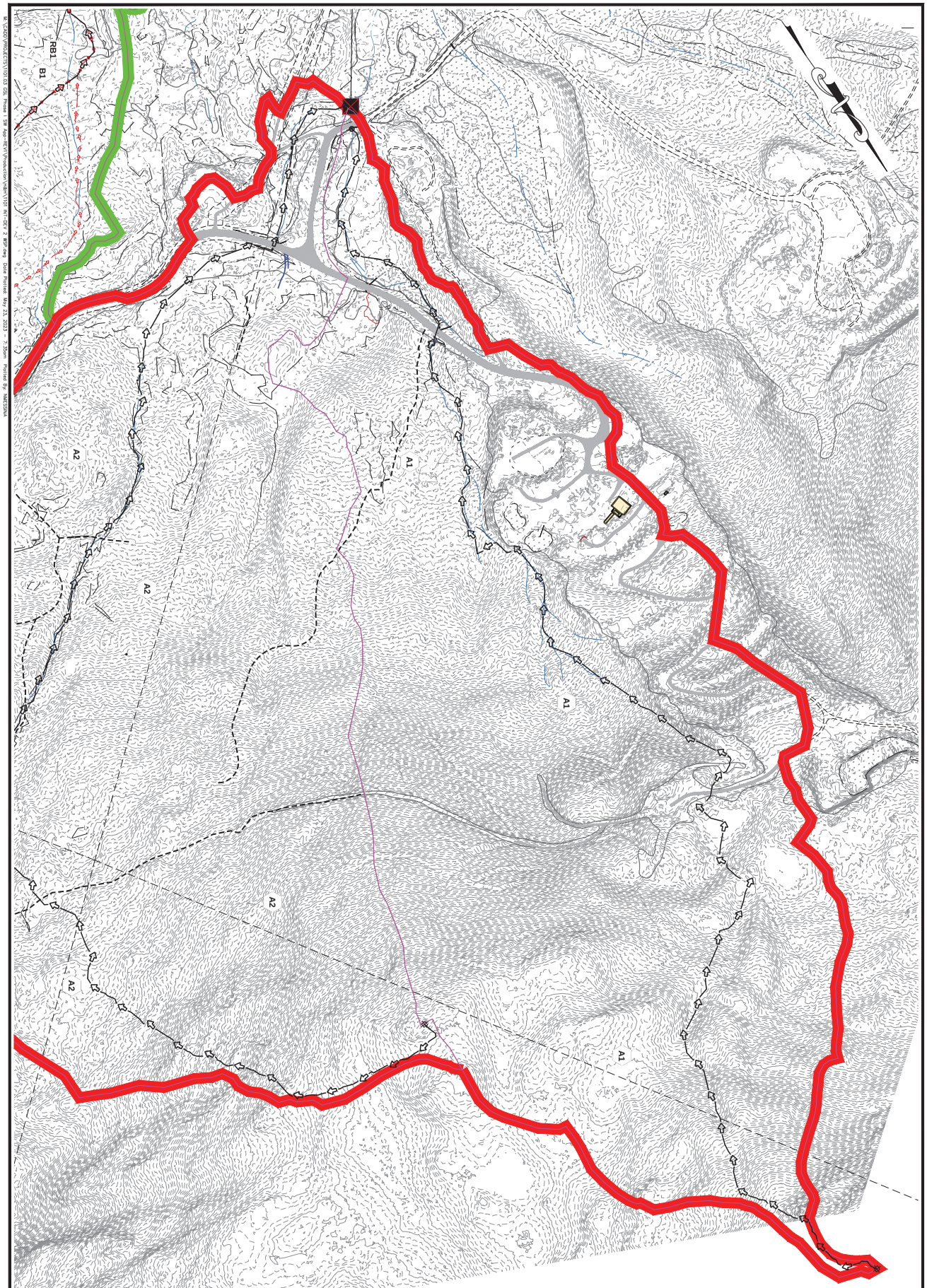

Granite State Landfill, LLC.
Dalton, New Hampshire

NHDES Alteration of Terrain
Permit Application

Intermediate-Development 2
Drainage Diagram

sheet 2 of 4

drawing no. INTDEV2-2

date: April 2023
designed by: NJM
project no: 1101
drawn by: NJM
checked by: AJS
approved by: AJS
scale: 0 150' 300'
Scale: 1" = 150'

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