



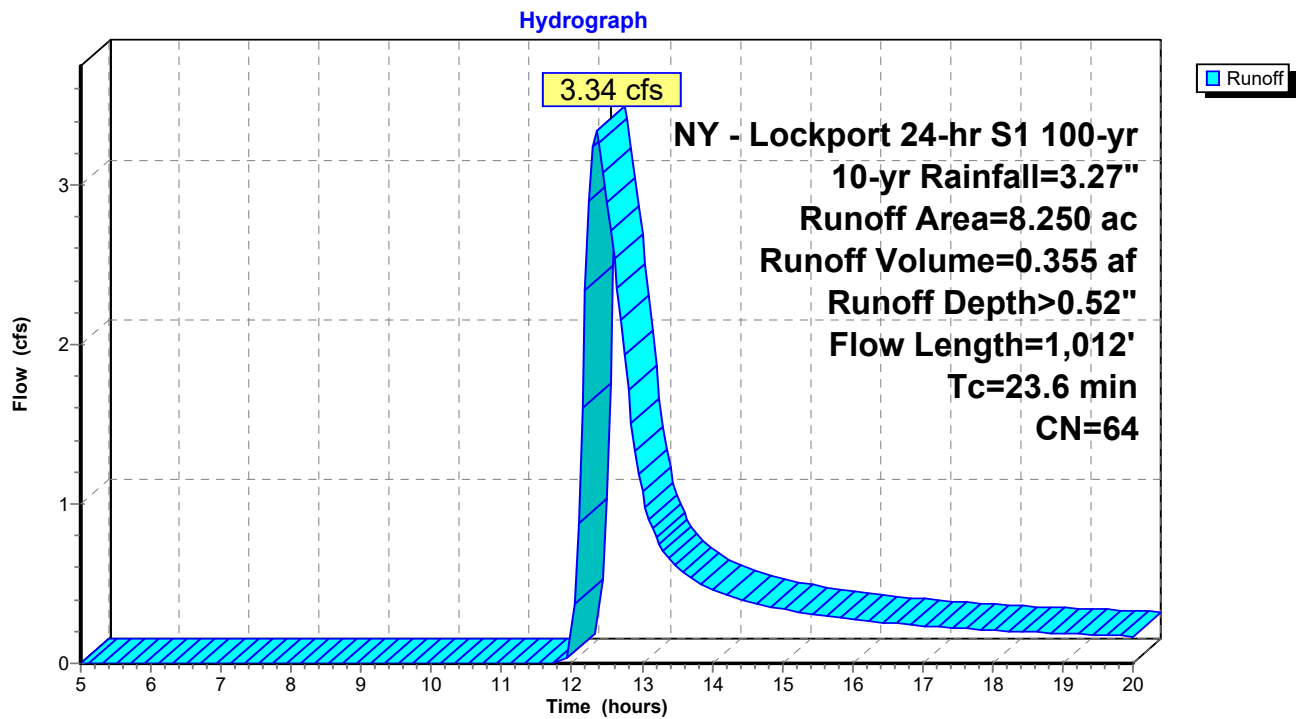
**Lockport-Batavia Line #112
Rebuild Project**

Appendix G

Stormwater Pollution Prevention Plan

Part 3 of 8

Subcatchment DA12: EXISTING DA STR 90-96



Summary for Subcatchment DA13: EXISTING DA STR 97-103

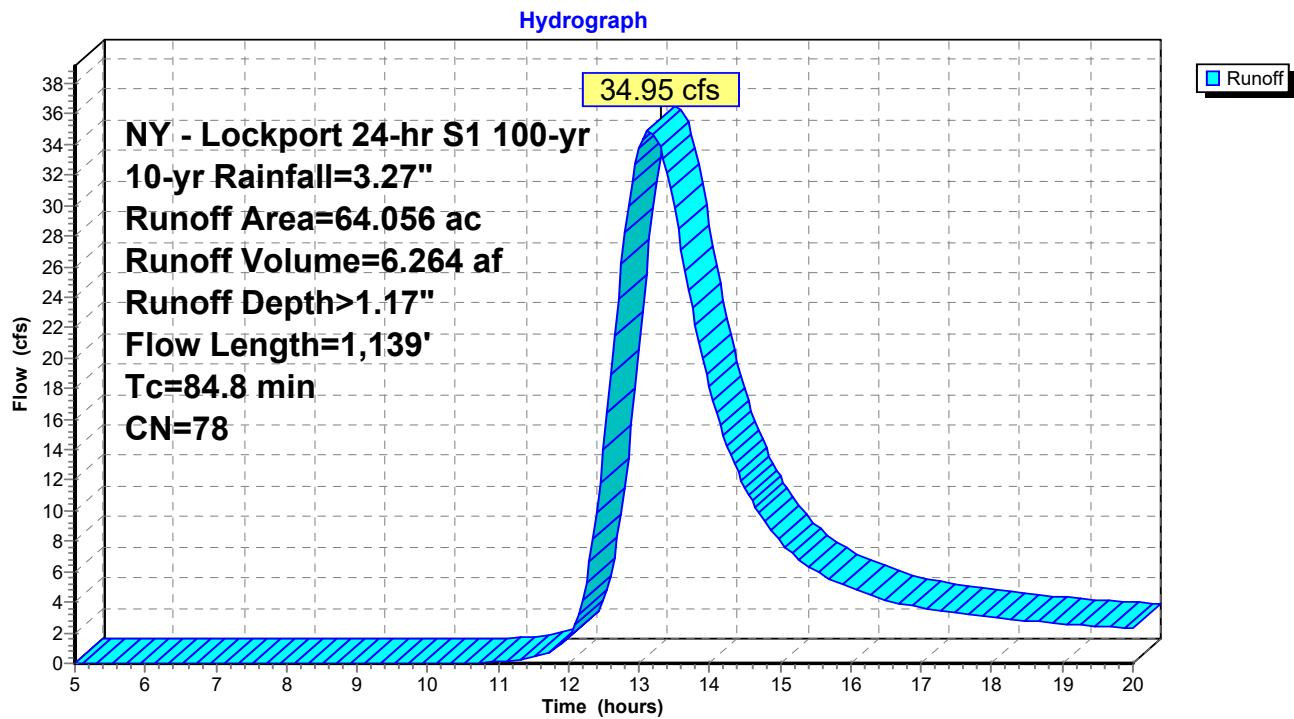
Runoff = 34.95 cfs @ 13.12 hrs, Volume= 6.264 af, Depth> 1.17"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 0.113	49	A-50-75% GRASS COVER, FAIR
* 0.131	30	A-MEADOW, NON-GRAZED
* 12.491	78	D-MEADOW, NON-GRAZED
* 0.855	80	D-75% GRASS COVER, GOOD
* 0.366	84	D-50-75% GRASS COVER, FAIR
* 0.263	79	D-WOODS/GRASS COMB., GOOD
* 49.419	78	D-MEADOW, NON-GRAZED
* 0.418	98	D-WATER SURFACE, 0% IMP
64.056	78	Weighted Average
63.638		99.35% Pervious Area
0.418		0.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.1	100	0.0030	0.07		Sheet Flow, 100 Grass: Short n= 0.150 P2= 2.22"
11.2	258	0.0030	0.38		Shallow Concentrated Flow, 258 Short Grass Pasture Kv= 7.0 fps
31.4	132	0.0001	0.07		Shallow Concentrated Flow, 132 Short Grass Pasture Kv= 7.0 fps
4.0	176	0.0110	0.73		Shallow Concentrated Flow, 176 Short Grass Pasture Kv= 7.0 fps
7.7	270	0.0070	0.59		Shallow Concentrated Flow, 270 Short Grass Pasture Kv= 7.0 fps
5.4	203	0.0080	0.63		Shallow Concentrated Flow, 203 Short Grass Pasture Kv= 7.0 fps
84.8	1,139	Total			

Subcatchment DA13: EXISTING DA STR 97-103



Summary for Subcatchment DA14: EXISTING DA STR 104-106

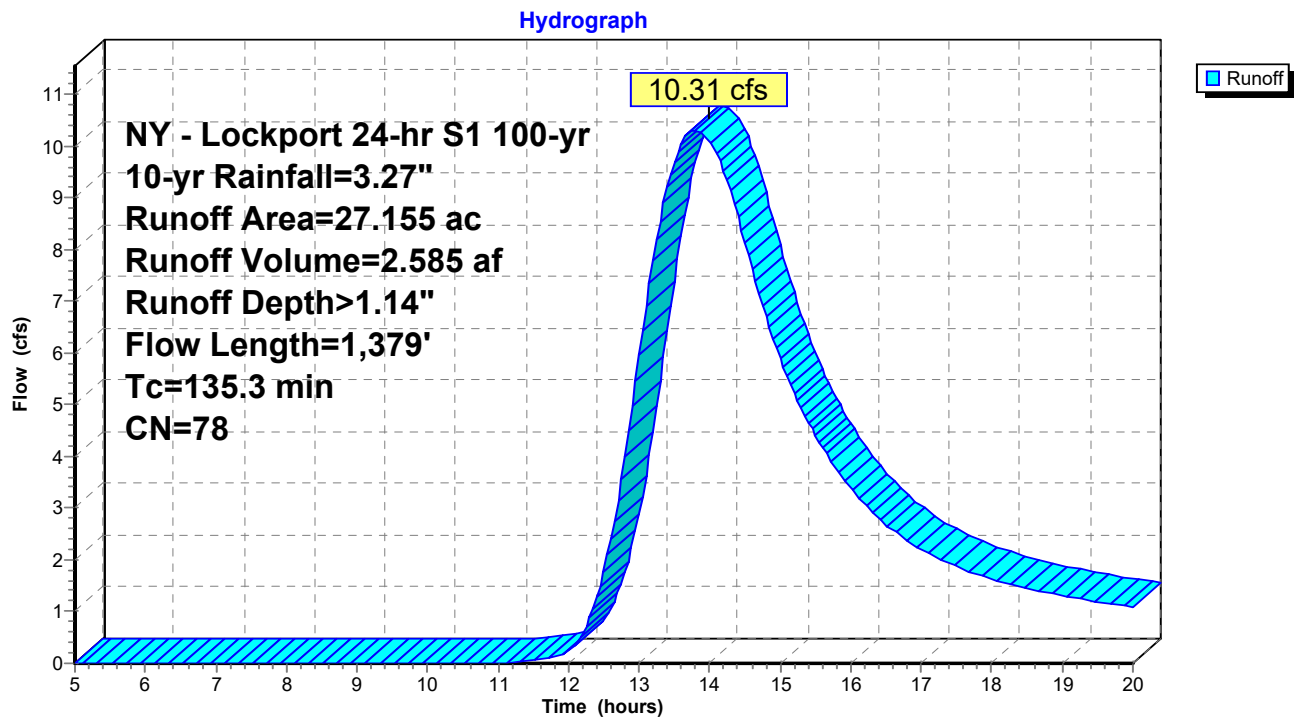
Runoff = 10.31 cfs @ 13.80 hrs, Volume= 2.585 af, Depth> 1.14"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 0.471	61	B-75% GRASS COVER, GOOD
* 1.291	80	D-75% GRASS COVER, GOOD
* 0.937	84	D-50-75% GRASS COVER, FAIR
* 1.189	79	D-WOODS/GRASS COMB., GOOD
* 2.124	78	D-MEADOW, NON-GRAZED
* 0.606	80	D-75% GRASS COVER, GOOD
* 0.552	79	D-WOODS/GRASS COMB., GOOD
* 10.418	78	D-MEADOW, NON-GRAZED
* 0.104	98	D-WATER SURFACE, 0% IMP
* 0.137	98	D-WATER SURFACE, 0% IMP
* 0.893	80	D-75% GRASS COVER, GOOD
* 0.115	80	D-50-75% GRASS COVER, FAIR
* 8.318	78	D-MEADOW, NON-GRAZED
27.155	78	Weighted Average
26.914		99.11% Pervious Area
0.241		0.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.6	100	0.0330	0.17		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.22"
0.9	53	0.0220	1.04		Shallow Concentrated Flow, 53
					Short Grass Pasture Kv= 7.0 fps
2.3	140	0.0210	1.01		Shallow Concentrated Flow, 140
					Short Grass Pasture Kv= 7.0 fps
2.2	140	0.0220	1.04		Shallow Concentrated Flow, 140
					Short Grass Pasture Kv= 7.0 fps
5.8	230	0.0090	0.66		Shallow Concentrated Flow, 230
					Short Grass Pasture Kv= 7.0 fps
7.6	267	0.0070	0.59		Shallow Concentrated Flow, 267
					Short Grass Pasture Kv= 7.0 fps
43.8	184	0.0001	0.07		Shallow Concentrated Flow, 184
					Short Grass Pasture Kv= 7.0 fps
63.1	265	0.0001	0.07		Shallow Concentrated Flow, 265
					Short Grass Pasture Kv= 7.0 fps
135.3	1,379	Total			

Subcatchment DA14: EXISTING DA STR 104-106



Summary for Subcatchment DA15: EXISTING DA STR 106-109

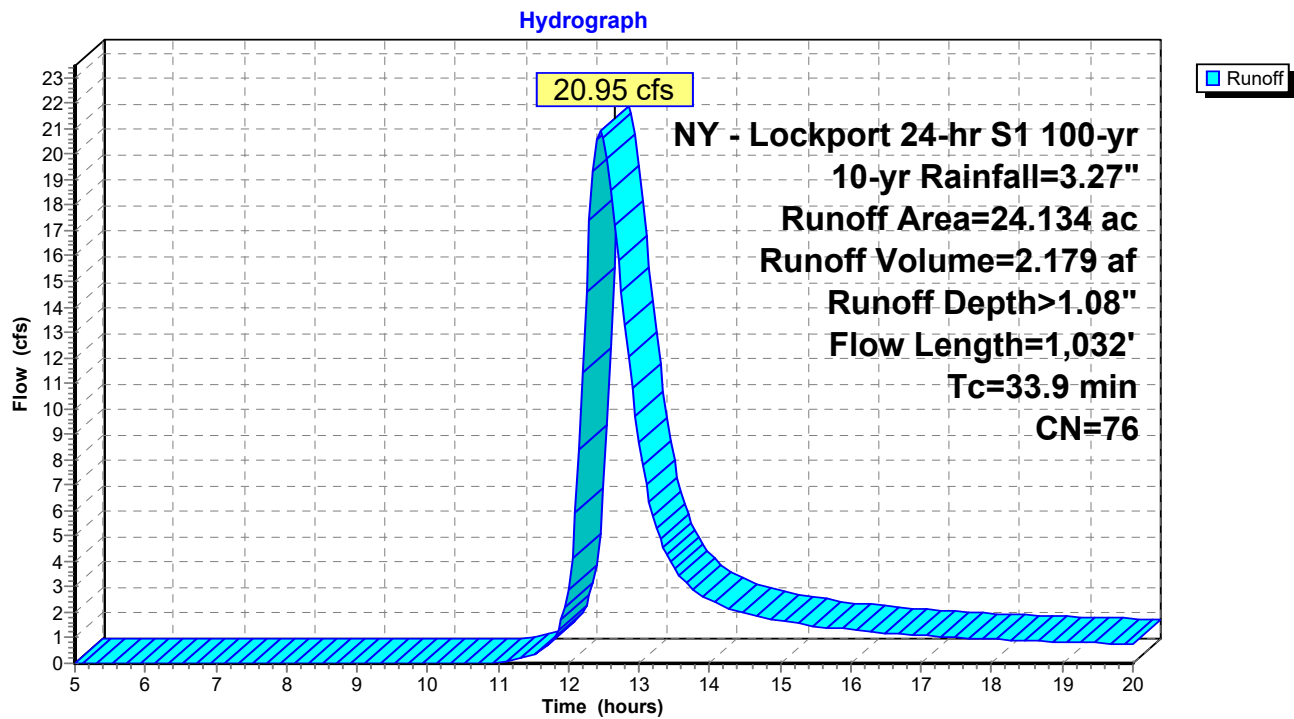
Runoff = 20.95 cfs @ 12.45 hrs, Volume= 2.179 af, Depth> 1.08"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 0.972	61	B-75% GRASS COVER, GOOD
* 1.615	69	B-50-75% GRASS COVER, FAIR
* 2.680	58	B-MEADOW, NON-GRAZED
* 0.028	80	D-75% GRASS COVER, GOOD
* 2.330	78	D-MEADOW, NON-GRAZED
* 0.585	80	D-75% GRASS COVER, GOOD
* 0.724	84	D-50-75% GRASS COVER, FAIR
* 0.465	79	D-WOODS/GRASS COMB., GOOD
* 13.770	78	D-MEADOW, NON-GRAZED
* 0.880	98	D-WATER SURFACE, 0% IMP
* 0.085	98	D-WATER SURFACE, 0% IMP
24.134	76	Weighted Average
23.169		96.00% Pervious Area
0.965		4.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0120	0.12		Sheet Flow, 100 Grass: Short n= 0.150 P2= 2.22"
2.1	148	0.0270	1.15		Shallow Concentrated Flow, 148 Short Grass Pasture Kv= 7.0 fps
3.4	204	0.0200	0.99		Shallow Concentrated Flow, 204 Short Grass Pasture Kv= 7.0 fps
6.0	300	0.0140	0.83		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
8.0	280	0.0070	0.59		Shallow Concentrated Flow, 280 Short Grass Pasture Kv= 7.0 fps
33.9	1,032	Total			

Subcatchment DA15: EXISTING DA STR 106-109



Summary for Subcatchment DA16: EXISTING DA STR 110-117

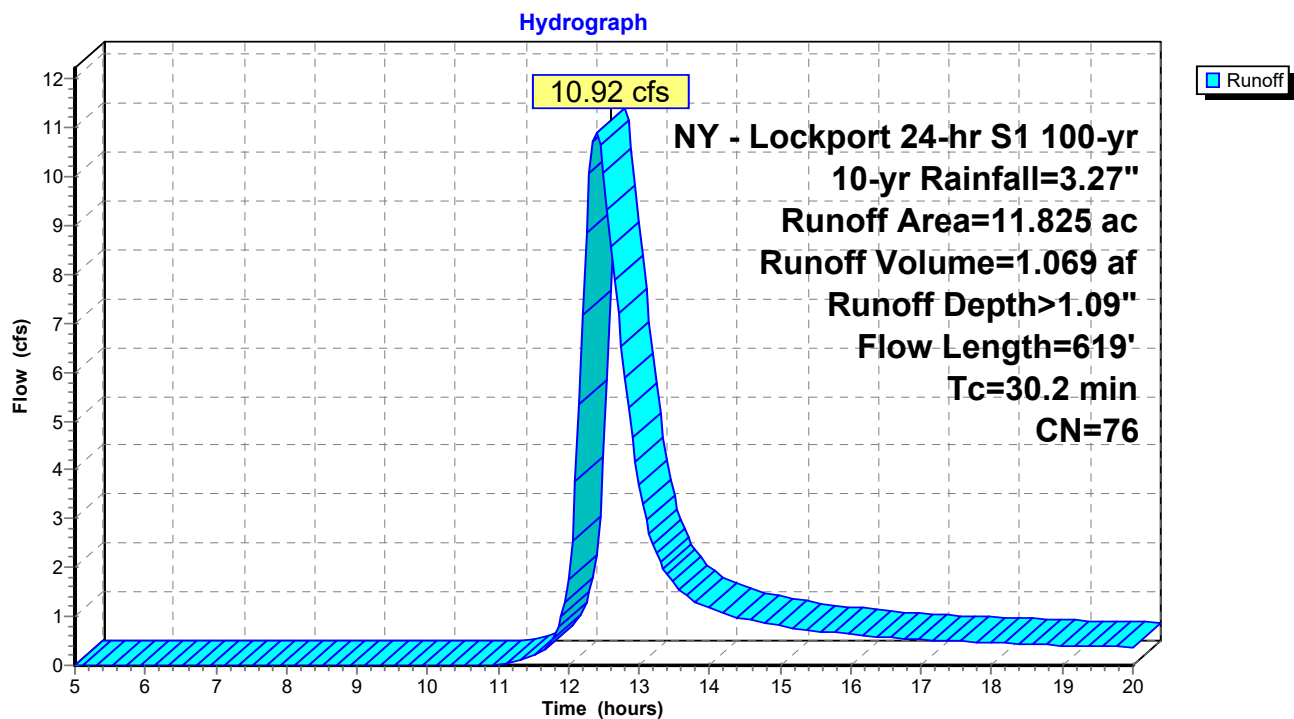
Runoff = 10.92 cfs @ 12.40 hrs, Volume= 1.069 af, Depth> 1.09"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 0.423	61	B-75%GRASS COVER, GOOD
* 0.460	69	B-50-75% GRASS COVER, FAIR
* 2.069	58	D-MEADOW, NON-GRAZED
* 0.045	78	D-MEADOW, NON-GRAZED
* 0.049	98	D-MEADOW, NON-GRAZED
* 0.487	80	D-75% GRASS COVER, GOOD
* 0.960	84	D-50-75% GRASS COVER, FAIR
* 0.293	79	D-WOODS/GRASS COMB., GOOD
* 5.704	78	D-MEADOW, NON-GRAZED
* 1.222	98	D-MEADOW, NON-GRAZED
* 0.048	79	D-WOODS/GRASS COMB., GOOD
* 0.009	78	D-MEADOW, NON-GRAZED
* 0.056	98	D-MEADOW, NON-GRAZED
11.825	76	Weighted Average
10.498		88.78% Pervious Area
1.327		11.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	100	0.0070	0.09		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.22"
3.4	222	0.0240	1.08		Shallow Concentrated Flow, 222
					Short Grass Pasture Kv= 7.0 fps
4.1	154	0.0080	0.63		Shallow Concentrated Flow, 154
					Short Grass Pasture Kv= 7.0 fps
4.8	143	0.0050	0.49		Shallow Concentrated Flow, 143
					Short Grass Pasture Kv= 7.0 fps
30.2	619	Total			

Subcatchment DA16: EXISTING DA STR 110-117



Summary for Subcatchment DA17: EXISTING DA STR 113-116

Runoff = 6.09 cfs @ 14.90 hrs, Volume= 2.059 af, Depth> 1.12"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 0.289	80	D-75% GRASS COVER, GOOD
* 0.899	84	D-50-75% GRASS COVER, FAIR
* 2.853	78	D-MEADOW, NON-GRAZED
* 0.540	78	D-MEADOW, NON-GRAZED
* 0.077	80	D-75% GRASS COVER, GOOD
* 0.177	84	D-50-75% GRASS COVER, FAIR
* 0.010	79	D-WOODS/GRASS COMB., GOOD
* 6.443	78	D-MEADOW, NON-GRAZED
* 7.074	78	D-MEADOW, NON-GRAZED
* 0.337	98	D-WATER SURFACE, 0% IMP
* 3.150	78	D-MEADOW, NON-GRAZED
* 0.141	98	D-WATER SURFACE, 0% IMP
21.990	79	Weighted Average
21.512		97.83% Pervious Area
0.478		2.17% Impervious Area

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NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Prepared by Fisher Associates

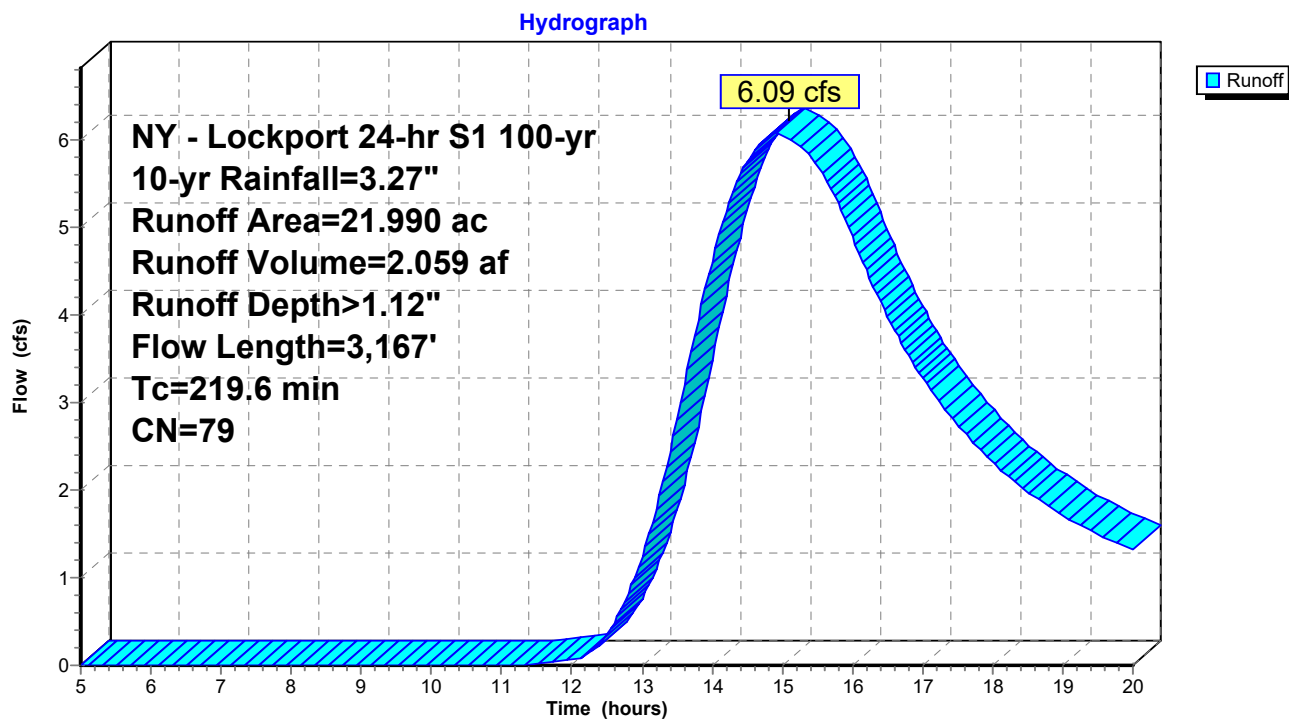
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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	100	0.0610	0.22		Sheet Flow, 100 Grass: Short n= 0.150 P2= 2.22"
3.0	144	0.0130	0.80		Shallow Concentrated Flow, 144 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
9.2	300	0.0060	0.54		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
71.4	300	0.0001	0.07		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
12.2	162	0.0010	0.22		Shallow Concentrated Flow, 162 Short Grass Pasture Kv= 7.0 fps
10.1	300	0.0050	0.49		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
8.3	290	0.0070	0.59		Shallow Concentrated Flow, 290 Short Grass Pasture Kv= 7.0 fps
0.6	50	0.0400	1.40		Shallow Concentrated Flow, 50 Short Grass Pasture Kv= 7.0 fps
4.4	242	0.0170	0.91		Shallow Concentrated Flow, 242 Short Grass Pasture Kv= 7.0 fps
6.3	300	0.0130	0.80		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
18.8	79	0.0001	0.07		Shallow Concentrated Flow, 79 Short Grass Pasture Kv= 7.0 fps
219.6	3,167	Total			

Subcatchment DA17: EXISTING DA STR 113-116



Summary for Subcatchment DA18: EXISTING DA STR 36

Runoff = 9.57 cfs @ 12.74 hrs, Volume= 1.297 af, Depth> 1.25"
 Routed to Link 1L : EXISTING

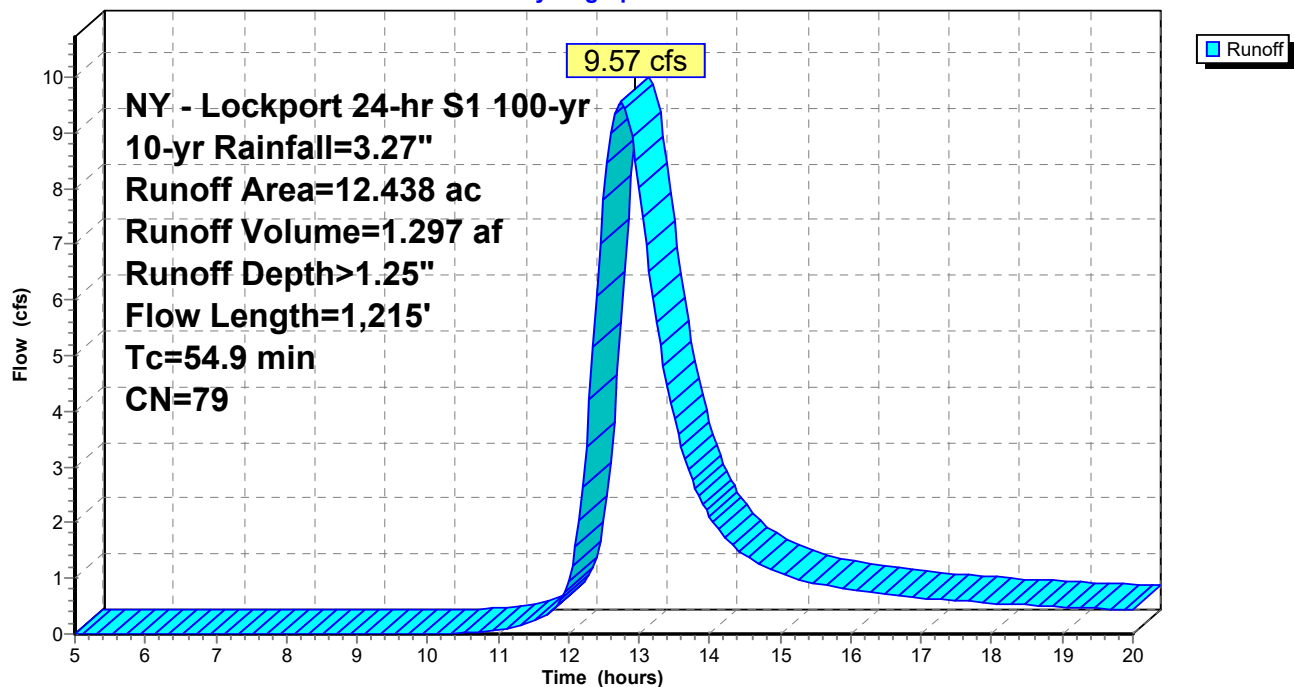
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 0.143	80	D - 80 - Developed open space
* 0.461	80	D - 80 - Developed open space
* 1.014	82	D - 82 - Developed Low intensity
* 1.218	82	D - 82 - Developed Low intensity
* 0.081	77	D - 77 - Deciduous Forest
* 7.367	78	D - 78 - Meadowed, grass, non-grazed land
* 2.154	78	D - 78 - Meadowed, grass, non-grazed land
12.438	79	Weighted Average
12.438		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	100	0.0200	0.14		Sheet Flow, 100' sheet
					Grass: Short n= 0.150 P2= 2.22"
43.1	1,115	0.0038	0.43		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
54.9	1,215	Total			

Subcatchment DA18: EXISTING DA STR 36

Hydrograph



Summary for Subcatchment DA19: EXISTING DA STR 42-47

Runoff = 49.00 cfs @ 13.66 hrs, Volume= 11.187 af, Depth> 1.21"
 Routed to Link 1L : EXISTING

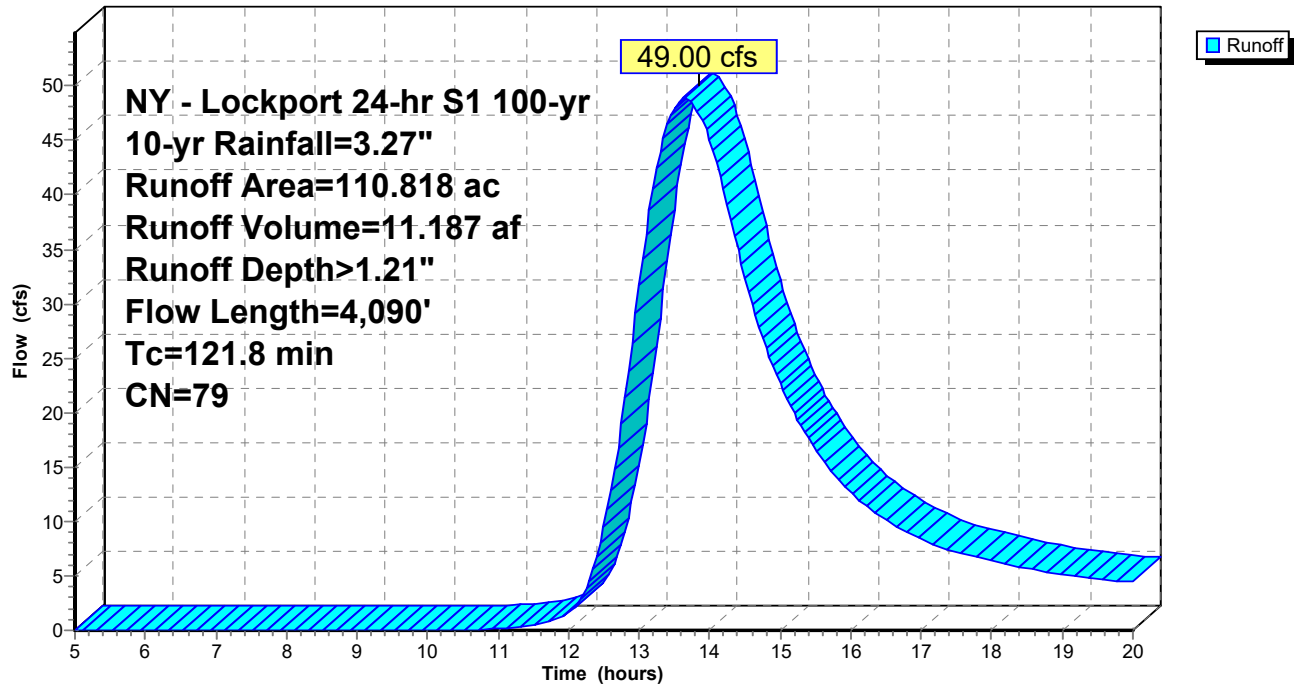
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 3.220	80	D - 80 - Developed open space
* 2.932	80	D - 80 - Developed open space
* 0.003	80	D - 80 - Developed open space
* 10.164	82	D - 82 - Developed Low intensity
* 6.410	82	D - 82 - Developed Low intensity
* 0.607	82	D - 82 - Developed Low intensity
* 5.494	77	D - 77 - Deciduous Forest
* 15.746	78	D - 78 - Meadowed, grass, non-grazed land
* 63.740	78	D - 78 - Meadowed, grass, non-grazed land
* 2.502	78	D - 78 - Meadowed, grass, non-grazed land
110.818	79	Weighted Average
110.818		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	100	0.0300	0.17		Sheet Flow, 100' Sheet
					Grass: Short n= 0.150 P2= 2.22"
88.0	2,225	0.0071	0.42		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
23.8	1,765	0.0068	1.24		Shallow Concentrated Flow,
					Grassed Waterway Kv= 15.0 fps
121.8	4,090	Total			

Subcatchment DA19: EXISTING DA STR 42-47

Hydrograph



Summary for Subcatchment DA2: EXISTING DA STR 11-12

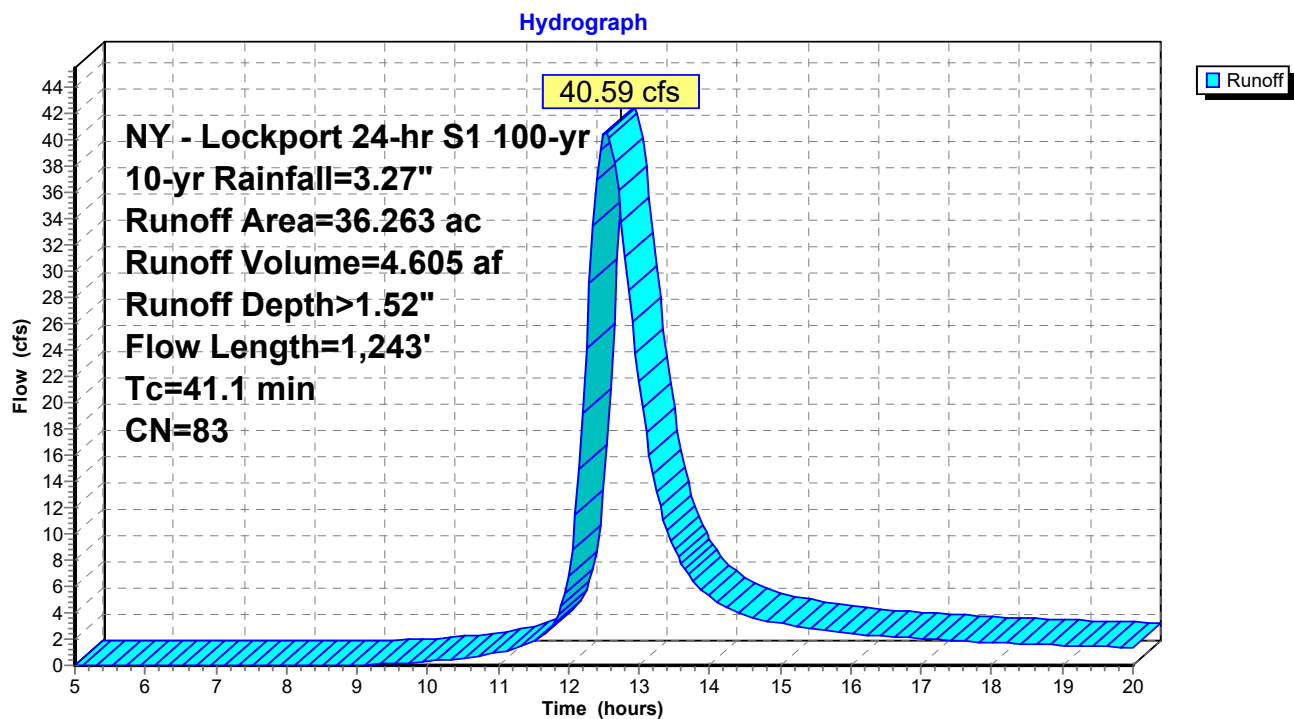
Runoff = 40.59 cfs @ 12.54 hrs, Volume= 4.605 af, Depth> 1.52"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 2.487	80	80-D-75% GRASS COVER, GOOD
* 1.050	84	84-D-50-75% GRASS COVER, FAIR
* 1.903	89	89-D-<50% GRASS COVER, POOR
* 0.250	95	95-D-URBAN COMMERCIAL, 85% IMP
* 0.043	79	79-D-WOODS/GRASS COMB., GOOD
* 1.541	78	78-D-MEADOW, NONGRAZED
* 0.054	80	80-D-75% GRASS COVER, GOOD
* 0.598	84	84-D-50-75% GRASS COVER, FAIR
* 2.041	89	89-D-<50% GRASS COVER, POOR
* 0.286	95	95-D-URBAN COMMERCIAL, 85% IMP
* 1.744	78	78-D-MEADOW, NON-GRAZED
* 6.222	80	80-D-75% GRASS COVER, GOOD
* 7.613	84	84-D-50-75% GRASS COVER, FAIR
* 3.609	89	89-D-<50% GRASS COVER, POOR
* 0.887	95	95-D-URBAN COMMERCIAL, 85% IMP
* 3.299	79	79-D-WOODS/GRASS COMB., GOOD
* 2.636	78	78-D-MEADOW, NON-GRAZED
36.263	83	Weighted Average
36.263		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	100	0.0050	0.66		Sheet Flow, 100' Smooth surfaces n= 0.011 P2= 2.22"
1.4	115	0.0043	1.33		Shallow Concentrated Flow, Paved Kv= 20.3 fps
2.4	256	0.0078	1.79		Shallow Concentrated Flow, Paved Kv= 20.3 fps
10.3	240	0.0031	0.39		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.3	30	0.0064	1.62		Shallow Concentrated Flow, Paved Kv= 20.3 fps
2.8	128	0.0117	0.76		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
14.2	209	0.0024	0.24		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
7.2	165	0.0030	0.38		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
41.1	1,243	Total			

Subcatchment DA2: EXISTING DA STR 11-12



Summary for Subcatchment DA3: EXISTING DA STR 17-20

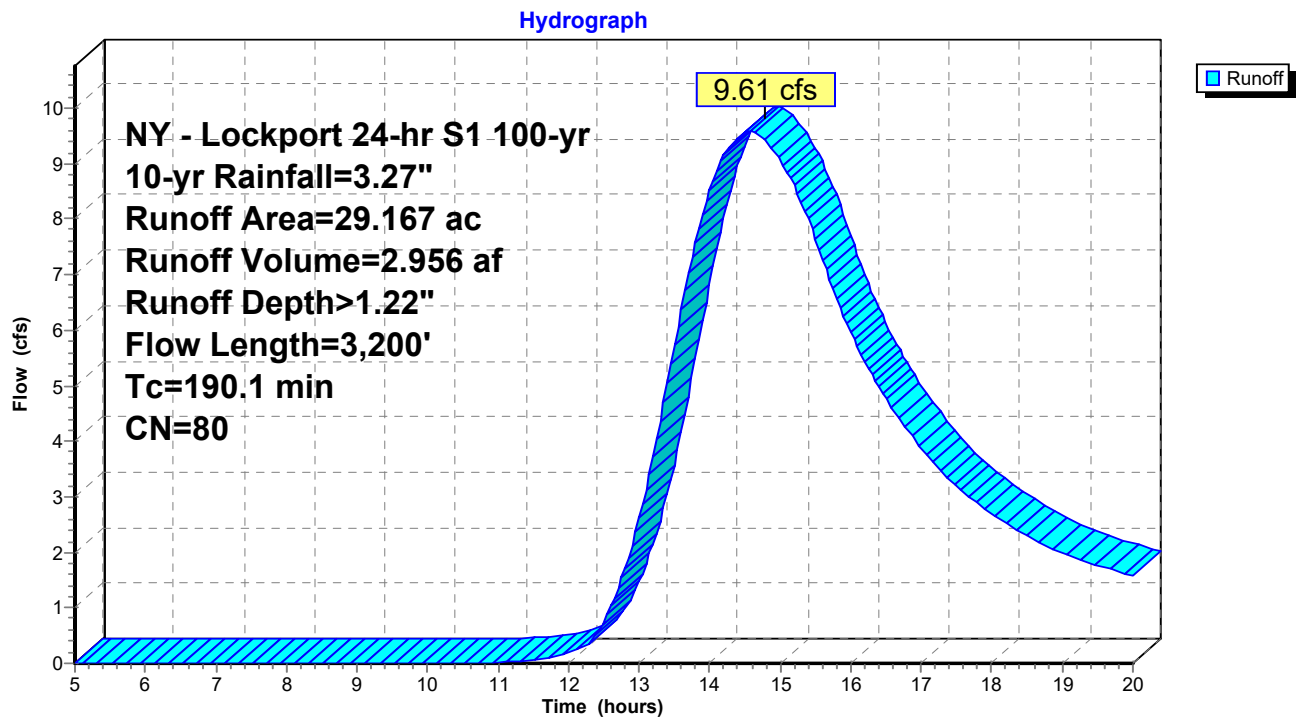
Runoff = 9.61 cfs @ 14.57 hrs, Volume= 2.956 af, Depth> 1.22"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 0.391	80	80-D-75% GRASS COVER, GOOD
* 4.601	79	WOODS/GRASS COMB., GOOD
* 1.427	79	WOODS/GRASS COMB., GOOD
* 2.196	78	MEADOW, NON-GRAZED
* 0.320	98	WATER SURFACE
* 3.636	80	75% GRASS COVER, GOOD
* 1.957	84	50-75% GRASS COVER, FAIR
* 1.104	89	<50% GRASS COVER, POOR
* 0.375	95	URBAN COMMERCIAL, 85% IMP
* 2.017	79	WOODS/GRASS COMB., GOOD
* 0.337	84	50-75% GRASS COVER, FAIR
* 1.756	79	WOODS/GRASS COMB., GOOD
* 0.470	79	WOODS/GRASS COMB., GOOD
* 8.306	78	MEADOW, NON-GRAZED
* 0.274	98	WATER SURFACE, 0% IMP
29.167	80	Weighted Average
28.573		97.96% Pervious Area
0.594		2.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.2	100	0.0175	0.06		Sheet Flow, 100' Sheet Woods: Light underbrush n= 0.400 P2= 2.22"
7.6	186	0.0067	0.41		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
8.3	368	0.0217	0.74		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
31.5	708	0.0056	0.37		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
23.1	576	0.0069	0.42		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
14.5	452	0.0055	0.52		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
77.9	810	0.0012	0.17		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
190.1	3,200	Total			

Subcatchment DA3: EXISTING DA STR 17-20



Summary for Subcatchment DA4: EXISTING DA STR 21-23

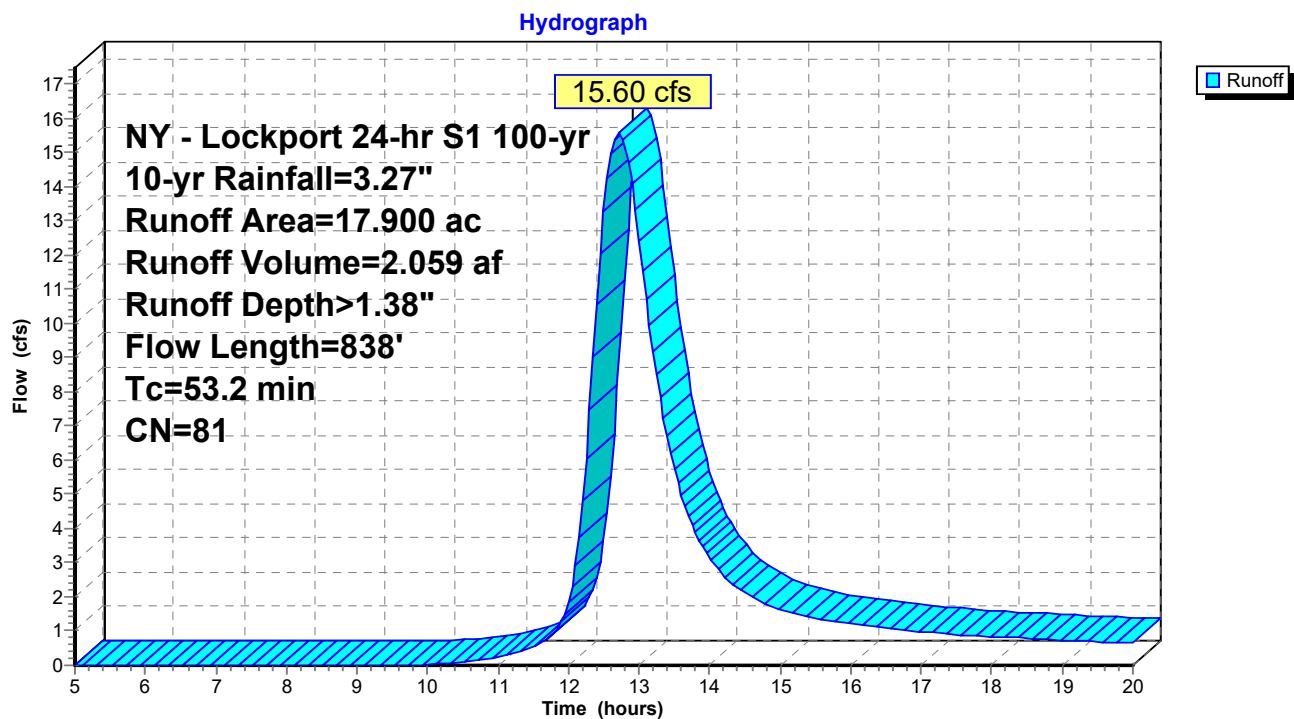
Runoff = 15.60 cfs @ 12.71 hrs, Volume= 2.059 af, Depth> 1.38"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 0.062	80	80-D-75% GRASS COVER, GOOD
* 0.720	84	84-D-50-75% GRASS COVER, FAIR
* 0.884	78	78-D-MEADOW, NON-GRAZED
* 4.286	80	80-D-75% GRASS COVER, GOOD
* 3.922	84	84-D-50-75% GRASS COVER, FAIR
* 0.139	89	89-D-<50% GRASS COVER, POOR
* 1.645	85	85-D-HERBACEOUS RANGE, GOOD
* 5.404	78	78-D-MEADOW, NON-GRAZED
* 0.188	80	80-D-75% GRASS COVER, GOOD
* 0.143	84	84-D-50-75% GRASS COVER, FAIR
* 0.507	78	78-D-MEADOW, NON-GRAZED
17.900	81	Weighted Average
17.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.2	100	0.0125	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.22"
23.5	419	0.0018	0.30		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
15.5	319	0.0024	0.34		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
53.2	838	Total			

Subcatchment DA4: EXISTING DA STR 21-23



Summary for Subcatchment DA5: EXISTING DA STR 25-29

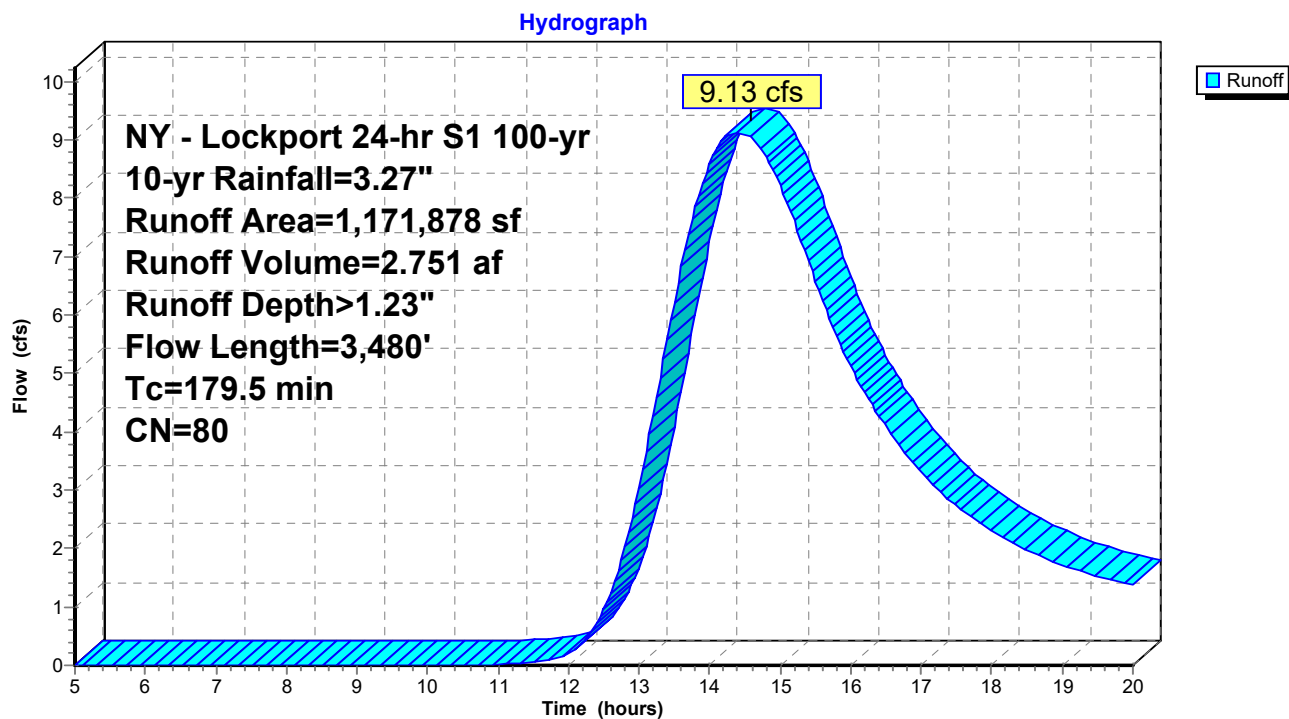
Runoff = 9.13 cfs @ 14.40 hrs, Volume= 2.751 af, Depth> 1.23"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (sf)	CN	Description
* 17,032	80	80-D-75% GRASS COVER, GOOD
* 200,420	79	WOODS/GRASS COMB., GOOD
* 62,160	79	WOODS/GRASS COMB., GOOD
* 95,658	78	MEADOW, NON-GRAZED
* 13,939	98	WATER SURFACE
* 158,384	80	75% GRASS COVER, GOOD
* 85,247	84	50-75% GRASS COVER, FAIR
* 48,090	89	<50% GRASS COVER, POOR
* 16,335	95	URBAN COMMERCIAL, 85% IMP
* 87,844	79	WOODS/GRASS COMB., GOOD
* 14,680	84	50-75% GRASS COVER, FAIR
* 152,329	79	WOODS/GRASS COMB., GOOD
* 20,473	79	WOODS/GRASS COMB., GOOD
* 187,352	78	MEADOW, NON-GRAZED
* 11,935	98	WATER SURFACE, 0% IMP
1,171,878	80	Weighted Average
1,146,004		97.79% Pervious Area
25,874		2.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.8	100	0.0200	0.06		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.22"
28.8	377	0.0019	0.22		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
12.9	548	0.0200	0.71		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
17.4	739	0.0200	0.71		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
10.5	489	0.0240	0.77		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
8.0	420	0.0156	0.87		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
13.1	429	0.0120	0.55		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
63.0	378	0.0004	0.10		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
179.5	3,480	Total			

Subcatchment DA5: EXISTING DA STR 25-29



Summary for Subcatchment DA6: EXISTING DA STR 29-35

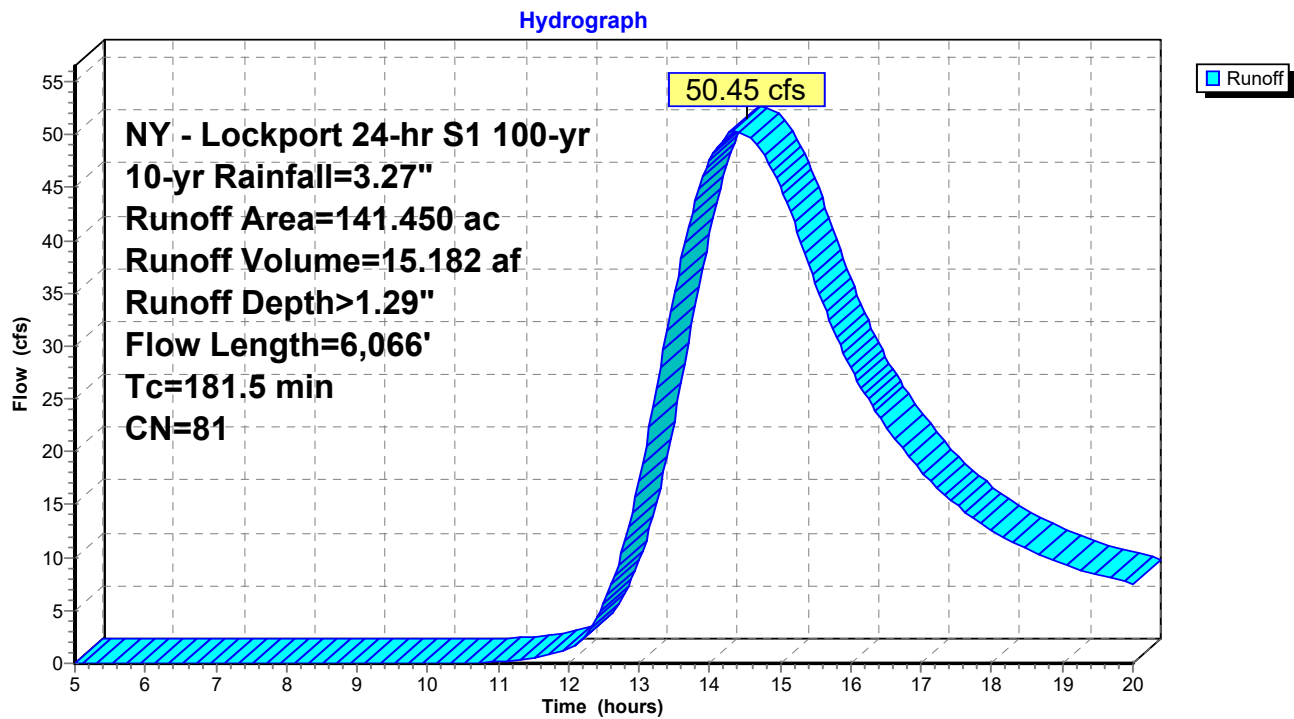
Runoff = 50.45 cfs @ 14.34 hrs, Volume= 15.182 af, Depth> 1.29"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 0.152	98	D - 98 - Open Water
* 0.074	80	D - 80 - Developed open space
* 0.307	80	D - 80 - Developed open space
* 2.363	80	D - 80 - Developed open space
* 1.992	82	D - 82 - Developed Low intensity
* 1.726	82	D - 82 - Developed Low intensity
* 2.185	85	D - 85 - Developed Med intensity
* 0.875	77	D - 77 - Deciduous Forest
* 18.239	77	D - 77 - Deciduous Forest
* 13.242	77	D - 77 - Deciduous Forest
* 0.038	77	D - 77 - Evergreen Forest
* 0.919	77	D - 77 - Evergreen Forest
* 0.021	77	D - 77 - Evergreen Forest
* 0.508	77	D - 77 - Mixed Forest
* 0.889	77	D - 77 - Mixed Forest
* 0.160	77	D - 77 - Mixed Forest
* 4.266	78	D - 78 - Meadowed, grass, non-grazed land
* 29.357	78	D - 78 - Meadowed, grass, non-grazed land
* 22.896	78	D - 78 - Meadowed, grass, non-grazed land
* 0.112	78	D - 78 - Meadowed, grass, non-grazed land
* 5.915	78	D - 78 - Meadowed, grass, non-grazed land
* 5.016	90	D - 90 - Woody Wetlands
* 30.198	90	D - 90 - Woody Wetlands
141.450	81	Weighted Average
141.298		99.89% Pervious Area
0.152		0.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.7	100	0.0275	0.07		Sheet Flow, 100' Sheet Woods: Light underbrush n= 0.400 P2= 2.22"
31.2	1,144	0.0149	0.61		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
14.6	670	0.0026	0.76		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
12.9	328	0.0008	0.42		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
100.1	3,824	0.0018	0.64		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
181.5	6,066	Total			

Subcatchment DA6: EXISTING DA STR 29-35



Summary for Subcatchment DA7: EXISTING DA STR 37-40

Runoff = 65.87 cfs @ 14.05 hrs, Volume= 17.293 af, Depth> 1.13"
 Routed to Link 1L : EXISTING

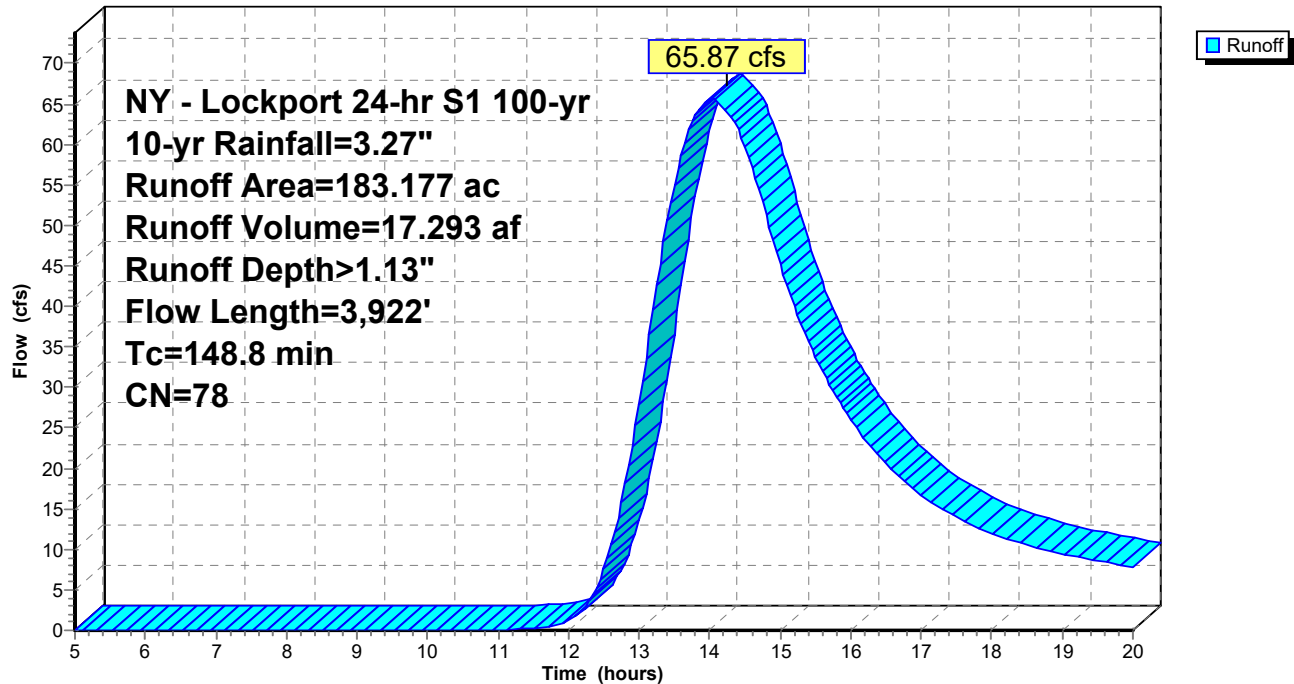
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 2.507	80	D - 80 - Developed open space
* 3.318	80	D - 80 - Developed open space
* 2.790	80	D - 80 - Developed open space
* 2.870	82	D - 82 - Developed Low intensity
* 4.979	82	D - 82 - Developed Low intensity
* 4.781	82	D - 82 - Developed Low intensity
* 0.152	85	D - 85 - Developed Med intensity
* 1.263	77	D - 77 - Deciduous Forest
* 3.431	77	D - 77 - Deciduous Forest
* 3.544	77	D - 77 - Deciduous Forest
* 14.732	78	D - 78 - Meadowed, grass, non-grazed land
* 59.055	78	D - 78 - Meadowed, grass, non-grazed land
* 79.755	78	D - 78 - Meadowed, grass, non-grazed land
183.177	78	Weighted Average
183.177		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.6	100	0.0350	0.08		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.22"
48.7	1,573	0.0116	0.54		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
62.0	1,276	0.0047	0.34		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
17.5	973	0.0038	0.92		Shallow Concentrated Flow,
					Grassed Waterway Kv= 15.0 fps
148.8	3,922	Total			

Subcatchment DA7: EXISTING DA STR 37-40

Hydrograph



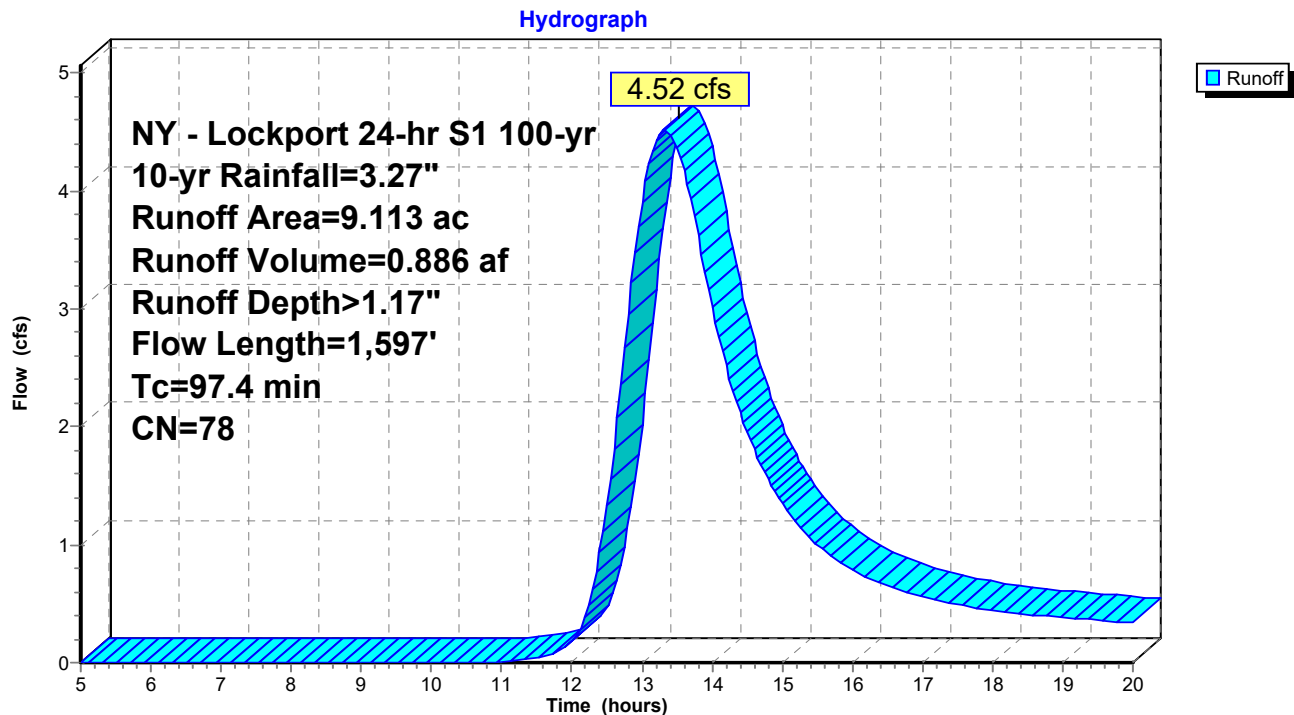
Summary for Subcatchment DA8: EXISTING DA STR 41

Runoff = 4.52 cfs @ 13.32 hrs, Volume= 0.886 af, Depth> 1.17"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 3.755	77	D - 77 - Deciduous Forest
* 5.358	78	D - 78 - Meadowed, grass, non-grazed land
9.113	78	Weighted Average
9.113		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.0	100	0.0100	0.05		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.22"
63.4	1,497	0.0062	0.39		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
97.4	1,597	Total			

Subcatchment DA8: EXISTING DA STR 41

Summary for Subcatchment DA9: EXISTING DA STR 48-50

Runoff = 17.11 cfs @ 13.44 hrs, Volume= 3.645 af, Depth> 1.22"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 2.300	80	D-75% GRASS COVER, GOOD
* 0.850	84	D-50-75% GRASS COVER, FAIR
* 0.080	89	D-<50% GRASS COVER, POOR
* 0.800	79	D-WOODS/GRASS COMB., GOOD
* 6.410	78	D-MEADOW, NON-GRAZED
* 0.060	98	D-WATER SURFACE, 0% IMP
* 1.214	80	D-75% GRASS COVER, GOOD
* 0.214	84	D-50-75% GRASS COVER, FAIR
* 0.060	89	D-<50% GRASS COVER, POOR
* 4.411	79	D-WOODS/GRASS COMB., GOOD
* 18.040	78	D-MEADOW, NON-GRAZED
* 1.050	98	D-WATER SURFACE, 0% IMP
* 0.150	80	D-75% GRASS COVER, GOOD
* 0.210	78	D-MEADOW, NON-GRAZED
35.849	79	Weighted Average
34.739		96.90% Pervious Area
1.110		3.10% Impervious Area

190176.00 - PCSM DESIGNrlw

Prepared by Fisher Associates

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NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

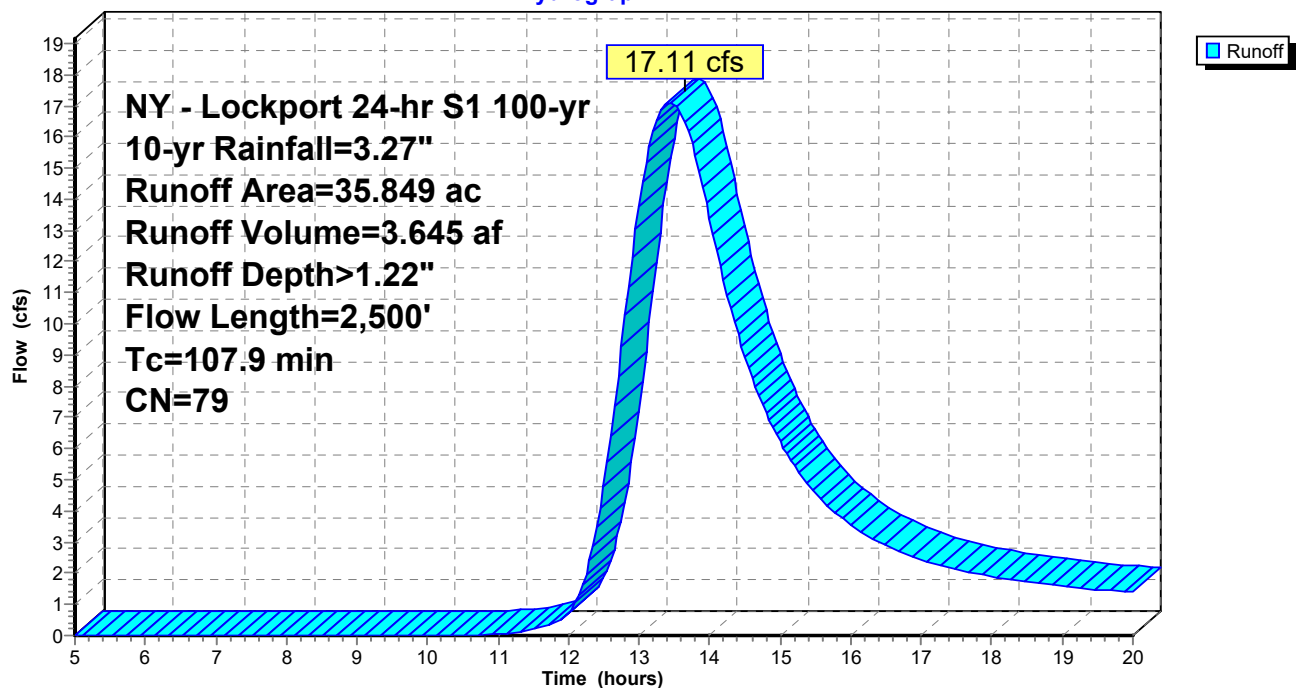
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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0300	1.21		Shallow Concentrated Flow, 100' Short Grass Pasture Kv= 7.0 fps
31.2	262	0.0120	0.14		Sheet Flow, 262.19 Grass: Short n= 0.150 P2= 2.22"
4.5	254	0.0180	0.94		Shallow Concentrated Flow, 254' Short Grass Pasture Kv= 7.0 fps
2.9	129	0.0110	0.73		Shallow Concentrated Flow, 128.66 Short Grass Pasture Kv= 7.0 fps
4.4	196	0.0110	0.73		Shallow Concentrated Flow, 196 Short Grass Pasture Kv= 7.0 fps
6.9	260	0.0080	0.63		Shallow Concentrated Flow, 260 Short Grass Pasture Kv= 7.0 fps
5.5	219	0.0090	0.66		Shallow Concentrated Flow, 219 Short Grass Pasture Kv= 7.0 fps
12.4	285	0.0030	0.38		Shallow Concentrated Flow, 285 Short Grass Pasture Kv= 7.0 fps
6.1	230	0.0080	0.63		Shallow Concentrated Flow, 230 Short Grass Pasture Kv= 7.0 fps
10.0	265	0.0040	0.44		Shallow Concentrated Flow, 265 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
107.9	2,500	Total			

Subcatchment DA9: EXISTING DA STR 48-50

Hydrograph



Summary for Subcatchment PDA1: PROPOSED DA STR 9-10

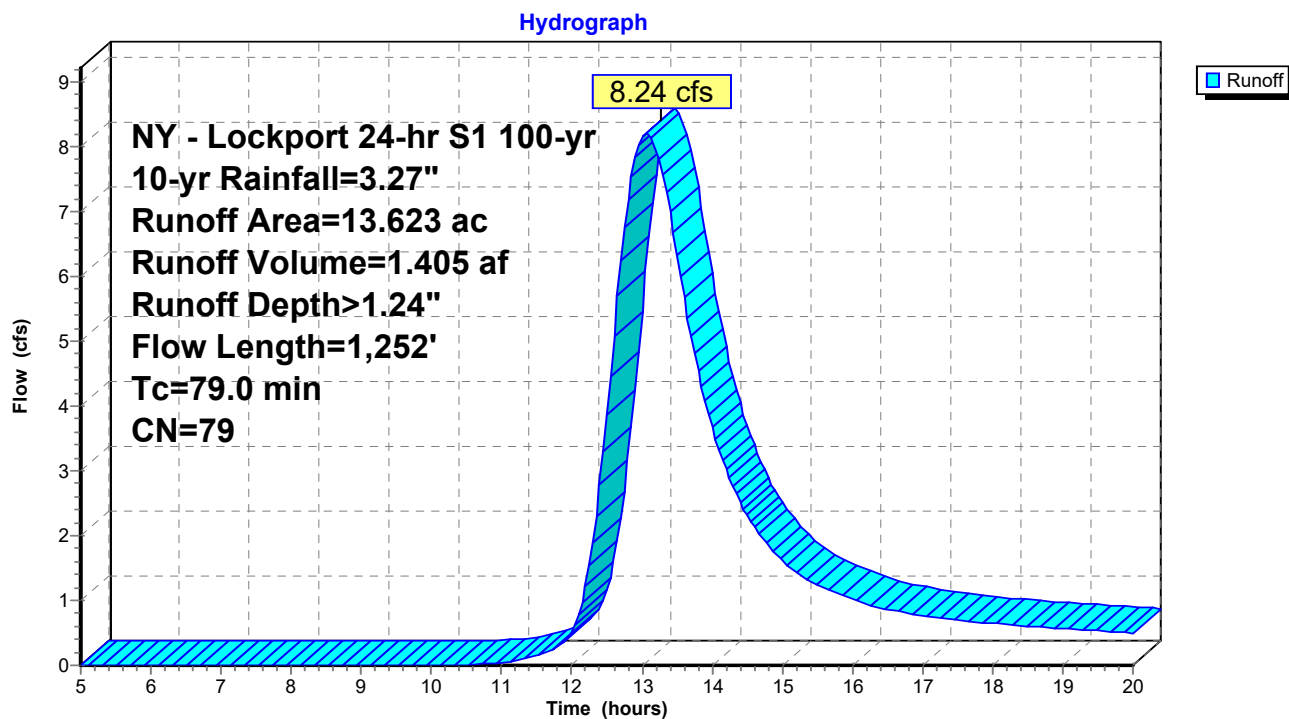
Runoff = 8.24 cfs @ 13.07 hrs, Volume= 1.405 af, Depth> 1.24"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 0.134	39	39 - A - 75% GRASS COVER, GOOD
* 0.938	49	49 - A - 50-75% GRASS COVER, FAIR
* 0.065	68	68 - A - <50% GRASS COVER, POOR
* 0.064	32	32 - A - FALLOW, BARE SOIL
* 0.064	30	30 - A - MEADOW, NON-GRAZED
* 0.293	80	80 - D - 75% GRASS COVER, GOOD
* 1.950	84	84 - D - 50-75% GRASS COVER, FAIR
* 0.320	89	89 - D - <50% GRASS COVER, POOR
* 0.105	79	79 - D - WOODS/GRASS COMB., GOOD
* 0.497	78	78 - D - MEADOW, NON-GRAZED
* 1.157	80	80 - D - 75% GRASS COVER, GOOD
* 4.870	84	84 - D - 50-75% GRASS COVER, FAIR
* 0.499	89	89 - D - <50% GRASS COVER, POOR
* 2.167	78	78 - D - MEADOW, NON-GRAZED
0.500	91	Gravel roads, HSG D
13.623	79	Weighted Average
13.623		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0175	0.13		Sheet Flow, 100' Sheet
					Grass: Short n= 0.150 P2= 2.22"
40.8	420	0.0006	0.17		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
0.5	45	0.0056	1.52		Shallow Concentrated Flow,
					Paved Kv= 20.3 fps
14.3	300	0.0025	0.35		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
6.7	200	0.0050	0.49		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
4.3	187	0.0107	0.72		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
79.0	1,252	Total			

Subcatchment PDA1: PROPOSED DA STR 9-10



Summary for Subcatchment PDA10: EXISTING DA STR 78-83

Runoff = 25.49 cfs @ 14.91 hrs, Volume= 8.632 af, Depth> 1.07"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 0.446	82	B-MEADOW, NON-GRAZED
* 0.142	43	D-WOODS/GRASS COMB., GOOD
* 13.840	81	D-MEADOW, NON-GRAZED
* 8.160	82	D-MEADOW, NON-GRAZED
* 1.781	21	D-75% GRASS COVER, GOOD
* 3.035	22	D-50-75% GRASS COVER, FAIR
* 24.158	81	D-MEADOW, NON-GRAZED
* 5.711	82	D-MEADOW, NON-GRAZED
* 0.003	21	D-75% GRASS COVER, GOOD
* 0.428	22	D-50-75% GRASS COVER, FAIR
* 18.333	81	D-MEADOW, NON-GRAZED
* 19.570	82	D-MEADOW, NON-GRAZED
* 0.340	98	D-PAVED ASPHALT DRIVEWAY
* 0.043	90	D-WATER SURFACE, 0% IMP
1.064	91	Gravel roads, HSG D
0.127	91	Gravel roads, HSG D
97.181	78	Weighted Average
96.841		99.65% Pervious Area
0.340		0.35% Impervious Area

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NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

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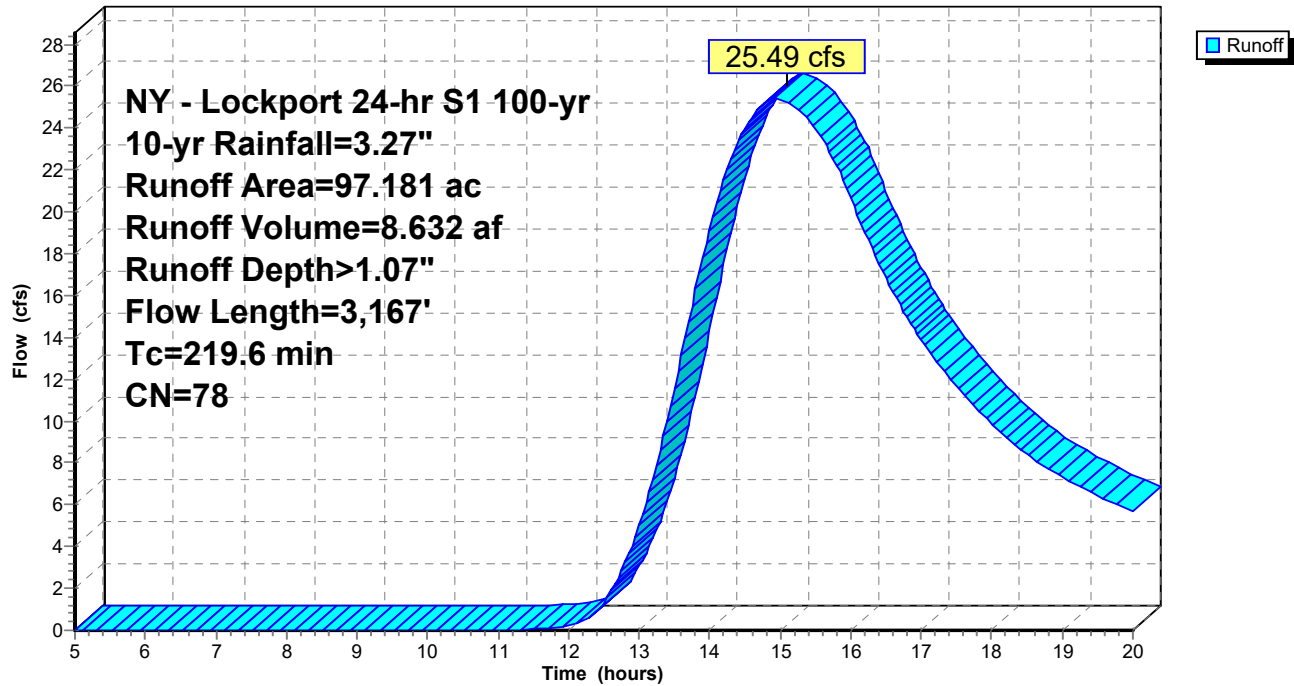
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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	100	0.0610	0.22		Sheet Flow, 100 Grass: Short n= 0.150 P2= 2.22"
3.0	144	0.0130	0.80		Shallow Concentrated Flow, 144 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
9.2	300	0.0060	0.54		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
71.4	300	0.0001	0.07		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
12.2	162	0.0010	0.22		Shallow Concentrated Flow, 162 Short Grass Pasture Kv= 7.0 fps
10.1	300	0.0050	0.49		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
8.3	290	0.0070	0.59		Shallow Concentrated Flow, 290 Short Grass Pasture Kv= 7.0 fps
0.6	50	0.0400	1.40		Shallow Concentrated Flow, 50 Short Grass Pasture Kv= 7.0 fps
4.4	242	0.0170	0.91		Shallow Concentrated Flow, 242 Short Grass Pasture Kv= 7.0 fps
6.3	300	0.0130	0.80		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
18.8	79	0.0001	0.07		Shallow Concentrated Flow, 79 Short Grass Pasture Kv= 7.0 fps
219.6	3,167	Total			

Subcatchment PDA10: EXISTING DA STR 78-83

Hydrograph



Summary for Subcatchment PDA11: PROPOSED DA STR 84-86

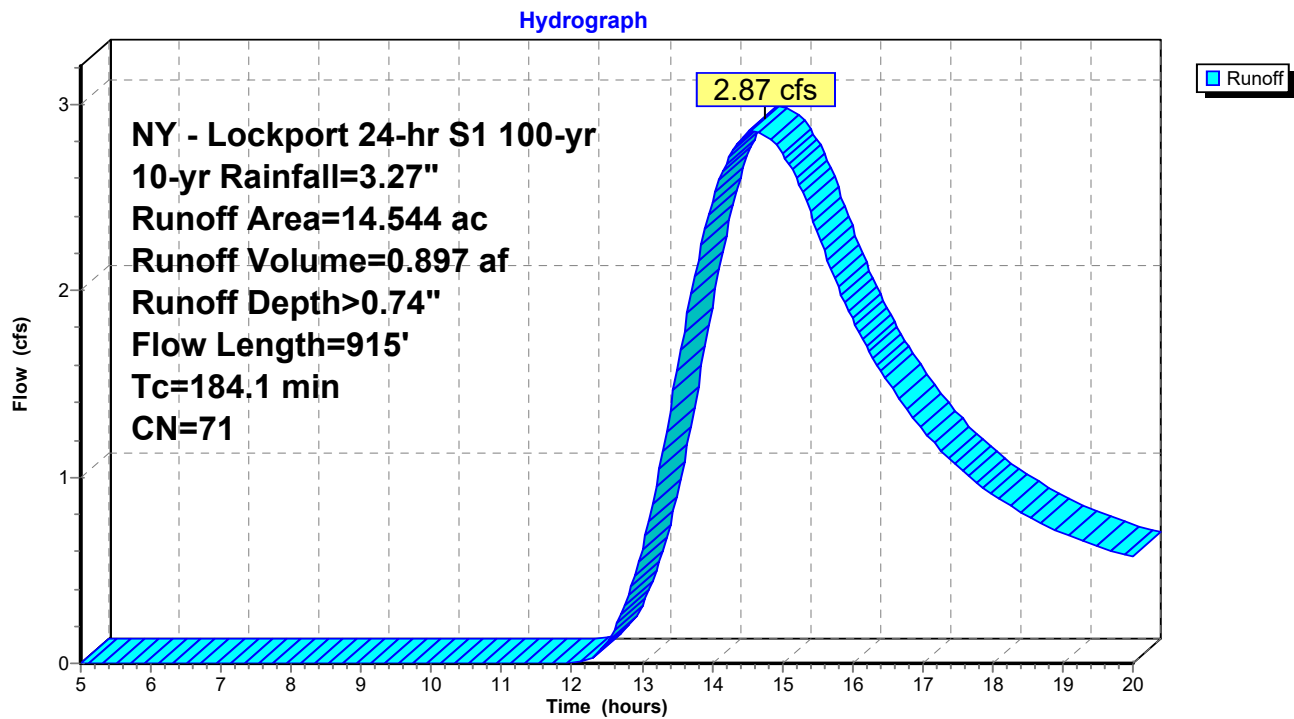
Runoff = 2.87 cfs @ 14.55 hrs, Volume= 0.897 af, Depth> 0.74"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 0.033	58	B-MEADOW, NON-GRAZED
* 3.140	58	B-MEADOW, NON-GRAZED
* 0.039	80	D-75% GRASS COVER, GOOD
* 0.117	84	D-50-75% GRASS COVER, FAIR
* 1.962	78	D-MEADOW, NON-GRAZED
* 2.017	78	D-MEADOW, NON-GRAZED
* 0.145	71	D-MEADOW, NON-GRAZED
* 5.505	71	D-MEADOW, NON-GRAZED
* 0.304	78	D-MEADOW, NONGRAZED
* 0.030	78	D-MEADOW, NON-GRAZED
* 0.724	78	D-MEADOW, NON-GRAZED
0.528	91	Gravel roads, HSG D
14.544	71	Weighted Average
14.544		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
97.9	100	0.0001	0.02		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.22"
3.6	164	0.0120	0.77		Shallow Concentrated Flow, 164
					Short Grass Pasture Kv= 7.0 fps
8.5	300	0.0070	0.59		Shallow Concentrated Flow, 300
					Short Grass Pasture Kv= 7.0 fps
71.4	300	0.0001	0.07		Shallow Concentrated Flow, 300
					Short Grass Pasture Kv= 7.0 fps
2.7	51	0.0020	0.31		Shallow Concentrated Flow, 51
					Short Grass Pasture Kv= 7.0 fps
184.1	915	Total			

Subcatchment PDA11: PROPOSED DA STR 84-86



Summary for Subcatchment PDA12: PROPOSED DA STR 90-96

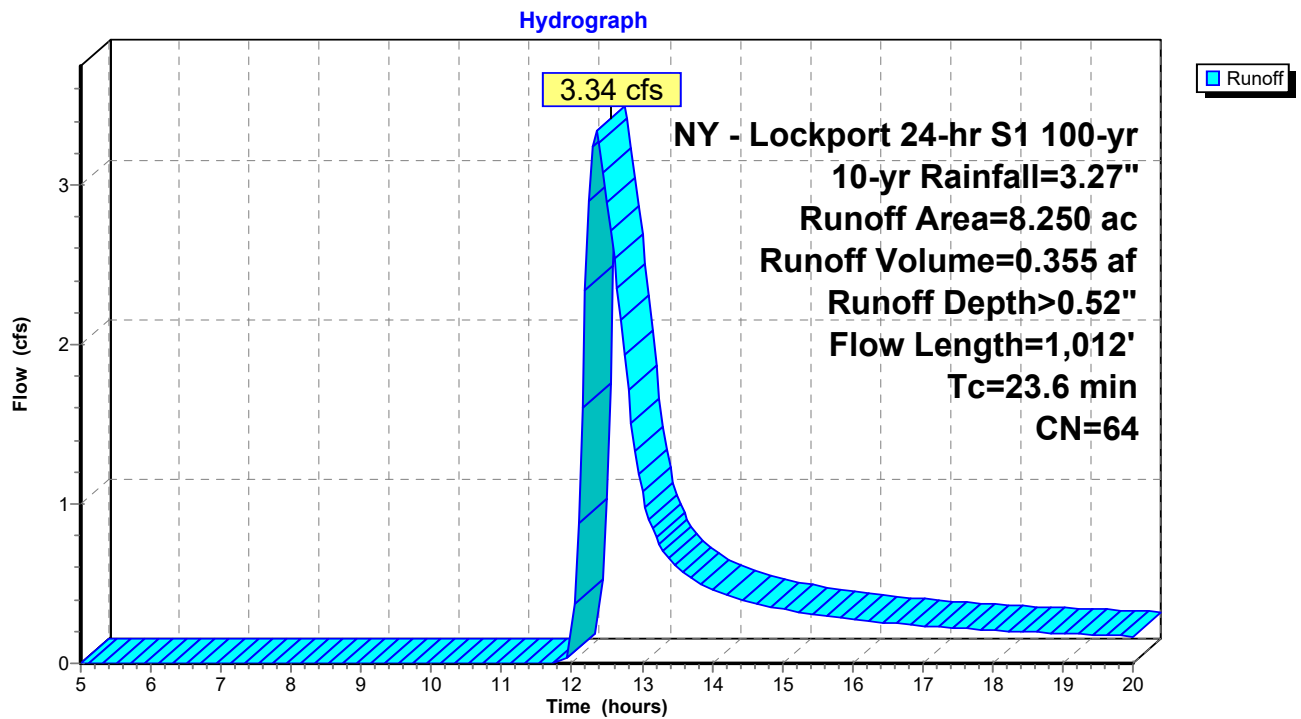
Runoff = 3.34 cfs @ 12.35 hrs, Volume= 0.355 af, Depth> 0.52"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 2.470	30	A-MEADOW, NON-GRAZED
* 5.354	78	D-MEADOW, NON-GRAZED
0.426	91	Gravel roads, HSG D
8.250	64	Weighted Average
8.250		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	100	0.0390	0.19		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.22"
1.5	130	0.0420	1.43		Shallow Concentrated Flow, 130
					Short Grass Pasture Kv= 7.0 fps
1.7	180	0.0640	1.77		Shallow Concentrated Flow, 180
					Short Grass Pasture Kv= 7.0 fps
2.5	237	0.0520	1.60		Shallow Concentrated Flow, 237
					Short Grass Pasture Kv= 7.0 fps
1.3	80	0.0230	1.06		Shallow Concentrated Flow, 80
					Short Grass Pasture Kv= 7.0 fps
5.0	132	0.0040	0.44		Shallow Concentrated Flow, 132
					Short Grass Pasture Kv= 7.0 fps
2.6	153	0.0200	0.99		Shallow Concentrated Flow, 153
					Short Grass Pasture Kv= 7.0 fps
23.6	1,012	Total			

Subcatchment PDA12: PROPOSED DA STR 90-96



Summary for Subcatchment PDA13: PROPOSED DA STR 97-103

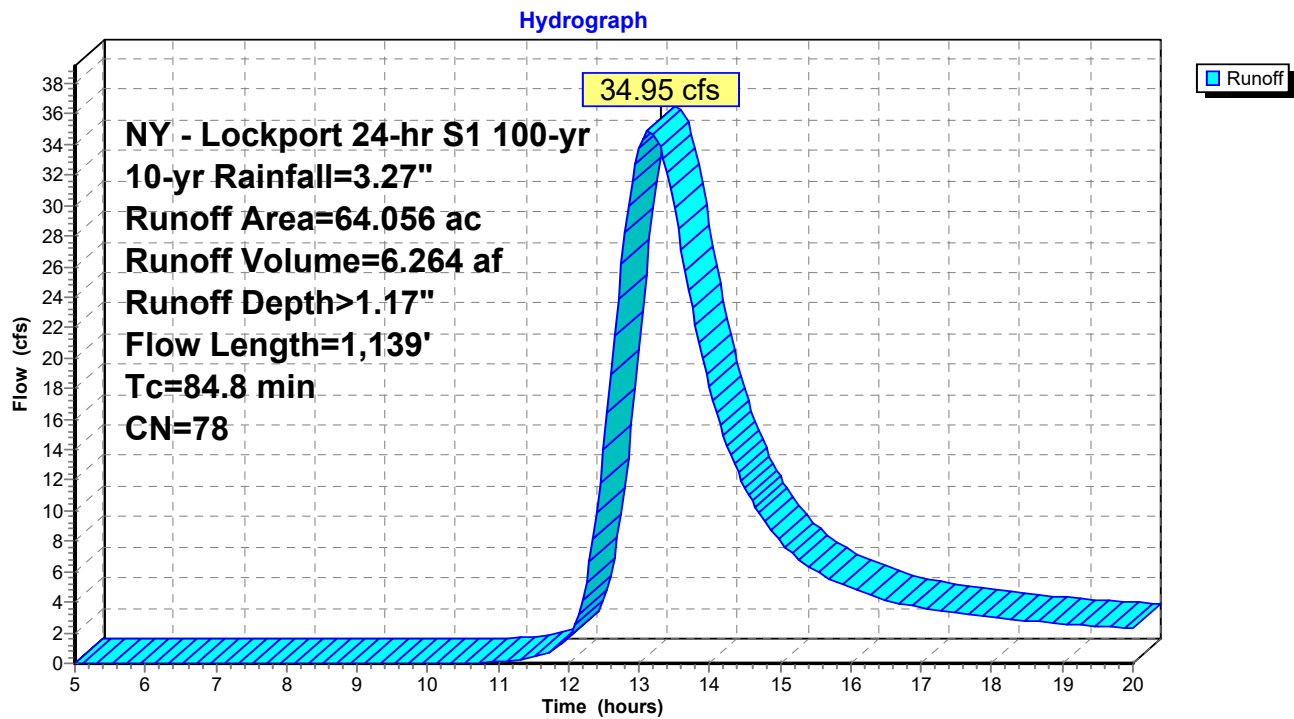
Runoff = 34.95 cfs @ 13.12 hrs, Volume= 6.264 af, Depth> 1.17"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 0.113	49	A-50-75% GRASS COVER, FAIR
* 0.131	30	A-MEADOW, NON-GRAZED
* 12.491	78	D-MEADOW, NON-GRAZED
* 0.855	80	D-75% GRASS COVER, GOOD
* 0.366	84	D-50-75% GRASS COVER, FAIR
* 0.263	79	D-WOODS/GRASS COMB., GOOD
* 48.359	78	D-MEADOW, NON-GRAZED
* 0.418	98	D-WATER SURFACE, 0% IMP
1.060	91	Gravel roads, HSG D
64.056	78	Weighted Average
63.638		99.35% Pervious Area
0.418		0.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.1	100	0.0030	0.07		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.22"
11.2	258	0.0030	0.38		Shallow Concentrated Flow, 258
					Short Grass Pasture Kv= 7.0 fps
31.4	132	0.0001	0.07		Shallow Concentrated Flow, 132
					Short Grass Pasture Kv= 7.0 fps
4.0	176	0.0110	0.73		Shallow Concentrated Flow, 176
					Short Grass Pasture Kv= 7.0 fps
7.7	270	0.0070	0.59		Shallow Concentrated Flow, 270
					Short Grass Pasture Kv= 7.0 fps
5.4	203	0.0080	0.63		Shallow Concentrated Flow, 203
					Short Grass Pasture Kv= 7.0 fps
84.8	1,139	Total			

Subcatchment PDA13: PROPOSED DA STR 97-103



Summary for Subcatchment PDA14: PROPOSED DA STR 104-106

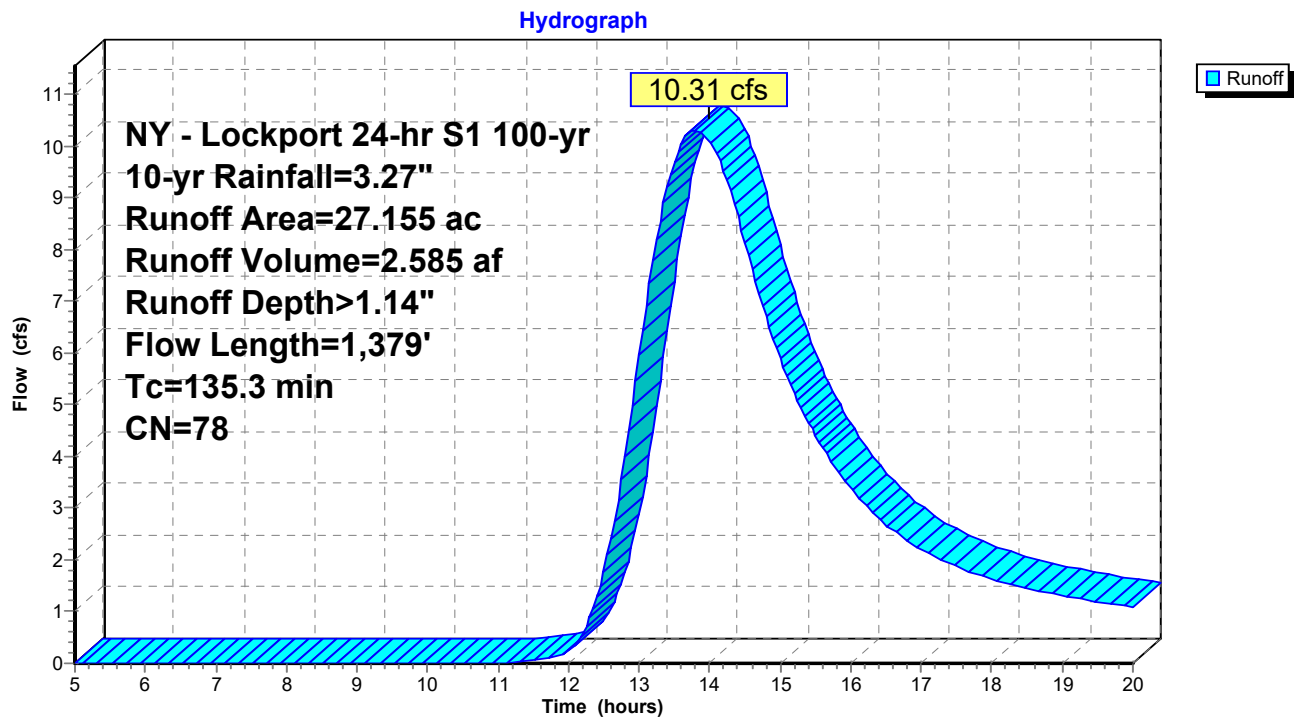
Runoff = 10.31 cfs @ 13.80 hrs, Volume= 2.585 af, Depth> 1.14"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 0.471	61	B-75% GRASS COVER, GOOD
* 1.291	80	D-75% GRASS COVER, GOOD
* 0.601	84	D-50-75% GRASS COVER, FAIR
* 1.189	79	D-WOODS/GRASS COMB., GOOD
* 2.124	78	D-MEADOW, NON-GRAZED
* 0.606	80	D-75% GRASS COVER, GOOD
* 0.552	79	D-WOODS/GRASS COMB., GOOD
* 10.418	78	D-MEADOW, NON-GRAZED
* 0.104	98	D-WATER SURFACE, 0% IMP
* 0.137	98	D-WATER SURFACE, 0% IMP
* 0.893	80	D-75% GRASS COVER, GOOD
* 0.115	80	D-50-75% GRASS COVER, FAIR
* 8.267	78	D-MEADOW, NON-GRAZED
0.387	91	Gravel roads, HSG D
27.155	78	Weighted Average
26.914		99.11% Pervious Area
0.241		0.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.6	100	0.0330	0.17		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.22"
0.9	53	0.0220	1.04		Shallow Concentrated Flow, 53
					Short Grass Pasture Kv= 7.0 fps
2.3	140	0.0210	1.01		Shallow Concentrated Flow, 140
					Short Grass Pasture Kv= 7.0 fps
2.2	140	0.0220	1.04		Shallow Concentrated Flow, 140
					Short Grass Pasture Kv= 7.0 fps
5.8	230	0.0090	0.66		Shallow Concentrated Flow, 230
					Short Grass Pasture Kv= 7.0 fps
7.6	267	0.0070	0.59		Shallow Concentrated Flow, 267
					Short Grass Pasture Kv= 7.0 fps
43.8	184	0.0001	0.07		Shallow Concentrated Flow, 184
					Short Grass Pasture Kv= 7.0 fps
63.1	265	0.0001	0.07		Shallow Concentrated Flow, 265
					Short Grass Pasture Kv= 7.0 fps
135.3	1,379	Total			

Subcatchment PDA14: PROPOSED DA STR 104-106



Summary for Subcatchment PDA15: PROPOSED DA STR 106-109

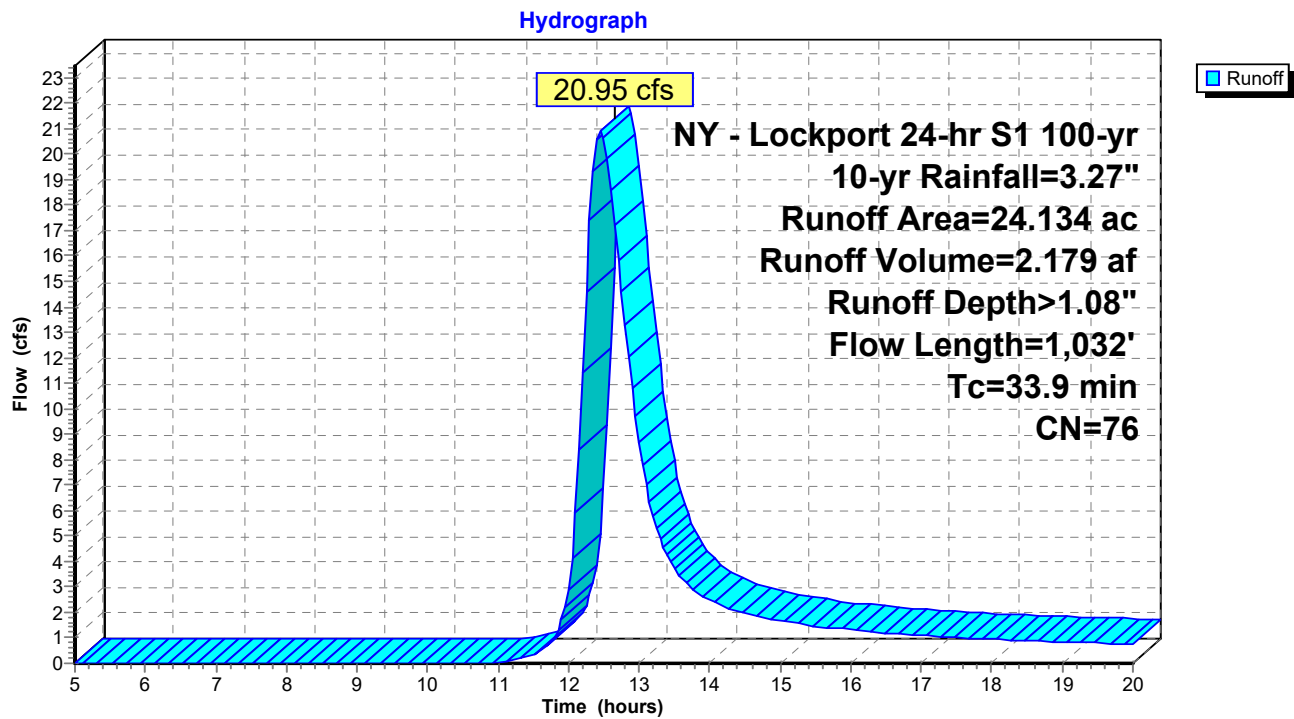
Runoff = 20.95 cfs @ 12.45 hrs, Volume= 2.179 af, Depth> 1.08"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 0.972	61	B-75% GRASS COVER, GOOD
* 1.615	69	B-50-75% GRASS COVER, FAIR
* 2.680	58	B-MEADOW, NON-GRAZED
* 0.028	80	D-75% GRASS COVER, GOOD
* 2.330	78	D-MEADOW, NON-GRAZED
* 0.585	80	D-75% GRASS COVER, GOOD
* 0.724	84	D-50-75% GRASS COVER, FAIR
* 0.465	79	D-WOODS/GRASS COMB., GOOD
* 13.310	78	D-MEADOW, NON-GRAZED
* 0.880	98	D-WATER SURFACE, 0% IMP
* 0.085	98	D-WATER SURFACE, 0% IMP
0.460	91	Gravel roads, HSG D
24.134	76	Weighted Average
23.169		96.00% Pervious Area
0.965		4.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0120	0.12		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.22"
2.1	148	0.0270	1.15		Shallow Concentrated Flow, 148
					Short Grass Pasture Kv= 7.0 fps
3.4	204	0.0200	0.99		Shallow Concentrated Flow, 204
					Short Grass Pasture Kv= 7.0 fps
6.0	300	0.0140	0.83		Shallow Concentrated Flow, 300
					Short Grass Pasture Kv= 7.0 fps
8.0	280	0.0070	0.59		Shallow Concentrated Flow, 280
					Short Grass Pasture Kv= 7.0 fps
33.9	1,032	Total			

Subcatchment PDA15: PROPOSED DA STR 106-109



Summary for Subcatchment PDA16: PROPOSED DA STR 110-117

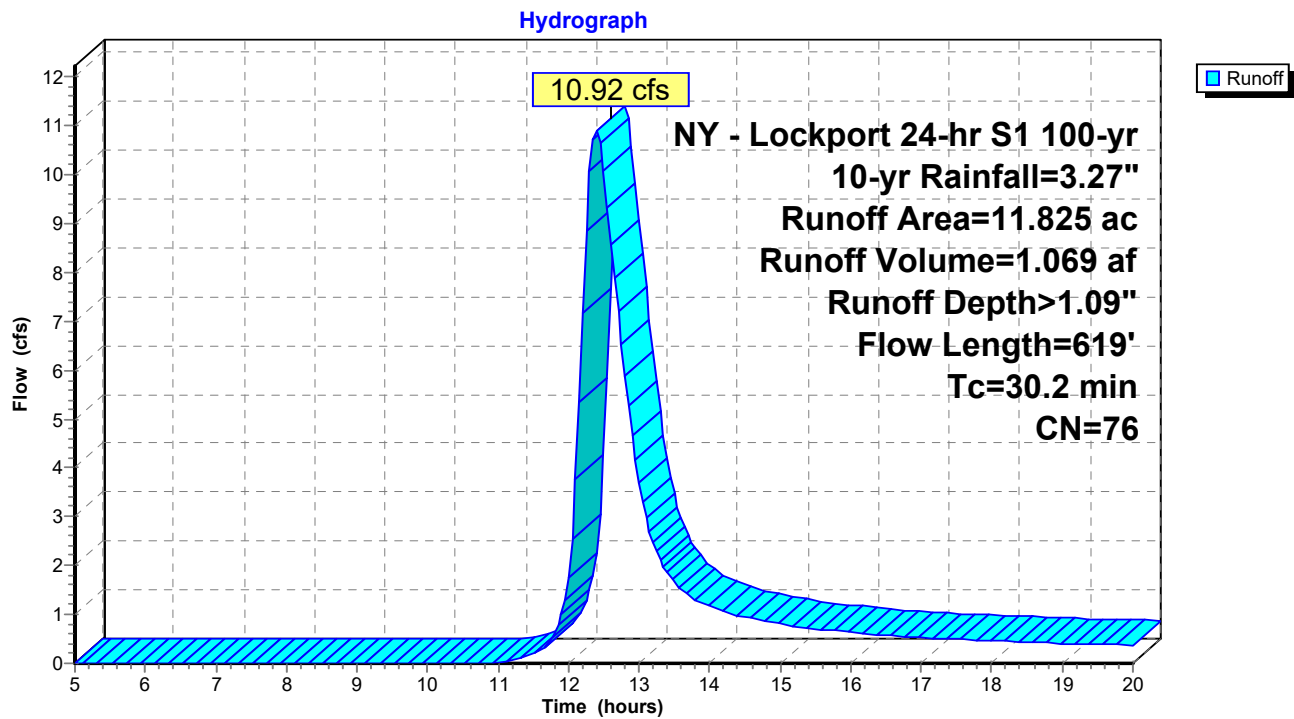
Runoff = 10.92 cfs @ 12.40 hrs, Volume= 1.069 af, Depth> 1.09"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 0.423	61	B-75%GRASS COVER, GOOD
* 0.460	69	B-50-75% GRASS COVER, FAIR
* 2.069	58	D-MEADOW, NON-GRAZED
* 0.045	78	D-MEADOW, NON-GRAZED
* 0.049	98	D-MEADOW, NON-GRAZED
* 0.487	80	D-75% GRASS COVER, GOOD
* 0.960	84	D-50-75% GRASS COVER, FAIR
* 0.293	79	D-WOODS/GRASS COMB., GOOD
* 5.704	78	D-MEADOW, NON-GRAZED
* 0.855	98	D-MEADOW, NON-GRAZED
* 0.048	79	D-WOODS/GRASS COMB., GOOD
* 0.009	78	D-MEADOW, NON-GRAZED
* 0.056	98	D-MEADOW, NON-GRAZED
0.367	91	Gravel roads, HSG D
11.825	76	Weighted Average
10.865		91.88% Pervious Area
0.960		8.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	100	0.0070	0.09		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.22"
3.4	222	0.0240	1.08		Shallow Concentrated Flow, 222
					Short Grass Pasture Kv= 7.0 fps
4.1	154	0.0080	0.63		Shallow Concentrated Flow, 154
					Short Grass Pasture Kv= 7.0 fps
4.8	143	0.0050	0.49		Shallow Concentrated Flow, 143
					Short Grass Pasture Kv= 7.0 fps
30.2	619	Total			

Subcatchment PDA16: PROPOSED DA STR 110-117



Summary for Subcatchment PDA17: PROPOSED DA STR 113-116

Runoff = 6.09 cfs @ 14.90 hrs, Volume= 2.059 af, Depth> 1.12"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 0.289	80	D-75% GRASS COVER, GOOD
* 0.899	84	D-50-75% GRASS COVER, FAIR
* 2.853	78	D-MEADOW, NON-GRAZED
* 0.540	78	D-MEADOW, NON-GRAZED
* 0.077	80	D-75% GRASS COVER, GOOD
* 0.177	84	D-50-75% GRASS COVER, FAIR
* 0.010	79	D-WOODS/GRASS COMB., GOOD
* 5.683	78	D-MEADOW, NON-GRAZED
* 6.973	78	D-MEADOW, NON-GRAZED
* 0.337	98	D-WATER SURFACE, 0% IMP
* 3.150	78	D-MEADOW, NON-GRAZED
* 0.141	98	D-WATER SURFACE, 0% IMP
0.861	91	Gravel roads, HSG D
21.990	79	Weighted Average
21.512		97.83% Pervious Area
0.478		2.17% Impervious Area

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NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Prepared by Fisher Associates

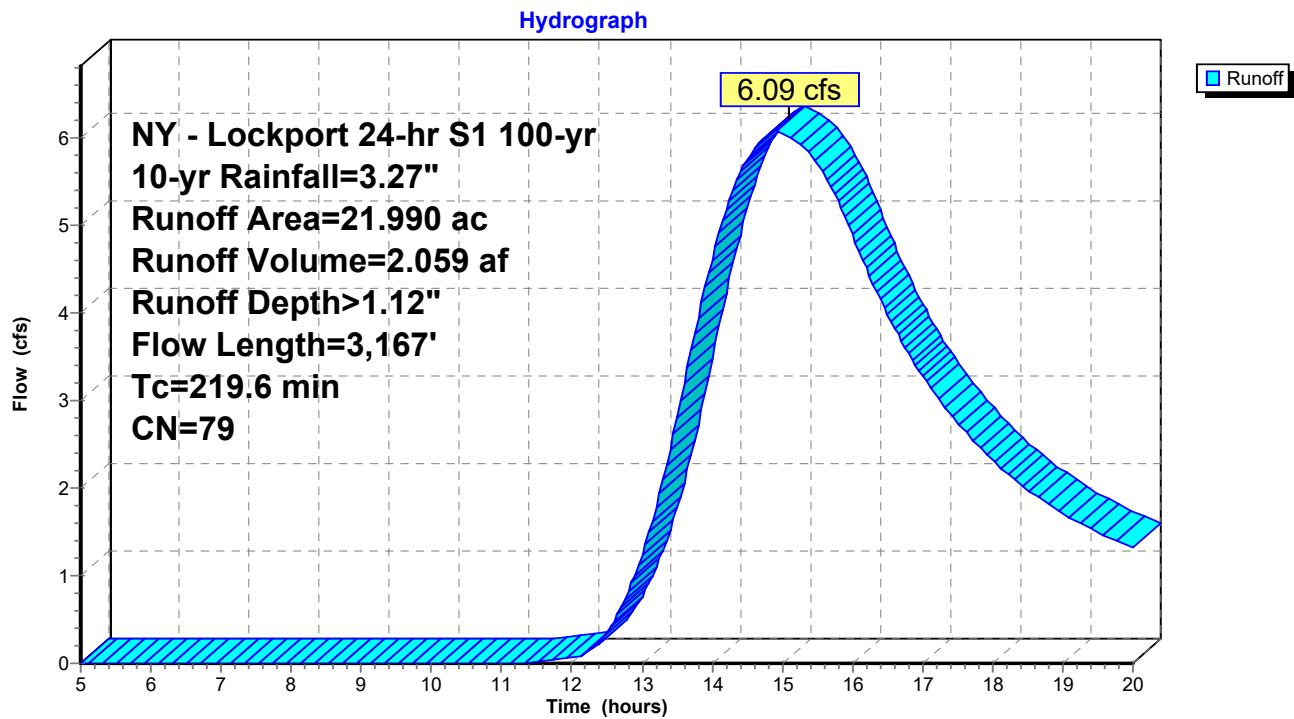
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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	100	0.0610	0.22		Sheet Flow, 100 Grass: Short n= 0.150 P2= 2.22"
3.0	144	0.0130	0.80		Shallow Concentrated Flow, 144 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
9.2	300	0.0060	0.54		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
71.4	300	0.0001	0.07		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
12.2	162	0.0010	0.22		Shallow Concentrated Flow, 162 Short Grass Pasture Kv= 7.0 fps
10.1	300	0.0050	0.49		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
8.3	290	0.0070	0.59		Shallow Concentrated Flow, 290 Short Grass Pasture Kv= 7.0 fps
0.6	50	0.0400	1.40		Shallow Concentrated Flow, 50 Short Grass Pasture Kv= 7.0 fps
4.4	242	0.0170	0.91		Shallow Concentrated Flow, 242 Short Grass Pasture Kv= 7.0 fps
6.3	300	0.0130	0.80		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
18.8	79	0.0001	0.07		Shallow Concentrated Flow, 79 Short Grass Pasture Kv= 7.0 fps
219.6	3,167	Total			

Subcatchment PDA17: PROPOSED DA STR 113-116



Summary for Subcatchment PDA18: PROPOSED DA STR 36

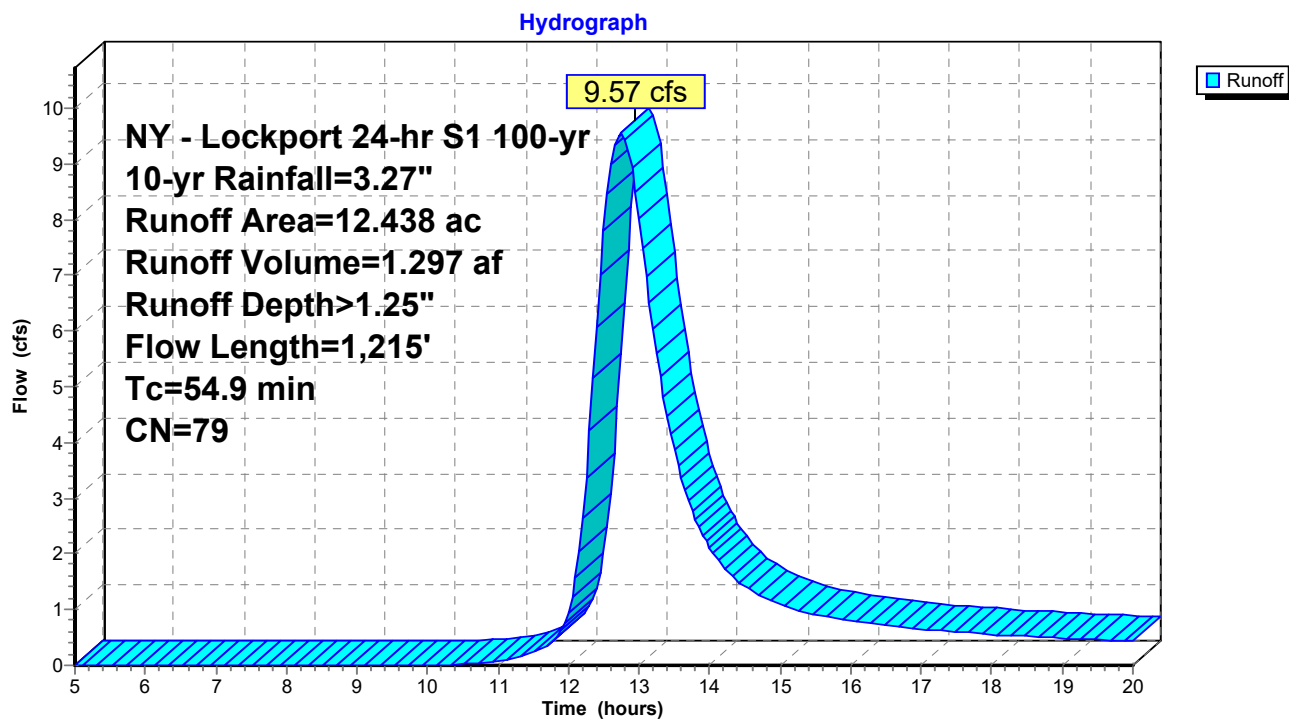
Runoff = 9.57 cfs @ 12.74 hrs, Volume= 1.297 af, Depth> 1.25"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 0.143	80	D - 80 - Developed open space
* 0.461	80	D - 80 - Developed open space
* 1.014	82	D - 82 - Developed Low intensity
* 0.988	82	D - 82 - Developed Low intensity
* 0.081	77	D - 77 - Deciduous Forest
* 7.367	78	D - 78 - Meadowed, grass, non-grazed land
* 2.154	78	D - 78 - Meadowed, grass, non-grazed land
* 0.230	91	D- Gravel Roads
12.438	79	Weighted Average
12.438		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	100	0.0200	0.14		Sheet Flow, 100' sheet
					Grass: Short n= 0.150 P2= 2.22"
43.1	1,115	0.0038	0.43		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
54.9	1,215	Total			

Subcatchment PDA18: PROPOSED DA STR 36



Summary for Subcatchment PDA19: PROPOSED DA STR 42-47

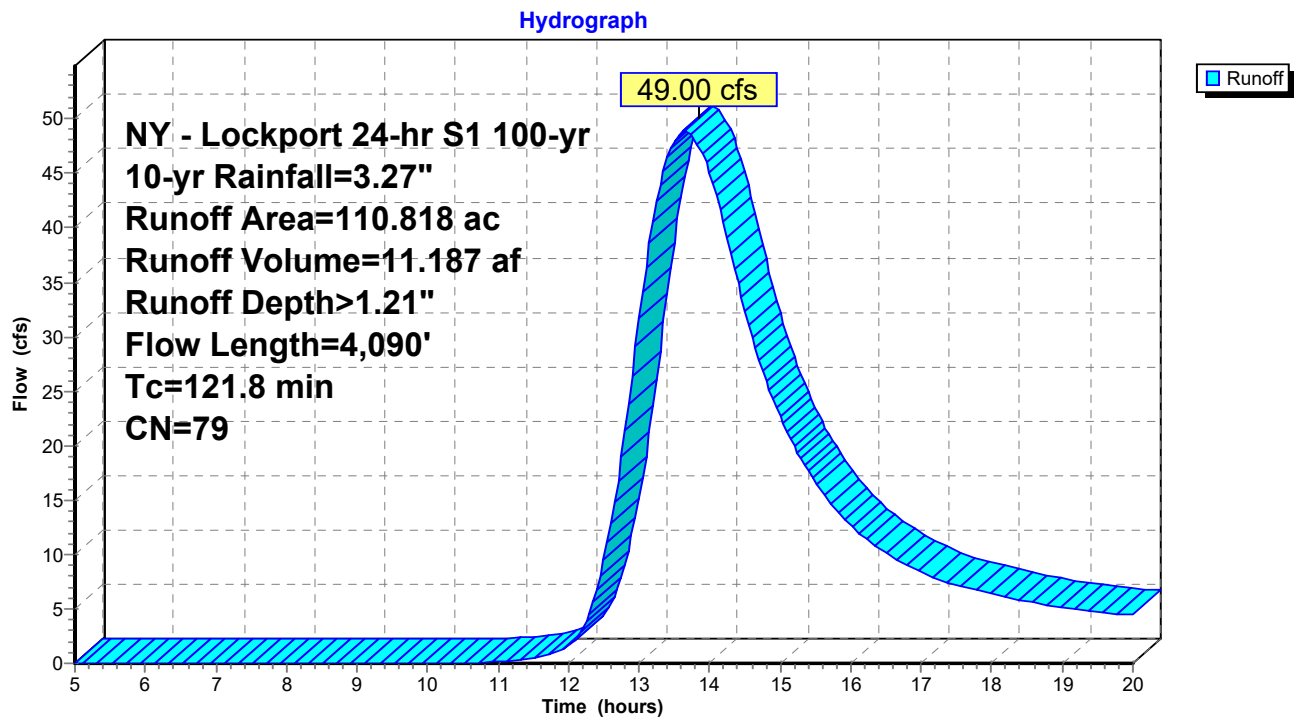
Runoff = 49.00 cfs @ 13.66 hrs, Volume= 11.187 af, Depth> 1.21"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 3.220	80	D - 80 - Developed open space
* 2.932	80	D - 80 - Developed open space
* 0.003	80	D - 80 - Developed open space
* 10.164	82	D - 82 - Developed Low intensity
* 6.410	82	D - 82 - Developed Low intensity
* 0.607	82	D - 82 - Developed Low intensity
* 5.494	77	D - 77 - Deciduous Forest
* 15.746	78	D - 78 - Meadowed, grass, non-grazed land
* 63.740	78	D - 78 - Meadowed, grass, non-grazed land
* 1.702	78	D - 78 - Meadowed, grass, non-grazed land
* 0.800	91	D - Gravel Roads
110.818	79	Weighted Average
110.818		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	100	0.0300	0.17		Sheet Flow, 100' Sheet
					Grass: Short n= 0.150 P2= 2.22"
88.0	2,225	0.0071	0.42		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
23.8	1,765	0.0068	1.24		Shallow Concentrated Flow,
					Grassed Waterway Kv= 15.0 fps
121.8	4,090	Total			

Subcatchment PDA19: PROPOSED DA STR 42-47



Summary for Subcatchment PDA2: PROPOSED DA STR 11-12

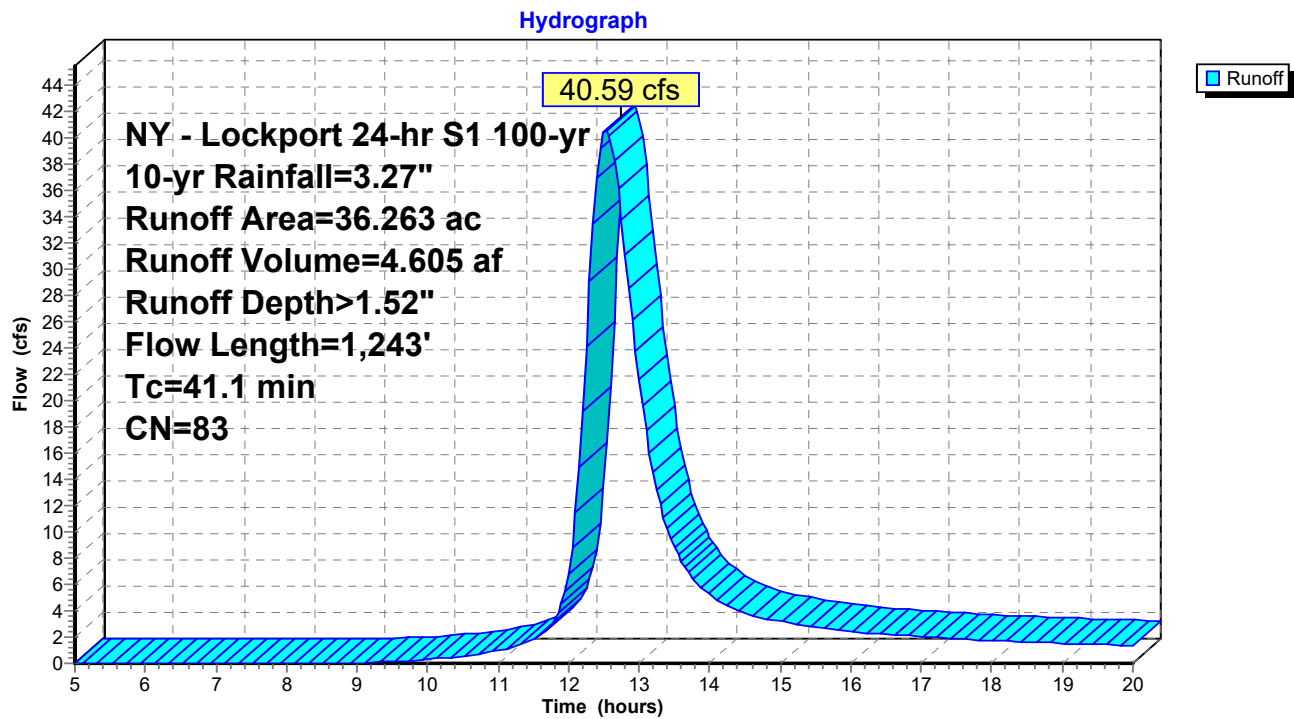
Runoff = 40.59 cfs @ 12.54 hrs, Volume= 4.605 af, Depth> 1.52"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 2.487	80	80-D-75% GRASS COVER, GOOD
* 1.050	84	84-D-50-75% GRASS COVER, FAIR
* 1.903	89	89-D-<50% GRASS COVER, POOR
* 0.250	95	95-D-URBAN COMMERCIAL, 85% IMP
* 0.043	79	79-D-WOODS/GRASS COMB., GOOD
* 1.421	78	78-D-MEADOW, NONGRAZED
* 0.054	80	80-D-75% GRASS COVER, GOOD
* 0.598	84	84-D-50-75% GRASS COVER, FAIR
* 2.041	89	89-D-<50% GRASS COVER, POOR
* 0.286	95	95-D-URBAN COMMERCIAL, 85% IMP
* 1.744	78	78-D-MEADOW, NON-GRAZED
* 5.982	80	80-D-75% GRASS COVER, GOOD
* 7.613	84	84-D-50-75% GRASS COVER, FAIR
* 3.609	89	89-D-<50% GRASS COVER, POOR
* 0.887	95	95-D-URBAN COMMERCIAL, 85% IMP
* 3.299	79	79-D-WOODS/GRASS COMB., GOOD
* 2.636	78	78-D-MEADOW, NON-GRAZED
0.360	91	Gravel roads, HSG D
36.263	83	Weighted Average
36.263		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	100	0.0050	0.66		Sheet Flow, 100' Smooth surfaces n= 0.011 P2= 2.22"
1.4	115	0.0043	1.33		Shallow Concentrated Flow, Paved Kv= 20.3 fps
2.4	256	0.0078	1.79		Shallow Concentrated Flow, Paved Kv= 20.3 fps
10.3	240	0.0031	0.39		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.3	30	0.0064	1.62		Shallow Concentrated Flow, Paved Kv= 20.3 fps
2.8	128	0.0117	0.76		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
14.2	209	0.0024	0.24		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
7.2	165	0.0030	0.38		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
41.1	1,243	Total			

Subcatchment PDA2: PROPOSED DA STR 11-12



Summary for Subcatchment PDA3: EXISTING DA STR 17-20

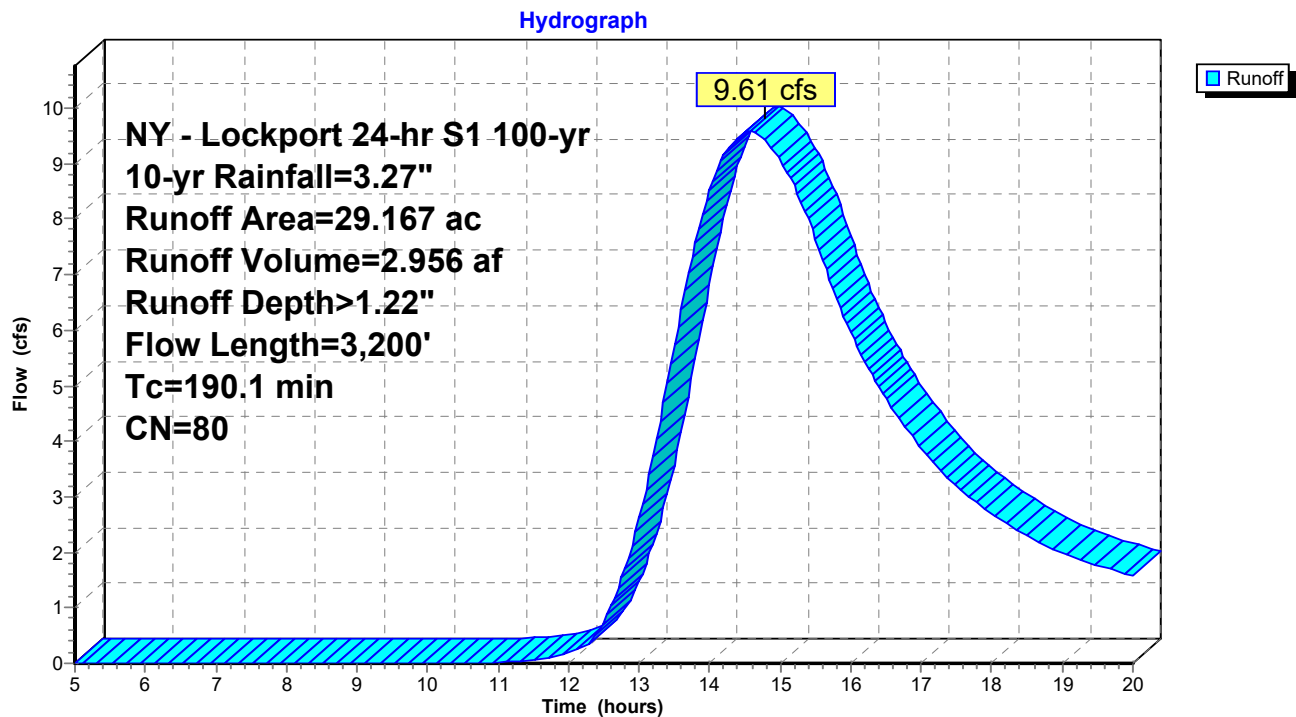
Runoff = 9.61 cfs @ 14.57 hrs, Volume= 2.956 af, Depth> 1.22"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 0.391	80	80-D-75% GRASS COVER, GOOD
* 4.601	79	WOODS/GRASS COMB., GOOD
* 1.427	79	WOODS/GRASS COMB., GOOD
* 2.196	78	MEADOW, NON-GRAZED
* 0.320	98	WATER SURFACE
* 3.636	80	75% GRASS COVER, GOOD
* 1.957	84	50-75% GRASS COVER, FAIR
* 1.103	89	<50% GRASS COVER, POOR
* 0.375	95	URBAN COMMERCIAL, 85% IMP
* 2.017	79	WOODS/GRASS COMB., GOOD
* 0.337	84	50-75% GRASS COVER, FAIR
* 1.236	79	WOODS/GRASS COMB., GOOD
* 0.470	79	WOODS/GRASS COMB., GOOD
* 8.306	78	MEADOW, NON-GRAZED
* 0.274	98	WATER SURFACE, 0% IMP
0.521	91	Gravel roads, HSG D
29.167	80	Weighted Average
28.573		97.96% Pervious Area
0.594		2.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.2	100	0.0175	0.06		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.22"
7.6	186	0.0067	0.41		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
8.3	368	0.0217	0.74		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
31.5	708	0.0056	0.37		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
23.1	576	0.0069	0.42		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
14.5	452	0.0055	0.52		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
77.9	810	0.0012	0.17		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
190.1	3,200	Total			

Subcatchment PDA3: EXISTING DA STR 17-20



Summary for Subcatchment PDA4: PROPOSED DA STR 21-23

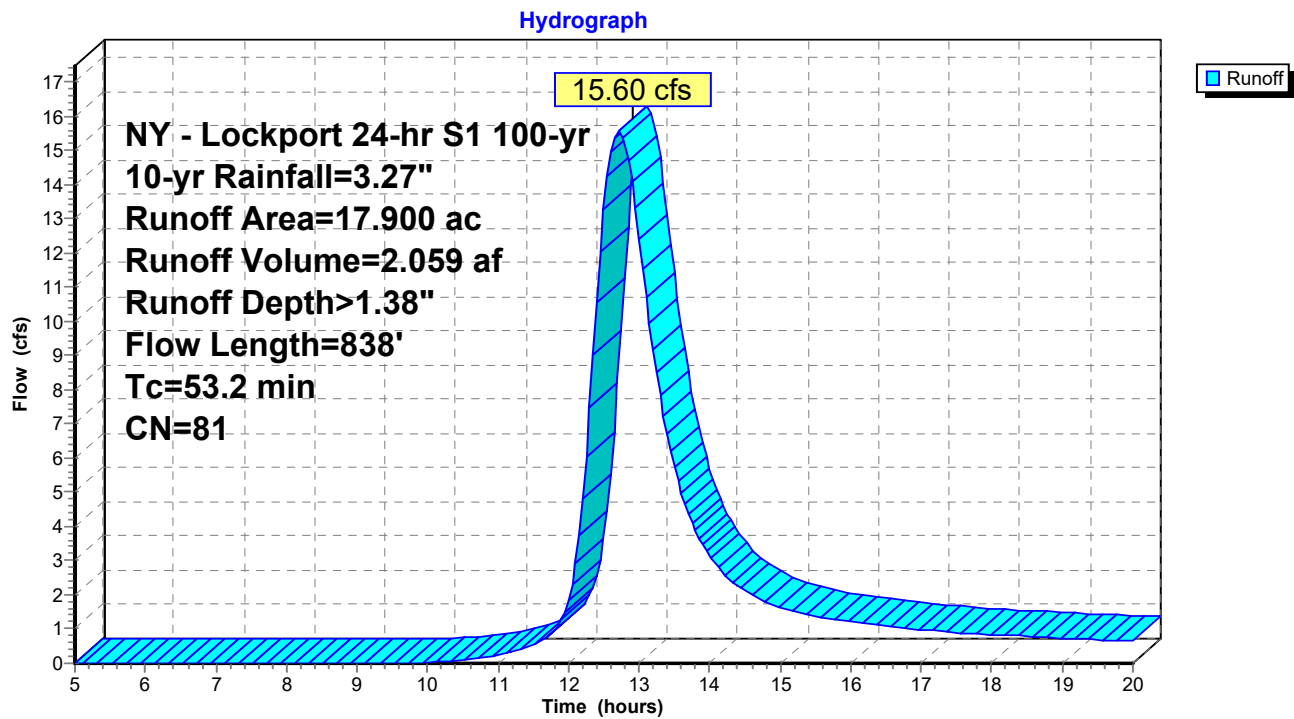
Runoff = 15.60 cfs @ 12.71 hrs, Volume= 2.059 af, Depth> 1.38"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 0.062	80	80-D-75% GRASS COVER, GOOD
* 0.720	84	84-D-50-75% GRASS COVER, FAIR
* 0.884	78	78-D-MEADOW, NON-GRAZED
* 4.286	80	80-D-75% GRASS COVER, GOOD
* 2.842	84	84-D-50-75% GRASS COVER, FAIR
* 0.139	89	89-D-<50% GRASS COVER, POOR
* 1.645	85	85-D-HERBACEOUS RANGE, GOOD
* 5.404	78	78-D-MEADOW, NON-GRAZED
* 0.188	80	80-D-75% GRASS COVER, GOOD
* 0.143	84	84-D-50-75% GRASS COVER, FAIR
* 0.507	78	78-D-MEADOW, NON-GRAZED
1.080	91	Gravel roads, HSG D
17.900	81	Weighted Average
17.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.2	100	0.0125	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.22"
23.5	419	0.0018	0.30		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
15.5	319	0.0024	0.34		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
53.2	838	Total			

Subcatchment PDA4: PROPOSED DA STR 21-23



Summary for Subcatchment PDA5: PROPOSED DA STR 25-29

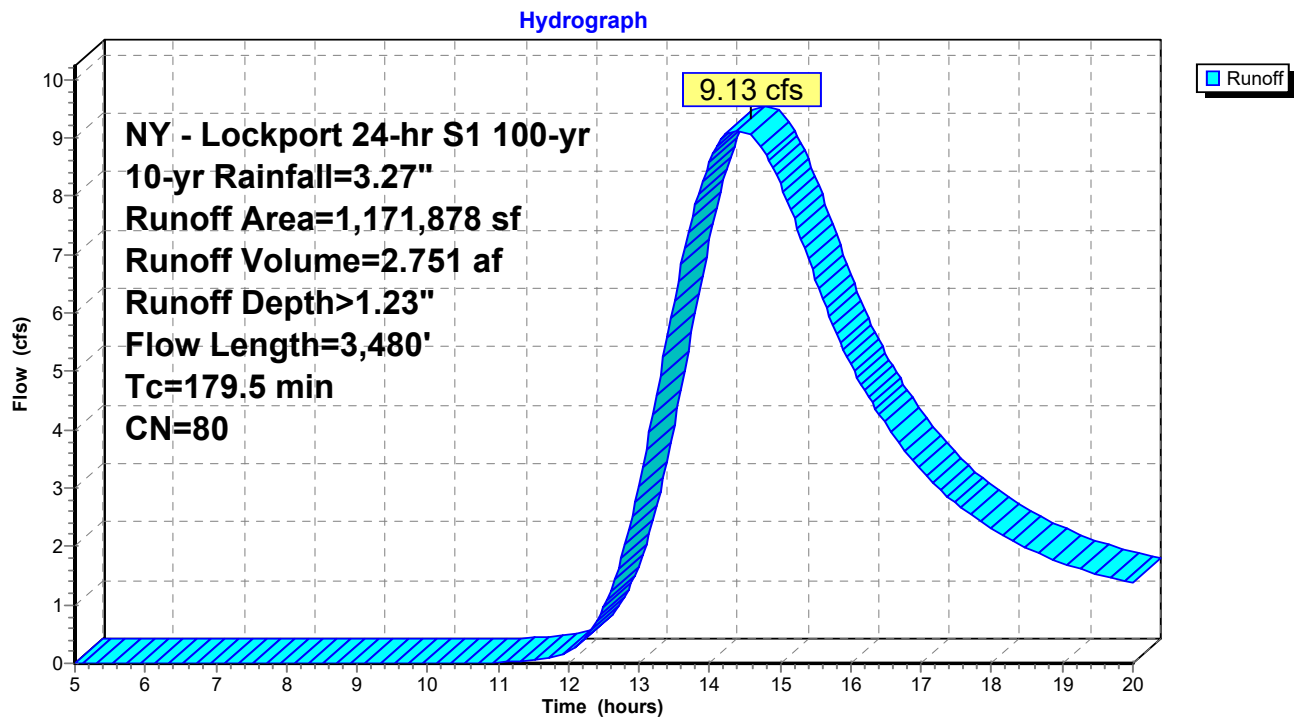
Runoff = 9.13 cfs @ 14.40 hrs, Volume= 2.751 af, Depth> 1.23"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (sf)	CN	Description
* 17,032	80	80-D-75% GRASS COVER, GOOD
* 200,420	79	WOODS/GRASS COMB., GOOD
* 62,160	79	WOODS/GRASS COMB., GOOD
* 95,658	78	MEADOW, NON-GRAZED
* 13,939	98	WATER SURFACE
* 158,384	80	75% GRASS COVER, GOOD
* 85,247	84	50-75% GRASS COVER, FAIR
* 11,396	89	<50% GRASS COVER, POOR
* 16,335	95	URBAN COMMERCIAL, 85% IMP
* 87,861	79	WOODS/GRASS COMB., GOOD
* 14,680	84	50-75% GRASS COVER, FAIR
* 152,329	79	WOODS/GRASS COMB., GOOD
* 20,473	79	WOODS/GRASS COMB., GOOD
* 187,335	78	MEADOW, NON-GRAZED
* 11,935	98	WATER SURFACE, 0% IMP
36,694	91	Gravel roads, HSG D
1,171,878	80	Weighted Average
1,146,004		97.79% Pervious Area
25,874		2.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.8	100	0.0200	0.06		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.22"
28.8	377	0.0019	0.22		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
12.9	548	0.0200	0.71		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
17.4	739	0.0200	0.71		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
10.5	489	0.0240	0.77		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
8.0	420	0.0156	0.87		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
13.1	429	0.0120	0.55		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
63.0	378	0.0004	0.10		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
179.5	3,480	Total			

Subcatchment PDA5: PROPOSED DA STR 25-29



Summary for Subcatchment PDA6: PROPOSED DA STR 29-35

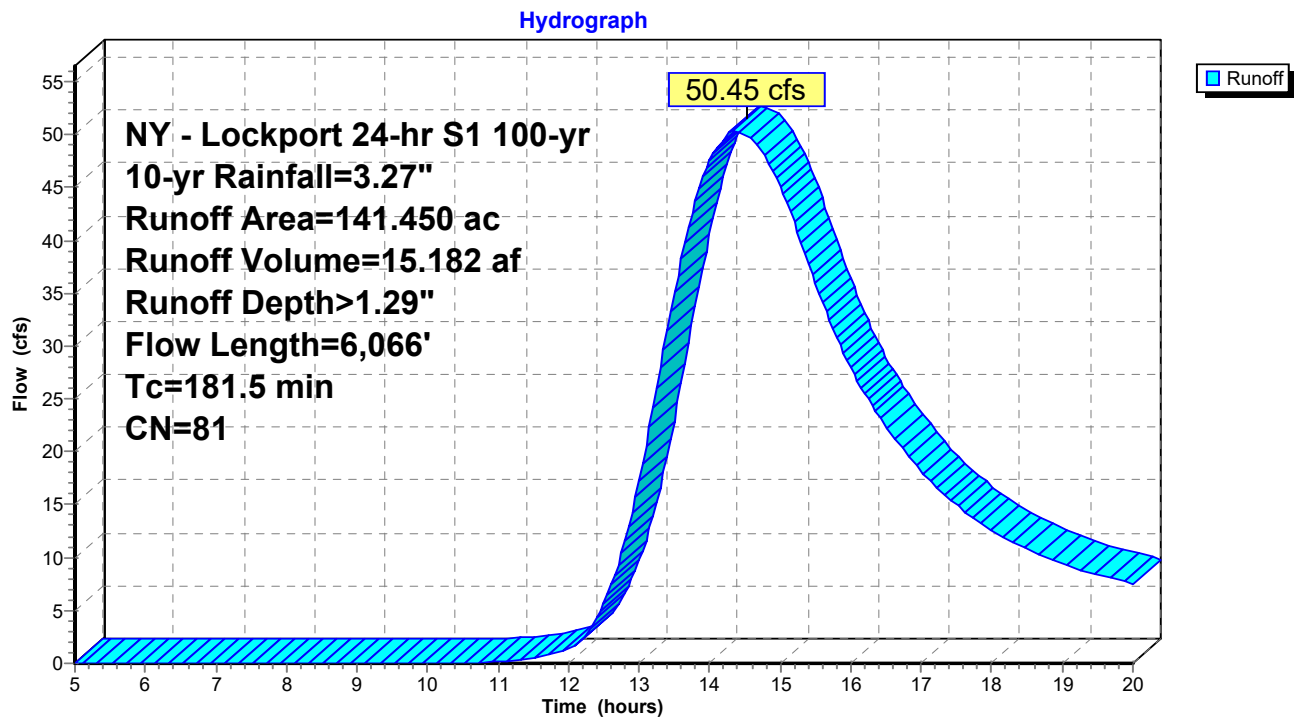
Runoff = 50.45 cfs @ 14.34 hrs, Volume= 15.182 af, Depth> 1.29"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 0.152	98	D - 98 - Open Water
* 0.074	80	D - 80 - Developed open space
* 0.307	80	D - 80 - Developed open space
* 2.363	80	D - 80 - Developed open space
* 1.992	82	D - 82 - Developed Low intensity
* 1.726	82	D - 82 - Developed Low intensity
* 2.185	85	D - 85 - Developed Med intensity
* 0.875	77	D - 77 - Deciduous Forest
* 18.239	77	D - 77 - Deciduous Forest
* 13.242	77	D - 77 - Deciduous Forest
* 0.038	77	D - 77 - Evergreen Forest
* 0.919	77	D - 77 - Evergreen Forest
* 0.021	77	D - 77 - Evergreen Forest
* 0.508	77	D - 77 - Mixed Forest
* 0.889	77	D - 77 - Mixed Forest
* 0.160	77	D - 77 - Mixed Forest
* 4.266	78	D - 78 - Meadowed, grass, non-grazed land
* 29.357	78	D - 78 - Meadowed, grass, non-grazed land
* 22.896	78	D - 78 - Meadowed, grass, non-grazed land
* 0.112	78	D - 78 - Meadowed, grass, non-grazed land
* 5.915	78	D - 78 - Meadowed, grass, non-grazed land
* 5.016	90	D - 90 - Woody Wetlands
* 1.110	91	D - Gravel Roads
* 29.088	90	D - 90 - Woody Wetlands
141.450	81	Weighted Average
141.298		99.89% Pervious Area
0.152		0.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.7	100	0.0275	0.07		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.22"
31.2	1,144	0.0149	0.61		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
14.6	670	0.0026	0.76		Shallow Concentrated Flow,
					Grassed Waterway Kv= 15.0 fps
12.9	328	0.0008	0.42		Shallow Concentrated Flow,
					Grassed Waterway Kv= 15.0 fps
100.1	3,824	0.0018	0.64		Shallow Concentrated Flow,
					Grassed Waterway Kv= 15.0 fps
181.5	6,066	Total			

Subcatchment PDA6: PROPOSED DA STR 29-35



Summary for Subcatchment PDA7: PROPOSED DA STR 37-40

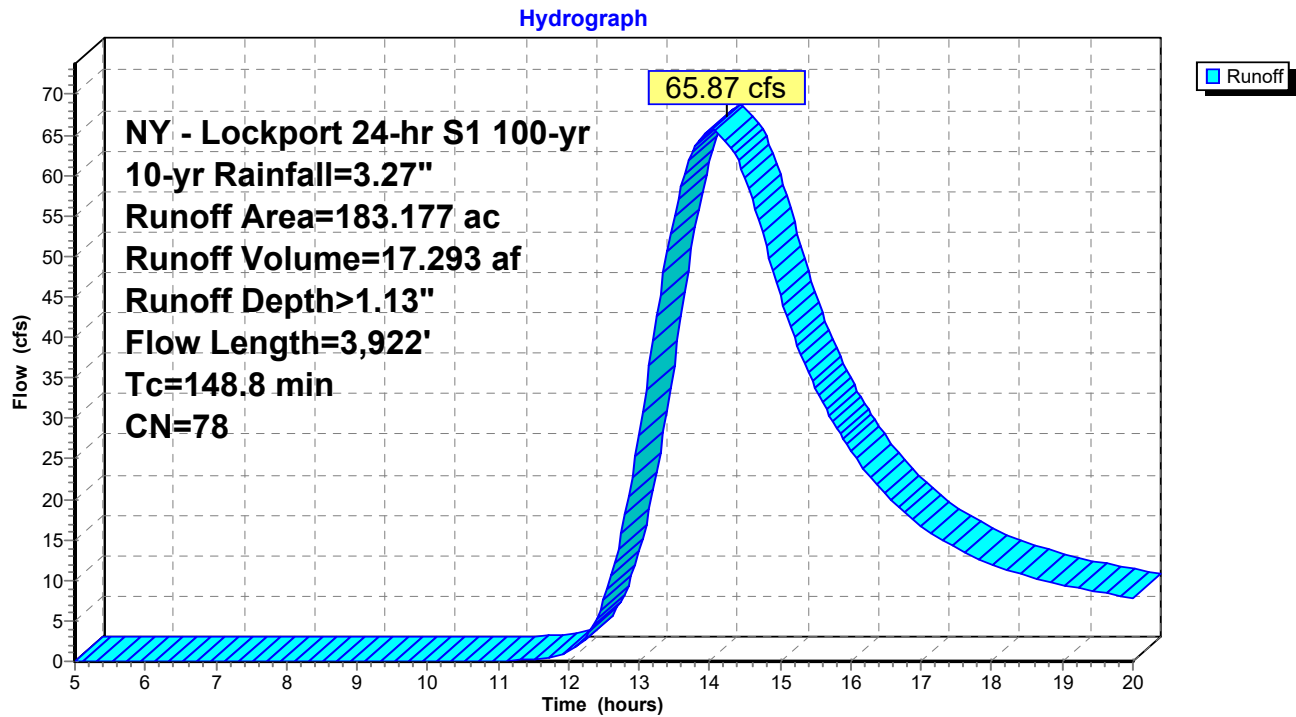
Runoff = 65.87 cfs @ 14.05 hrs, Volume= 17.293 af, Depth> 1.13"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 2.507	80	D - 80 - Developed open space
* 3.318	80	D - 80 - Developed open space
* 2.790	80	D - 80 - Developed open space
* 2.870	82	D - 82 - Developed Low intensity
* 4.979	82	D - 82 - Developed Low intensity
* 4.781	82	D - 82 - Developed Low intensity
* 0.152	85	D - 85 - Developed Med intensity
* 1.263	77	D - 77 - Deciduous Forest
* 3.431	77	D - 77 - Deciduous Forest
* 3.544	77	D - 77 - Deciduous Forest
* 14.732	78	D - 78 - Meadowed, grass, non-grazed land
* 59.055	78	D - 78 - Meadowed, grass, non-grazed land
* 79.095	78	D - 78 - Meadowed, grass, non-grazed land
* 0.660	91	D- Gravel Roads
183.177	78	Weighted Average
183.177		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.6	100	0.0350	0.08		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.22"
48.7	1,573	0.0116	0.54		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
62.0	1,276	0.0047	0.34		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
17.5	973	0.0038	0.92		Shallow Concentrated Flow,
					Grassed Waterway Kv= 15.0 fps
148.8	3,922	Total			

Subcatchment PDA7: PROPOSED DA STR 37-40



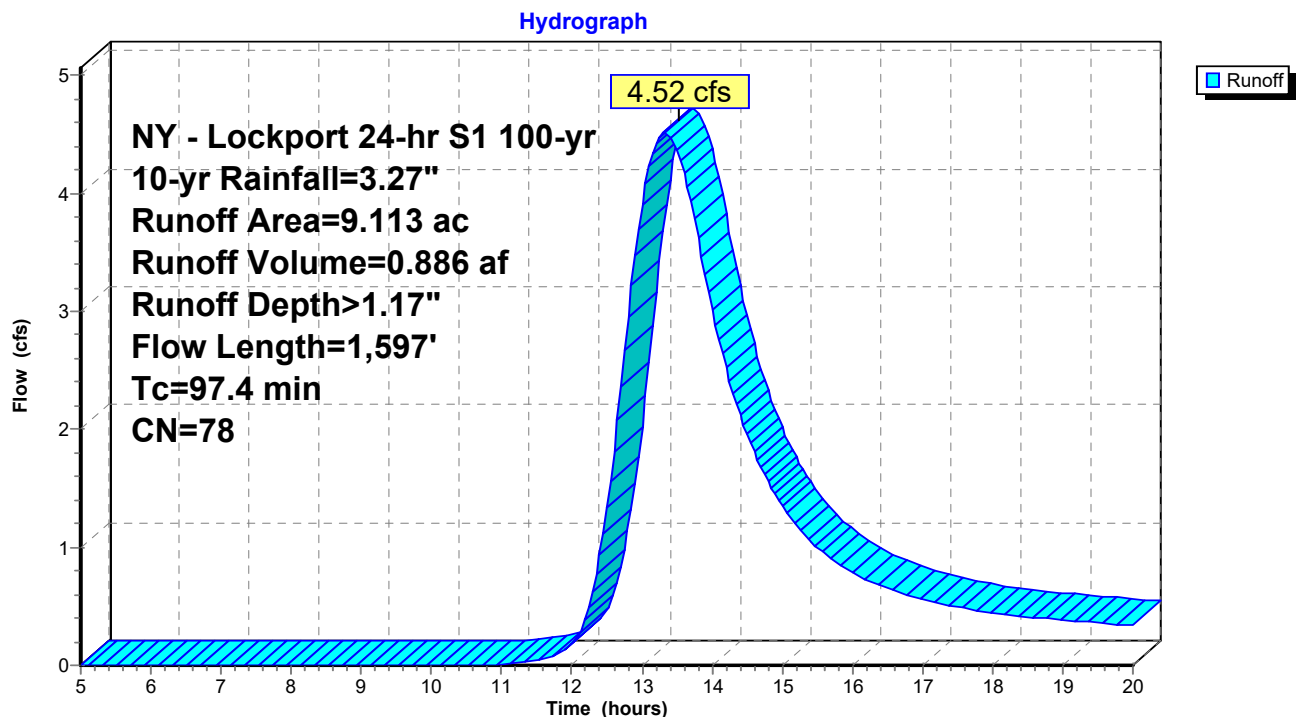
Summary for Subcatchment PDA8: PROPOSED DA STR 41

Runoff = 4.52 cfs @ 13.32 hrs, Volume= 0.886 af, Depth> 1.17"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 3.755	77	D - 77 - Deciduous Forest
* 5.138	78	D - 78 - Meadowed, grass, non-grazed land
* 0.220	91	D- Gravel Roads
9.113	78	Weighted Average
9.113		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.0	100	0.0100	0.05		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.22"
63.4	1,497	0.0062	0.39		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
97.4	1,597	Total			

Subcatchment PDA8: PROPOSED DA STR 41

Summary for Subcatchment PDA9: PROPOSED DA STR 48-50

Runoff = 17.11 cfs @ 13.44 hrs, Volume= 3.645 af, Depth> 1.22"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

Area (ac)	CN	Description
* 2.020	80	D-75% GRASS COVER, GOOD
* 0.850	84	D-50-75% GRASS COVER, FAIR
* 0.080	89	D-<50% GRASS COVER, POOR
* 0.800	79	D-WOODS/GRASS COMB., GOOD
* 6.410	78	D-MEADOW, NON-GRAZED
* 0.060	98	D-WATER SURFACE, 0% IMP
* 1.214	80	D-75% GRASS COVER, GOOD
* 0.074	84	D-50-75% GRASS COVER, FAIR
* 0.060	89	D-<50% GRASS COVER, POOR
* 4.411	79	D-WOODS/GRASS COMB., GOOD
* 18.040	78	D-MEADOW, NON-GRAZED
* 1.050	98	D-WATER SURFACE, 0% IMP
* 0.150	80	D-75% GRASS COVER, GOOD
* 0.210	78	D-MEADOW, NON-GRAZED
* 0.420	91	D-Gravel Roads
35.849	79	Weighted Average
34.739		96.90% Pervious Area
1.110		3.10% Impervious Area

190176.00 - PCSM DESIGNrlw

Prepared by Fisher Associates

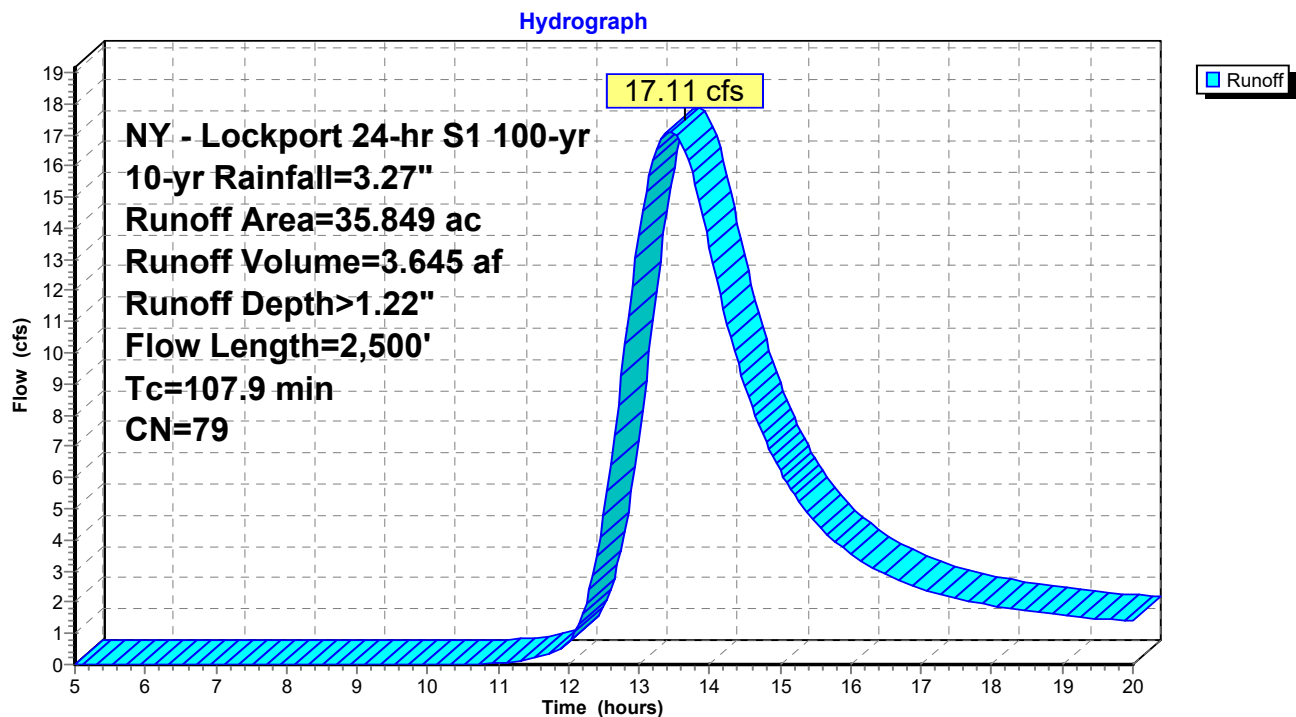
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NY - Lockport 24-hr S1 100-yr 10-yr Rainfall=3.27"

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0300	1.21		Shallow Concentrated Flow, 100' Short Grass Pasture Kv= 7.0 fps
31.2	262	0.0120	0.14		Sheet Flow, 262.19 Grass: Short n= 0.150 P2= 2.22"
4.5	254	0.0180	0.94		Shallow Concentrated Flow, 254' Short Grass Pasture Kv= 7.0 fps
2.9	129	0.0110	0.73		Shallow Concentrated Flow, 128.66 Short Grass Pasture Kv= 7.0 fps
4.4	196	0.0110	0.73		Shallow Concentrated Flow, 196 Short Grass Pasture Kv= 7.0 fps
6.9	260	0.0080	0.63		Shallow Concentrated Flow, 260 Short Grass Pasture Kv= 7.0 fps
5.5	219	0.0090	0.66		Shallow Concentrated Flow, 219 Short Grass Pasture Kv= 7.0 fps
12.4	285	0.0030	0.38		Shallow Concentrated Flow, 285 Short Grass Pasture Kv= 7.0 fps
6.1	230	0.0080	0.63		Shallow Concentrated Flow, 230 Short Grass Pasture Kv= 7.0 fps
10.0	265	0.0040	0.44		Shallow Concentrated Flow, 265 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
107.9	2,500	Total			

Subcatchment PDA9: PROPOSED DA STR 48-50

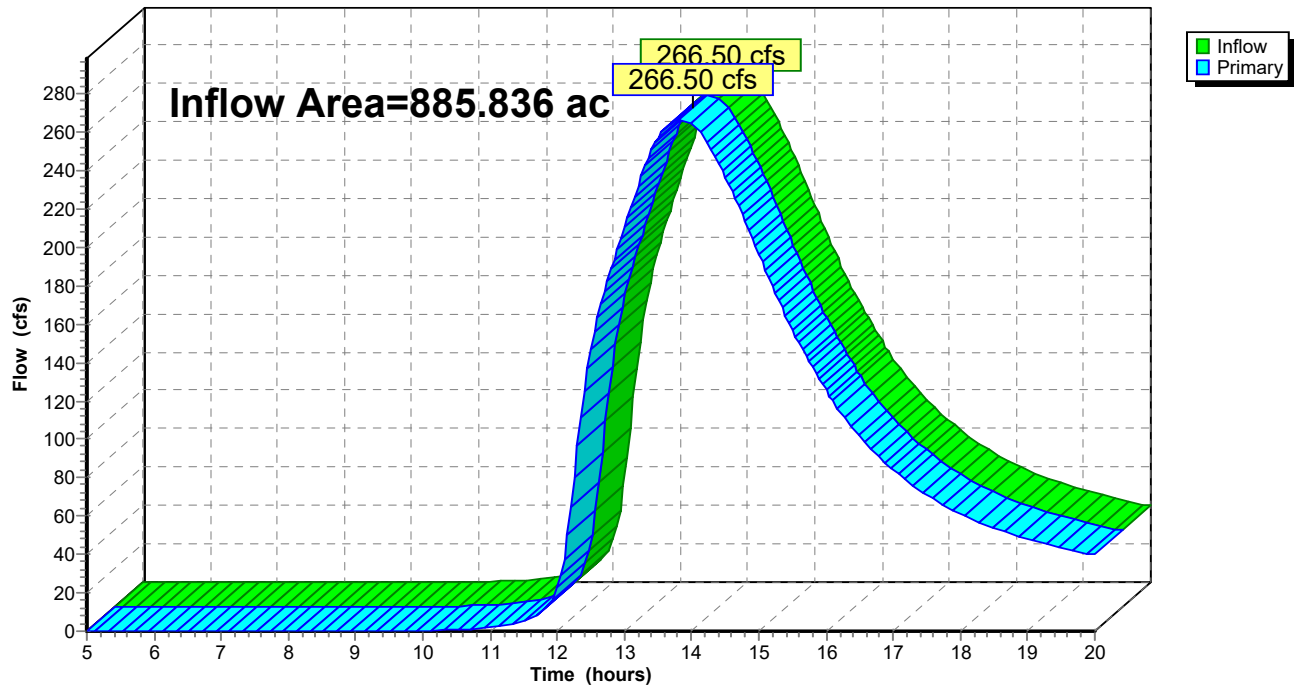
Summary for Link 1L: EXISTING

Inflow Area = 885.836 ac, 0.70% Impervious, Inflow Depth > 1.18" for 10-yr event
Inflow = 266.50 cfs @ 13.80 hrs, Volume= 87.306 af
Primary = 266.50 cfs @ 13.80 hrs, Volume= 87.306 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 1L: EXISTING

Hydrograph



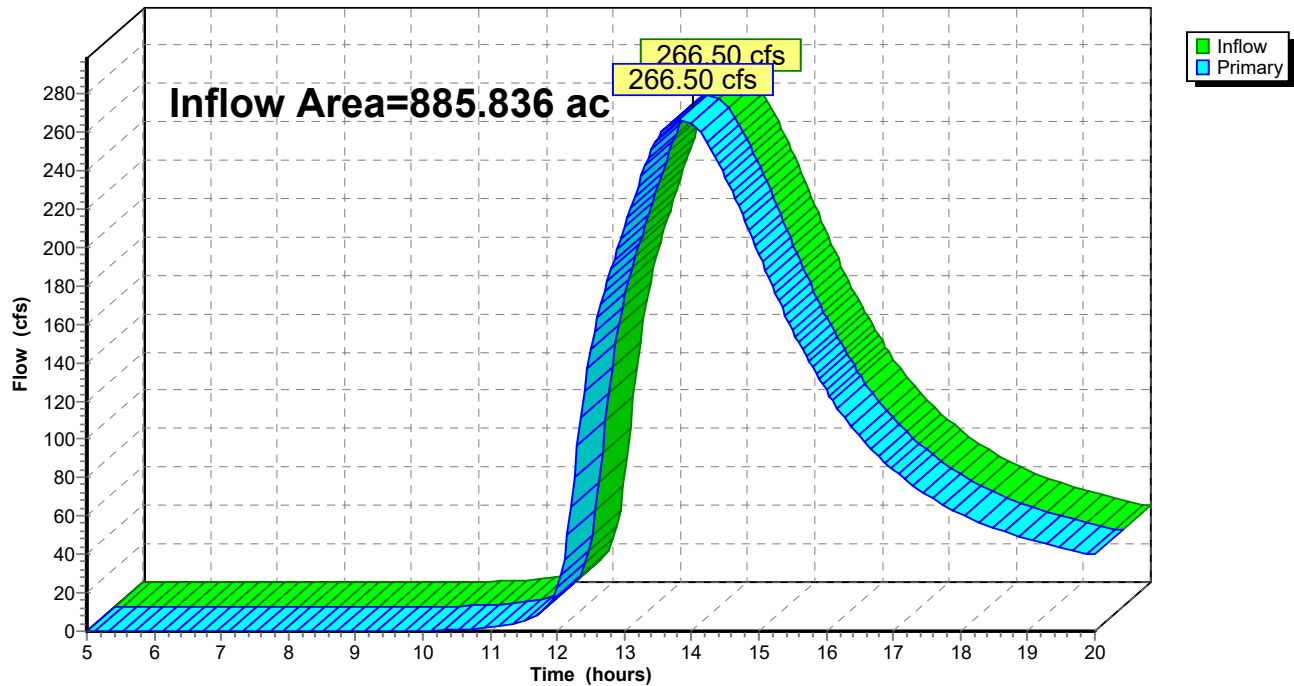
Summary for Link 2L: PROPOSED

Inflow Area = 885.836 ac, 0.66% Impervious, Inflow Depth > 1.18" for 10-yr event
Inflow = 266.50 cfs @ 13.80 hrs, Volume= 87.306 af
Primary = 266.50 cfs @ 13.80 hrs, Volume= 87.306 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 2L: PROPOSED

Hydrograph



Time span=5.00-20.00 hrs, dt=0.05 hrs, 301 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

SubcatchmentDA1: EXISTING DA STR 9-10 Runoff Area=13.623 ac 0.00% Impervious Runoff Depth>2.48"
Flow Length=1,252' Tc=79.0 min CN=79 Runoff=16.62 cfs 2.816 af

SubcatchmentDA10: EXISTING DA STR Runoff Area=97.181 ac 0.35% Impervious Runoff Depth>2.20"
Flow Length=3,167' Tc=219.6 min CN=78 Runoff=52.84 cfs 17.787 af

SubcatchmentDA11: EXISTING DA STR Runoff Area=14.544 ac 0.00% Impervious Runoff Depth>1.72"
Flow Length=915' Tc=184.1 min CN=71 Runoff=6.92 cfs 2.088 af

SubcatchmentDA12: EXISTING DA STR Runoff Area=8.250 ac 0.00% Impervious Runoff Depth>1.38"
Flow Length=1,012' Tc=23.6 min CN=64 Runoff=10.78 cfs 0.949 af

SubcatchmentDA13: EXISTING DA STR Runoff Area=64.056 ac 0.65% Impervious Runoff Depth>2.39"
Flow Length=1,139' Tc=84.8 min CN=78 Runoff=72.21 cfs 12.756 af

SubcatchmentDA14: EXISTING DA STR Runoff Area=27.155 ac 0.89% Impervious Runoff Depth>2.34"
Flow Length=1,379' Tc=135.3 min CN=78 Runoff=21.42 cfs 5.284 af

SubcatchmentDA15: EXISTING DA STR Runoff Area=24.134 ac 4.00% Impervious Runoff Depth>2.27"
Flow Length=1,032' Tc=33.9 min CN=76 Runoff=45.02 cfs 4.565 af

SubcatchmentDA16: EXISTING DA STR Runoff Area=11.825 ac 11.22% Impervious Runoff Depth>2.27"
Flow Length=619' Tc=30.2 min CN=76 Runoff=23.49 cfs 2.240 af

SubcatchmentDA17: EXISTING DA STR Runoff Area=21.990 ac 2.17% Impervious Runoff Depth>2.28"
Flow Length=3,167' Tc=219.6 min CN=79 Runoff=12.39 cfs 4.174 af

SubcatchmentDA18: EXISTING DA STR 36 Runoff Area=12.438 ac 0.00% Impervious Runoff Depth>2.50"
Flow Length=1,215' Tc=54.9 min CN=79 Runoff=19.27 cfs 2.596 af

SubcatchmentDA19: EXISTING DA STR Runoff Area=110.818 ac 0.00% Impervious Runoff Depth>2.44"
Flow Length=4,090' Tc=121.8 min CN=79 Runoff=99.04 cfs 22.489 af

SubcatchmentDA2: EXISTING DA STR Runoff Area=36.263 ac 0.00% Impervious Runoff Depth>2.87"
Flow Length=1,243' Tc=41.1 min CN=83 Runoff=76.18 cfs 8.686 af

SubcatchmentDA3: EXISTING DA STR Runoff Area=29.167 ac 2.04% Impervious Runoff Depth>2.42"
Flow Length=3,200' Tc=190.1 min CN=80 Runoff=19.11 cfs 5.885 af

SubcatchmentDA4: EXISTING DA STR Runoff Area=17.900 ac 0.00% Impervious Runoff Depth>2.68"
Flow Length=838' Tc=53.2 min CN=81 Runoff=30.30 cfs 3.999 af

SubcatchmentDA5: EXISTING DA STR Runoff Area=1,171,878 sf 2.21% Impervious Runoff Depth>2.44"
Flow Length=3,480' Tc=179.5 min CN=80 Runoff=18.21 cfs 5.471 af

SubcatchmentDA6: EXISTING DA STR Runoff Area=141.450 ac 0.11% Impervious Runoff Depth>2.52"
Flow Length=6,066' Tc=181.5 min CN=81 Runoff=99.03 cfs 29.743 af

SubcatchmentDA7: EXISTING DA STR Runoff Area=183.177 ac 0.00% Impervious Runoff Depth>2.32"
Flow Length=3,922' Tc=148.8 min CN=78 Runoff=135.74 cfs 35.392 af

SubcatchmentDA8: EXISTING DA STR 41 Runoff Area=9.113 ac 0.00% Impervious Runoff Depth>2.38"
Flow Length=1,597' Tc=97.4 min CN=78 Runoff=9.32 cfs 1.805 af

SubcatchmentDA9: EXISTING DA STR Runoff Area=35.849 ac 3.10% Impervious Runoff Depth>2.45"
Flow Length=2,500' Tc=107.9 min CN=79 Runoff=34.71 cfs 7.321 af

SubcatchmentPDA1: PROPOSED DA STR Runoff Area=13.623 ac 0.00% Impervious Runoff Depth>2.48"
Flow Length=1,252' Tc=79.0 min CN=79 Runoff=16.62 cfs 2.816 af

SubcatchmentPDA10: EXISTING DA STR Runoff Area=97.181 ac 0.35% Impervious Runoff Depth>2.20"
Flow Length=3,167' Tc=219.6 min CN=78 Runoff=52.84 cfs 17.787 af

SubcatchmentPDA11: PROPOSED DA STR Runoff Area=14.544 ac 0.00% Impervious Runoff Depth>1.72"
Flow Length=915' Tc=184.1 min CN=71 Runoff=6.92 cfs 2.088 af

SubcatchmentPDA12: PROPOSED DA STR Runoff Area=8.250 ac 0.00% Impervious Runoff Depth>1.38"
Flow Length=1,012' Tc=23.6 min CN=64 Runoff=10.78 cfs 0.949 af

SubcatchmentPDA13: PROPOSED DA STR Runoff Area=64.056 ac 0.65% Impervious Runoff Depth>2.39"
Flow Length=1,139' Tc=84.8 min CN=78 Runoff=72.21 cfs 12.756 af

SubcatchmentPDA14: PROPOSED DA STR Runoff Area=27.155 ac 0.89% Impervious Runoff Depth>2.34"
Flow Length=1,379' Tc=135.3 min CN=78 Runoff=21.42 cfs 5.284 af

SubcatchmentPDA15: PROPOSED DA STR Runoff Area=24.134 ac 4.00% Impervious Runoff Depth>2.27"
Flow Length=1,032' Tc=33.9 min CN=76 Runoff=45.02 cfs 4.565 af

SubcatchmentPDA16: PROPOSED DA STR Runoff Area=11.825 ac 8.12% Impervious Runoff Depth>2.27"
Flow Length=619' Tc=30.2 min CN=76 Runoff=23.49 cfs 2.240 af

SubcatchmentPDA17: PROPOSED DA STR Runoff Area=21.990 ac 2.17% Impervious Runoff Depth>2.28"
Flow Length=3,167' Tc=219.6 min CN=79 Runoff=12.39 cfs 4.174 af

SubcatchmentPDA18: PROPOSED DA STR Runoff Area=12.438 ac 0.00% Impervious Runoff Depth>2.50"
Flow Length=1,215' Tc=54.9 min CN=79 Runoff=19.27 cfs 2.596 af

SubcatchmentPDA19: PROPOSED DA Runoff Area=110.818 ac 0.00% Impervious Runoff Depth>2.44"
Flow Length=4,090' Tc=121.8 min CN=79 Runoff=99.04 cfs 22.489 af

SubcatchmentPDA2: PROPOSED DA STR Runoff Area=36.263 ac 0.00% Impervious Runoff Depth>2.87"
Flow Length=1,243' Tc=41.1 min CN=83 Runoff=76.18 cfs 8.686 af

SubcatchmentPDA3: EXISTING DA STR Runoff Area=29.167 ac 2.04% Impervious Runoff Depth>2.42"
Flow Length=3,200' Tc=190.1 min CN=80 Runoff=19.11 cfs 5.885 af

SubcatchmentPDA4: PROPOSED DA STR Runoff Area=17.900 ac 0.00% Impervious Runoff Depth>2.68"
Flow Length=838' Tc=53.2 min CN=81 Runoff=30.30 cfs 3.999 af

SubcatchmentPDA5: PROPOSED DA Runoff Area=1,171,878 sf 2.21% Impervious Runoff Depth>2.44"
Flow Length=3,480' Tc=179.5 min CN=80 Runoff=18.21 cfs 5.471 af

SubcatchmentPDA6: PROPOSED DA STR Runoff Area=141.450 ac 0.11% Impervious Runoff Depth>2.52"
Flow Length=6,066' Tc=181.5 min CN=81 Runoff=99.03 cfs 29.743 af

SubcatchmentPDA7: PROPOSED DA STR Runoff Area=183.177 ac 0.00% Impervious Runoff Depth>2.32"
Flow Length=3,922' Tc=148.8 min CN=78 Runoff=135.74 cfs 35.392 af

SubcatchmentPDA8: PROPOSED DA STR Runoff Area=9.113 ac 0.00% Impervious Runoff Depth>2.38"
Flow Length=1,597' Tc=97.4 min CN=78 Runoff=9.32 cfs 1.805 af

SubcatchmentPDA9: PROPOSED DA STR Runoff Area=35.849 ac 3.10% Impervious Runoff Depth>2.45"
Flow Length=2,500' Tc=107.9 min CN=79 Runoff=34.71 cfs 7.321 af

Link 1L: EXISTING

Inflow=542.98 cfs 176.048 af
Primary=542.98 cfs 176.048 af

Link 2L: PROPOSED

Inflow=542.98 cfs 176.048 af
Primary=542.98 cfs 176.048 af

Total Runoff Area = 1,771.671 ac Runoff Volume = 352.095 af Average Runoff Depth = 2.38"
99.32% Pervious = 1,759.600 ac 0.68% Impervious = 12.071 ac

Summary for Subcatchment DA1: EXISTING DA STR 9-10

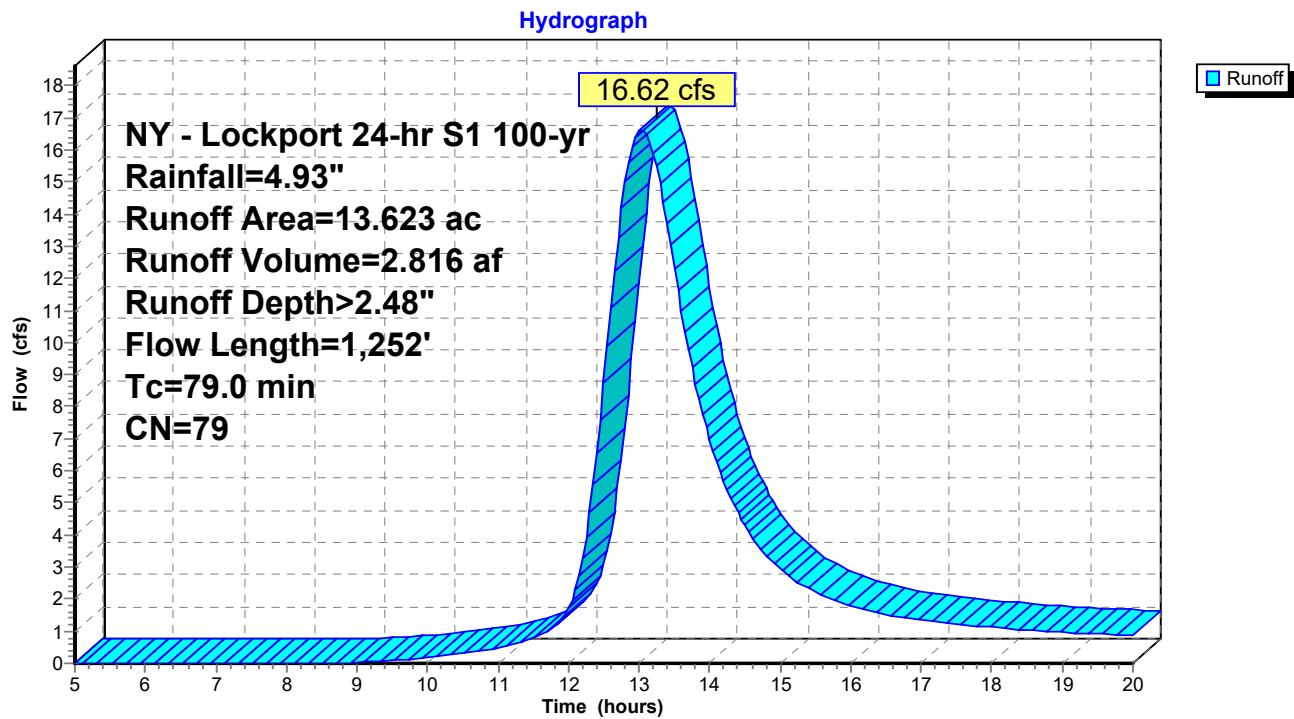
Runoff = 16.62 cfs @ 13.04 hrs, Volume= 2.816 af, Depth> 2.48"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.134	39	39 - A - 75% GRASS COVER, GOOD
* 0.938	49	49 - A - 50-75% GRASS COVER, FAIR
* 0.065	68	68 - A - <50% GRASS COVER, POOR
* 0.064	32	32 - A - FALLOW, BARE SOIL
* 0.064	30	30 - A - MEADOW, NON-GRAZED
* 0.293	80	80 - D - 75% GRASS COVER, GOOD
* 1.950	84	84 - D - 50-75% GRASS COVER, FAIR
* 0.320	89	89 - D - <50% GRASS COVER, POOR
* 0.105	79	79 - D - WOODS/GRASS COMB., GOOD
* 0.497	78	78 - D - MEADOW, NON-GRAZED
* 1.157	80	80 - D - 75% GRASS COVER, GOOD
* 4.870	84	84 - D - 50-75% GRASS COVER, FAIR
* 0.999	89	89 - D - <50% GRASS COVER, POOR
* 2.167	78	78 - D - MEADOW, NON-GRAZED
13.623	79	Weighted Average
13.623		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0175	0.13		Sheet Flow, 100' Sheet
					Grass: Short n= 0.150 P2= 2.22"
40.8	420	0.0006	0.17		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
0.5	45	0.0056	1.52		Shallow Concentrated Flow,
					Paved Kv= 20.3 fps
14.3	300	0.0025	0.35		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
6.7	200	0.0050	0.49		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
4.3	187	0.0107	0.72		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
79.0	1,252	Total			

Subcatchment DA1: EXISTING DA STR 9-10



Summary for Subcatchment DA10: EXISTING DA STR 78-83

Runoff = 52.84 cfs @ 14.89 hrs, Volume= 17.787 af, Depth> 2.20"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.446	82	B-MEADOW, NON-GRAZED
* 0.142	43	D-WOODS/GRASS COMB., GOOD
* 13.840	81	D-MEADOW, NON-GRAZED
* 8.160	82	D-MEADOW, NON-GRAZED
* 1.781	21	D-75% GRASS COVER, GOOD
* 3.035	22	D-50-75% GRASS COVER, FAIR
* 24.158	81	D-MEADOW, NON-GRAZED
* 5.711	82	D-MEADOW, NON-GRAZED
* 0.003	21	D-75% GRASS COVER, GOOD
* 0.428	22	D-50-75% GRASS COVER, FAIR
* 18.333	81	D-MEADOW, NON-GRAZED
* 20.761	82	D-MEADOW, NON-GRAZED
* 0.340	98	D-PAVED ASPHALT DRIVEWAY
* 0.043	90	D-WATER SURFACE, 0% IMP
97.181	78	Weighted Average
96.841		99.65% Pervious Area
0.340		0.35% Impervious Area

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NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Prepared by Fisher Associates

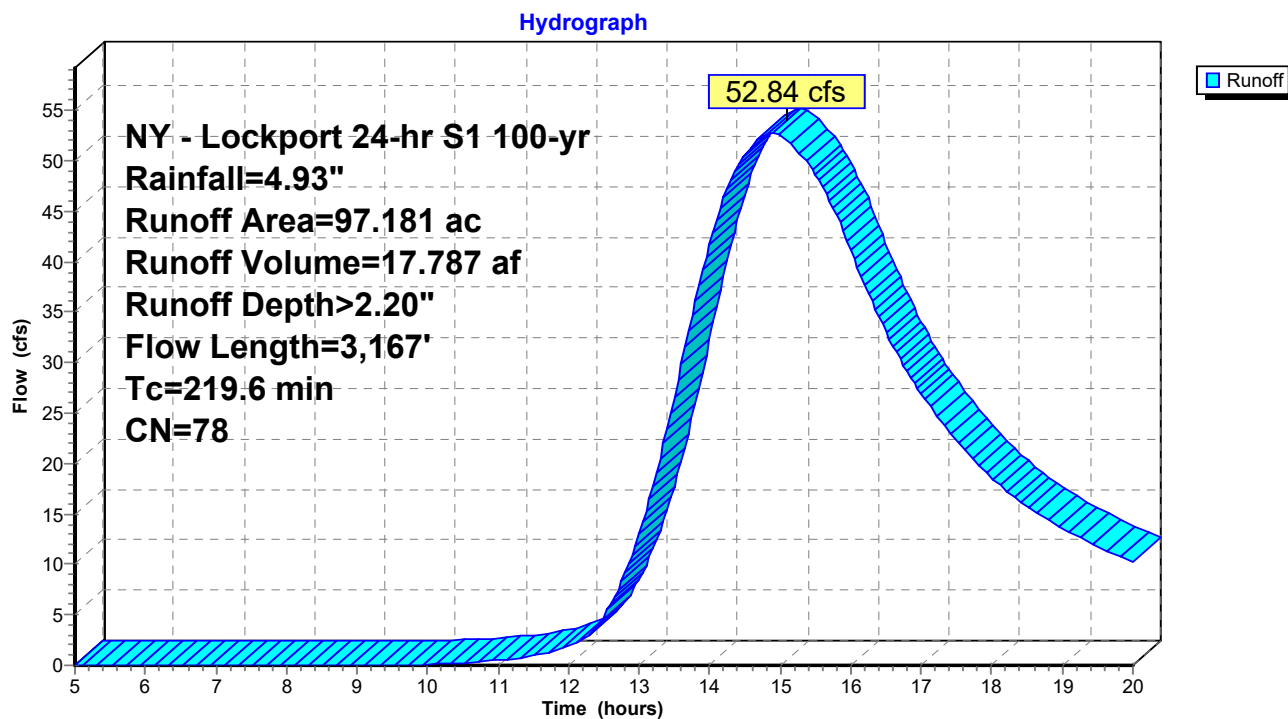
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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	100	0.0610	0.22		Sheet Flow, 100 Grass: Short n= 0.150 P2= 2.22"
3.0	144	0.0130	0.80		Shallow Concentrated Flow, 144 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
9.2	300	0.0060	0.54		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
71.4	300	0.0001	0.07		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
12.2	162	0.0010	0.22		Shallow Concentrated Flow, 162 Short Grass Pasture Kv= 7.0 fps
10.1	300	0.0050	0.49		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
8.3	290	0.0070	0.59		Shallow Concentrated Flow, 290 Short Grass Pasture Kv= 7.0 fps
0.6	50	0.0400	1.40		Shallow Concentrated Flow, 50 Short Grass Pasture Kv= 7.0 fps
4.4	242	0.0170	0.91		Shallow Concentrated Flow, 242 Short Grass Pasture Kv= 7.0 fps
6.3	300	0.0130	0.80		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
18.8	79	0.0001	0.07		Shallow Concentrated Flow, 79 Short Grass Pasture Kv= 7.0 fps
219.6	3,167	Total			

Subcatchment DA10: EXISTING DA STR 78-83



Summary for Subcatchment DA11: EXISTING DA STR 84-86

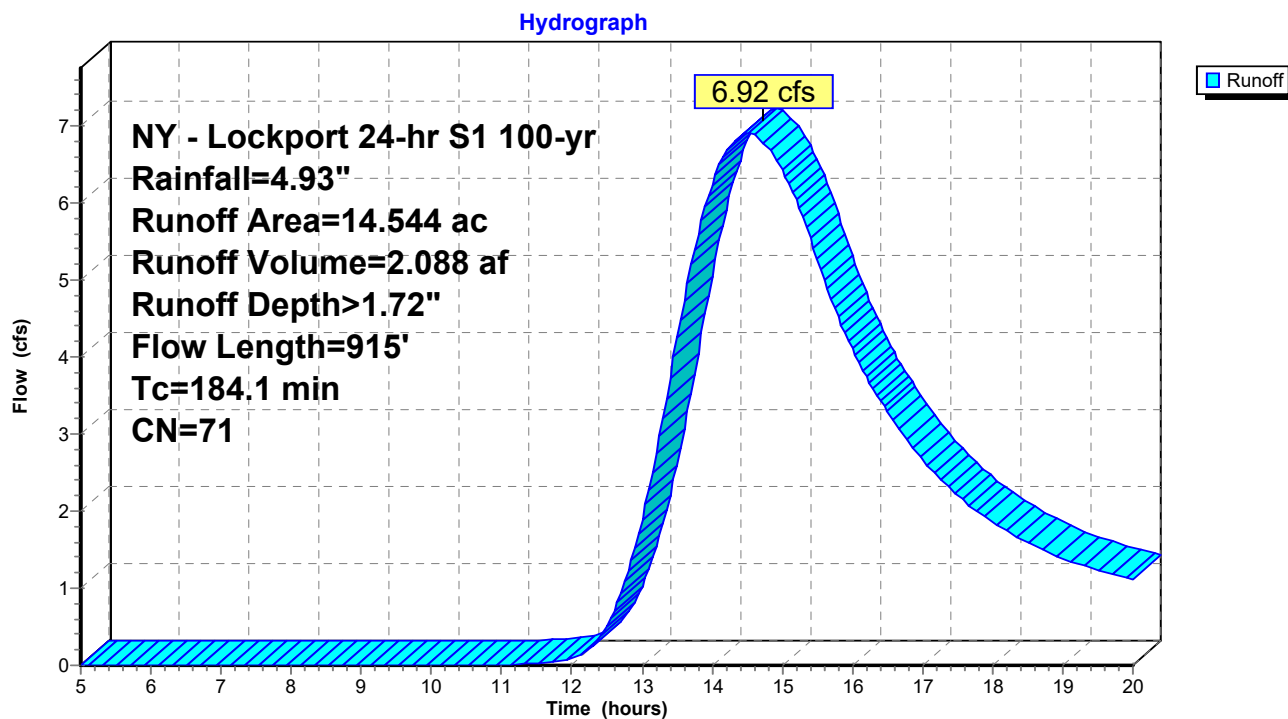
Runoff = 6.92 cfs @ 14.52 hrs, Volume= 2.088 af, Depth> 1.72"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.033	58	B-MEADOW, NON-GRAZED
* 3.140	58	B-MEADOW, NON-GRAZED
* 0.039	80	D-75% GRASS COVER, GOOD
* 0.117	84	D-50-75% GRASS COVER, FAIR
* 1.962	78	D-MEADOW, NON-GRAZED
* 2.545	78	D-MEADOW, NON-GRAZED
* 0.145	71	D-MEADOW, NON-GRAZED
* 5.505	71	D-MEADOW, NON-GRAZED
* 0.304	78	D-MEADOW, NONGRAZED
* 0.030	78	D-MEADOW, NON-GRAZED
* 0.724	78	D-MEADOW, NON-GRAZED
14.544	71	Weighted Average
14.544		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
97.9	100	0.0001	0.02		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.22"
3.6	164	0.0120	0.77		Shallow Concentrated Flow, 164
					Short Grass Pasture Kv= 7.0 fps
8.5	300	0.0070	0.59		Shallow Concentrated Flow, 300
					Short Grass Pasture Kv= 7.0 fps
71.4	300	0.0001	0.07		Shallow Concentrated Flow, 300
					Short Grass Pasture Kv= 7.0 fps
2.7	51	0.0020	0.31		Shallow Concentrated Flow, 51
					Short Grass Pasture Kv= 7.0 fps
184.1	915	Total			

Subcatchment DA11: EXISTING DA STR 84-86



Summary for Subcatchment DA12: EXISTING DA STR 90-96

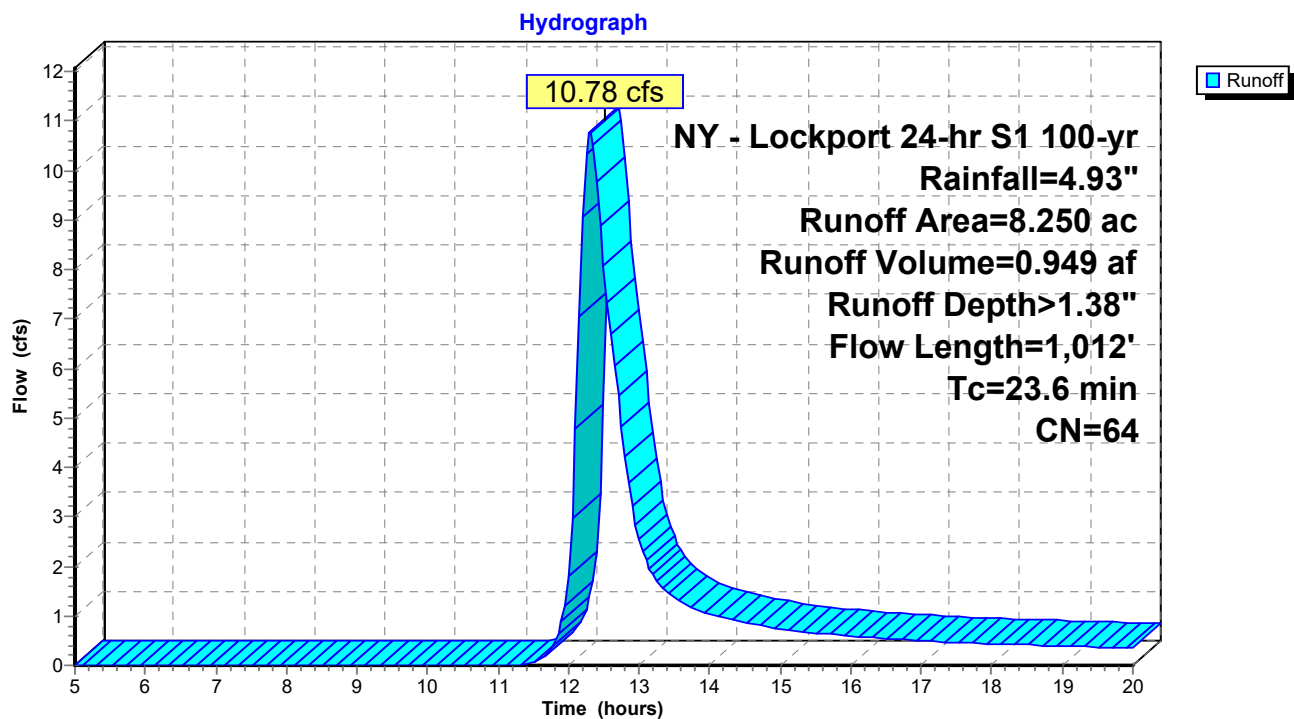
Runoff = 10.78 cfs @ 12.31 hrs, Volume= 0.949 af, Depth> 1.38"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 2.470	30	A-MEADOW, NON-GRAZED
* 5.780	78	D-MEADOW, NON-GRAZED
8.250	64	Weighted Average
8.250		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	100	0.0390	0.19		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.22"
1.5	130	0.0420	1.43		Shallow Concentrated Flow, 130
					Short Grass Pasture Kv= 7.0 fps
1.7	180	0.0640	1.77		Shallow Concentrated Flow, 180
					Short Grass Pasture Kv= 7.0 fps
2.5	237	0.0520	1.60		Shallow Concentrated Flow, 237
					Short Grass Pasture Kv= 7.0 fps
1.3	80	0.0230	1.06		Shallow Concentrated Flow, 80
					Short Grass Pasture Kv= 7.0 fps
5.0	132	0.0040	0.44		Shallow Concentrated Flow, 132
					Short Grass Pasture Kv= 7.0 fps
2.6	153	0.0200	0.99		Shallow Concentrated Flow, 153
					Short Grass Pasture Kv= 7.0 fps
23.6	1,012	Total			

Subcatchment DA12: EXISTING DA STR 90-96



Summary for Subcatchment DA13: EXISTING DA STR 97-103

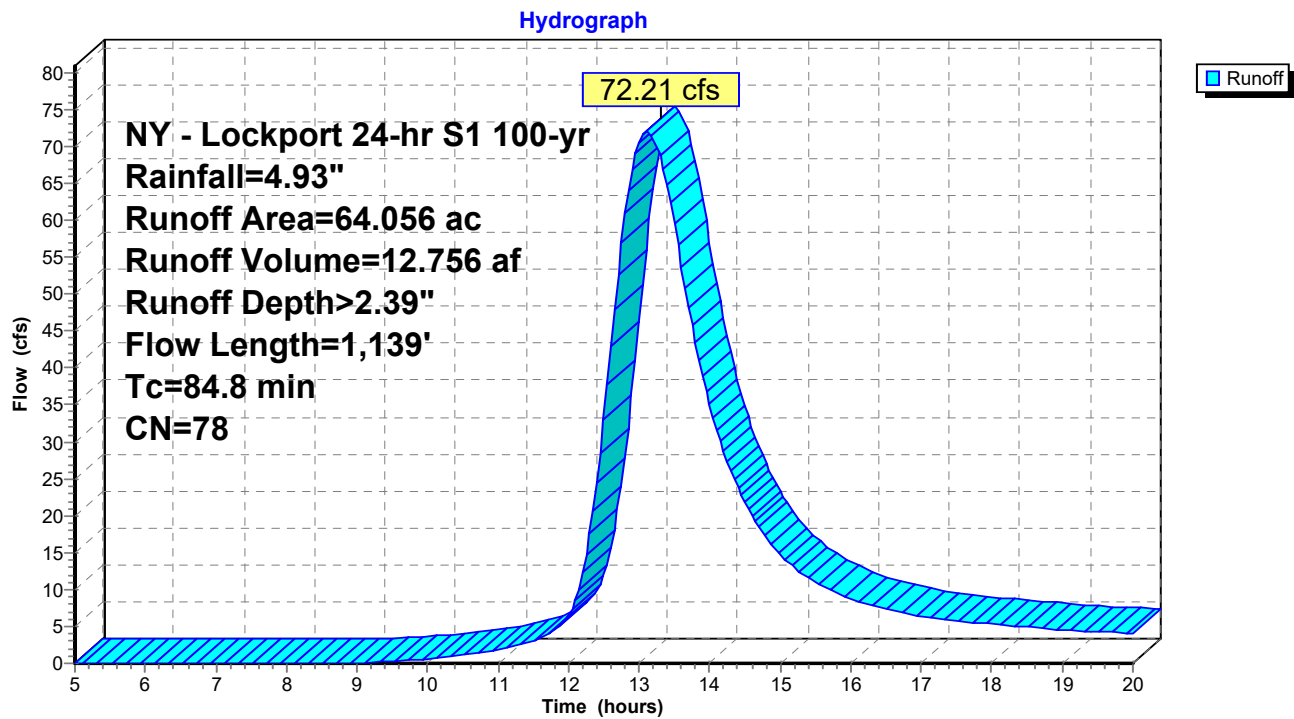
Runoff = 72.21 cfs @ 13.11 hrs, Volume= 12.756 af, Depth> 2.39"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.113	49	A-50-75% GRASS COVER, FAIR
* 0.131	30	A-MEADOW, NON-GRAZED
* 12.491	78	D-MEADOW, NON-GRAZED
* 0.855	80	D-75% GRASS COVER, GOOD
* 0.366	84	D-50-75% GRASS COVER, FAIR
* 0.263	79	D-WOODS/GRASS COMB., GOOD
* 49.419	78	D-MEADOW, NON-GRAZED
* 0.418	98	D-WATER SURFACE, 0% IMP
64.056	78	Weighted Average
63.638		99.35% Pervious Area
0.418		0.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.1	100	0.0030	0.07		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.22"
11.2	258	0.0030	0.38		Shallow Concentrated Flow, 258
					Short Grass Pasture Kv= 7.0 fps
31.4	132	0.0001	0.07		Shallow Concentrated Flow, 132
					Short Grass Pasture Kv= 7.0 fps
4.0	176	0.0110	0.73		Shallow Concentrated Flow, 176
					Short Grass Pasture Kv= 7.0 fps
7.7	270	0.0070	0.59		Shallow Concentrated Flow, 270
					Short Grass Pasture Kv= 7.0 fps
5.4	203	0.0080	0.63		Shallow Concentrated Flow, 203
					Short Grass Pasture Kv= 7.0 fps
84.8	1,139	Total			

Subcatchment DA13: EXISTING DA STR 97-103



Summary for Subcatchment DA14: EXISTING DA STR 104-106

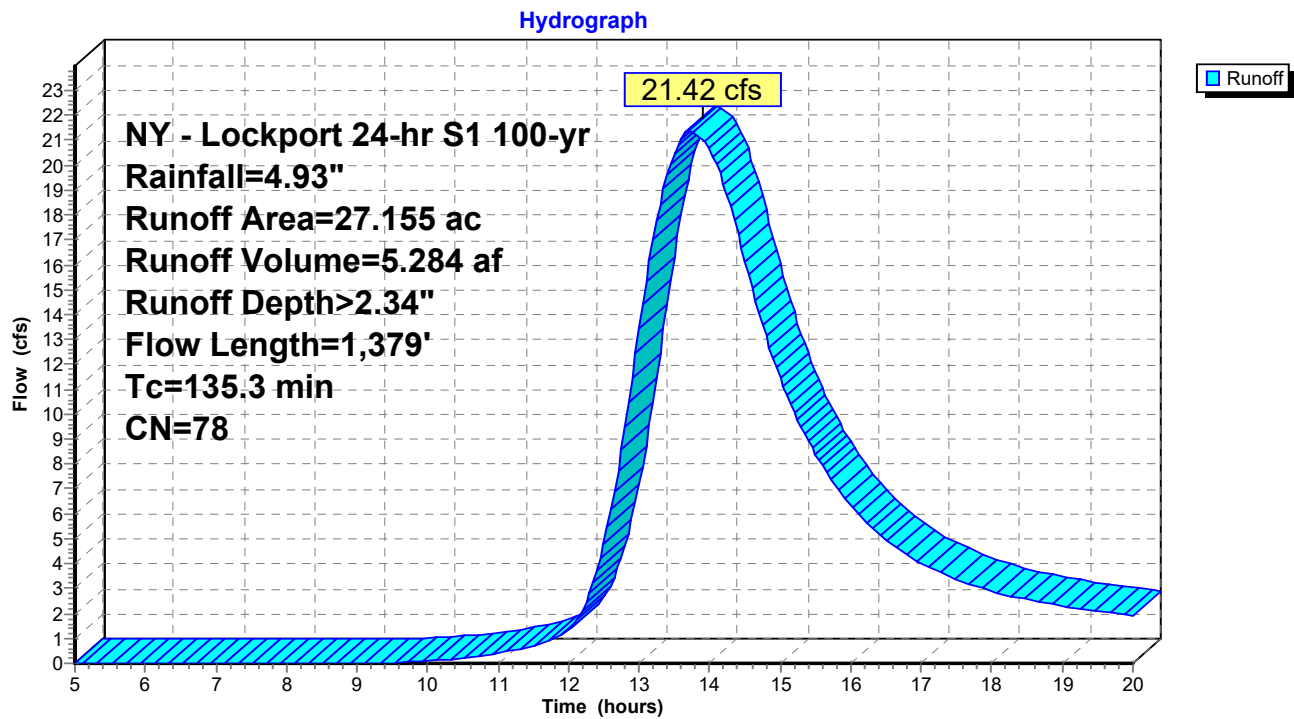
Runoff = 21.42 cfs @ 13.71 hrs, Volume= 5.284 af, Depth> 2.34"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.471	61	B-75% GRASS COVER, GOOD
* 1.291	80	D-75% GRASS COVER, GOOD
* 0.937	84	D-50-75% GRASS COVER, FAIR
* 1.189	79	D-WOODS/GRASS COMB., GOOD
* 2.124	78	D-MEADOW, NON-GRAZED
* 0.606	80	D-75% GRASS COVER, GOOD
* 0.552	79	D-WOODS/GRASS COMB., GOOD
* 10.418	78	D-MEADOW, NON-GRAZED
* 0.104	98	D-WATER SURFACE, 0% IMP
* 0.137	98	D-WATER SURFACE, 0% IMP
* 0.893	80	D-75% GRASS COVER, GOOD
* 0.115	80	D-50-75% GRASS COVER, FAIR
* 8.318	78	D-MEADOW, NON-GRAZED
27.155	78	Weighted Average
26.914		99.11% Pervious Area
0.241		0.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.6	100	0.0330	0.17		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.22"
0.9	53	0.0220	1.04		Shallow Concentrated Flow, 53
					Short Grass Pasture Kv= 7.0 fps
2.3	140	0.0210	1.01		Shallow Concentrated Flow, 140
					Short Grass Pasture Kv= 7.0 fps
2.2	140	0.0220	1.04		Shallow Concentrated Flow, 140
					Short Grass Pasture Kv= 7.0 fps
5.8	230	0.0090	0.66		Shallow Concentrated Flow, 230
					Short Grass Pasture Kv= 7.0 fps
7.6	267	0.0070	0.59		Shallow Concentrated Flow, 267
					Short Grass Pasture Kv= 7.0 fps
43.8	184	0.0001	0.07		Shallow Concentrated Flow, 184
					Short Grass Pasture Kv= 7.0 fps
63.1	265	0.0001	0.07		Shallow Concentrated Flow, 265
					Short Grass Pasture Kv= 7.0 fps
135.3	1,379	Total			

Subcatchment DA14: EXISTING DA STR 104-106



Summary for Subcatchment DA15: EXISTING DA STR 106-109

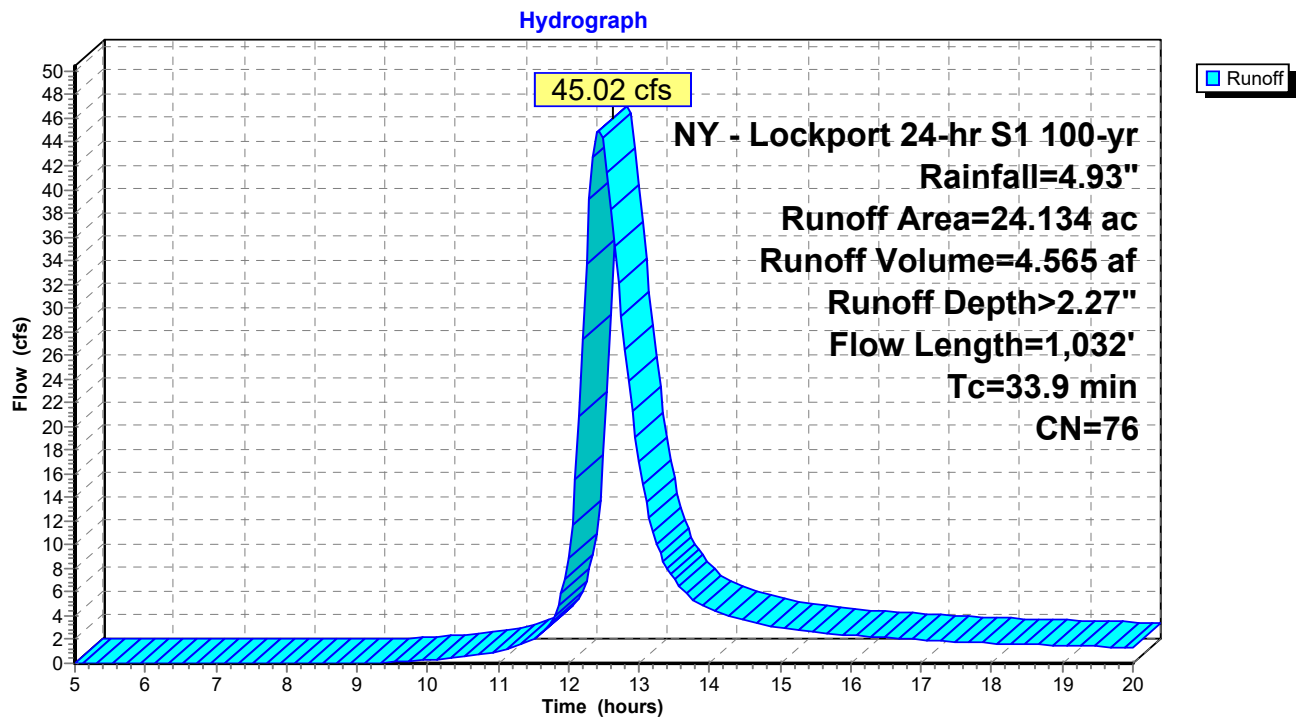
Runoff = 45.02 cfs @ 12.43 hrs, Volume= 4.565 af, Depth> 2.27"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.972	61	B-75% GRASS COVER, GOOD
* 1.615	69	B-50-75% GRASS COVER, FAIR
* 2.680	58	B-MEADOW, NON-GRAZED
* 0.028	80	D-75% GRASS COVER, GOOD
* 2.330	78	D-MEADOW, NON-GRAZED
* 0.585	80	D-75% GRASS COVER, GOOD
* 0.724	84	D-50-75% GRASS COVER, FAIR
* 0.465	79	D-WOODS/GRASS COMB., GOOD
* 13.770	78	D-MEADOW, NON-GRAZED
* 0.880	98	D-WATER SURFACE, 0% IMP
* 0.085	98	D-WATER SURFACE, 0% IMP
24.134	76	Weighted Average
23.169		96.00% Pervious Area
0.965		4.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0120	0.12		Sheet Flow, 100 Grass: Short n= 0.150 P2= 2.22"
2.1	148	0.0270	1.15		Shallow Concentrated Flow, 148 Short Grass Pasture Kv= 7.0 fps
3.4	204	0.0200	0.99		Shallow Concentrated Flow, 204 Short Grass Pasture Kv= 7.0 fps
6.0	300	0.0140	0.83		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
8.0	280	0.0070	0.59		Shallow Concentrated Flow, 280 Short Grass Pasture Kv= 7.0 fps
33.9	1,032	Total			

Subcatchment DA15: EXISTING DA STR 106-109



Summary for Subcatchment DA16: EXISTING DA STR 110-117

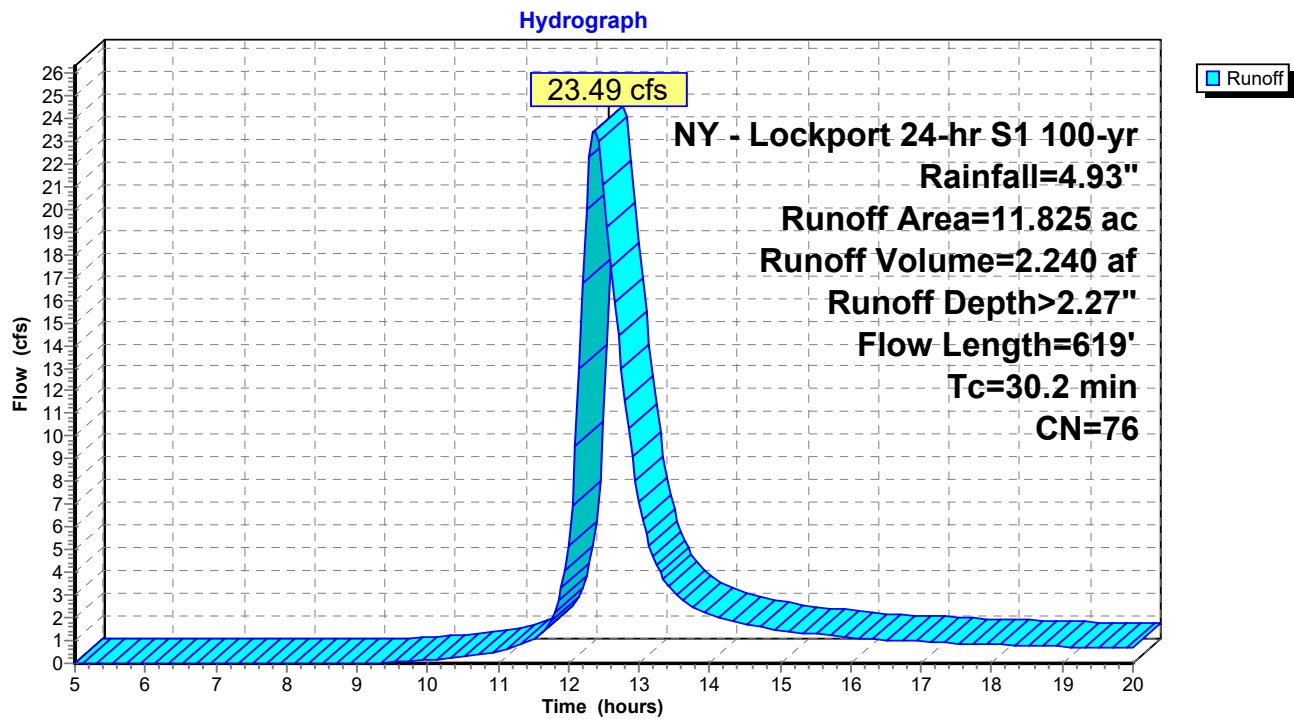
Runoff = 23.49 cfs @ 12.38 hrs, Volume= 2.240 af, Depth> 2.27"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.423	61	B-75%GRASS COVER, GOOD
* 0.460	69	B-50-75% GRASS COVER, FAIR
* 2.069	58	D-MEADOW, NON-GRAZED
* 0.045	78	D-MEADOW, NON-GRAZED
* 0.049	98	D-MEADOW, NON-GRAZED
* 0.487	80	D-75% GRASS COVER, GOOD
* 0.960	84	D-50-75% GRASS COVER, FAIR
* 0.293	79	D-WOODS/GRASS COMB., GOOD
* 5.704	78	D-MEADOW, NON-GRAZED
* 1.222	98	D-MEADOW, NON-GRAZED
* 0.048	79	D-WOODS/GRASS COMB., GOOD
* 0.009	78	D-MEADOW, NON-GRAZED
* 0.056	98	D-MEADOW, NON-GRAZED
11.825	76	Weighted Average
10.498		88.78% Pervious Area
1.327		11.22% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	100	0.0070	0.09		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.22"
3.4	222	0.0240	1.08		Shallow Concentrated Flow, 222
					Short Grass Pasture Kv= 7.0 fps
4.1	154	0.0080	0.63		Shallow Concentrated Flow, 154
					Short Grass Pasture Kv= 7.0 fps
4.8	143	0.0050	0.49		Shallow Concentrated Flow, 143
					Short Grass Pasture Kv= 7.0 fps
30.2	619	Total			

Subcatchment DA16: EXISTING DA STR 110-117



Summary for Subcatchment DA17: EXISTING DA STR 113-116

Runoff = 12.39 cfs @ 14.88 hrs, Volume= 4.174 af, Depth> 2.28"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.289	80	D-75% GRASS COVER, GOOD
* 0.899	84	D-50-75% GRASS COVER, FAIR
* 2.853	78	D-MEADOW, NON-GRAZED
* 0.540	78	D-MEADOW, NON-GRAZED
* 0.077	80	D-75% GRASS COVER, GOOD
* 0.177	84	D-50-75% GRASS COVER, FAIR
* 0.010	79	D-WOODS/GRASS COMB., GOOD
* 6.443	78	D-MEADOW, NON-GRAZED
* 7.074	78	D-MEADOW, NON-GRAZED
* 0.337	98	D-WATER SURFACE, 0% IMP
* 3.150	78	D-MEADOW, NON-GRAZED
* 0.141	98	D-WATER SURFACE, 0% IMP
21.990	79	Weighted Average
21.512		97.83% Pervious Area
0.478		2.17% Impervious Area

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NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Prepared by Fisher Associates

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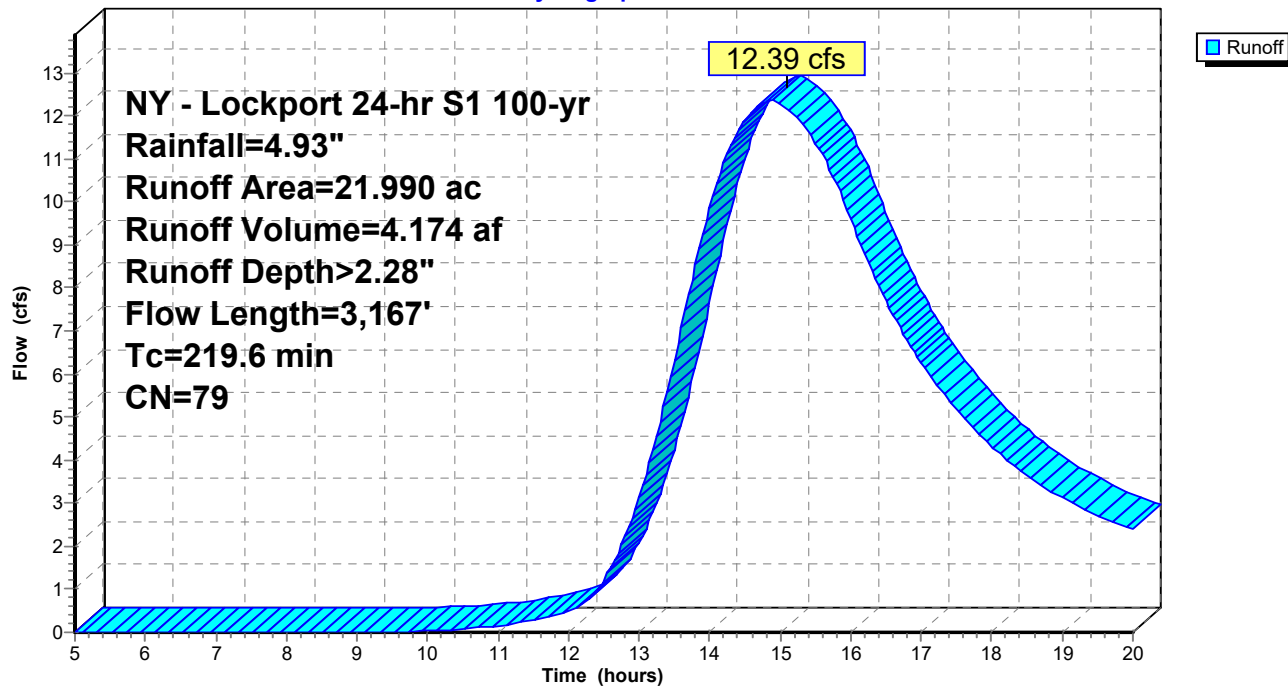
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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	100	0.0610	0.22		Sheet Flow, 100 Grass: Short n= 0.150 P2= 2.22"
3.0	144	0.0130	0.80		Shallow Concentrated Flow, 144 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
9.2	300	0.0060	0.54		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
71.4	300	0.0001	0.07		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
12.2	162	0.0010	0.22		Shallow Concentrated Flow, 162 Short Grass Pasture Kv= 7.0 fps
10.1	300	0.0050	0.49		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
8.3	290	0.0070	0.59		Shallow Concentrated Flow, 290 Short Grass Pasture Kv= 7.0 fps
0.6	50	0.0400	1.40		Shallow Concentrated Flow, 50 Short Grass Pasture Kv= 7.0 fps
4.4	242	0.0170	0.91		Shallow Concentrated Flow, 242 Short Grass Pasture Kv= 7.0 fps
6.3	300	0.0130	0.80		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
18.8	79	0.0001	0.07		Shallow Concentrated Flow, 79 Short Grass Pasture Kv= 7.0 fps
219.6	3,167	Total			

Subcatchment DA17: EXISTING DA STR 113-116

Hydrograph



Summary for Subcatchment DA18: EXISTING DA STR 36

Runoff = 19.27 cfs @ 12.72 hrs, Volume= 2.596 af, Depth> 2.50"
 Routed to Link 1L : EXISTING

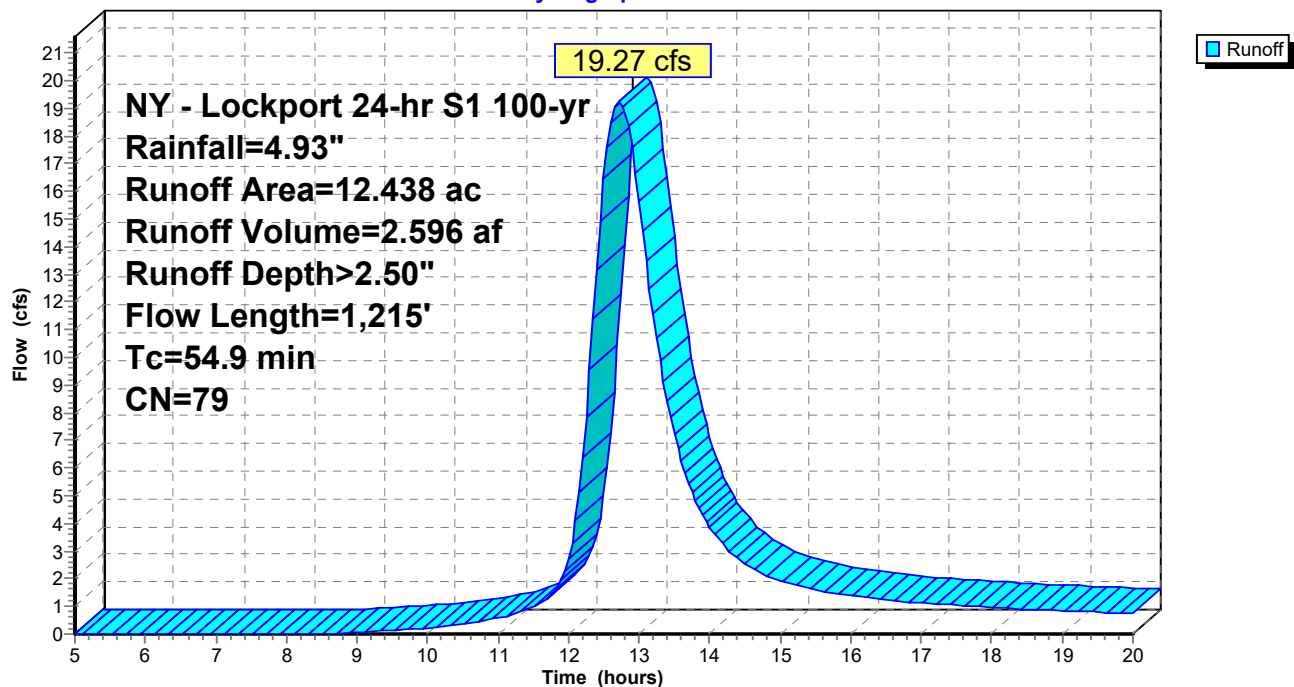
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.143	80	D - 80 - Developed open space
* 0.461	80	D - 80 - Developed open space
* 1.014	82	D - 82 - Developed Low intensity
* 1.218	82	D - 82 - Developed Low intensity
* 0.081	77	D - 77 - Deciduous Forest
* 7.367	78	D - 78 - Meadowed, grass, non-grazed land
* 2.154	78	D - 78 - Meadowed, grass, non-grazed land
12.438	79	Weighted Average
12.438		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	100	0.0200	0.14		Sheet Flow, 100' sheet
					Grass: Short n= 0.150 P2= 2.22"
43.1	1,115	0.0038	0.43		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
54.9	1,215	Total			

Subcatchment DA18: EXISTING DA STR 36

Hydrograph



Summary for Subcatchment DA19: EXISTING DA STR 42-47

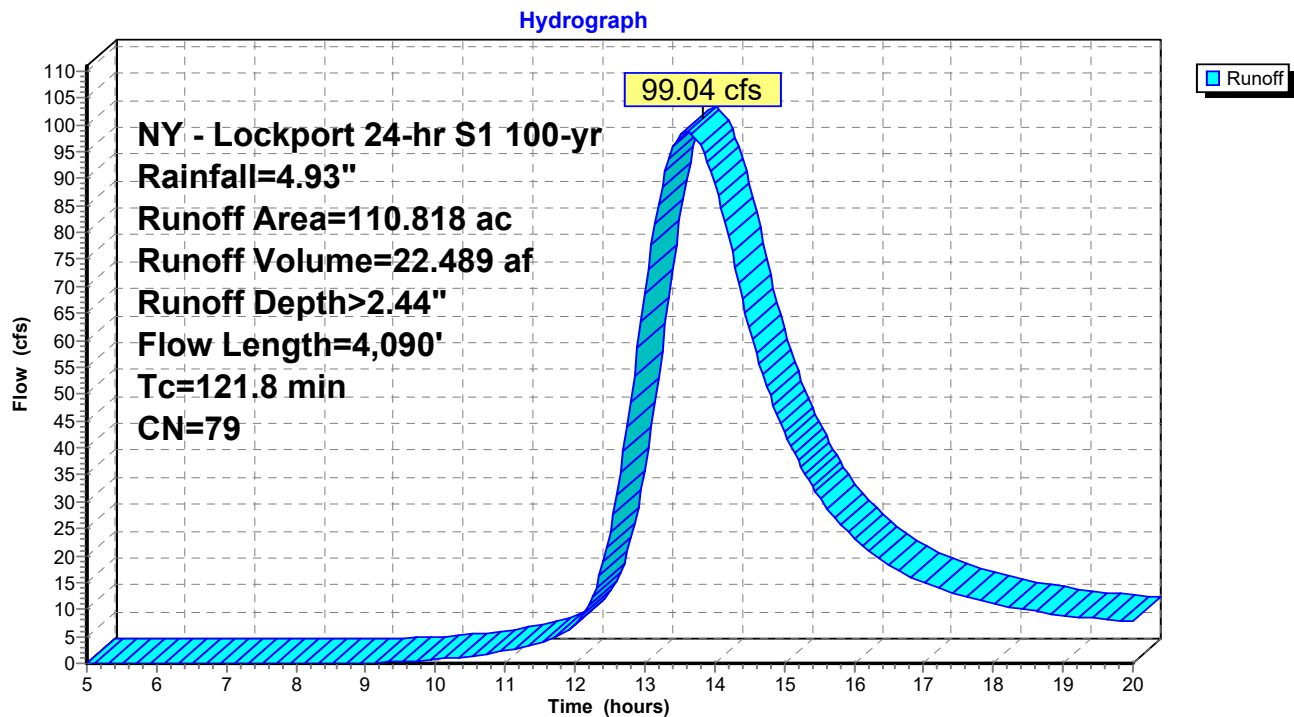
Runoff = 99.04 cfs @ 13.64 hrs, Volume= 22.489 af, Depth> 2.44"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 3.220	80	D - 80 - Developed open space
* 2.932	80	D - 80 - Developed open space
* 0.003	80	D - 80 - Developed open space
* 10.164	82	D - 82 - Developed Low intensity
* 6.410	82	D - 82 - Developed Low intensity
* 0.607	82	D - 82 - Developed Low intensity
* 5.494	77	D - 77 - Deciduous Forest
* 15.746	78	D - 78 - Meadowed, grass, non-grazed land
* 63.740	78	D - 78 - Meadowed, grass, non-grazed land
* 2.502	78	D - 78 - Meadowed, grass, non-grazed land
110.818	79	Weighted Average
110.818		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	100	0.0300	0.17		Sheet Flow, 100' Sheet
					Grass: Short n= 0.150 P2= 2.22"
88.0	2,225	0.0071	0.42		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
23.8	1,765	0.0068	1.24		Shallow Concentrated Flow,
					Grassed Waterway Kv= 15.0 fps
121.8	4,090	Total			

Subcatchment DA19: EXISTING DA STR 42-47



Summary for Subcatchment DA2: EXISTING DA STR 11-12

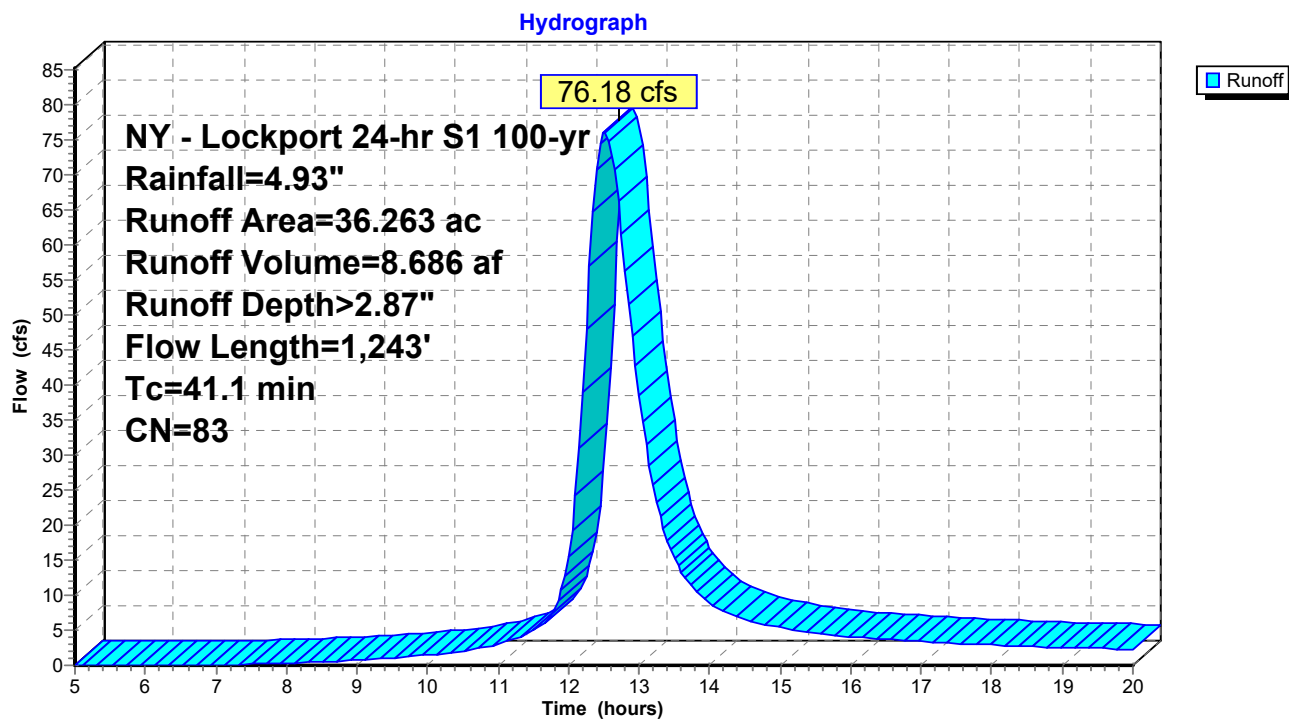
Runoff = 76.18 cfs @ 12.52 hrs, Volume= 8.686 af, Depth> 2.87"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 2.487	80	80-D-75% GRASS COVER, GOOD
* 1.050	84	84-D-50-75% GRASS COVER, FAIR
* 1.903	89	89-D-<50% GRASS COVER, POOR
* 0.250	95	95-D-URBAN COMMERCIAL, 85% IMP
* 0.043	79	79-D-WOODS/GRASS COMB., GOOD
* 1.541	78	78-D-MEADOW, NONGRAZED
* 0.054	80	80-D-75% GRASS COVER, GOOD
* 0.598	84	84-D-50-75% GRASS COVER, FAIR
* 2.041	89	89-D-<50% GRASS COVER, POOR
* 0.286	95	95-D-URBAN COMMERCIAL, 85% IMP
* 1.744	78	78-D-MEADOW, NON-GRAZED
* 6.222	80	80-D-75% GRASS COVER, GOOD
* 7.613	84	84-D-50-75% GRASS COVER, FAIR
* 3.609	89	89-D-<50% GRASS COVER, POOR
* 0.887	95	95-D-URBAN COMMERCIAL, 85% IMP
* 3.299	79	79-D-WOODS/GRASS COMB., GOOD
* 2.636	78	78-D-MEADOW, NON-GRAZED
36.263	83	Weighted Average
36.263		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	100	0.0050	0.66		Sheet Flow, 100' Smooth surfaces n= 0.011 P2= 2.22"
1.4	115	0.0043	1.33		Shallow Concentrated Flow, Paved Kv= 20.3 fps
2.4	256	0.0078	1.79		Shallow Concentrated Flow, Paved Kv= 20.3 fps
10.3	240	0.0031	0.39		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.3	30	0.0064	1.62		Shallow Concentrated Flow, Paved Kv= 20.3 fps
2.8	128	0.0117	0.76		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
14.2	209	0.0024	0.24		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
7.2	165	0.0030	0.38		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
41.1	1,243	Total			

Subcatchment DA2: EXISTING DA STR 11-12



Summary for Subcatchment DA3: EXISTING DA STR 17-20

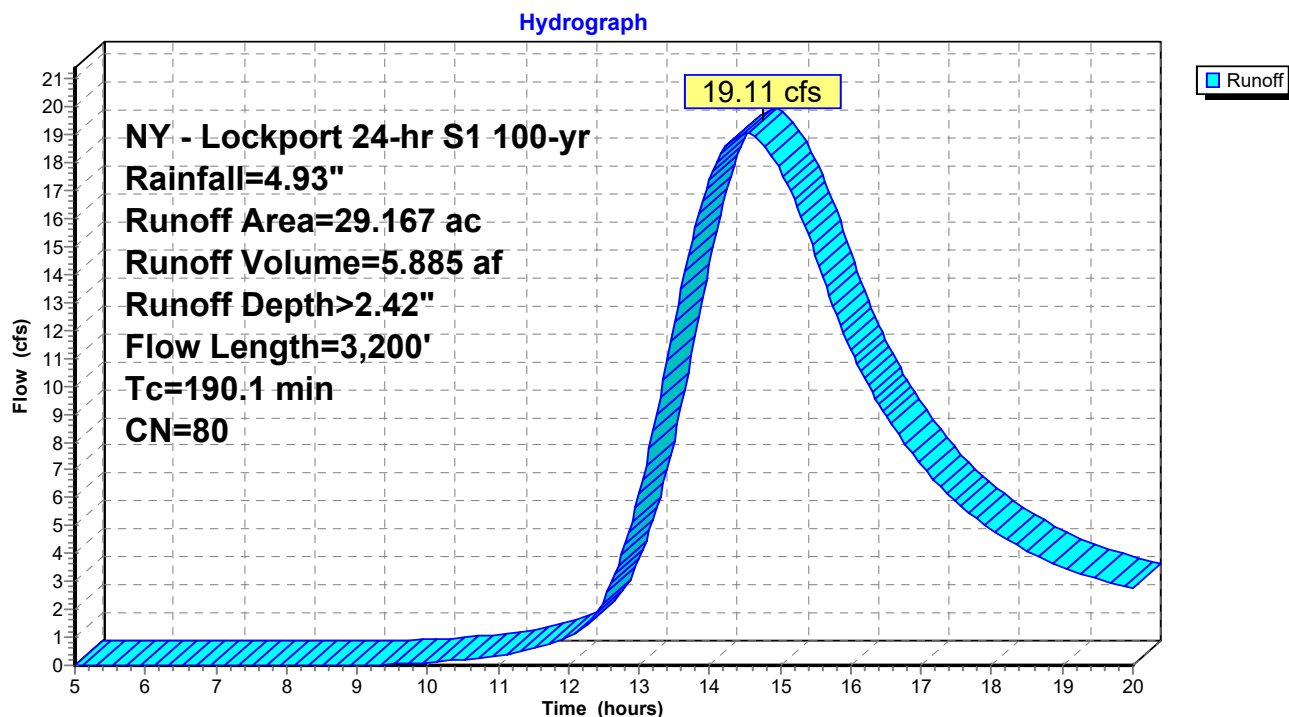
Runoff = 19.11 cfs @ 14.55 hrs, Volume= 5.885 af, Depth> 2.42"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.391	80	80-D-75% GRASS COVER, GOOD
* 4.601	79	WOODS/GRASS COMB., GOOD
* 1.427	79	WOODS/GRASS COMB., GOOD
* 2.196	78	MEADOW, NON-GRAZED
* 0.320	98	WATER SURFACE
* 3.636	80	75% GRASS COVER, GOOD
* 1.957	84	50-75% GRASS COVER, FAIR
* 1.104	89	<50% GRASS COVER, POOR
* 0.375	95	URBAN COMMERCIAL, 85% IMP
* 2.017	79	WOODS/GRASS COMB., GOOD
* 0.337	84	50-75% GRASS COVER, FAIR
* 1.756	79	WOODS/GRASS COMB., GOOD
* 0.470	79	WOODS/GRASS COMB., GOOD
* 8.306	78	MEADOW, NON-GRAZED
* 0.274	98	WATER SURFACE, 0% IMP
29.167	80	Weighted Average
28.573		97.96% Pervious Area
0.594		2.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.2	100	0.0175	0.06		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.22"
7.6	186	0.0067	0.41		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
8.3	368	0.0217	0.74		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
31.5	708	0.0056	0.37		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
23.1	576	0.0069	0.42		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
14.5	452	0.0055	0.52		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
77.9	810	0.0012	0.17		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
190.1	3,200	Total			

Subcatchment DA3: EXISTING DA STR 17-20



Summary for Subcatchment DA4: EXISTING DA STR 21-23

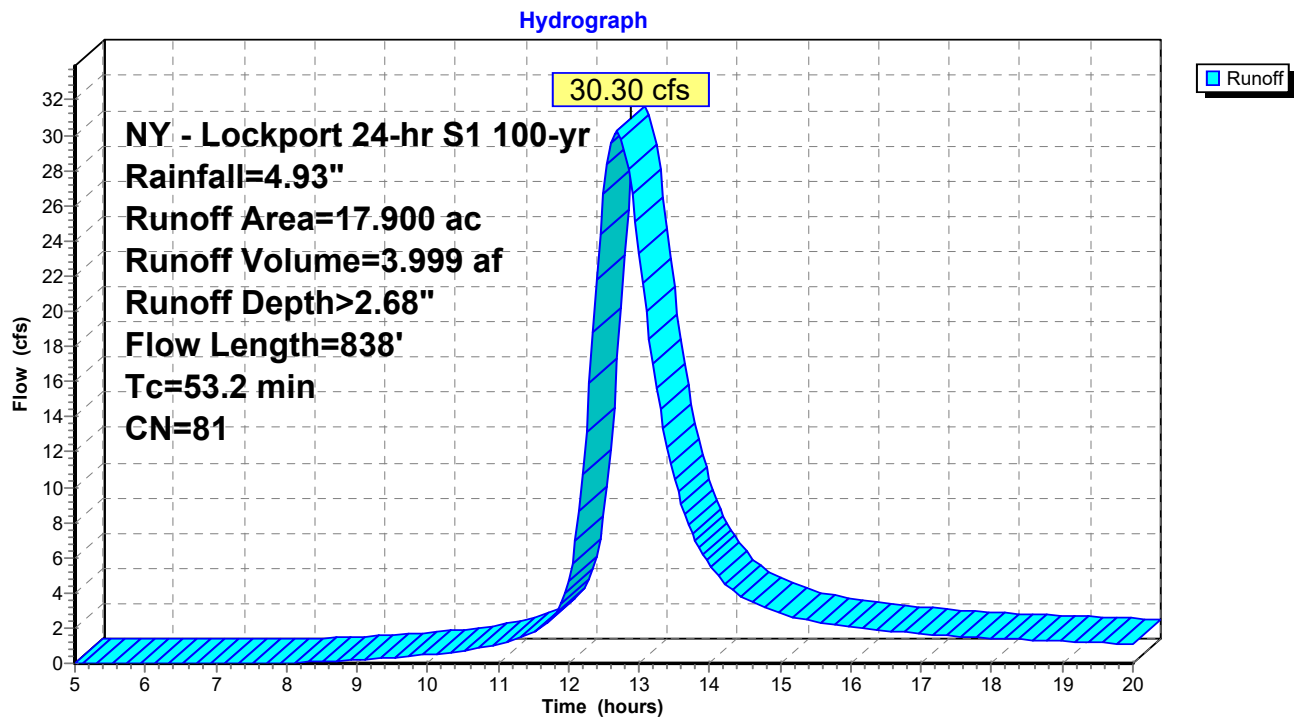
Runoff = 30.30 cfs @ 12.69 hrs, Volume= 3.999 af, Depth> 2.68"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.062	80	80-D-75% GRASS COVER, GOOD
* 0.720	84	84-D-50-75% GRASS COVER, FAIR
* 0.884	78	78-D-MEADOW, NON-GRAZED
* 4.286	80	80-D-75% GRASS COVER, GOOD
* 3.922	84	84-D-50-75% GRASS COVER, FAIR
* 0.139	89	89-D-<50% GRASS COVER, POOR
* 1.645	85	85-D-HERBACEOUS RANGE, GOOD
* 5.404	78	78-D-MEADOW, NON-GRAZED
* 0.188	80	80-D-75% GRASS COVER, GOOD
* 0.143	84	84-D-50-75% GRASS COVER, FAIR
* 0.507	78	78-D-MEADOW, NON-GRAZED
17.900	81	Weighted Average
17.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.2	100	0.0125	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.22"
23.5	419	0.0018	0.30		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
15.5	319	0.0024	0.34		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
53.2	838	Total			

Subcatchment DA4: EXISTING DA STR 21-23



Summary for Subcatchment DA5: EXISTING DA STR 25-29

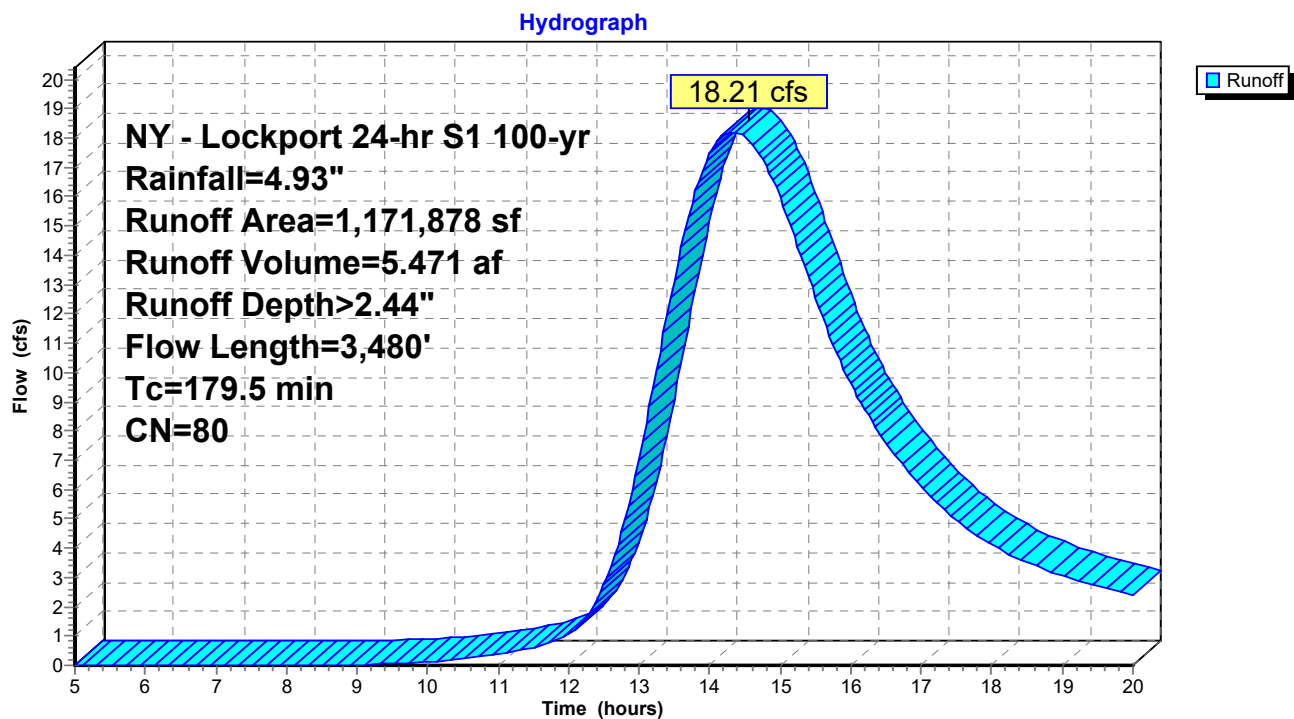
Runoff = 18.21 cfs @ 14.34 hrs, Volume= 5.471 af, Depth> 2.44"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (sf)	CN	Description
* 17,032	80	80-D-75% GRASS COVER, GOOD
* 200,420	79	WOODS/GRASS COMB., GOOD
* 62,160	79	WOODS/GRASS COMB., GOOD
* 95,658	78	MEADOW, NON-GRAZED
* 13,939	98	WATER SURFACE
* 158,384	80	75% GRASS COVER, GOOD
* 85,247	84	50-75% GRASS COVER, FAIR
* 48,090	89	<50% GRASS COVER, POOR
* 16,335	95	URBAN COMMERCIAL, 85% IMP
* 87,844	79	WOODS/GRASS COMB., GOOD
* 14,680	84	50-75% GRASS COVER, FAIR
* 152,329	79	WOODS/GRASS COMB., GOOD
* 20,473	79	WOODS/GRASS COMB., GOOD
* 187,352	78	MEADOW, NON-GRAZED
* 11,935	98	WATER SURFACE, 0% IMP
1,171,878	80	Weighted Average
1,146,004		97.79% Pervious Area
25,874		2.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.8	100	0.0200	0.06		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.22"
28.8	377	0.0019	0.22		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
12.9	548	0.0200	0.71		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
17.4	739	0.0200	0.71		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
10.5	489	0.0240	0.77		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
8.0	420	0.0156	0.87		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
13.1	429	0.0120	0.55		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
63.0	378	0.0004	0.10		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
179.5	3,480	Total			

Subcatchment DA5: EXISTING DA STR 25-29



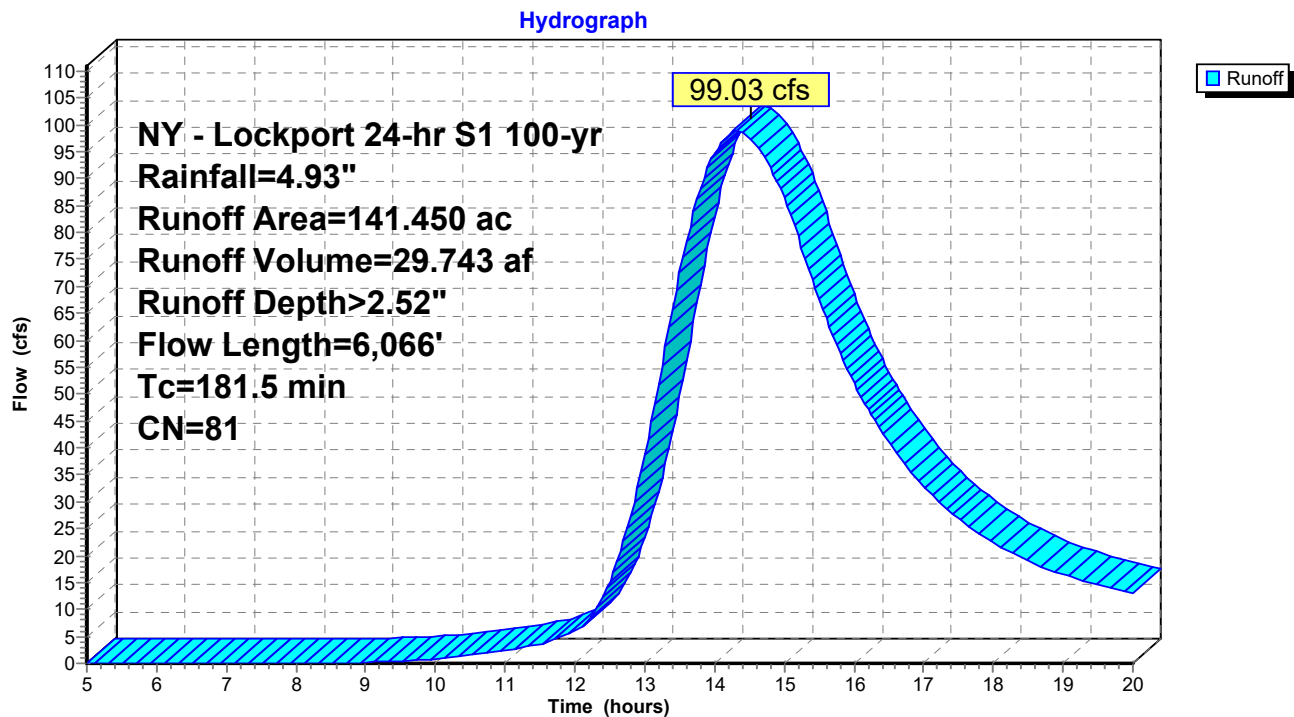
Summary for Subcatchment DA6: EXISTING DA STR 29-35

Runoff = 99.03 cfs @ 14.32 hrs, Volume= 29.743 af, Depth> 2.52"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.152	98	D - 98 - Open Water
* 0.074	80	D - 80 - Developed open space
* 0.307	80	D - 80 - Developed open space
* 2.363	80	D - 80 - Developed open space
* 1.992	82	D - 82 - Developed Low intensity
* 1.726	82	D - 82 - Developed Low intensity
* 2.185	85	D - 85 - Developed Med intensity
* 0.875	77	D - 77 - Deciduous Forest
* 18.239	77	D - 77 - Deciduous Forest
* 13.242	77	D - 77 - Deciduous Forest
* 0.038	77	D - 77 - Evergreen Forest
* 0.919	77	D - 77 - Evergreen Forest
* 0.021	77	D - 77 - Evergreen Forest
* 0.508	77	D - 77 - Mixed Forest
* 0.889	77	D - 77 - Mixed Forest
* 0.160	77	D - 77 - Mixed Forest
* 4.266	78	D - 78 - Meadowed, grass, non-grazed land
* 29.357	78	D - 78 - Meadowed, grass, non-grazed land
* 22.896	78	D - 78 - Meadowed, grass, non-grazed land
* 0.112	78	D - 78 - Meadowed, grass, non-grazed land
* 5.915	78	D - 78 - Meadowed, grass, non-grazed land
* 5.016	90	D - 90 - Woody Wetlands
* 30.198	90	D - 90 - Woody Wetlands
141.450	81	Weighted Average
141.298		99.89% Pervious Area
0.152		0.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.7	100	0.0275	0.07		Sheet Flow, 100' Sheet Woods: Light underbrush n= 0.400 P2= 2.22"
31.2	1,144	0.0149	0.61		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
14.6	670	0.0026	0.76		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
12.9	328	0.0008	0.42		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
100.1	3,824	0.0018	0.64		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
181.5	6,066	Total			

Subcatchment DA6: EXISTING DA STR 29-35

Summary for Subcatchment DA7: EXISTING DA STR 37-40

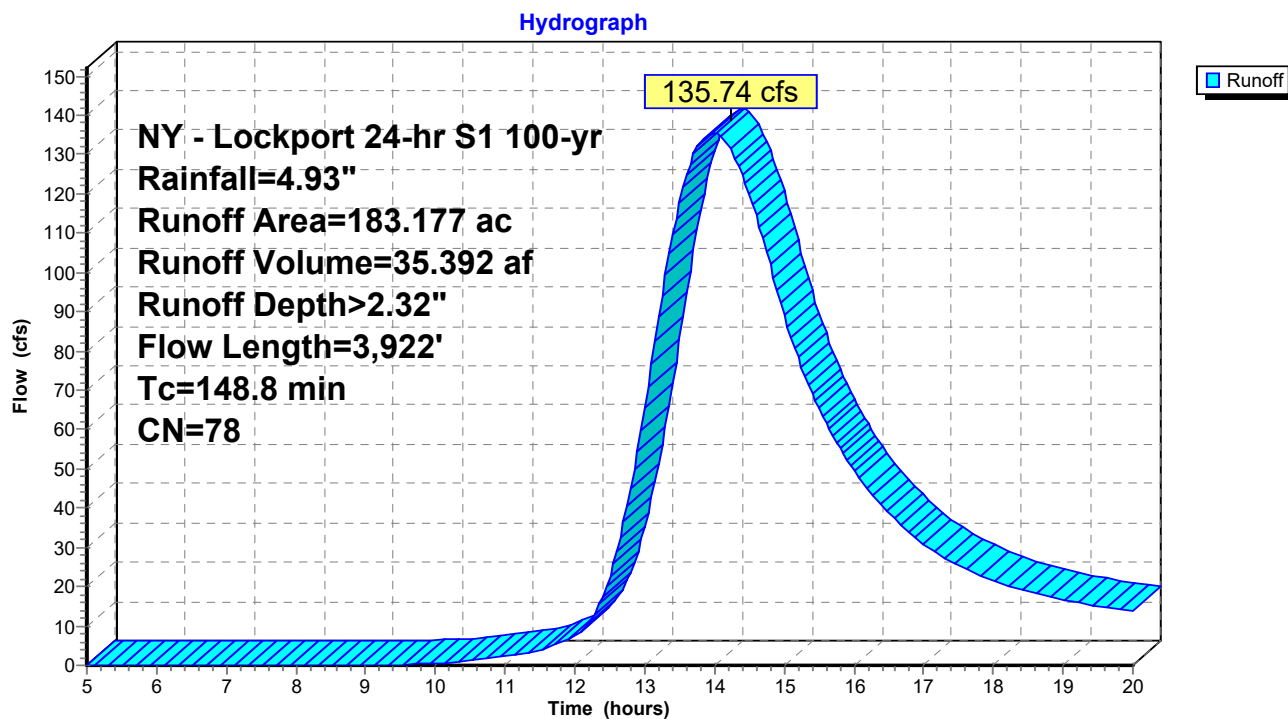
Runoff = 135.74 cfs @ 14.03 hrs, Volume= 35.392 af, Depth> 2.32"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 2.507	80	D - 80 - Developed open space
* 3.318	80	D - 80 - Developed open space
* 2.790	80	D - 80 - Developed open space
* 2.870	82	D - 82 - Developed Low intensity
* 4.979	82	D - 82 - Developed Low intensity
* 4.781	82	D - 82 - Developed Low intensity
* 0.152	85	D - 85 - Developed Med intensity
* 1.263	77	D - 77 - Deciduous Forest
* 3.431	77	D - 77 - Deciduous Forest
* 3.544	77	D - 77 - Deciduous Forest
* 14.732	78	D - 78 - Meadowed, grass, non-grazed land
* 59.055	78	D - 78 - Meadowed, grass, non-grazed land
* 79.755	78	D - 78 - Meadowed, grass, non-grazed land
183.177	78	Weighted Average
183.177		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.6	100	0.0350	0.08		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.22"
48.7	1,573	0.0116	0.54		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
62.0	1,276	0.0047	0.34		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
17.5	973	0.0038	0.92		Shallow Concentrated Flow,
					Grassed Waterway Kv= 15.0 fps
148.8	3,922	Total			

Subcatchment DA7: EXISTING DA STR 37-40



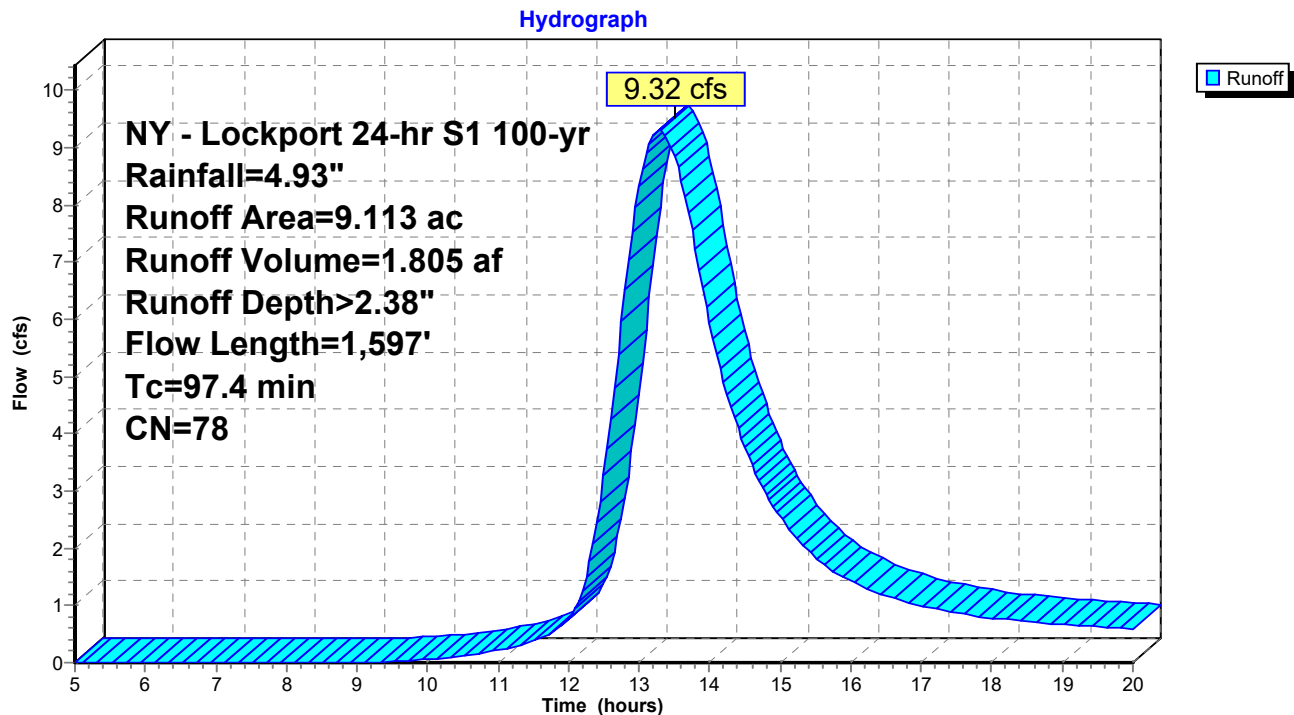
Summary for Subcatchment DA8: EXISTING DA STR 41

Runoff = 9.32 cfs @ 13.30 hrs, Volume= 1.805 af, Depth> 2.38"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 3.755	77	D - 77 - Deciduous Forest
* 5.358	78	D - 78 - Meadowed, grass, non-grazed land
9.113	78	Weighted Average
9.113		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.0	100	0.0100	0.05		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.22"
63.4	1,497	0.0062	0.39		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
97.4	1,597	Total			

Subcatchment DA8: EXISTING DA STR 41

Summary for Subcatchment DA9: EXISTING DA STR 48-50

Runoff = 34.71 cfs @ 13.38 hrs, Volume= 7.321 af, Depth> 2.45"
 Routed to Link 1L : EXISTING

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 2.300	80	D-75% GRASS COVER, GOOD
* 0.850	84	D-50-75% GRASS COVER, FAIR
* 0.080	89	D-<50% GRASS COVER, POOR
* 0.800	79	D-WOODS/GRASS COMB., GOOD
* 6.410	78	D-MEADOW, NON-GRAZED
* 0.060	98	D-WATER SURFACE, 0% IMP
* 1.214	80	D-75% GRASS COVER, GOOD
* 0.214	84	D-50-75% GRASS COVER, FAIR
* 0.060	89	D-<50% GRASS COVER, POOR
* 4.411	79	D-WOODS/GRASS COMB., GOOD
* 18.040	78	D-MEADOW, NON-GRAZED
* 1.050	98	D-WATER SURFACE, 0% IMP
* 0.150	80	D-75% GRASS COVER, GOOD
* 0.210	78	D-MEADOW, NON-GRAZED
35.849	79	Weighted Average
34.739		96.90% Pervious Area
1.110		3.10% Impervious Area

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NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

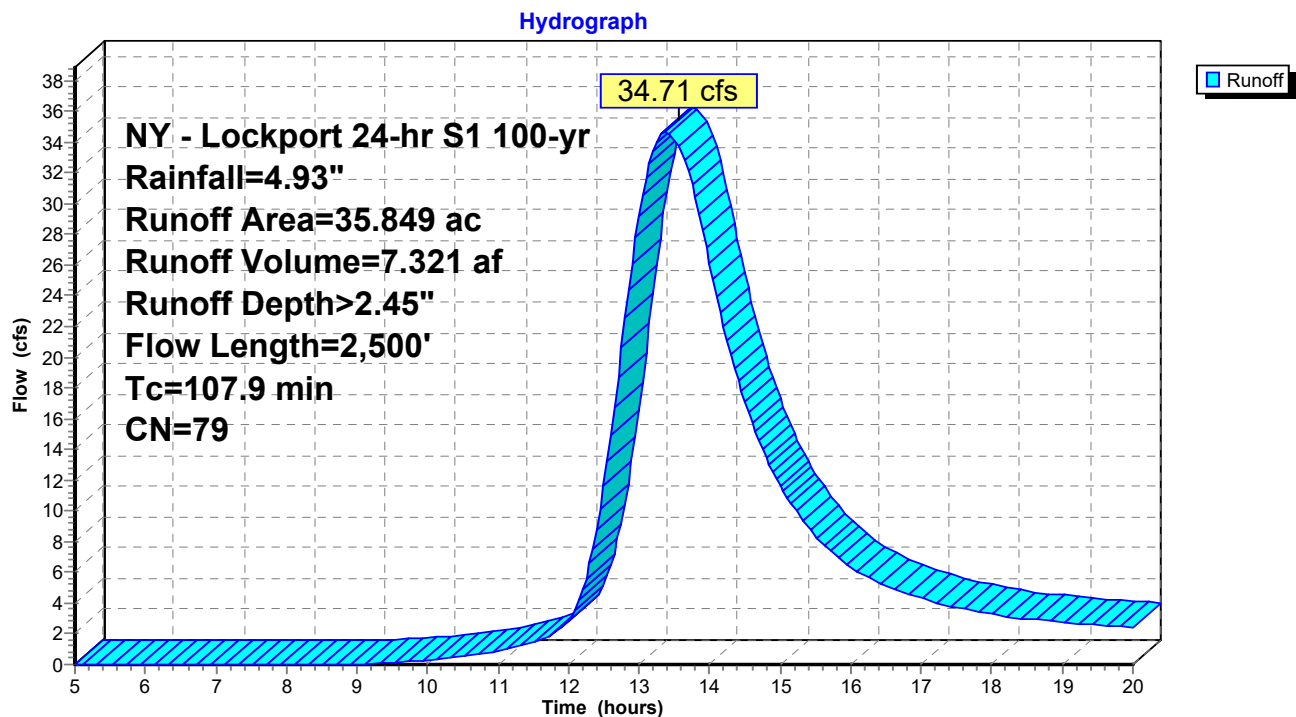
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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0300	1.21		Shallow Concentrated Flow, 100' Short Grass Pasture Kv= 7.0 fps
31.2	262	0.0120	0.14		Sheet Flow, 262.19 Grass: Short n= 0.150 P2= 2.22"
4.5	254	0.0180	0.94		Shallow Concentrated Flow, 254' Short Grass Pasture Kv= 7.0 fps
2.9	129	0.0110	0.73		Shallow Concentrated Flow, 128.66 Short Grass Pasture Kv= 7.0 fps
4.4	196	0.0110	0.73		Shallow Concentrated Flow, 196 Short Grass Pasture Kv= 7.0 fps
6.9	260	0.0080	0.63		Shallow Concentrated Flow, 260 Short Grass Pasture Kv= 7.0 fps
5.5	219	0.0090	0.66		Shallow Concentrated Flow, 219 Short Grass Pasture Kv= 7.0 fps
12.4	285	0.0030	0.38		Shallow Concentrated Flow, 285 Short Grass Pasture Kv= 7.0 fps
6.1	230	0.0080	0.63		Shallow Concentrated Flow, 230 Short Grass Pasture Kv= 7.0 fps
10.0	265	0.0040	0.44		Shallow Concentrated Flow, 265 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
107.9	2,500	Total			

Subcatchment DA9: EXISTING DA STR 48-50

Summary for Subcatchment PDA1: PROPOSED DA STR 9-10

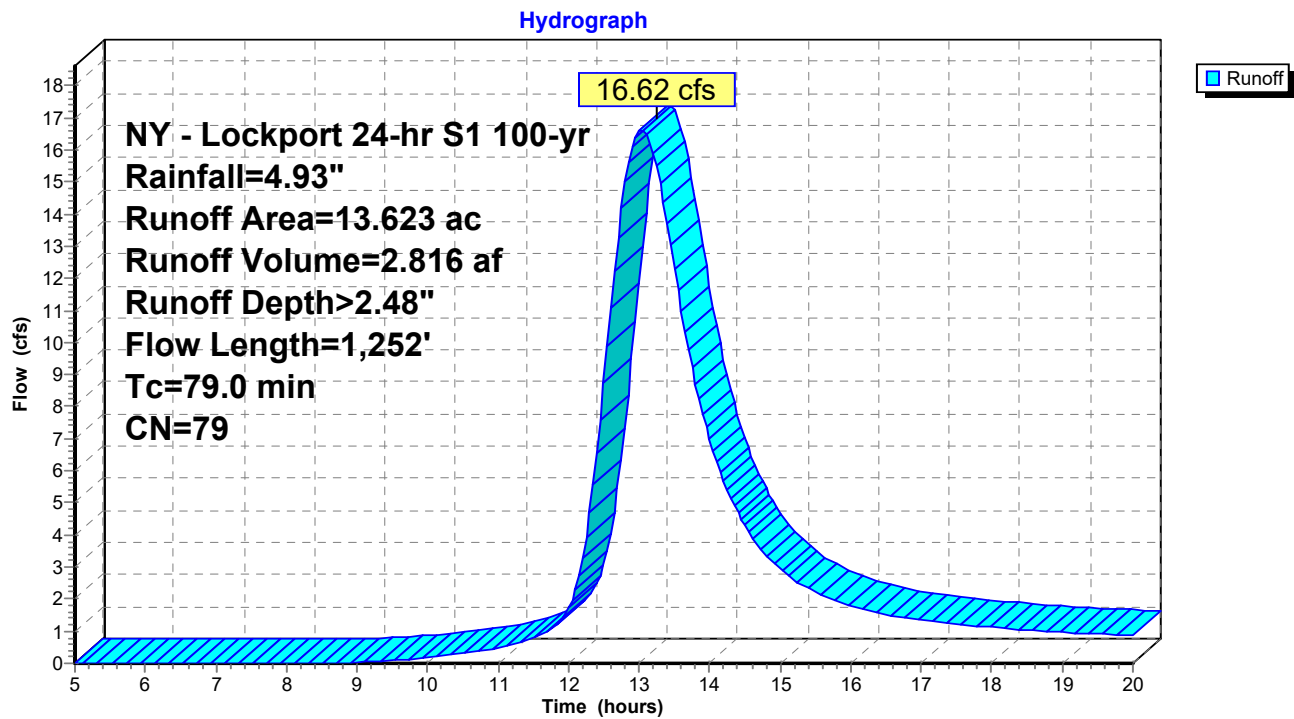
Runoff = 16.62 cfs @ 13.04 hrs, Volume= 2.816 af, Depth> 2.48"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.134	39	39 - A - 75% GRASS COVER, GOOD
* 0.938	49	49 - A - 50-75% GRASS COVER, FAIR
* 0.065	68	68 - A - <50% GRASS COVER, POOR
* 0.064	32	32 - A - FALLOW, BARE SOIL
* 0.064	30	30 - A - MEADOW, NON-GRAZED
* 0.293	80	80 - D - 75% GRASS COVER, GOOD
* 1.950	84	84 - D - 50-75% GRASS COVER, FAIR
* 0.320	89	89 - D - <50% GRASS COVER, POOR
* 0.105	79	79 - D - WOODS/GRASS COMB., GOOD
* 0.497	78	78 - D - MEADOW, NON-GRAZED
* 1.157	80	80 - D - 75% GRASS COVER, GOOD
* 4.870	84	84 - D - 50-75% GRASS COVER, FAIR
* 0.499	89	89 - D - <50% GRASS COVER, POOR
* 2.167	78	78 - D - MEADOW, NON-GRAZED
0.500	91	Gravel roads, HSG D
13.623	79	Weighted Average
13.623		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.4	100	0.0175	0.13		Sheet Flow, 100' Sheet
					Grass: Short n= 0.150 P2= 2.22"
40.8	420	0.0006	0.17		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
0.5	45	0.0056	1.52		Shallow Concentrated Flow,
					Paved Kv= 20.3 fps
14.3	300	0.0025	0.35		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
6.7	200	0.0050	0.49		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
4.3	187	0.0107	0.72		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
79.0	1,252	Total			

Subcatchment PDA1: PROPOSED DA STR 9-10



Summary for Subcatchment PDA10: EXISTING DA STR 78-83

Runoff = 52.84 cfs @ 14.89 hrs, Volume= 17.787 af, Depth> 2.20"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.446	82	B-MEADOW, NON-GRAZED
* 0.142	43	D-WOODS/GRASS COMB., GOOD
* 13.840	81	D-MEADOW, NON-GRAZED
* 8.160	82	D-MEADOW, NON-GRAZED
* 1.781	21	D-75% GRASS COVER, GOOD
* 3.035	22	D-50-75% GRASS COVER, FAIR
* 24.158	81	D-MEADOW, NON-GRAZED
* 5.711	82	D-MEADOW, NON-GRAZED
* 0.003	21	D-75% GRASS COVER, GOOD
* 0.428	22	D-50-75% GRASS COVER, FAIR
* 18.333	81	D-MEADOW, NON-GRAZED
* 19.570	82	D-MEADOW, NON-GRAZED
* 0.340	98	D-PAVED ASPHALT DRIVEWAY
* 0.043	90	D-WATER SURFACE, 0% IMP
1.064	91	Gravel roads, HSG D
0.127	91	Gravel roads, HSG D
97.181	78	Weighted Average
96.841		99.65% Pervious Area
0.340		0.35% Impervious Area

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NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

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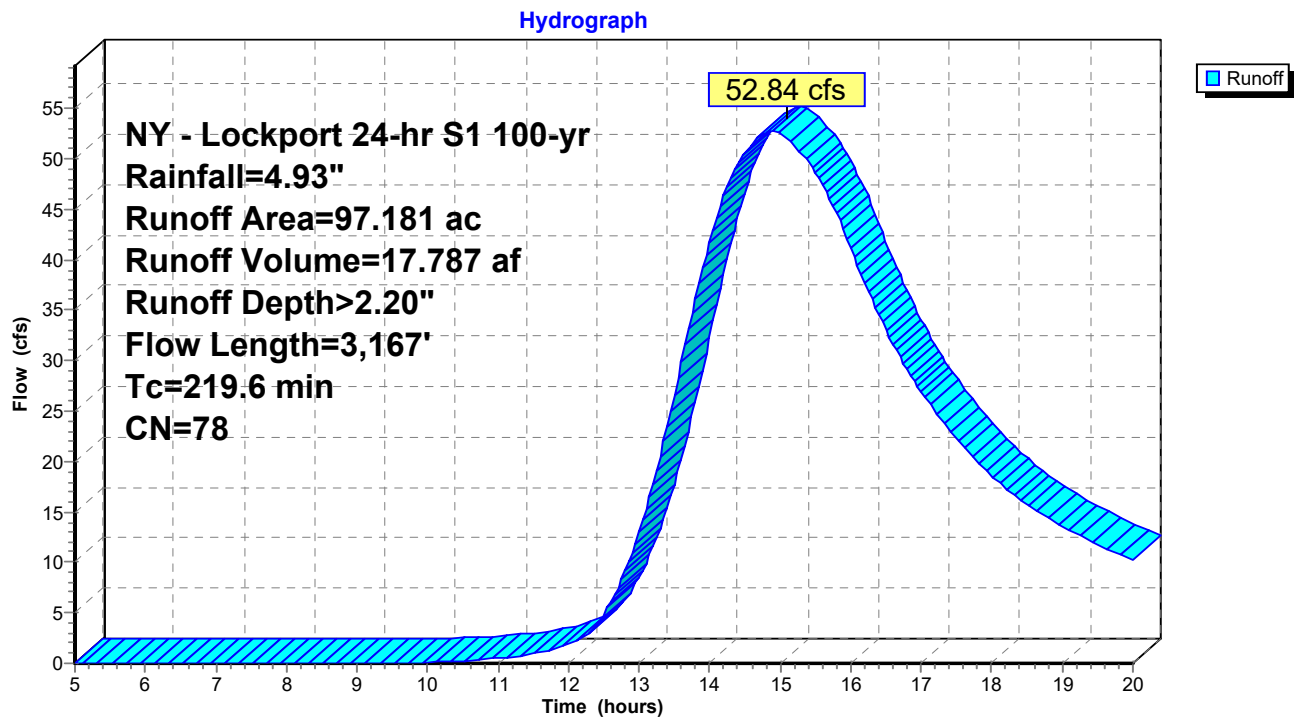
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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	100	0.0610	0.22		Sheet Flow, 100 Grass: Short n= 0.150 P2= 2.22"
3.0	144	0.0130	0.80		Shallow Concentrated Flow, 144 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
9.2	300	0.0060	0.54		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
71.4	300	0.0001	0.07		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
12.2	162	0.0010	0.22		Shallow Concentrated Flow, 162 Short Grass Pasture Kv= 7.0 fps
10.1	300	0.0050	0.49		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
8.3	290	0.0070	0.59		Shallow Concentrated Flow, 290 Short Grass Pasture Kv= 7.0 fps
0.6	50	0.0400	1.40		Shallow Concentrated Flow, 50 Short Grass Pasture Kv= 7.0 fps
4.4	242	0.0170	0.91		Shallow Concentrated Flow, 242 Short Grass Pasture Kv= 7.0 fps
6.3	300	0.0130	0.80		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
18.8	79	0.0001	0.07		Shallow Concentrated Flow, 79 Short Grass Pasture Kv= 7.0 fps
219.6	3,167	Total			

Subcatchment PDA10: EXISTING DA STR 78-83



Summary for Subcatchment PDA11: PROPOSED DA STR 84-86

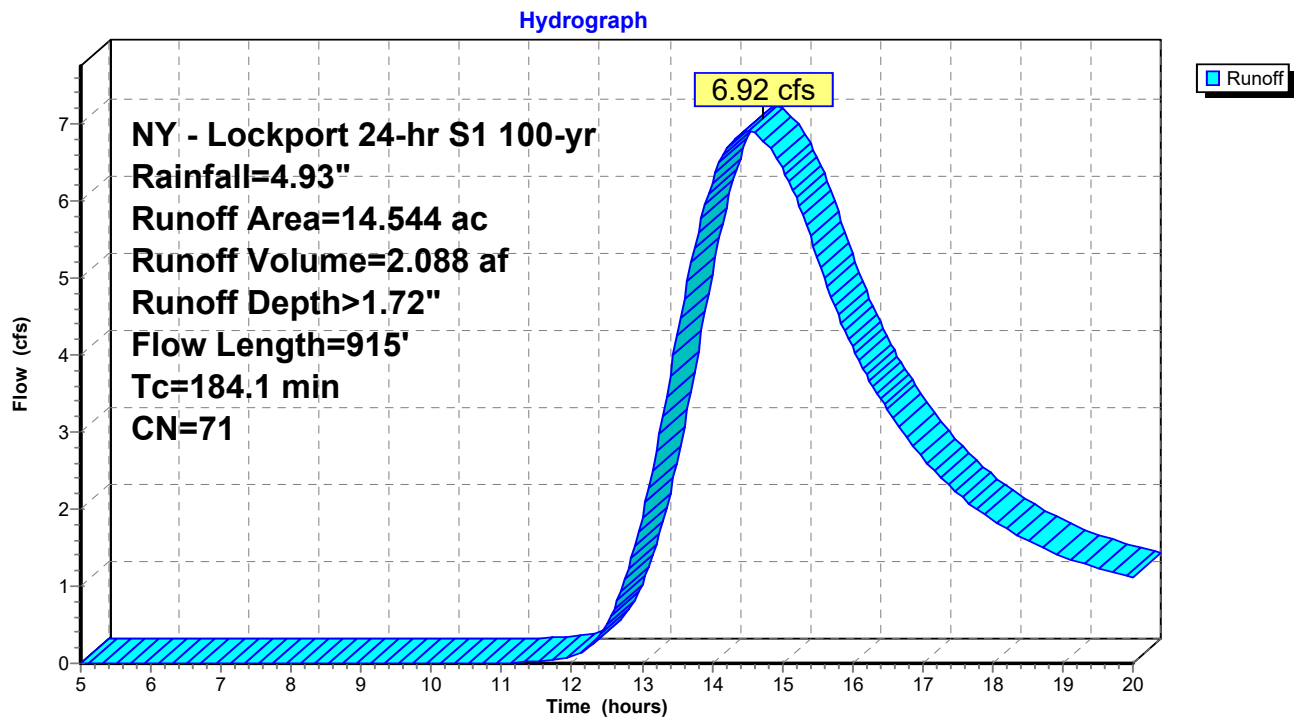
Runoff = 6.92 cfs @ 14.52 hrs, Volume= 2.088 af, Depth> 1.72"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.033	58	B-MEADOW, NON-GRAZED
* 3.140	58	B-MEADOW, NON-GRAZED
* 0.039	80	D-75% GRASS COVER, GOOD
* 0.117	84	D-50-75% GRASS COVER, FAIR
* 1.962	78	D-MEADOW, NON-GRAZED
* 2.017	78	D-MEADOW, NON-GRAZED
* 0.145	71	D-MEADOW, NON-GRAZED
* 5.505	71	D-MEADOW, NON-GRAZED
* 0.304	78	D-MEADOW, NONGRAZED
* 0.030	78	D-MEADOW, NON-GRAZED
* 0.724	78	D-MEADOW, NON-GRAZED
0.528	91	Gravel roads, HSG D
14.544	71	Weighted Average
14.544		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
97.9	100	0.0001	0.02		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.22"
3.6	164	0.0120	0.77		Shallow Concentrated Flow, 164
					Short Grass Pasture Kv= 7.0 fps
8.5	300	0.0070	0.59		Shallow Concentrated Flow, 300
					Short Grass Pasture Kv= 7.0 fps
71.4	300	0.0001	0.07		Shallow Concentrated Flow, 300
					Short Grass Pasture Kv= 7.0 fps
2.7	51	0.0020	0.31		Shallow Concentrated Flow, 51
					Short Grass Pasture Kv= 7.0 fps
184.1	915	Total			

Subcatchment PDA11: PROPOSED DA STR 84-86



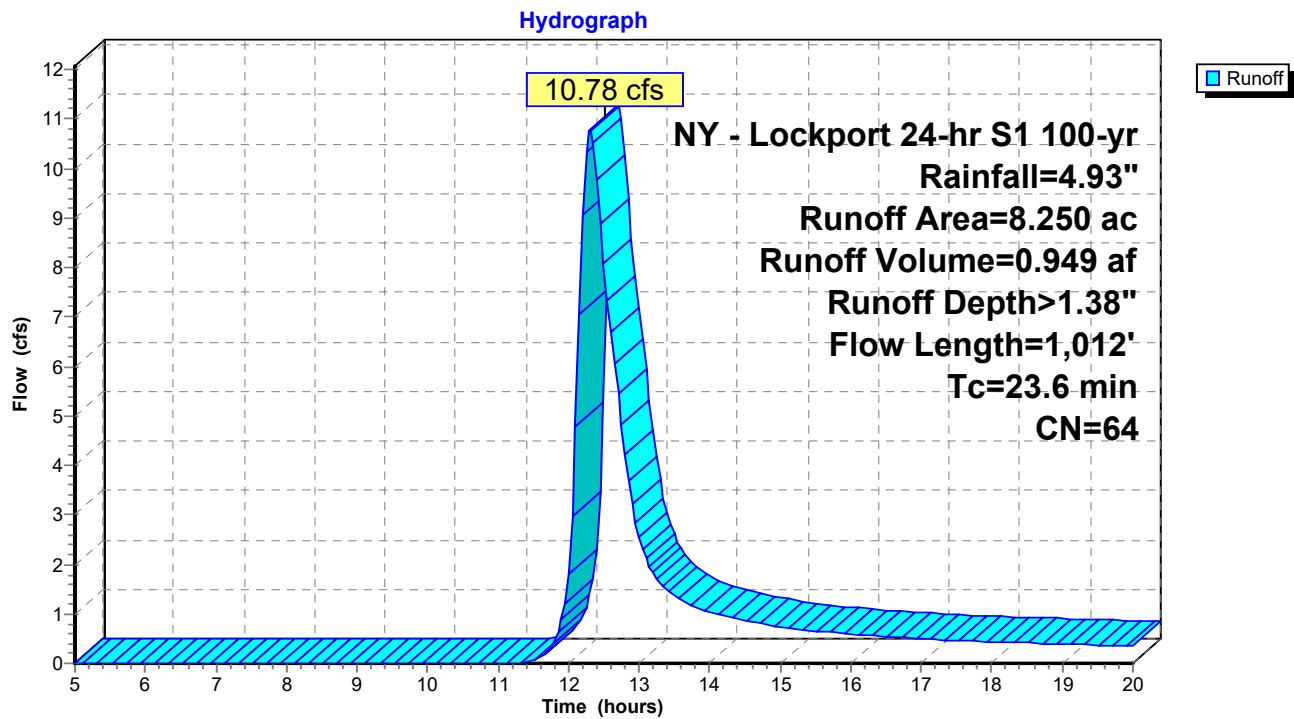
Summary for Subcatchment PDA12: PROPOSED DA STR 90-96

Runoff = 10.78 cfs @ 12.31 hrs, Volume= 0.949 af, Depth> 1.38"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 2.470	30	A-MEADOW, NON-GRAZED
* 5.354	78	D-MEADOW, NON-GRAZED
0.426	91	Gravel roads, HSG D
8.250	64	Weighted Average
8.250		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	100	0.0390	0.19		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.22"
1.5	130	0.0420	1.43		Shallow Concentrated Flow, 130
					Short Grass Pasture Kv= 7.0 fps
1.7	180	0.0640	1.77		Shallow Concentrated Flow, 180
					Short Grass Pasture Kv= 7.0 fps
2.5	237	0.0520	1.60		Shallow Concentrated Flow, 237
					Short Grass Pasture Kv= 7.0 fps
1.3	80	0.0230	1.06		Shallow Concentrated Flow, 80
					Short Grass Pasture Kv= 7.0 fps
5.0	132	0.0040	0.44		Shallow Concentrated Flow, 132
					Short Grass Pasture Kv= 7.0 fps
2.6	153	0.0200	0.99		Shallow Concentrated Flow, 153
					Short Grass Pasture Kv= 7.0 fps
23.6	1,012	Total			

Subcatchment PDA12: PROPOSED DA STR 90-96

Summary for Subcatchment PDA13: PROPOSED DA STR 97-103

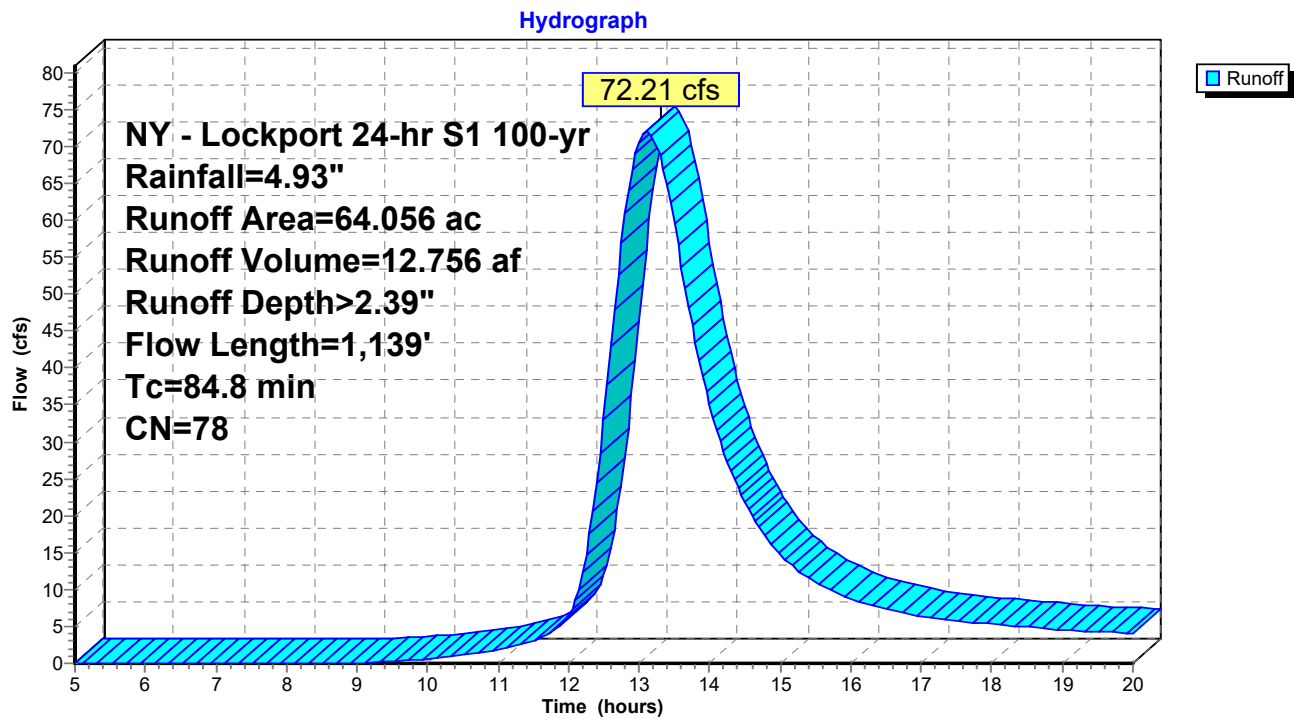
Runoff = 72.21 cfs @ 13.11 hrs, Volume= 12.756 af, Depth> 2.39"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.113	49	A-50-75% GRASS COVER, FAIR
* 0.131	30	A-MEADOW, NON-GRAZED
* 12.491	78	D-MEADOW, NON-GRAZED
* 0.855	80	D-75% GRASS COVER, GOOD
* 0.366	84	D-50-75% GRASS COVER, FAIR
* 0.263	79	D-WOODS/GRASS COMB., GOOD
* 48.359	78	D-MEADOW, NON-GRAZED
* 0.418	98	D-WATER SURFACE, 0% IMP
1.060	91	Gravel roads, HSG D
64.056	78	Weighted Average
63.638		99.35% Pervious Area
0.418		0.65% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.1	100	0.0030	0.07		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.22"
11.2	258	0.0030	0.38		Shallow Concentrated Flow, 258
					Short Grass Pasture Kv= 7.0 fps
31.4	132	0.0001	0.07		Shallow Concentrated Flow, 132
					Short Grass Pasture Kv= 7.0 fps
4.0	176	0.0110	0.73		Shallow Concentrated Flow, 176
					Short Grass Pasture Kv= 7.0 fps
7.7	270	0.0070	0.59		Shallow Concentrated Flow, 270
					Short Grass Pasture Kv= 7.0 fps
5.4	203	0.0080	0.63		Shallow Concentrated Flow, 203
					Short Grass Pasture Kv= 7.0 fps
84.8	1,139	Total			

Subcatchment PDA13: PROPOSED DA STR 97-103



Summary for Subcatchment PDA14: PROPOSED DA STR 104-106

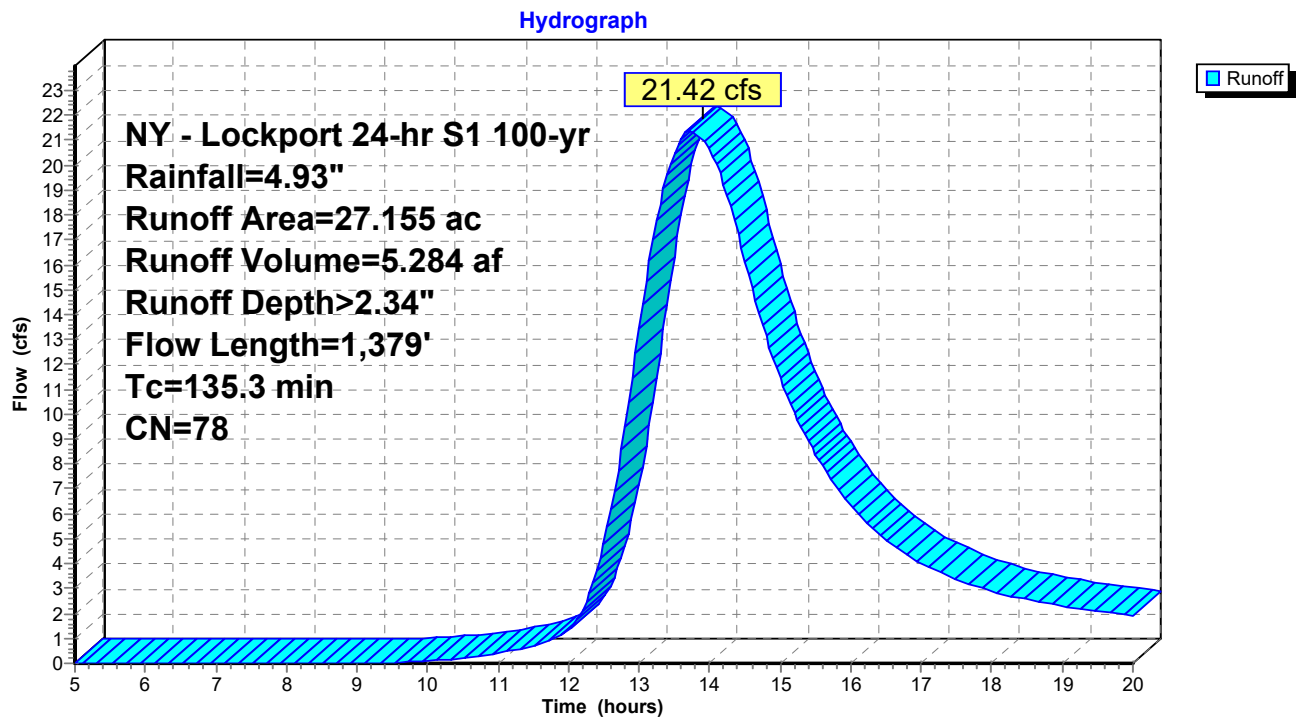
Runoff = 21.42 cfs @ 13.71 hrs, Volume= 5.284 af, Depth> 2.34"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.471	61	B-75% GRASS COVER, GOOD
* 1.291	80	D-75% GRASS COVER, GOOD
* 0.601	84	D-50-75% GRASS COVER, FAIR
* 1.189	79	D-WOODS/GRASS COMB., GOOD
* 2.124	78	D-MEADOW, NON-GRAZED
* 0.606	80	D-75% GRASS COVER, GOOD
* 0.552	79	D-WOODS/GRASS COMB., GOOD
* 10.418	78	D-MEADOW, NON-GRAZED
* 0.104	98	D-WATER SURFACE, 0% IMP
* 0.137	98	D-WATER SURFACE, 0% IMP
* 0.893	80	D-75% GRASS COVER, GOOD
* 0.115	80	D-50-75% GRASS COVER, FAIR
* 8.267	78	D-MEADOW, NON-GRAZED
0.387	91	Gravel roads, HSG D
27.155	78	Weighted Average
26.914		99.11% Pervious Area
0.241		0.89% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.6	100	0.0330	0.17		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.22"
0.9	53	0.0220	1.04		Shallow Concentrated Flow, 53
					Short Grass Pasture Kv= 7.0 fps
2.3	140	0.0210	1.01		Shallow Concentrated Flow, 140
					Short Grass Pasture Kv= 7.0 fps
2.2	140	0.0220	1.04		Shallow Concentrated Flow, 140
					Short Grass Pasture Kv= 7.0 fps
5.8	230	0.0090	0.66		Shallow Concentrated Flow, 230
					Short Grass Pasture Kv= 7.0 fps
7.6	267	0.0070	0.59		Shallow Concentrated Flow, 267
					Short Grass Pasture Kv= 7.0 fps
43.8	184	0.0001	0.07		Shallow Concentrated Flow, 184
					Short Grass Pasture Kv= 7.0 fps
63.1	265	0.0001	0.07		Shallow Concentrated Flow, 265
					Short Grass Pasture Kv= 7.0 fps
135.3	1,379	Total			

Subcatchment PDA14: PROPOSED DA STR 104-106



Summary for Subcatchment PDA15: PROPOSED DA STR 106-109

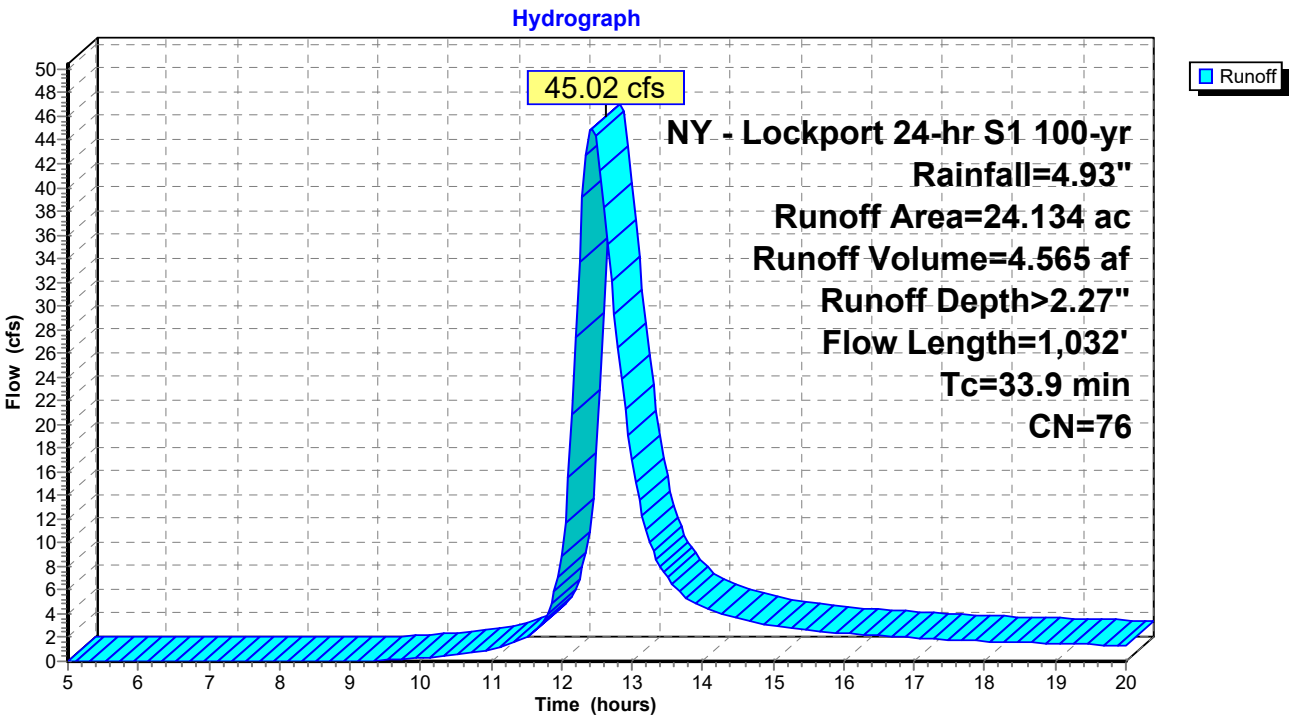
Runoff = 45.02 cfs @ 12.43 hrs, Volume= 4.565 af, Depth> 2.27"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.972	61	B-75% GRASS COVER, GOOD
* 1.615	69	B-50-75% GRASS COVER, FAIR
* 2.680	58	B-MEADOW, NON-GRAZED
* 0.028	80	D-75% GRASS COVER, GOOD
* 2.330	78	D-MEADOW, NON-GRAZED
* 0.585	80	D-75% GRASS COVER, GOOD
* 0.724	84	D-50-75% GRASS COVER, FAIR
* 0.465	79	D-WOODS/GRASS COMB., GOOD
* 13.310	78	D-MEADOW, NON-GRAZED
* 0.880	98	D-WATER SURFACE, 0% IMP
* 0.085	98	D-WATER SURFACE, 0% IMP
0.460	91	Gravel roads, HSG D
24.134	76	Weighted Average
23.169		96.00% Pervious Area
0.965		4.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.4	100	0.0120	0.12		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.22"
2.1	148	0.0270	1.15		Shallow Concentrated Flow, 148
					Short Grass Pasture Kv= 7.0 fps
3.4	204	0.0200	0.99		Shallow Concentrated Flow, 204
					Short Grass Pasture Kv= 7.0 fps
6.0	300	0.0140	0.83		Shallow Concentrated Flow, 300
					Short Grass Pasture Kv= 7.0 fps
8.0	280	0.0070	0.59		Shallow Concentrated Flow, 280
					Short Grass Pasture Kv= 7.0 fps
33.9	1,032	Total			

Subcatchment PDA15: PROPOSED DA STR 106-109



Summary for Subcatchment PDA16: PROPOSED DA STR 110-117

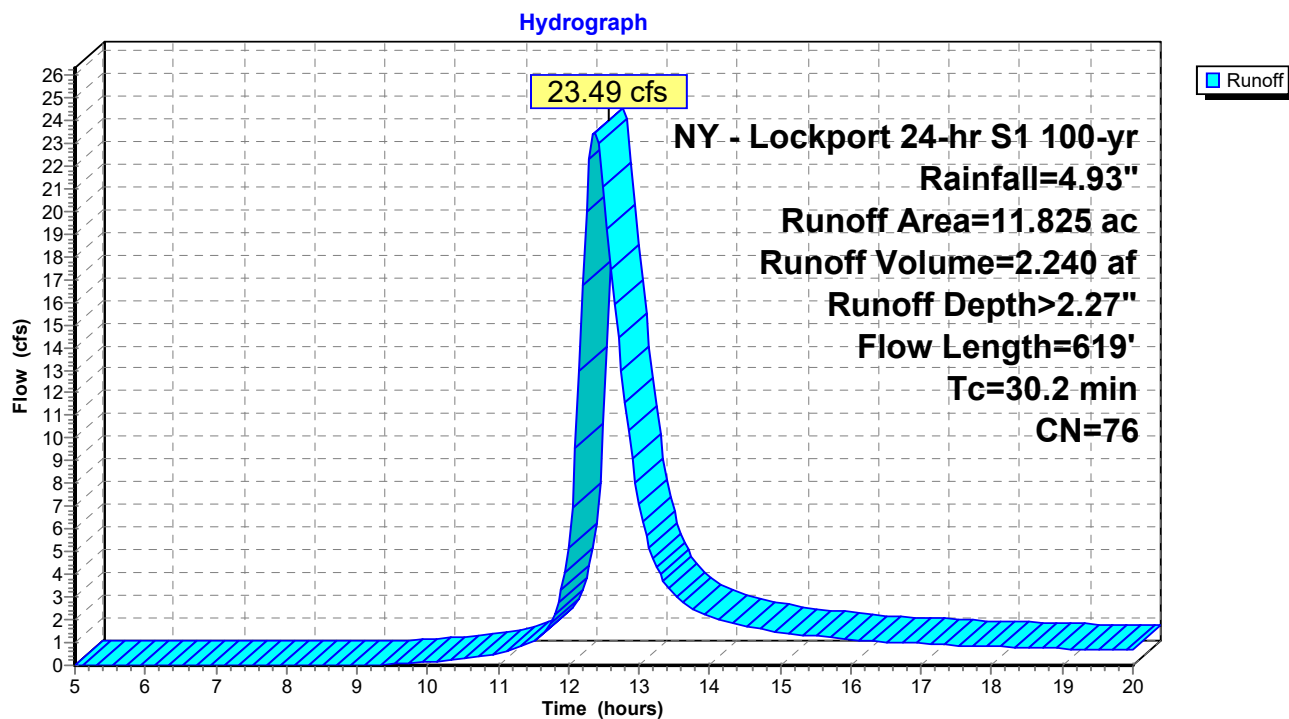
Runoff = 23.49 cfs @ 12.38 hrs, Volume= 2.240 af, Depth> 2.27"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.423	61	B-75%GRASS COVER, GOOD
* 0.460	69	B-50-75% GRASS COVER, FAIR
* 2.069	58	D-MEADOW, NON-GRAZED
* 0.045	78	D-MEADOW, NON-GRAZED
* 0.049	98	D-MEADOW, NON-GRAZED
* 0.487	80	D-75% GRASS COVER, GOOD
* 0.960	84	D-50-75% GRASS COVER, FAIR
* 0.293	79	D-WOODS/GRASS COMB., GOOD
* 5.704	78	D-MEADOW, NON-GRAZED
* 0.855	98	D-MEADOW, NON-GRAZED
* 0.048	79	D-WOODS/GRASS COMB., GOOD
* 0.009	78	D-MEADOW, NON-GRAZED
* 0.056	98	D-MEADOW, NON-GRAZED
0.367	91	Gravel roads, HSG D
11.825	76	Weighted Average
10.865		91.88% Pervious Area
0.960		8.12% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
17.9	100	0.0070	0.09		Sheet Flow, 100 Grass: Short n= 0.150 P2= 2.22"
3.4	222	0.0240	1.08		Shallow Concentrated Flow, 222 Short Grass Pasture Kv= 7.0 fps
4.1	154	0.0080	0.63		Shallow Concentrated Flow, 154 Short Grass Pasture Kv= 7.0 fps
4.8	143	0.0050	0.49		Shallow Concentrated Flow, 143 Short Grass Pasture Kv= 7.0 fps
30.2	619	Total			

Subcatchment PDA16: PROPOSED DA STR 110-117



Summary for Subcatchment PDA17: PROPOSED DA STR 113-116

Runoff = 12.39 cfs @ 14.88 hrs, Volume= 4.174 af, Depth> 2.28"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.289	80	D-75% GRASS COVER, GOOD
* 0.899	84	D-50-75% GRASS COVER, FAIR
* 2.853	78	D-MEADOW, NON-GRAZED
* 0.540	78	D-MEADOW, NON-GRAZED
* 0.077	80	D-75% GRASS COVER, GOOD
* 0.177	84	D-50-75% GRASS COVER, FAIR
* 0.010	79	D-WOODS/GRASS COMB., GOOD
* 5.683	78	D-MEADOW, NON-GRAZED
* 6.973	78	D-MEADOW, NON-GRAZED
* 0.337	98	D-WATER SURFACE, 0% IMP
* 3.150	78	D-MEADOW, NON-GRAZED
* 0.141	98	D-WATER SURFACE, 0% IMP
0.861	91	Gravel roads, HSG D
21.990	79	Weighted Average
21.512		97.83% Pervious Area
0.478		2.17% Impervious Area

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NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Prepared by Fisher Associates

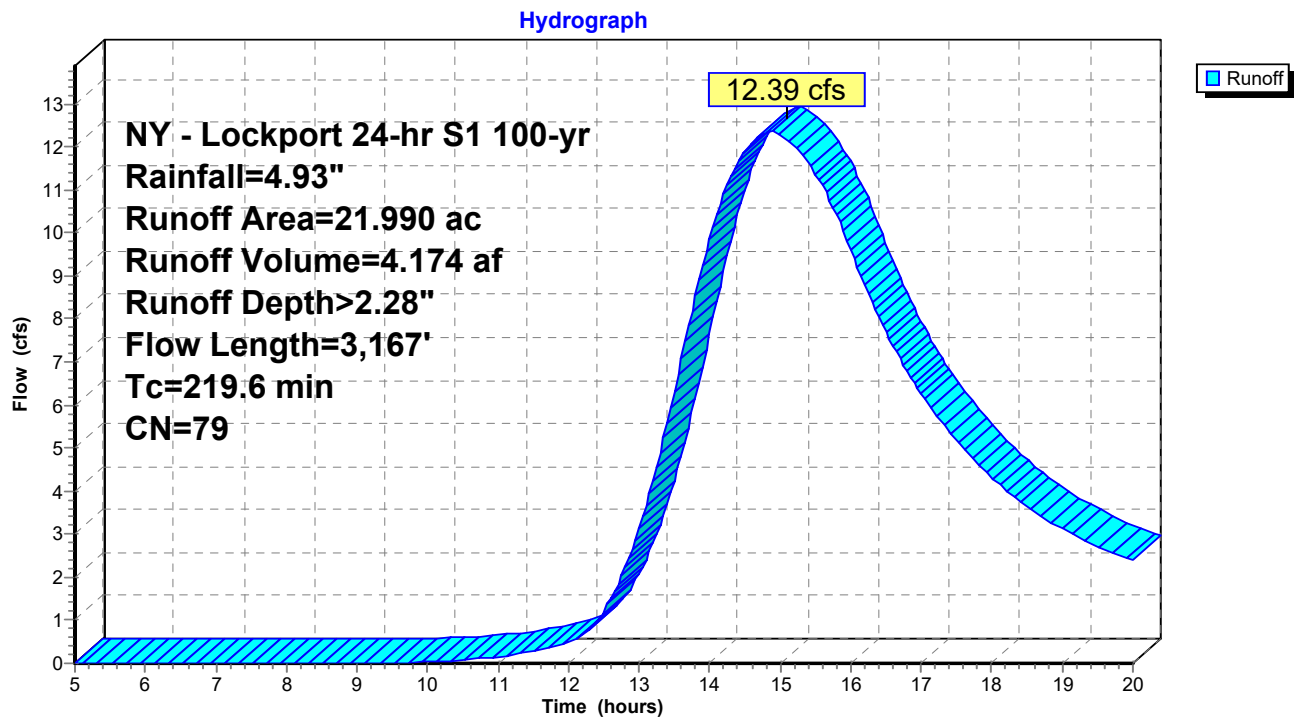
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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.5	100	0.0610	0.22		Sheet Flow, 100 Grass: Short n= 0.150 P2= 2.22"
3.0	144	0.0130	0.80		Shallow Concentrated Flow, 144 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
9.2	300	0.0060	0.54		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
71.4	300	0.0001	0.07		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
12.2	162	0.0010	0.22		Shallow Concentrated Flow, 162 Short Grass Pasture Kv= 7.0 fps
10.1	300	0.0050	0.49		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
8.3	290	0.0070	0.59		Shallow Concentrated Flow, 290 Short Grass Pasture Kv= 7.0 fps
0.6	50	0.0400	1.40		Shallow Concentrated Flow, 50 Short Grass Pasture Kv= 7.0 fps
4.4	242	0.0170	0.91		Shallow Concentrated Flow, 242 Short Grass Pasture Kv= 7.0 fps
6.3	300	0.0130	0.80		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
18.8	79	0.0001	0.07		Shallow Concentrated Flow, 79 Short Grass Pasture Kv= 7.0 fps
219.6	3,167	Total			

Subcatchment PDA17: PROPOSED DA STR 113-116



Summary for Subcatchment PDA18: PROPOSED DA STR 36

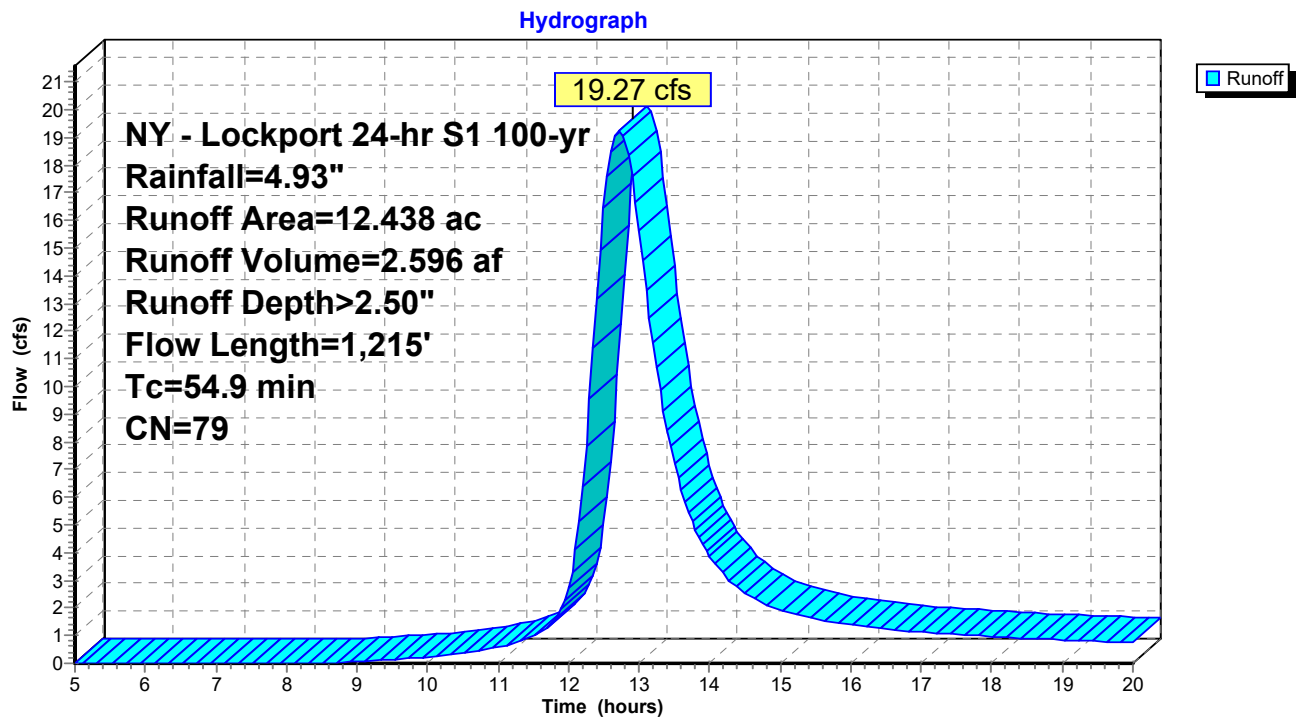
Runoff = 19.27 cfs @ 12.72 hrs, Volume= 2.596 af, Depth> 2.50"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.143	80	D - 80 - Developed open space
* 0.461	80	D - 80 - Developed open space
* 1.014	82	D - 82 - Developed Low intensity
* 0.988	82	D - 82 - Developed Low intensity
* 0.081	77	D - 77 - Deciduous Forest
* 7.367	78	D - 78 - Meadowed, grass, non-grazed land
* 2.154	78	D - 78 - Meadowed, grass, non-grazed land
* 0.230	91	D- Gravel Roads
12.438	79	Weighted Average
12.438		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	100	0.0200	0.14		Sheet Flow, 100' sheet
					Grass: Short n= 0.150 P2= 2.22"
43.1	1,115	0.0038	0.43		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
54.9	1,215	Total			

Subcatchment PDA18: PROPOSED DA STR 36



Summary for Subcatchment PDA19: PROPOSED DA STR 42-47

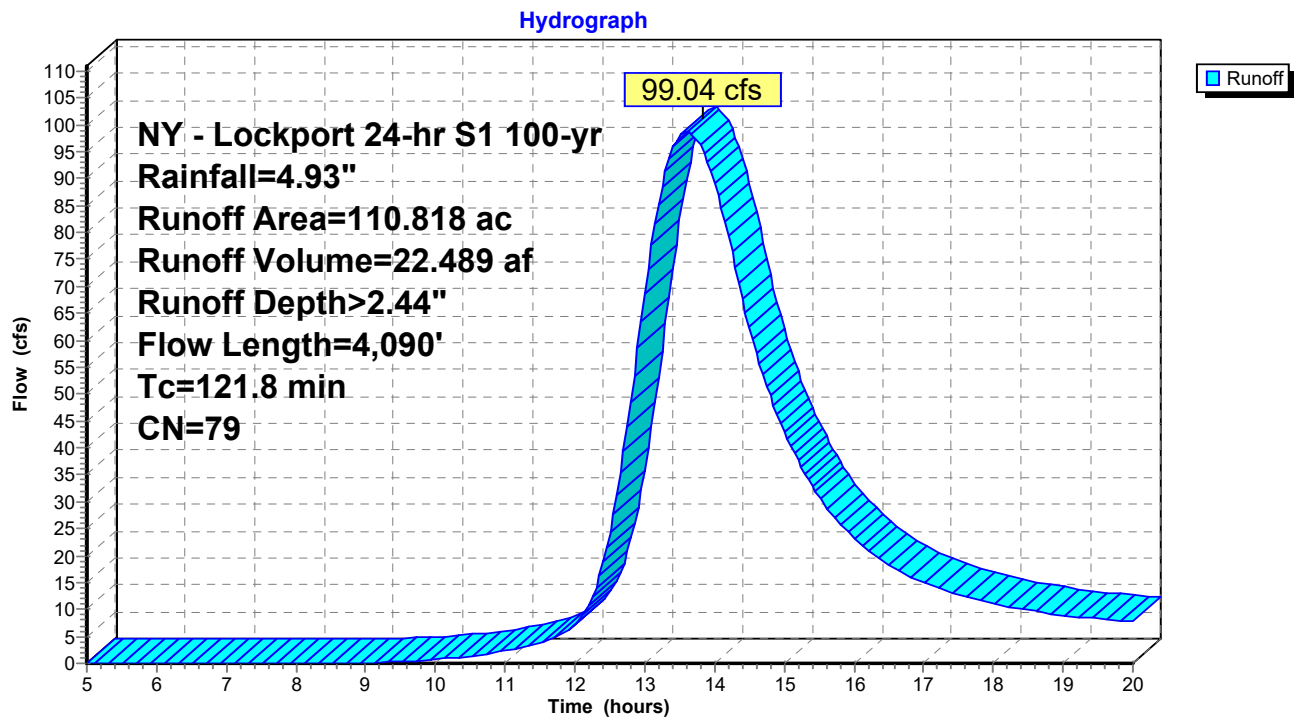
Runoff = 99.04 cfs @ 13.64 hrs, Volume= 22.489 af, Depth> 2.44"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 3.220	80	D - 80 - Developed open space
* 2.932	80	D - 80 - Developed open space
* 0.003	80	D - 80 - Developed open space
* 10.164	82	D - 82 - Developed Low intensity
* 6.410	82	D - 82 - Developed Low intensity
* 0.607	82	D - 82 - Developed Low intensity
* 5.494	77	D - 77 - Deciduous Forest
* 15.746	78	D - 78 - Meadowed, grass, non-grazed land
* 63.740	78	D - 78 - Meadowed, grass, non-grazed land
* 1.702	78	D - 78 - Meadowed, grass, non-grazed land
* 0.800	91	D - Gravel Roads
110.818	79	Weighted Average
110.818		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	100	0.0300	0.17		Sheet Flow, 100' Sheet
					Grass: Short n= 0.150 P2= 2.22"
88.0	2,225	0.0071	0.42		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
23.8	1,765	0.0068	1.24		Shallow Concentrated Flow,
					Grassed Waterway Kv= 15.0 fps
121.8	4,090	Total			

Subcatchment PDA19: PROPOSED DA STR 42-47



Summary for Subcatchment PDA2: PROPOSED DA STR 11-12

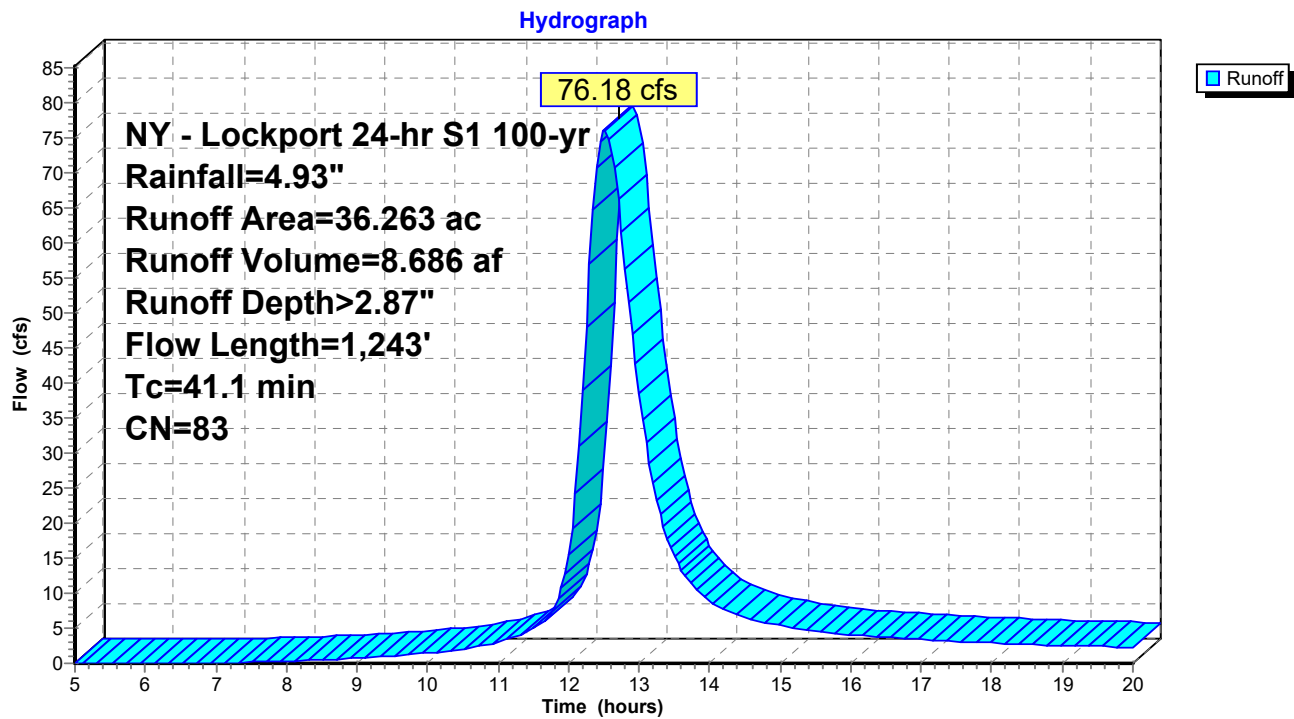
Runoff = 76.18 cfs @ 12.52 hrs, Volume= 8.686 af, Depth> 2.87"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 2.487	80	80-D-75% GRASS COVER, GOOD
* 1.050	84	84-D-50-75% GRASS COVER, FAIR
* 1.903	89	89-D-<50% GRASS COVER, POOR
* 0.250	95	95-D-URBAN COMMERCIAL, 85% IMP
* 0.043	79	79-D-WOODS/GRASS COMB., GOOD
* 1.421	78	78-D-MEADOW, NONGRAZED
* 0.054	80	80-D-75% GRASS COVER, GOOD
* 0.598	84	84-D-50-75% GRASS COVER, FAIR
* 2.041	89	89-D-<50% GRASS COVER, POOR
* 0.286	95	95-D-URBAN COMMERCIAL, 85% IMP
* 1.744	78	78-D-MEADOW, NON-GRAZED
* 5.982	80	80-D-75% GRASS COVER, GOOD
* 7.613	84	84-D-50-75% GRASS COVER, FAIR
* 3.609	89	89-D-<50% GRASS COVER, POOR
* 0.887	95	95-D-URBAN COMMERCIAL, 85% IMP
* 3.299	79	79-D-WOODS/GRASS COMB., GOOD
* 2.636	78	78-D-MEADOW, NON-GRAZED
0.360	91	Gravel roads, HSG D
36.263	83	Weighted Average
36.263		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.5	100	0.0050	0.66		Sheet Flow, 100' Smooth surfaces n= 0.011 P2= 2.22"
1.4	115	0.0043	1.33		Shallow Concentrated Flow, Paved Kv= 20.3 fps
2.4	256	0.0078	1.79		Shallow Concentrated Flow, Paved Kv= 20.3 fps
10.3	240	0.0031	0.39		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
0.3	30	0.0064	1.62		Shallow Concentrated Flow, Paved Kv= 20.3 fps
2.8	128	0.0117	0.76		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
14.2	209	0.0024	0.24		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
7.2	165	0.0030	0.38		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
41.1	1,243	Total			

Subcatchment PDA2: PROPOSED DA STR 11-12



Summary for Subcatchment PDA3: EXISTING DA STR 17-20

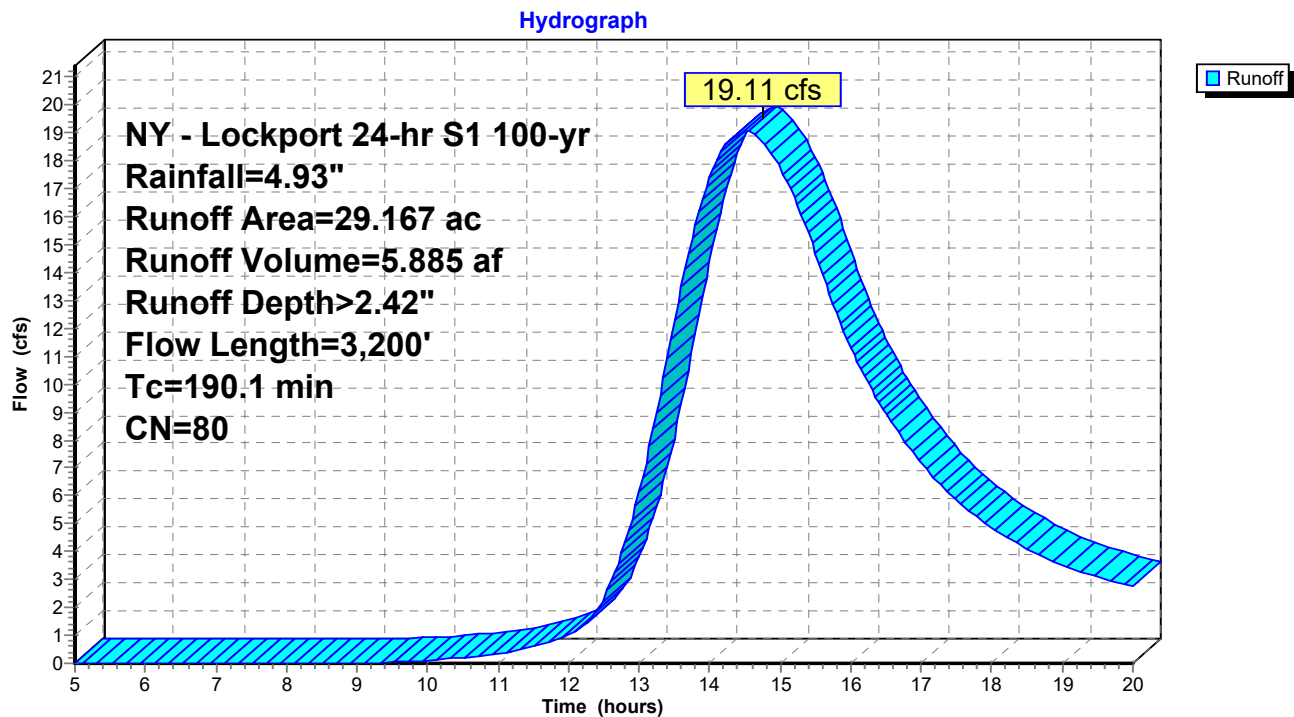
Runoff = 19.11 cfs @ 14.55 hrs, Volume= 5.885 af, Depth> 2.42"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.391	80	80-D-75% GRASS COVER, GOOD
* 4.601	79	WOODS/GRASS COMB., GOOD
* 1.427	79	WOODS/GRASS COMB., GOOD
* 2.196	78	MEADOW, NON-GRAZED
* 0.320	98	WATER SURFACE
* 3.636	80	75% GRASS COVER, GOOD
* 1.957	84	50-75% GRASS COVER, FAIR
* 1.103	89	<50% GRASS COVER, POOR
* 0.375	95	URBAN COMMERCIAL, 85% IMP
* 2.017	79	WOODS/GRASS COMB., GOOD
* 0.337	84	50-75% GRASS COVER, FAIR
* 1.236	79	WOODS/GRASS COMB., GOOD
* 0.470	79	WOODS/GRASS COMB., GOOD
* 8.306	78	MEADOW, NON-GRAZED
* 0.274	98	WATER SURFACE, 0% IMP
0.521	91	Gravel roads, HSG D
29.167	80	Weighted Average
28.573		97.96% Pervious Area
0.594		2.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.2	100	0.0175	0.06		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.22"
7.6	186	0.0067	0.41		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
8.3	368	0.0217	0.74		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
31.5	708	0.0056	0.37		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
23.1	576	0.0069	0.42		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
14.5	452	0.0055	0.52		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
77.9	810	0.0012	0.17		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
190.1	3,200	Total			

Subcatchment PDA3: EXISTING DA STR 17-20



Summary for Subcatchment PDA4: PROPOSED DA STR 21-23

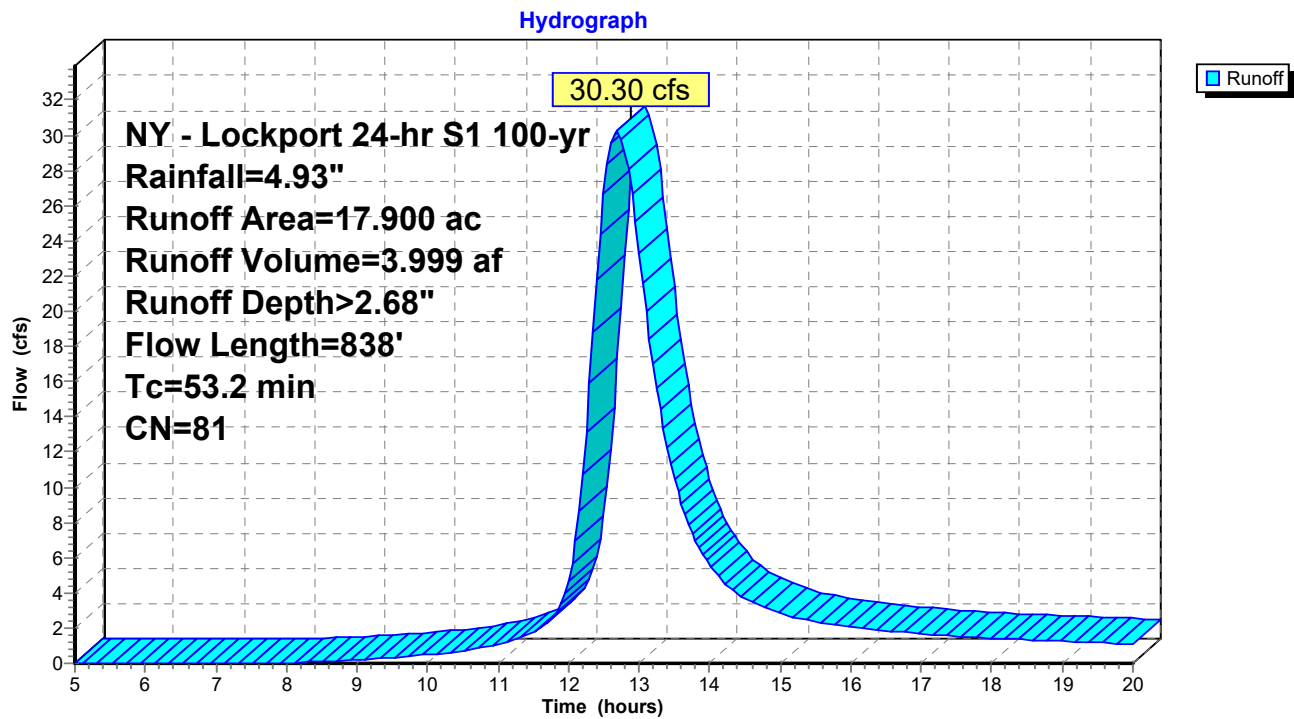
Runoff = 30.30 cfs @ 12.69 hrs, Volume= 3.999 af, Depth> 2.68"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.062	80	80-D-75% GRASS COVER, GOOD
* 0.720	84	84-D-50-75% GRASS COVER, FAIR
* 0.884	78	78-D-MEADOW, NON-GRAZED
* 4.286	80	80-D-75% GRASS COVER, GOOD
* 2.842	84	84-D-50-75% GRASS COVER, FAIR
* 0.139	89	89-D-<50% GRASS COVER, POOR
* 1.645	85	85-D-HERBACEOUS RANGE, GOOD
* 5.404	78	78-D-MEADOW, NON-GRAZED
* 0.188	80	80-D-75% GRASS COVER, GOOD
* 0.143	84	84-D-50-75% GRASS COVER, FAIR
* 0.507	78	78-D-MEADOW, NON-GRAZED
1.080	91	Gravel roads, HSG D
17.900	81	Weighted Average
17.900		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.2	100	0.0125	0.12		Sheet Flow, Grass: Short n= 0.150 P2= 2.22"
23.5	419	0.0018	0.30		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
15.5	319	0.0024	0.34		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
53.2	838	Total			

Subcatchment PDA4: PROPOSED DA STR 21-23



Summary for Subcatchment PDA5: PROPOSED DA STR 25-29

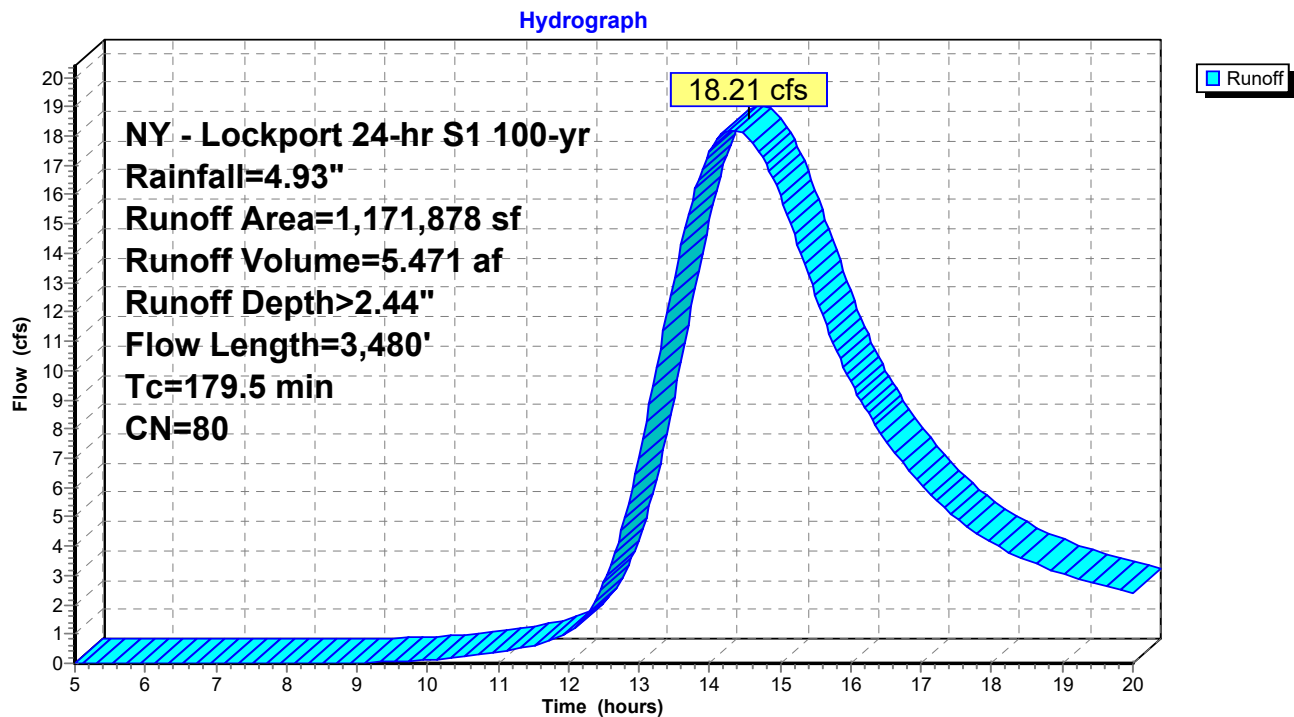
Runoff = 18.21 cfs @ 14.34 hrs, Volume= 5.471 af, Depth> 2.44"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (sf)	CN	Description
* 17,032	80	80-D-75% GRASS COVER, GOOD
* 200,420	79	WOODS/GRASS COMB., GOOD
* 62,160	79	WOODS/GRASS COMB., GOOD
* 95,658	78	MEADOW, NON-GRAZED
* 13,939	98	WATER SURFACE
* 158,384	80	75% GRASS COVER, GOOD
* 85,247	84	50-75% GRASS COVER, FAIR
* 11,396	89	<50% GRASS COVER, POOR
* 16,335	95	URBAN COMMERCIAL, 85% IMP
* 87,861	79	WOODS/GRASS COMB., GOOD
* 14,680	84	50-75% GRASS COVER, FAIR
* 152,329	79	WOODS/GRASS COMB., GOOD
* 20,473	79	WOODS/GRASS COMB., GOOD
* 187,335	78	MEADOW, NON-GRAZED
* 11,935	98	WATER SURFACE, 0% IMP
36,694	91	Gravel roads, HSG D
1,171,878	80	Weighted Average
1,146,004		97.79% Pervious Area
25,874		2.21% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.8	100	0.0200	0.06		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.22"
28.8	377	0.0019	0.22		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
12.9	548	0.0200	0.71		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
17.4	739	0.0200	0.71		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
10.5	489	0.0240	0.77		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
8.0	420	0.0156	0.87		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
13.1	429	0.0120	0.55		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
63.0	378	0.0004	0.10		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
179.5	3,480	Total			

Subcatchment PDA5: PROPOSED DA STR 25-29



Summary for Subcatchment PDA6: PROPOSED DA STR 29-35

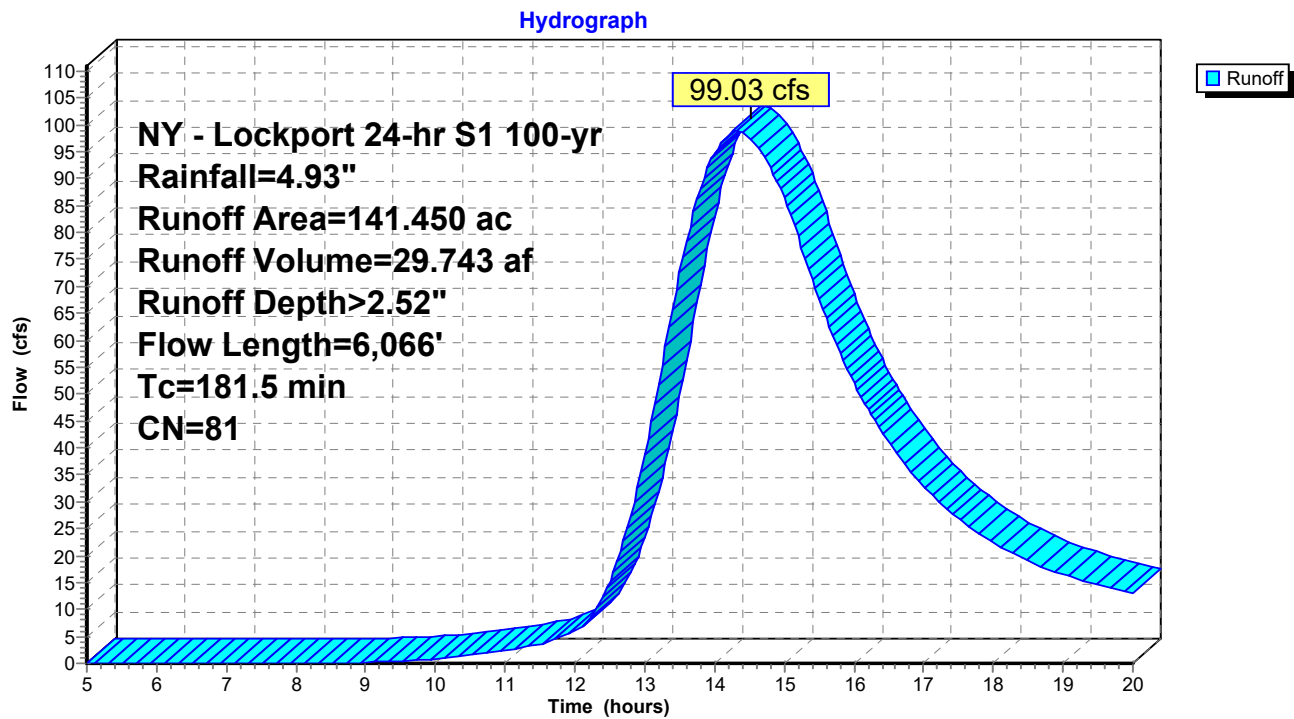
Runoff = 99.03 cfs @ 14.32 hrs, Volume= 29.743 af, Depth> 2.52"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 0.152	98	D - 98 - Open Water
* 0.074	80	D - 80 - Developed open space
* 0.307	80	D - 80 - Developed open space
* 2.363	80	D - 80 - Developed open space
* 1.992	82	D - 82 - Developed Low intensity
* 1.726	82	D - 82 - Developed Low intensity
* 2.185	85	D - 85 - Developed Med intensity
* 0.875	77	D - 77 - Deciduous Forest
* 18.239	77	D - 77 - Deciduous Forest
* 13.242	77	D - 77 - Deciduous Forest
* 0.038	77	D - 77 - Evergreen Forest
* 0.919	77	D - 77 - Evergreen Forest
* 0.021	77	D - 77 - Evergreen Forest
* 0.508	77	D - 77 - Mixed Forest
* 0.889	77	D - 77 - Mixed Forest
* 0.160	77	D - 77 - Mixed Forest
* 4.266	78	D - 78 - Meadowed, grass, non-grazed land
* 29.357	78	D - 78 - Meadowed, grass, non-grazed land
* 22.896	78	D - 78 - Meadowed, grass, non-grazed land
* 0.112	78	D - 78 - Meadowed, grass, non-grazed land
* 5.915	78	D - 78 - Meadowed, grass, non-grazed land
* 5.016	90	D - 90 - Woody Wetlands
* 1.110	91	D - Gravel Roads
* 29.088	90	D - 90 - Woody Wetlands
141.450	81	Weighted Average
141.298		99.89% Pervious Area
0.152		0.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.7	100	0.0275	0.07		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.22"
31.2	1,144	0.0149	0.61		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
14.6	670	0.0026	0.76		Shallow Concentrated Flow,
					Grassed Waterway Kv= 15.0 fps
12.9	328	0.0008	0.42		Shallow Concentrated Flow,
					Grassed Waterway Kv= 15.0 fps
100.1	3,824	0.0018	0.64		Shallow Concentrated Flow,
					Grassed Waterway Kv= 15.0 fps
181.5	6,066	Total			

Subcatchment PDA6: PROPOSED DA STR 29-35



Summary for Subcatchment PDA7: PROPOSED DA STR 37-40

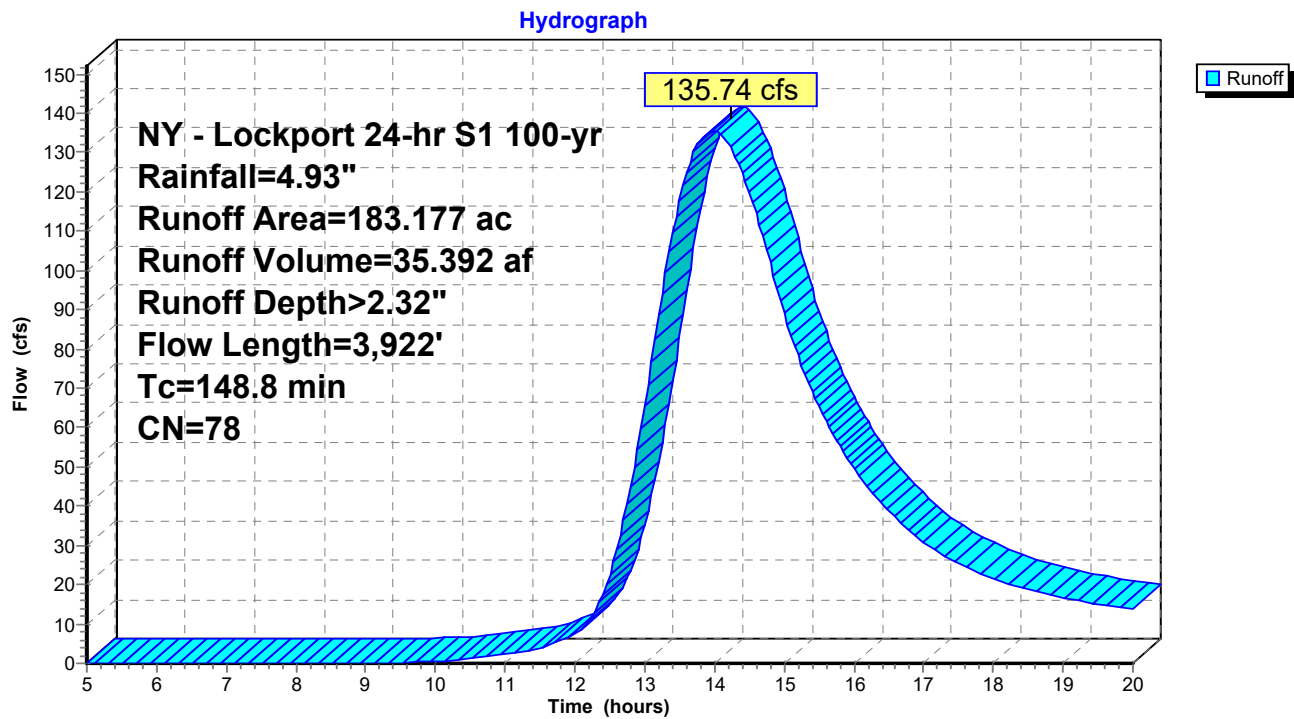
Runoff = 135.74 cfs @ 14.03 hrs, Volume= 35.392 af, Depth> 2.32"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 2.507	80	D - 80 - Developed open space
* 3.318	80	D - 80 - Developed open space
* 2.790	80	D - 80 - Developed open space
* 2.870	82	D - 82 - Developed Low intensity
* 4.979	82	D - 82 - Developed Low intensity
* 4.781	82	D - 82 - Developed Low intensity
* 0.152	85	D - 85 - Developed Med intensity
* 1.263	77	D - 77 - Deciduous Forest
* 3.431	77	D - 77 - Deciduous Forest
* 3.544	77	D - 77 - Deciduous Forest
* 14.732	78	D - 78 - Meadowed, grass, non-grazed land
* 59.055	78	D - 78 - Meadowed, grass, non-grazed land
* 79.095	78	D - 78 - Meadowed, grass, non-grazed land
* 0.660	91	D- Gravel Roads
183.177	78	Weighted Average
183.177		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.6	100	0.0350	0.08		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.22"
48.7	1,573	0.0116	0.54		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
62.0	1,276	0.0047	0.34		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
17.5	973	0.0038	0.92		Shallow Concentrated Flow,
					Grassed Waterway Kv= 15.0 fps
148.8	3,922	Total			

Subcatchment PDA7: PROPOSED DA STR 37-40



Summary for Subcatchment PDA8: PROPOSED DA STR 41

Runoff = 9.32 cfs @ 13.30 hrs, Volume= 1.805 af, Depth> 2.38"
 Routed to Link 2L : PROPOSED

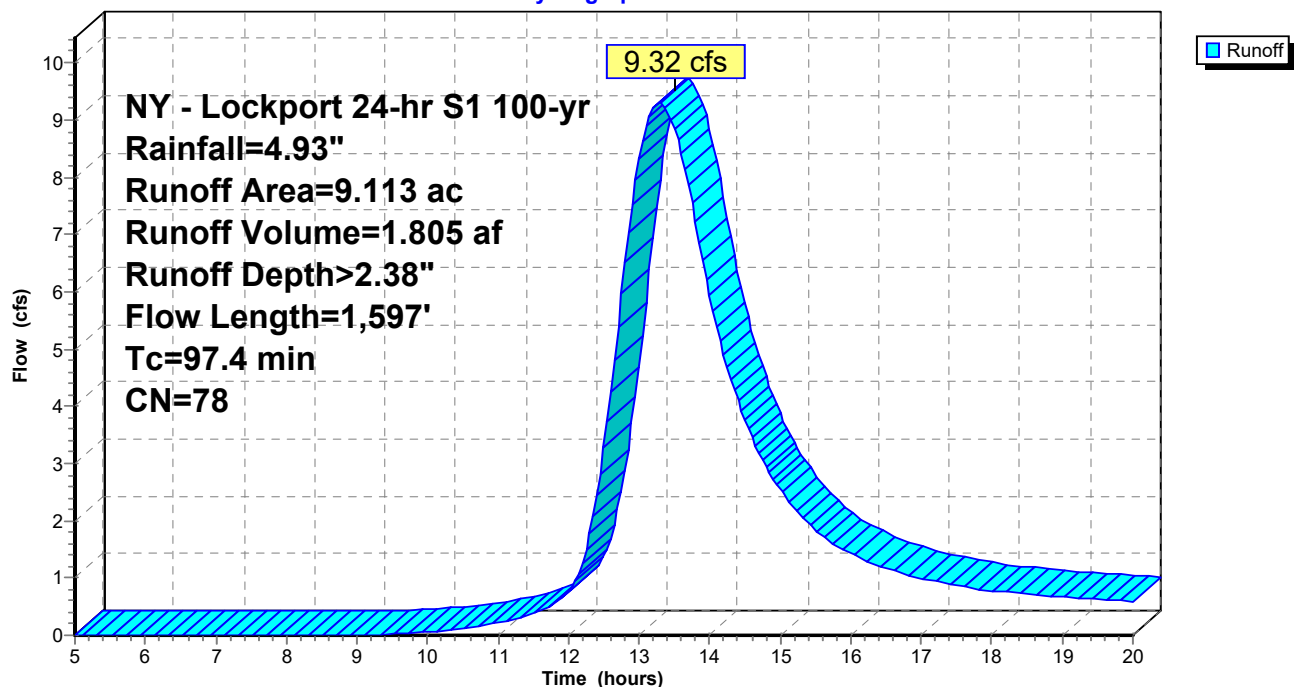
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 3.755	77	D - 77 - Deciduous Forest
* 5.138	78	D - 78 - Meadowed, grass, non-grazed land
* 0.220	91	D- Gravel Roads
9.113	78	Weighted Average
9.113		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.0	100	0.0100	0.05		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.22"
63.4	1,497	0.0062	0.39		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
97.4	1,597	Total			

Subcatchment PDA8: PROPOSED DA STR 41

Hydrograph



Summary for Subcatchment PDA9: PROPOSED DA STR 48-50

Runoff = 34.71 cfs @ 13.38 hrs, Volume= 7.321 af, Depth> 2.45"
 Routed to Link 2L : PROPOSED

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

Area (ac)	CN	Description
* 2.020	80	D-75% GRASS COVER, GOOD
* 0.850	84	D-50-75% GRASS COVER, FAIR
* 0.080	89	D-<50% GRASS COVER, POOR
* 0.800	79	D-WOODS/GRASS COMB., GOOD
* 6.410	78	D-MEADOW, NON-GRAZED
* 0.060	98	D-WATER SURFACE, 0% IMP
* 1.214	80	D-75% GRASS COVER, GOOD
* 0.074	84	D-50-75% GRASS COVER, FAIR
* 0.060	89	D-<50% GRASS COVER, POOR
* 4.411	79	D-WOODS/GRASS COMB., GOOD
* 18.040	78	D-MEADOW, NON-GRAZED
* 1.050	98	D-WATER SURFACE, 0% IMP
* 0.150	80	D-75% GRASS COVER, GOOD
* 0.210	78	D-MEADOW, NON-GRAZED
* 0.420	91	D-Gravel Roads
35.849	79	Weighted Average
34.739		96.90% Pervious Area
1.110		3.10% Impervious Area

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NY - Lockport 24-hr S1 100-yr Rainfall=4.93"

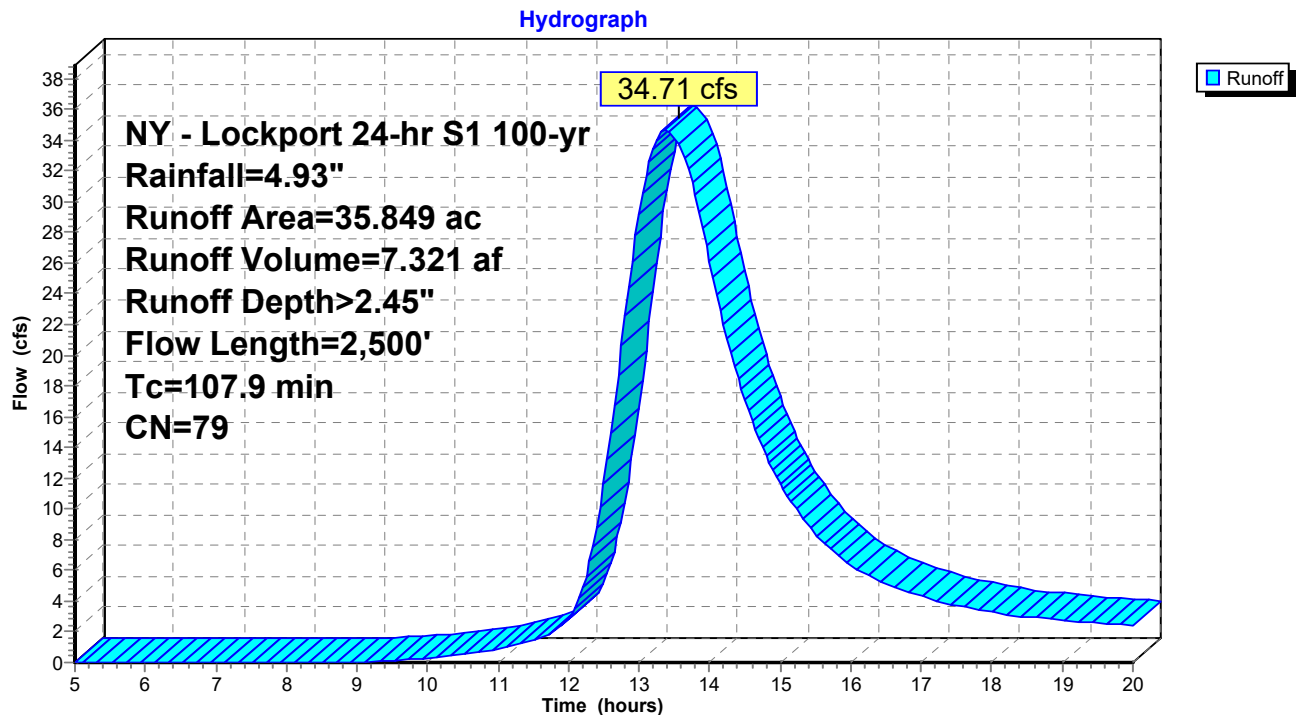
Prepared by Fisher Associates

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Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.4	100	0.0300	1.21		Shallow Concentrated Flow, 100' Short Grass Pasture Kv= 7.0 fps
31.2	262	0.0120	0.14		Sheet Flow, 262.19 Grass: Short n= 0.150 P2= 2.22"
4.5	254	0.0180	0.94		Shallow Concentrated Flow, 254' Short Grass Pasture Kv= 7.0 fps
2.9	129	0.0110	0.73		Shallow Concentrated Flow, 128.66 Short Grass Pasture Kv= 7.0 fps
4.4	196	0.0110	0.73		Shallow Concentrated Flow, 196 Short Grass Pasture Kv= 7.0 fps
6.9	260	0.0080	0.63		Shallow Concentrated Flow, 260 Short Grass Pasture Kv= 7.0 fps
5.5	219	0.0090	0.66		Shallow Concentrated Flow, 219 Short Grass Pasture Kv= 7.0 fps
12.4	285	0.0030	0.38		Shallow Concentrated Flow, 285 Short Grass Pasture Kv= 7.0 fps
6.1	230	0.0080	0.63		Shallow Concentrated Flow, 230 Short Grass Pasture Kv= 7.0 fps
10.0	265	0.0040	0.44		Shallow Concentrated Flow, 265 Short Grass Pasture Kv= 7.0 fps
22.6	300	0.0010	0.22		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
107.9	2,500	Total			

Subcatchment PDA9: PROPOSED DA STR 48-50

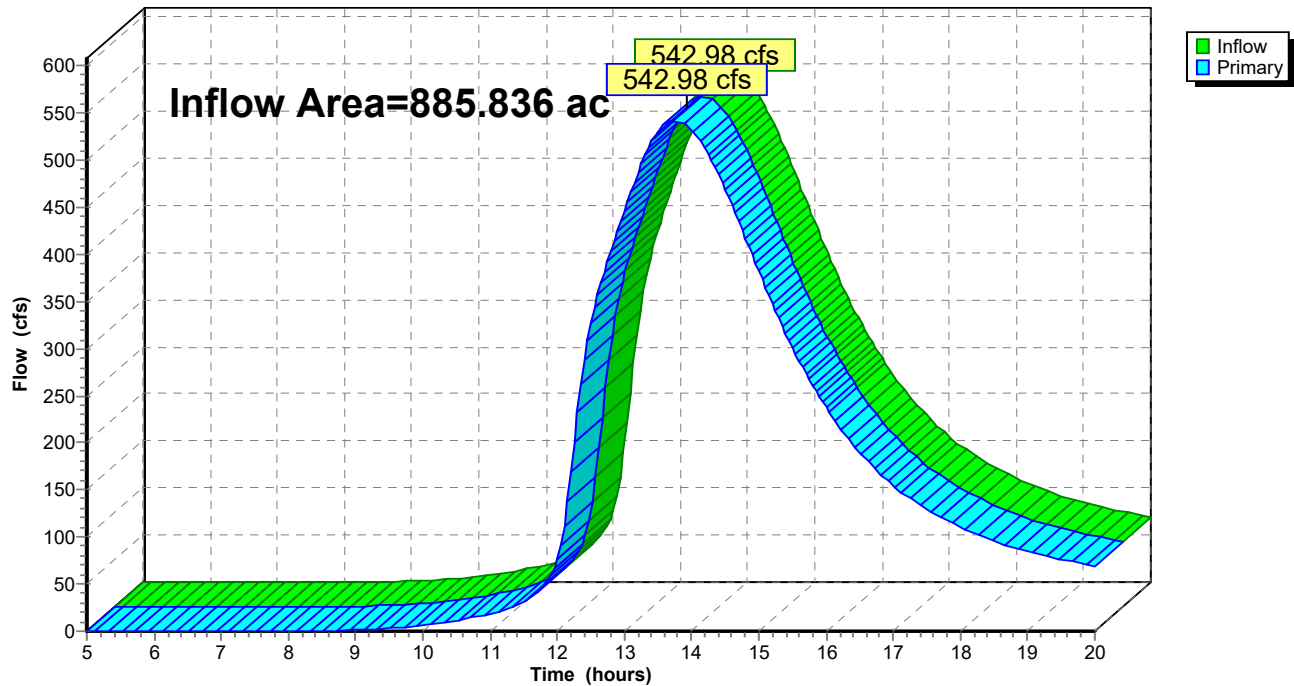
Summary for Link 1L: EXISTING

Inflow Area = 885.836 ac, 0.70% Impervious, Inflow Depth > 2.38" for 100-yr event
Inflow = 542.98 cfs @ 13.72 hrs, Volume= 176.048 af
Primary = 542.98 cfs @ 13.72 hrs, Volume= 176.048 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 1L: EXISTING

Hydrograph



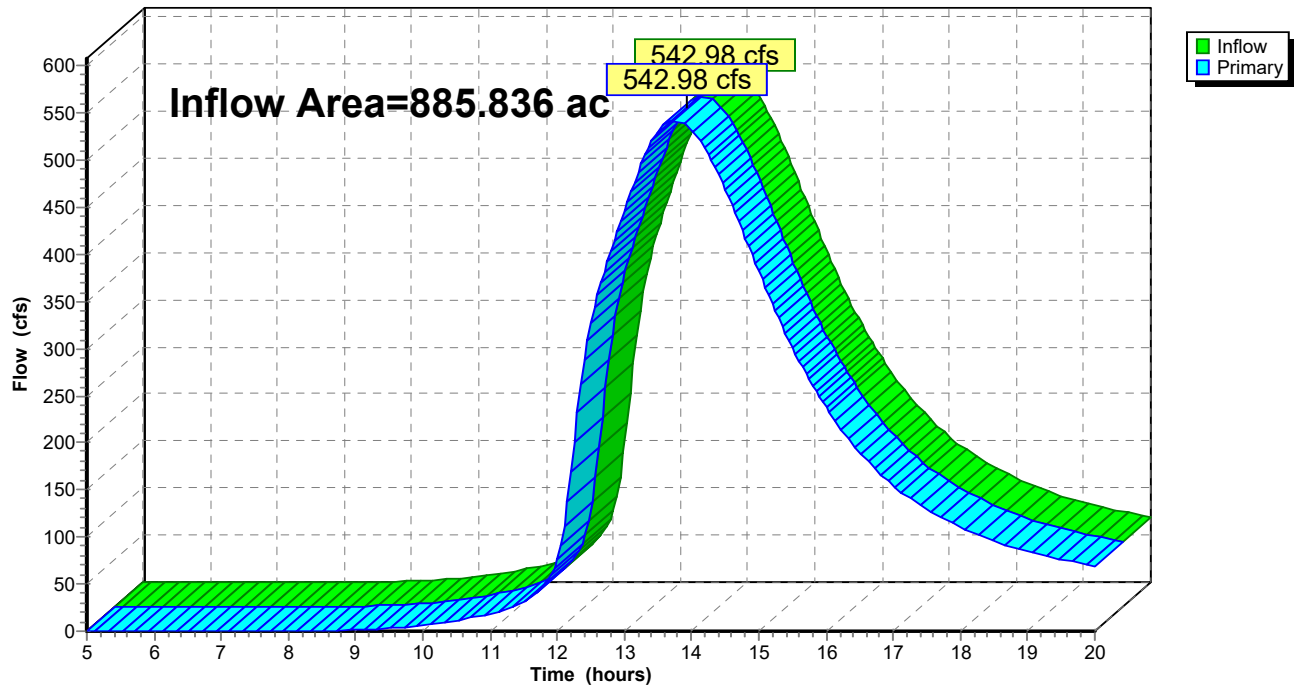
Summary for Link 2L: PROPOSED

Inflow Area = 885.836 ac, 0.66% Impervious, Inflow Depth > 2.38" for 100-yr event
Inflow = 542.98 cfs @ 13.72 hrs, Volume= 176.048 af
Primary = 542.98 cfs @ 13.72 hrs, Volume= 176.048 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Link 2L: PROPOSED

Hydrograph



Appendix P

New York Utility Company BMP for Preventing the Transportation of Invasive Species

New York Utility Company Best Management Practices for Preventing the Transportation of Invasive Species

Environmental Energy Alliance of New York
Revisions January 2015

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Appendices

- Appendix 1 - Best Management Practices (BMP's) for Invasive Species Transportation Prevention
- Appendix 2 - 6 NYCRR Part 575 Prohibited and Regulated Invasive Species, September 10, 2014

1.0 Introduction

Invasive species are non-native plant, animal, or microbial species that cause, or are likely to cause, economic or ecological harm or harm to human health (Presidential Executive Order 13112). Invasive species means, “A species that is nonnative to the ecosystem under consideration; and whose introduction causes or is likely to cause economic or environmental harm or harm to human health. Harm must significantly outweigh benefit” [New York Environmental Conservation Law §9-1703(10)(a)] Invasive species have been introduced by human action into a region outside their natural geographic range. Introductions occur along a variety of pathways or vectors, either intentionally such as intentional transport of a species for trade, or by accidental means, as in the case of stowaway species found in the ballast-water of ocean-going vessels.

Most scientists regard invasive species as second only to habitat loss as a threat to biodiversity. The presence of invasive species in a given region is one of the leading causes of endangerment to species native to that region. On a nationwide basis, about half of plant and animal species listed as federally Endangered or Threatened are at risk because of invasive species.

Annual economic losses due to invasive species in the U.S. have been estimated at over \$138 billion (Pimentel et al. 2000). These losses include damage to crops and pasture, forest losses, damage from insect and other invertebrate pests, human diseases, and associated control costs.

In an effort, where feasible, to limit the introduction and spread of *invasive species*, this Best Management Practice (“BMP”) will be employed when performing activities that occur in *jurisdictional areas* as authorized by the DEC. The BMP identifies procedures that will be incorporated into routine work practices to prevent the introduction and spread of *invasive species*.

2.0 Definitions

The following definitions are applicable to this BMP.

Environmental Energy Alliance of New York (EEANY) – is an association of electric and gas Transmission and Distribution (T&D) companies and electric generating companies that provide energy services in the State of New York. This BMP was prepared by the Land Use Subcommittee of the T&D Committee, which currently represents the following members: Central Hudson Gas & Electric Corporation, Consolidated Edison Company of New York, Long Island Power Authority, National Grid USA Service Company, Inc., New York Power Authority, New York State Electric & Gas Corporation, Orange and Rockland Utilities, and Rochester Gas & Electric Corporation.

Invasive species – species that are non-native to the ecosystem under consideration and whose introduction causes or is likely to cause economic or environmental harm or harm to human health (Management Plan National Invasive Species Council, 2001). For purposes of this document, *invasive species* are those contained on the list contained within 6 NYCRR Part 575 Prohibited and Regulated Invasive Species (Appendix – 2).

Invasive species plant material – seeds, roots, or pieces of plant material that could germinate into live plants.

Jurisdictional Area – lands under the statutory jurisdiction of the NYSDEC such as certain freshwater wetlands and adjacent areas, tidal wetlands, certain water bodies, and any protected and species habitat areas specified by natural resource supervisors.

NYSDEC General Permit – a NYSDEC permit authorizing certain utility line activities under Articles 15, 24, and 25 of NYS Environmental Conservation Law. These activities include: inspection, maintenance, repair, restoration, reconstruction of pre-existing structures, vegetation cutting and trimming, and emergency actions affecting tidal wetlands, protected waters, regulated freshwater wetlands, adjacent areas, and protected habitat areas.

Regulated Activity – an activity taking place within a *jurisdictional area* that requires authorization from the NYSDEC.

Utility Rights-of-Way - is an easement-acquired or fee-owned corridor in which gas or electric transmission facilities are located.

3.0 Purpose

This BMP provides guidance for inspecting and cleaning vehicles and equipment to help prevent the spread of invasive species. The procedures identified within this manual outline cost-effective and realistic practices that *Environmental Energy Alliance of New York (EEANY)* utility members will implement when conducting a *regulated activity* within a *jurisdictional area*.

4.0 Applicability

This management practice applies to all *EEANY* utility members performing *NYSDEC regulated activities* within *jurisdictional areas* with populations of *invasive species*.

5.0 Procedures

There are two procedural options for *EEANY* companies to follow; one is to conduct the BMPs as detailed in the following sections of this plan or to conduct vegetation surveys for invasive species as outlined in Section 5.6. Field crews will be provided a flowchart to assist with determining when to implement these best management practices (Appendix 1).

The following detailed practices will apply where feasible when invasive species are present and when the work is covered by a GP or individual wetland permit.

5.1 Equipment

- a. Equipment must arrive clean without visible soil clumps, plant or animal material.
- b. Equipment includes, but is not limited to, vehicles, trailers, machinery, matting, boats, barges, and other watercraft, tools, and other materials.
- c. Transporting equipment will be cleaned before accepting a new load.
- d. Consider tracking pads as a means to remove soil from equipment. If tracking pads are used they must be cleaned after each use in a specific area.
- e. Equipment will be cleaned using one of the methods listed below (use the most effective method that is practical):
 - Brush, broom, shovel or other similar hand tools (used without water)
 - High pressure air (when feasible)
- f. Equipment must be cleaned within one of the below areas:
 - the infested work area
 - an area immediately adjacent to the work area that is itself currently infested with *invasive species*
- g. Do not clean equipment in or near waterways as it may promote the spread of *invasive species* downstream.
- h. Where possible, staging areas will be established in locations that are free of *invasive species*. Otherwise, all equipment will be cleaned using the techniques described in 5.3 before leaving the area.
- i. When wetland matting is required, it will arrive on site visibly clean, be installed prior to any activities, and will be appropriately cleaned before leaving the area.

5.2 Inspection and Cleaning

- a. Inspections and cleaning should be conducted especially when moving from an infested area to an uninfested area.
- b. Prior to exiting work area clothing, footwear, and gear should be cleaned of visible signs of plant material.
- c. Carry appropriate cleaning equipment (e.g. wire brush, small screwdriver, boot brush) to help remove soils, seeds, and plant material.
- d. Preferred locations for cleaning are those where:
 - Work activities are taking place;
 - *Invasive species* are already established; or
 - An area immediately adjacent to the work site that is itself currently infested with *invasive species*.
- e. No cleaning of clothing, footwear, gear in or adjacent to waterways – it may promote the spread of *invasive species* downstream.
- f. Cleaning will include brushing or self “pat down” of clothing, footwear, and other personal gear within the infested work area.

5.3 Disposal of Impacted Material

- a. Preferred locations for equipment cleaning are those areas where work activities are taking place or immediately adjacent areas currently impacted with *invasive species*.
- b. Do not clean equipment, vehicles or trailers in or near waterways.
- c. Do not dispose of soil, seeds, or plant material in storm drains.
- d. Any plant materials that are incidentally removed after completion of steps a-c from site will be properly disposed of in a manner that prevents viable plant parts and propagules from being spread

5.4 Other Prevention Measures

- a. Reasonable steps to avoid transportation of *invasive species*, including small, isolated, populations, will be taken.
- b. As an alternative to cleaning, ancillary equipment such as spare tires and winches when feasible will be covered when entering *jurisdictional areas* containing populations of *invasive species*.
- c. Vehicular access into areas containing populations of *invasive species* will be reduced or minimized to the maximum extent practical. When practical vehicles will be parked outside of the impacted area and crews will enter on foot.

5.5 Site Restoration

- a. Minimize soil disturbances by reducing work areas and reducing activities that may result in soil disturbances.
- b. Re-vegetate bare soils as soon as feasible to minimize the possible establishment of *invasive species*. When seeding, non-invasive or local native species must be used (seed mixes will vary from region to region). Seed will be broadcasted over all bare soil areas and covered with a mulch layer such as straw. Choose appropriate seed mixes based on site conditions.

- c. On steep sloping areas (i.e. slopes exceeding 20 percent), soil erosion control matting (i.e. jute mesh or straw blankets) must be installed over the seeded area. The matting should be secured with biodegradable tacks.
- d. Stabilize disturbed soils using appropriate erosion and sediment control procedures as soon as possible. Use invasive free materials such as straw or wood chips; avoid using hay.

5.6 Vegetation Survey (Optional)

If the above BMPS are not followed, then vegetation surveys of site(s) to detect populations of invasive species should be made in advance prior to any activities. If the optional vegetation survey is performed and no invasive species are found, then the procedures outlined above in section 5.1 through 5.5 will not be followed. Survey inspections can be integrated with other activities such as ROW inspections and should be kept as simple as possible to meet invasive species management objectives. If significant populations of invasive species are detected on surveys, then Sections 5.1 to 5.5 apply.

- a. Prior to implementing activities scout for, locate and document significant invasive species infestations.
- b. Consider the need for actions based on: 1) the degree of invasiveness; 2) severity of the current infestation; 3) amount of additional habitat or host at risk for invasion; and 4) feasibility of managing the spread.
- c. Plan activities to limit the potential for introduction and spread of invasive species, prior to construction.
- d. Provide appropriate resources in identification of known invasive species for corridor workers.

6.0 Training

A flowchart (Appendix 1) to assist field crews on when to implement the above procedures will be distributed to all field crews.

All transmission vegetation management planners, foresters, and ROW maintenance personnel will be trained in the procedures outlined in Section 5.0 above. Additionally, training sessions focused on the identification of *invasive species* identified in Appendix 2 will be conducted by the individual utility companies. This may take the form of hard copy materials, tail gate briefings and/or presentations during regular staff meetings.

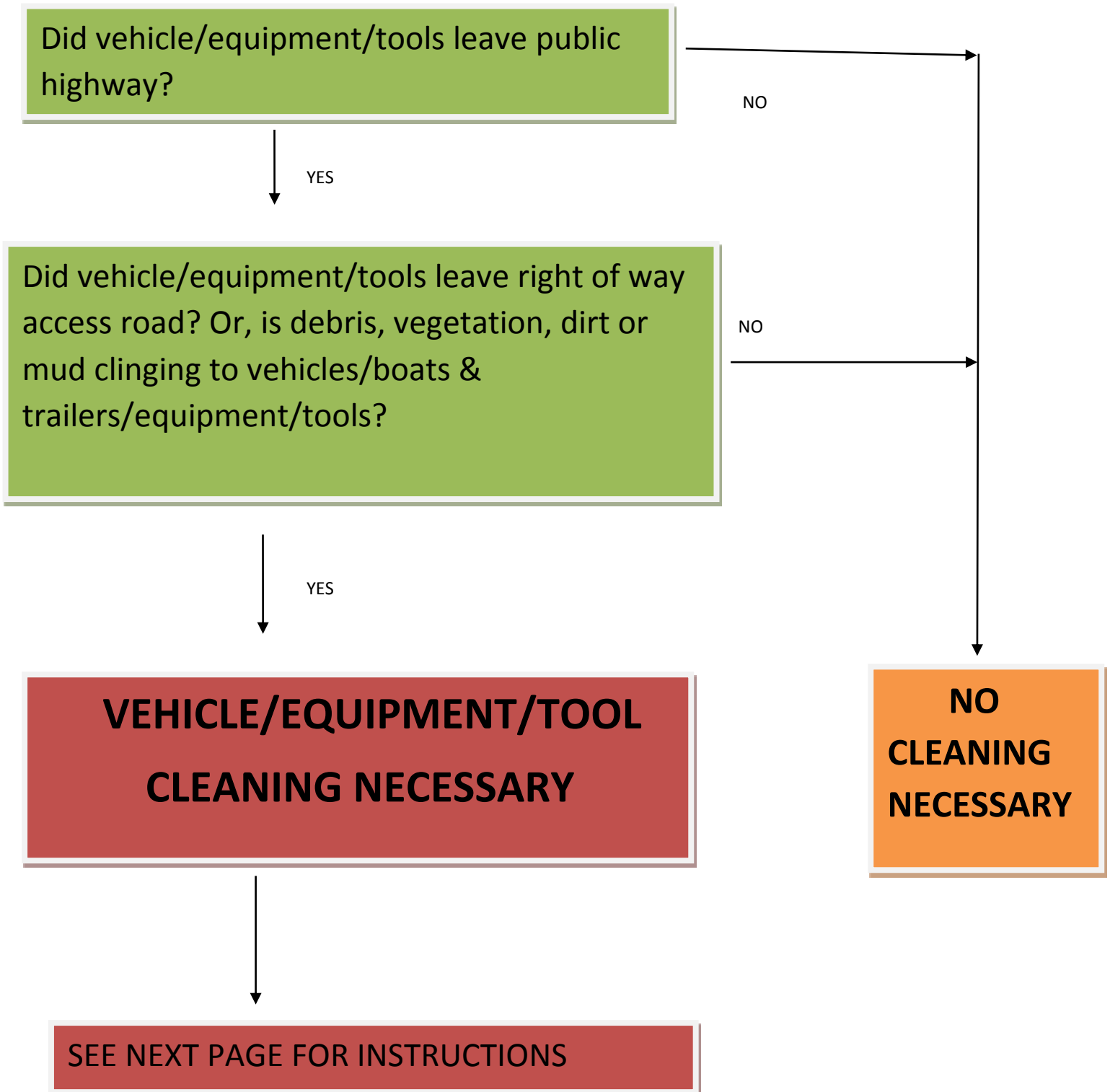
7.0 Emergency Work

During emergencies, *EEANY* utility members will strictly comply with the Emergency Action condition protocol outlined in the *NYSDEC General Permit*. Appropriate site-specific *invasive species* controls and restoration efforts will be determined on an individual basis in conjunction with the regional NYSDEC office.

8.0 References

- Electric Power Research Institute, 2008. "Invasive Species and Utility Rights of Way: A Review of the Science". EPRI Publication number 1014032, Palo Alto, CA
- Pimentel, D., Lach, L., Zuniga, R. & Morrison, D. 2000. Environmental and economic costs of nonindigenous species in the United States. *Bioscience*, 50(1): 53-65.
- Presidential Executive Order 13112. Volume 64, Federal Register 1999. Invasive Species.
- Wisconsin Council on Forestry. 2010. *Invasive Species Best Management Practice for Transportation and Utility Rights-of-Way*.

BEST MANAGEMENT PRACTICES (BMP'S) for INVASIVE SPECIES TRANSPORT PREVENTION



PRIOR TO LEAVING THE RIGHT-OF-WAY

- Prior to loading vehicle/equipment/tools remove as much debris, vegetation, dirt and mud clinging to the equipment as feasible using a brush, broom, shovel or other similar hand tool.
- High pressure air can be used on site for cleaning debris, vegetation, dirt and mud off vehicles/equipment/tools.
- Pick-ups and other small road vehicles shall remove on the right-of-way, as much debris, vegetation, dirt and mud clinging to vehicle as feasible prior to entering the highway.
- Small equipment/tools/boots shall be cleaned on site before removal or storage.
- Arrangements can be made for onsite cleaning or washing of vehicles/equipment/tools if deemed necessary.

PRIOR TO LEAVING A BOAT LAUNCH:

CLEAN, DRAIN, DRY -- Prior to leaving a boat launch, **Clean** any visible mud, plants, fish or animals before transporting equipment; **Drain** all water holding compartments including live wells, bait wells and bilge areas; **Dry** the boat, trailer and all equipment before use in another water body

APPENDIX - 2

6 NYCRR Part 575

Prohibited and Regulated Invasive Species September 10, 2014

ALGAE AND CYANOBACTERIA

Prohibited:

Caulerpa taxifolia, Killer Green Algae
Didymosphenia geminata,
Didymo Prynmesium parvum, Golden Algae

Regulated:

Cylindrospermopsis raciborskii, Cylindro
Grateloupia turuturu, Red Algae

PLANTS

Prohibited:

Acer pseudoplatanus, Sycamore Maple
Achyranthes japonica, Japanese Chaff Flower
Alliaria petiolata, Garlic Mustard
Ampelopsis brevipedunculata, Porcelain Berry
Anthriscus sylvestris, Wild Chervil
Aralia elata, Japanese Angelica Tree
Artemisia vulgaris, Mugwort
Arthraxon hispidus, Small Carpet Grass
Berberis thunbergii, Japanese Barberry
Brachypodium sylvaticum, Slender False Brome
Cabomba caroliniana, Fanwort
Cardamine impatiens, Narrowleaf Bittercress
Celastrus orbiculatus, Oriental Bittersweet
Centaurea stoebe (*C. biebersteinii*, *C. diffusa*, *C. maculosa* misapplied, *C. xpsammogena*), Spotted Knapweed
Cirsium arvense (*C. setosum*, *C. incanum*, *Serratula arvensis*), Canada Thistle
Cynanchum louiseae (*C. nigrum*, *Vincetoxicum nigrum*), Black Swallow-wort
Cynanchum rossicum (*C. medium*, *Vincetoxicum medium*, *V. rossicum*), Pale Swallow-wort
Dioscorea polystachya (*D. batatas*), Chinese Yam
Dipsacus laciniatus, Cut-leaf Teasel
Egeria densa, Brazilian Waterweed
Elaeagnus umbellata, Autumn Olive
Euphorbia cyparissias, Cypress Spurge
Euphorbia esula, Leafy Spurge
Ficaria verna (*Ranunculus ficaria*), Lesser Celandine
Frangula alnus (*Rhamnus frangula*), Smooth Buckthorn
Glyceria maxima, Reed Manna Grass

Heracleum mantegazzianum, Giant Hogweed
Humulus japonicus, Japanese Hops
Hydrilla verticillata, Hydrilla/ Water Thyme
Hydrocharis morsus-ranae, European Frogbit
Imperata cylindrica (*I. arundinacea*, *Lagurus cylindricus*), Cogon Grass
Iris pseudacorus, Yellow Iris
Lepidium latifolium, Broad-leaved Pepper-grass
Lespedeza cuneata, Chinese Lespedeza
Ligustrum obtusifolium, Border Privet
Lonicera japonica, Japanese Honeysuckle
Lonicera maackii, Amur Honeysuckle
Lonicera morrowii, Morrow's Honeysuckle
Lonicera tatarica, Tartarian Honeysuckle
Lonicera x bella, Fly Honeysuckle
Ludwigia hexapetala (*L. grandiflora*), Uruguayan Primrose Willow
Ludwigia peploides, Floating Primrose Willow
Lysimachia vulgaris, Garden Loosestrife
Lythrum salicaria, Purple Loosestrife
Microstegium vimineum, Japanese Stilt Grass
Murdannia keisak, Marsh Dewflower
Myriophyllum aquaticum, Parrot-feather
Myriophyllum heterophyllum, Broadleaf Water-milfoil
Myriophyllum heterophyllum x M. laxum, Broadleaf Water-milfoil Hybrid
Myriophyllum spicatum, Eurasian Water-milfoil
Nymphoides peltata, Yellow Floating Heart
Oplismenus hirtellus, Wavyleaf Basketgrass
Persicaria perfoliata (*Polygonum perfoliatum*), Mile-a-minute Weed
Phellodendron amurense, Amur Cork Tree
Phragmites australis, Common Reed Grass
Phyllostachys aurea, Golden Bamboo
Phyllostachys aureosulcata, Yellow Groove Bamboo
Potamogeton crispus, Curly Pondweed
Pueraria montana, Kudzu
Reynoutria japonica (*Fallopia japonica*, *Polygonum cuspidatum*), Japanese Knotweed
Reynoutria sachalinensis (*Fallopia sachalinensis*, *Polygonum sachalinensis*), Giant Knotweed
Reynoutria x bohemica (*Fallopia x bohemica*, *Polygonum x bohemica*), Bohemian Knotweed
Rhamnus cathartica, Common Buckthorn
Rosa multiflora, Multiflora Rose
Rubus phoenicolasius, Wineberry
Salix atrocinerea, Gray Florist's Willow
Silphium perfoliatum, Cup-plant
Trapa natans, Water Chestnut
Vitex rotundifolia, Beach Vitex

Regulated:

Acer platanoides, Norway Maple
 Clematis terniflora, Japanese Virgin's Bower
 Euonymus alatus, Burning Bush
 Euonymus fortunei, Winter Creeper
 Miscanthus sinensis, Chinese Silver Grass
 Robinia pseudoacacia, Black Locust

FISH**Prohibited:**

Channa argus, Northern Snakehead
 Channa marulius, Bullseye Snakehead
 Channa micropeltes, Giant Snakehead
 Clarias batrachus, Walking Catfish
 Gambusia affinis, Western Mosquitofish
 Gambusia holbrooki, Eastern Mosquitofish
 Hypophthalmichthys harmandi, Largescale Silver Carp
 Hypophthalmichthys molitrix, Silver Carp
 Hypophthalmichthys nobilis, Bighead Carp
 Misgurnus anguillicaudatus, Oriental Weatherfish
 Mylopharyngodon piceus, Black Carp
 Neogobius melanostomus, Round Goby
 Petromyzon marinus, Sea Lamprey
 Proterorhinus semilunaris (P. marmoratus), Tubenose Goby
 Tinca tinca, Tench

Regulated:

Carassius auratus, Goldfish
 Cyprinella lutrensis, Red Shiner
 Cyprinus carpio, Common Carp/ Koi
 Gymnocephalus cernuus, Ruffe
 Monopterus albus, Asian Swamp Eel
 Oreochromis aureus, Blue Tilapia
 Oreochromis niloticus, Nile Tilapia
 Pterois miles, Common Lionfish
 Pterois volitans, Red Lionfish
 Sander lucioperca (Stizostedion lucioperca), Zander
 Scardinius erythrophthalmus, Rudd

AQUATIC INVERTEBRATES**Prohibited:**

Bellamy chinensis (Cipangopaludina chinensis), Chinese Mystery Snail
 Bellamy japonica, Japanese Mystery Snail
 Bithynia tentaculata, Faucet Snail
 Bythotrephes longimanus (B. cederstroemi), Spiny Water Flea
 Cercopagis pengoi, Fishhook Water Flea
 Corbicula fluminea, Asian Clam
 Crassostrea ariakensis, Suminoe Oyster
 Didemnum spp., Carpet Tunicate

Dreissena polymorpha, Zebra Mussel
 Dreissena rostriformis bugensis, Quagga Mussel
 Eriocheir sinensis, Chinese Mitten Crab
 Hemigrapsus sanguineus, Asian Shore Crab
 Hemimysis anomala, Bloody Red Shrimp
 Orconectes rusticus, Rusty Crayfish
 Potamopyrgus antipodarum, New Zealand Mud Snail
 Rapana venosa, Veined Rapa Whelk
 Styela plicata, Asian Sea Squirt

Regulated:

Carcinus maenas, European Green Crab
 Daphnia lumholzi, Water Flea
 Hemigrapsus takanoi (H. penicillatus), Brush-clawed Shore Crab/ Grapsid Crab

TERRESTRIAL INVERTEBRATES**Prohibited:**

Achatina achatina, Giant Ghana Snail
 Achatina fulica (Lissachatina fulica), Giant African Land Snail
 Adelges tsugae, Hemlock Woolly Adelgid
 Agrilus planipennis, Emerald Ash Borer
 Amyntas spp., Asian Earthworms
 Anoplophora glabripennis, Asian Longhorn Beetle
 Apis mellifera scutellata x A. mellifera ligustica/ A. mellifera iberiensis, Africanized Honey Bee
 Archachatina marginata, Giant West African Snail
 Cryptococcus fagisuga, Beech Scale
 Lymantria dispar, Asian and European Gypsy Moth
 Monochamus alternatus, Japanese Pine Sawyer
 Pityophthorus juglandis, Walnut Twig Beetle
 Sirex noctilio, Sirex Woodwasp

TERRESTRIAL AND AQUATIC VERTEBRATES**Prohibited:**

Cygnus olor, Mute Swan
 Lepus europaeus, European Hare
 Myocastor coypus, Nutria
 Nyctereutes procyonoides, Asian Raccoon Dog
 Sus scrofa (excluding Sus scrofa domestica), Eurasian Boar

Regulated:

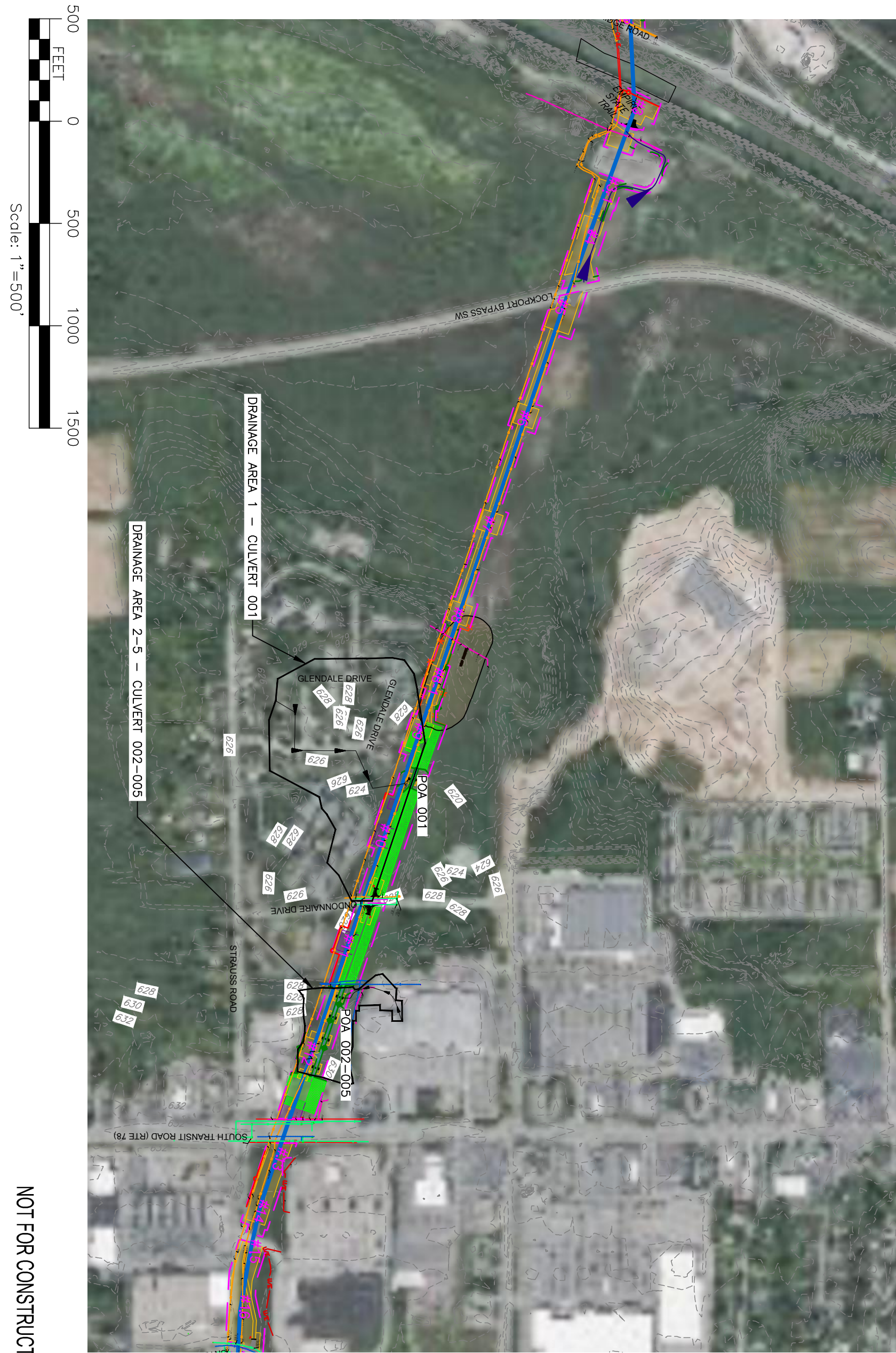
Alopochen aegyptiacus, Egyptian Goose
 Cairina moschata, Muscovy Duck
 Myiopsitta monachus, Monk Parakeet
 Oryctolagus cuniculus, European Rabbit
 Trachemys scripta elegans, Red-eared Slider
 Xenopus laevis, African Clawed Frog

FUNGI**Prohibited:**

Amylostereum areolatum, Sirex Wasp Fungus
Geomyces destructans, White-nose Syndrome
Geosmithia morbida, Thousand Canker Disease
Phytophthora ramorum, Sudden Oak Death

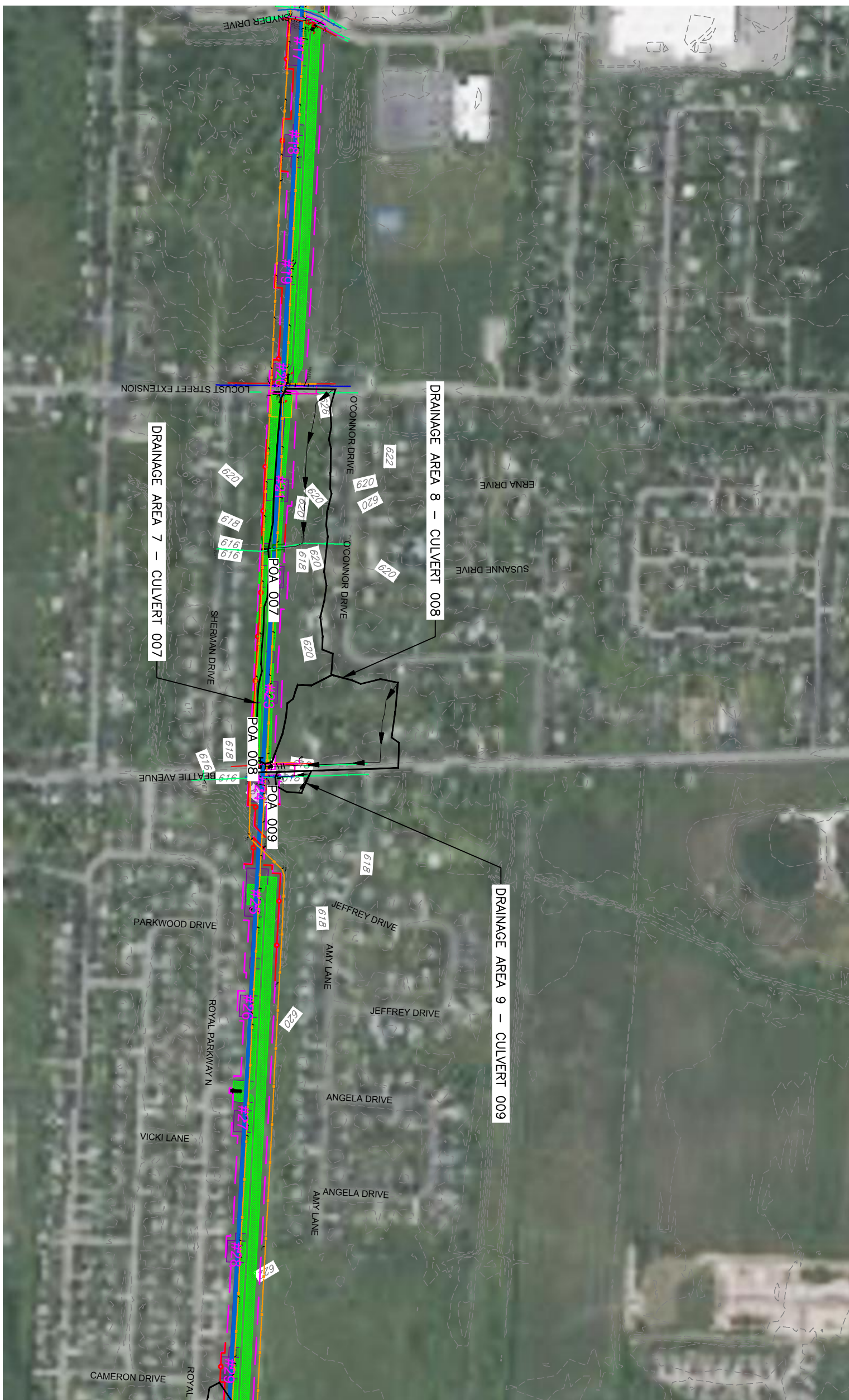
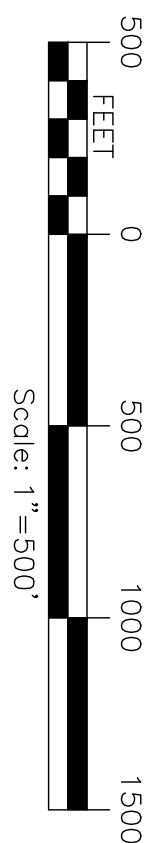
For the official regulations and species lists please
see: <http://www.dec.ny.gov/regulations/265.html>

Appendix Q
Hydraulic and Hydrology Calculations
for Proposed Culverts



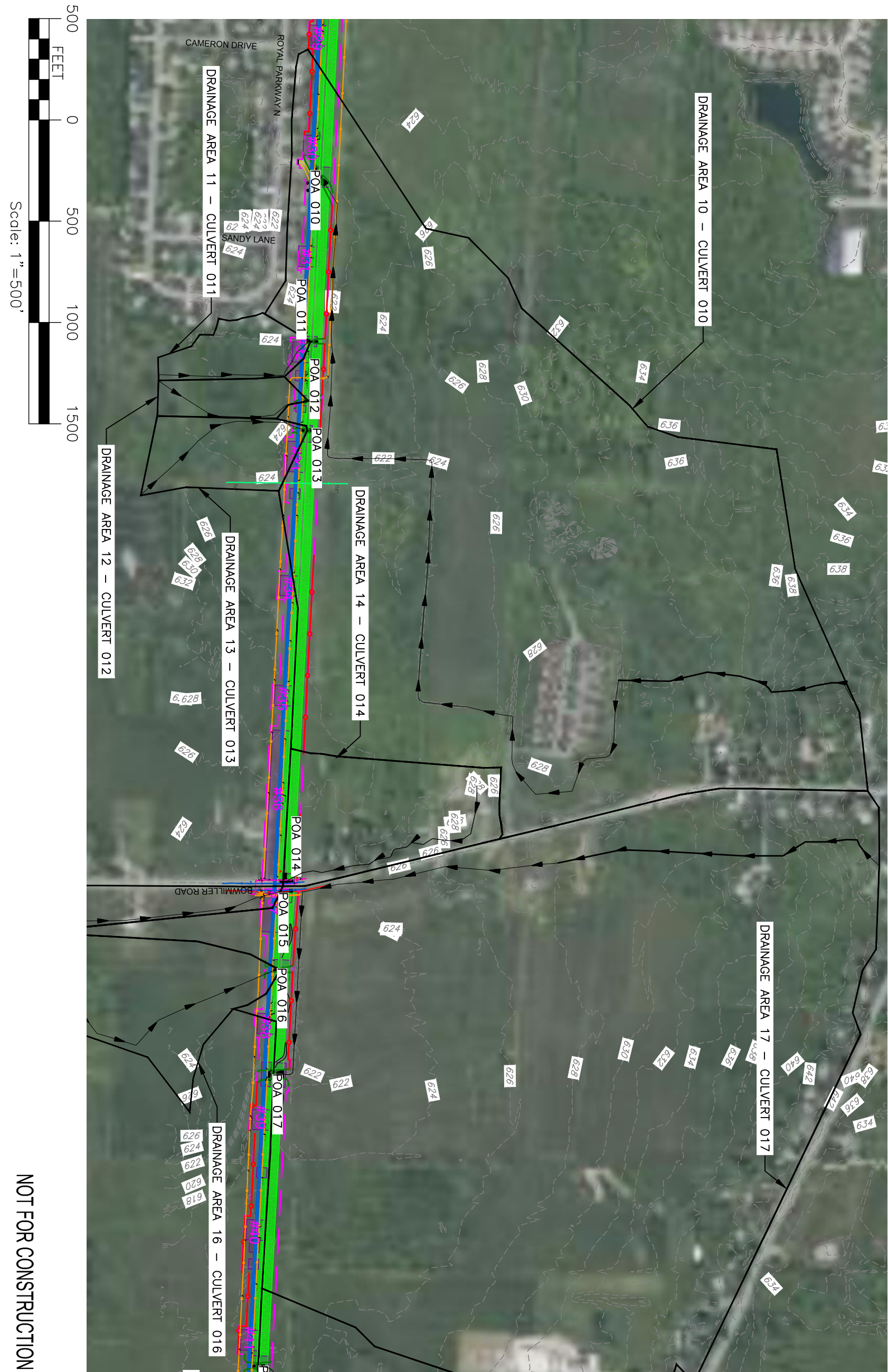
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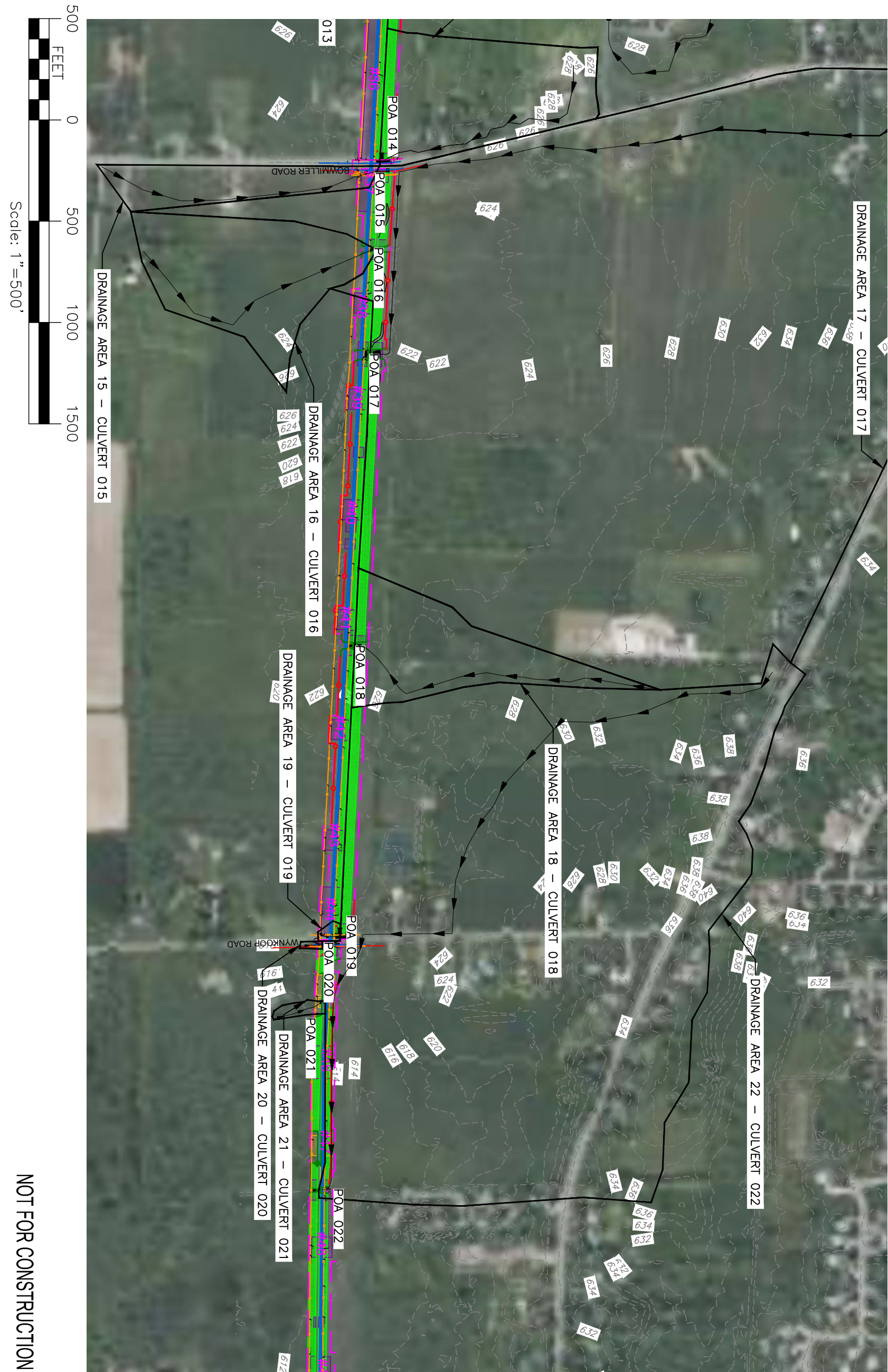
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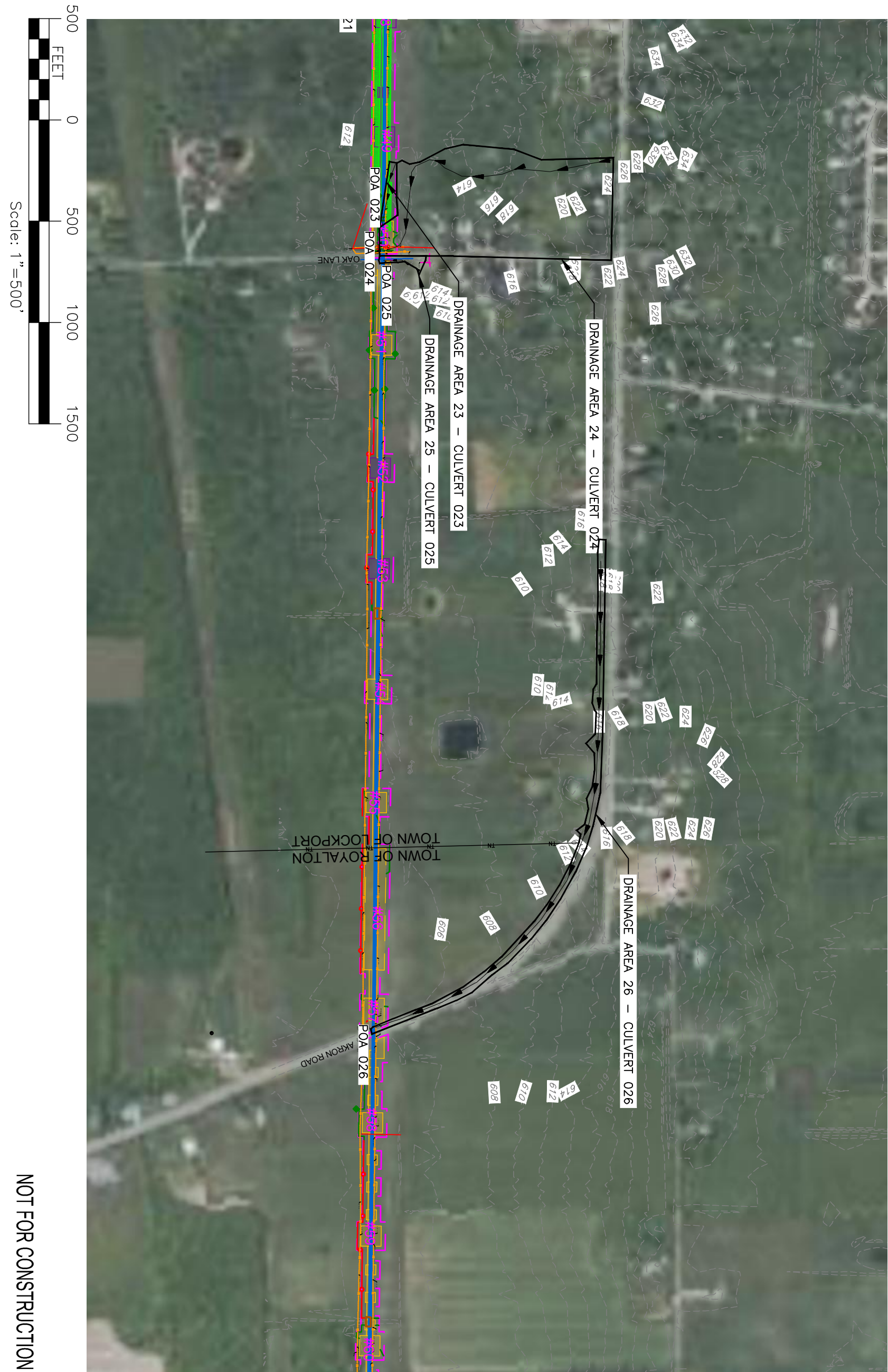
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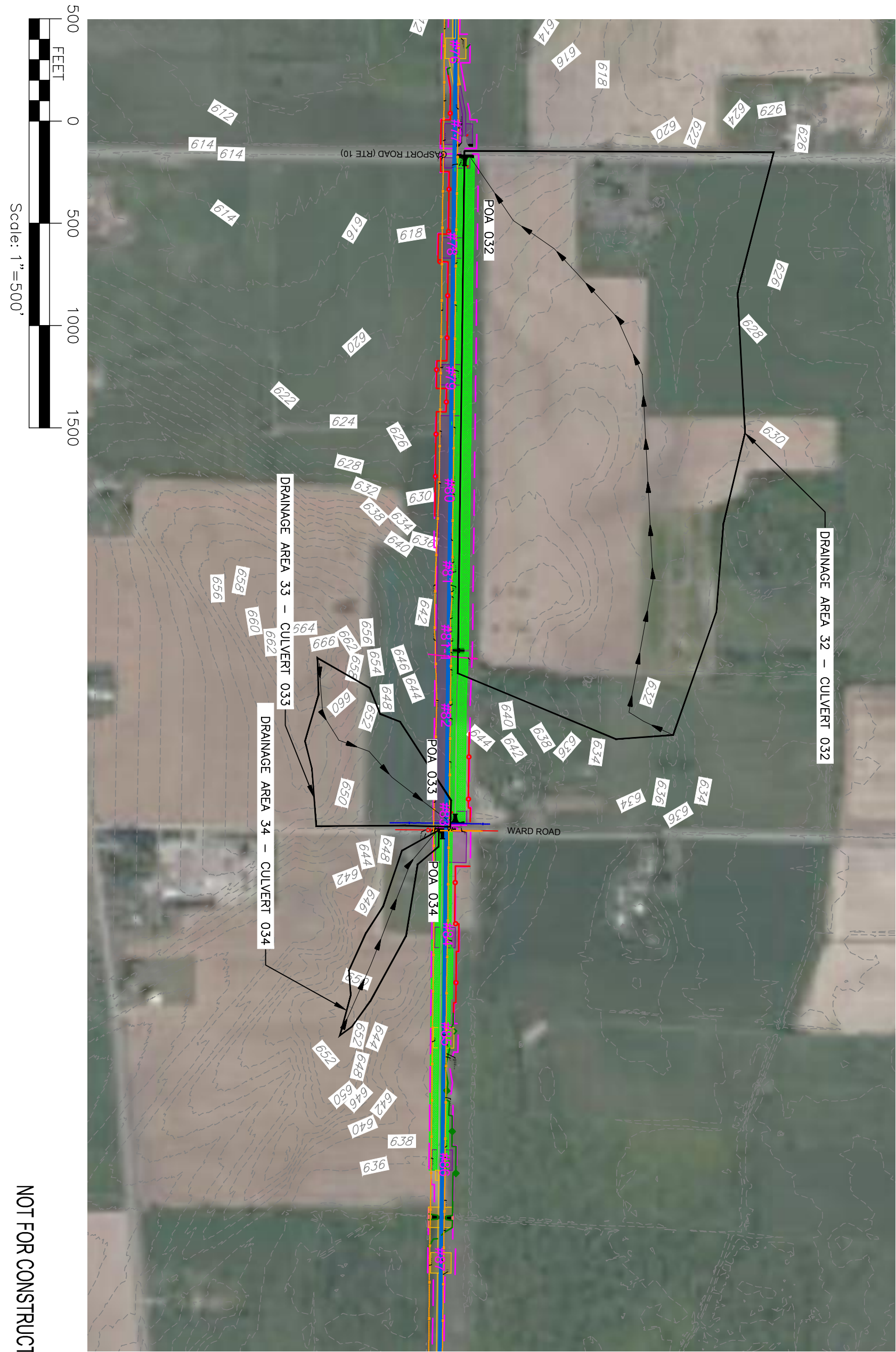
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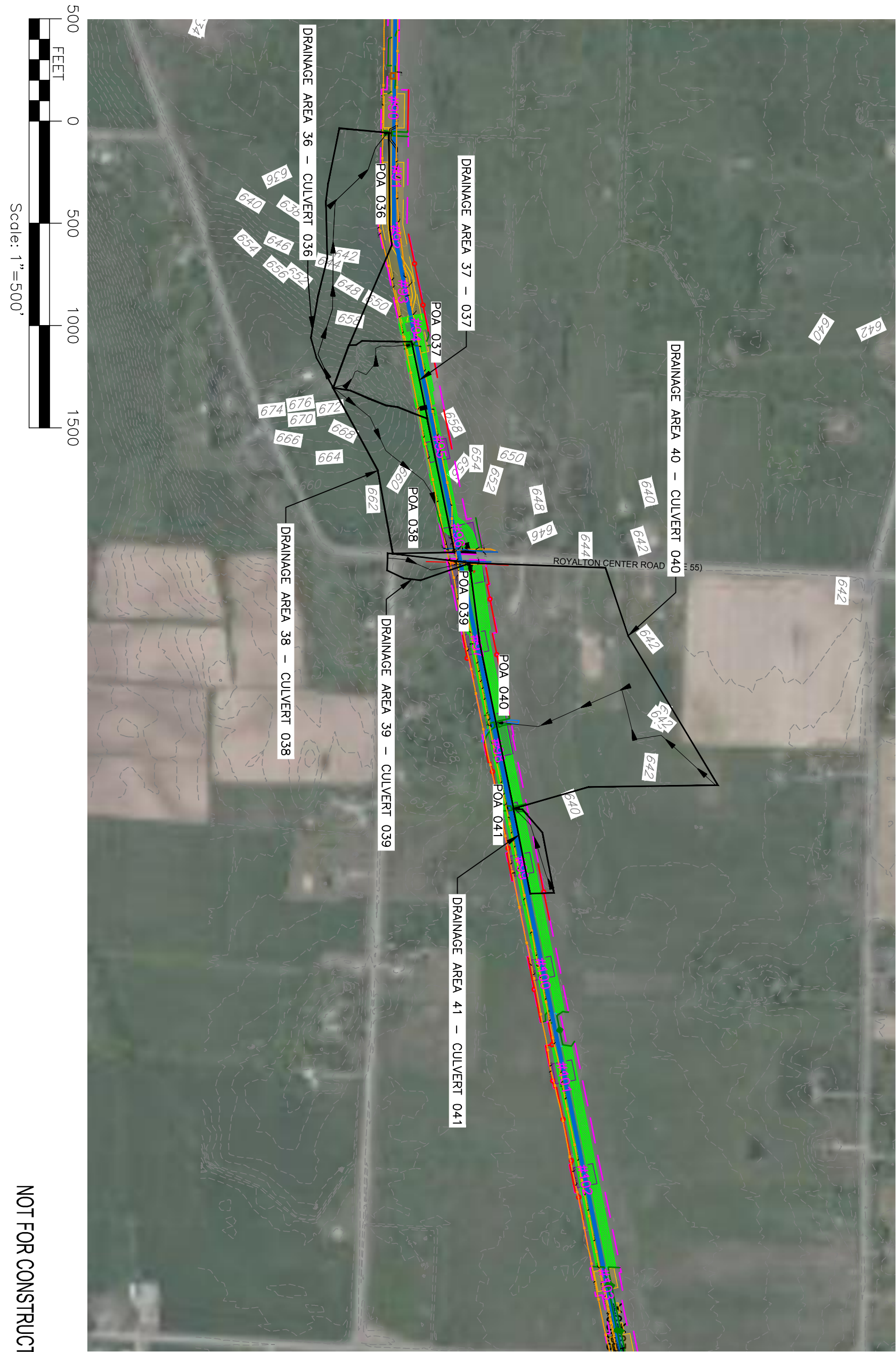
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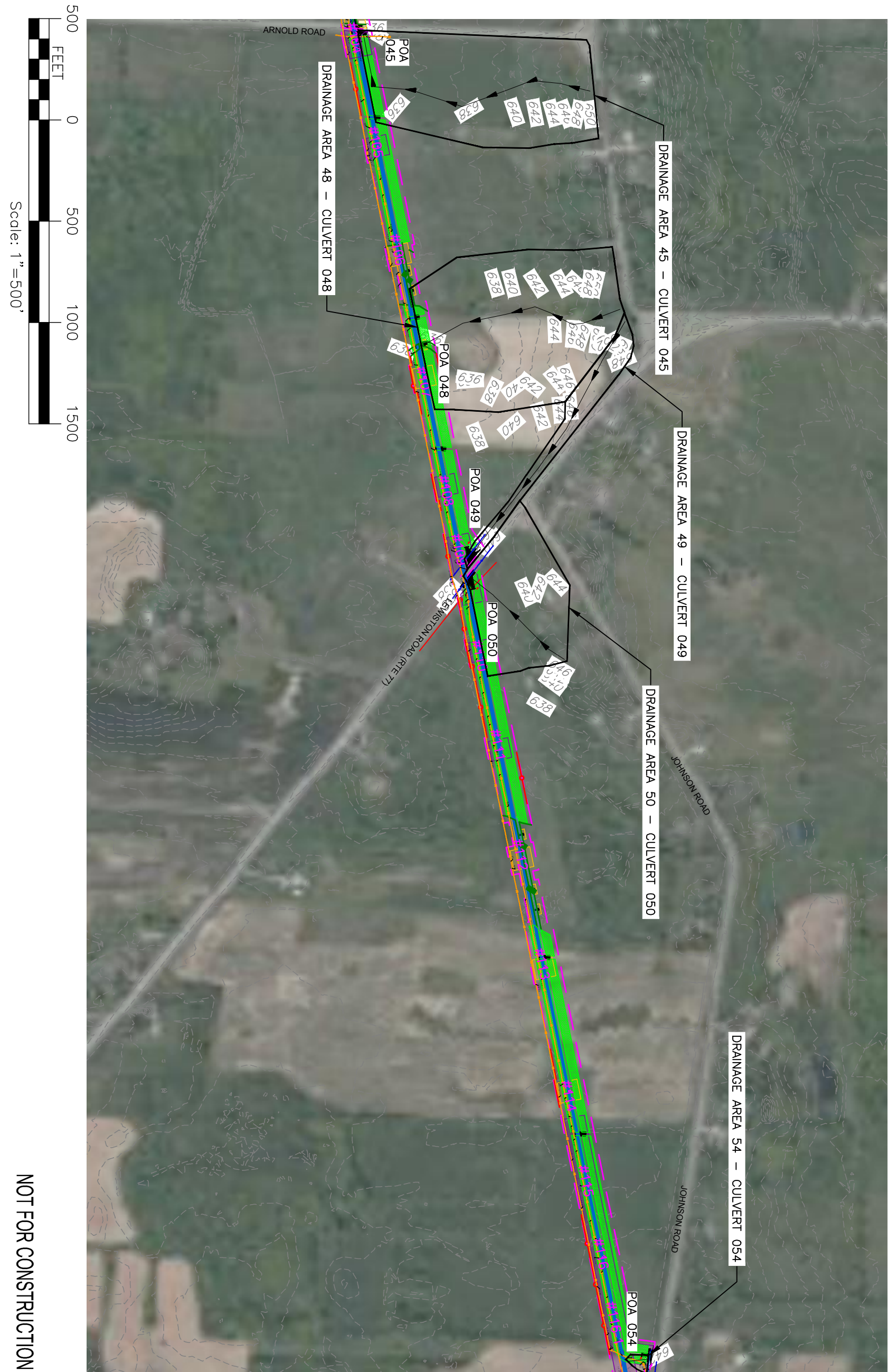
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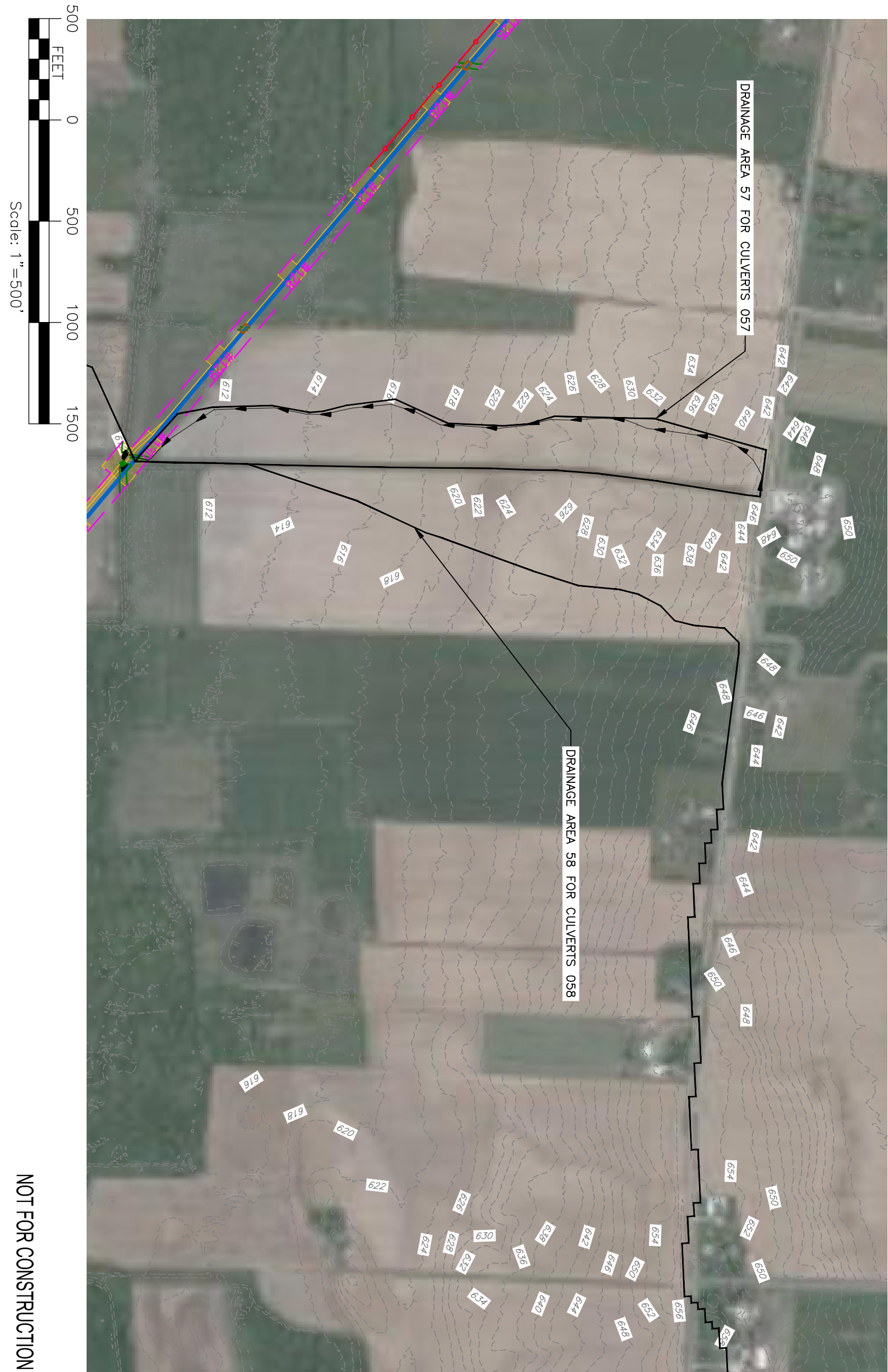
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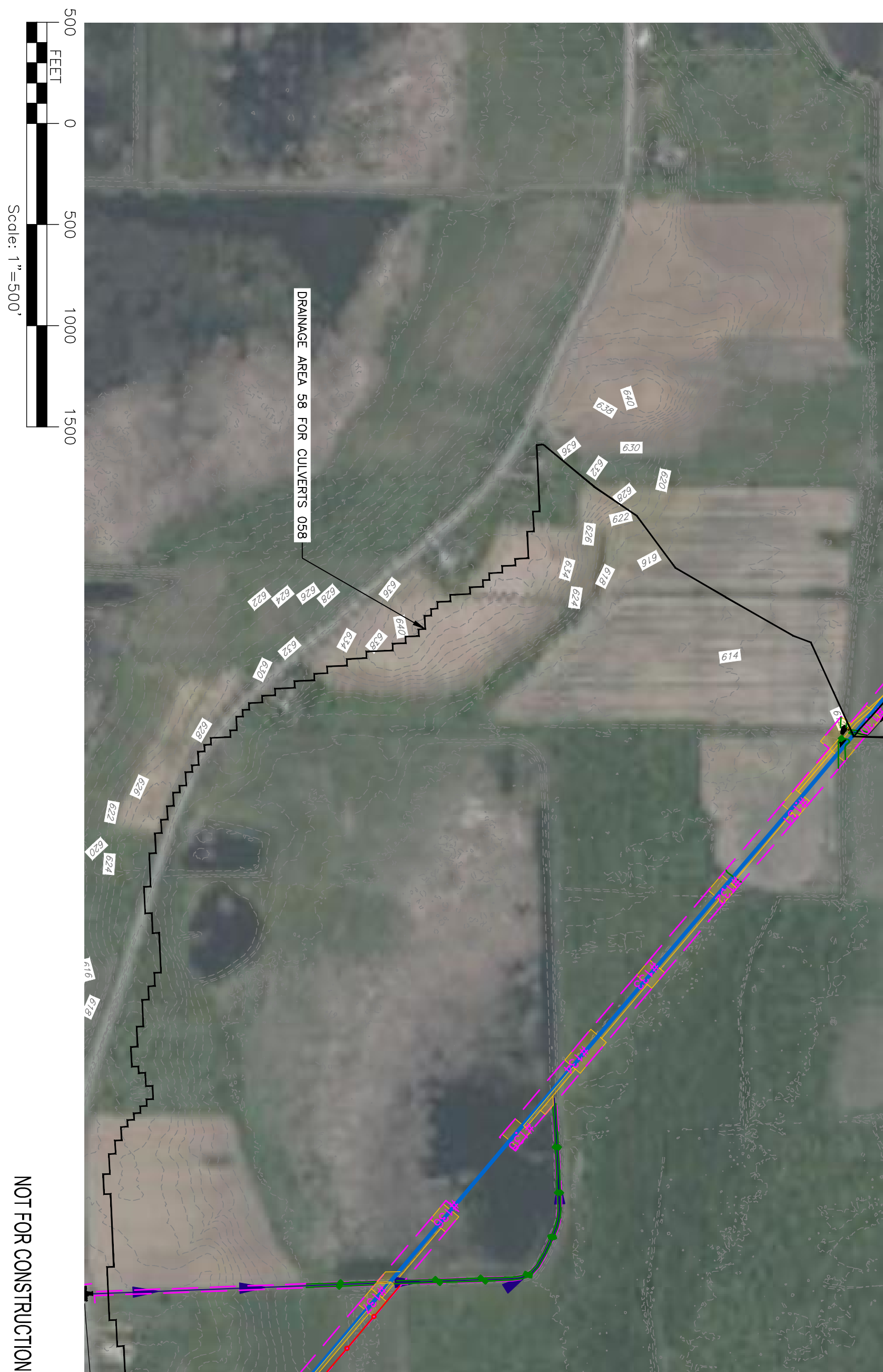


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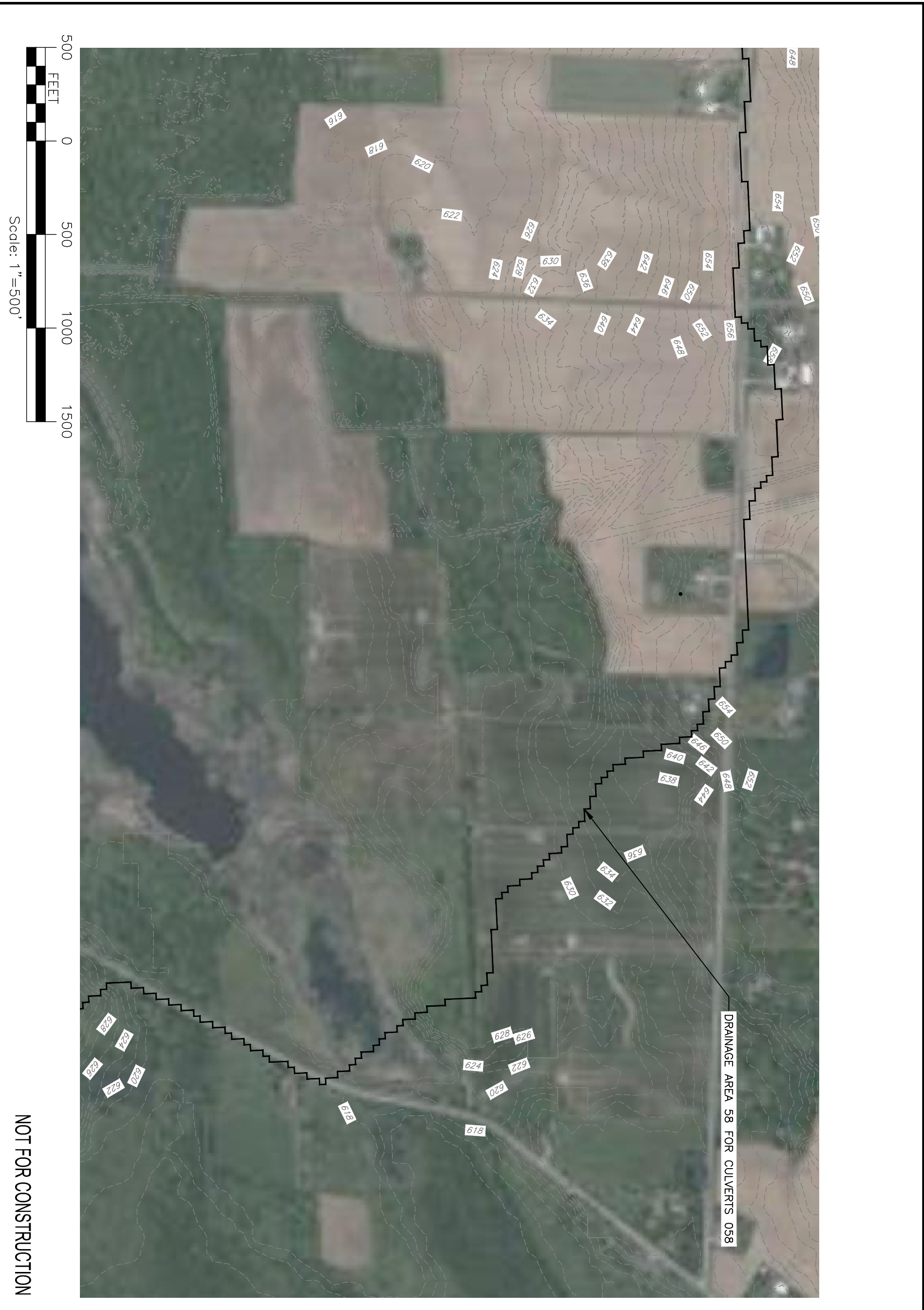
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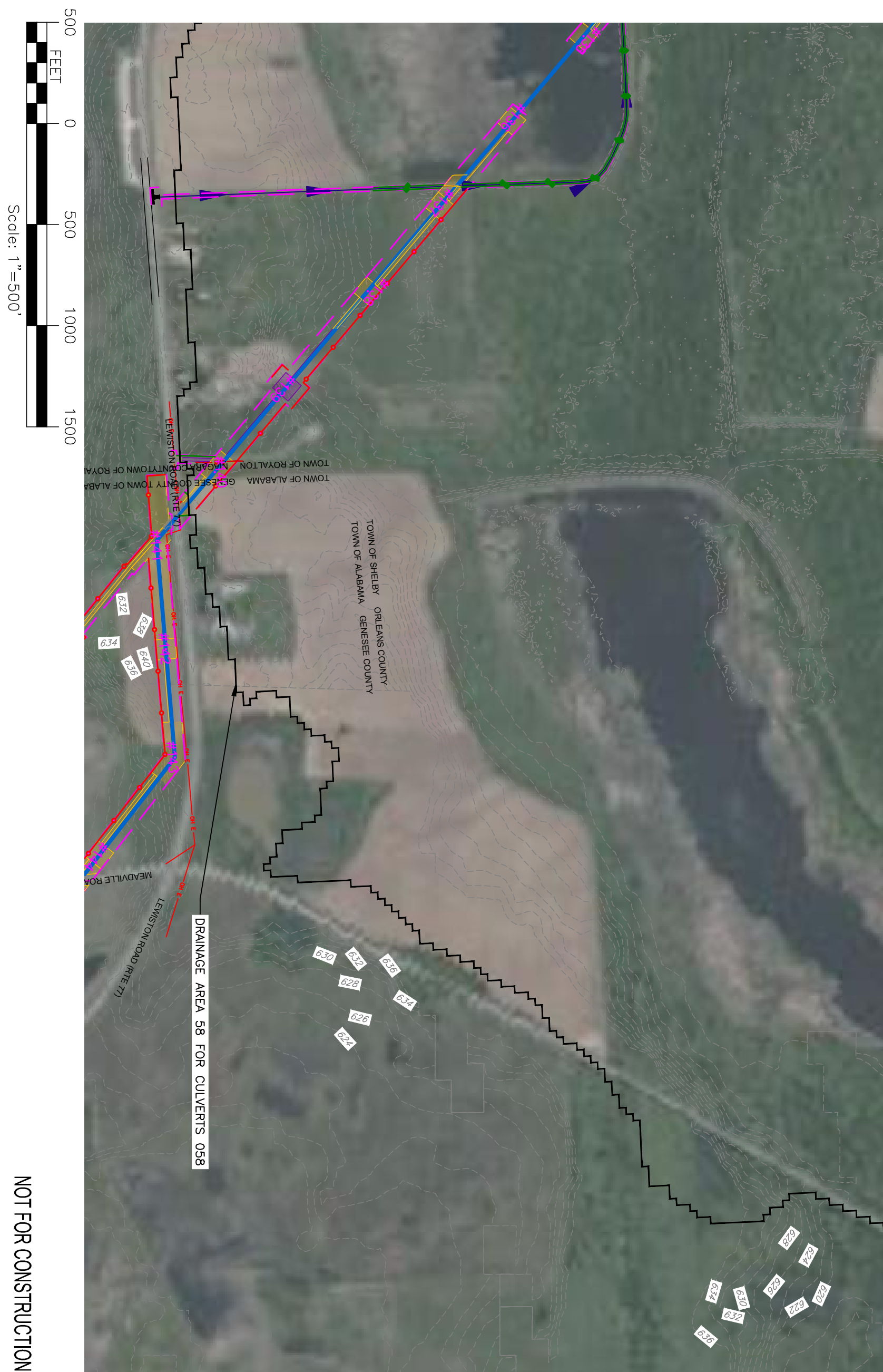
SHEET 10 OF 12

PROJECT LOCKPORT BATAVIA NEW YORK PROPOSED CULVERTS TOWN OF ROYALTON	FA PROJECT NO. 190176		ISSUE DATE 2025	COPYRIGHT © 2025 FISHER ASSOCIATES, P.E., L.S., L.A., D.P.C.
	PROJECT MANAGER T. LIBERTY		New York State Education Law Section 7209 states that it is violation of this law for any person, unless he/she is acting under the direction of a licensed professional engineer or land surveyor, to alter an item in any way.	
	DRAWN BY D. JIMENEZ	DRAWING CHK R. WIGHTMAN		
TITLE OF DRAWING CULVERT DRAINAGE MAPS	SCALE AS SHOWN	ENGINEER R. WIGHTMAN	If an item bearing the seal of an engineer or land surveyor is altered, the altering engineer or land surveyor shall affix to the item his/her seal and the notation "altered by" followed by his/her signature and the date of such alteration, and a specific description of the alteration.	

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DRAWING NO. CD-11 SHEET 11 OF 12	PROJECT LOCKPORT BATAVIA NEW YORK PROPOSED CULVERTS TOWN OF ROYALTON		FA PROJECT NO. 190176 PROJECT MANAGER T. LIBERTY	ISSUE DATE 2025	COPYRIGHT © 2025 FISHER ASSOCIATES, P.E., L.S., L.A., D.P.C. New York State Education Law Section 7209 states that it is a violation of this law for any person, unless he/she is acting under the direction of a licensed professional engineer or land surveyor, to alter an item in any way. If an item bearing the seal of an engineer or land surveyor is altered, the altering engineer or land surveyor shall affix to the item his/her seal and the notation "altered by" followed by his/her signature and the date of such alteration, and a specific description of the alteration.
	TITLE OF DRAWING CULVERT DRAINAGE MAPS		DRAWN BY D. JIMENEZ SCALE AS SHOWN	DRAWING CHK R. WIGHTMAN ENGINEER R. WIGHTMAN	



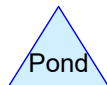
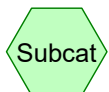
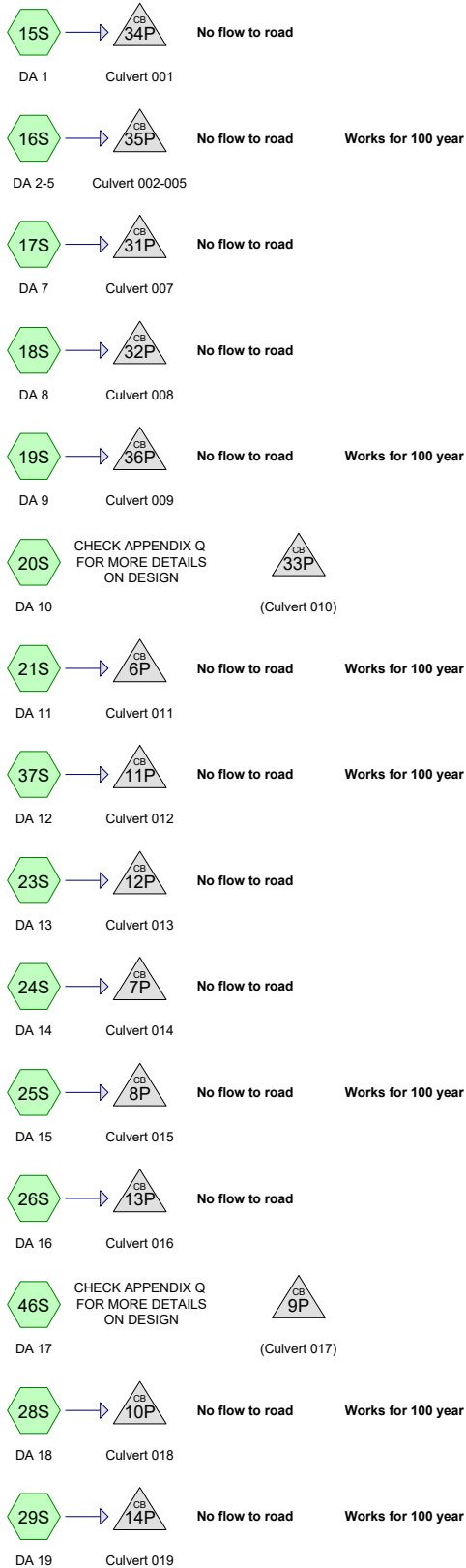
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CD-12

SHEET 12 OF 12

<u>PROJECT</u> LOCKPORT BATAVIA NEW YORK PROPOSED CULVERTS TOWNS OF ROYALTON, ALABAMA, & SHELBY	<u>FA PROJECT NO.</u> 190176 <u>PROJECT MANAGER</u> T. LIBERTY	<u>ISSUE DATE</u> 2025	COPYRIGHT © 2025 FISHER ASSOCIATES, P.E., L.S., L.A., D.P.C. New York State Education Law Section 7209 states that it is a violation of this law for any person, unless he/she is acting under the direction of a licensed professional engineer or land surveyor, to alter an item in any way.	
<u>TITLE OF DRAWING</u> CULVERT DRAINAGE MAPS	<u>DRAWN BY</u> D. JIMENEZ	<u>DRAWING CHK</u> R. WIGHTMAN	If an item bearing the seal of an engineer or land surveyor is altered, the altering engineer or land surveyor shall affix to the item his/her seal and the notation "altered by" followed by his/her signature and the date of such alteration, and a specific description of the alteration.	
	<u>SCALE</u> AS SHOWN	<u>ENGINEER</u> R. WIGHTMAN		

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Routing Diagram for DA 1-19

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DA 1-19

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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-yr	NY - Lockport Batavia 24-hr S1	1-yr	Default	24.00	1	1.87	2
2	10-yr	NY - Lockport Batavia 24-hr S1	10-yr	Default	24.00	1	3.24	2
3	100-yr	NY - Lockport Batavia 24-hr S1	100-yr	Default	24.00	1	4.88	2

DA 1-19

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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.064	30	A - 30 - Deciduous Forest (15S)
0.063	30	A - 30 - Meadowed, grass, non-grazed land (15S)
0.134	39	A - 39 - Developed open space (15S)
0.938	46	A - 46 - Developed Low intensity (15S)
0.065	54	A - 54 - Developed Med intensity (15S)
46.218	77	D - 77 - Deciduous Forest (15S, 20S, 23S, 24S, 26S, 28S, 46S)
0.978	77	D - 77 - Evergreen Forest (20S)
1.557	77	D - 77 - Mixed Forest (20S)
257.452	78	D - 78 - Meadowed, grass, non-grazed land (15S, 16S, 17S, 18S, 19S, 20S, 21S, 23S, 24S, 25S, 26S, 28S, 29S, 37S, 46S)
20.595	80	D - 80 - Developed open space (15S, 16S, 17S, 18S, 19S, 20S, 21S, 24S, 25S, 26S, 29S, 46S)
30.032	82	D - 82 - Developed Low intensity (15S, 16S, 17S, 18S, 19S, 20S, 21S, 24S, 25S, 46S)
4.406	85	D - 85 - Developed Med intensity (15S, 16S, 17S, 20S, 46S)
1.795	85	D - 85 - Grassland/Herbaceous (17S, 18S)
43.288	90	D - 90 - Woody Wetlands (20S, 21S, 23S, 37S)
0.441	93	D - 93 - Developed High intensity (16S)
0.152	98	D - 98 - Open Water (20S)
408.178	80	TOTAL AREA

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Pipe Listing (all nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)	Node Name
1	6P	623.90	623.70	33.4	0.0060	0.012	0.0	18.0	3.6	
2	7P	623.00	622.95	46.2	0.0011	0.012	0.0	24.0	3.6	
3	8P	623.20	622.90	46.2	0.0065	0.012	0.0	18.0	3.6	
4	9P	618.40	618.30	34.5	0.0029	0.012	0.0	198.0	39.6	
5	10P	623.45	622.45	38.0	0.0263	0.012	0.0	18.0	3.6	
6	11P	623.85	623.75	38.5	0.0026	0.012	0.0	18.0	3.6	
7	12P	623.90	623.55	38.5	0.0091	0.012	0.0	18.0	3.6	
8	13P	622.90	622.67	38.5	0.0060	0.012	0.0	18.0	3.6	
9	14P	619.10	618.40	46.2	0.0152	0.012	0.0	18.0	3.6	
10	31P	615.43	614.85	22.0	0.0264	0.012	0.0	24.0	4.8	
11	32P	615.35	615.00	47.0	0.0074	0.012	0.0	18.0	3.6	
12	33P	619.75	619.25	45.5	0.0110	0.012	0.0	126.0	25.2	
13	34P	621.70	621.05	34.0	0.0191	0.012	0.0	30.0	6.0	
14	35P	630.00	628.90	29.0	0.0379	0.012	0.0	18.0	3.6	
15	36P	616.00	615.75	46.2	0.0054	0.012	0.0	18.0	3.6	

DA 1-19*NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"*

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Time span=5.00-48.00 hrs, dt=0.05 hrs, 861 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment15S: DA 1	Runoff Area=13.622 ac 0.00% Impervious Runoff Depth=0.41" Flow Length=968' Tc=21.2 min CN=78 Runoff=3.95 cfs 0.469 af
Subcatchment16S: DA 2-5	Runoff Area=3.251 ac 0.00% Impervious Runoff Depth=0.61" Flow Length=403' Tc=8.5 min CN=83 Runoff=2.40 cfs 0.165 af
Subcatchment17S: DA 7	Runoff Area=9.445 ac 0.00% Impervious Runoff Depth=0.48" Flow Length=888' Tc=21.2 min CN=80 Runoff=3.44 cfs 0.382 af
Subcatchment18S: DA 8	Runoff Area=5.077 ac 0.00% Impervious Runoff Depth=0.52" Flow Length=924' Tc=30.2 min CN=81 Runoff=1.69 cfs 0.222 af
Subcatchment19S: DA 9	Runoff Area=0.301 ac 0.00% Impervious Runoff Depth=0.48" Flow Length=251' Tc=30.7 min CN=80 Runoff=0.09 cfs 0.012 af
Subcatchment20S: DA 10	Runoff Area=141.450 ac 0.11% Impervious Runoff Depth=0.52" Flow Length=6,066' Tc=181.5 min CN=81 Runoff=14.42 cfs 6.174 af
Subcatchment21S: DA 11	Runoff Area=3.830 ac 0.00% Impervious Runoff Depth=0.81" Flow Length=828' Tc=110.7 min CN=87 Runoff=0.95 cfs 0.257 af
Subcatchment23S: DA 13	Runoff Area=5.832 ac 0.00% Impervious Runoff Depth=0.65" Flow Length=938' Tc=54.7 min CN=84 Runoff=1.82 cfs 0.318 af
Subcatchment24S: DA 14	Runoff Area=12.438 ac 0.00% Impervious Runoff Depth=0.45" Flow Length=1,215' Tc=54.9 min CN=79 Runoff=2.40 cfs 0.465 af
Subcatchment25S: DA 15	Runoff Area=5.030 ac 0.00% Impervious Runoff Depth=0.48" Flow Length=1,411' Tc=78.0 min CN=80 Runoff=0.86 cfs 0.203 af
Subcatchment26S: DA 16	Runoff Area=12.541 ac 0.00% Impervious Runoff Depth=0.41" Flow Length=1,389' Tc=92.7 min CN=78 Runoff=1.54 cfs 0.432 af
Subcatchment28S: DA 18	Runoff Area=9.113 ac 0.00% Impervious Runoff Depth=0.41" Flow Length=1,597' Tc=97.5 min CN=78 Runoff=1.08 cfs 0.314 af
Subcatchment29S: DA 19	Runoff Area=0.196 ac 0.00% Impervious Runoff Depth=0.48" Flow Length=90' Slope=0.0111 '/' Tc=13.7 min CN=80 Runoff=0.09 cfs 0.008 af
Subcatchment37S: DA 12	Runoff Area=2.875 ac 0.00% Impervious Runoff Depth=0.86" Flow Length=788' Tc=134.3 min CN=88 Runoff=0.67 cfs 0.206 af
Subcatchment46S: DA 17	Runoff Area=183.177 ac 0.00% Impervious Runoff Depth=0.41" Flow Length=3,922' Tc=148.9 min CN=78 Runoff=16.19 cfs 6.309 af
Pond 6P: Culvert 011	Peak Elev=624.62' Inflow=0.95 cfs 0.257 af Outflow=0.95 cfs 0.257 af

DA 1-19*NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"*

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Pond 7P: Culvert 014	Peak Elev=624.05' Inflow=2.40 cfs 0.465 af Outflow=2.40 cfs 0.465 af
Pond 8P: Culvert 015	Peak Elev=623.90' Inflow=0.86 cfs 0.203 af Outflow=0.86 cfs 0.203 af
Pond 9P: (Culvert 017)	Peak Elev=0.00' Primary=0.00 cfs 0.000 af
Pond 10P: Culvert 018	Peak Elev=624.21' Inflow=1.08 cfs 0.314 af Outflow=1.08 cfs 0.314 af
Pond 11P: Culvert 012	Peak Elev=624.50' Inflow=0.67 cfs 0.206 af Outflow=0.67 cfs 0.206 af
Pond 12P: Culvert 013	Peak Elev=624.84' Inflow=1.82 cfs 0.318 af Outflow=1.82 cfs 0.318 af
Pond 13P: Culvert 016	Peak Elev=623.77' Inflow=1.54 cfs 0.432 af Outflow=1.54 cfs 0.432 af
Pond 14P: Culvert 019	Peak Elev=619.49' Inflow=0.09 cfs 0.008 af Outflow=0.09 cfs 0.008 af
Pond 31P: Culvert 007	Peak Elev=616.64' Inflow=3.44 cfs 0.382 af Outflow=3.44 cfs 0.382 af
Pond 32P: Culvert 008	Peak Elev=616.26' Inflow=1.69 cfs 0.222 af Outflow=1.69 cfs 0.222 af
Pond 33P: (Culvert 010)	Peak Elev=0.00' Primary=0.00 cfs 0.000 af
Pond 34P: Culvert 001	Peak Elev=622.97' Inflow=3.95 cfs 0.469 af Outflow=3.95 cfs 0.469 af
Pond 35P: Culvert 002-005	Peak Elev=630.61' Inflow=2.40 cfs 0.165 af Outflow=2.40 cfs 0.165 af
Pond 36P: Culvert 009	Peak Elev=616.39' Inflow=0.09 cfs 0.012 af Outflow=0.09 cfs 0.012 af

Total Runoff Area = 408.178 ac Runoff Volume = 15.935 af Average Runoff Depth = 0.47"
99.96% Pervious = 408.026 ac 0.04% Impervious = 0.152 ac

DA 1-19

NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

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Summary for Subcatchment 15S: DA 1

Runoff = 3.95 cfs @ 12.29 hrs, Volume= 0.469 af, Depth= 0.41"
 Routed to Pond 34P : Culvert 001

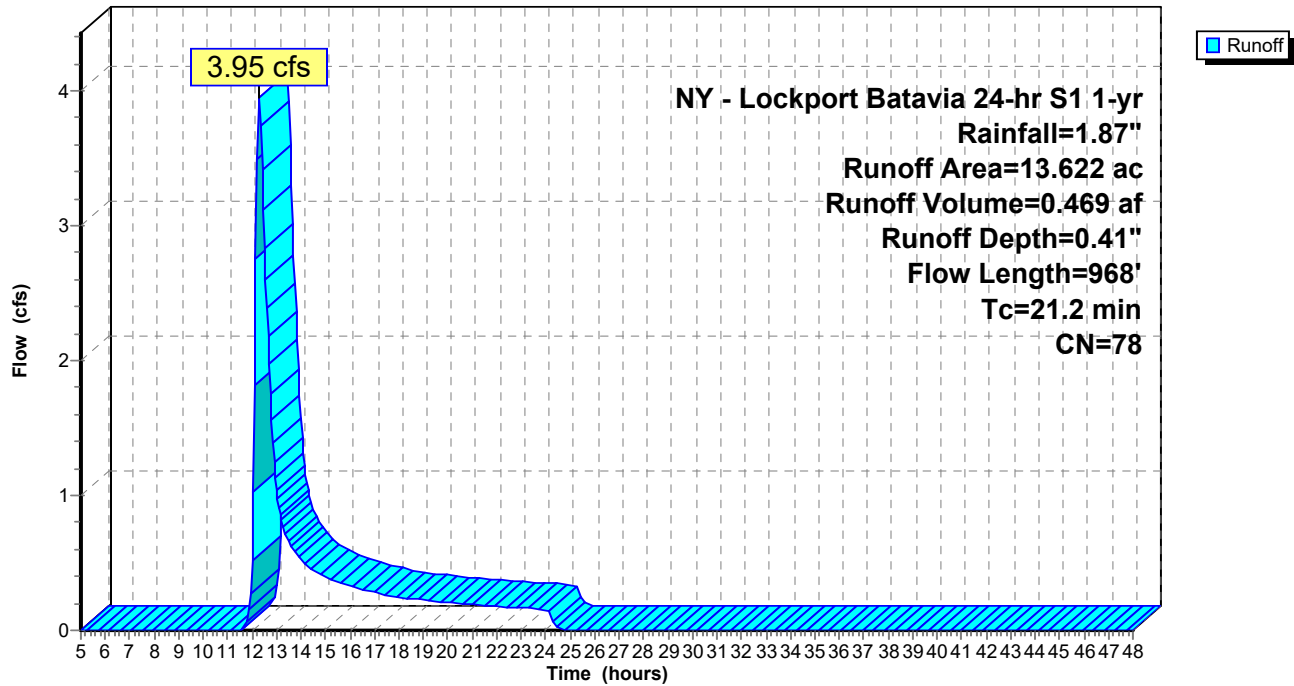
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

Area (ac)	CN	Description
* 0.134	39	A - 39 - Developed open space
* 0.938	46	A - 46 - Developed Low intensity
* 0.065	54	A - 54 - Developed Med intensity
* 0.064	30	A - 30 - Deciduous Forest
* 0.063	30	A - 30 - Meadowed, grass, non-grazed land
* 0.293	80	D - 80 - Developed open space
* 1.950	82	D - 82 - Developed Low intensity
* 0.320	85	D - 85 - Developed Med intensity
* 0.105	77	D - 77 - Deciduous Forest
* 0.497	78	D - 78 - Meadowed, grass, non-grazed land
* 1.157	80	D - 80 - Developed open space
* 4.870	82	D - 82 - Developed Low intensity
* 0.999	85	D - 85 - Developed Med intensity
* 2.167	78	D - 78 - Meadowed, grass, non-grazed land
13.622	78	Weighted Average
13.622		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0125	0.95		Sheet Flow, 100' Sheet Smooth surfaces n= 0.011 P2= 2.21"
4.1	180	0.0013	0.73		Shallow Concentrated Flow, Paved Kv= 20.3 fps
4.3	300	0.0033	1.17		Shallow Concentrated Flow, Paved Kv= 20.3 fps
6.7	200	0.0050	0.49		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
4.3	188	0.0106	0.72		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
21.2	968	Total			

Subcatchment 15S: DA 1

Hydrograph



DA 1-19

NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

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Summary for Subcatchment 16S: DA 2-5

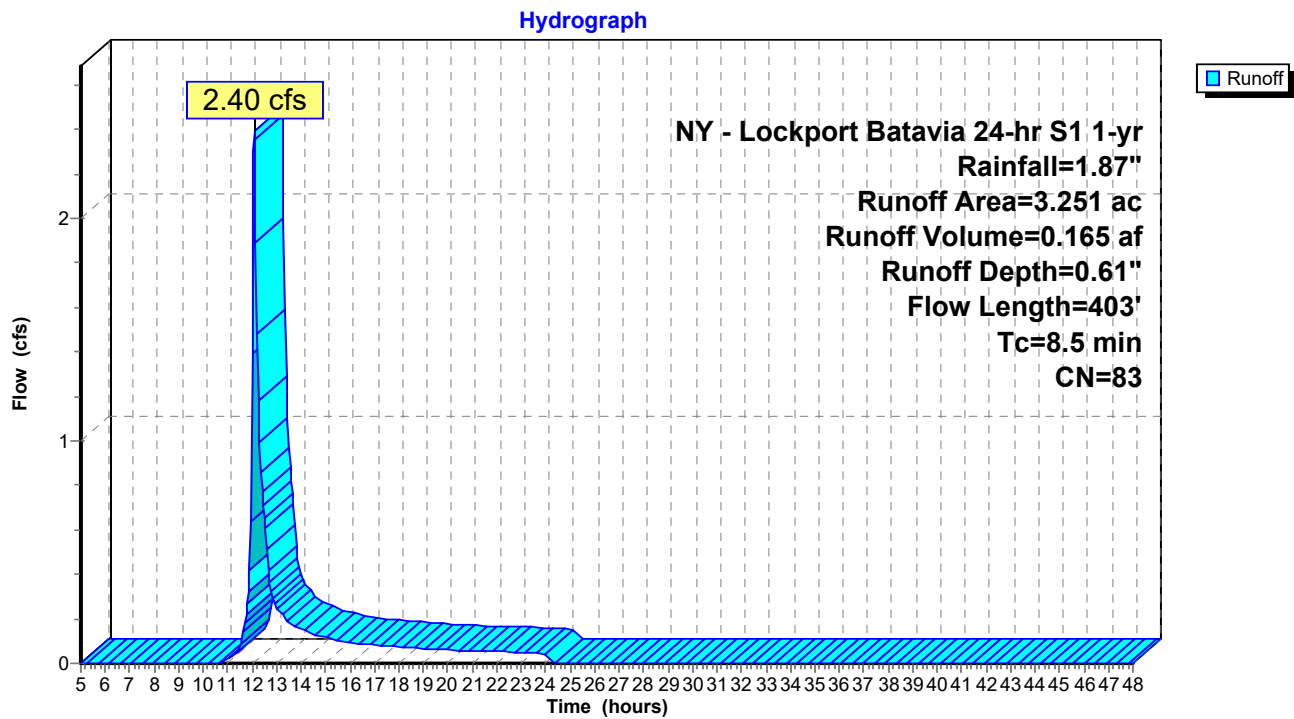
Runoff = 2.40 cfs @ 12.08 hrs, Volume= 0.165 af, Depth= 0.61"
 Routed to Pond 35P : Culvert 002-005

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

Area (ac)	CN	Description
* 0.854	80	D - 80 - Developed open space
* 0.145	82	D - 82 - Developed Low intensity
* 0.111	85	D - 85 - Developed Med intensity
* 0.124	80	D - 80 - Developed open space
* 0.018	82	D - 82 - Developed Low intensity
* 0.270	85	D - 85 - Developed Med intensity
* 0.894	80	D - 80 - Developed open space
* 0.077	82	D - 82 - Developed Low intensity
* 0.315	85	D - 85 - Developed Med intensity
* 0.441	93	D - 93 - Developed High intensity
* 0.002	78	D - 78 - Meadowed, grass, non-grazed land
3.251	83	Weighted Average
3.251		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0325	1.39		Sheet Flow, 100' Smooth surfaces n= 0.011 P2= 2.21"
0.3	49	0.0255	3.24		Shallow Concentrated Flow, Paved Kv= 20.3 fps
1.6	123	0.0041	1.30		Shallow Concentrated Flow, Paved Kv= 20.3 fps
4.2	91	0.0027	0.36		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
1.2	40	0.0063	0.56		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
8.5	403	Total			

Subcatchment 16S: DA 2-5



DA 1-19

NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

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Summary for Subcatchment 17S: DA 7

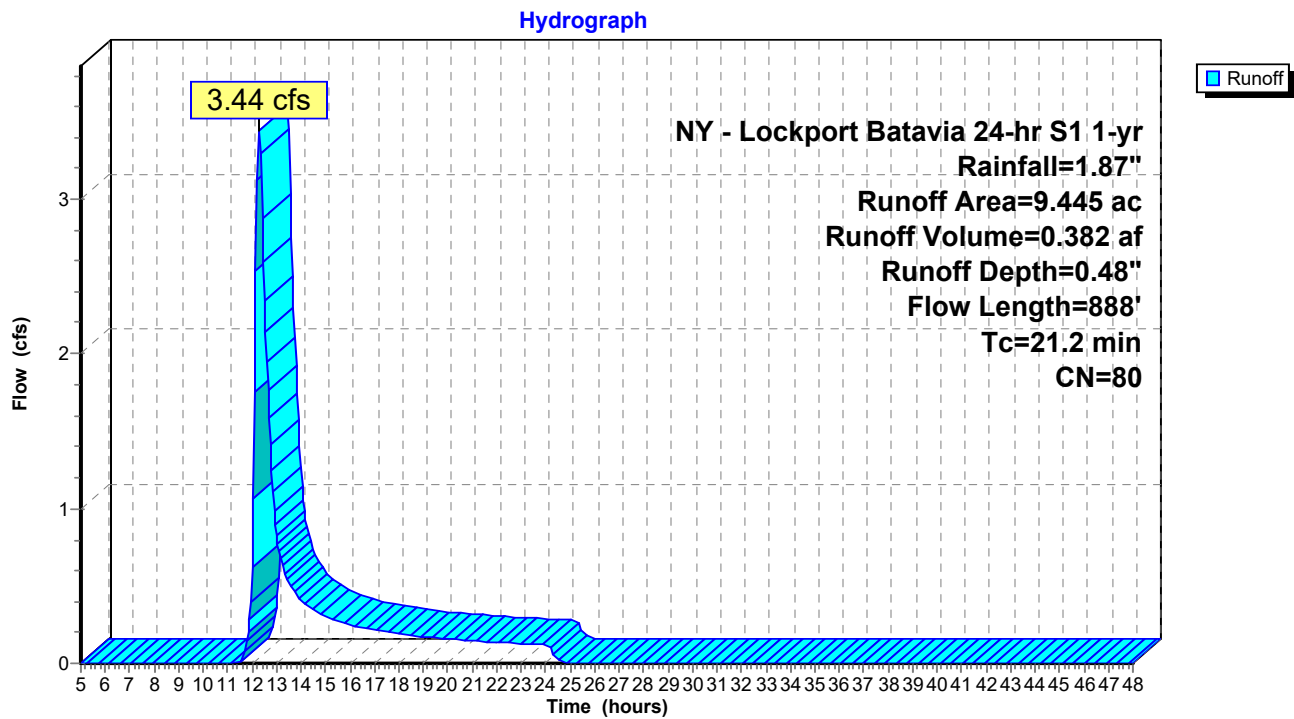
Runoff = 3.44 cfs @ 12.27 hrs, Volume= 0.382 af, Depth= 0.48"
 Routed to Pond 31P : Culvert 007

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

Area (ac)	CN	Description
* 0.134	80	D - 80 - Developed open space
* 0.231	82	D - 82 - Developed Low intensity
* 0.882	78	D - 78 - Meadowed, grass, non-grazed land
* 0.569	80	D - 80 - Developed open space
* 0.868	82	D - 82 - Developed Low intensity
* 0.054	85	D - 85 - Developed Med intensity
* 1.190	85	D - 85 - Grassland/Herbaceous
* 4.820	78	D - 78 - Meadowed, grass, non-grazed land
* 0.187	80	D - 80 - Developed open space
* 0.013	82	D - 82 - Developed Low intensity
* 0.497	78	D - 78 - Meadowed, grass, non-grazed land
9.445	80	Weighted Average
9.445		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0350	0.18		Sheet Flow, 100' Sheet Grass: Short n= 0.150 P2= 2.21"
4.6	202	0.0111	0.74		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
4.4	445	0.0126	1.68		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
2.8	141	0.0142	0.83		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
21.2	888	Total			

Subcatchment 17S: DA 7



DA 1-19

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Summary for Subcatchment 18S: DA 8

Runoff = 1.69 cfs @ 12.41 hrs, Volume= 0.222 af, Depth= 0.52"
Routed to Pond 32P : Culvert 008

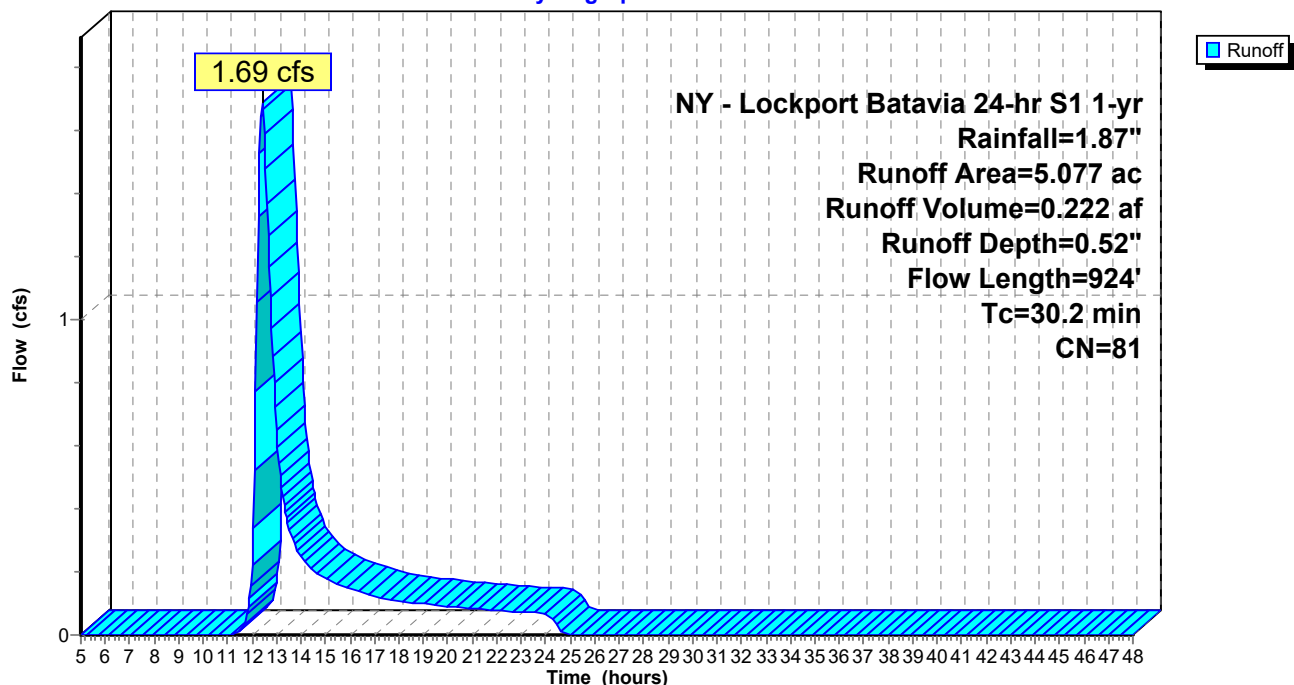
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

Area (ac)	CN	Description
* 2.612	80	D - 80 - Developed open space
* 1.184	82	D - 82 - Developed Low intensity
* 0.605	85	D - 85 - Grassland/Herbaceous
* 0.676	78	D - 78 - Meadowed, grass, non-grazed land
5.077	81	Weighted Average
5.077		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.5	100	0.0173	0.13		Sheet Flow, Grass: Short n= 0.150 P2= 2.21"
8.1	290	0.0073	0.60		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
9.6	534	0.0038	0.92		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
30.2	924	Total			

Subcatchment 18S: DA 8

Hydrograph



DA 1-19

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NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

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Summary for Subcatchment 19S: DA 9

Runoff = 0.09 cfs @ 12.42 hrs, Volume= 0.012 af, Depth= 0.48"
Routed to Pond 36P : Culvert 009

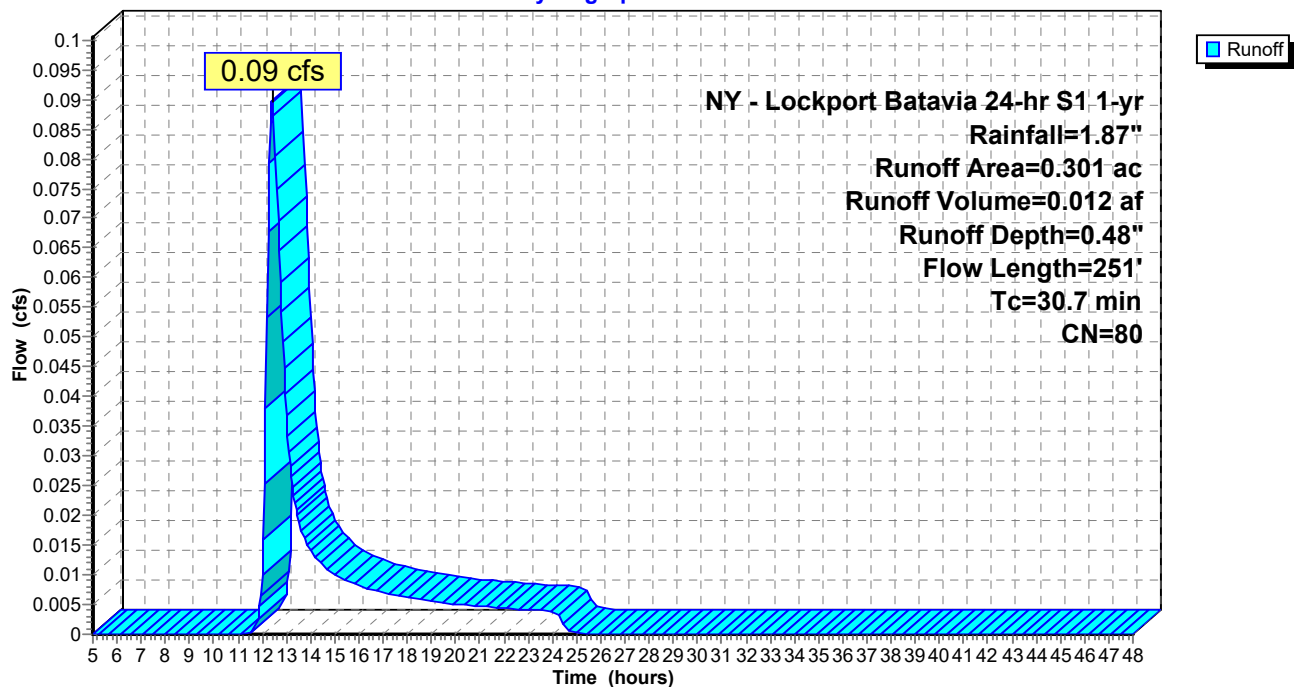
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

Area (ac)	CN	Description
* 0.024	80	D - 80 - Developed open space
* 0.155	82	D - 82 - Developed Low intensity
* 0.122	78	D - 78 - Meadowed, grass, non-grazed land
0.301	80	Weighted Average
0.301		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.1	100	0.0025	0.06		Sheet Flow, 100' Sheet Grass: Short n= 0.150 P2= 2.21"
3.6	151	0.0099	0.70		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
30.7	251	Total			

Subcatchment 19S: DA 9

Hydrograph



DA 1-19

NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

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Summary for Subcatchment 20S: DA 10

Runoff = 14.42 cfs @ 14.55 hrs, Volume= 6.174 af, Depth= 0.52"

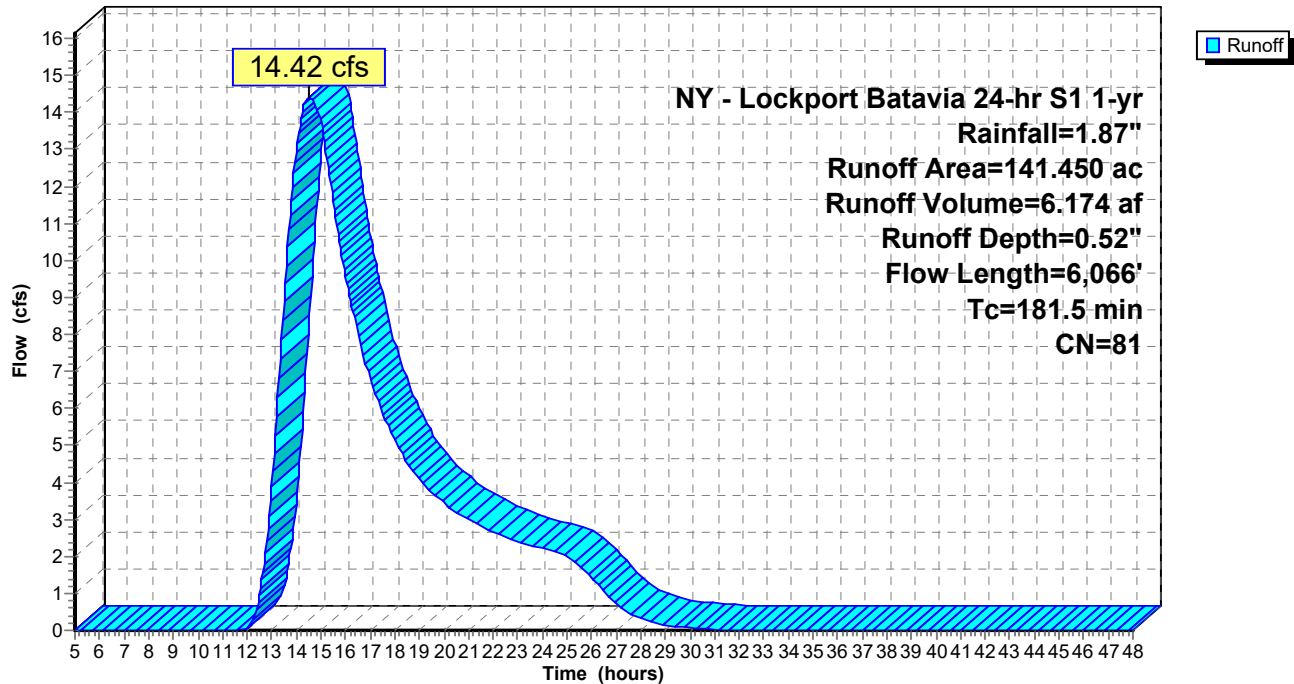
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

Area (ac)	CN	Description
* 0.152	98	D - 98 - Open Water
* 0.074	80	D - 80 - Developed open space
* 0.307	80	D - 80 - Developed open space
* 2.363	80	D - 80 - Developed open space
* 1.992	82	D - 82 - Developed Low intensity
* 1.726	82	D - 82 - Developed Low intensity
* 2.185	85	D - 85 - Developed Med intensity
* 0.875	77	D - 77 - Deciduous Forest
* 18.239	77	D - 77 - Deciduous Forest
* 13.242	77	D - 77 - Deciduous Forest
* 0.038	77	D - 77 - Evergreen Forest
* 0.919	77	D - 77 - Evergreen Forest
* 0.021	77	D - 77 - Evergreen Forest
* 0.508	77	D - 77 - Mixed Forest
* 0.889	77	D - 77 - Mixed Forest
* 0.160	77	D - 77 - Mixed Forest
* 4.266	78	D - 78 - Meadowed, grass, non-grazed land
* 29.357	78	D - 78 - Meadowed, grass, non-grazed land
* 22.896	78	D - 78 - Meadowed, grass, non-grazed land
* 0.112	78	D - 78 - Meadowed, grass, non-grazed land
* 5.915	78	D - 78 - Meadowed, grass, non-grazed land
* 5.016	90	D - 90 - Woody Wetlands
* 30.198	90	D - 90 - Woody Wetlands
141.450	81	Weighted Average
141.298		99.89% Pervious Area
0.152		0.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.7	100	0.0275	0.07		Sheet Flow, 100' Sheet Woods: Light underbrush n= 0.400 P2= 2.21"
31.2	1,144	0.0149	0.61		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
14.6	670	0.0026	0.76		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
12.9	328	0.0008	0.42		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
100.1	3,824	0.0018	0.64		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
181.5	6,066	Total			

Subcatchment 20S: DA 10

Hydrograph



DA 1-19

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NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

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Summary for Subcatchment 21S: DA 11

Runoff = 0.95 cfs @ 13.44 hrs, Volume= 0.257 af, Depth= 0.81"
Routed to Pond 6P : Culvert 011

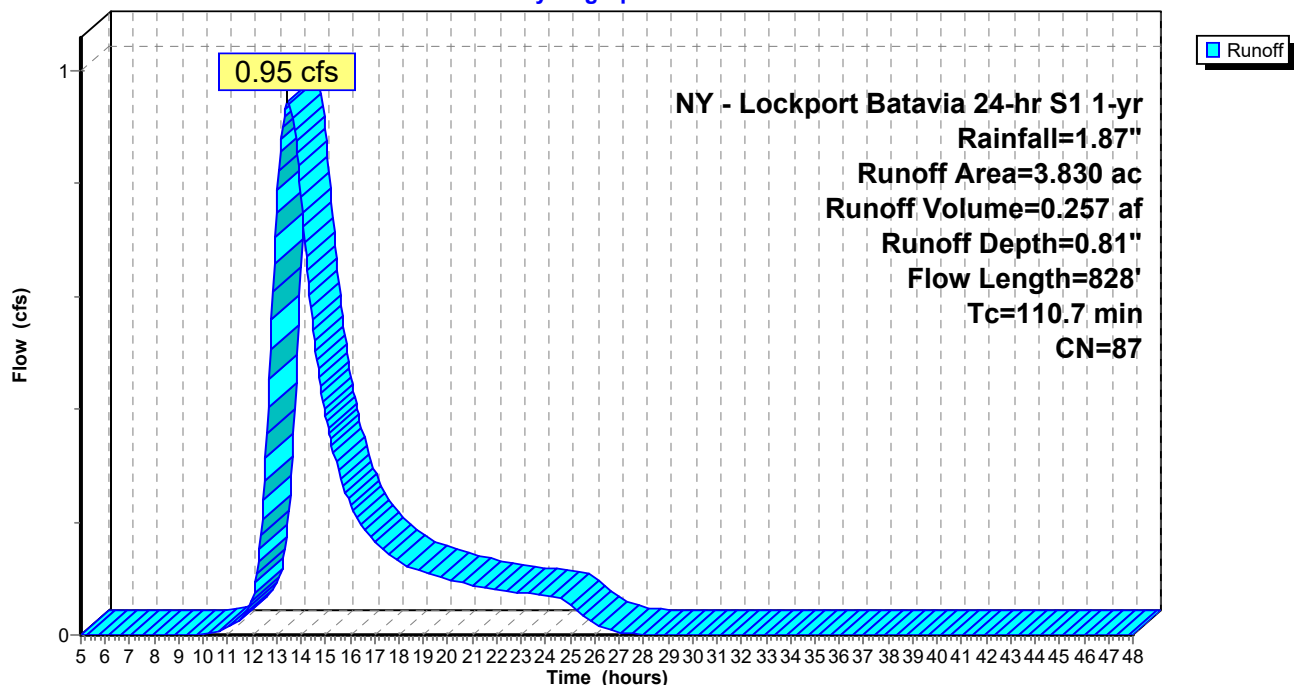
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

Area (ac)	CN	Description
* 0.183	80	D - 80 - Developed open space
* 0.651	82	D - 82 - Developed Low intensity
* 0.305	78	D - 78 - Meadowed, grass, non-grazed land
* 2.691	90	D - 90 - Woody Wetlands
3.830	87	Weighted Average
3.830		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.1	100	0.0425	0.09		Sheet Flow, 100' Sheet Woods: Light underbrush n= 0.400 P2= 2.21"
77.1	517	0.0005	0.11		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
14.5	211	0.0012	0.24		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
110.7	828	Total			

Subcatchment 21S: DA 11

Hydrograph



DA 1-19

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Summary for Subcatchment 23S: DA 13

Runoff = 1.82 cfs @ 12.75 hrs, Volume= 0.318 af, Depth= 0.65"
 Routed to Pond 12P : Culvert 013

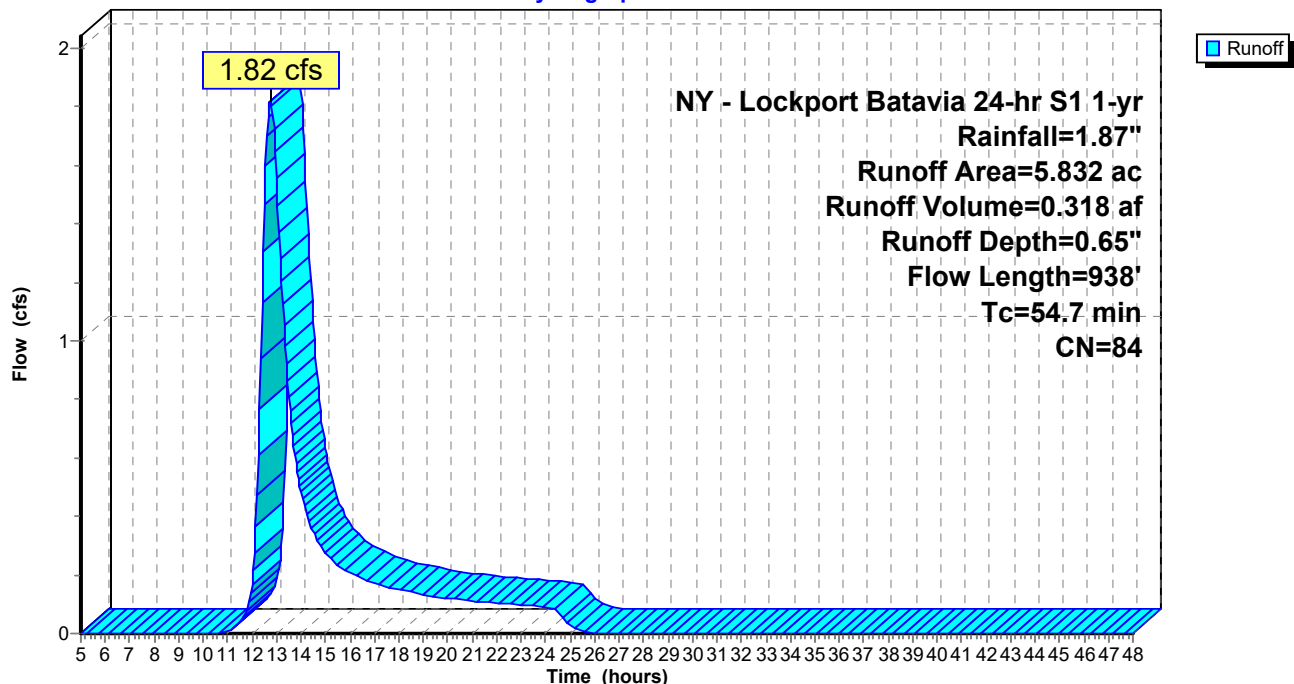
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

Area (ac)	CN	Description
* 0.222	77	D - 77 - Deciduous Forest
* 1.173	78	D - 78 - Meadowed, grass, non-grazed land
* 1.200	78	D - 78 - Meadowed, grass, non-grazed land
* 0.112	78	D - 78 - Meadowed, grass, non-grazed land
* 0.115	78	D - 78 - Meadowed, grass, non-grazed land
* 0.123	90	D - 90 - Woody Wetlands
* 2.887	90	D - 90 - Woody Wetlands
5.832	84	Weighted Average
5.832		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	100	0.0300	0.17		Sheet Flow, 100' Sheet Grass: Short n= 0.150 P2= 2.21"
44.7	838	0.0039	0.31		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
54.7	938	Total			

Subcatchment 23S: DA 13

Hydrograph



DA 1-19

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NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

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Summary for Subcatchment 24S: DA 14

Runoff = 2.40 cfs @ 12.80 hrs, Volume= 0.465 af, Depth= 0.45"
 Routed to Pond 7P : Culvert 014

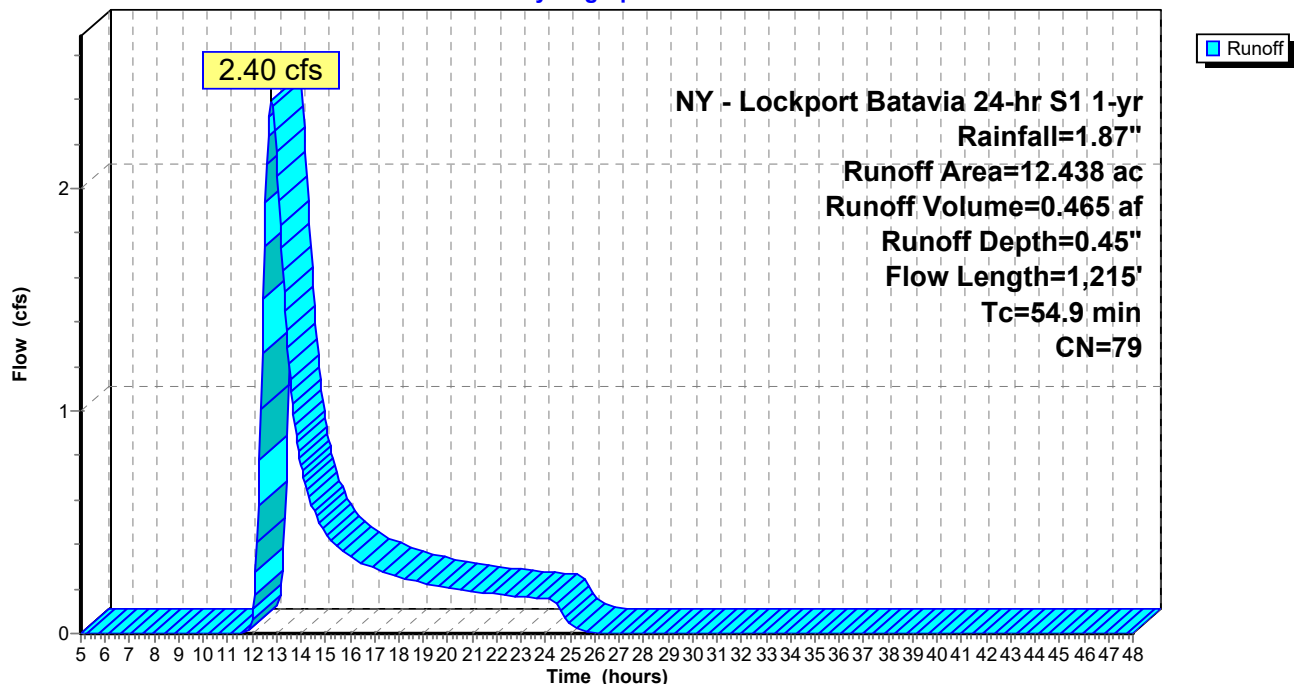
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

Area (ac)	CN	Description
* 0.143	80	D - 80 - Developed open space
* 0.461	80	D - 80 - Developed open space
* 1.014	82	D - 82 - Developed Low intensity
* 1.218	82	D - 82 - Developed Low intensity
* 0.081	77	D - 77 - Deciduous Forest
* 7.367	78	D - 78 - Meadowed, grass, non-grazed land
* 2.154	78	D - 78 - Meadowed, grass, non-grazed land
12.438	79	Weighted Average
12.438		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	100	0.0200	0.14		Sheet Flow, 100' sheet Grass: Short n= 0.150 P2= 2.21"
43.1	1,115	0.0038	0.43		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
54.9	1,215	Total			

Subcatchment 24S: DA 14

Hydrograph



DA 1-19

NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

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Summary for Subcatchment 25S: DA 15

Runoff = 0.86 cfs @ 13.11 hrs, Volume= 0.203 af, Depth= 0.48"
 Routed to Pond 8P : Culvert 015

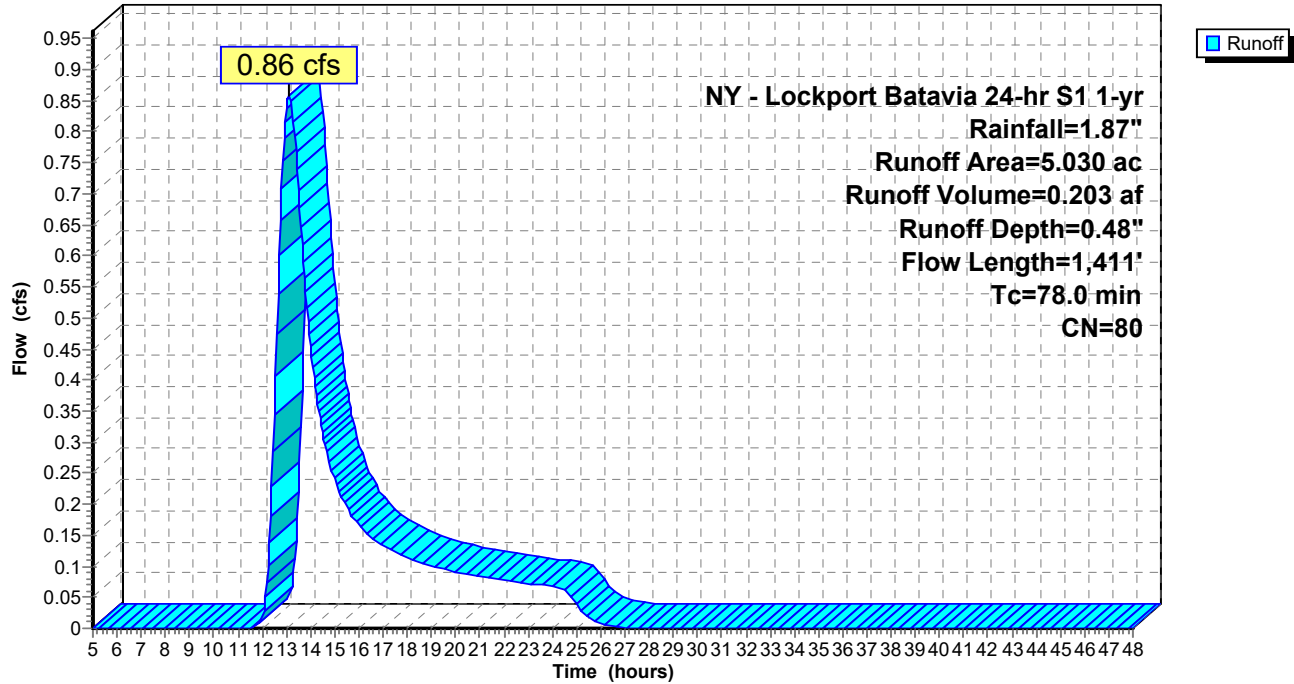
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

Area (ac)	CN	Description
* 0.345	80	D - 80 - Developed open space
* 0.249	80	D - 80 - Developed open space
* 0.809	80	D - 80 - Developed open space
* 0.107	82	D - 82 - Developed Low intensity
* 1.183	82	D - 82 - Developed Low intensity
* 0.330	78	D - 78 - Meadowed, grass, non-grazed land
* 0.809	78	D - 78 - Meadowed, grass, non-grazed land
* 1.198	78	D - 78 - Meadowed, grass, non-grazed land
5.030	80	Weighted Average
5.030		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.6	100	0.0100	0.11		Sheet Flow, 100' Sheet Grass: Short n= 0.150 P2= 2.21"
62.4	1,311	0.0025	0.35		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
78.0	1,411	Total			

Subcatchment 25S: DA 15

Hydrograph



DA 1-19

NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

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Summary for Subcatchment 26S: DA 16

Runoff = 1.54 cfs @ 13.35 hrs, Volume= 0.432 af, Depth= 0.41"
 Routed to Pond 13P : Culvert 016

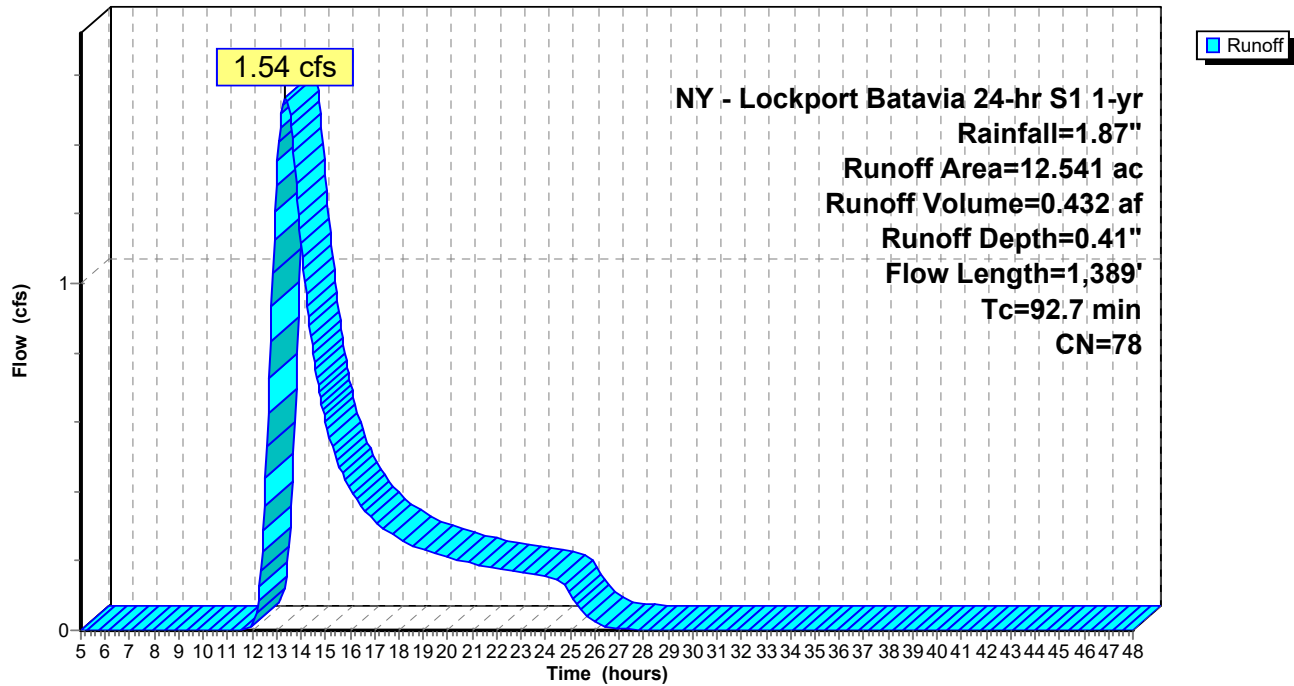
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

Area (ac)	CN	Description
* 0.003	80	D - 80 - Developed open space
* 1.259	77	D - 77 - Deciduous Forest
* 0.202	77	D - 77 - Deciduous Forest
* 0.926	78	D - 78 - Meadowed, grass, non-grazed land
* 3.759	78	D - 78 - Meadowed, grass, non-grazed land
* 6.392	78	D - 78 - Meadowed, grass, non-grazed land
12.541	78	Weighted Average
12.541		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.7	100	0.0225	0.07		Sheet Flow, 100' Sheet Woods: Light underbrush n= 0.400 P2= 2.21"
24.6	495	0.0045	0.34		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
43.4	794	0.0019	0.31		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
92.7	1,389	Total			

Subcatchment 26S: DA 16

Hydrograph



DA 1-19

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Summary for Subcatchment 28S: DA 18

Runoff = 1.08 cfs @ 13.44 hrs, Volume= 0.314 af, Depth= 0.41"
Routed to Pond 10P : Culvert 018

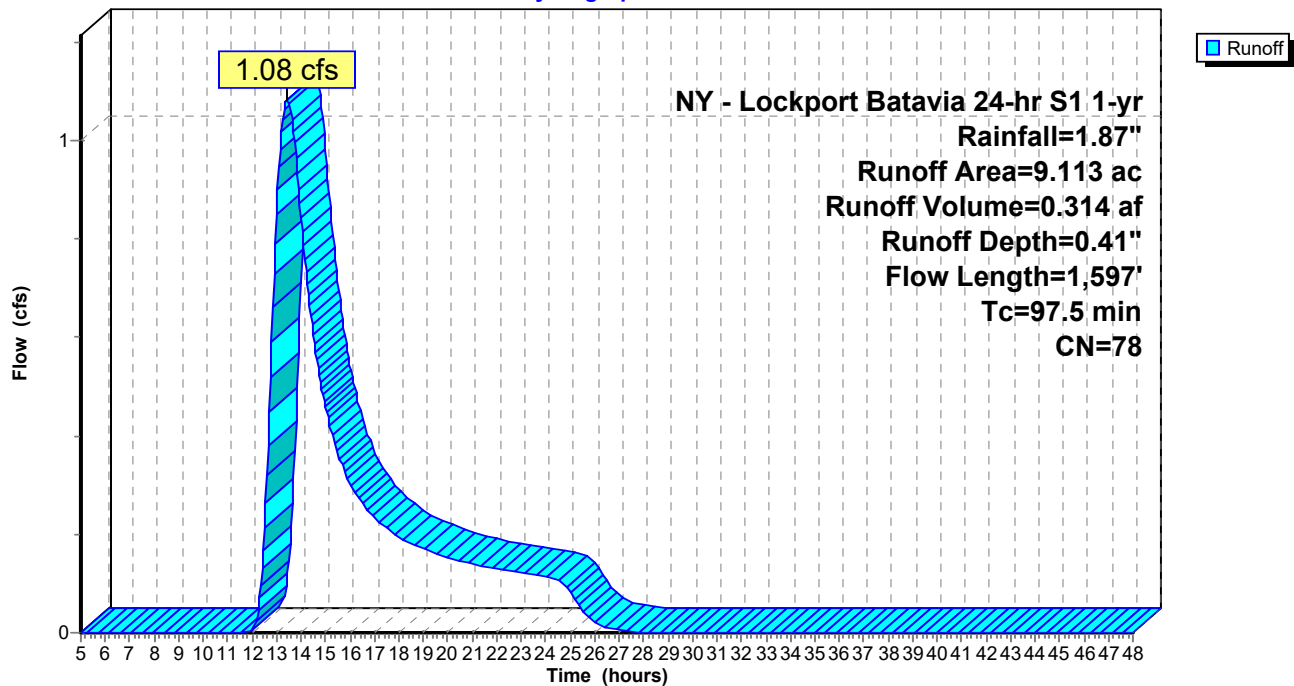
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

Area (ac)	CN	Description
* 3.755	77	D - 77 - Deciduous Forest
* 5.358	78	D - 78 - Meadowed, grass, non-grazed land
9.113	78	Weighted Average
9.113		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.1	100	0.0100	0.05		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.21"
63.4	1,497	0.0062	0.39		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
97.5	1,597	Total			

Subcatchment 28S: DA 18

Hydrograph



DA 1-19

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NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

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Summary for Subcatchment 29S: DA 19

Runoff = 0.09 cfs @ 12.16 hrs, Volume= 0.008 af, Depth= 0.48"
Routed to Pond 14P : Culvert 019

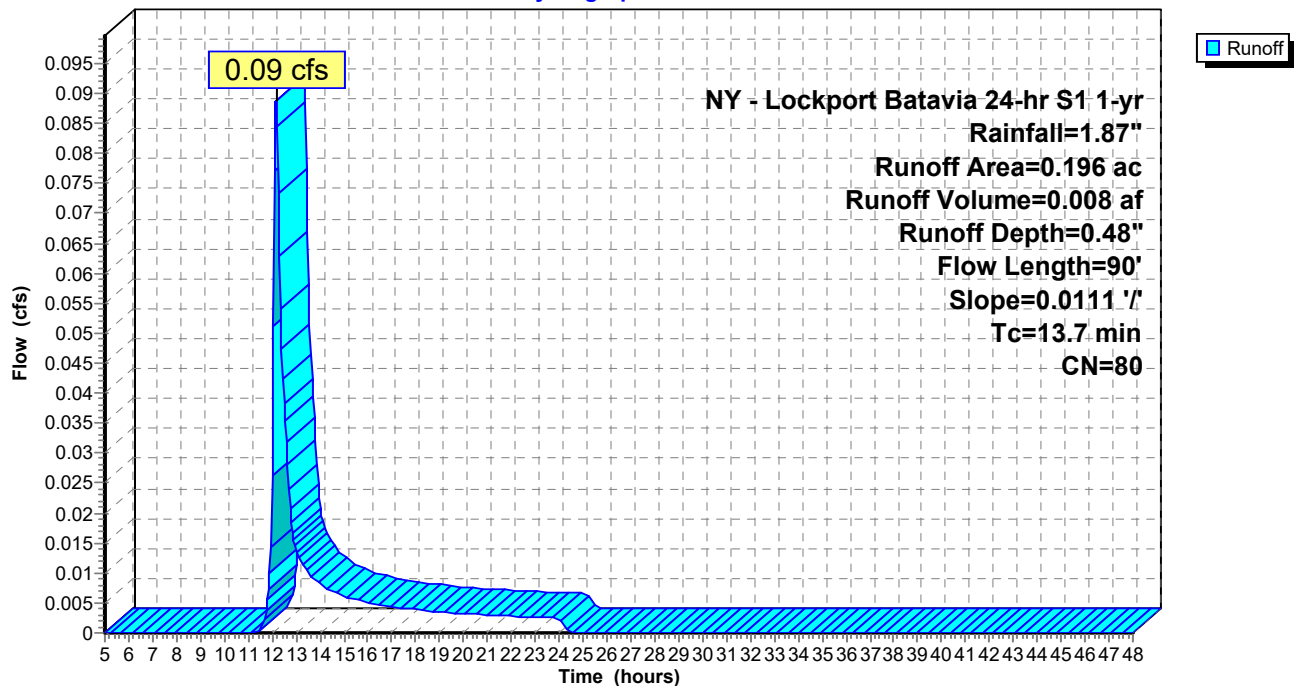
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

Area (ac)	CN	Description
* 0.195	80	D - 80 - Developed open space
* 0.001	78	D - 78 - Meadowed, grass, non-grazed land
0.196	80	Weighted Average
0.196		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	90	0.0111	0.11		Sheet Flow, 90' Sheet
Grass: Short n= 0.150 P2= 2.21"					

Subcatchment 29S: DA 19

Hydrograph



DA 1-19

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NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

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Summary for Subcatchment 37S: DA 12

Runoff = 0.67 cfs @ 13.84 hrs, Volume= 0.206 af, Depth= 0.86"
Routed to Pond 11P : Culvert 012

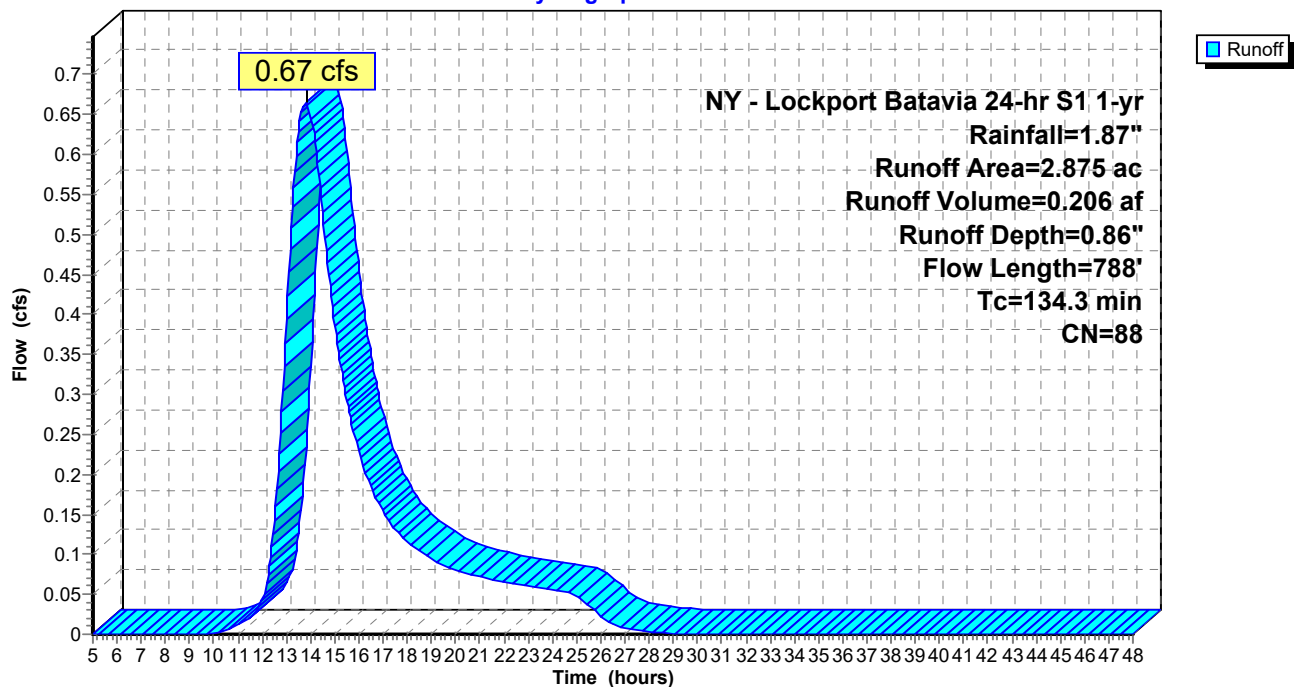
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

Area (ac)	CN	Description
* 0.052	78	D - 78 - Meadowed, grass, non-grazed land
* 0.450	78	D - 78 - Meadowed, grass, non-grazed land
* 2.373	90	D - 90 - Woody Wetlands
2.875	88	Weighted Average
2.875		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.6	100	0.0400	0.09		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.21"
114.7	688	0.0004	0.10		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
134.3	788	Total			

Subcatchment 37S: DA 12

Hydrograph



DA 1-19

NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

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Summary for Subcatchment 46S: DA 17

Runoff = 16.19 cfs @ 14.20 hrs, Volume= 6.309 af, Depth= 0.41"

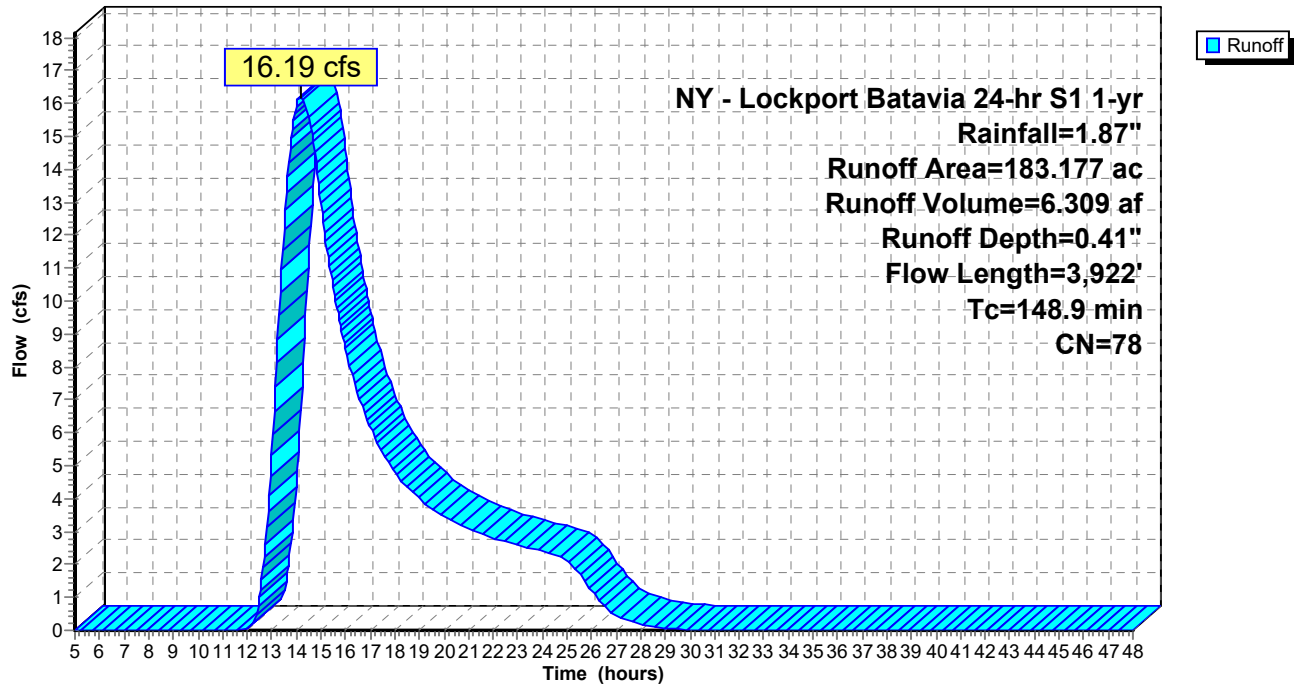
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport Batavia 24-hr S1 1-yr Rainfall=1.87"

Area (ac)	CN	Description
* 2.507	80	D - 80 - Developed open space
* 3.318	80	D - 80 - Developed open space
* 2.790	80	D - 80 - Developed open space
* 2.870	82	D - 82 - Developed Low intensity
* 4.979	82	D - 82 - Developed Low intensity
* 4.781	82	D - 82 - Developed Low intensity
* 0.152	85	D - 85 - Developed Med intensity
* 1.263	77	D - 77 - Deciduous Forest
* 3.431	77	D - 77 - Deciduous Forest
* 3.544	77	D - 77 - Deciduous Forest
* 14.732	78	D - 78 - Meadowed, grass, non-grazed land
* 59.055	78	D - 78 - Meadowed, grass, non-grazed land
* 79.755	78	D - 78 - Meadowed, grass, non-grazed land
183.177	78	Weighted Average
183.177		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.7	100	0.0350	0.08		Sheet Flow, 100' Sheet Woods: Light underbrush n= 0.400 P2= 2.21"
48.7	1,573	0.0116	0.54		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
62.0	1,276	0.0047	0.34		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
17.5	973	0.0038	0.92		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
148.9	3,922	Total			

Subcatchment 46S: DA 17

Hydrograph



Summary for Pond 6P: Culvert 011

[57] Hint: Peaked at 624.62' (Flood elevation advised)

Inflow Area = 3.830 ac, 0.00% Impervious, Inflow Depth = 0.81" for 1-yr event
 Inflow = 0.95 cfs @ 13.44 hrs, Volume= 0.257 af
 Outflow = 0.95 cfs @ 13.44 hrs, Volume= 0.257 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.95 cfs @ 13.44 hrs, Volume= 0.257 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 624.62' @ 13.44 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	624.20'	18.0" Round Culvert 011 w/ 3.6" inside fill L= 33.4' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 623.90' / 623.70' S= 0.0060 ' S= 0.0060 ' Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	626.90'	100.0' long + 3.0 ' SideZ x 20.0' 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

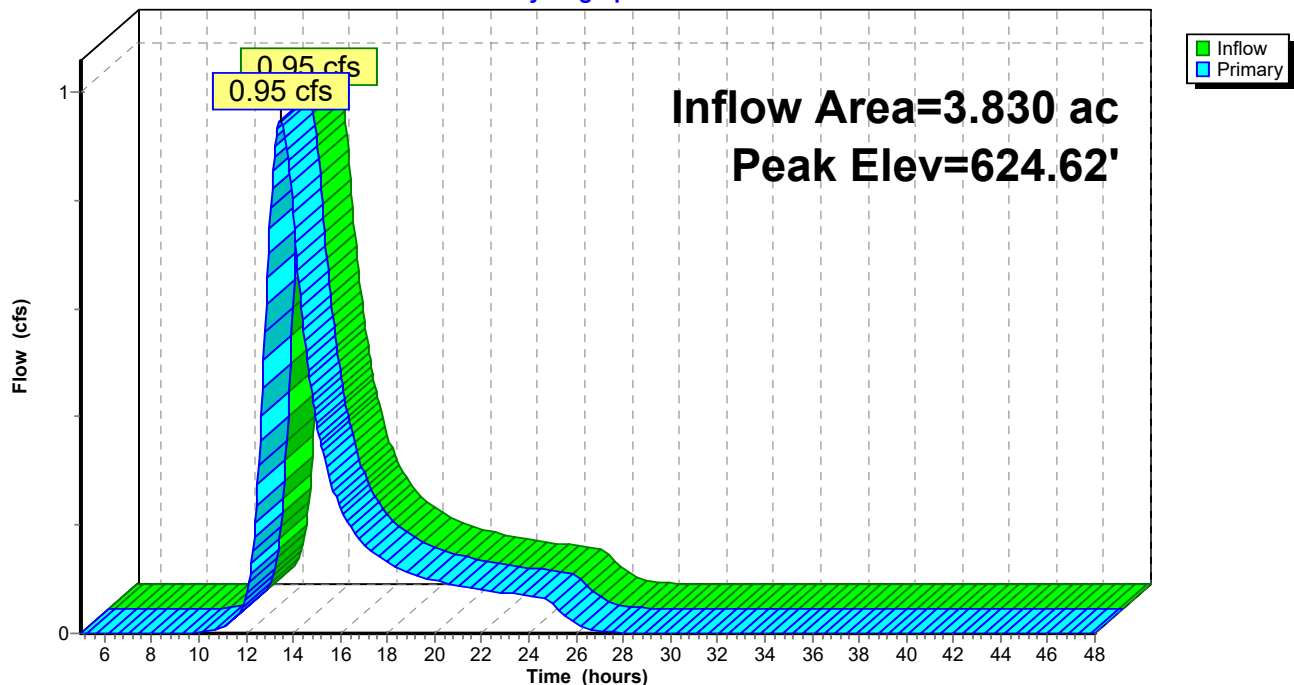
Primary OutFlow Max=0.95 cfs @ 13.44 hrs HW=624.62' (Free Discharge)

1=Culvert 011 (Inlet Controls 0.95 cfs @ 1.61 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 6P: Culvert 011

Hydrograph



Summary for Pond 7P: Culvert 014

[57] Hint: Peaked at 624.05' (Flood elevation advised)

Inflow Area = 12.438 ac, 0.00% Impervious, Inflow Depth = 0.45" for 1-yr event
 Inflow = 2.40 cfs @ 12.80 hrs, Volume= 0.465 af
 Outflow = 2.40 cfs @ 12.80 hrs, Volume= 0.465 af, Atten= 0%, Lag= 0.0 min
 Primary = 2.40 cfs @ 12.80 hrs, Volume= 0.465 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 624.05' @ 12.80 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	623.30'	24.0" Round Culvert 014 w/ 3.6" inside fill L= 46.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 623.00' / 622.95' S= 0.0011 ' / ' Cc= 0.900 n= 0.012, Flow Area= 2.85 sf
#2	Primary	626.50'	100.0' long + 3.0 ' SideZ x 20.0' 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

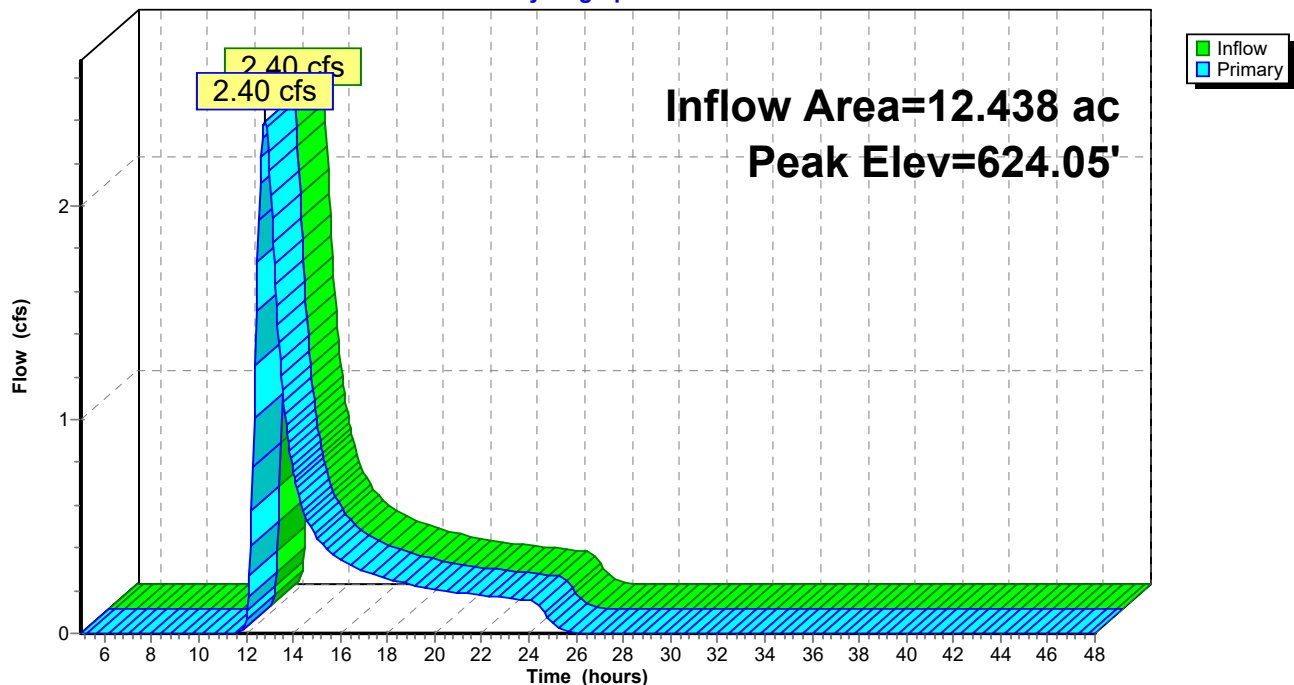
Primary OutFlow Max=2.39 cfs @ 12.80 hrs HW=624.05' (Free Discharge)

1=Culvert 014 (Barrel Controls 2.39 cfs @ 2.40 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 7P: Culvert 014

Hydrograph



Summary for Pond 8P: Culvert 015

[57] Hint: Peaked at 623.90' (Flood elevation advised)

Inflow Area = 5.030 ac, 0.00% Impervious, Inflow Depth = 0.48" for 1-yr event
 Inflow = 0.86 cfs @ 13.11 hrs, Volume= 0.203 af
 Outflow = 0.86 cfs @ 13.11 hrs, Volume= 0.203 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.86 cfs @ 13.11 hrs, Volume= 0.203 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 623.90' @ 13.11 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	623.50'	18.0" Round Culvert 015 w/ 3.6" inside fill L= 46.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 623.20' / 622.90' S= 0.0065 ' S= 0.0065 ' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 1.52 sf
#2	Primary	626.20'	100.0' long + 3.0 ' SideZ x 20.0' 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

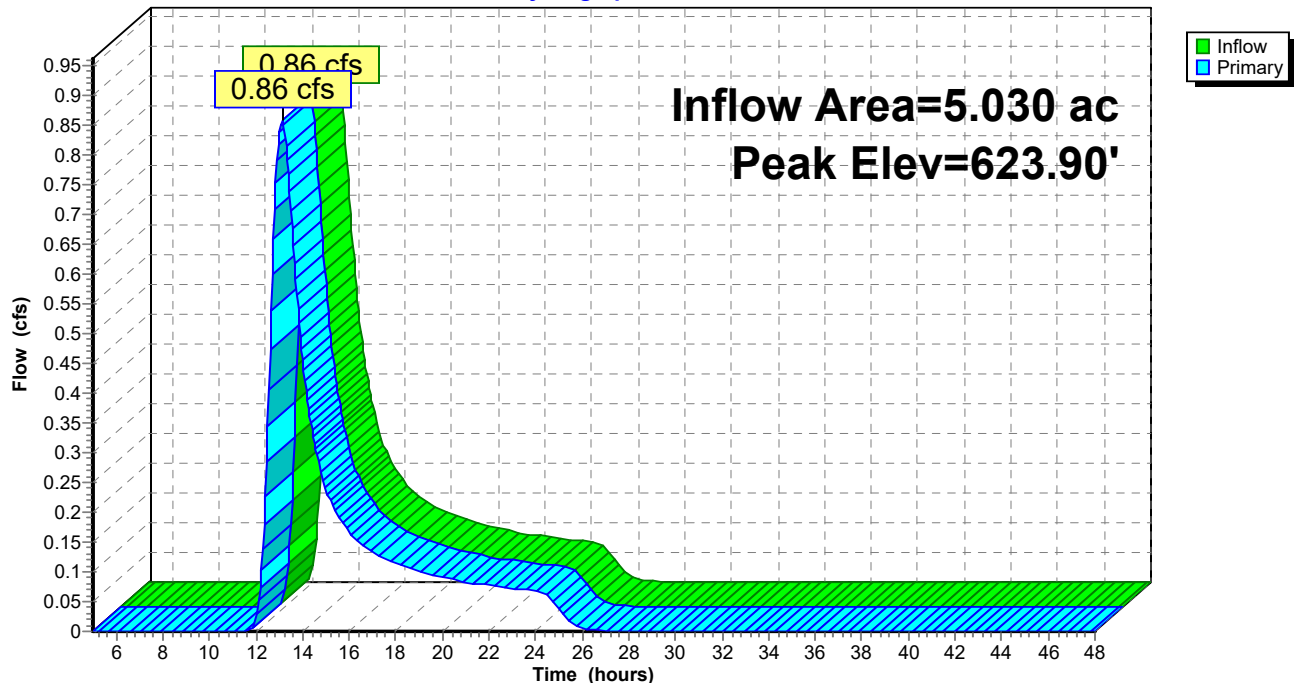
Primary OutFlow Max=0.86 cfs @ 13.11 hrs HW=623.89' (Free Discharge)

1=Culvert 015 (Inlet Controls 0.86 cfs @ 1.56 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 8P: Culvert 015

Hydrograph



Summary for Pond 9P: (Culvert 017)

Check culvert master for updated sizing

[43] Hint: Has no inflow (Outflow=Zero)

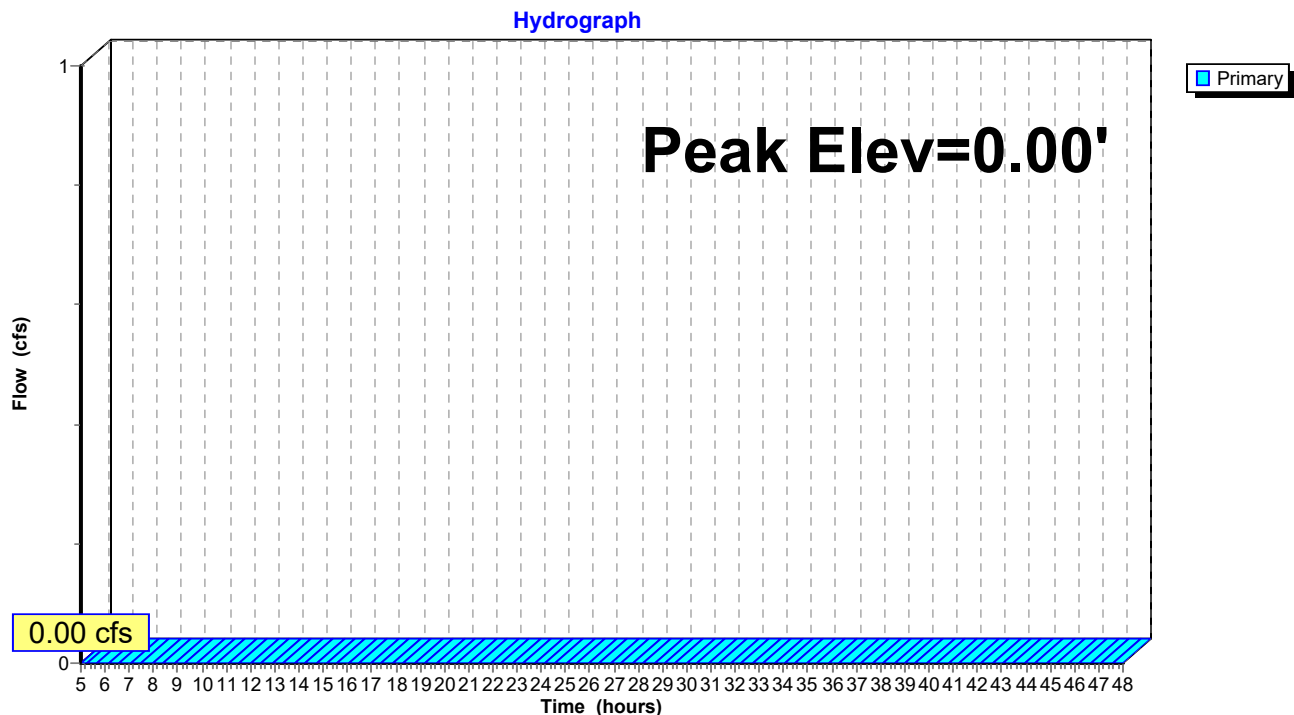
Device	Routing	Invert	Outlet Devices
#1	Primary	621.70'	198.0" Round Culvert 017 w/ 39.6" inside fill L= 34.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 618.40' / 618.30' S= 0.0029 ' S Cc= 0.900 n= 0.012, Flow Area= 183.38 sf
#2	Primary	623.20'	100.0' long + 3.0 ' SideZ x 20.0' breadth 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=0.00 cfs @ 5.00 hrs HW=0.00' (Free Discharge)

1=Culvert 017 (Controls 0.00 cfs)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 9P: (Culvert 017)



Summary for Pond 10P: Culvert 018

[57] Hint: Peaked at 624.21' (Flood elevation advised)

Inflow Area = 9.113 ac, 0.00% Impervious, Inflow Depth = 0.41" for 1-yr event
 Inflow = 1.08 cfs @ 13.44 hrs, Volume= 0.314 af
 Outflow = 1.08 cfs @ 13.44 hrs, Volume= 0.314 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.08 cfs @ 13.44 hrs, Volume= 0.314 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 624.21' @ 13.44 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	623.75'	18.0" Round Culvert 018 w/ 3.6" inside fill L= 38.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 623.45' / 622.45' S= 0.0263 ' S Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	626.45'	100.0' long + 3.0 ' SideZ x 20.0' 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

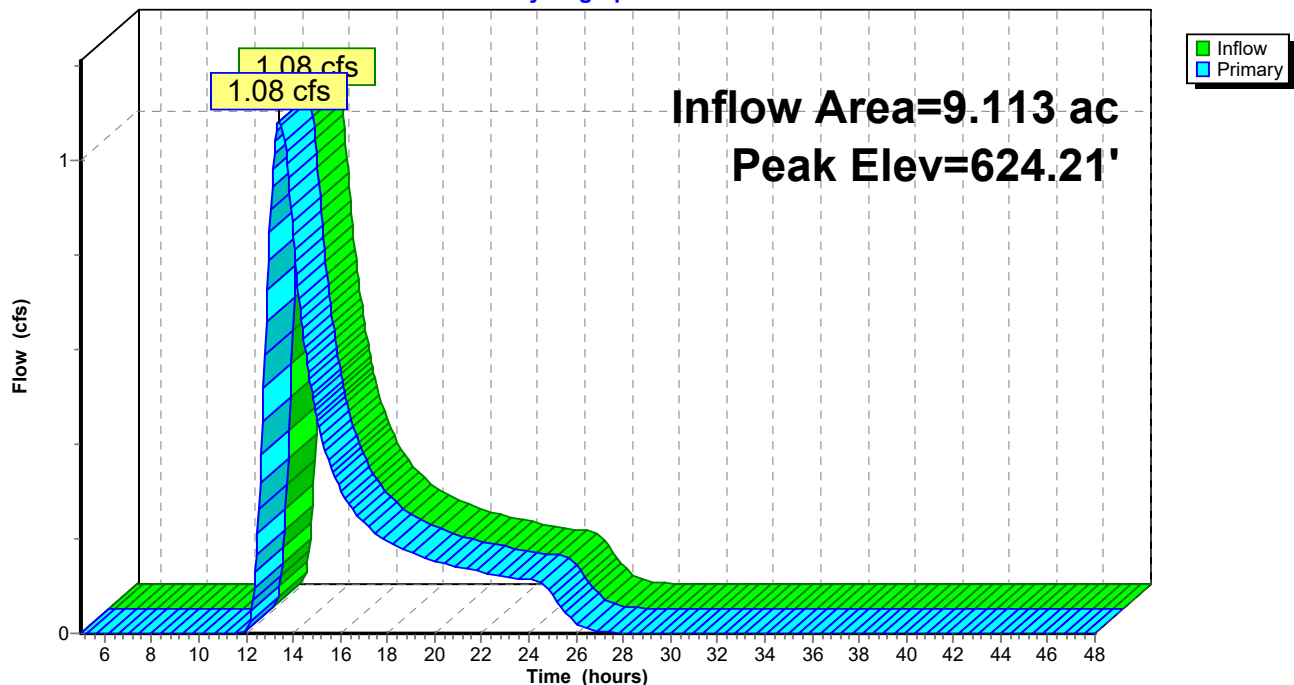
Primary OutFlow Max=1.08 cfs @ 13.44 hrs HW=624.21' (Free Discharge)

1=Culvert 018 (Inlet Controls 1.08 cfs @ 1.68 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 10P: Culvert 018

Hydrograph



Summary for Pond 11P: Culvert 012

[57] Hint: Peaked at 624.50' (Flood elevation advised)

Inflow Area = 2.875 ac, 0.00% Impervious, Inflow Depth = 0.86" for 1-yr event
 Inflow = 0.67 cfs @ 13.84 hrs, Volume= 0.206 af
 Outflow = 0.67 cfs @ 13.84 hrs, Volume= 0.206 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.67 cfs @ 13.84 hrs, Volume= 0.206 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 624.50' @ 13.84 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	624.15'	18.0" Round Culvert 012 w/ 3.6" inside fill L= 38.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 623.85' / 623.75' S= 0.0026 ' S= 0.0026 ' Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	626.85'	100.0' long + 3.0 ' SideZ x 20.0' 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

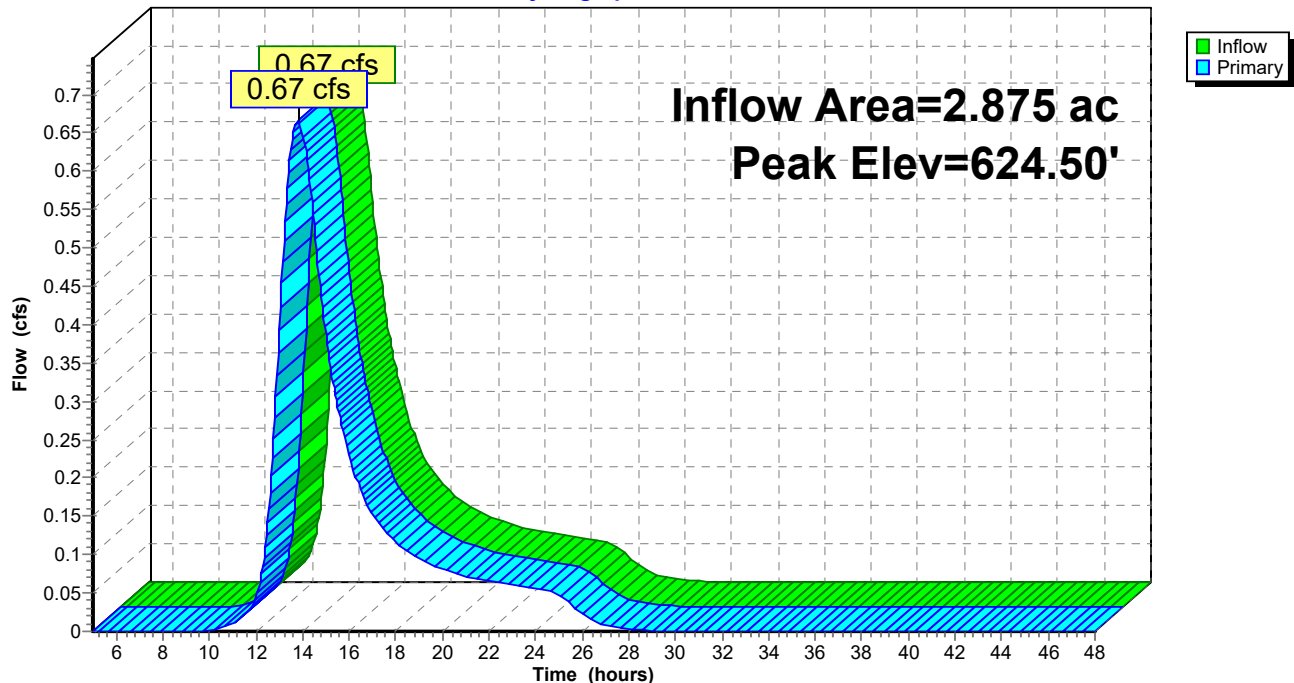
Primary OutFlow Max=0.67 cfs @ 13.84 hrs HW=624.50' (Free Discharge)

1=Culvert 012 (Barrel Controls 0.67 cfs @ 1.90 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 11P: Culvert 012

Hydrograph



Summary for Pond 12P: Culvert 013

[57] Hint: Peaked at 624.84' (Flood elevation advised)

Inflow Area = 5.832 ac, 0.00% Impervious, Inflow Depth = 0.65" for 1-yr event
 Inflow = 1.82 cfs @ 12.75 hrs, Volume= 0.318 af
 Outflow = 1.82 cfs @ 12.75 hrs, Volume= 0.318 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.82 cfs @ 12.75 hrs, Volume= 0.318 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 624.84' @ 12.75 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	624.20'	18.0" Round Culvert 013 w/ 3.6" inside fill L= 38.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 623.90' / 623.55' S= 0.0091 ' S= 0.0091 ' Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	626.90'	100.0' long + 3.0 ' SideZ x 20.0' 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

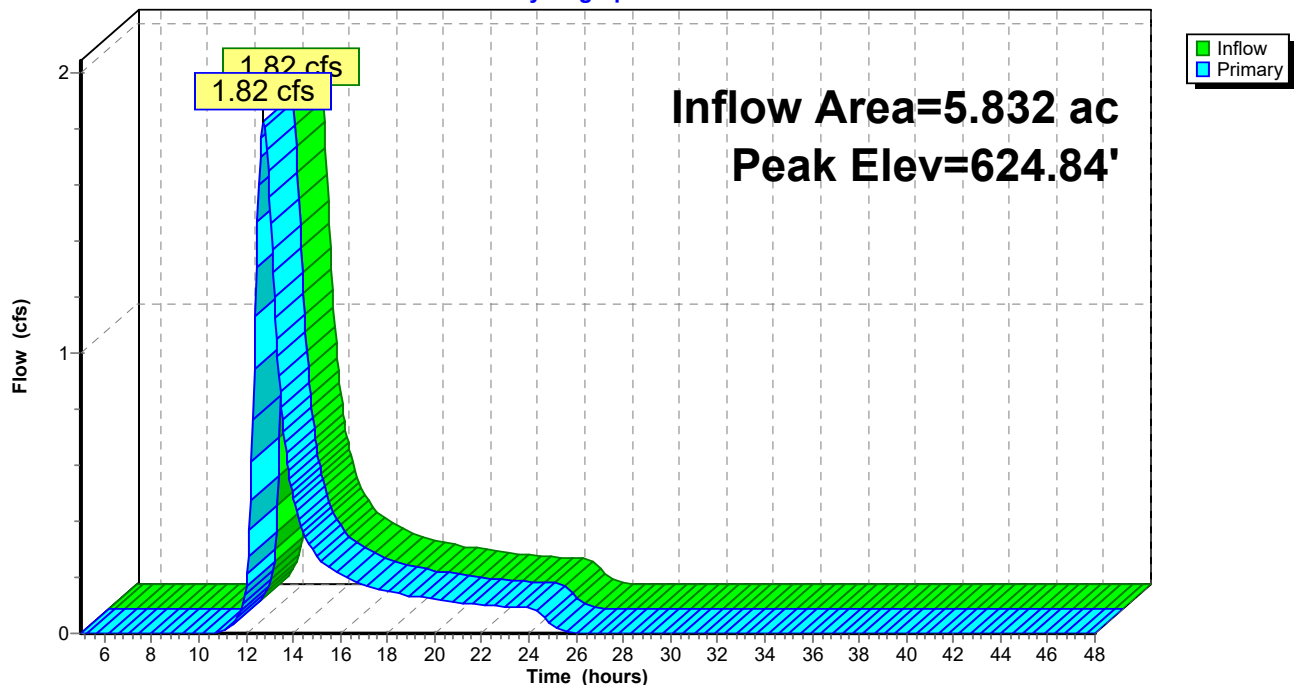
Primary OutFlow Max=1.82 cfs @ 12.75 hrs HW=624.84' (Free Discharge)

1=Culvert 013 (Inlet Controls 1.82 cfs @ 2.00 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 12P: Culvert 013

Hydrograph



Summary for Pond 13P: Culvert 016

[57] Hint: Peaked at 623.77' (Flood elevation advised)

Inflow Area = 12.541 ac, 0.00% Impervious, Inflow Depth = 0.41" for 1-yr event
 Inflow = 1.54 cfs @ 13.35 hrs, Volume= 0.432 af
 Outflow = 1.54 cfs @ 13.35 hrs, Volume= 0.432 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.54 cfs @ 13.35 hrs, Volume= 0.432 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 623.77' @ 13.35 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	623.20'	18.0" Round Culvert 016 w/ 3.6" inside fill L= 38.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 622.90' / 622.67' S= 0.0060 ' S= 0.0060 ' Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	625.90'	100.0' long + 3.0 ' SideZ x 20.0' 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

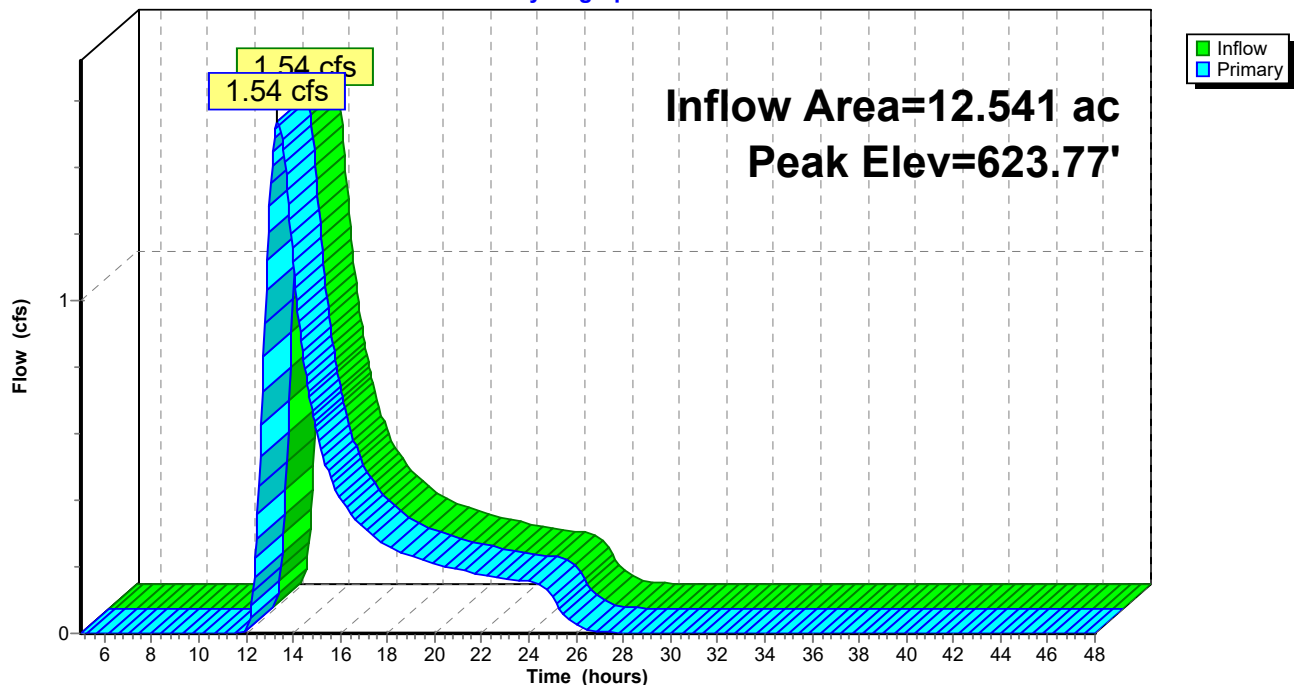
Primary OutFlow Max=1.54 cfs @ 13.35 hrs HW=623.77' (Free Discharge)

1=Culvert 016 (Inlet Controls 1.54 cfs @ 1.88 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 13P: Culvert 016

Hydrograph



Summary for Pond 14P: Culvert 019

[57] Hint: Peaked at 619.49' (Flood elevation advised)

Inflow Area = 0.196 ac, 0.00% Impervious, Inflow Depth = 0.48" for 1-yr event
 Inflow = 0.09 cfs @ 12.16 hrs, Volume= 0.008 af
 Outflow = 0.09 cfs @ 12.16 hrs, Volume= 0.008 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.09 cfs @ 12.16 hrs, Volume= 0.008 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 619.49' @ 12.16 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	619.40'	18.0" Round Culvert 019 w/ 3.6" inside fill L= 46.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 619.10' / 618.40' S= 0.0152 ' S= 0.0152 ' Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	622.40'	100.0' long + 3.0 ' SideZ x 20.0' 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

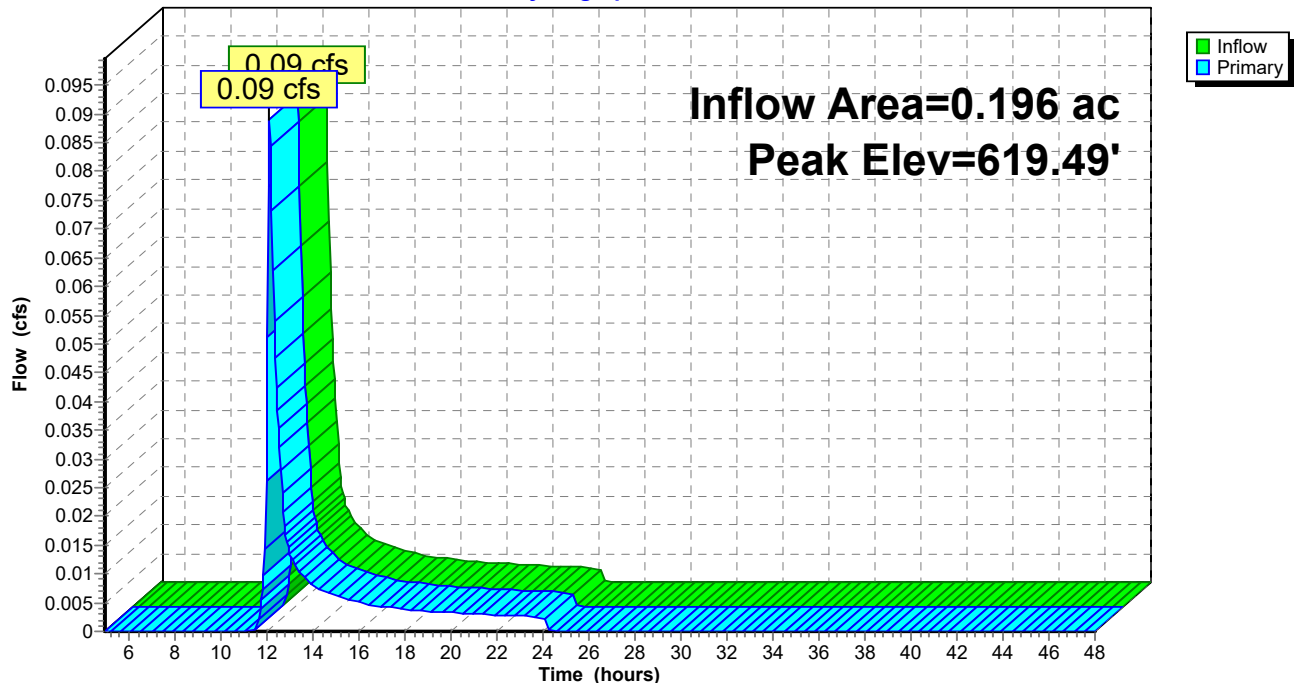
Primary OutFlow Max=0.09 cfs @ 12.16 hrs HW=619.49' (Free Discharge)

1=Culvert 019 (Inlet Controls 0.09 cfs @ 0.76 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 14P: Culvert 019

Hydrograph



Summary for Pond 31P: Culvert 007

[57] Hint: Peaked at 616.64' (Flood elevation advised)

Inflow Area = 9.445 ac, 0.00% Impervious, Inflow Depth = 0.48" for 1-yr event
 Inflow = 3.44 cfs @ 12.27 hrs, Volume= 0.382 af
 Outflow = 3.44 cfs @ 12.27 hrs, Volume= 0.382 af, Atten= 0%, Lag= 0.0 min
 Primary = 3.44 cfs @ 12.27 hrs, Volume= 0.382 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 616.64' @ 12.27 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	615.83'	24.0" Round Culvert 007 w/ 4.8" inside fill L= 22.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 615.43' / 614.85' S= 0.0264 ' S Cc= 0.900 n= 0.012, Flow Area= 2.69 sf
#2	Primary	618.93'	100.0' long + 3.0 ' SideZ x 20.0' 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

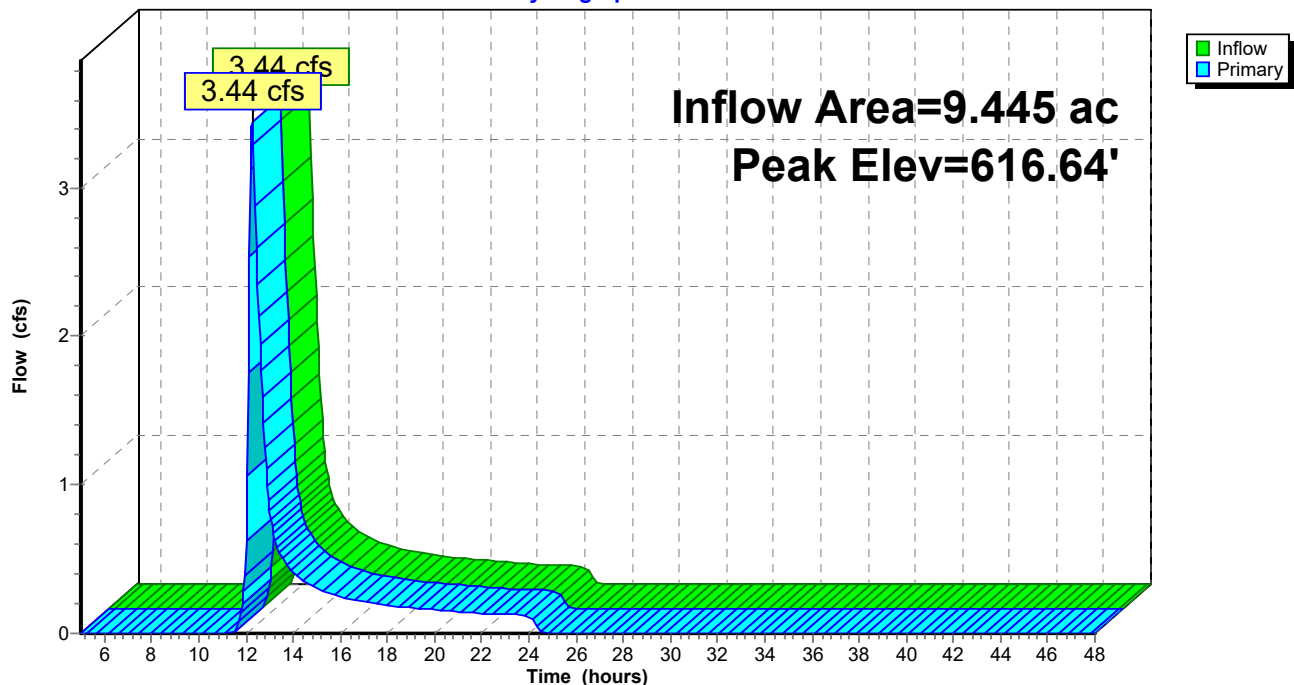
Primary OutFlow Max=3.41 cfs @ 12.27 hrs HW=616.63' (Free Discharge)

1=Culvert 007 (Inlet Controls 3.41 cfs @ 2.23 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 31P: Culvert 007

Hydrograph



Summary for Pond 32P: Culvert 008

[57] Hint: Peaked at 616.26' (Flood elevation advised)

Inflow Area = 5.077 ac, 0.00% Impervious, Inflow Depth = 0.52" for 1-yr event
 Inflow = 1.69 cfs @ 12.41 hrs, Volume= 0.222 af
 Outflow = 1.69 cfs @ 12.41 hrs, Volume= 0.222 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.69 cfs @ 12.41 hrs, Volume= 0.222 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 616.26' @ 12.41 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	615.65'	18.0" Round Culvert 008 w/ 3.6" inside fill L= 47.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 615.35' / 615.00' S= 0.0074 ' S Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	618.35'	100.0' long + 3.0 ' SideZ x 20.0' 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

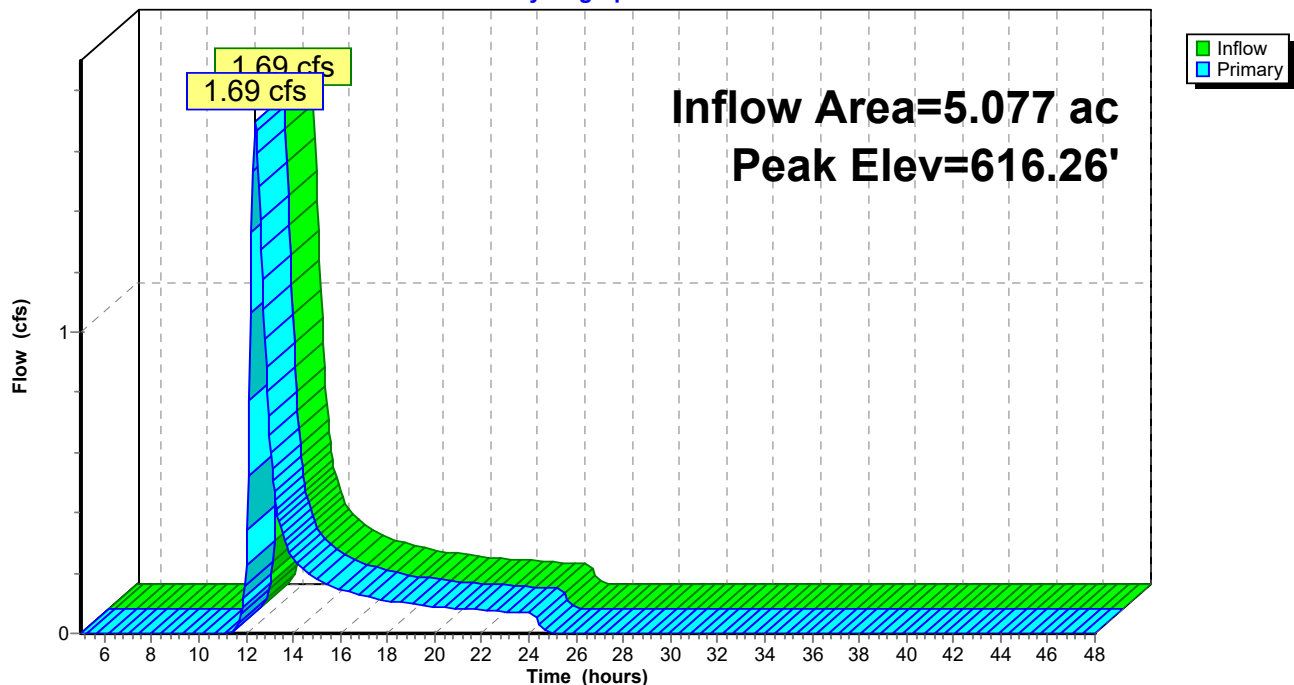
Primary OutFlow Max=1.69 cfs @ 12.41 hrs HW=616.26' (Free Discharge)

1=Culvert 008 (Inlet Controls 1.69 cfs @ 1.95 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 32P: Culvert 008

Hydrograph



Summary for Pond 33P: (Culvert 010)

Check culvert master for updated sizing

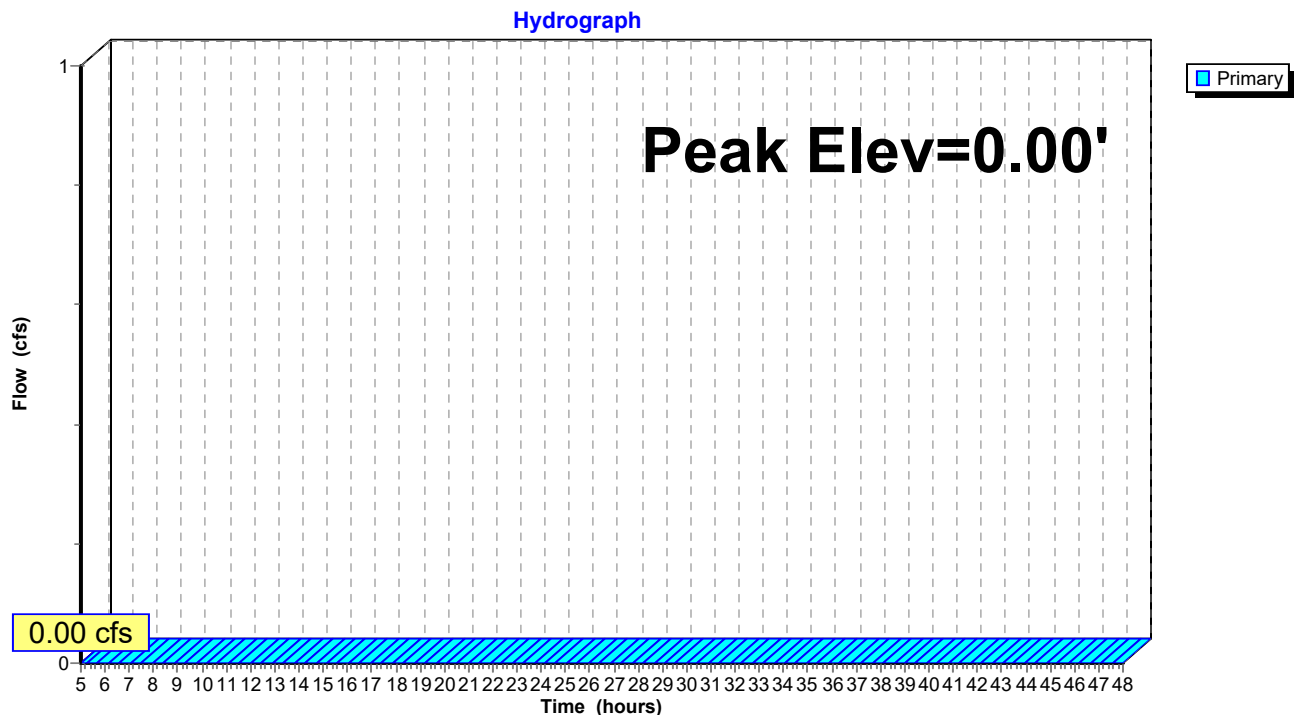
[43] Hint: Has no inflow (Outflow=Zero)

Device	Routing	Invert	Outlet Devices
#1	Primary	621.85'	126.0" Round Culvert 009 w/ 25.2" inside fill L= 45.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 619.75' / 619.25' S= 0.0110 ' S Cc= 0.900 n= 0.012, Flow Area= 74.26 sf
#2	Primary	623.35'	100.0' long + 3.0 ' SideZ x 20.0' 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=0.00 cfs @ 5.00 hrs HW=0.00' (Free Discharge)

1=Culvert 009 (Controls 0.00 cfs)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 33P: (Culvert 010)

Summary for Pond 34P: Culvert 001

[57] Hint: Peaked at 622.97' (Flood elevation advised)

Inflow Area = 13.622 ac, 0.00% Impervious, Inflow Depth = 0.41" for 1-yr event
 Inflow = 3.95 cfs @ 12.29 hrs, Volume= 0.469 af
 Outflow = 3.95 cfs @ 12.29 hrs, Volume= 0.469 af, Atten= 0%, Lag= 0.0 min
 Primary = 3.95 cfs @ 12.29 hrs, Volume= 0.469 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 622.97' @ 12.29 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	622.20'	30.0" Round Culvert 001 w/ 6.0" inside fill L= 34.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 621.70' / 621.05' S= 0.0191 ' / ' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 4.21 sf
#2	Primary	625.20'	100.0' long + 3.0 ' SideZ x 20.0' 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

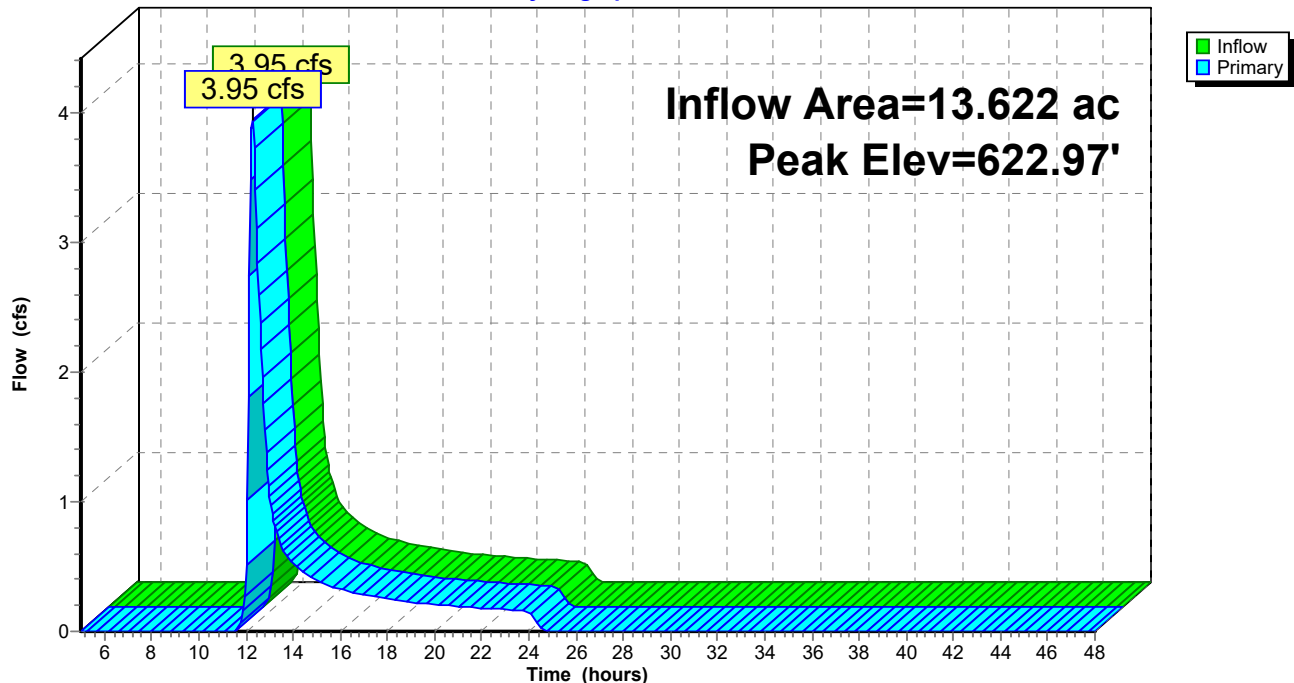
Primary OutFlow Max=3.92 cfs @ 12.29 hrs HW=622.97' (Free Discharge)

1=Culvert 001 (Inlet Controls 3.92 cfs @ 2.18 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 34P: Culvert 001

Hydrograph



Summary for Pond 35P: Culvert 002-005

[57] Hint: Peaked at 630.61' (Flood elevation advised)

Inflow Area = 3.251 ac, 0.00% Impervious, Inflow Depth = 0.61" for 1-yr event
 Inflow = 2.40 cfs @ 12.08 hrs, Volume= 0.165 af
 Outflow = 2.40 cfs @ 12.08 hrs, Volume= 0.165 af, Atten= 0%, Lag= 0.0 min
 Primary = 2.40 cfs @ 12.08 hrs, Volume= 0.165 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 630.61' @ 12.08 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	630.30'	18.0" Round Culvert 002-005 X 4.00 w/ 3.6" inside fill L= 29.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 630.00' / 628.90' S= 0.0379 ' S Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	633.00'	100.0' long + 3.0 ' SideZ x 20.0' 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

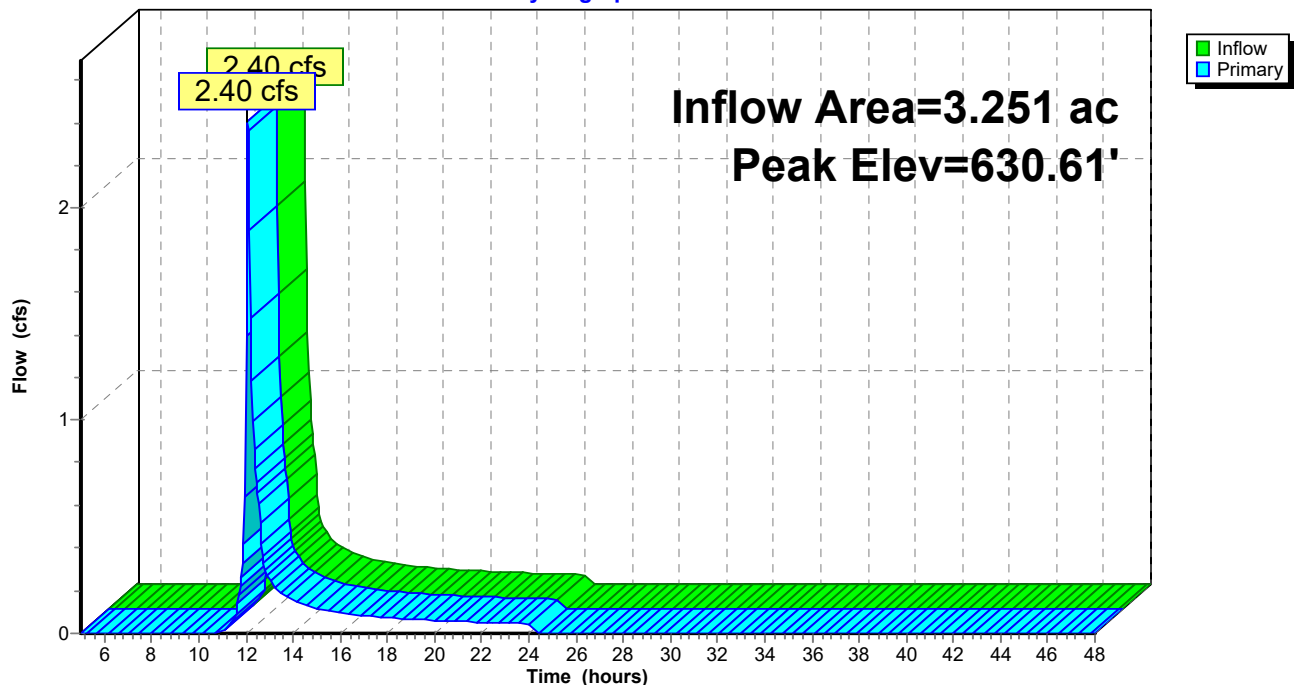
Primary OutFlow Max=2.34 cfs @ 12.08 hrs HW=630.61' (Free Discharge)

1=Culvert 002-005 (Inlet Controls 2.34 cfs @ 1.38 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 35P: Culvert 002-005

Hydrograph



Summary for Pond 36P: Culvert 009

[57] Hint: Peaked at 616.39' (Flood elevation advised)

Inflow Area = 0.301 ac, 0.00% Impervious, Inflow Depth = 0.48" for 1-yr event
 Inflow = 0.09 cfs @ 12.42 hrs, Volume= 0.012 af
 Outflow = 0.09 cfs @ 12.42 hrs, Volume= 0.012 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.09 cfs @ 12.42 hrs, Volume= 0.012 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 616.39' @ 12.42 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	616.30'	18.0" Round Culvert 009 w/ 3.6" inside fill L= 46.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 616.00' / 615.75' S= 0.0054 ' S= 0.0054 ' Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	619.00'	100.0' long + 3.0 ' SideZ x 20.0' 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

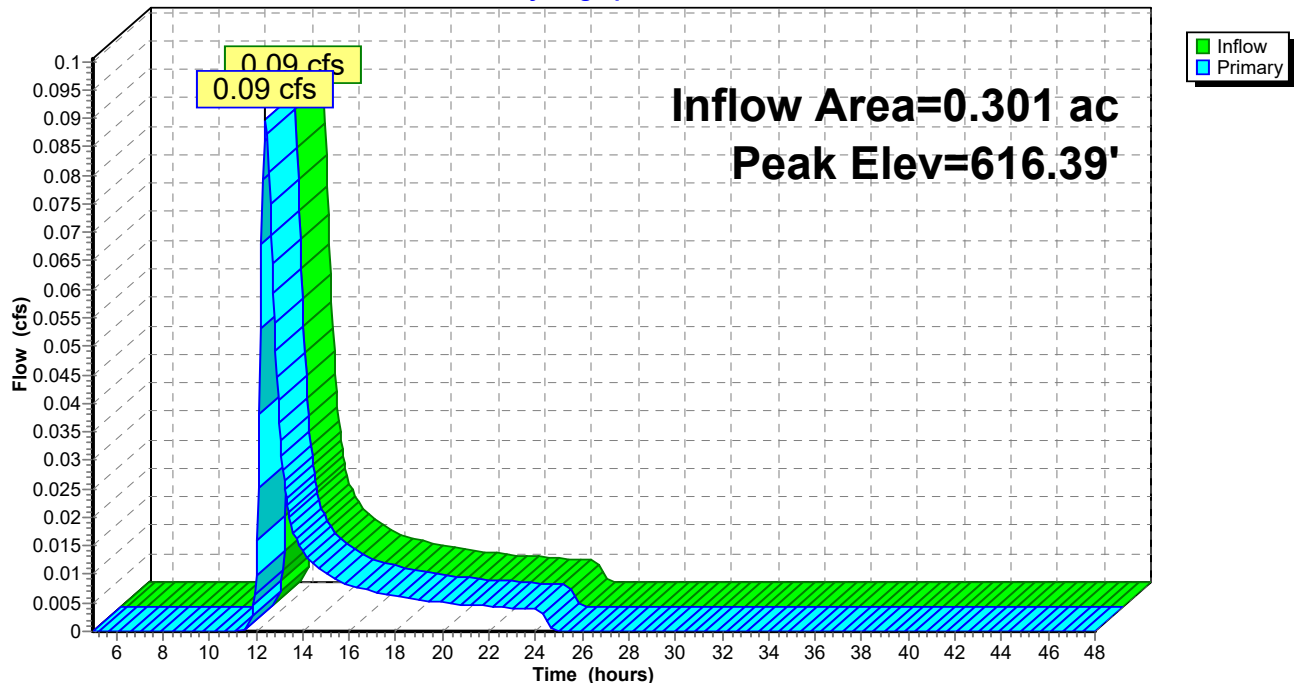
Primary OutFlow Max=0.09 cfs @ 12.42 hrs HW=616.39' (Free Discharge)

1=Culvert 009 (Inlet Controls 0.09 cfs @ 0.76 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 36P: Culvert 009

Hydrograph



DA 1-19*NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"*

Prepared by Fisher Associates

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Time span=5.00-48.00 hrs, dt=0.05 hrs, 861 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 15S: DA 1	Runoff Area=13.622 ac 0.00% Impervious Runoff Depth=1.30" Flow Length=968' Tc=21.2 min CN=78 Runoff=16.33 cfs 1.479 af
Subcatchment 16S: DA 2-5	Runoff Area=3.251 ac 0.00% Impervious Runoff Depth=1.64" Flow Length=403' Tc=8.5 min CN=83 Runoff=7.81 cfs 0.445 af
Subcatchment 17S: DA 7	Runoff Area=9.445 ac 0.00% Impervious Runoff Depth=1.43" Flow Length=888' Tc=21.2 min CN=80 Runoff=12.63 cfs 1.128 af
Subcatchment 18S: DA 8	Runoff Area=5.077 ac 0.00% Impervious Runoff Depth=1.50" Flow Length=924' Tc=30.2 min CN=81 Runoff=5.87 cfs 0.635 af
Subcatchment 19S: DA 9	Runoff Area=0.301 ac 0.00% Impervious Runoff Depth=1.43" Flow Length=251' Tc=30.7 min CN=80 Runoff=0.33 cfs 0.036 af
Subcatchment 20S: DA 10	Runoff Area=141.450 ac 0.11% Impervious Runoff Depth=1.50" Flow Length=6,066' Tc=181.5 min CN=81 Runoff=48.51 cfs 17.688 af
Subcatchment 21S: DA 11	Runoff Area=3.830 ac 0.00% Impervious Runoff Depth=1.95" Flow Length=828' Tc=110.7 min CN=87 Runoff=2.55 cfs 0.622 af
Subcatchment 23S: DA 13	Runoff Area=5.832 ac 0.00% Impervious Runoff Depth=1.72" Flow Length=938' Tc=54.7 min CN=84 Runoff=5.52 cfs 0.834 af
Subcatchment 24S: DA 14	Runoff Area=12.438 ac 0.00% Impervious Runoff Depth=1.37" Flow Length=1,215' Tc=54.9 min CN=79 Runoff=9.11 cfs 1.417 af
Subcatchment 25S: DA 15	Runoff Area=5.030 ac 0.00% Impervious Runoff Depth=1.43" Flow Length=1,411' Tc=78.0 min CN=80 Runoff=3.07 cfs 0.601 af
Subcatchment 26S: DA 16	Runoff Area=12.541 ac 0.00% Impervious Runoff Depth=1.30" Flow Length=1,389' Tc=92.7 min CN=78 Runoff=6.10 cfs 1.361 af
Subcatchment 28S: DA 18	Runoff Area=9.113 ac 0.00% Impervious Runoff Depth=1.30" Flow Length=1,597' Tc=97.5 min CN=78 Runoff=4.30 cfs 0.989 af
Subcatchment 29S: DA 19	Runoff Area=0.196 ac 0.00% Impervious Runoff Depth=1.43" Flow Length=90' Slope=0.0111 '/' Tc=13.7 min CN=80 Runoff=0.33 cfs 0.023 af
Subcatchment 37S: DA 12	Runoff Area=2.875 ac 0.00% Impervious Runoff Depth=2.03" Flow Length=788' Tc=134.3 min CN=88 Runoff=1.72 cfs 0.487 af
Subcatchment 46S: DA 17	Runoff Area=183.177 ac 0.00% Impervious Runoff Depth=1.30" Flow Length=3,922' Tc=148.9 min CN=78 Runoff=62.97 cfs 19.886 af
Pond 6P: Culvert 011	Peak Elev=625.00' Inflow=2.55 cfs 0.622 af Outflow=2.55 cfs 0.622 af

DA 1-19*NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"*

Prepared by Fisher Associates

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Pond 7P: Culvert 014	Peak Elev=625.08' Inflow=9.11 cfs 1.417 af Outflow=9.11 cfs 1.417 af
Pond 8P: Culvert 015	Peak Elev=624.40' Inflow=3.07 cfs 0.601 af Outflow=3.07 cfs 0.601 af
Pond 9P: (Culvert 017)	Peak Elev=0.00' Primary=0.00 cfs 0.000 af
Pond 10P: Culvert 018	Peak Elev=624.91' Inflow=4.30 cfs 0.989 af Outflow=4.30 cfs 0.989 af
Pond 11P: Culvert 012	Peak Elev=624.80' Inflow=1.72 cfs 0.487 af Outflow=1.72 cfs 0.487 af
Pond 12P: Culvert 013	Peak Elev=625.69' Inflow=5.52 cfs 0.834 af Outflow=5.52 cfs 0.834 af
Pond 13P: Culvert 016	Peak Elev=624.89' Inflow=6.10 cfs 1.361 af Outflow=6.10 cfs 1.361 af
Pond 14P: Culvert 019	Peak Elev=619.61' Inflow=0.33 cfs 0.023 af Outflow=0.33 cfs 0.023 af
Pond 31P: Culvert 007	Peak Elev=618.11' Inflow=12.63 cfs 1.128 af Outflow=12.63 cfs 1.128 af
Pond 32P: Culvert 008	Peak Elev=617.26' Inflow=5.87 cfs 0.635 af Outflow=5.87 cfs 0.635 af
Pond 33P: (Culvert 010)	Peak Elev=0.00' Primary=0.00 cfs 0.000 af
Pond 34P: Culvert 001	Peak Elev=624.23' Inflow=16.33 cfs 1.479 af Outflow=16.33 cfs 1.479 af
Pond 35P: Culvert 002-005	Peak Elev=630.97' Inflow=7.81 cfs 0.445 af Outflow=7.81 cfs 0.445 af
Pond 36P: Culvert 009	Peak Elev=616.51' Inflow=0.33 cfs 0.036 af Outflow=0.33 cfs 0.036 af

Total Runoff Area = 408.178 ac Runoff Volume = 47.631 af Average Runoff Depth = 1.40"
99.96% Pervious = 408.026 ac 0.04% Impervious = 0.152 ac

DA 1-19

NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

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Summary for Subcatchment 15S: DA 1

Runoff = 16.33 cfs @ 12.26 hrs, Volume= 1.479 af, Depth= 1.30"
 Routed to Pond 34P : Culvert 001

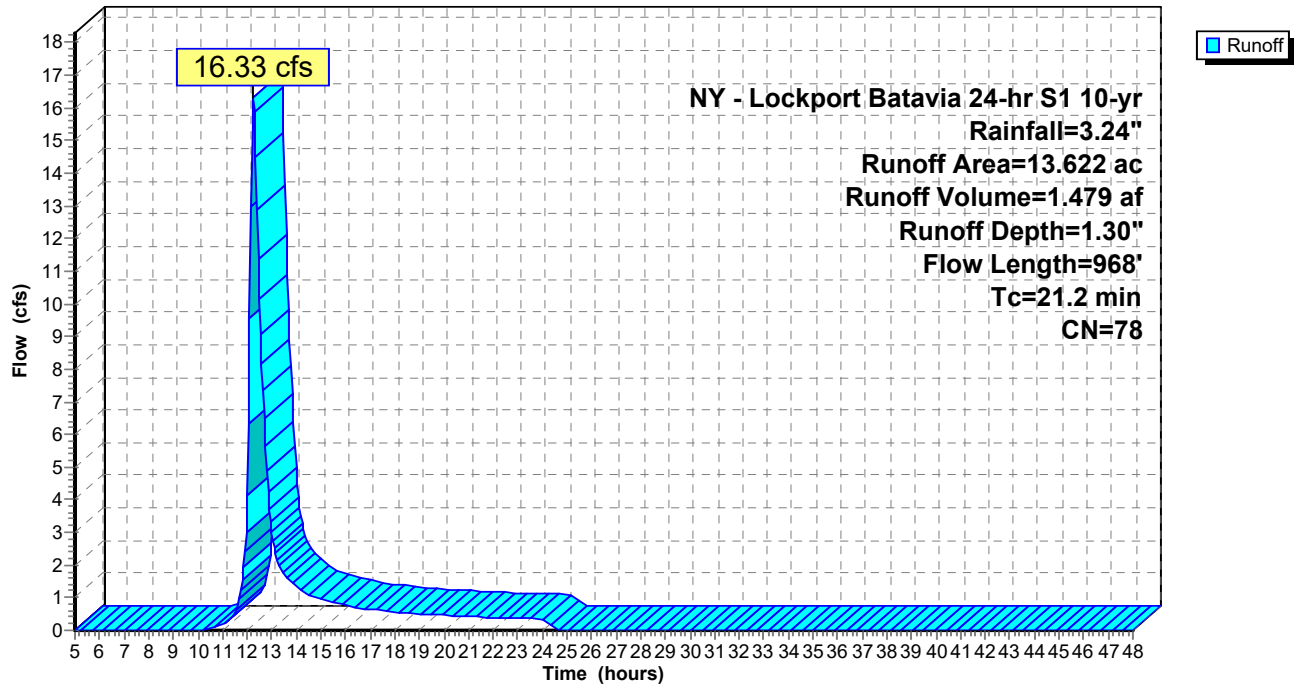
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

Area (ac)	CN	Description
* 0.134	39	A - 39 - Developed open space
* 0.938	46	A - 46 - Developed Low intensity
* 0.065	54	A - 54 - Developed Med intensity
* 0.064	30	A - 30 - Deciduous Forest
* 0.063	30	A - 30 - Meadowed, grass, non-grazed land
* 0.293	80	D - 80 - Developed open space
* 1.950	82	D - 82 - Developed Low intensity
* 0.320	85	D - 85 - Developed Med intensity
* 0.105	77	D - 77 - Deciduous Forest
* 0.497	78	D - 78 - Meadowed, grass, non-grazed land
* 1.157	80	D - 80 - Developed open space
* 4.870	82	D - 82 - Developed Low intensity
* 0.999	85	D - 85 - Developed Med intensity
* 2.167	78	D - 78 - Meadowed, grass, non-grazed land
13.622	78	Weighted Average
13.622		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0125	0.95		Sheet Flow, 100' Sheet Smooth surfaces n= 0.011 P2= 2.21"
4.1	180	0.0013	0.73		Shallow Concentrated Flow, Paved Kv= 20.3 fps
4.3	300	0.0033	1.17		Shallow Concentrated Flow, Paved Kv= 20.3 fps
6.7	200	0.0050	0.49		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
4.3	188	0.0106	0.72		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
21.2	968	Total			

Subcatchment 15S: DA 1

Hydrograph



DA 1-19

NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

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Summary for Subcatchment 16S: DA 2-5

Runoff = 7.81 cfs @ 12.07 hrs, Volume= 0.445 af, Depth= 1.64"
 Routed to Pond 35P : Culvert 002-005

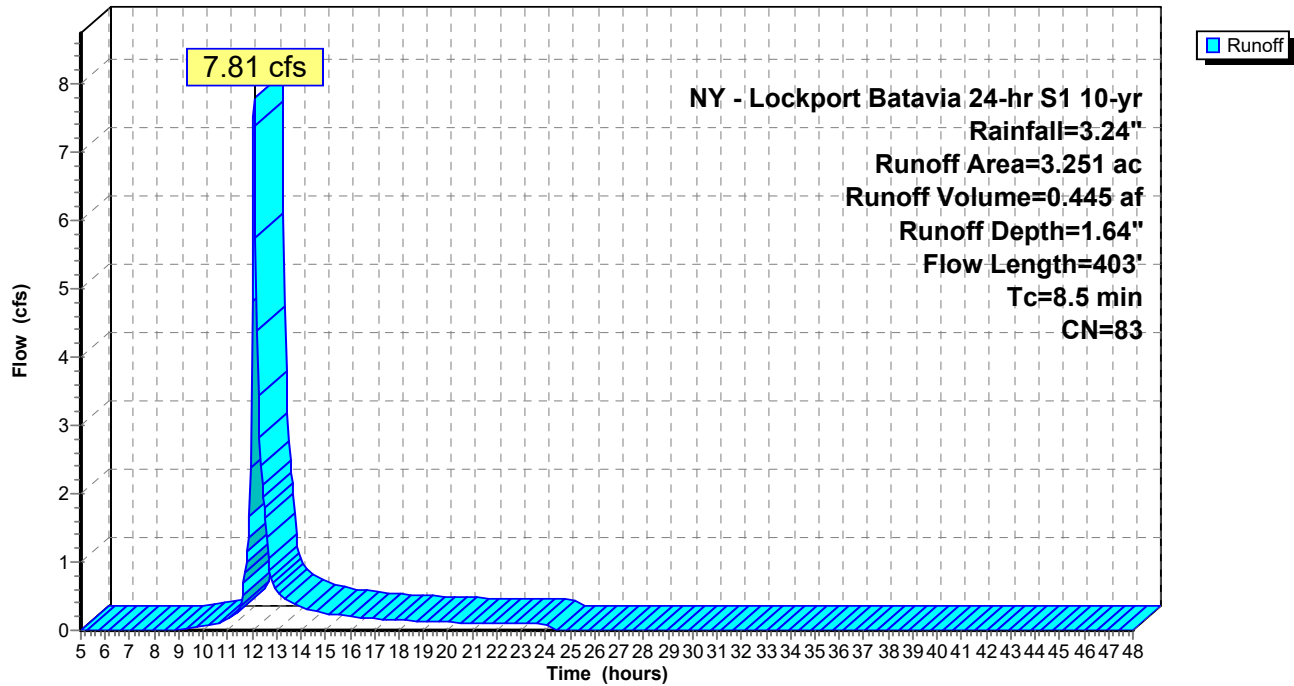
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

Area (ac)	CN	Description
* 0.854	80	D - 80 - Developed open space
* 0.145	82	D - 82 - Developed Low intensity
* 0.111	85	D - 85 - Developed Med intensity
* 0.124	80	D - 80 - Developed open space
* 0.018	82	D - 82 - Developed Low intensity
* 0.270	85	D - 85 - Developed Med intensity
* 0.894	80	D - 80 - Developed open space
* 0.077	82	D - 82 - Developed Low intensity
* 0.315	85	D - 85 - Developed Med intensity
* 0.441	93	D - 93 - Developed High intensity
* 0.002	78	D - 78 - Meadowed, grass, non-grazed land
3.251	83	Weighted Average
3.251		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0325	1.39		Sheet Flow, 100' Smooth surfaces n= 0.011 P2= 2.21"
0.3	49	0.0255	3.24		Shallow Concentrated Flow, Paved Kv= 20.3 fps
1.6	123	0.0041	1.30		Shallow Concentrated Flow, Paved Kv= 20.3 fps
4.2	91	0.0027	0.36		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
1.2	40	0.0063	0.56		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
8.5	403	Total			

Subcatchment 16S: DA 2-5

Hydrograph



DA 1-19

NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

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Summary for Subcatchment 17S: DA 7

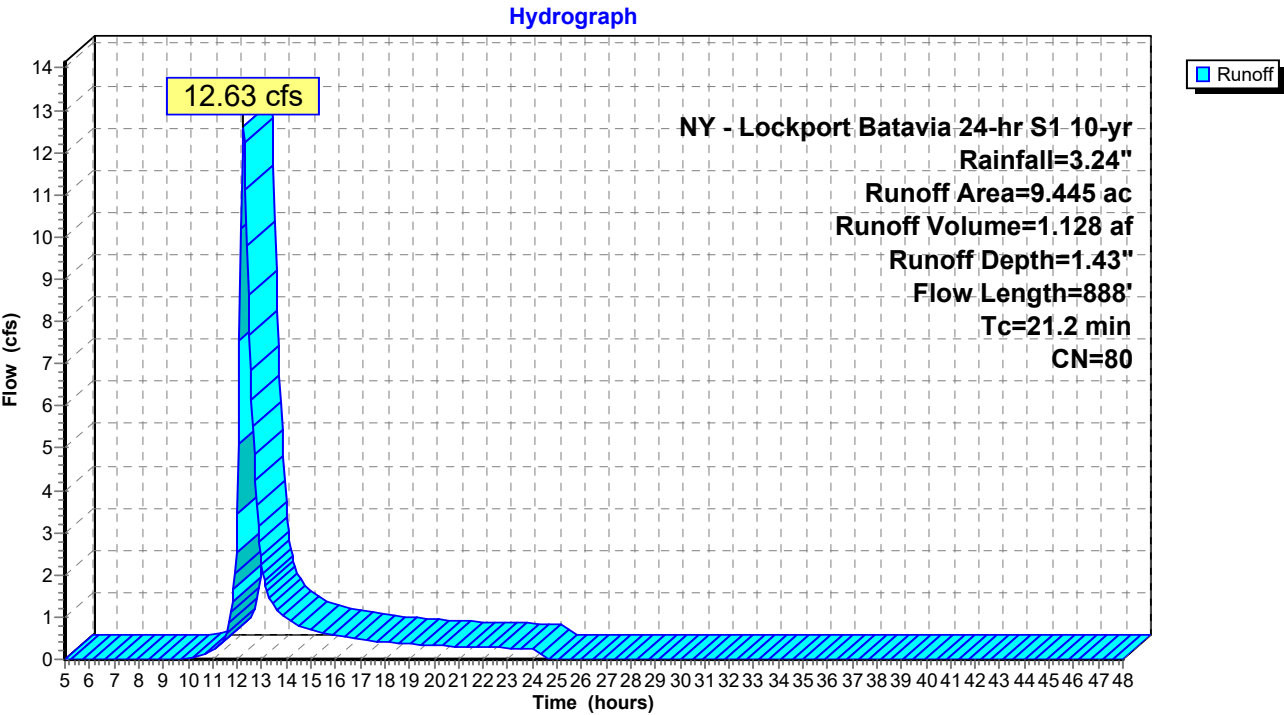
Runoff = 12.63 cfs @ 12.26 hrs, Volume= 1.128 af, Depth= 1.43"
 Routed to Pond 31P : Culvert 007

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

Area (ac)	CN	Description
* 0.134	80	D - 80 - Developed open space
* 0.231	82	D - 82 - Developed Low intensity
* 0.882	78	D - 78 - Meadowed, grass, non-grazed land
* 0.569	80	D - 80 - Developed open space
* 0.868	82	D - 82 - Developed Low intensity
* 0.054	85	D - 85 - Developed Med intensity
* 1.190	85	D - 85 - Grassland/Herbaceous
* 4.820	78	D - 78 - Meadowed, grass, non-grazed land
* 0.187	80	D - 80 - Developed open space
* 0.013	82	D - 82 - Developed Low intensity
* 0.497	78	D - 78 - Meadowed, grass, non-grazed land
9.445	80	Weighted Average
9.445		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0350	0.18		Sheet Flow, 100' Sheet Grass: Short n= 0.150 P2= 2.21"
4.6	202	0.0111	0.74		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
4.4	445	0.0126	1.68		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
2.8	141	0.0142	0.83		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
21.2	888	Total			

Subcatchment 17S: DA 7



DA 1-19

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NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

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Summary for Subcatchment 18S: DA 8

Runoff = 5.87 cfs @ 12.38 hrs, Volume= 0.635 af, Depth= 1.50"
 Routed to Pond 32P : Culvert 008

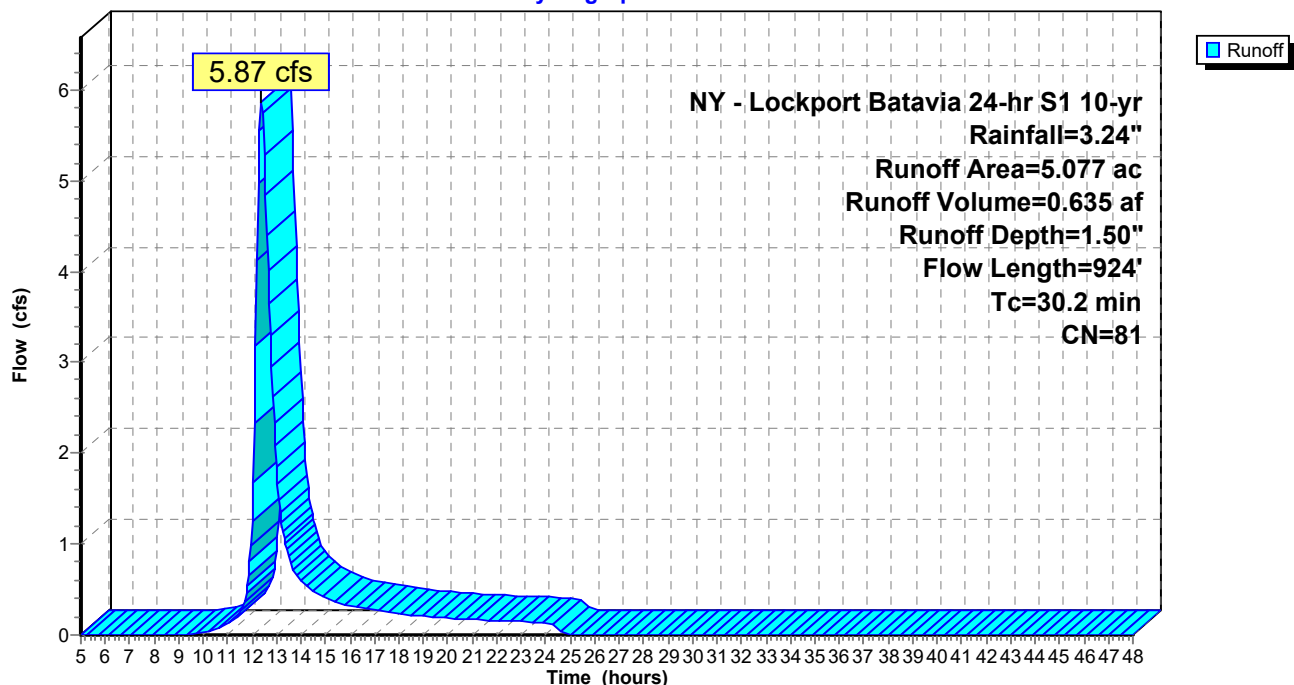
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

Area (ac)	CN	Description
* 2.612	80	D - 80 - Developed open space
* 1.184	82	D - 82 - Developed Low intensity
* 0.605	85	D - 85 - Grassland/Herbaceous
* 0.676	78	D - 78 - Meadowed, grass, non-grazed land
5.077	81	Weighted Average
5.077		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.5	100	0.0173	0.13		Sheet Flow, Grass: Short n= 0.150 P2= 2.21"
8.1	290	0.0073	0.60		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
9.6	534	0.0038	0.92		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
30.2	924	Total			

Subcatchment 18S: DA 8

Hydrograph



DA 1-19

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NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

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Summary for Subcatchment 19S: DA 9

Runoff = 0.33 cfs @ 12.39 hrs, Volume= 0.036 af, Depth= 1.43"
Routed to Pond 36P : Culvert 009

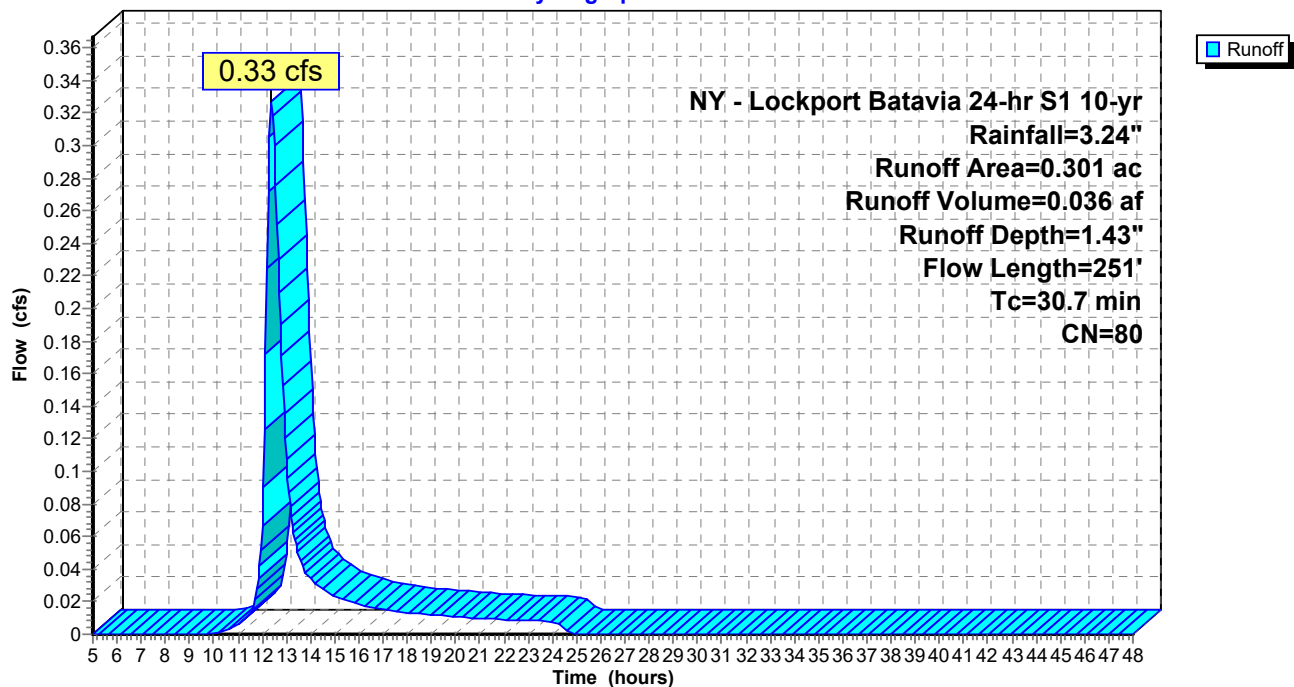
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

Area (ac)	CN	Description
* 0.024	80	D - 80 - Developed open space
* 0.155	82	D - 82 - Developed Low intensity
* 0.122	78	D - 78 - Meadowed, grass, non-grazed land
0.301	80	Weighted Average
0.301		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.1	100	0.0025	0.06		Sheet Flow, 100' Sheet Grass: Short n= 0.150 P2= 2.21"
3.6	151	0.0099	0.70		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
30.7	251	Total			

Subcatchment 19S: DA 9

Hydrograph



DA 1-19

NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

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Summary for Subcatchment 20S: DA 10

Runoff = 48.51 cfs @ 14.34 hrs, Volume= 17.688 af, Depth= 1.50"

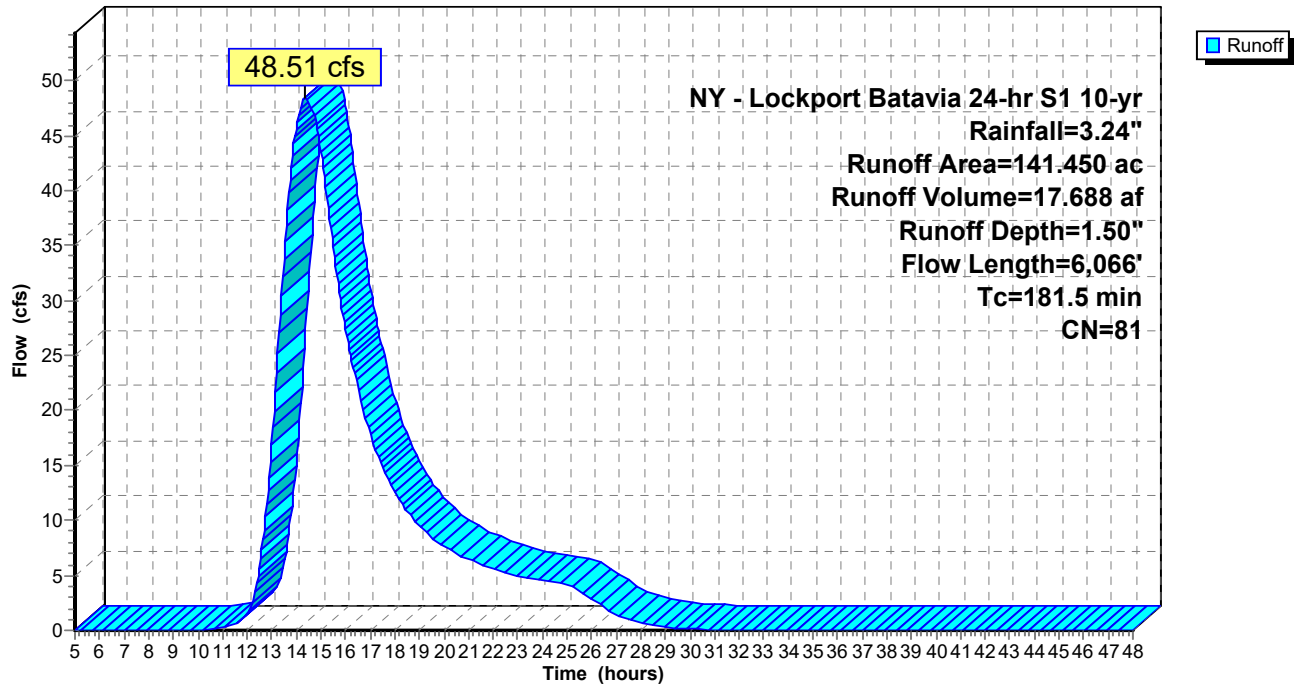
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

Area (ac)	CN	Description
* 0.152	98	D - 98 - Open Water
* 0.074	80	D - 80 - Developed open space
* 0.307	80	D - 80 - Developed open space
* 2.363	80	D - 80 - Developed open space
* 1.992	82	D - 82 - Developed Low intensity
* 1.726	82	D - 82 - Developed Low intensity
* 2.185	85	D - 85 - Developed Med intensity
* 0.875	77	D - 77 - Deciduous Forest
* 18.239	77	D - 77 - Deciduous Forest
* 13.242	77	D - 77 - Deciduous Forest
* 0.038	77	D - 77 - Evergreen Forest
* 0.919	77	D - 77 - Evergreen Forest
* 0.021	77	D - 77 - Evergreen Forest
* 0.508	77	D - 77 - Mixed Forest
* 0.889	77	D - 77 - Mixed Forest
* 0.160	77	D - 77 - Mixed Forest
* 4.266	78	D - 78 - Meadowed, grass, non-grazed land
* 29.357	78	D - 78 - Meadowed, grass, non-grazed land
* 22.896	78	D - 78 - Meadowed, grass, non-grazed land
* 0.112	78	D - 78 - Meadowed, grass, non-grazed land
* 5.915	78	D - 78 - Meadowed, grass, non-grazed land
* 5.016	90	D - 90 - Woody Wetlands
* 30.198	90	D - 90 - Woody Wetlands
141.450	81	Weighted Average
141.298		99.89% Pervious Area
0.152		0.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.7	100	0.0275	0.07		Sheet Flow, 100' Sheet Woods: Light underbrush n= 0.400 P2= 2.21"
31.2	1,144	0.0149	0.61		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
14.6	670	0.0026	0.76		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
12.9	328	0.0008	0.42		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
100.1	3,824	0.0018	0.64		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
181.5	6,066	Total			

Subcatchment 20S: DA 10

Hydrograph



DA 1-19

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Summary for Subcatchment 21S: DA 11

Runoff = 2.55 cfs @ 13.41 hrs, Volume= 0.622 af, Depth= 1.95"
Routed to Pond 6P : Culvert 011

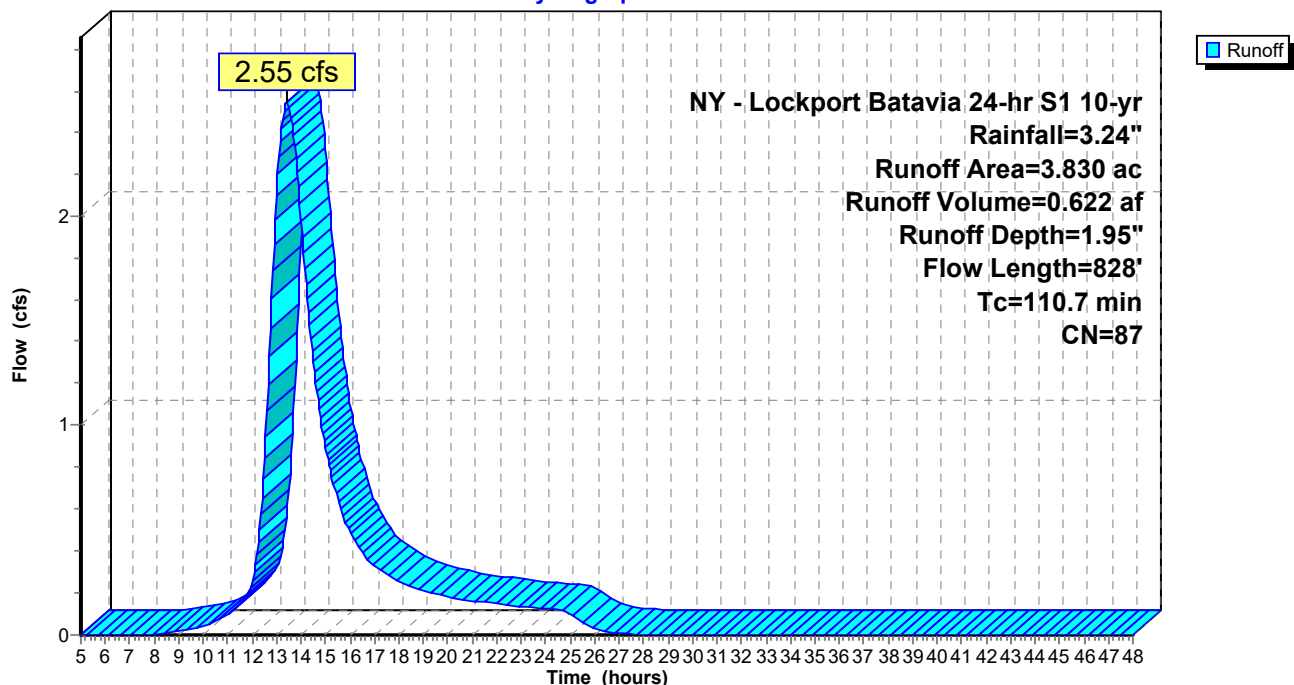
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

Area (ac)	CN	Description
* 0.183	80	D - 80 - Developed open space
* 0.651	82	D - 82 - Developed Low intensity
* 0.305	78	D - 78 - Meadowed, grass, non-grazed land
* 2.691	90	D - 90 - Woody Wetlands
3.830	87	Weighted Average
3.830		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.1	100	0.0425	0.09		Sheet Flow, 100' Sheet Woods: Light underbrush n= 0.400 P2= 2.21"
77.1	517	0.0005	0.11		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
14.5	211	0.0012	0.24		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
110.7	828	Total			

Subcatchment 21S: DA 11

Hydrograph



DA 1-19

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NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

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Summary for Subcatchment 23S: DA 13

Runoff = 5.52 cfs @ 12.71 hrs, Volume= 0.834 af, Depth= 1.72"
 Routed to Pond 12P : Culvert 013

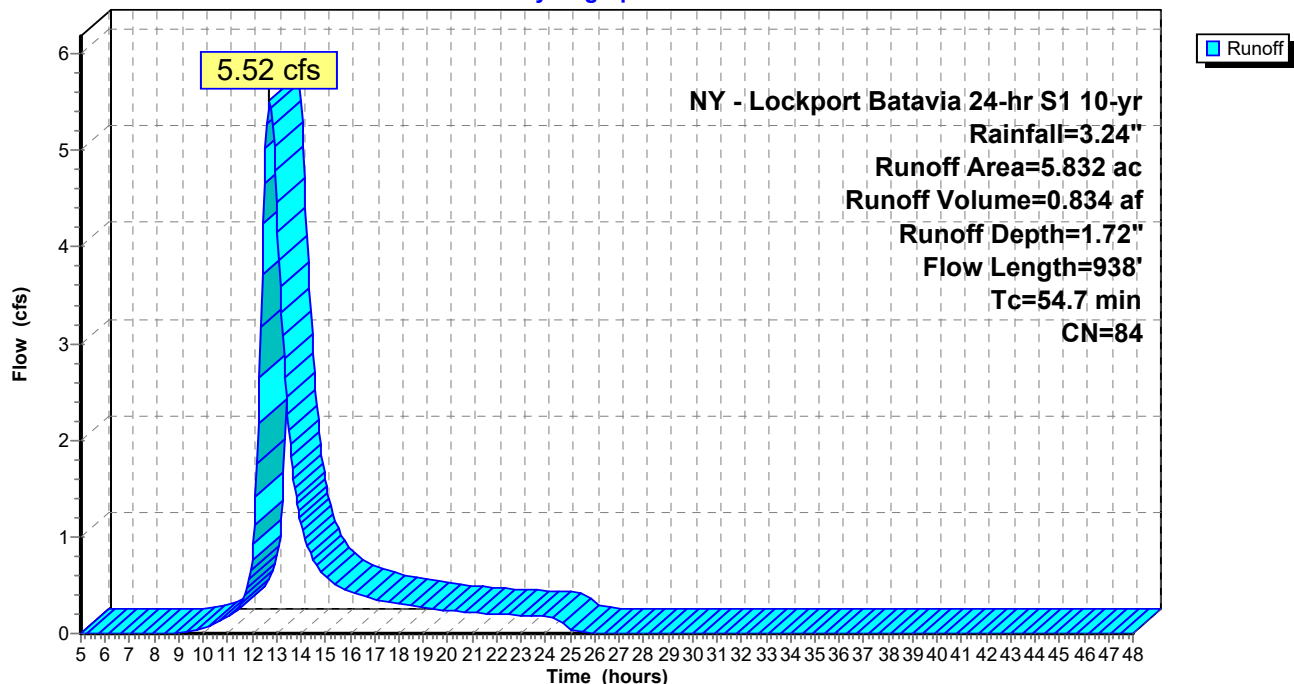
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

Area (ac)	CN	Description
* 0.222	77	D - 77 - Deciduous Forest
* 1.173	78	D - 78 - Meadowed, grass, non-grazed land
* 1.200	78	D - 78 - Meadowed, grass, non-grazed land
* 0.112	78	D - 78 - Meadowed, grass, non-grazed land
* 0.115	78	D - 78 - Meadowed, grass, non-grazed land
* 0.123	90	D - 90 - Woody Wetlands
* 2.887	90	D - 90 - Woody Wetlands
5.832	84	Weighted Average
5.832		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	100	0.0300	0.17		Sheet Flow, 100' Sheet
					Grass: Short n= 0.150 P2= 2.21"
44.7	838	0.0039	0.31		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
54.7	938	Total			

Subcatchment 23S: DA 13

Hydrograph



DA 1-19

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Summary for Subcatchment 24S: DA 14

Runoff = 9.11 cfs @ 12.74 hrs, Volume= 1.417 af, Depth= 1.37"
 Routed to Pond 7P : Culvert 014

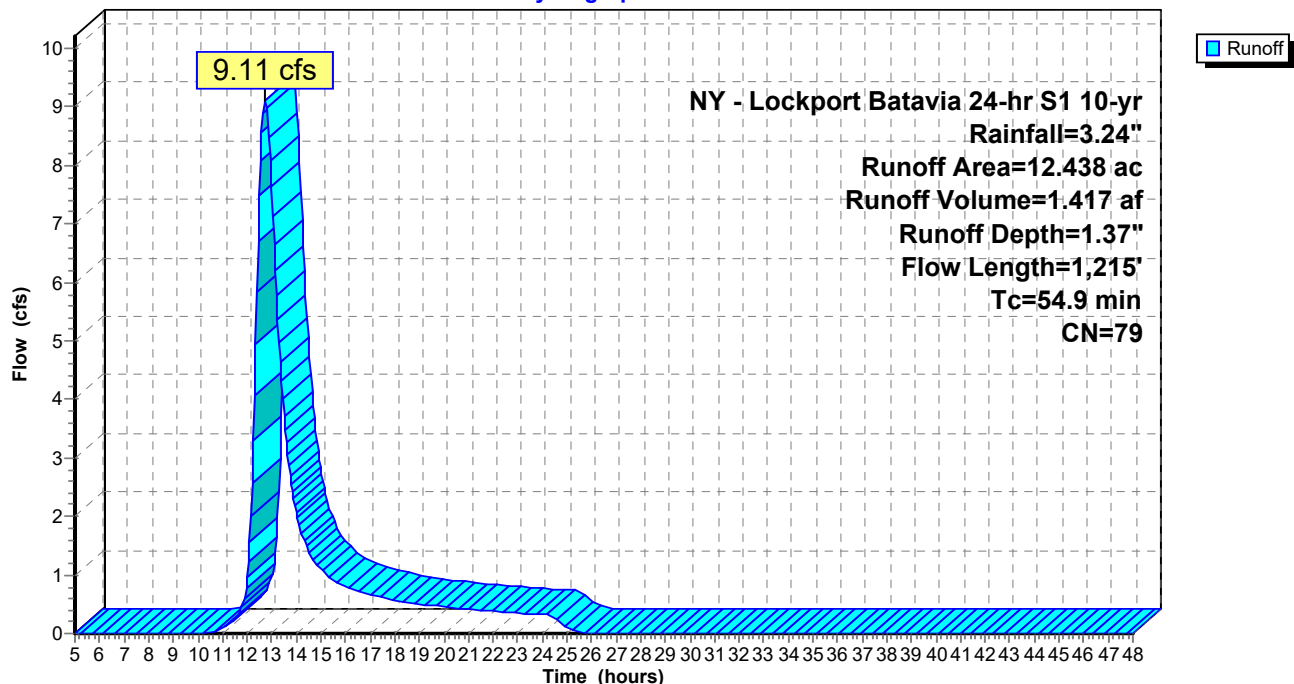
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

Area (ac)	CN	Description
* 0.143	80	D - 80 - Developed open space
* 0.461	80	D - 80 - Developed open space
* 1.014	82	D - 82 - Developed Low intensity
* 1.218	82	D - 82 - Developed Low intensity
* 0.081	77	D - 77 - Deciduous Forest
* 7.367	78	D - 78 - Meadowed, grass, non-grazed land
* 2.154	78	D - 78 - Meadowed, grass, non-grazed land
12.438	79	Weighted Average
12.438		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	100	0.0200	0.14		Sheet Flow, 100' sheet
					Grass: Short n= 0.150 P2= 2.21"
43.1	1,115	0.0038	0.43		Shallow Concentrated Flow,
					Short Grass Pasture Kv= 7.0 fps
54.9	1,215	Total			

Subcatchment 24S: DA 14

Hydrograph



DA 1-19

NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

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Summary for Subcatchment 25S: DA 15

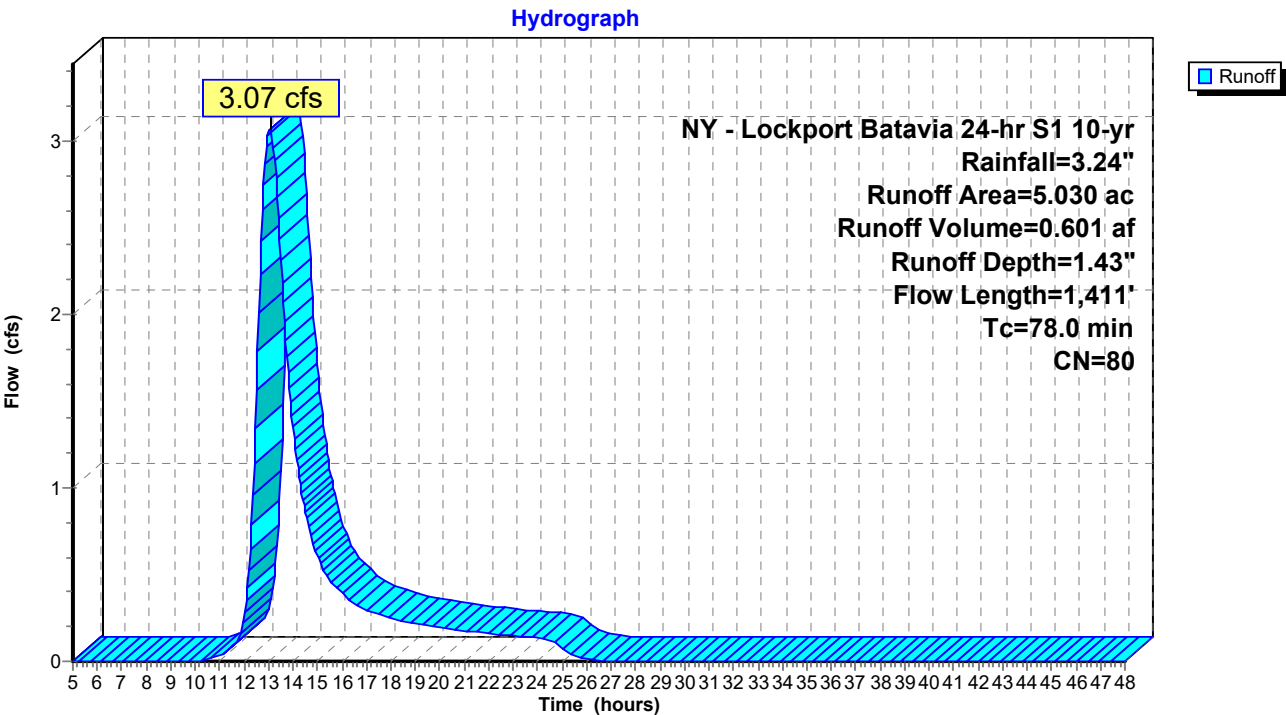
Runoff = 3.07 cfs @ 13.05 hrs, Volume= 0.601 af, Depth= 1.43"
 Routed to Pond 8P : Culvert 015

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

Area (ac)	CN	Description
* 0.345	80	D - 80 - Developed open space
* 0.249	80	D - 80 - Developed open space
* 0.809	80	D - 80 - Developed open space
* 0.107	82	D - 82 - Developed Low intensity
* 1.183	82	D - 82 - Developed Low intensity
* 0.330	78	D - 78 - Meadowed, grass, non-grazed land
* 0.809	78	D - 78 - Meadowed, grass, non-grazed land
* 1.198	78	D - 78 - Meadowed, grass, non-grazed land
5.030	80	Weighted Average
5.030		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.6	100	0.0100	0.11		Sheet Flow, 100' Sheet Grass: Short n= 0.150 P2= 2.21"
62.4	1,311	0.0025	0.35		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
78.0	1,411	Total			

Subcatchment 25S: DA 15



DA 1-19

NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

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Summary for Subcatchment 26S: DA 16

Runoff = 6.10 cfs @ 13.28 hrs, Volume= 1.361 af, Depth= 1.30"
 Routed to Pond 13P : Culvert 016

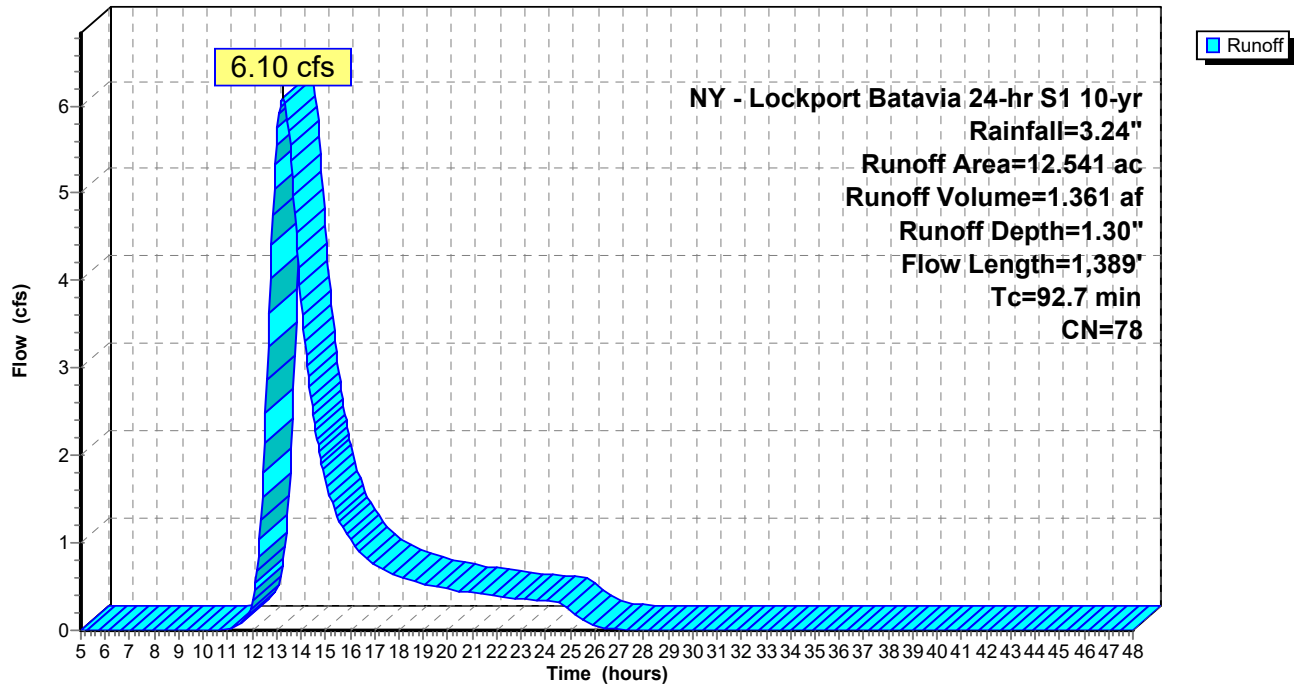
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

Area (ac)	CN	Description
* 0.003	80	D - 80 - Developed open space
* 1.259	77	D - 77 - Deciduous Forest
* 0.202	77	D - 77 - Deciduous Forest
* 0.926	78	D - 78 - Meadowed, grass, non-grazed land
* 3.759	78	D - 78 - Meadowed, grass, non-grazed land
* 6.392	78	D - 78 - Meadowed, grass, non-grazed land
12.541	78	Weighted Average
12.541		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.7	100	0.0225	0.07		Sheet Flow, 100' Sheet Woods: Light underbrush n= 0.400 P2= 2.21"
24.6	495	0.0045	0.34		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
43.4	794	0.0019	0.31		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
92.7	1,389	Total			

Subcatchment 26S: DA 16

Hydrograph



DA 1-19

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NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

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Summary for Subcatchment 28S: DA 18

Runoff = 4.30 cfs @ 13.33 hrs, Volume= 0.989 af, Depth= 1.30"
Routed to Pond 10P : Culvert 018

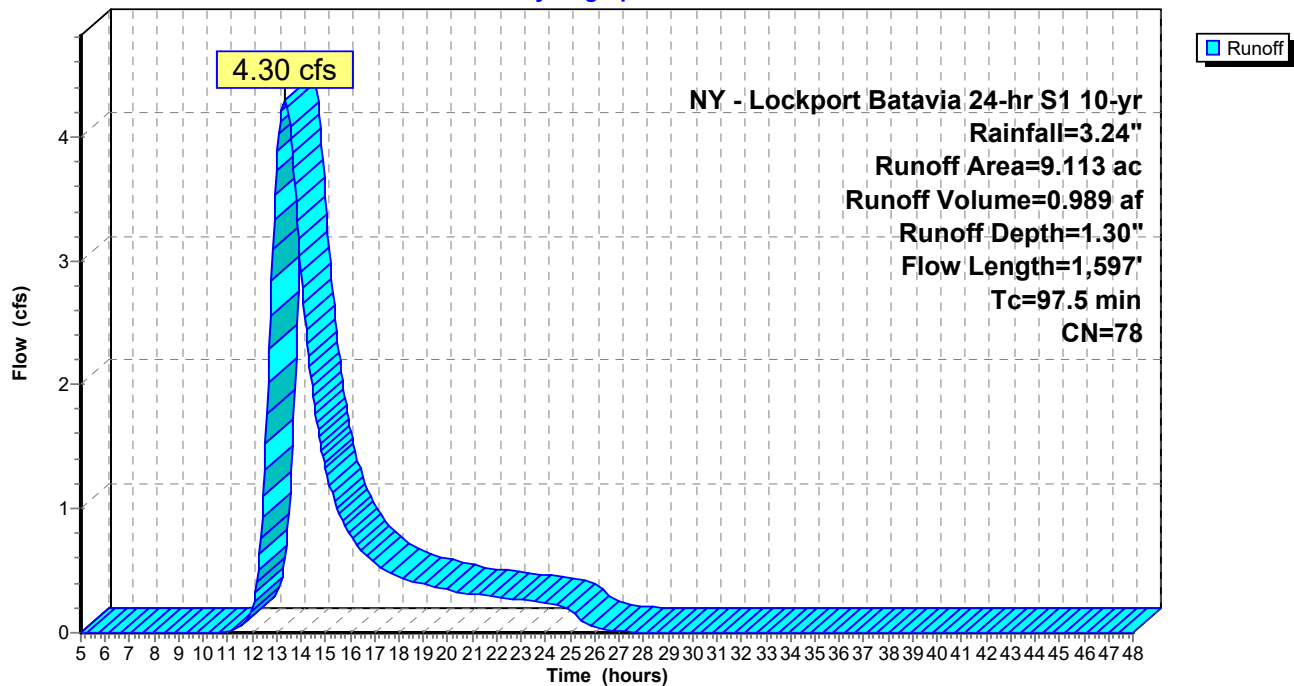
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

Area (ac)	CN	Description
* 3.755	77	D - 77 - Deciduous Forest
* 5.358	78	D - 78 - Meadowed, grass, non-grazed land
9.113	78	Weighted Average
9.113		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.1	100	0.0100	0.05		Sheet Flow, 100' Sheet Woods: Light underbrush n= 0.400 P2= 2.21"
63.4	1,497	0.0062	0.39		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
97.5	1,597	Total			

Subcatchment 28S: DA 18

Hydrograph



DA 1-19

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NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

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Summary for Subcatchment 29S: DA 19

Runoff = 0.33 cfs @ 12.15 hrs, Volume= 0.023 af, Depth= 1.43"
Routed to Pond 14P : Culvert 019

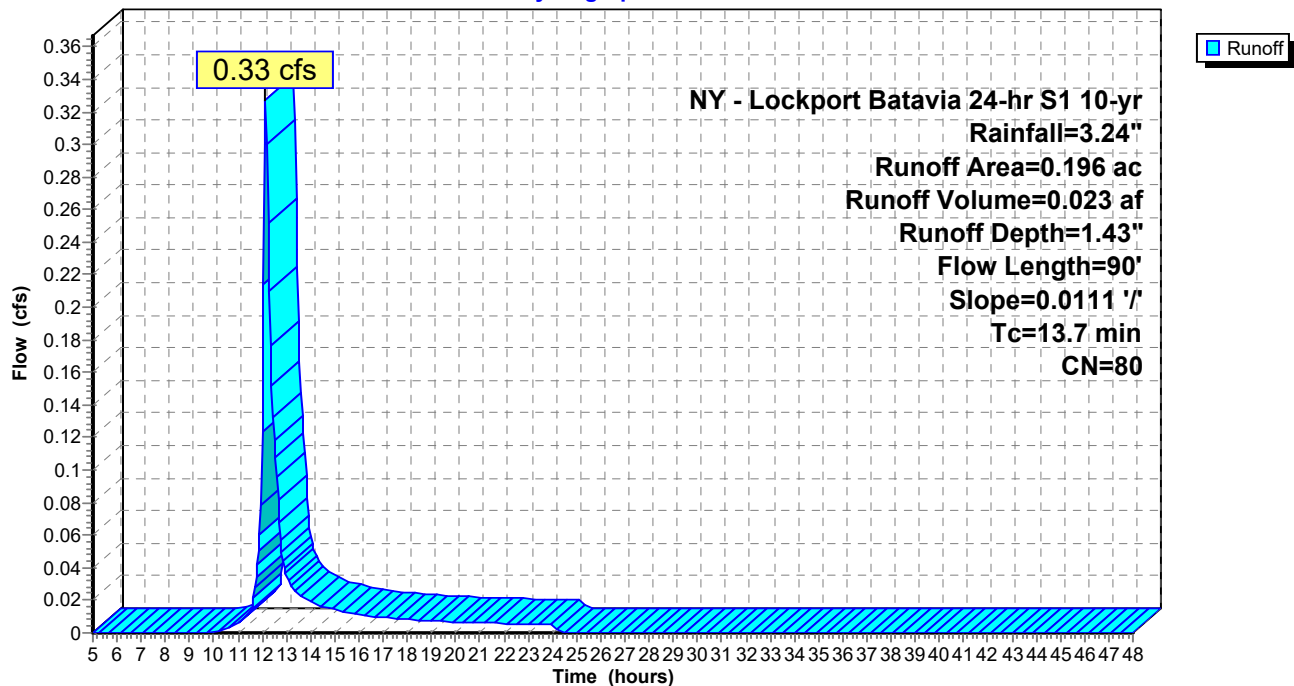
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

Area (ac)	CN	Description
* 0.195	80	D - 80 - Developed open space
* 0.001	78	D - 78 - Meadowed, grass, non-grazed land
0.196	80	Weighted Average
0.196		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	90	0.0111	0.11		Sheet Flow, 90' Sheet
Grass: Short n= 0.150 P2= 2.21"					

Subcatchment 29S: DA 19

Hydrograph



DA 1-19

Prepared by Fisher Associates

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NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

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Summary for Subcatchment 37S: DA 12

Runoff = 1.72 cfs @ 13.74 hrs, Volume= 0.487 af, Depth= 2.03"
Routed to Pond 11P : Culvert 012

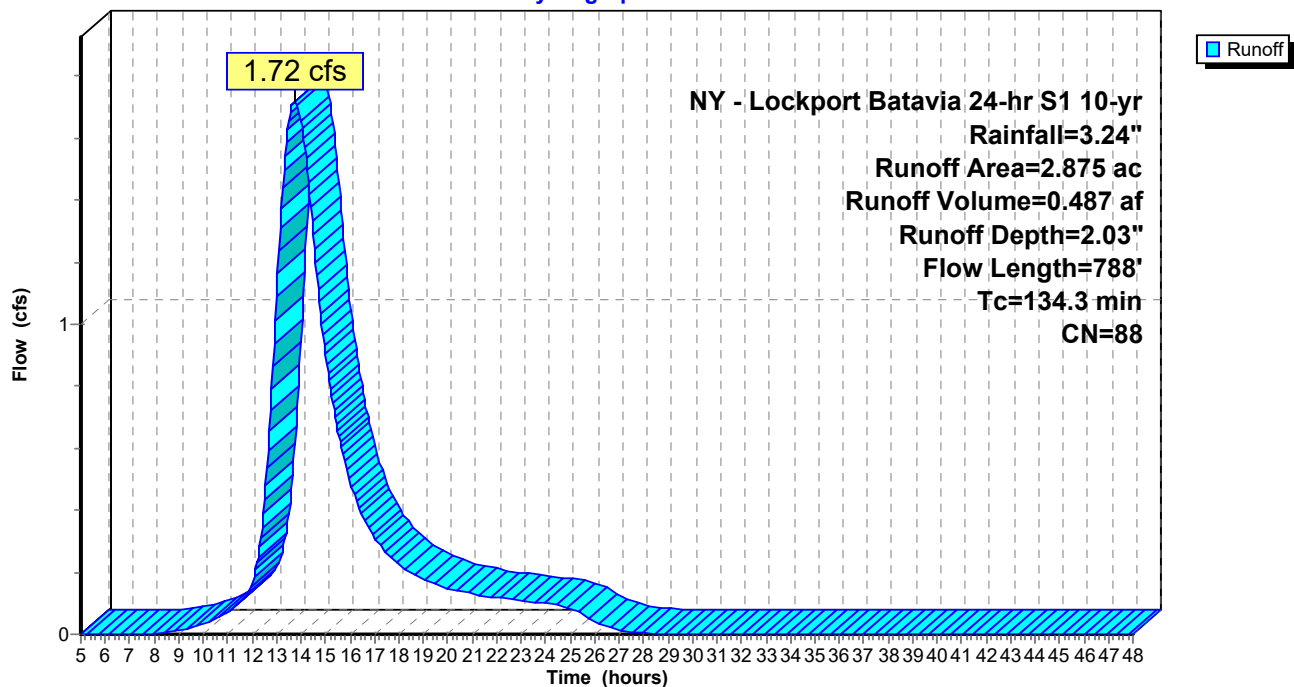
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

Area (ac)	CN	Description
* 0.052	78	D - 78 - Meadowed, grass, non-grazed land
* 0.450	78	D - 78 - Meadowed, grass, non-grazed land
* 2.373	90	D - 90 - Woody Wetlands
2.875	88	Weighted Average
2.875		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.6	100	0.0400	0.09		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.21"
114.7	688	0.0004	0.10		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
134.3	788	Total			

Subcatchment 37S: DA 12

Hydrograph



DA 1-19

NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

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Summary for Subcatchment 46S: DA 17

Runoff = 62.97 cfs @ 14.05 hrs, Volume= 19.886 af, Depth= 1.30"

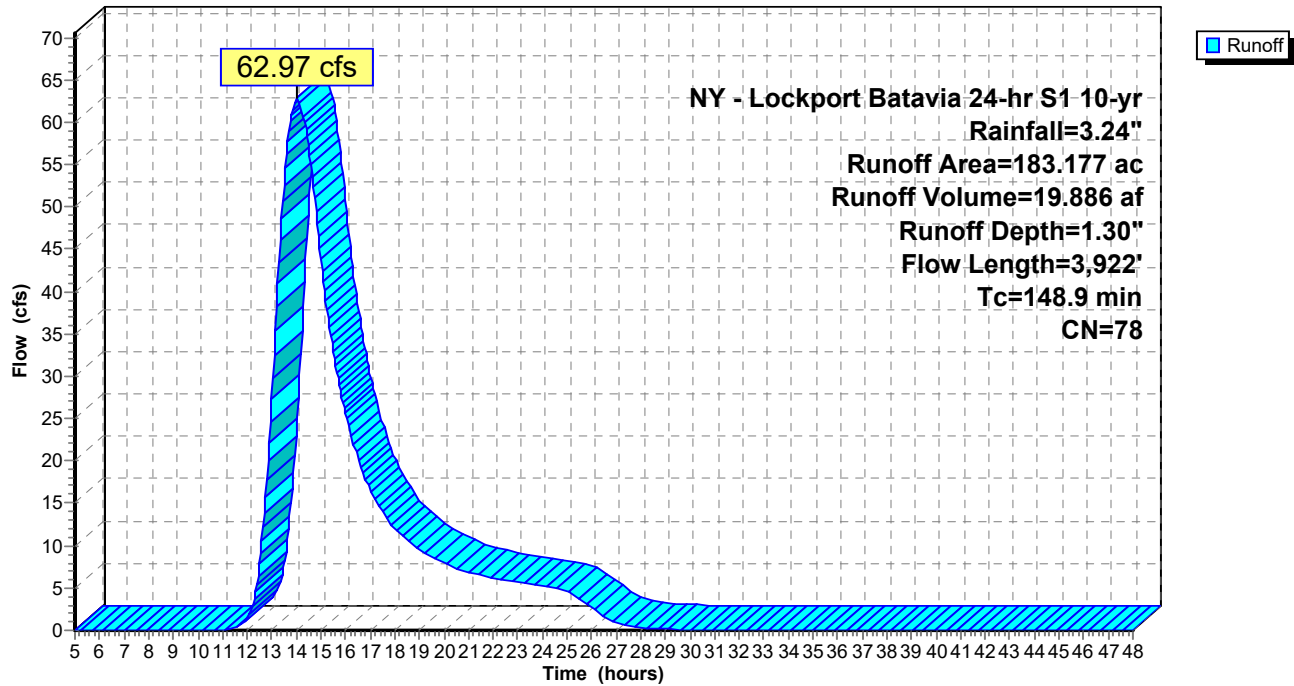
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport Batavia 24-hr S1 10-yr Rainfall=3.24"

Area (ac)	CN	Description
* 2.507	80	D - 80 - Developed open space
* 3.318	80	D - 80 - Developed open space
* 2.790	80	D - 80 - Developed open space
* 2.870	82	D - 82 - Developed Low intensity
* 4.979	82	D - 82 - Developed Low intensity
* 4.781	82	D - 82 - Developed Low intensity
* 0.152	85	D - 85 - Developed Med intensity
* 1.263	77	D - 77 - Deciduous Forest
* 3.431	77	D - 77 - Deciduous Forest
* 3.544	77	D - 77 - Deciduous Forest
* 14.732	78	D - 78 - Meadowed, grass, non-grazed land
* 59.055	78	D - 78 - Meadowed, grass, non-grazed land
* 79.755	78	D - 78 - Meadowed, grass, non-grazed land
183.177	78	Weighted Average
183.177		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.7	100	0.0350	0.08		Sheet Flow, 100' Sheet Woods: Light underbrush n= 0.400 P2= 2.21"
48.7	1,573	0.0116	0.54		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
62.0	1,276	0.0047	0.34		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
17.5	973	0.0038	0.92		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
148.9	3,922	Total			

Subcatchment 46S: DA 17

Hydrograph



Summary for Pond 6P: Culvert 011

[57] Hint: Peaked at 625.00' (Flood elevation advised)

Inflow Area = 3.830 ac, 0.00% Impervious, Inflow Depth = 1.95" for 10-yr event
 Inflow = 2.55 cfs @ 13.41 hrs, Volume= 0.622 af
 Outflow = 2.55 cfs @ 13.41 hrs, Volume= 0.622 af, Atten= 0%, Lag= 0.0 min
 Primary = 2.55 cfs @ 13.41 hrs, Volume= 0.622 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 625.00' @ 13.41 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	624.20'	18.0" Round Culvert 011 w/ 3.6" inside fill L= 33.4' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 623.90' / 623.70' S= 0.0060 ' S= 0.0060 ' Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	626.90'	100.0' long + 3.0 ' SideZ x 20.0' 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

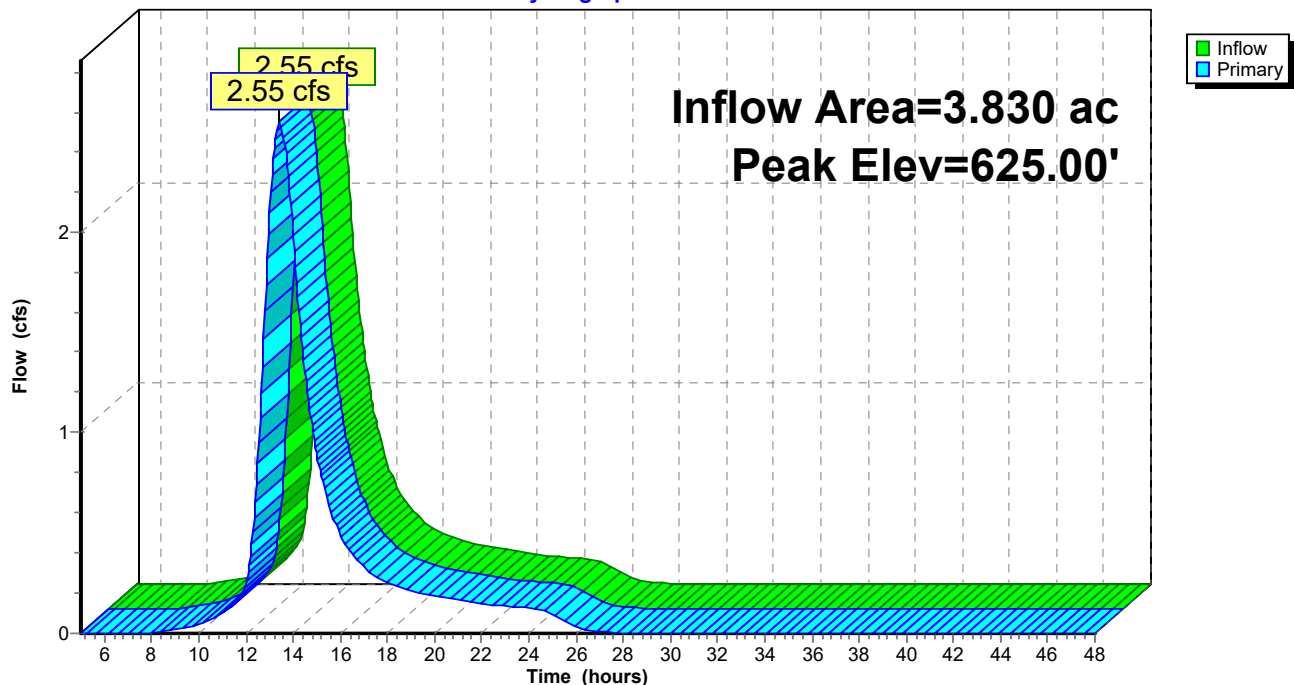
Primary OutFlow Max=2.54 cfs @ 13.41 hrs HW=625.00' (Free Discharge)

1=Culvert 011 (Inlet Controls 2.54 cfs @ 2.25 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 6P: Culvert 011

Hydrograph



Summary for Pond 7P: Culvert 014

[57] Hint: Peaked at 625.08' (Flood elevation advised)

Inflow Area = 12.438 ac, 0.00% Impervious, Inflow Depth = 1.37" for 10-yr event
 Inflow = 9.11 cfs @ 12.74 hrs, Volume= 1.417 af
 Outflow = 9.11 cfs @ 12.74 hrs, Volume= 1.417 af, Atten= 0%, Lag= 0.0 min
 Primary = 9.11 cfs @ 12.74 hrs, Volume= 1.417 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 625.08' @ 12.74 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	623.30'	24.0" Round Culvert 014 w/ 3.6" inside fill L= 46.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 623.00' / 622.95' S= 0.0011 '/' Cc= 0.900 n= 0.012, Flow Area= 2.85 sf
#2	Primary	626.50'	100.0' long + 3.0 '/' SideZ x 20.0' 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

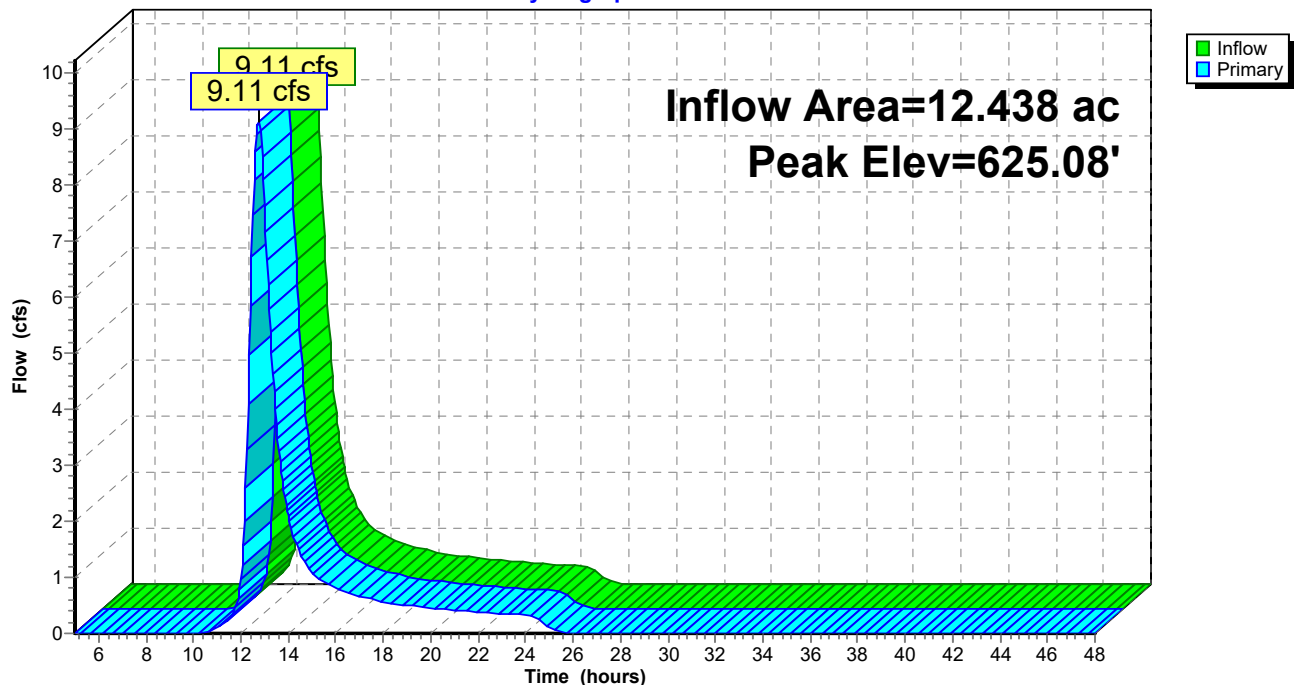
Primary OutFlow Max=9.10 cfs @ 12.74 hrs HW=625.08' (Free Discharge)

1=Culvert 014 (Barrel Controls 9.10 cfs @ 3.71 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 7P: Culvert 014

Hydrograph



Summary for Pond 8P: Culvert 015

[57] Hint: Peaked at 624.40' (Flood elevation advised)

Inflow Area = 5.030 ac, 0.00% Impervious, Inflow Depth = 1.43" for 10-yr event
 Inflow = 3.07 cfs @ 13.05 hrs, Volume= 0.601 af
 Outflow = 3.07 cfs @ 13.05 hrs, Volume= 0.601 af, Atten= 0%, Lag= 0.0 min
 Primary = 3.07 cfs @ 13.05 hrs, Volume= 0.601 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 624.40' @ 13.05 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	623.50'	18.0" Round Culvert 015 w/ 3.6" inside fill L= 46.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 623.20' / 622.90' S= 0.0065 ' S= 0.0065 ' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 1.52 sf
#2	Primary	626.20'	100.0' long + 3.0 ' SideZ x 20.0' 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

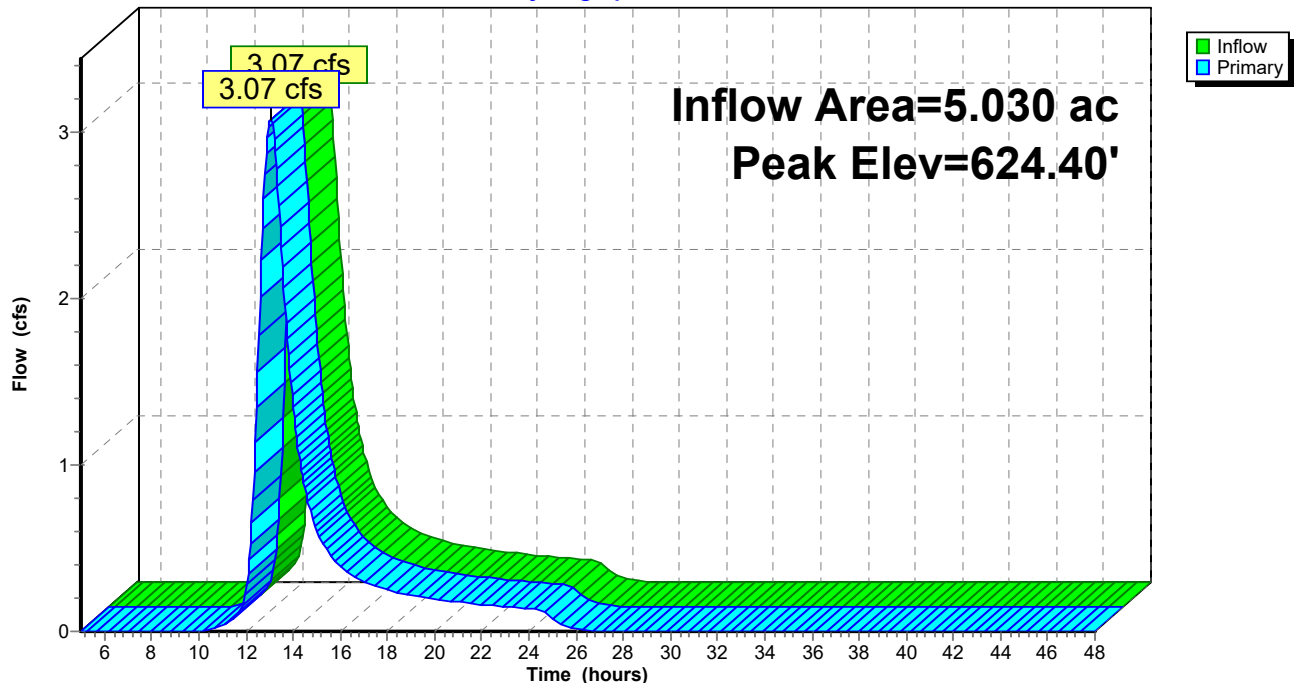
Primary OutFlow Max=3.07 cfs @ 13.05 hrs HW=624.40' (Free Discharge)

1=Culvert 015 (Inlet Controls 3.07 cfs @ 2.42 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 8P: Culvert 015

Hydrograph



Summary for Pond 9P: (Culvert 017)

Check culvert master for updated sizing

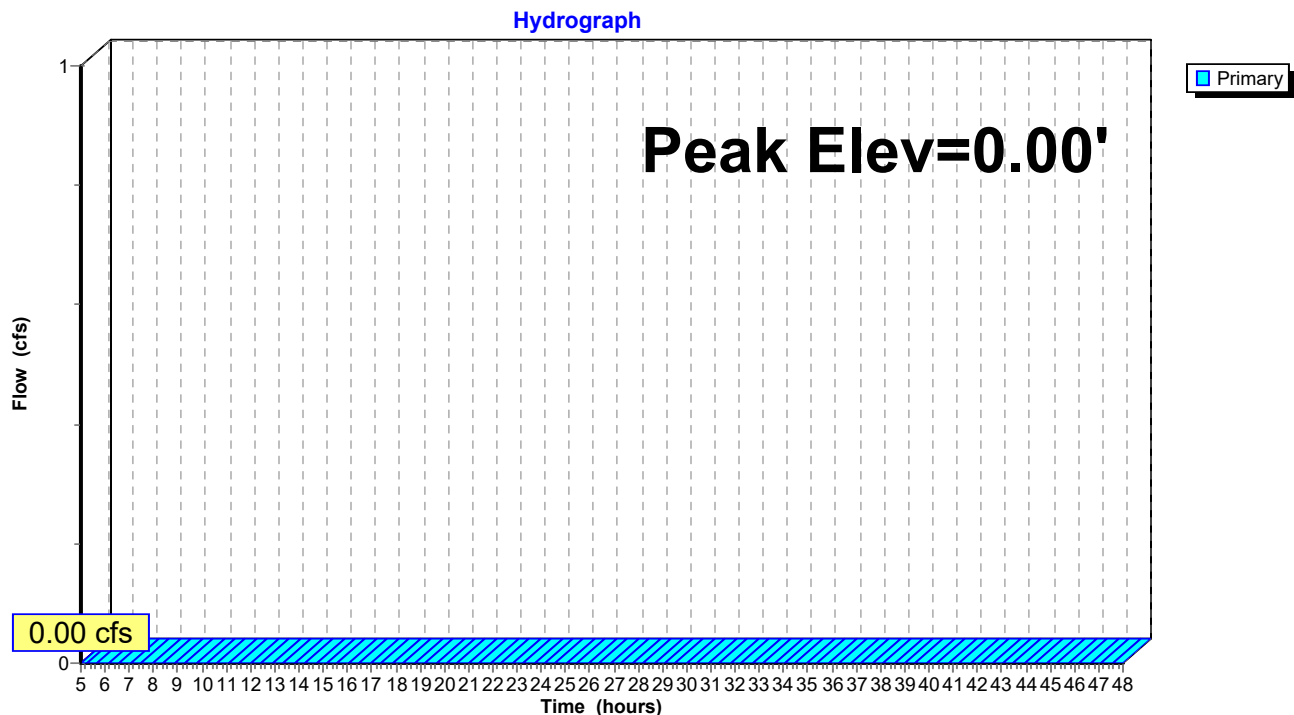
[43] Hint: Has no inflow (Outflow=Zero)

Device	Routing	Invert	Outlet Devices
#1	Primary	621.70'	198.0" Round Culvert 017 w/ 39.6" inside fill L= 34.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 618.40' / 618.30' S= 0.0029 ' S Cc= 0.900 n= 0.012, Flow Area= 183.38 sf
#2	Primary	623.20'	100.0' long + 3.0 ' SideZ x 20.0' 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=0.00 cfs @ 5.00 hrs HW=0.00' (Free Discharge)

1=Culvert 017 (Controls 0.00 cfs)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 9P: (Culvert 017)

Summary for Pond 10P: Culvert 018

[57] Hint: Peaked at 624.91' (Flood elevation advised)

Inflow Area = 9.113 ac, 0.00% Impervious, Inflow Depth = 1.30" for 10-yr event
 Inflow = 4.30 cfs @ 13.33 hrs, Volume= 0.989 af
 Outflow = 4.30 cfs @ 13.33 hrs, Volume= 0.989 af, Atten= 0%, Lag= 0.0 min
 Primary = 4.30 cfs @ 13.33 hrs, Volume= 0.989 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 624.91' @ 13.33 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	623.75'	18.0" Round Culvert 018 w/ 3.6" inside fill L= 38.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 623.45' / 622.45' S= 0.0263 ' S= 0.0263 ' Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	626.45'	100.0' long + 3.0 ' SideZ x 20.0' 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

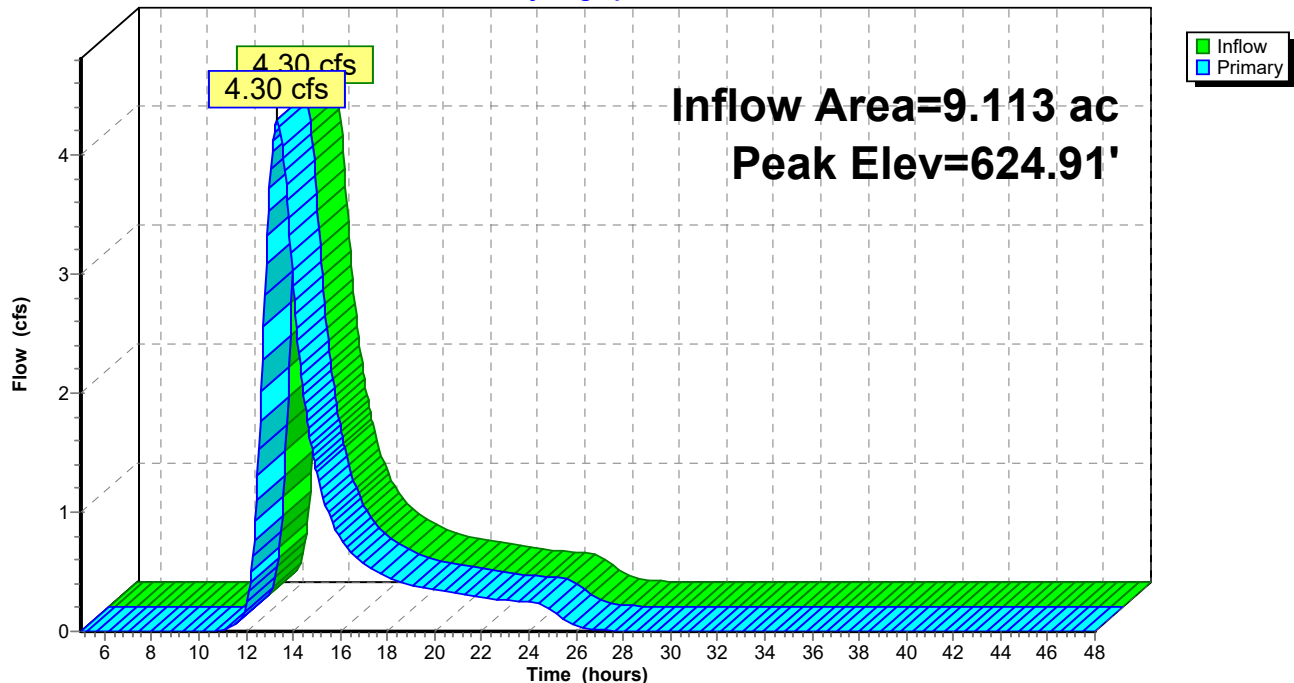
Primary OutFlow Max=4.30 cfs @ 13.33 hrs HW=624.91' (Free Discharge)

1=Culvert 018 (Inlet Controls 4.30 cfs @ 2.86 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 10P: Culvert 018

Hydrograph



Summary for Pond 11P: Culvert 012

[57] Hint: Peaked at 624.80' (Flood elevation advised)

Inflow Area = 2.875 ac, 0.00% Impervious, Inflow Depth = 2.03" for 10-yr event
 Inflow = 1.72 cfs @ 13.74 hrs, Volume= 0.487 af
 Outflow = 1.72 cfs @ 13.74 hrs, Volume= 0.487 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.72 cfs @ 13.74 hrs, Volume= 0.487 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 624.80' @ 13.74 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	624.15'	18.0" Round Culvert 012 w/ 3.6" inside fill L= 38.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 623.85' / 623.75' S= 0.0026 ' S= 0.0026 ' Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	626.85'	100.0' long + 3.0 ' SideZ x 20.0' 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

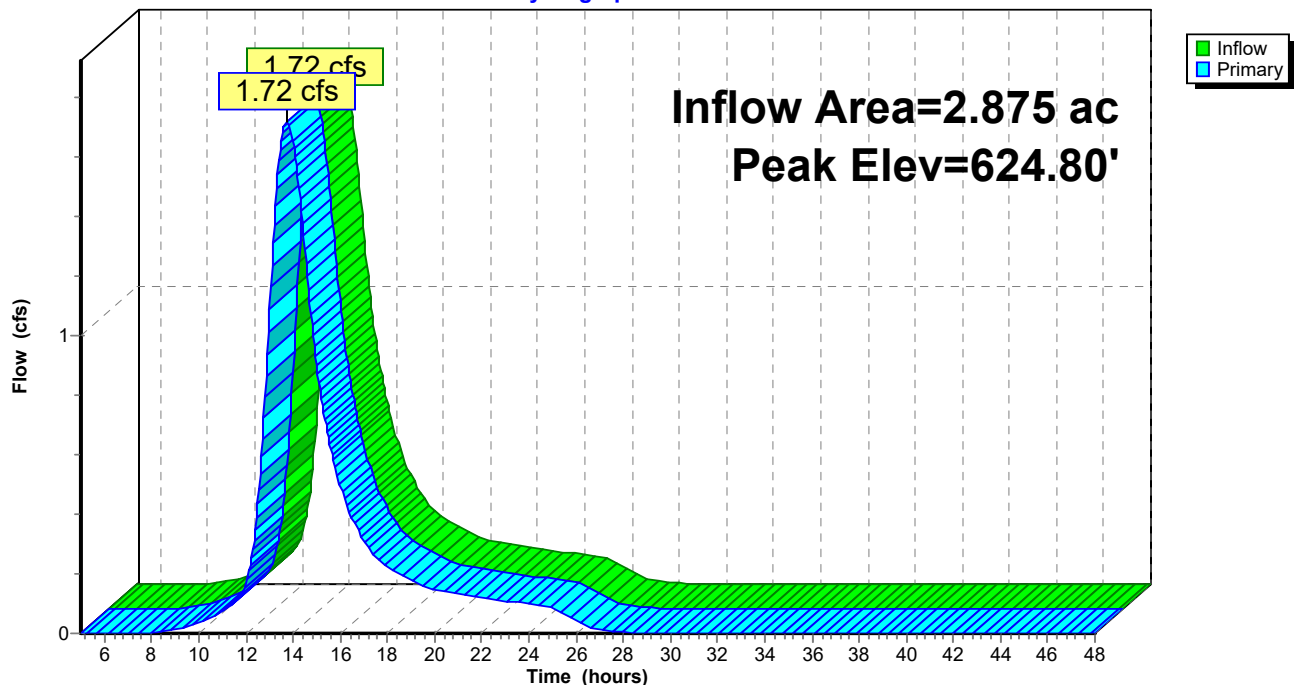
Primary OutFlow Max=1.72 cfs @ 13.74 hrs HW=624.80' (Free Discharge)

1=Culvert 012 (Barrel Controls 1.72 cfs @ 2.51 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 11P: Culvert 012

Hydrograph



Summary for Pond 12P: Culvert 013

[57] Hint: Peaked at 625.69' (Flood elevation advised)

Inflow Area = 5.832 ac, 0.00% Impervious, Inflow Depth = 1.72" for 10-yr event
 Inflow = 5.52 cfs @ 12.71 hrs, Volume= 0.834 af
 Outflow = 5.52 cfs @ 12.71 hrs, Volume= 0.834 af, Atten= 0%, Lag= 0.0 min
 Primary = 5.52 cfs @ 12.71 hrs, Volume= 0.834 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 625.69' @ 12.71 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	624.20'	18.0" Round Culvert 013 w/ 3.6" inside fill L= 38.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 623.90' / 623.55' S= 0.0091 ' S= 0.0091 ' Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	626.90'	100.0' long + 3.0 ' SideZ x 20.0' 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

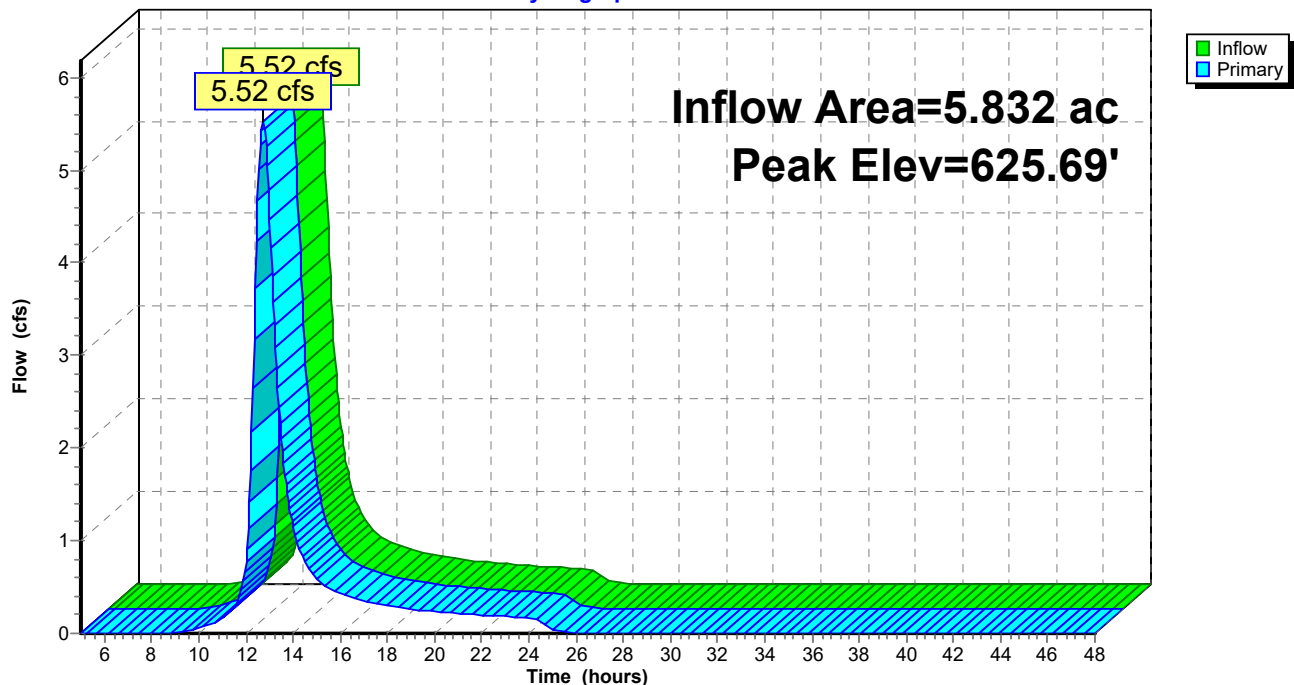
Primary OutFlow Max=5.51 cfs @ 12.71 hrs HW=625.69' (Free Discharge)

1=Culvert 013 (Inlet Controls 5.51 cfs @ 3.63 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 12P: Culvert 013

Hydrograph



Summary for Pond 13P: Culvert 016

[57] Hint: Peaked at 624.89' (Flood elevation advised)

Inflow Area = 12.541 ac, 0.00% Impervious, Inflow Depth = 1.30" for 10-yr event
 Inflow = 6.10 cfs @ 13.28 hrs, Volume= 1.361 af
 Outflow = 6.10 cfs @ 13.28 hrs, Volume= 1.361 af, Atten= 0%, Lag= 0.0 min
 Primary = 6.10 cfs @ 13.28 hrs, Volume= 1.361 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 624.89' @ 13.28 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	623.20'	18.0" Round Culvert 016 w/ 3.6" inside fill L= 38.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 622.90' / 622.67' S= 0.0060 ' S= 0.0060 ' Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	625.90'	100.0' long + 3.0 ' SideZ x 20.0' 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

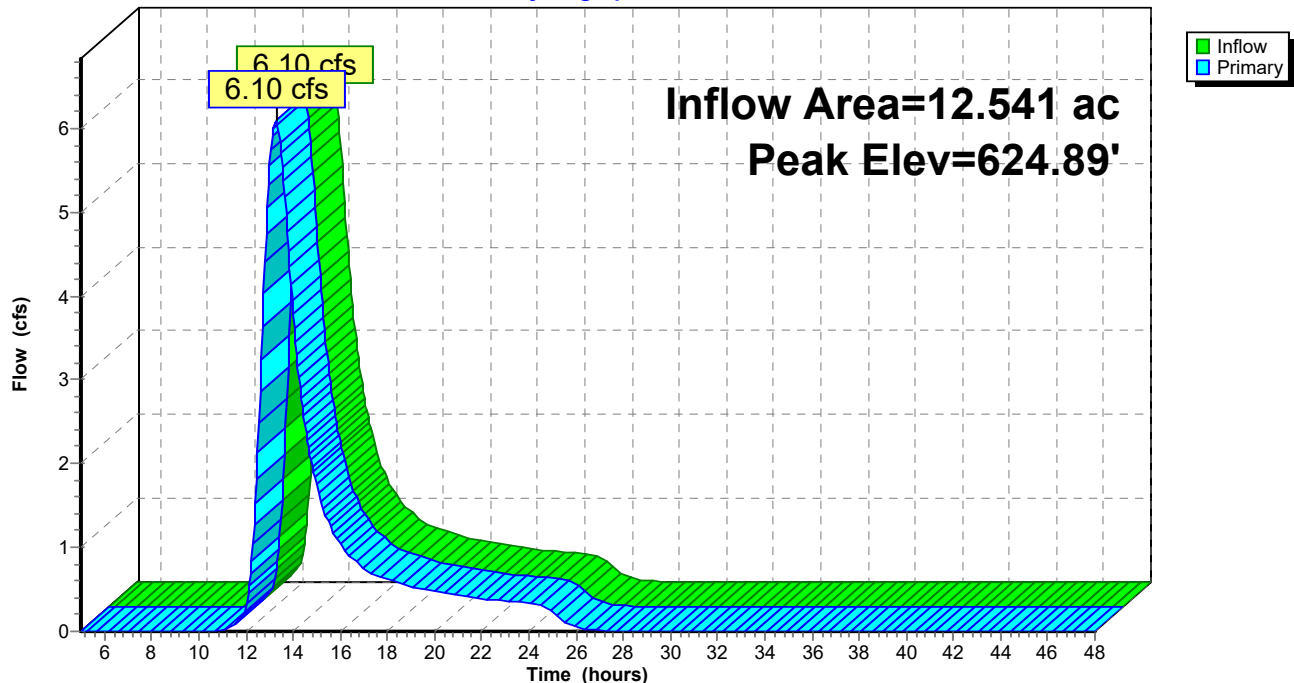
Primary OutFlow Max=6.09 cfs @ 13.28 hrs HW=624.89' (Free Discharge)

1=Culvert 016 (Inlet Controls 6.09 cfs @ 4.02 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 13P: Culvert 016

Hydrograph



Summary for Pond 14P: Culvert 019

[57] Hint: Peaked at 619.61' (Flood elevation advised)

Inflow Area = 0.196 ac, 0.00% Impervious, Inflow Depth = 1.43" for 10-yr event
 Inflow = 0.33 cfs @ 12.15 hrs, Volume= 0.023 af
 Outflow = 0.33 cfs @ 12.15 hrs, Volume= 0.023 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.33 cfs @ 12.15 hrs, Volume= 0.023 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 619.61' @ 12.15 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	619.40'	18.0" Round Culvert 019 w/ 3.6" inside fill L= 46.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 619.10' / 618.40' S= 0.0152 ' S Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	622.40'	100.0' long + 3.0 ' SideZ x 20.0' 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

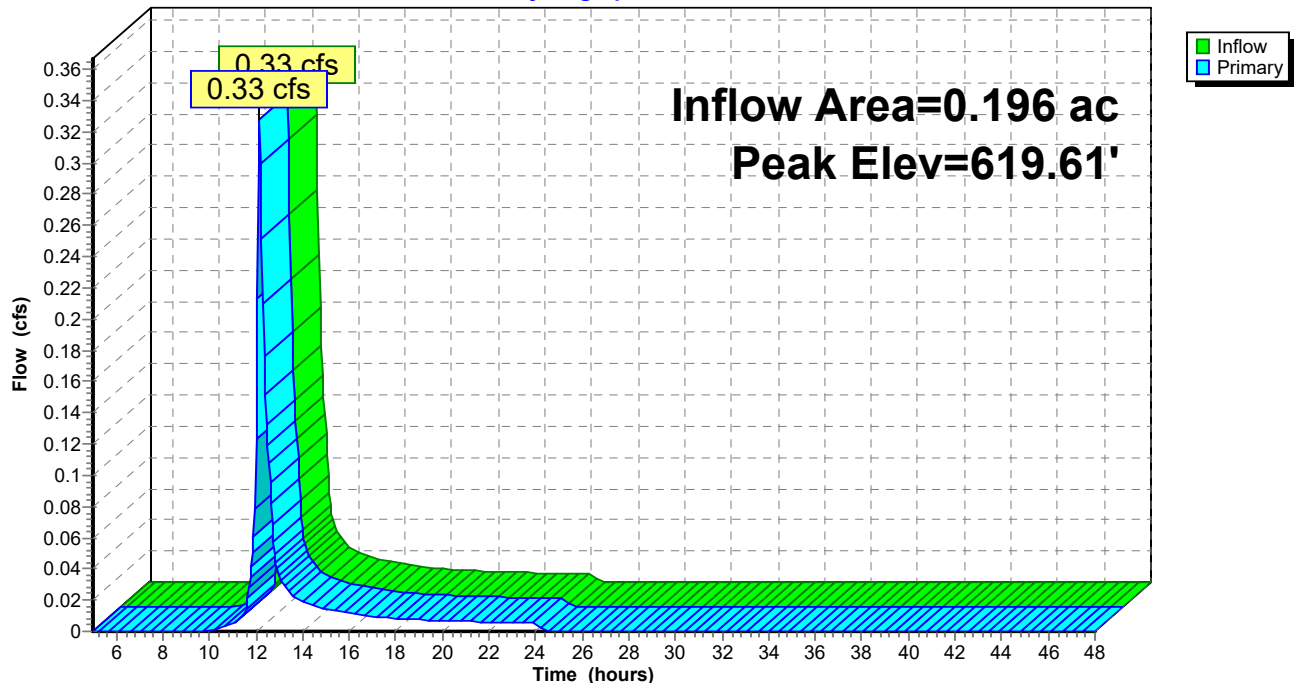
Primary OutFlow Max=0.33 cfs @ 12.15 hrs HW=619.61' (Free Discharge)

1=Culvert 019 (Inlet Controls 0.33 cfs @ 1.15 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 14P: Culvert 019

Hydrograph



Summary for Pond 31P: Culvert 007

[57] Hint: Peaked at 618.11' (Flood elevation advised)

Inflow Area = 9.445 ac, 0.00% Impervious, Inflow Depth = 1.43" for 10-yr event
 Inflow = 12.63 cfs @ 12.26 hrs, Volume= 1.128 af
 Outflow = 12.63 cfs @ 12.26 hrs, Volume= 1.128 af, Atten= 0%, Lag= 0.0 min
 Primary = 12.63 cfs @ 12.26 hrs, Volume= 1.128 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 618.11' @ 12.26 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	615.83'	24.0" Round Culvert 007 w/ 4.8" inside fill L= 22.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 615.43' / 614.85' S= 0.0264 ' S= 0.0264 ' Cc= 0.900 n= 0.012, Flow Area= 2.69 sf
#2	Primary	618.93'	100.0' long + 3.0 ' SideZ x 20.0' 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

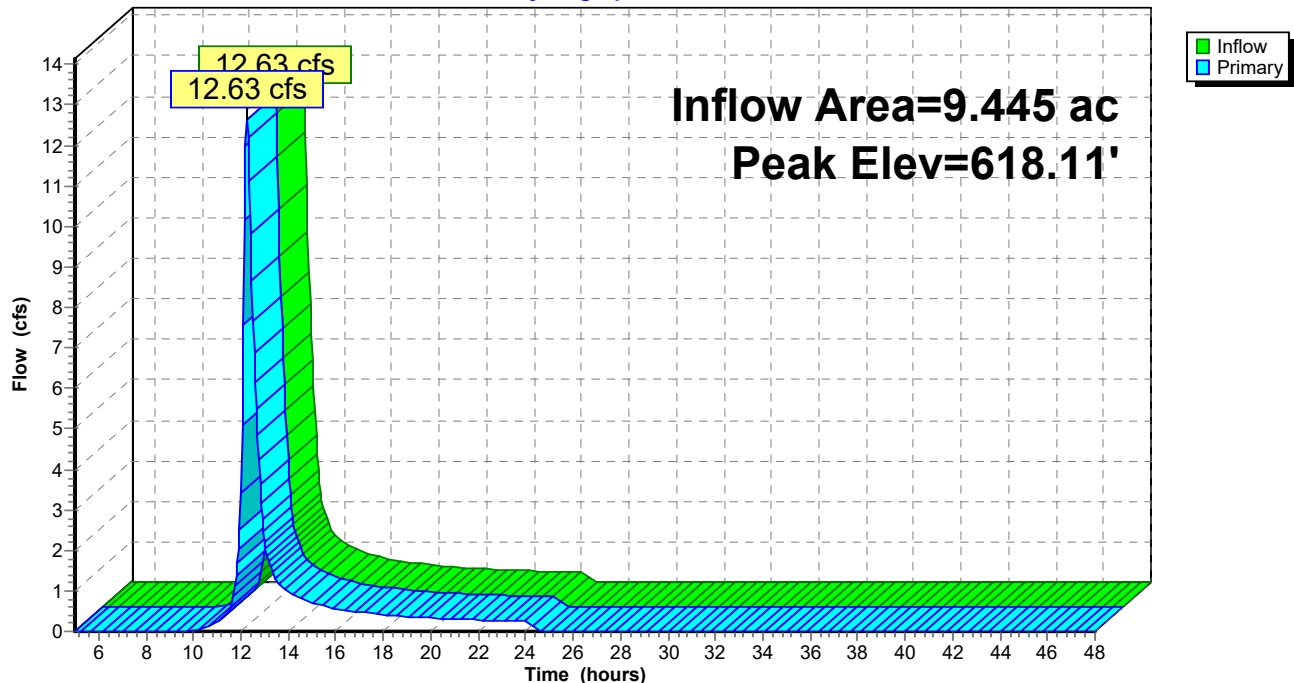
Primary OutFlow Max=12.58 cfs @ 12.26 hrs HW=618.10' (Free Discharge)

1=Culvert 007 (Inlet Controls 12.58 cfs @ 4.67 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 31P: Culvert 007

Hydrograph



Summary for Pond 32P: Culvert 008

[57] Hint: Peaked at 617.26' (Flood elevation advised)

Inflow Area = 5.077 ac, 0.00% Impervious, Inflow Depth = 1.50" for 10-yr event
 Inflow = 5.87 cfs @ 12.38 hrs, Volume= 0.635 af
 Outflow = 5.87 cfs @ 12.38 hrs, Volume= 0.635 af, Atten= 0%, Lag= 0.0 min
 Primary = 5.87 cfs @ 12.38 hrs, Volume= 0.635 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 617.26' @ 12.38 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	615.65'	18.0" Round Culvert 008 w/ 3.6" inside fill L= 47.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 615.35' / 615.00' S= 0.0074 ' S= 0.0074 ' Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	618.35'	100.0' long + 3.0 ' SideZ x 20.0' 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

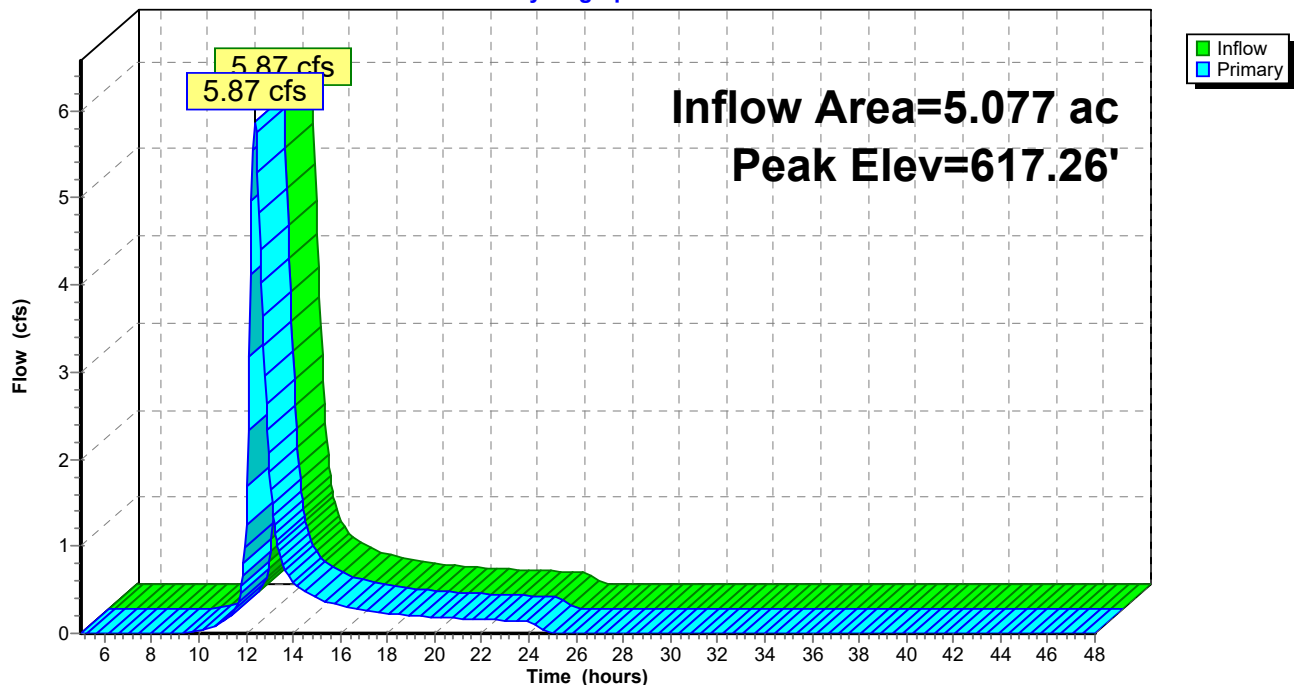
Primary OutFlow Max=5.85 cfs @ 12.38 hrs HW=617.25' (Free Discharge)

1=Culvert 008 (Inlet Controls 5.85 cfs @ 3.86 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 32P: Culvert 008

Hydrograph



Summary for Pond 33P: (Culvert 010)

Check culvert master for updated sizing

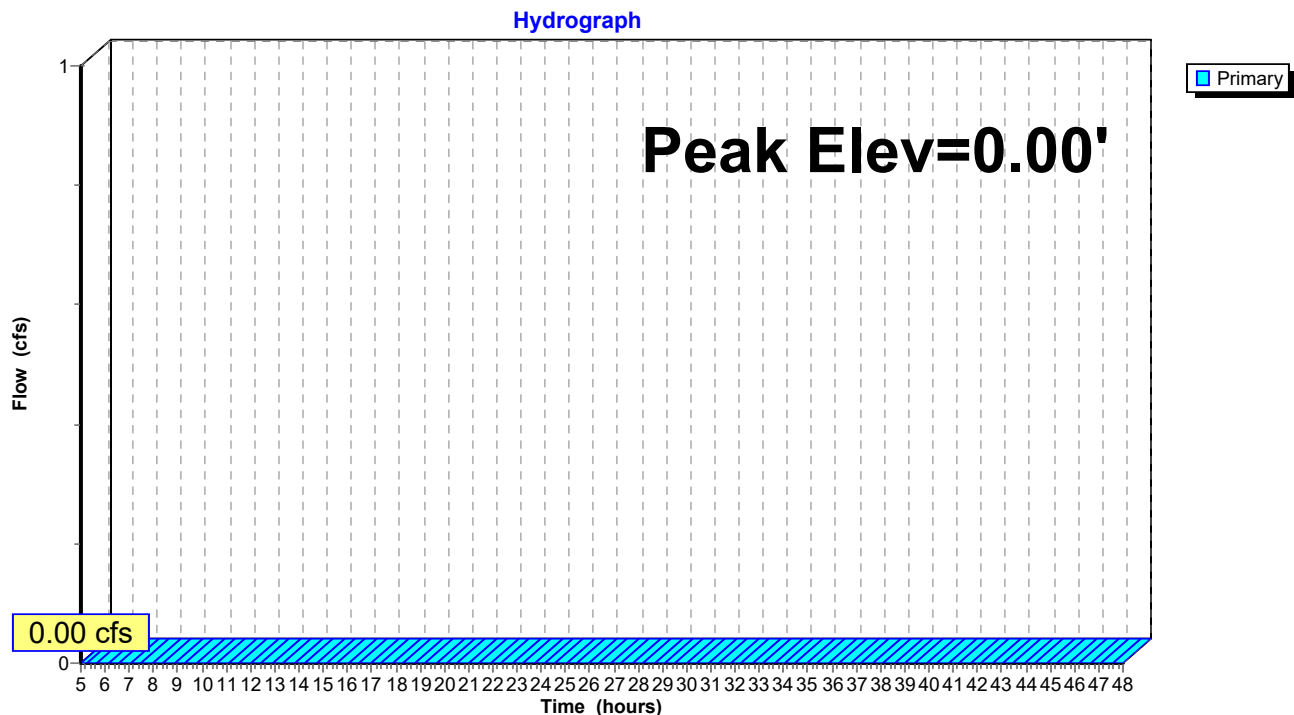
[43] Hint: Has no inflow (Outflow=Zero)

Device	Routing	Invert	Outlet Devices
#1	Primary	621.85'	126.0" Round Culvert 009 w/ 25.2" inside fill L= 45.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 619.75' / 619.25' S= 0.0110 ' S Cc= 0.900 n= 0.012, Flow Area= 74.26 sf
#2	Primary	623.35'	100.0' long + 3.0 ' SideZ x 20.0' 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=0.00 cfs @ 5.00 hrs HW=0.00' (Free Discharge)

1=Culvert 009 (Controls 0.00 cfs)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 33P: (Culvert 010)

Summary for Pond 34P: Culvert 001

[57] Hint: Peaked at 624.23' (Flood elevation advised)

Inflow Area = 13.622 ac, 0.00% Impervious, Inflow Depth = 1.30" for 10-yr event
 Inflow = 16.33 cfs @ 12.26 hrs, Volume= 1.479 af
 Outflow = 16.33 cfs @ 12.26 hrs, Volume= 1.479 af, Atten= 0%, Lag= 0.0 min
 Primary = 16.33 cfs @ 12.26 hrs, Volume= 1.479 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 624.23' @ 12.26 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	622.20'	30.0" Round Culvert 001 w/ 6.0" inside fill L= 34.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 621.70' / 621.05' S= 0.0191 ' / ' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 4.21 sf
#2	Primary	625.20'	100.0' long + 3.0 ' SideZ x 20.0' 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

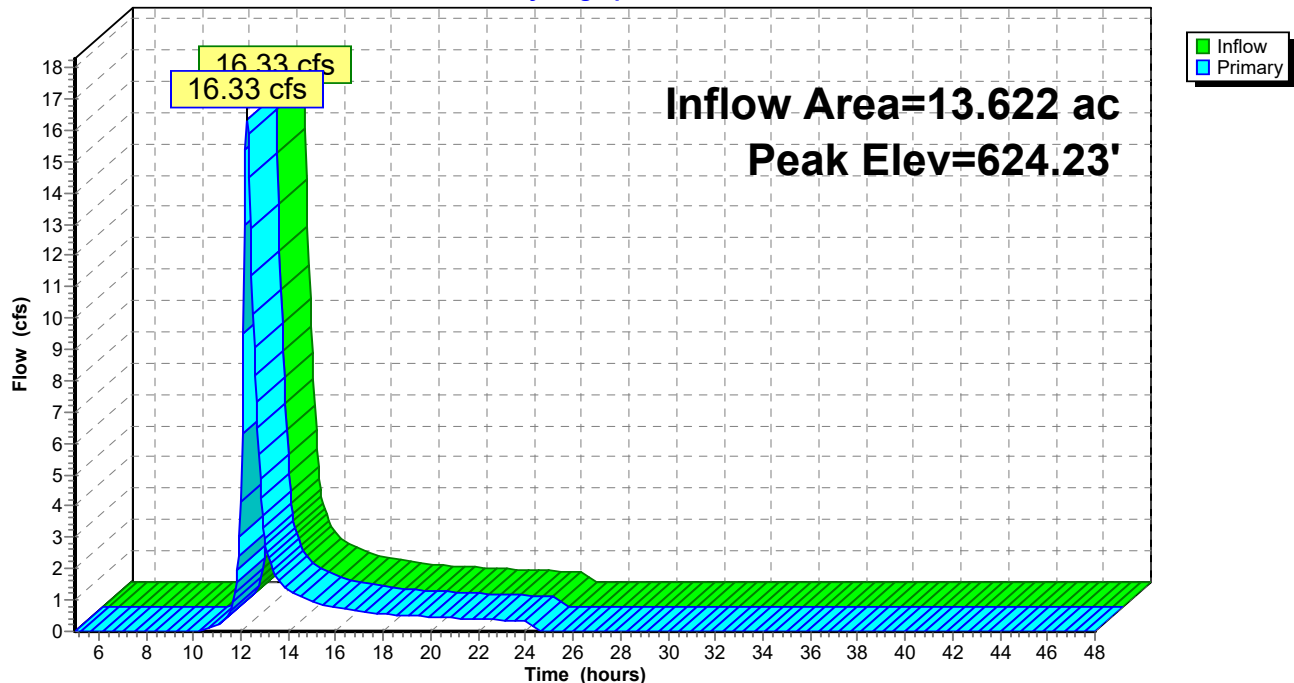
Primary OutFlow Max=16.24 cfs @ 12.26 hrs HW=624.22' (Free Discharge)

1=Culvert 001 (Inlet Controls 16.24 cfs @ 3.86 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 34P: Culvert 001

Hydrograph



Summary for Pond 35P: Culvert 002-005

[57] Hint: Peaked at 630.97' (Flood elevation advised)

Inflow Area = 3.251 ac, 0.00% Impervious, Inflow Depth = 1.64" for 10-yr event
 Inflow = 7.81 cfs @ 12.07 hrs, Volume= 0.445 af
 Outflow = 7.81 cfs @ 12.07 hrs, Volume= 0.445 af, Atten= 0%, Lag= 0.0 min
 Primary = 7.81 cfs @ 12.07 hrs, Volume= 0.445 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 630.97' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	630.30'	18.0" Round Culvert 002-005 X 4.00 w/ 3.6" inside fill L= 29.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 630.00' / 628.90' S= 0.0379 ' /' Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	633.00'	100.0' long + 3.0 ' /' SideZ x 20.0' 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

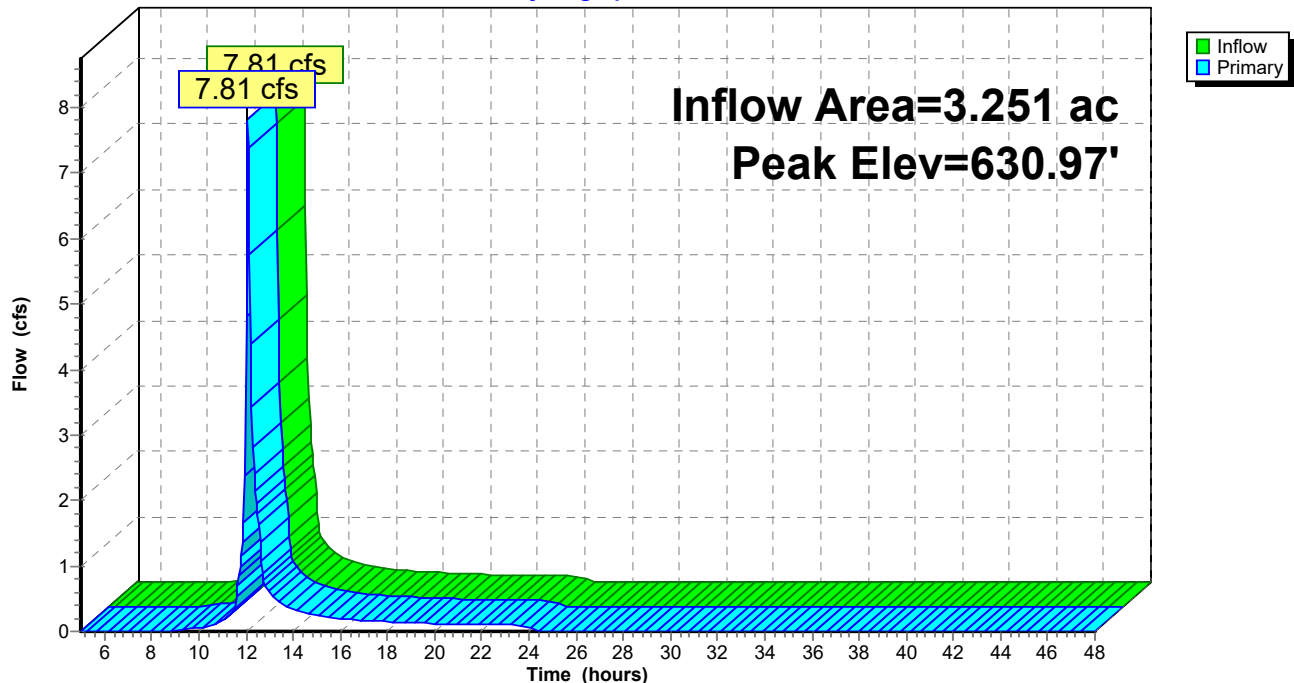
Primary OutFlow Max=7.46 cfs @ 12.07 hrs HW=630.95' (Free Discharge)

1=Culvert 002-005 (Inlet Controls 7.46 cfs @ 2.01 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 35P: Culvert 002-005

Hydrograph



Summary for Pond 36P: Culvert 009

[57] Hint: Peaked at 616.51' (Flood elevation advised)

Inflow Area = 0.301 ac, 0.00% Impervious, Inflow Depth = 1.43" for 10-yr event
 Inflow = 0.33 cfs @ 12.39 hrs, Volume= 0.036 af
 Outflow = 0.33 cfs @ 12.39 hrs, Volume= 0.036 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.33 cfs @ 12.39 hrs, Volume= 0.036 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 616.51' @ 12.39 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	616.30'	18.0" Round Culvert 009 w/ 3.6" inside fill L= 46.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 616.00' / 615.75' S= 0.0054 ' S= 0.0054 ' Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	619.00'	100.0' long + 3.0 ' SideZ x 20.0' 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

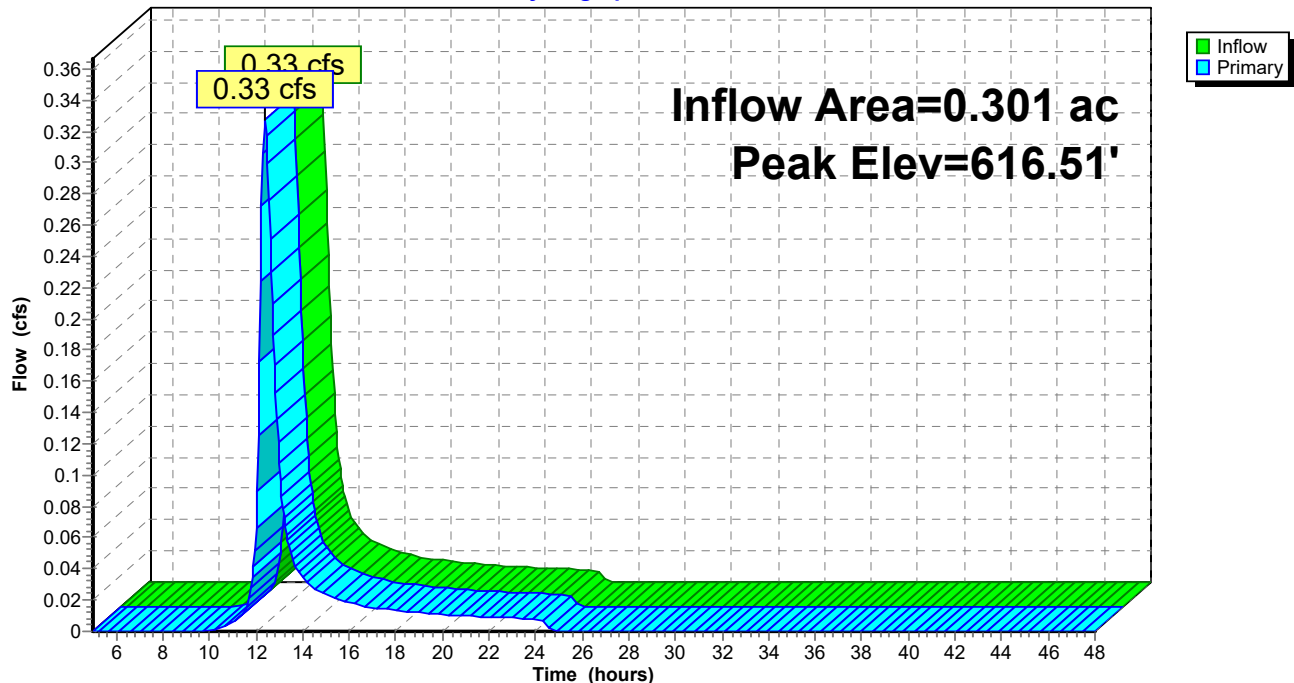
Primary OutFlow Max=0.33 cfs @ 12.39 hrs HW=616.51' (Free Discharge)

1=Culvert 009 (Inlet Controls 0.33 cfs @ 1.15 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 36P: Culvert 009

Hydrograph



DA 1-19

NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

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Time span=5.00-48.00 hrs, dt=0.05 hrs, 861 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment15S: DA 1	Runoff Area=13.622 ac 0.00% Impervious Runoff Depth=2.61" Flow Length=968' Tc=21.2 min CN=78 Runoff=35.06 cfs 2.963 af
Subcatchment16S: DA 2-5	Runoff Area=3.251 ac 0.00% Impervious Runoff Depth=3.07" Flow Length=403' Tc=8.5 min CN=83 Runoff=15.28 cfs 0.831 af
Subcatchment17S: DA 7	Runoff Area=9.445 ac 0.00% Impervious Runoff Depth=2.79" Flow Length=888' Tc=21.2 min CN=80 Runoff=26.05 cfs 2.195 af
Subcatchment18S: DA 8	Runoff Area=5.077 ac 0.00% Impervious Runoff Depth=2.88" Flow Length=924' Tc=30.2 min CN=81 Runoff=11.89 cfs 1.218 af
Subcatchment19S: DA 9	Runoff Area=0.301 ac 0.00% Impervious Runoff Depth=2.79" Flow Length=251' Tc=30.7 min CN=80 Runoff=0.68 cfs 0.070 af
Subcatchment20S: DA 10	Runoff Area=141.450 ac 0.11% Impervious Runoff Depth=2.88" Flow Length=6,066' Tc=181.5 min CN=81 Runoff=97.88 cfs 33.943 af
Subcatchment21S: DA 11	Runoff Area=3.830 ac 0.00% Impervious Runoff Depth=3.45" Flow Length=828' Tc=110.7 min CN=87 Runoff=4.65 cfs 1.103 af
Subcatchment23S: DA 13	Runoff Area=5.832 ac 0.00% Impervious Runoff Depth=3.16" Flow Length=938' Tc=54.7 min CN=84 Runoff=10.58 cfs 1.536 af
Subcatchment24S: DA 14	Runoff Area=12.438 ac 0.00% Impervious Runoff Depth=2.70" Flow Length=1,215' Tc=54.9 min CN=79 Runoff=19.08 cfs 2.797 af
Subcatchment25S: DA 15	Runoff Area=5.030 ac 0.00% Impervious Runoff Depth=2.79" Flow Length=1,411' Tc=78.0 min CN=80 Runoff=6.32 cfs 1.169 af
Subcatchment26S: DA 16	Runoff Area=12.541 ac 0.00% Impervious Runoff Depth=2.61" Flow Length=1,389' Tc=92.7 min CN=78 Runoff=13.00 cfs 2.728 af
Subcatchment28S: DA 18	Runoff Area=9.113 ac 0.00% Impervious Runoff Depth=2.61" Flow Length=1,597' Tc=97.5 min CN=78 Runoff=9.17 cfs 1.982 af
Subcatchment29S: DA 19	Runoff Area=0.196 ac 0.00% Impervious Runoff Depth=2.79" Flow Length=90' Slope=0.0111 '/' Tc=13.7 min CN=80 Runoff=0.68 cfs 0.046 af
Subcatchment37S: DA 12	Runoff Area=2.875 ac 0.00% Impervious Runoff Depth=3.56" Flow Length=788' Tc=134.3 min CN=88 Runoff=3.08 cfs 0.852 af
Subcatchment46S: DA 17	Runoff Area=183.177 ac 0.00% Impervious Runoff Depth=2.61" Flow Length=3,922' Tc=148.9 min CN=78 Runoff=133.72 cfs 39.843 af
Pond 6P: Culvert 011	Peak Elev=625.44' Inflow=4.65 cfs 1.103 af Outflow=4.65 cfs 1.103 af

DA 1-19*NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"*

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Pond 7P: Culvert 014	Peak Elev=626.54' Inflow=19.08 cfs 2.797 af Outflow=19.08 cfs 2.797 af
Pond 8P: Culvert 015	Peak Elev=625.27' Inflow=6.32 cfs 1.169 af Outflow=6.32 cfs 1.169 af
Pond 9P: (Culvert 017)	Peak Elev=0.00' Primary=0.00 cfs 0.000 af
Pond 10P: Culvert 018	Peak Elev=626.47' Inflow=9.17 cfs 1.982 af Outflow=9.17 cfs 1.982 af
Pond 11P: Culvert 012	Peak Elev=625.12' Inflow=3.08 cfs 0.852 af Outflow=3.08 cfs 0.852 af
Pond 12P: Culvert 013	Peak Elev=626.94' Inflow=10.58 cfs 1.536 af Outflow=10.58 cfs 1.536 af
Pond 13P: Culvert 016	Peak Elev=625.96' Inflow=13.00 cfs 2.728 af Outflow=13.00 cfs 2.728 af
Pond 14P: Culvert 019	Peak Elev=619.74' Inflow=0.68 cfs 0.046 af Outflow=0.68 cfs 0.046 af
Pond 31P: Culvert 007	Peak Elev=619.04' Inflow=26.05 cfs 2.195 af Outflow=26.05 cfs 2.195 af
Pond 32P: Culvert 008	Peak Elev=618.40' Inflow=11.89 cfs 1.218 af Outflow=11.89 cfs 1.218 af
Pond 33P: (Culvert 010)	Peak Elev=0.00' Primary=0.00 cfs 0.000 af
Pond 34P: Culvert 001	Peak Elev=625.32' Inflow=35.06 cfs 2.963 af Outflow=35.06 cfs 2.963 af
Pond 35P: Culvert 002-005	Peak Elev=631.36' Inflow=15.28 cfs 0.831 af Outflow=15.28 cfs 0.831 af
Pond 36P: Culvert 009	Peak Elev=616.64' Inflow=0.68 cfs 0.070 af Outflow=0.68 cfs 0.070 af

Total Runoff Area = 408.178 ac Runoff Volume = 93.274 af Average Runoff Depth = 2.74"
99.96% Pervious = 408.026 ac 0.04% Impervious = 0.152 ac

DA 1-19

NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

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Summary for Subcatchment 15S: DA 1

Runoff = 35.06 cfs @ 12.25 hrs, Volume= 2.963 af, Depth= 2.61"
 Routed to Pond 34P : Culvert 001

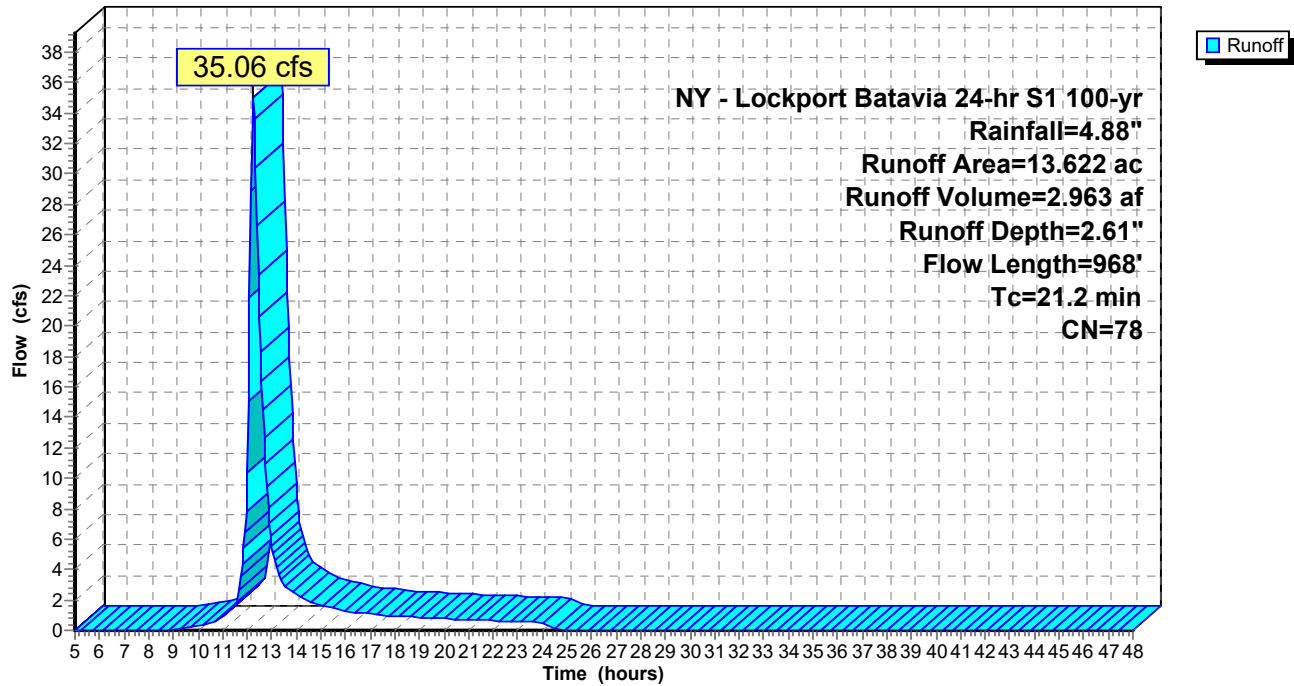
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

Area (ac)	CN	Description
* 0.134	39	A - 39 - Developed open space
* 0.938	46	A - 46 - Developed Low intensity
* 0.065	54	A - 54 - Developed Med intensity
* 0.064	30	A - 30 - Deciduous Forest
* 0.063	30	A - 30 - Meadowed, grass, non-grazed land
* 0.293	80	D - 80 - Developed open space
* 1.950	82	D - 82 - Developed Low intensity
* 0.320	85	D - 85 - Developed Med intensity
* 0.105	77	D - 77 - Deciduous Forest
* 0.497	78	D - 78 - Meadowed, grass, non-grazed land
* 1.157	80	D - 80 - Developed open space
* 4.870	82	D - 82 - Developed Low intensity
* 0.999	85	D - 85 - Developed Med intensity
* 2.167	78	D - 78 - Meadowed, grass, non-grazed land
13.622	78	Weighted Average
13.622		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	100	0.0125	0.95		Sheet Flow, 100' Sheet Smooth surfaces n= 0.011 P2= 2.21"
4.1	180	0.0013	0.73		Shallow Concentrated Flow, Paved Kv= 20.3 fps
4.3	300	0.0033	1.17		Shallow Concentrated Flow, Paved Kv= 20.3 fps
6.7	200	0.0050	0.49		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
4.3	188	0.0106	0.72		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
21.2	968	Total			

Subcatchment 15S: DA 1

Hydrograph



DA 1-19

NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

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Summary for Subcatchment 16S: DA 2-5

Runoff = 15.28 cfs @ 12.07 hrs, Volume= 0.831 af, Depth= 3.07"
 Routed to Pond 35P : Culvert 002-005

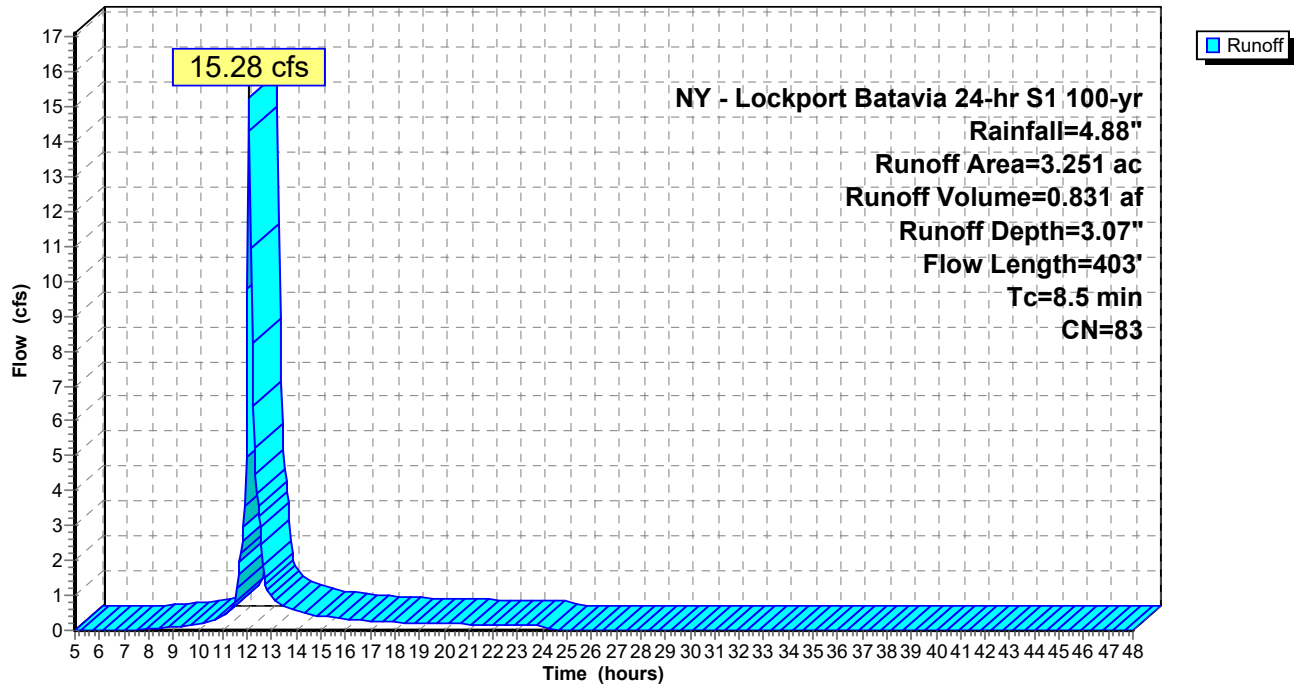
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

Area (ac)	CN	Description
* 0.854	80	D - 80 - Developed open space
* 0.145	82	D - 82 - Developed Low intensity
* 0.111	85	D - 85 - Developed Med intensity
* 0.124	80	D - 80 - Developed open space
* 0.018	82	D - 82 - Developed Low intensity
* 0.270	85	D - 85 - Developed Med intensity
* 0.894	80	D - 80 - Developed open space
* 0.077	82	D - 82 - Developed Low intensity
* 0.315	85	D - 85 - Developed Med intensity
* 0.441	93	D - 93 - Developed High intensity
* 0.002	78	D - 78 - Meadowed, grass, non-grazed land
3.251	83	Weighted Average
3.251		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.2	100	0.0325	1.39		Sheet Flow, 100' Smooth surfaces n= 0.011 P2= 2.21"
0.3	49	0.0255	3.24		Shallow Concentrated Flow, Paved Kv= 20.3 fps
1.6	123	0.0041	1.30		Shallow Concentrated Flow, Paved Kv= 20.3 fps
4.2	91	0.0027	0.36		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
1.2	40	0.0063	0.56		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
8.5	403	Total			

Subcatchment 16S: DA 2-5

Hydrograph



DA 1-19

NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

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Summary for Subcatchment 17S: DA 7

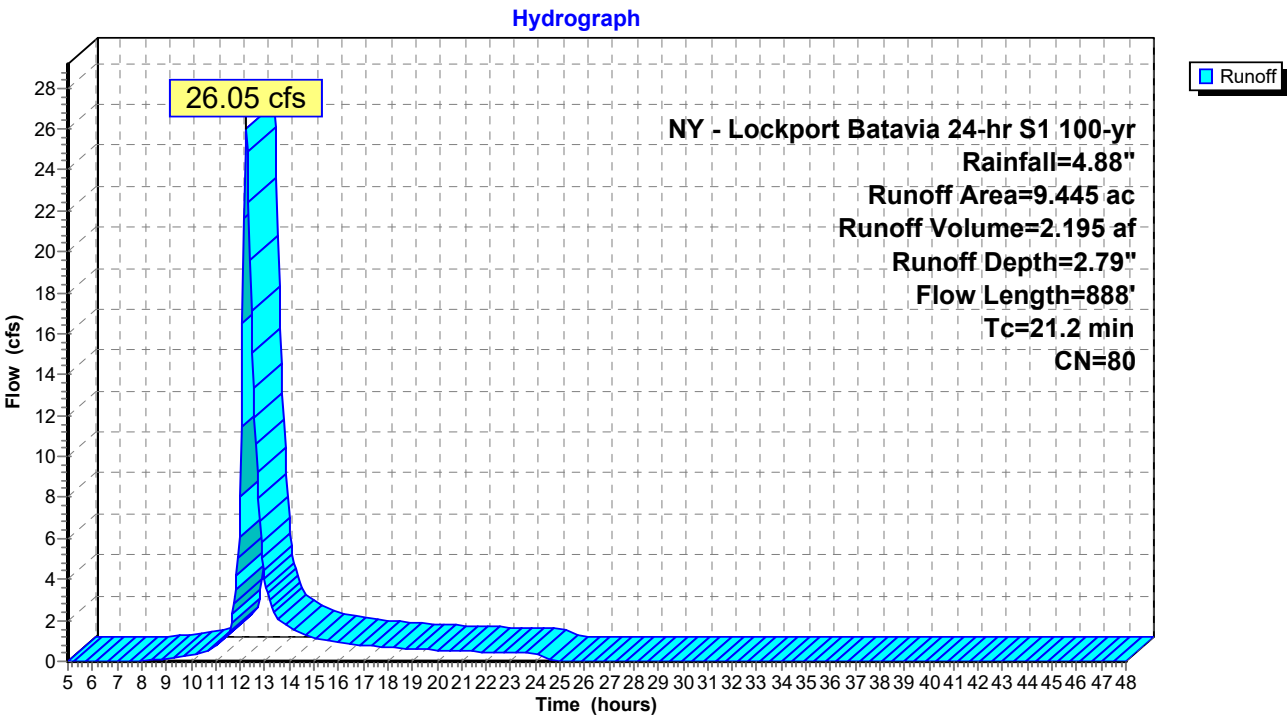
Runoff = 26.05 cfs @ 12.25 hrs, Volume= 2.195 af, Depth= 2.79"
 Routed to Pond 31P : Culvert 007

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

Area (ac)	CN	Description
* 0.134	80	D - 80 - Developed open space
* 0.231	82	D - 82 - Developed Low intensity
* 0.882	78	D - 78 - Meadowed, grass, non-grazed land
* 0.569	80	D - 80 - Developed open space
* 0.868	82	D - 82 - Developed Low intensity
* 0.054	85	D - 85 - Developed Med intensity
* 1.190	85	D - 85 - Grassland/Herbaceous
* 4.820	78	D - 78 - Meadowed, grass, non-grazed land
* 0.187	80	D - 80 - Developed open space
* 0.013	82	D - 82 - Developed Low intensity
* 0.497	78	D - 78 - Meadowed, grass, non-grazed land
9.445	80	Weighted Average
9.445		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0350	0.18		Sheet Flow, 100' Sheet Grass: Short n= 0.150 P2= 2.21"
4.6	202	0.0111	0.74		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
4.4	445	0.0126	1.68		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
2.8	141	0.0142	0.83		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
21.2	888	Total			

Subcatchment 17S: DA 7



DA 1-19

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NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

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Summary for Subcatchment 18S: DA 8

Runoff = 11.89 cfs @ 12.37 hrs, Volume= 1.218 af, Depth= 2.88"
 Routed to Pond 32P : Culvert 008

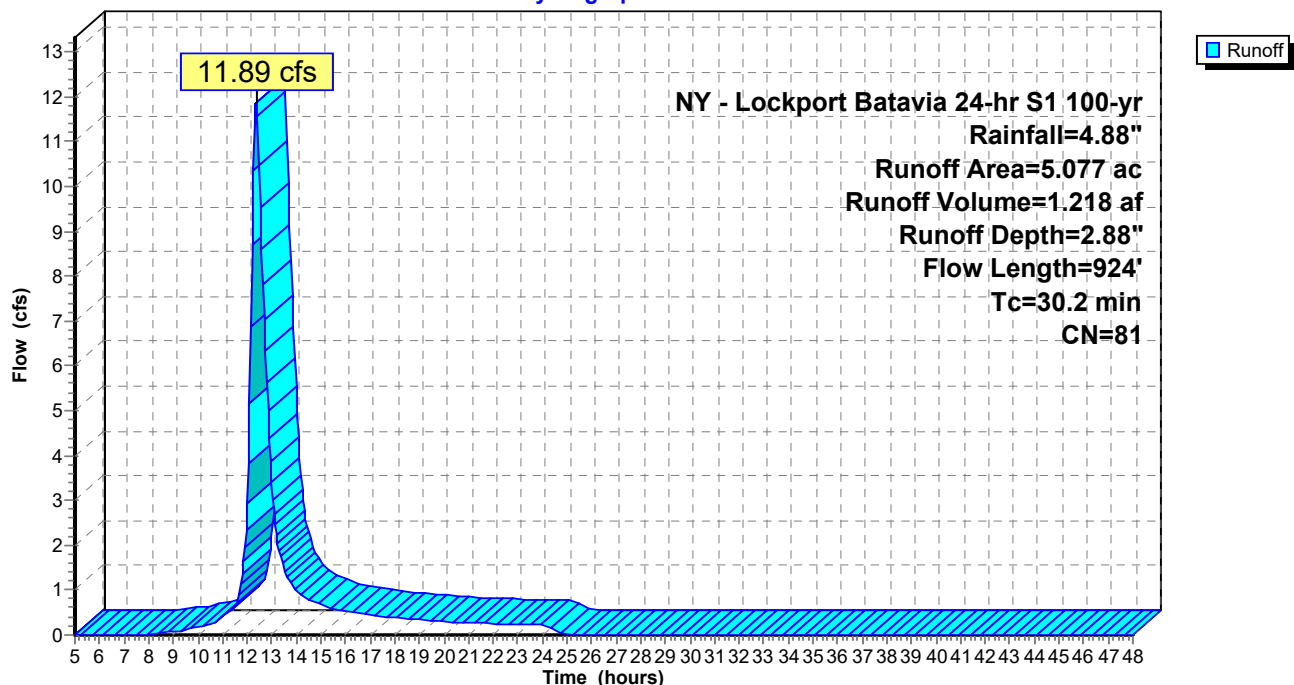
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

Area (ac)	CN	Description
* 2.612	80	D - 80 - Developed open space
* 1.184	82	D - 82 - Developed Low intensity
* 0.605	85	D - 85 - Grassland/Herbaceous
* 0.676	78	D - 78 - Meadowed, grass, non-grazed land
5.077	81	Weighted Average
5.077		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.5	100	0.0173	0.13		Sheet Flow, Grass: Short n= 0.150 P2= 2.21"
8.1	290	0.0073	0.60		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
9.6	534	0.0038	0.92		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
30.2	924	Total			

Subcatchment 18S: DA 8

Hydrograph



DA 1-19

NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

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Summary for Subcatchment 19S: DA 9

Runoff = 0.68 cfs @ 12.38 hrs, Volume= 0.070 af, Depth= 2.79"
Routed to Pond 36P : Culvert 009

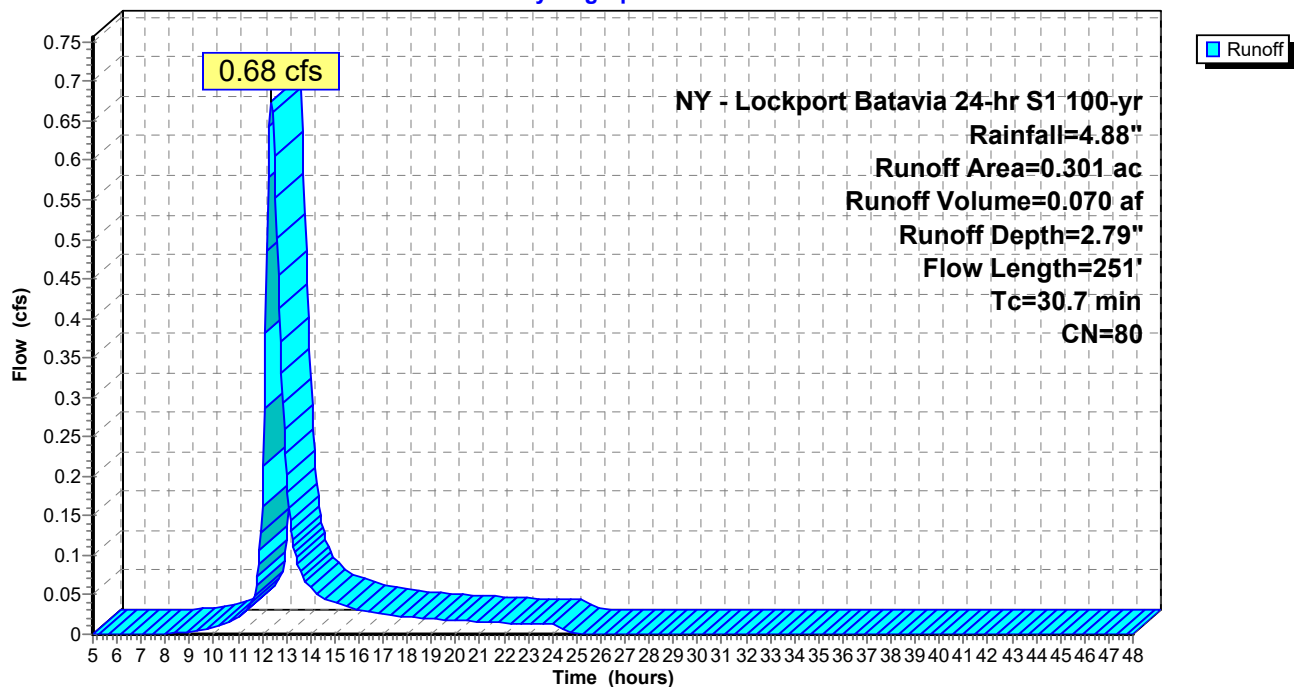
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

Area (ac)	CN	Description
* 0.024	80	D - 80 - Developed open space
* 0.155	82	D - 82 - Developed Low intensity
* 0.122	78	D - 78 - Meadowed, grass, non-grazed land
0.301	80	Weighted Average
0.301		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
27.1	100	0.0025	0.06		Sheet Flow, 100' Sheet Grass: Short n= 0.150 P2= 2.21"
3.6	151	0.0099	0.70		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
30.7	251	Total			

Subcatchment 19S: DA 9

Hydrograph



DA 1-19

NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

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Summary for Subcatchment 20S: DA 10

Runoff = 97.88 cfs @ 14.32 hrs, Volume= 33.943 af, Depth= 2.88"

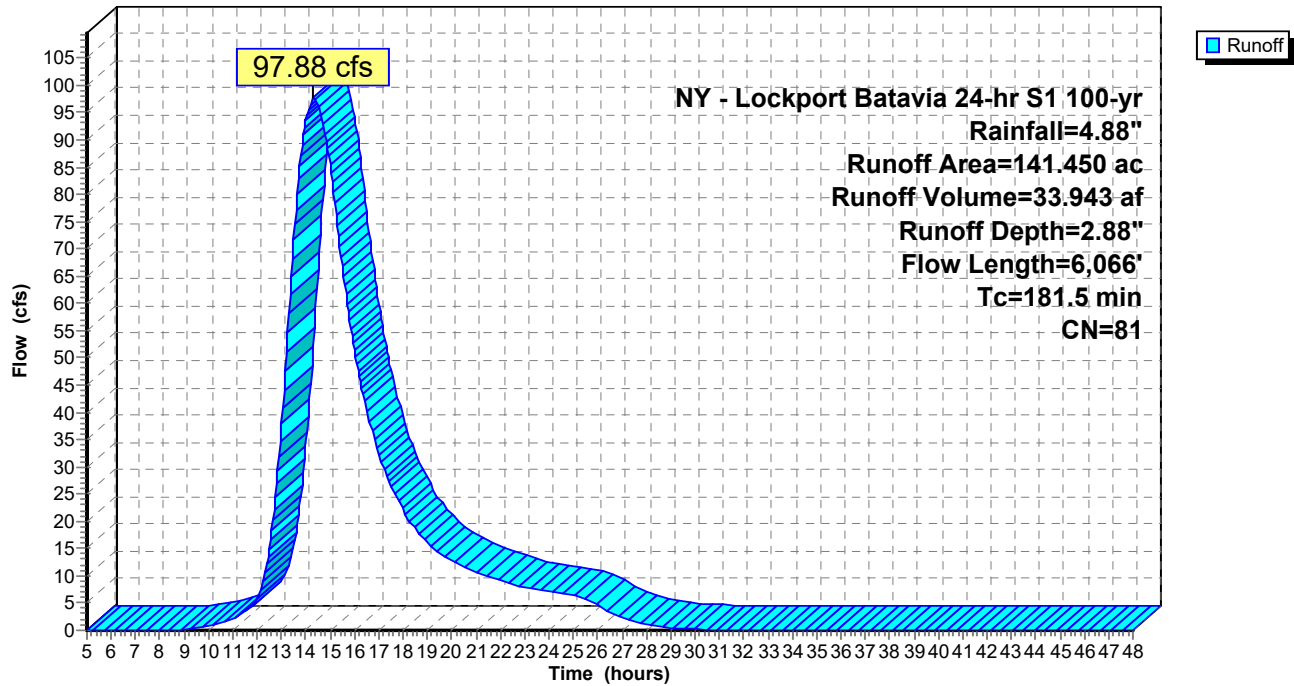
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

Area (ac)	CN	Description
* 0.152	98	D - 98 - Open Water
* 0.074	80	D - 80 - Developed open space
* 0.307	80	D - 80 - Developed open space
* 2.363	80	D - 80 - Developed open space
* 1.992	82	D - 82 - Developed Low intensity
* 1.726	82	D - 82 - Developed Low intensity
* 2.185	85	D - 85 - Developed Med intensity
* 0.875	77	D - 77 - Deciduous Forest
* 18.239	77	D - 77 - Deciduous Forest
* 13.242	77	D - 77 - Deciduous Forest
* 0.038	77	D - 77 - Evergreen Forest
* 0.919	77	D - 77 - Evergreen Forest
* 0.021	77	D - 77 - Evergreen Forest
* 0.508	77	D - 77 - Mixed Forest
* 0.889	77	D - 77 - Mixed Forest
* 0.160	77	D - 77 - Mixed Forest
* 4.266	78	D - 78 - Meadowed, grass, non-grazed land
* 29.357	78	D - 78 - Meadowed, grass, non-grazed land
* 22.896	78	D - 78 - Meadowed, grass, non-grazed land
* 0.112	78	D - 78 - Meadowed, grass, non-grazed land
* 5.915	78	D - 78 - Meadowed, grass, non-grazed land
* 5.016	90	D - 90 - Woody Wetlands
* 30.198	90	D - 90 - Woody Wetlands
141.450	81	Weighted Average
141.298		99.89% Pervious Area
0.152		0.11% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
22.7	100	0.0275	0.07		Sheet Flow, 100' Sheet Woods: Light underbrush n= 0.400 P2= 2.21"
31.2	1,144	0.0149	0.61		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
14.6	670	0.0026	0.76		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
12.9	328	0.0008	0.42		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
100.1	3,824	0.0018	0.64		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
181.5	6,066	Total			

Subcatchment 20S: DA 10

Hydrograph



DA 1-19

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NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

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Summary for Subcatchment 21S: DA 11

Runoff = 4.65 cfs @ 13.40 hrs, Volume= 1.103 af, Depth= 3.45"
 Routed to Pond 6P : Culvert 011

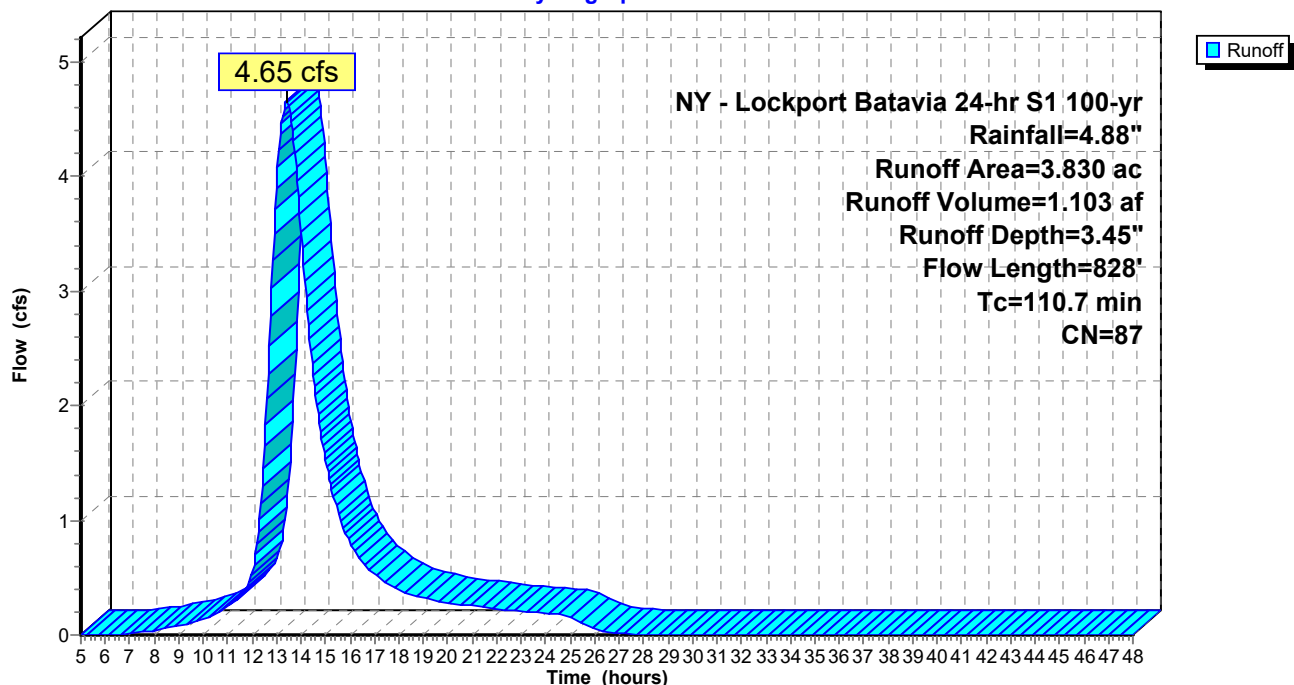
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

Area (ac)	CN	Description
* 0.183	80	D - 80 - Developed open space
* 0.651	82	D - 82 - Developed Low intensity
* 0.305	78	D - 78 - Meadowed, grass, non-grazed land
* 2.691	90	D - 90 - Woody Wetlands
3.830	87	Weighted Average
3.830		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.1	100	0.0425	0.09		Sheet Flow, 100' Sheet Woods: Light underbrush n= 0.400 P2= 2.21"
77.1	517	0.0005	0.11		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
14.5	211	0.0012	0.24		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
110.7	828	Total			

Subcatchment 21S: DA 11

Hydrograph



DA 1-19

NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

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Summary for Subcatchment 23S: DA 13

Runoff = 10.58 cfs @ 12.70 hrs, Volume= 1.536 af, Depth= 3.16"
 Routed to Pond 12P : Culvert 013

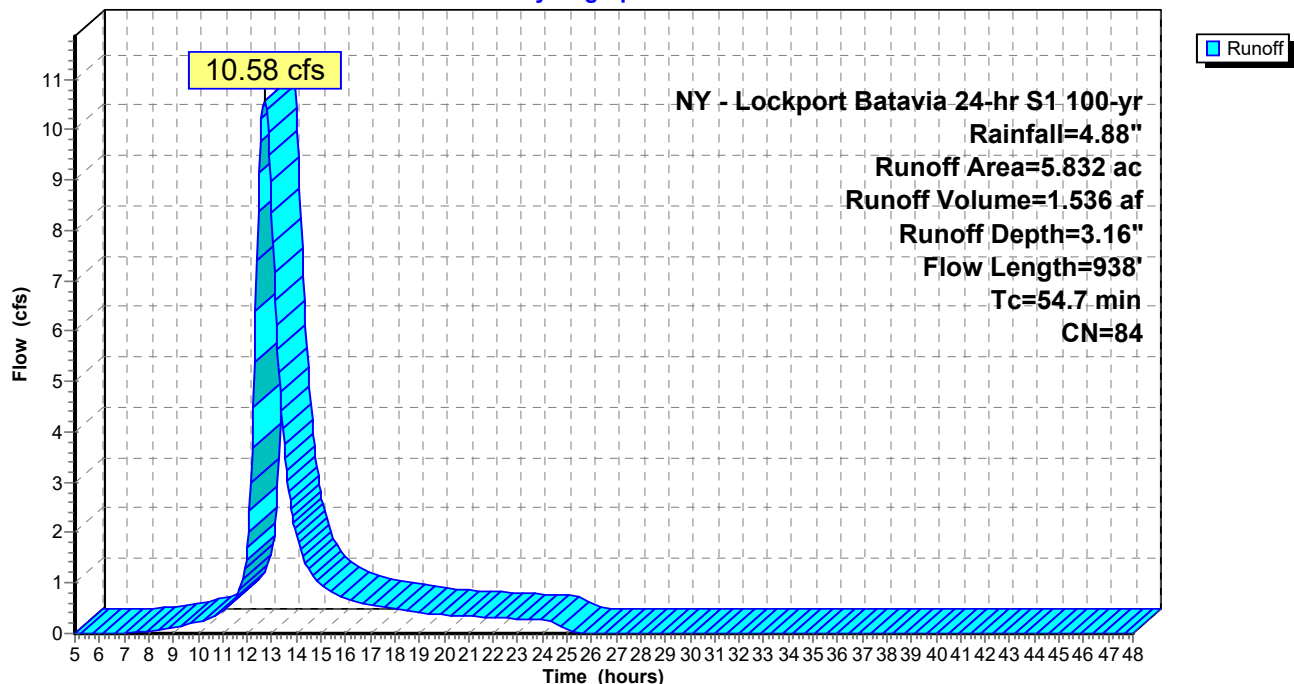
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

Area (ac)	CN	Description
* 0.222	77	D - 77 - Deciduous Forest
* 1.173	78	D - 78 - Meadowed, grass, non-grazed land
* 1.200	78	D - 78 - Meadowed, grass, non-grazed land
* 0.112	78	D - 78 - Meadowed, grass, non-grazed land
* 0.115	78	D - 78 - Meadowed, grass, non-grazed land
* 0.123	90	D - 90 - Woody Wetlands
* 2.887	90	D - 90 - Woody Wetlands
5.832	84	Weighted Average
5.832		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	100	0.0300	0.17		Sheet Flow, 100' Sheet Grass: Short n= 0.150 P2= 2.21"
44.7	838	0.0039	0.31		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
54.7	938	Total			

Subcatchment 23S: DA 13

Hydrograph



DA 1-19

NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

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Summary for Subcatchment 24S: DA 14

Runoff = 19.08 cfs @ 12.72 hrs, Volume= 2.797 af, Depth= 2.70"
 Routed to Pond 7P : Culvert 014

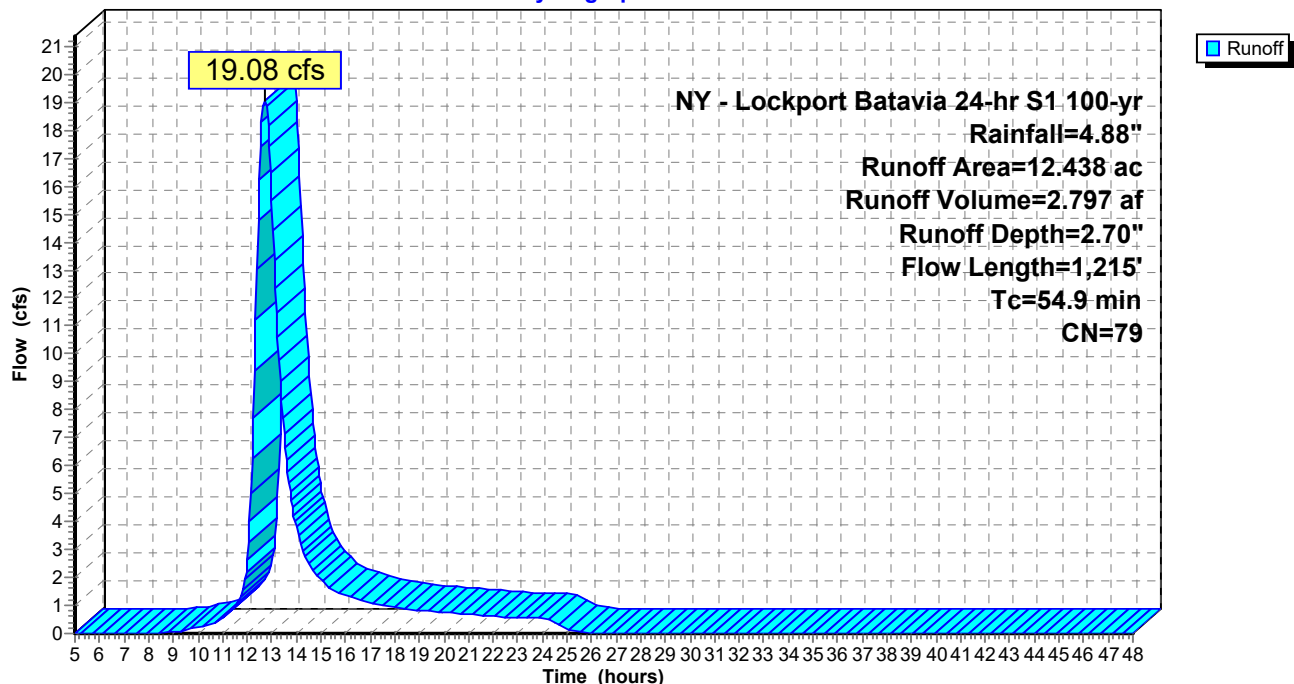
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

Area (ac)	CN	Description
* 0.143	80	D - 80 - Developed open space
* 0.461	80	D - 80 - Developed open space
* 1.014	82	D - 82 - Developed Low intensity
* 1.218	82	D - 82 - Developed Low intensity
* 0.081	77	D - 77 - Deciduous Forest
* 7.367	78	D - 78 - Meadowed, grass, non-grazed land
* 2.154	78	D - 78 - Meadowed, grass, non-grazed land
12.438	79	Weighted Average
12.438		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.8	100	0.0200	0.14		Sheet Flow, 100' sheet Grass: Short n= 0.150 P2= 2.21"
43.1	1,115	0.0038	0.43		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
54.9	1,215	Total			

Subcatchment 24S: DA 14

Hydrograph



DA 1-19

NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

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Summary for Subcatchment 25S: DA 15

Runoff = 6.32 cfs @ 13.02 hrs, Volume= 1.169 af, Depth= 2.79"
 Routed to Pond 8P : Culvert 015

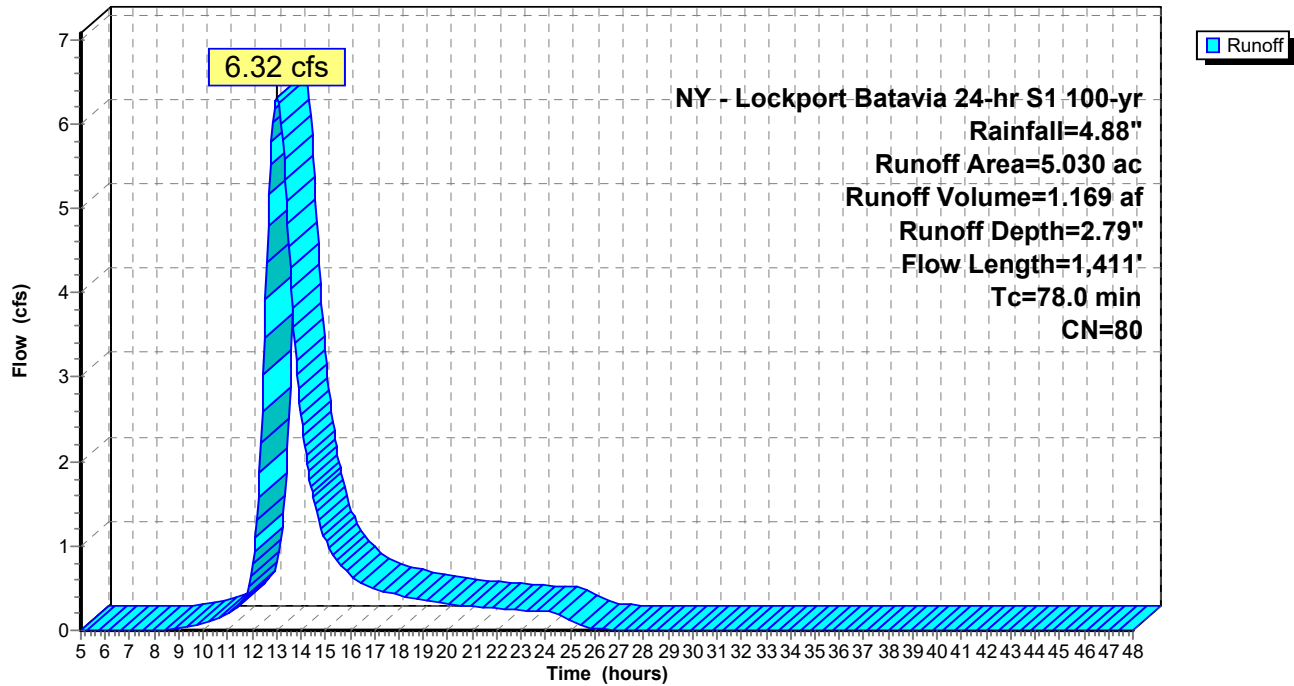
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

Area (ac)	CN	Description
* 0.345	80	D - 80 - Developed open space
* 0.249	80	D - 80 - Developed open space
* 0.809	80	D - 80 - Developed open space
* 0.107	82	D - 82 - Developed Low intensity
* 1.183	82	D - 82 - Developed Low intensity
* 0.330	78	D - 78 - Meadowed, grass, non-grazed land
* 0.809	78	D - 78 - Meadowed, grass, non-grazed land
* 1.198	78	D - 78 - Meadowed, grass, non-grazed land
5.030	80	Weighted Average
5.030		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.6	100	0.0100	0.11		Sheet Flow, 100' Sheet Grass: Short n= 0.150 P2= 2.21"
62.4	1,311	0.0025	0.35		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
78.0	1,411	Total			

Subcatchment 25S: DA 15

Hydrograph



DA 1-19

NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

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Summary for Subcatchment 26S: DA 16

Runoff = 13.00 cfs @ 13.23 hrs, Volume= 2.728 af, Depth= 2.61"
 Routed to Pond 13P : Culvert 016

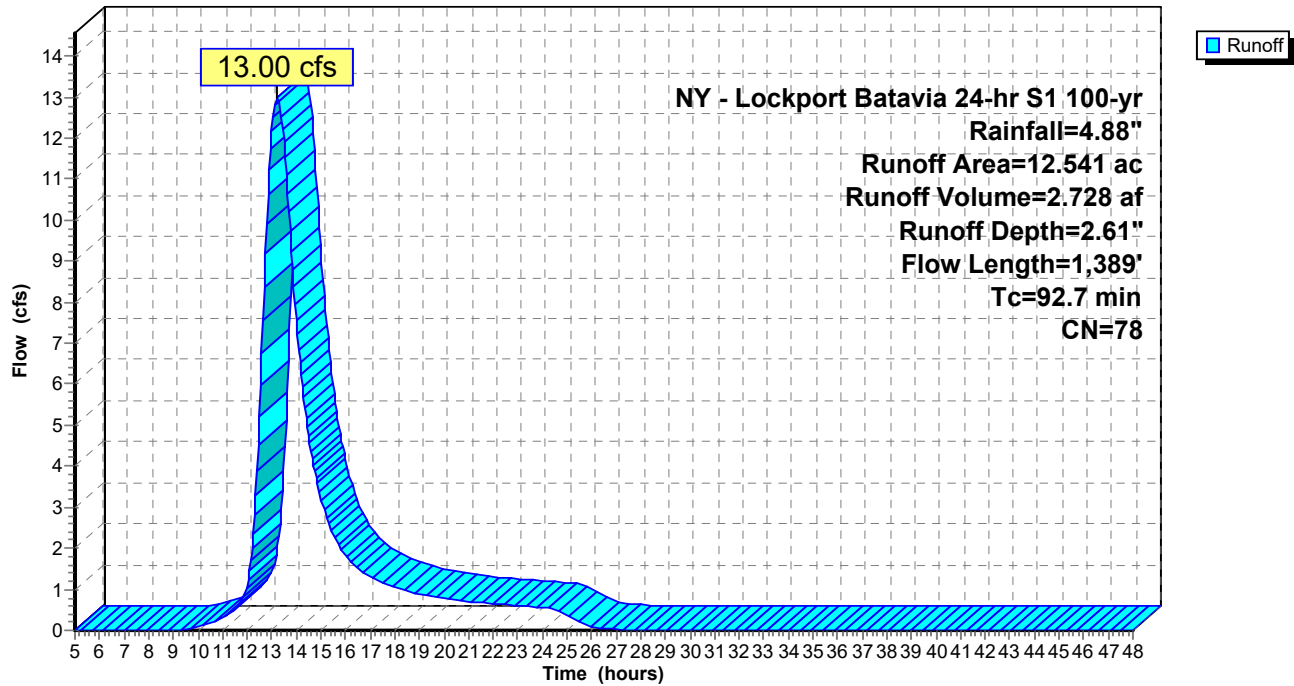
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

Area (ac)	CN	Description
* 0.003	80	D - 80 - Developed open space
* 1.259	77	D - 77 - Deciduous Forest
* 0.202	77	D - 77 - Deciduous Forest
* 0.926	78	D - 78 - Meadowed, grass, non-grazed land
* 3.759	78	D - 78 - Meadowed, grass, non-grazed land
* 6.392	78	D - 78 - Meadowed, grass, non-grazed land
12.541	78	Weighted Average
12.541		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.7	100	0.0225	0.07		Sheet Flow, 100' Sheet Woods: Light underbrush n= 0.400 P2= 2.21"
24.6	495	0.0045	0.34		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
43.4	794	0.0019	0.31		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
92.7	1,389	Total			

Subcatchment 26S: DA 16

Hydrograph



DA 1-19

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NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

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Summary for Subcatchment 28S: DA 18

Runoff = 9.17 cfs @ 13.30 hrs, Volume= 1.982 af, Depth= 2.61"
Routed to Pond 10P : Culvert 018

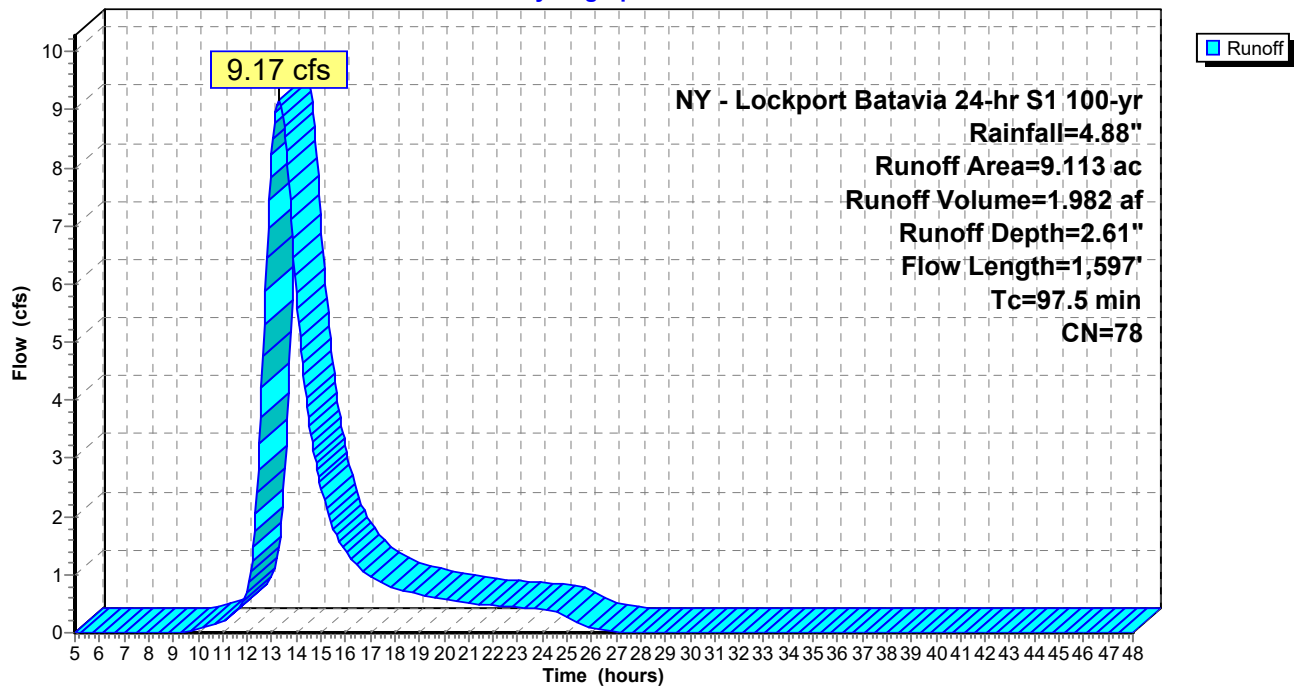
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

Area (ac)	CN	Description
* 3.755	77	D - 77 - Deciduous Forest
* 5.358	78	D - 78 - Meadowed, grass, non-grazed land
9.113	78	Weighted Average
9.113		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
34.1	100	0.0100	0.05		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.21"
63.4	1,497	0.0062	0.39		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
97.5	1,597	Total			

Subcatchment 28S: DA 18

Hydrograph



DA 1-19

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NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

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Summary for Subcatchment 29S: DA 19

Runoff = 0.68 cfs @ 12.15 hrs, Volume= 0.046 af, Depth= 2.79"
Routed to Pond 14P : Culvert 019

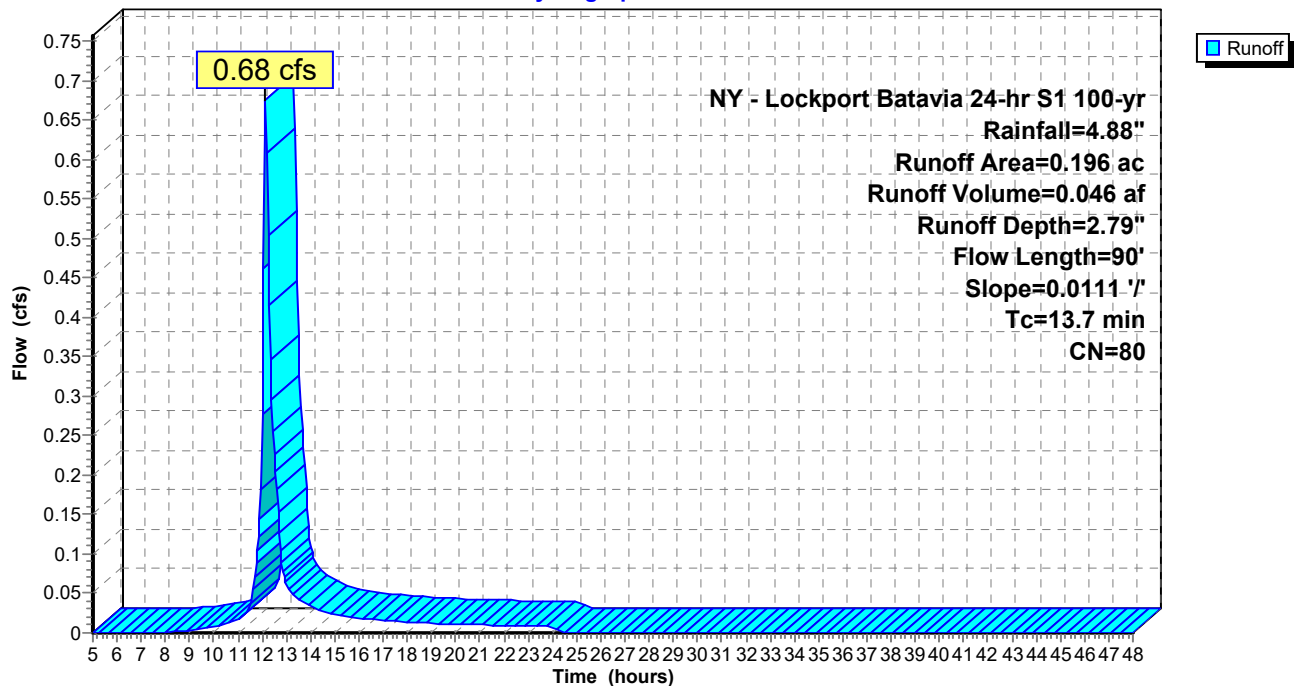
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

Area (ac)	CN	Description
* 0.195	80	D - 80 - Developed open space
* 0.001	78	D - 78 - Meadowed, grass, non-grazed land
0.196	80	Weighted Average
0.196		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.7	90	0.0111	0.11		Sheet Flow, 90' Sheet
Grass: Short n= 0.150 P2= 2.21"					

Subcatchment 29S: DA 19

Hydrograph



DA 1-19

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NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

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Summary for Subcatchment 37S: DA 12

Runoff = 3.08 cfs @ 13.71 hrs, Volume= 0.852 af, Depth= 3.56"
Routed to Pond 11P : Culvert 012

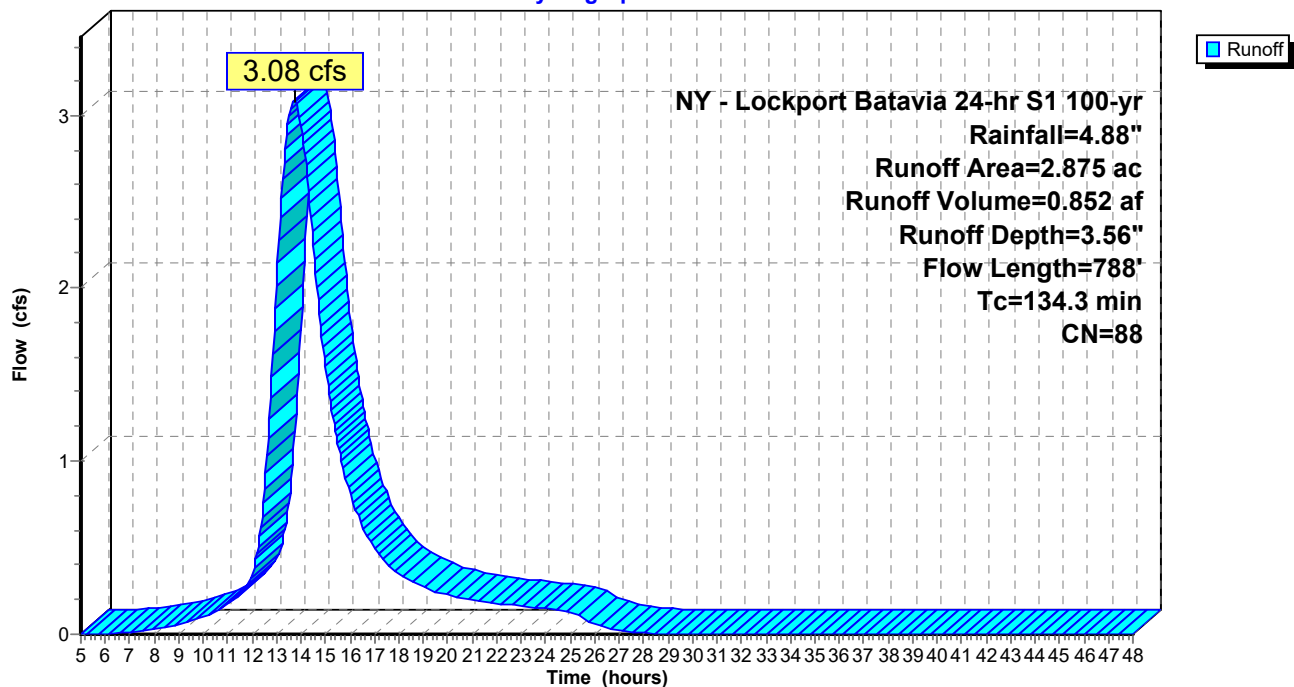
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

Area (ac)	CN	Description
* 0.052	78	D - 78 - Meadowed, grass, non-grazed land
* 0.450	78	D - 78 - Meadowed, grass, non-grazed land
* 2.373	90	D - 90 - Woody Wetlands
2.875	88	Weighted Average
2.875		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
19.6	100	0.0400	0.09		Sheet Flow, 100' Sheet Woods: Light underbrush n= 0.400 P2= 2.21"
114.7	688	0.0004	0.10		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
134.3	788	Total			

Subcatchment 37S: DA 12

Hydrograph



DA 1-19

NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

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Summary for Subcatchment 46S: DA 17

Runoff = 133.72 cfs @ 14.03 hrs, Volume= 39.843 af, Depth= 2.61"

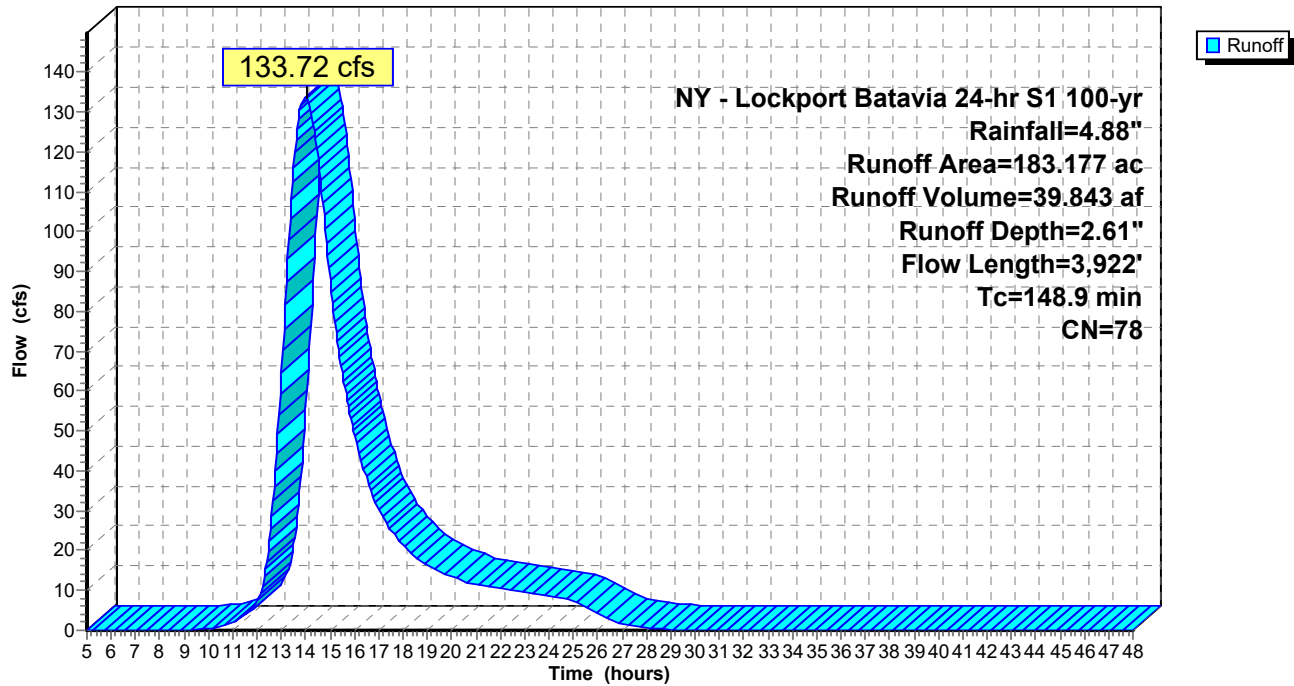
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport Batavia 24-hr S1 100-yr Rainfall=4.88"

Area (ac)	CN	Description
* 2.507	80	D - 80 - Developed open space
* 3.318	80	D - 80 - Developed open space
* 2.790	80	D - 80 - Developed open space
* 2.870	82	D - 82 - Developed Low intensity
* 4.979	82	D - 82 - Developed Low intensity
* 4.781	82	D - 82 - Developed Low intensity
* 0.152	85	D - 85 - Developed Med intensity
* 1.263	77	D - 77 - Deciduous Forest
* 3.431	77	D - 77 - Deciduous Forest
* 3.544	77	D - 77 - Deciduous Forest
* 14.732	78	D - 78 - Meadowed, grass, non-grazed land
* 59.055	78	D - 78 - Meadowed, grass, non-grazed land
* 79.755	78	D - 78 - Meadowed, grass, non-grazed land
183.177	78	Weighted Average
183.177		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.7	100	0.0350	0.08		Sheet Flow, 100' Sheet Woods: Light underbrush n= 0.400 P2= 2.21"
48.7	1,573	0.0116	0.54		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
62.0	1,276	0.0047	0.34		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
17.5	973	0.0038	0.92		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
148.9	3,922	Total			

Subcatchment 46S: DA 17

Hydrograph



Summary for Pond 6P: Culvert 011

[57] Hint: Peaked at 625.44' (Flood elevation advised)

Inflow Area = 3.830 ac, 0.00% Impervious, Inflow Depth = 3.45" for 100-yr event
 Inflow = 4.65 cfs @ 13.40 hrs, Volume= 1.103 af
 Outflow = 4.65 cfs @ 13.40 hrs, Volume= 1.103 af, Atten= 0%, Lag= 0.0 min
 Primary = 4.65 cfs @ 13.40 hrs, Volume= 1.103 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 625.44' @ 13.40 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	624.20'	18.0" Round Culvert 011 w/ 3.6" inside fill L= 33.4' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 623.90' / 623.70' S= 0.0060 ' S= 0.0060 ' Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	626.90'	100.0' long + 3.0 ' SideZ x 20.0' 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

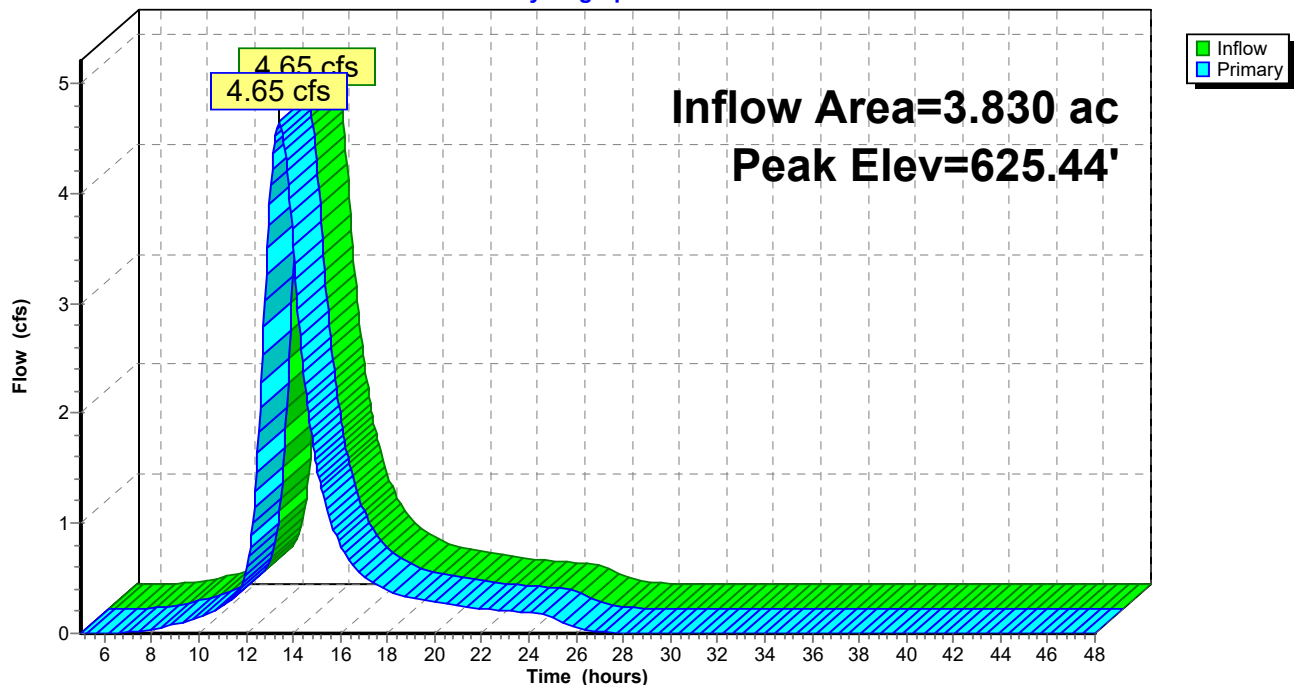
Primary OutFlow Max=4.65 cfs @ 13.40 hrs HW=625.44' (Free Discharge)

1=Culvert 011 (Inlet Controls 4.65 cfs @ 3.07 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 6P: Culvert 011

Hydrograph



Summary for Pond 7P: Culvert 014

[57] Hint: Peaked at 626.54' (Flood elevation advised)

Inflow Area = 12.438 ac, 0.00% Impervious, Inflow Depth = 2.70" for 100-yr event
 Inflow = 19.08 cfs @ 12.72 hrs, Volume= 2.797 af
 Outflow = 19.08 cfs @ 12.72 hrs, Volume= 2.797 af, Atten= 0%, Lag= 0.0 min
 Primary = 19.08 cfs @ 12.72 hrs, Volume= 2.797 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 626.54' @ 12.72 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	623.30'	24.0" Round Culvert 014 w/ 3.6" inside fill L= 46.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 623.00' / 622.95' S= 0.0011 '/' Cc= 0.900 n= 0.012, Flow Area= 2.85 sf
#2	Primary	626.50'	100.0' long + 3.0 ' SideZ x 20.0' 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

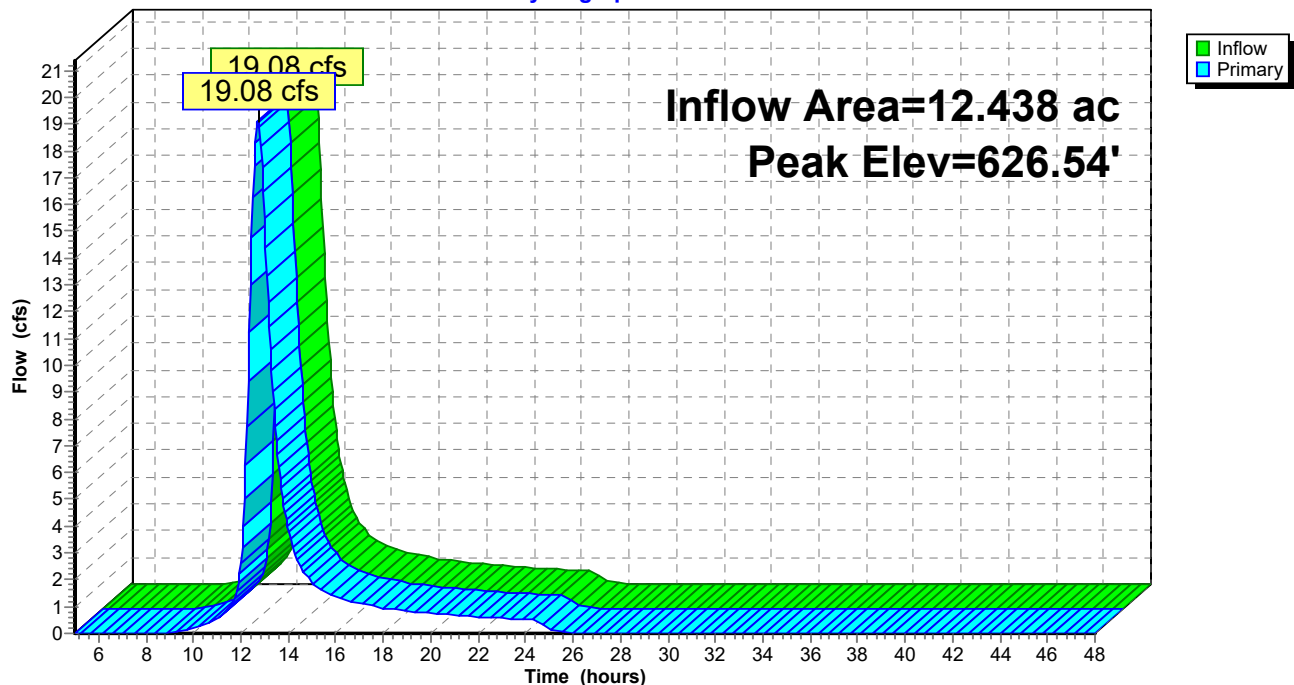
Primary OutFlow Max=18.96 cfs @ 12.72 hrs HW=626.54' (Free Discharge)

1=Culvert 014 (Inlet Controls 16.88 cfs @ 5.93 fps)

2=Broad-Crested Rectangular Weir (Weir Controls 2.09 cfs @ 0.53 fps)

Pond 7P: Culvert 014

Hydrograph



Summary for Pond 8P: Culvert 015

[57] Hint: Peaked at 625.27' (Flood elevation advised)

Inflow Area = 5.030 ac, 0.00% Impervious, Inflow Depth = 2.79" for 100-yr event
 Inflow = 6.32 cfs @ 13.02 hrs, Volume= 1.169 af
 Outflow = 6.32 cfs @ 13.02 hrs, Volume= 1.169 af, Atten= 0%, Lag= 0.0 min
 Primary = 6.32 cfs @ 13.02 hrs, Volume= 1.169 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 625.27' @ 13.02 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	623.50'	18.0" Round Culvert 015 w/ 3.6" inside fill L= 46.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 623.20' / 622.90' S= 0.0065 ' S= 0.0065 ' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 1.52 sf
#2	Primary	626.20'	100.0' long + 3.0 ' SideZ x 20.0' 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

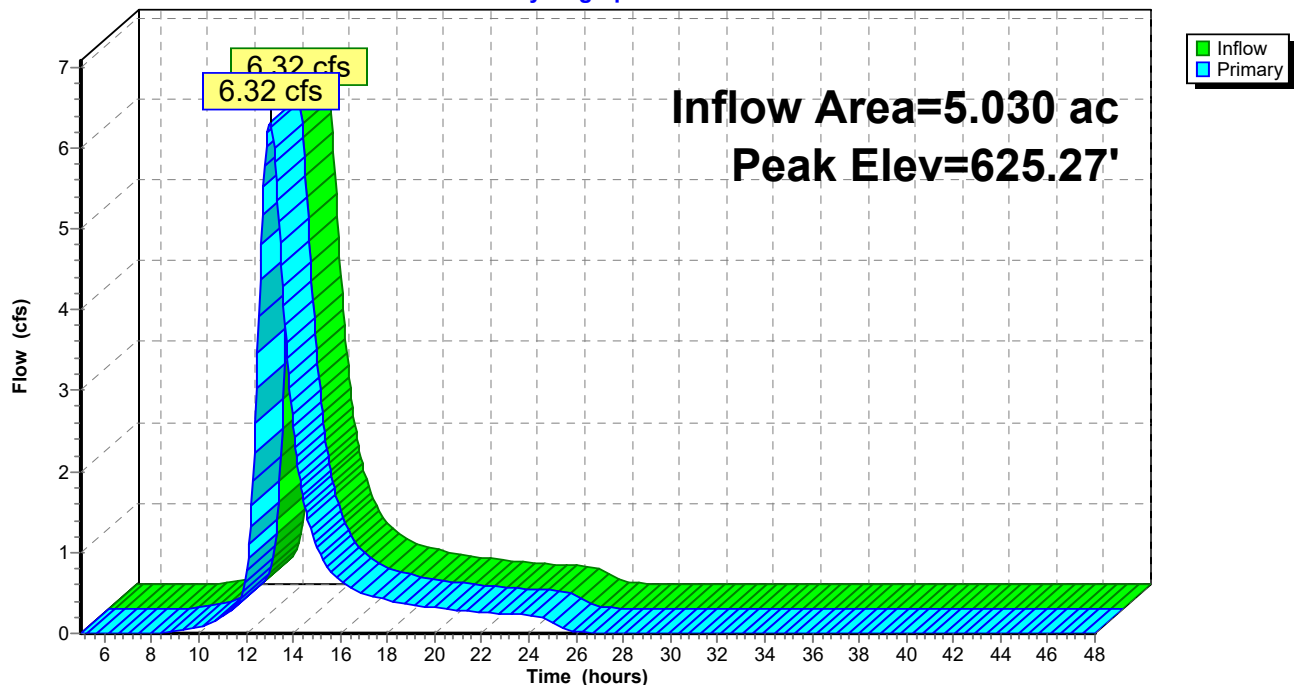
Primary OutFlow Max=6.31 cfs @ 13.02 hrs HW=625.27' (Free Discharge)

1=Culvert 015 (Inlet Controls 6.31 cfs @ 4.17 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 8P: Culvert 015

Hydrograph



Summary for Pond 9P: (Culvert 017)

Check culvert master for updated sizing

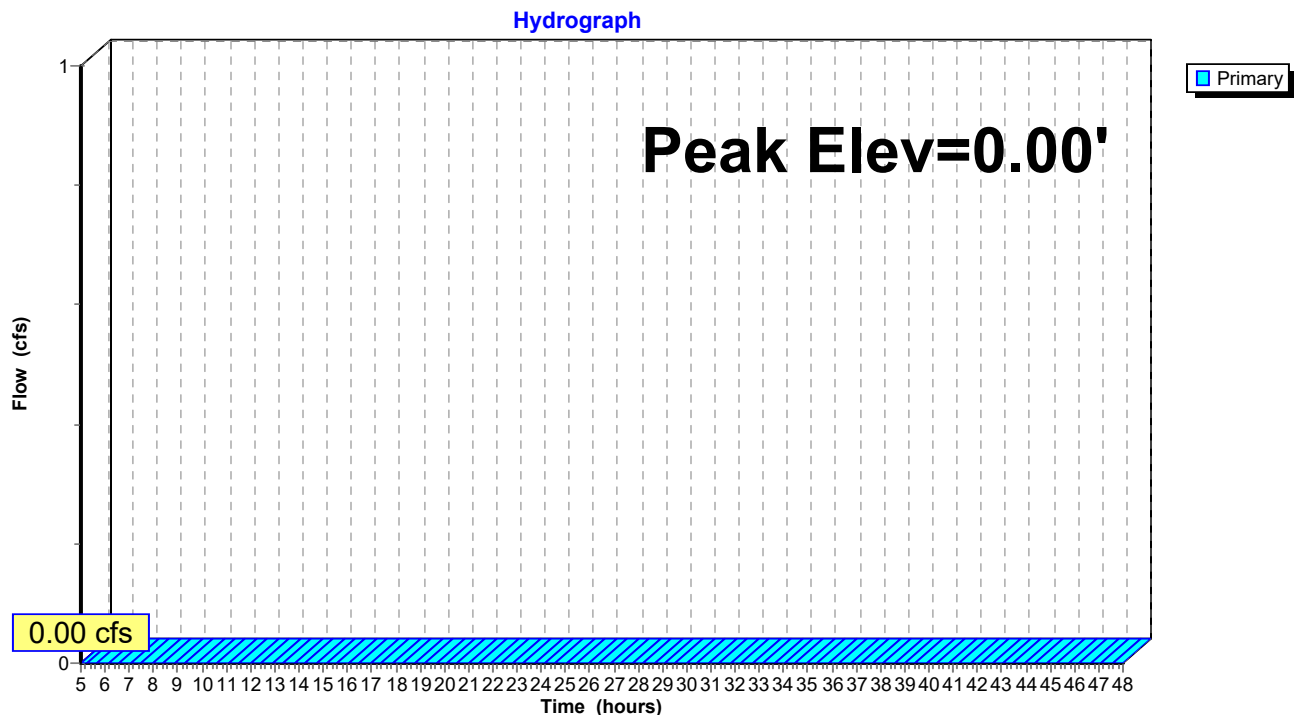
[43] Hint: Has no inflow (Outflow=Zero)

Device	Routing	Invert	Outlet Devices
#1	Primary	621.70'	198.0" Round Culvert 017 w/ 39.6" inside fill L= 34.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 618.40' / 618.30' S= 0.0029 ' S Cc= 0.900 n= 0.012, Flow Area= 183.38 sf
#2	Primary	623.20'	100.0' long + 3.0 ' SideZ x 20.0' 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=0.00 cfs @ 5.00 hrs HW=0.00' (Free Discharge)

1=Culvert 017 (Controls 0.00 cfs)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 9P: (Culvert 017)

Summary for Pond 10P: Culvert 018

[57] Hint: Peaked at 626.47' (Flood elevation advised)

Inflow Area = 9.113 ac, 0.00% Impervious, Inflow Depth = 2.61" for 100-yr event
 Inflow = 9.17 cfs @ 13.30 hrs, Volume= 1.982 af
 Outflow = 9.17 cfs @ 13.30 hrs, Volume= 1.982 af, Atten= 0%, Lag= 0.0 min
 Primary = 9.17 cfs @ 13.30 hrs, Volume= 1.982 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 626.47' @ 13.30 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	623.75'	18.0" Round Culvert 018 w/ 3.6" inside fill L= 38.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 623.45' / 622.45' S= 0.0263 ' S= 0.0263 ' Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	626.45'	100.0' long + 3.0 ' SideZ x 20.0' 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

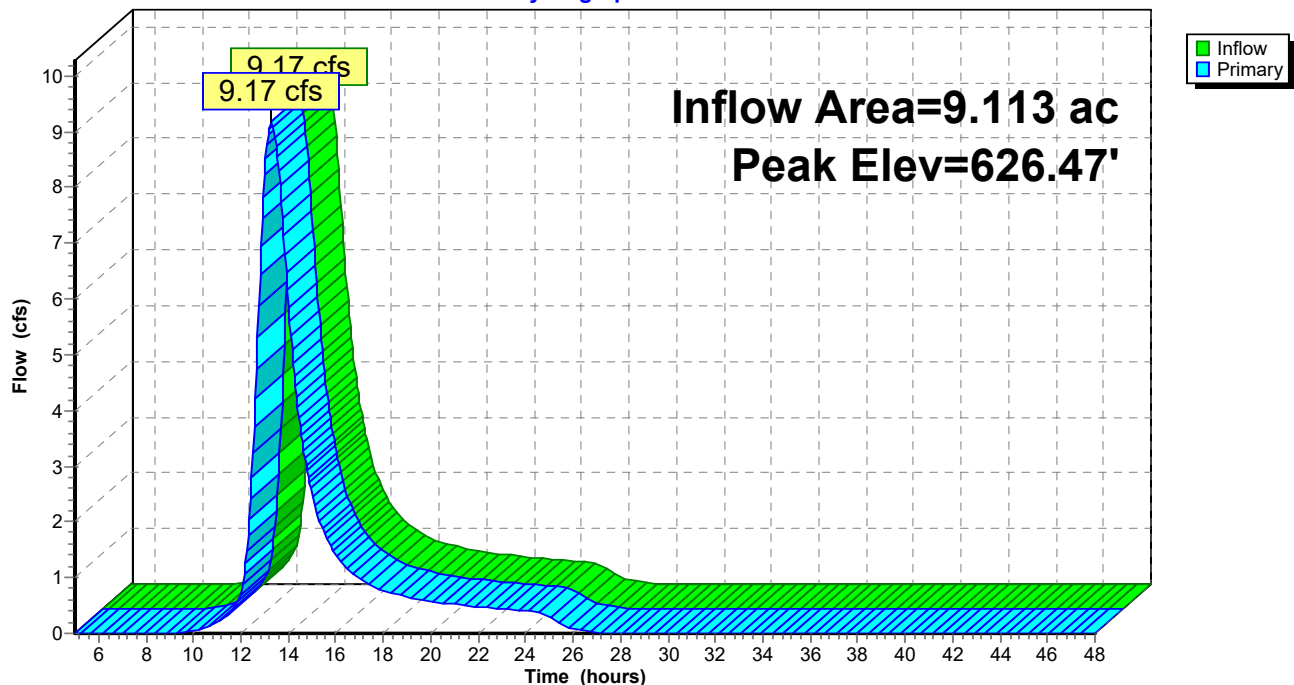
Primary OutFlow Max=9.01 cfs @ 13.30 hrs HW=626.47' (Free Discharge)

1=Culvert 018 (Inlet Controls 8.47 cfs @ 5.59 fps)

2=Broad-Crested Rectangular Weir (Weir Controls 0.55 cfs @ 0.34 fps)

Pond 10P: Culvert 018

Hydrograph



Summary for Pond 11P: Culvert 012

[57] Hint: Peaked at 625.12' (Flood elevation advised)

Inflow Area = 2.875 ac, 0.00% Impervious, Inflow Depth = 3.56" for 100-yr event
 Inflow = 3.08 cfs @ 13.71 hrs, Volume= 0.852 af
 Outflow = 3.08 cfs @ 13.71 hrs, Volume= 0.852 af, Atten= 0%, Lag= 0.0 min
 Primary = 3.08 cfs @ 13.71 hrs, Volume= 0.852 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 625.12' @ 13.71 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	624.15'	18.0" Round Culvert 012 w/ 3.6" inside fill L= 38.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 623.85' / 623.75' S= 0.0026 ' S= 0.0026 ' Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	626.85'	100.0' long + 3.0 ' SideZ x 20.0' 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

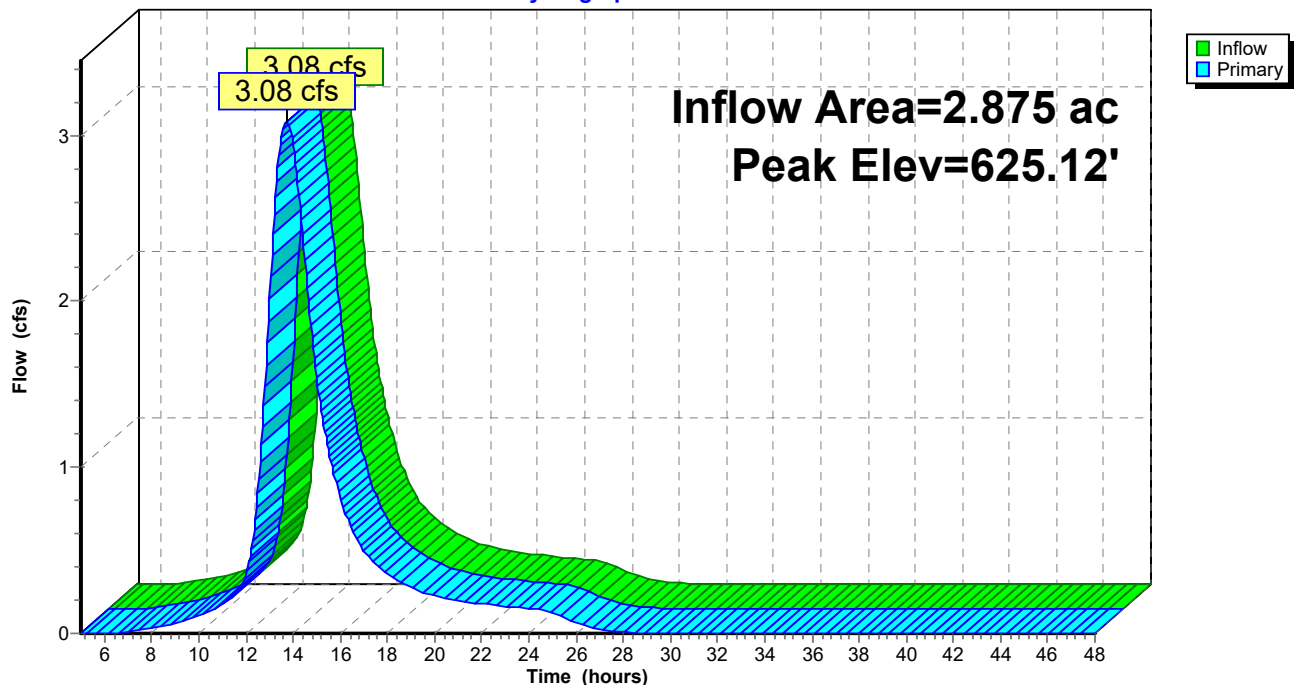
Primary OutFlow Max=3.08 cfs @ 13.71 hrs HW=625.12' (Free Discharge)

1=Culvert 012 (Barrel Controls 3.08 cfs @ 2.97 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 11P: Culvert 012

Hydrograph



Summary for Pond 12P: Culvert 013

[57] Hint: Peaked at 626.94' (Flood elevation advised)

Inflow Area = 5.832 ac, 0.00% Impervious, Inflow Depth = 3.16" for 100-yr event
 Inflow = 10.58 cfs @ 12.70 hrs, Volume= 1.536 af
 Outflow = 10.58 cfs @ 12.70 hrs, Volume= 1.536 af, Atten= 0%, Lag= 0.0 min
 Primary = 10.58 cfs @ 12.70 hrs, Volume= 1.536 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 626.94' @ 12.70 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	624.20'	18.0" Round Culvert 013 w/ 3.6" inside fill L= 38.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 623.90' / 623.55' S= 0.0091 ' S= 0.0091 ' Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	626.90'	100.0' long + 3.0 ' SideZ x 20.0' 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

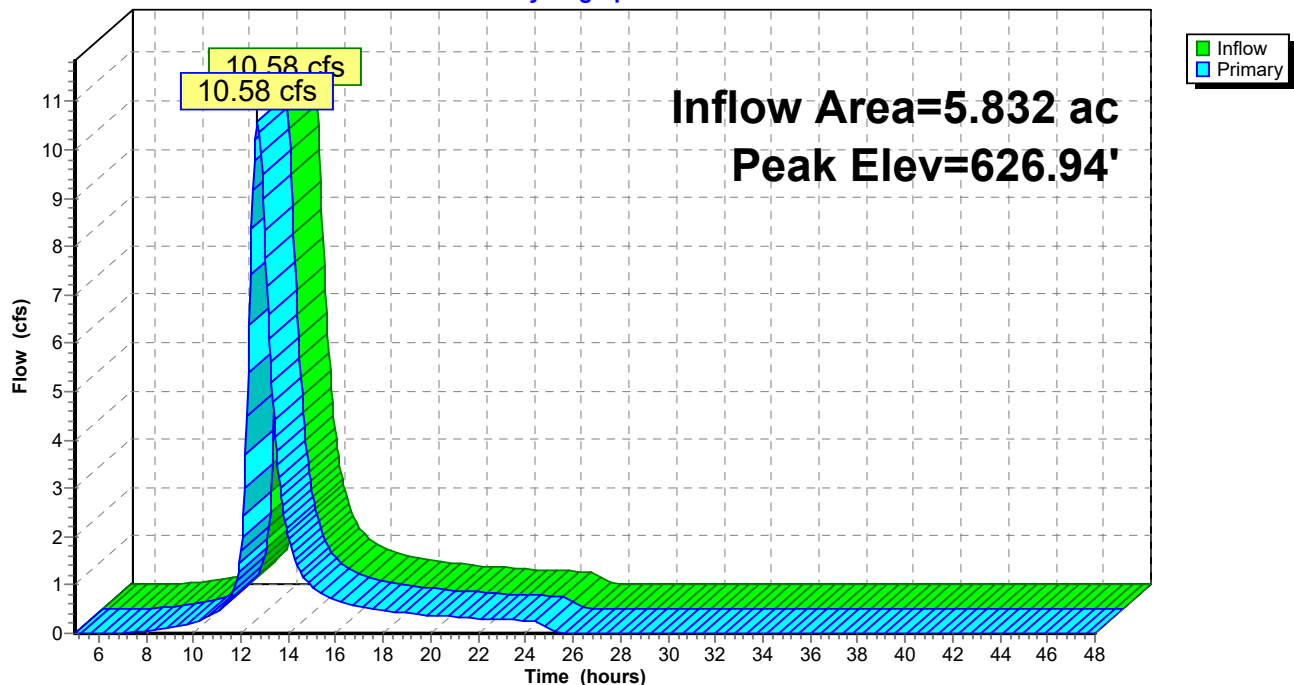
Primary OutFlow Max=10.49 cfs @ 12.70 hrs HW=626.94' (Free Discharge)

1=Culvert 013 (Inlet Controls 8.51 cfs @ 5.61 fps)

2=Broad-Crested Rectangular Weir (Weir Controls 1.98 cfs @ 0.52 fps)

Pond 12P: Culvert 013

Hydrograph



Summary for Pond 13P: Culvert 016

[57] Hint: Peaked at 625.96' (Flood elevation advised)

Inflow Area = 12.541 ac, 0.00% Impervious, Inflow Depth = 2.61" for 100-yr event
 Inflow = 13.00 cfs @ 13.23 hrs, Volume= 2.728 af
 Outflow = 13.00 cfs @ 13.23 hrs, Volume= 2.728 af, Atten= 0%, Lag= 0.0 min
 Primary = 13.00 cfs @ 13.23 hrs, Volume= 2.728 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 625.96' @ 13.23 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	623.20'	18.0" Round Culvert 016 w/ 3.6" inside fill L= 38.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 622.90' / 622.67' S= 0.0060 ' S Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	625.90'	100.0' long + 3.0 ' SideZ x 20.0' 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

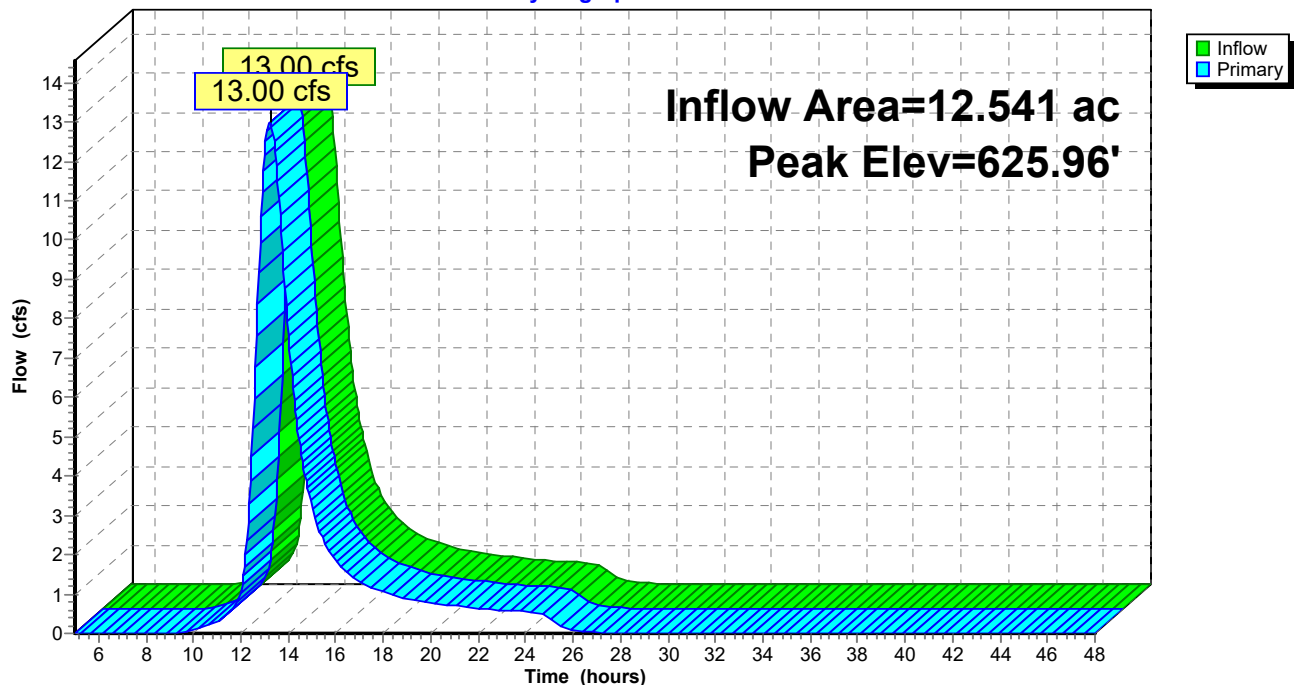
Primary OutFlow Max=12.93 cfs @ 13.23 hrs HW=625.96' (Free Discharge)

1=Culvert 016 (Inlet Controls 8.56 cfs @ 5.65 fps)

2=Broad-Crested Rectangular Weir (Weir Controls 4.37 cfs @ 0.68 fps)

Pond 13P: Culvert 016

Hydrograph



Summary for Pond 14P: Culvert 019

[57] Hint: Peaked at 619.74' (Flood elevation advised)

Inflow Area = 0.196 ac, 0.00% Impervious, Inflow Depth = 2.79" for 100-yr event
 Inflow = 0.68 cfs @ 12.15 hrs, Volume= 0.046 af
 Outflow = 0.68 cfs @ 12.15 hrs, Volume= 0.046 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.68 cfs @ 12.15 hrs, Volume= 0.046 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 619.74' @ 12.15 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	619.40'	18.0" Round Culvert 019 w/ 3.6" inside fill L= 46.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 619.10' / 618.40' S= 0.0152 ' S= 0.0152 ' Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	622.40'	100.0' long + 3.0 ' SideZ x 20.0' 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

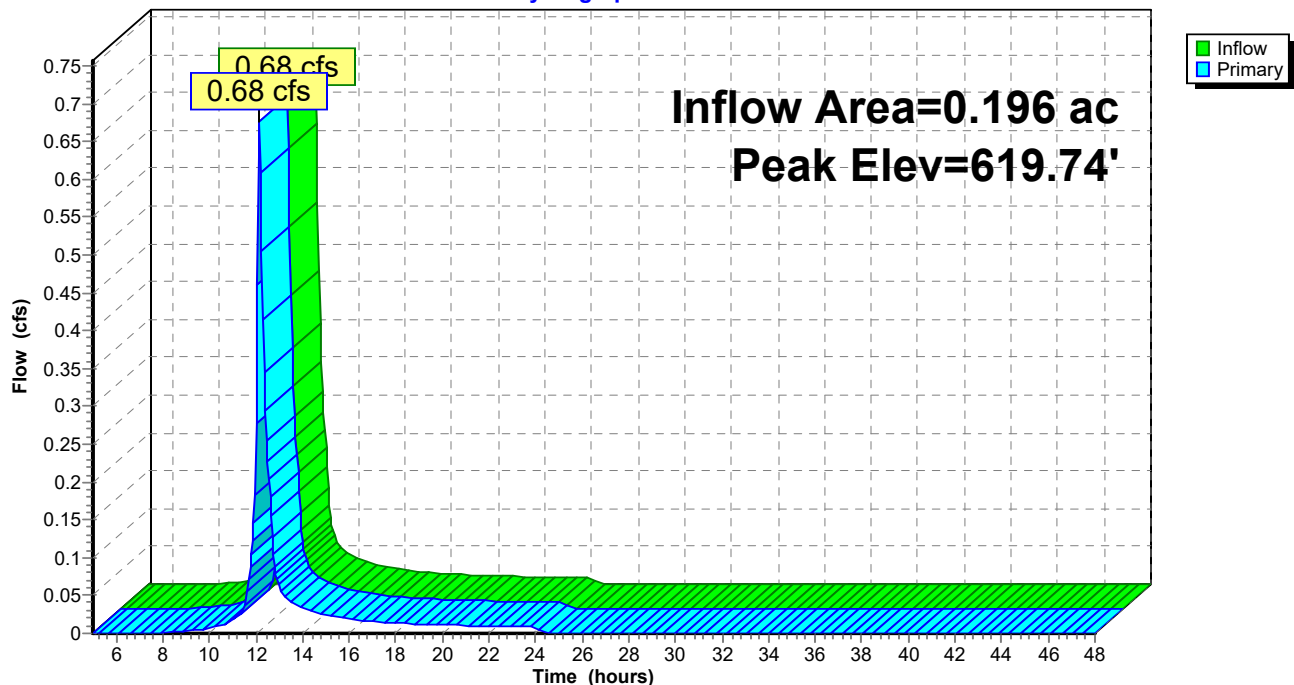
Primary OutFlow Max=0.67 cfs @ 12.15 hrs HW=619.74' (Free Discharge)

1=Culvert 019 (Inlet Controls 0.67 cfs @ 1.44 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 14P: Culvert 019

Hydrograph



Summary for Pond 31P: Culvert 007

[57] Hint: Peaked at 619.04' (Flood elevation advised)

Inflow Area = 9.445 ac, 0.00% Impervious, Inflow Depth = 2.79" for 100-yr event
 Inflow = 26.05 cfs @ 12.25 hrs, Volume= 2.195 af
 Outflow = 26.05 cfs @ 12.25 hrs, Volume= 2.195 af, Atten= 0%, Lag= 0.0 min
 Primary = 26.05 cfs @ 12.25 hrs, Volume= 2.195 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 619.04' @ 12.25 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	615.83'	24.0" Round Culvert 007 w/ 4.8" inside fill L= 22.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 615.43' / 614.85' S= 0.0264 ' S Cc= 0.900 n= 0.012, Flow Area= 2.69 sf
#2	Primary	618.93'	100.0' long + 3.0 ' SideZ x 20.0' 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

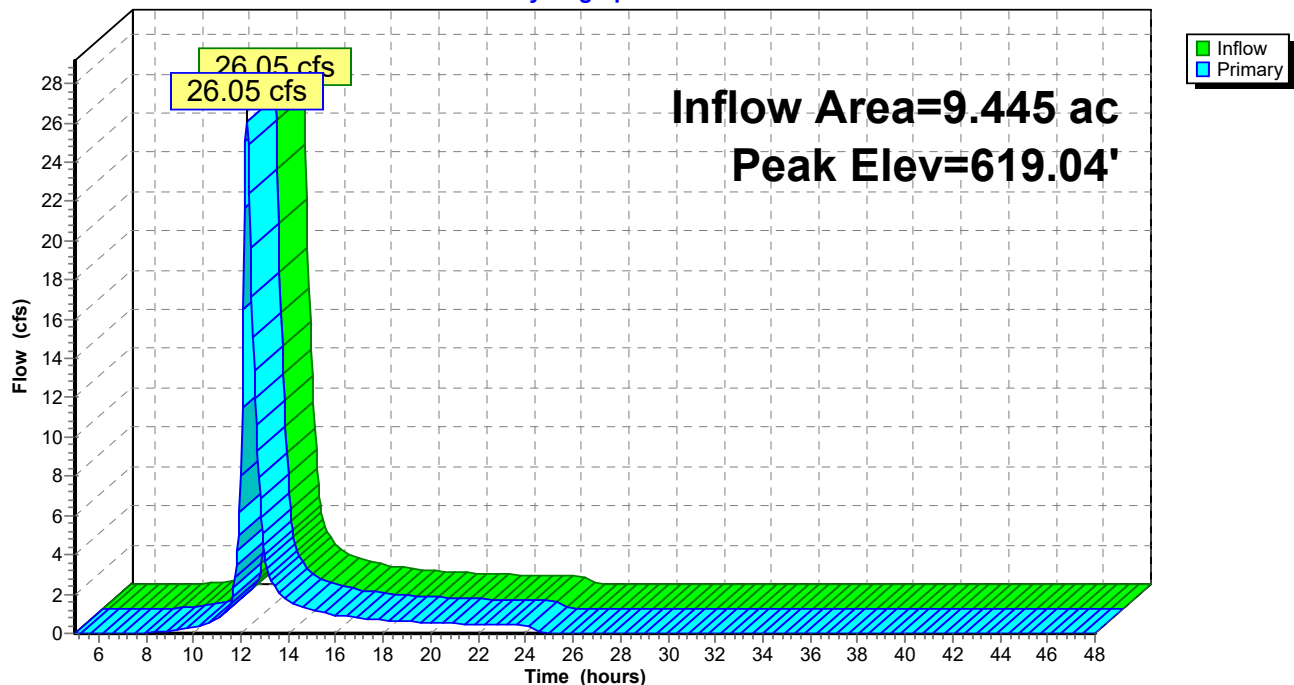
Primary OutFlow Max=25.93 cfs @ 12.25 hrs HW=619.04' (Free Discharge)

1=Culvert 007 (Inlet Controls 16.08 cfs @ 5.97 fps)

2=Broad-Crested Rectangular Weir (Weir Controls 9.85 cfs @ 0.89 fps)

Pond 31P: Culvert 007

Hydrograph



Summary for Pond 32P: Culvert 008

[57] Hint: Peaked at 618.40' (Flood elevation advised)

Inflow Area = 5.077 ac, 0.00% Impervious, Inflow Depth = 2.88" for 100-yr event
 Inflow = 11.89 cfs @ 12.37 hrs, Volume= 1.218 af
 Outflow = 11.89 cfs @ 12.37 hrs, Volume= 1.218 af, Atten= 0%, Lag= 0.0 min
 Primary = 11.89 cfs @ 12.37 hrs, Volume= 1.218 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 618.40' @ 12.37 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	615.65'	18.0" Round Culvert 008 w/ 3.6" inside fill L= 47.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 615.35' / 615.00' S= 0.0074 ' S Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	618.35'	100.0' long + 3.0 ' SideZ x 20.0' 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

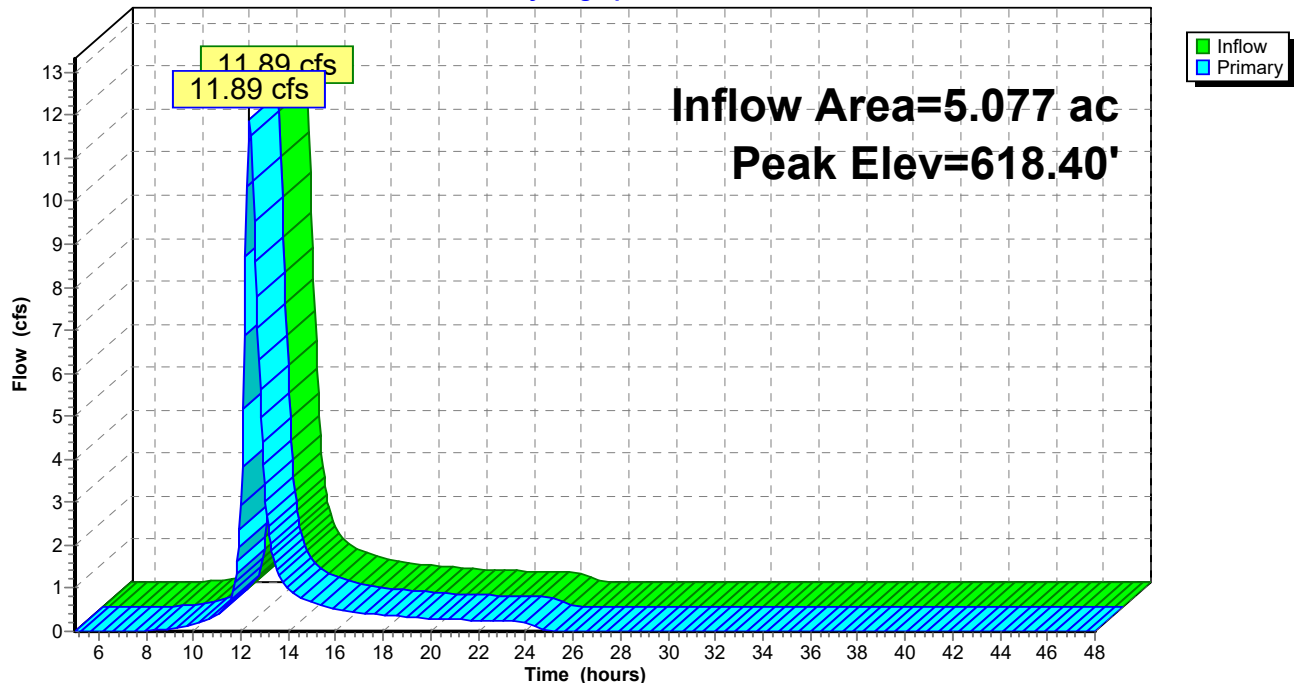
Primary OutFlow Max=11.82 cfs @ 12.37 hrs HW=618.40' (Free Discharge)

1=Culvert 008 (Inlet Controls 8.54 cfs @ 5.63 fps)

2=Broad-Crested Rectangular Weir (Weir Controls 3.28 cfs @ 0.62 fps)

Pond 32P: Culvert 008

Hydrograph



Summary for Pond 33P: (Culvert 010)

Check culvert master for updated sizing

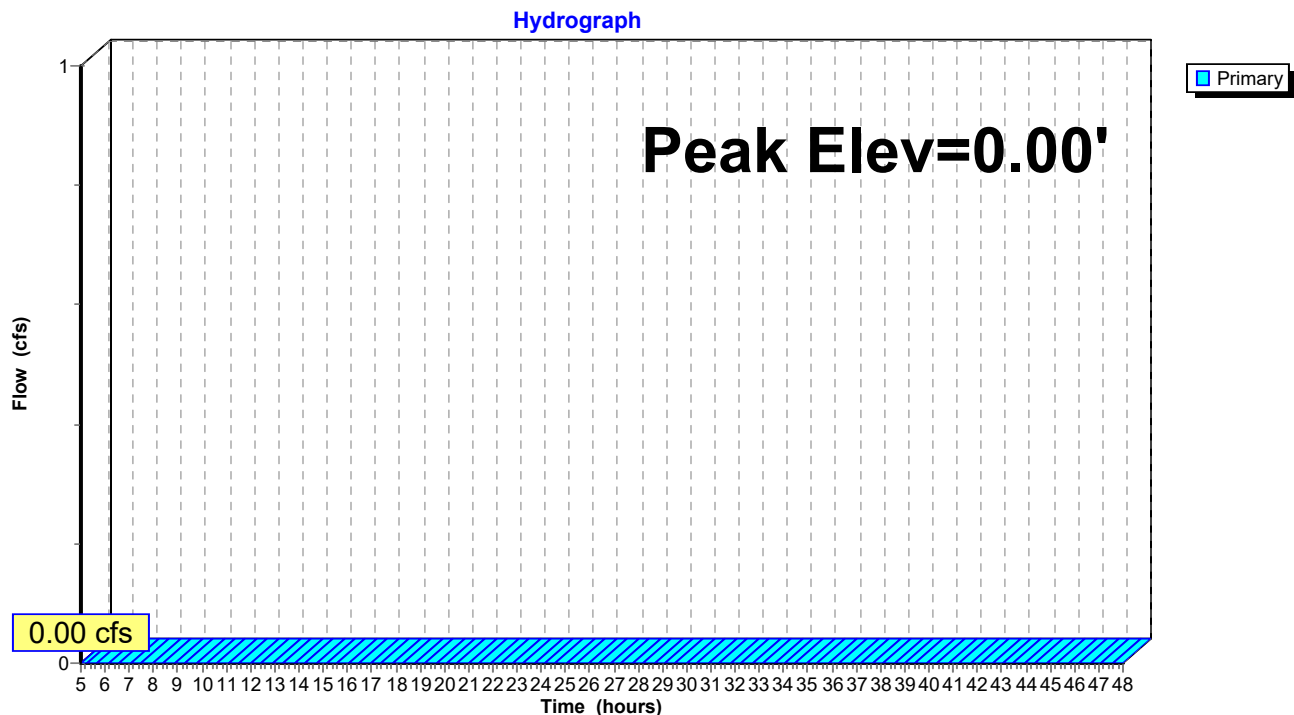
[43] Hint: Has no inflow (Outflow=Zero)

Device	Routing	Invert	Outlet Devices
#1	Primary	621.85'	126.0" Round Culvert 009 w/ 25.2" inside fill L= 45.5' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 619.75' / 619.25' S= 0.0110 ' S Cc= 0.900 n= 0.012, Flow Area= 74.26 sf
#2	Primary	623.35'	100.0' long + 3.0 ' SideZ x 20.0' 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=0.00 cfs @ 5.00 hrs HW=0.00' (Free Discharge)

1=Culvert 009 (Controls 0.00 cfs)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 33P: (Culvert 010)

Summary for Pond 34P: Culvert 001

[57] Hint: Peaked at 625.32' (Flood elevation advised)

Inflow Area = 13.622 ac, 0.00% Impervious, Inflow Depth = 2.61" for 100-yr event
 Inflow = 35.06 cfs @ 12.25 hrs, Volume= 2.963 af
 Outflow = 35.06 cfs @ 12.25 hrs, Volume= 2.963 af, Atten= 0%, Lag= 0.0 min
 Primary = 35.06 cfs @ 12.25 hrs, Volume= 2.963 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 625.32' @ 12.25 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	622.20'	30.0" Round Culvert 001 w/ 6.0" inside fill L= 34.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 621.70' / 621.05' S= 0.0191 ' / ' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 4.21 sf
#2	Primary	625.20'	100.0' long + 3.0 ' SideZ x 20.0' 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

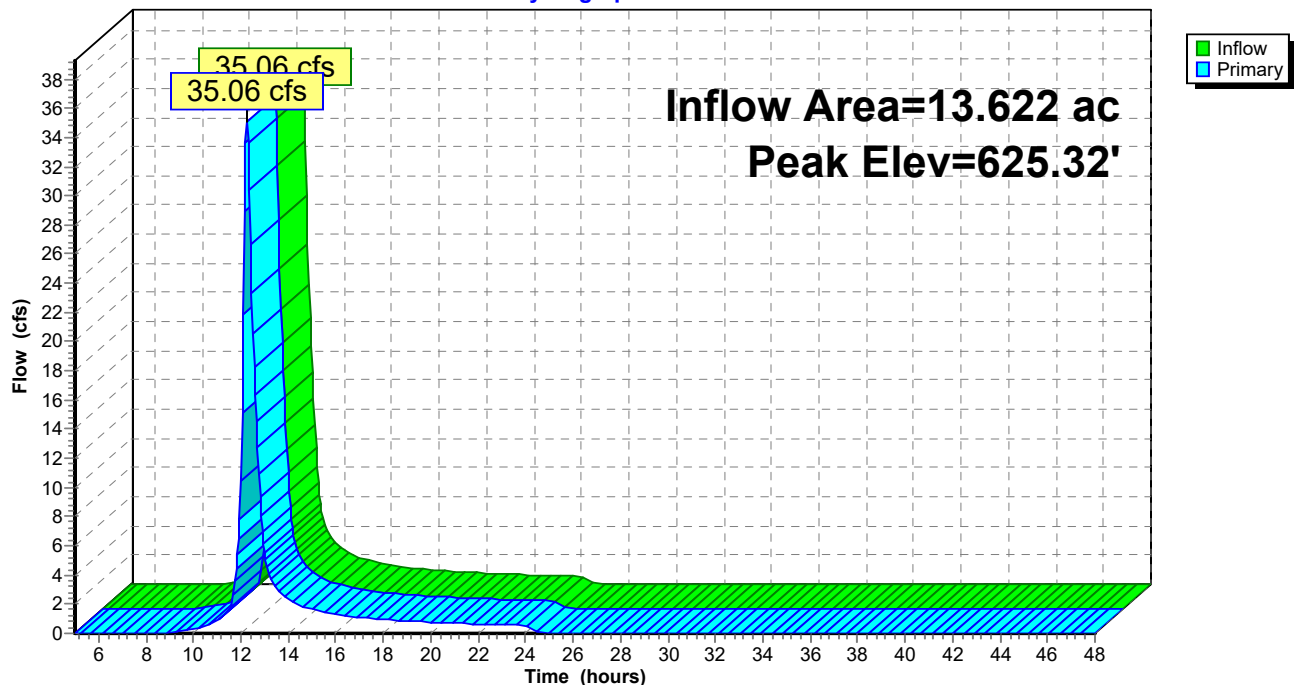
Primary OutFlow Max=35.05 cfs @ 12.25 hrs HW=625.32' (Free Discharge)

1=Culvert 001 (Inlet Controls 23.63 cfs @ 5.61 fps)

2=Broad-Crested Rectangular Weir (Weir Controls 11.41 cfs @ 0.93 fps)

Pond 34P: Culvert 001

Hydrograph



Summary for Pond 35P: Culvert 002-005

[57] Hint: Peaked at 631.36' (Flood elevation advised)

Inflow Area = 3.251 ac, 0.00% Impervious, Inflow Depth = 3.07" for 100-yr event
 Inflow = 15.28 cfs @ 12.07 hrs, Volume= 0.831 af
 Outflow = 15.28 cfs @ 12.07 hrs, Volume= 0.831 af, Atten= 0%, Lag= 0.0 min
 Primary = 15.28 cfs @ 12.07 hrs, Volume= 0.831 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 631.36' @ 12.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	630.30'	18.0" Round Culvert 002-005 X 4.00 w/ 3.6" inside fill L= 29.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 630.00' / 628.90' S= 0.0379 ' S= 0.0379 ' Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	633.00'	100.0' long + 3.0 ' SideZ x 20.0' 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

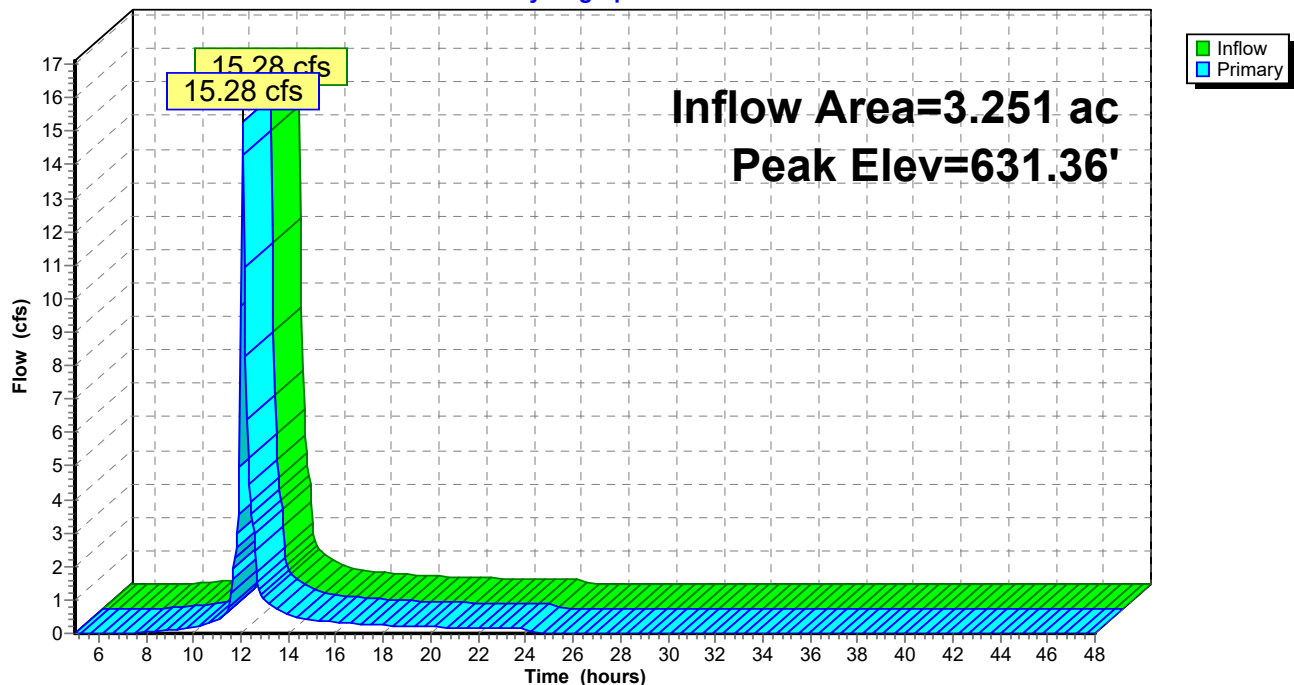
Primary OutFlow Max=14.61 cfs @ 12.07 hrs HW=631.32' (Free Discharge)

1=Culvert 002-005 (Inlet Controls 14.61 cfs @ 2.61 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 35P: Culvert 002-005

Hydrograph



Summary for Pond 36P: Culvert 009

[57] Hint: Peaked at 616.64' (Flood elevation advised)

Inflow Area = 0.301 ac, 0.00% Impervious, Inflow Depth = 2.79" for 100-yr event
 Inflow = 0.68 cfs @ 12.38 hrs, Volume= 0.070 af
 Outflow = 0.68 cfs @ 12.38 hrs, Volume= 0.070 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.68 cfs @ 12.38 hrs, Volume= 0.070 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 616.64' @ 12.38 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	616.30'	18.0" Round Culvert 009 w/ 3.6" inside fill L= 46.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 616.00' / 615.75' S= 0.0054 ' S Cc= 0.900 n= 0.012, Flow Area= 1.52 sf
#2	Primary	619.00'	100.0' long + 3.0 ' SideZ x 20.0' 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

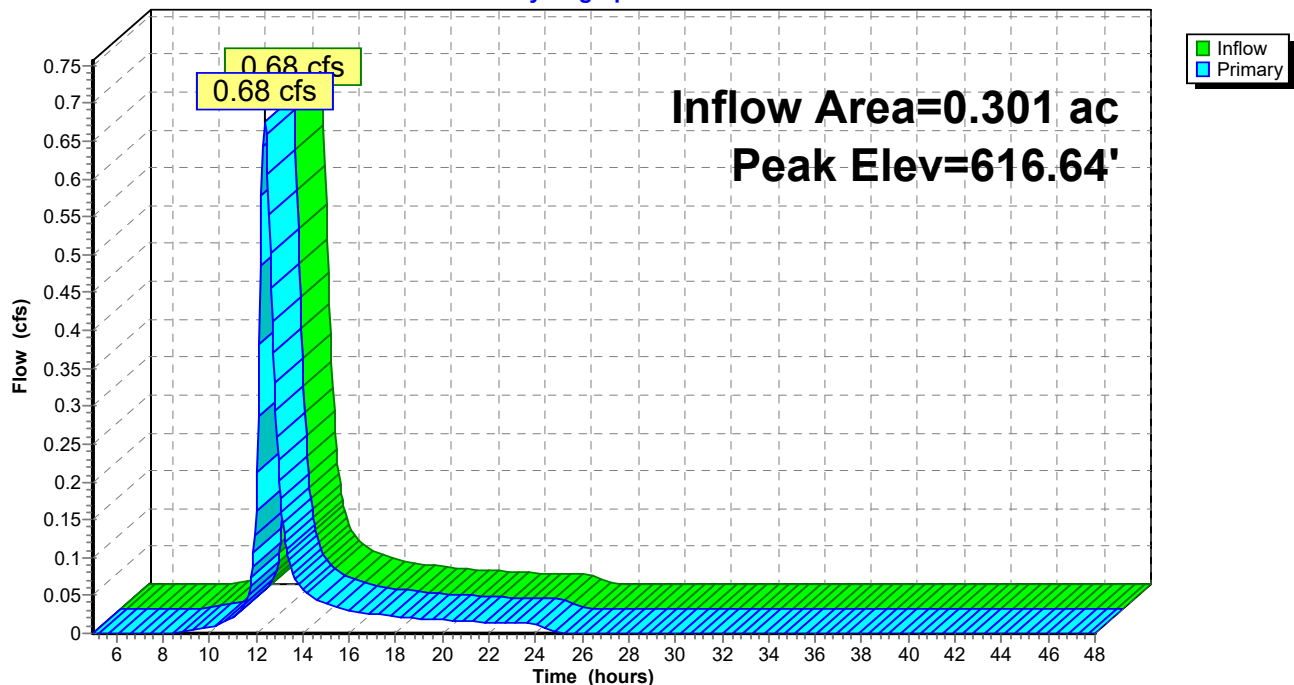
Primary OutFlow Max=0.67 cfs @ 12.38 hrs HW=616.64' (Free Discharge)

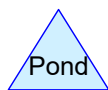
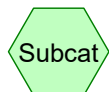
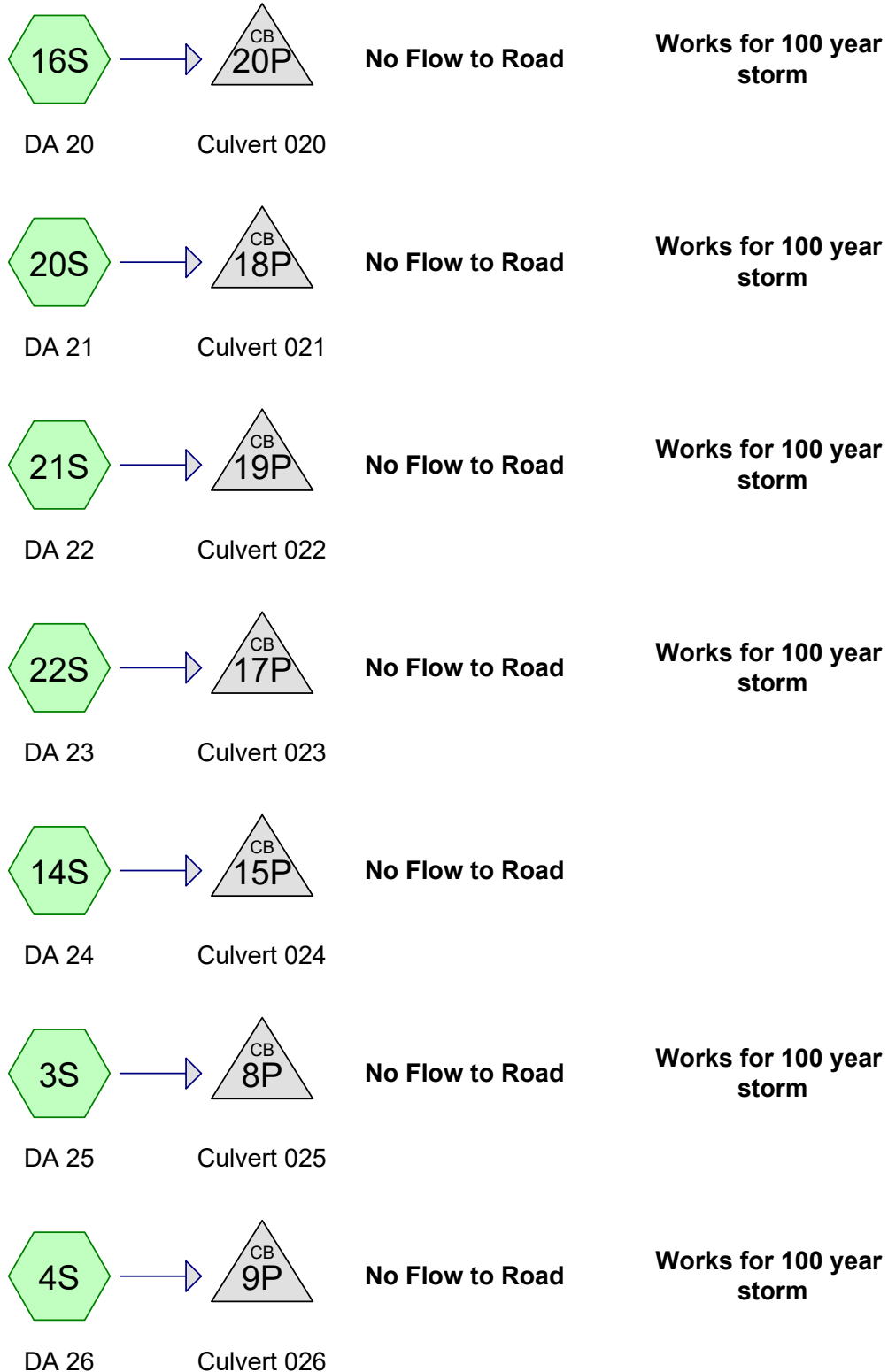
1=Culvert 009 (Inlet Controls 0.67 cfs @ 1.45 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 36P: Culvert 009

Hydrograph





Routing Diagram for DA 20-26

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DA 20-26

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Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	1-yr	NRCC 24-hr	A	Default	24.00	1	1.87	2
2	10-yr	NRCC 24-hr	A	Default	24.00	1	3.26	2
3	100-yr	NRCC 24-hr	A	Default	24.00	1	4.91	2

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Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
6.229	77	D - 77 - Deciduous Forest (14S, 20S, 21S, 22S)
0.260	77	D - 77 - Mixed Forest (20S)
87.955	78	D - 78 - Meadowed, grass, non-grazed land (4S, 14S, 20S, 21S, 22S)
10.821	80	D - 80 - Developed open space (3S, 14S, 16S, 21S)
20.839	82	D - 82 - Developed Low intensity (3S, 4S, 14S, 21S)
0.211	85	D - 85 - Developed Med intensity (4S)
1.053	90	D - 90 - Woody Wetlands (14S)
127.368	79	TOTAL AREA

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Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)	Node Name
1	8P	610.00	608.50	46.2	0.0325	0.012	0.0	18.0	3.6	
2	9P	606.60	605.40	46.2	0.0260	0.010	0.0	18.0	3.6	
3	15P	610.30	608.50	46.2	0.0390	0.012	0.0	18.0	3.6	
4	17P	611.92	611.15	27.0	0.0285	0.012	0.0	18.0	3.6	
5	18P	614.90	615.10	27.0	-0.0074	0.012	0.0	18.0	3.6	
6	19P	610.50	610.40	37.0	0.0027	0.012	0.0	60.0	12.0	
7	20P	618.60	619.00	46.2	-0.0087	0.012	0.0	18.0	3.6	

DA 20-26

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NRCC 24-hr A 1-yr Rainfall=1.87"

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Time span=5.00-48.00 hrs, dt=0.05 hrs, 861 points
 Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
 Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 3S: DA 25	Runoff Area=0.216 ac 0.00% Impervious Runoff Depth=0.48" Flow Length=190' Tc=13.4 min CN=80 Runoff=0.11 cfs 0.009 af
Subcatchment 4S: DA 26	Runoff Area=2.726 ac 0.00% Impervious Runoff Depth=0.56" Flow Length=2,922' Tc=77.6 min CN=82 Runoff=0.64 cfs 0.128 af
Subcatchment 14S: DA 24	Runoff Area=12.746 ac 0.00% Impervious Runoff Depth=0.48" Flow Length=1,498' Tc=60.9 min CN=80 Runoff=2.90 cfs 0.515 af
Subcatchment 16S: DA 20	Runoff Area=0.088 ac 0.00% Impervious Runoff Depth=0.48" Flow Length=100' Slope=0.0050 '/' Tc=20.5 min CN=80 Runoff=0.04 cfs 0.004 af
Subcatchment 20S: DA 21	Runoff Area=0.382 ac 0.00% Impervious Runoff Depth=0.38" Flow Length=243' Tc=49.6 min CN=77 Runoff=0.07 cfs 0.012 af
Subcatchment 21S: DA 22	Runoff Area=110.818 ac 0.00% Impervious Runoff Depth=0.45" Flow Length=4,090' Tc=121.8 min CN=79 Runoff=14.29 cfs 4.139 af
Subcatchment 22S: DA 23	Runoff Area=0.392 ac 0.00% Impervious Runoff Depth=0.38" Flow Length=310' Tc=34.8 min CN=77 Runoff=0.09 cfs 0.012 af
Pond 8P: Culvert 025	Peak Elev=610.41' Inflow=0.11 cfs 0.009 af Outflow=0.11 cfs 0.009 af
Pond 9P: Culvert 026	Peak Elev=607.23' Inflow=0.64 cfs 0.128 af Outflow=0.64 cfs 0.128 af
Pond 15P: Culvert 024	Peak Elev=611.47' Inflow=2.90 cfs 0.515 af Outflow=2.90 cfs 0.515 af
Pond 17P: Culvert 023	Peak Elev=612.25' Inflow=0.09 cfs 0.012 af Outflow=0.09 cfs 0.012 af
Pond 18P: Culvert 021	Peak Elev=615.48' Inflow=0.07 cfs 0.012 af Outflow=0.07 cfs 0.012 af
Pond 19P: Culvert 022	Peak Elev=612.72' Inflow=14.29 cfs 4.139 af Outflow=14.29 cfs 4.139 af
Pond 20P: Culvert 020	Peak Elev=619.35' Inflow=0.04 cfs 0.004 af Outflow=0.04 cfs 0.004 af

Total Runoff Area = 127.368 ac Runoff Volume = 4.819 af Average Runoff Depth = 0.45"
100.00% Pervious = 127.368 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 3S: DA 25

Runoff = 0.11 cfs @ 12.24 hrs, Volume= 0.009 af, Depth= 0.48"
 Routed to Pond 8P : Culvert 025

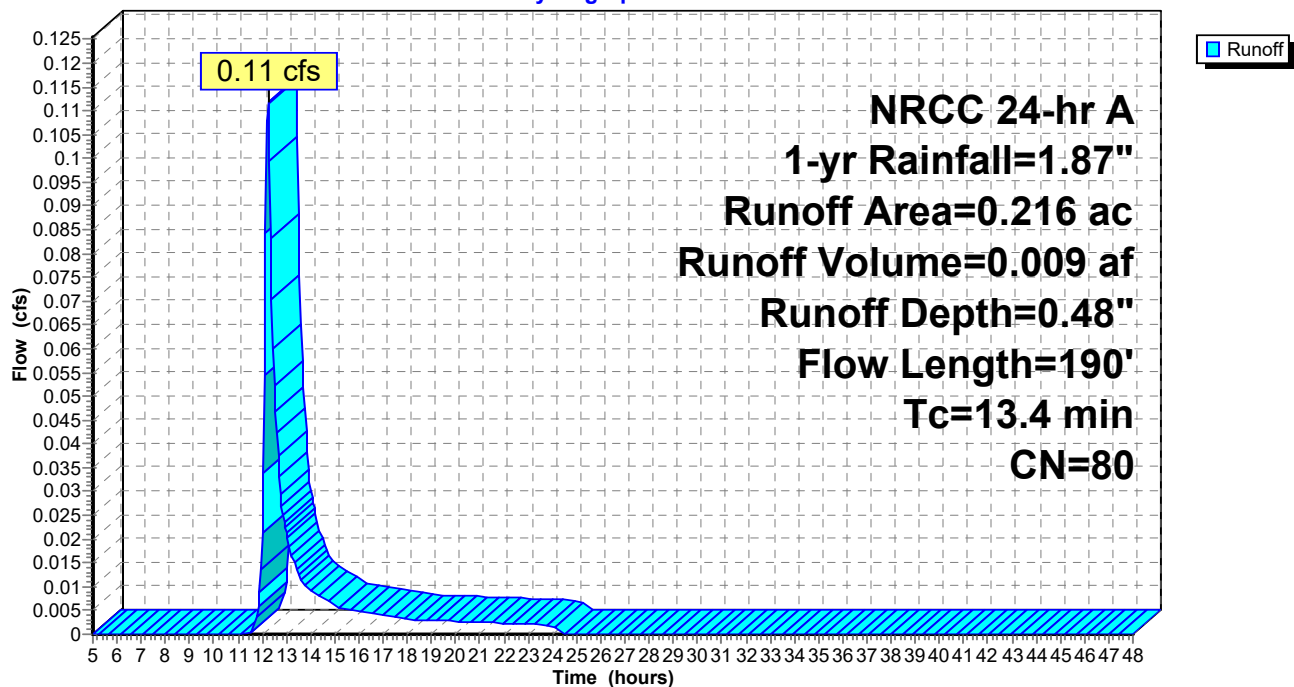
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NRCC 24-hr A 1-yr Rainfall=1.87"

Area (ac)	CN	Description
* 0.124	80	D - 80 - Developed open space
* 0.049	80	D - 80 - Developed open space
* 0.043	82	D - 82 - Developed Low intensity
0.216	80	Weighted Average
0.216		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0350	0.18		Sheet Flow, 100' sheet Grass: Short n= 0.150 P2= 2.22"
4.0	90	0.0028	0.37		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
13.4	190	Total			

Subcatchment 3S: DA 25

Hydrograph



DA 20-26

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NRCC 24-hr A 1-yr Rainfall=1.87"

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Summary for Subcatchment 4S: DA 26

Runoff = 0.64 cfs @ 13.16 hrs, Volume= 0.128 af, Depth= 0.56"
 Routed to Pond 9P : Culvert 026

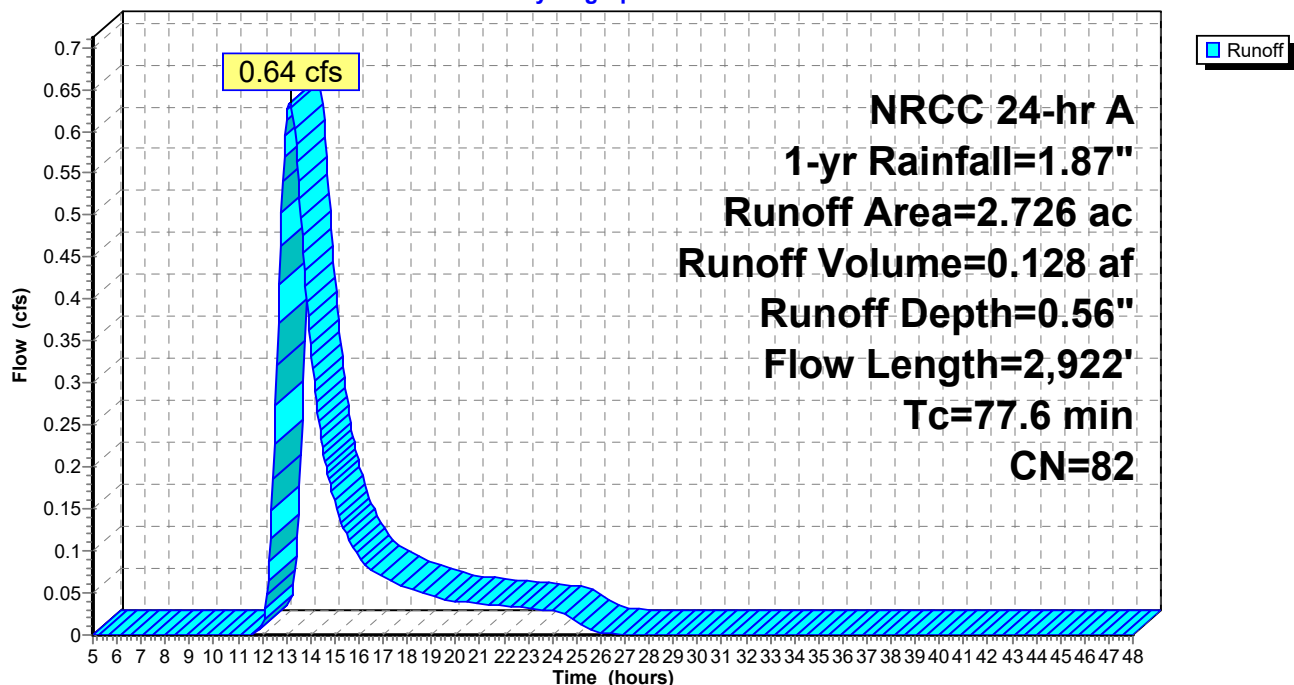
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NRCC 24-hr A 1-yr Rainfall=1.87"

Area (ac)	CN	Description
* 0.000	80	D - 80 - Developed open space
* 1.720	82	D - 82 - Developed Low intensity
* 0.770	82	D - 82 - Developed Low intensity
* 0.001	82	D - 82 - Developed Low intensity
* 0.211	85	D - 85 - Developed Med intensity
* 0.024	78	D - 78 - Meadowed, grass, non-grazed land
2.726	82	Weighted Average
2.726		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.6	100	0.0225	0.07		Sheet Flow, 100' sheet Woods: Light underbrush n= 0.400 P2= 2.22"
53.0	2,822	0.0035	0.89		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
77.6	2,922	Total			

Subcatchment 4S: DA 26

Hydrograph



Summary for Subcatchment 14S: DA 24

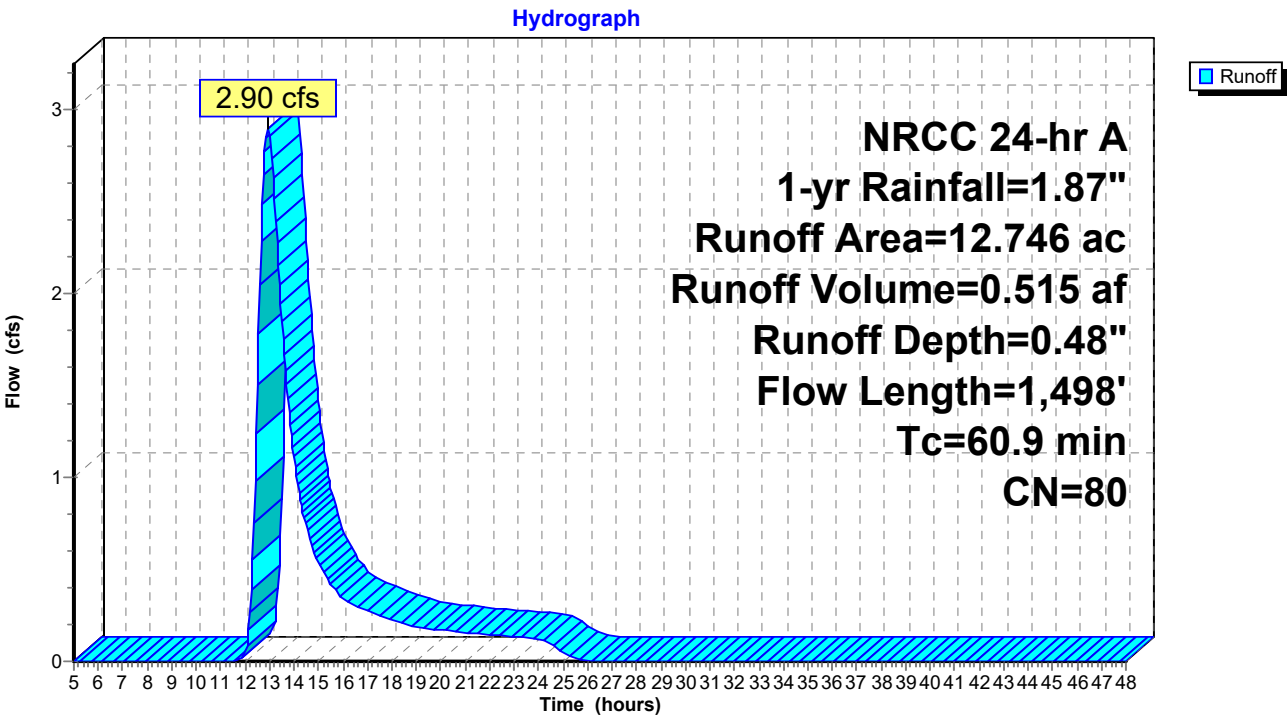
Runoff = 2.90 cfs @ 12.93 hrs, Volume= 0.515 af, Depth= 0.48"
 Routed to Pond 15P : Culvert 024

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NRCC 24-hr A 1-yr Rainfall=1.87"

Area (ac)	CN	Description
* 3.807	80	D - 80 - Developed open space
* 0.054	80	D - 80 - Developed open space
* 0.544	80	D - 80 - Developed open space
* 1.124	82	D - 82 - Developed Low intensity
* 0.289	77	D - 77 - Deciduous Forest
* 0.167	77	D - 77 - Deciduous Forest
* 3.445	78	D - 78 - Meadowed, grass, non-grazed land
* 1.976	78	D - 78 - Meadowed, grass, non-grazed land
* 0.287	78	D - 78 - Meadowed, grass, non-grazed land
* 0.002	90	D - 90 - Woody Wetlands
* 1.051	90	D - 90 - Woody Wetlands
12.746	80	Weighted Average
12.746		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0350	0.18		Sheet Flow, 100' sheet Grass: Short n= 0.150 P2= 2.22"
7.3	379	0.0152	0.86		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
44.2	1,019	0.0059	0.38		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
60.9	1,498	Total			

Subcatchment 14S: DA 24



DA 20-26

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NRCC 24-hr A 1-yr Rainfall=1.87"

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Summary for Subcatchment 16S: DA 20

Runoff = 0.04 cfs @ 12.34 hrs, Volume= 0.004 af, Depth= 0.48"
Routed to Pond 20P : Culvert 020

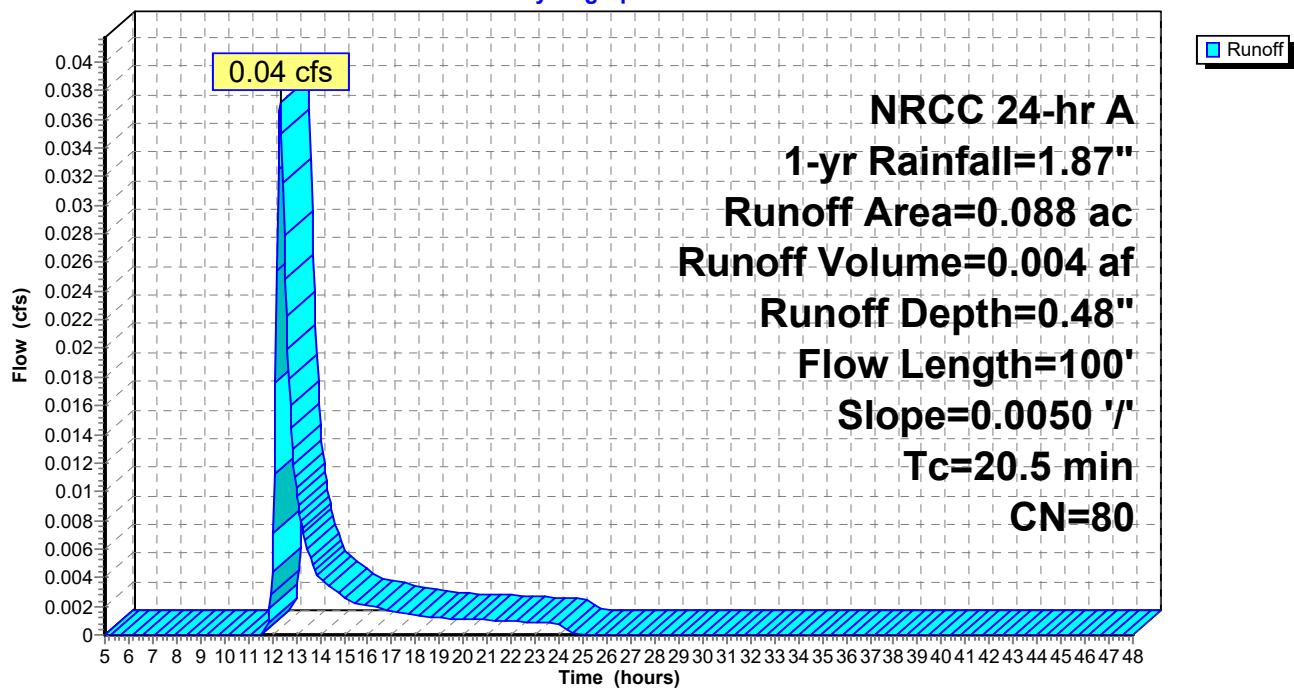
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 1-yr Rainfall=1.87"

Area (ac)	CN	Description
* 0.088	80	D - 80 - Developed open space
0.088		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.5	100	0.0050	0.08		Sheet Flow, 100' Sheet Grass: Short n= 0.150 P2= 2.22"

Subcatchment 16S: DA 20

Hydrograph



Summary for Subcatchment 20S: DA 21

Runoff = 0.07 cfs @ 12.80 hrs, Volume= 0.012 af, Depth= 0.38"
 Routed to Pond 18P : Culvert 021

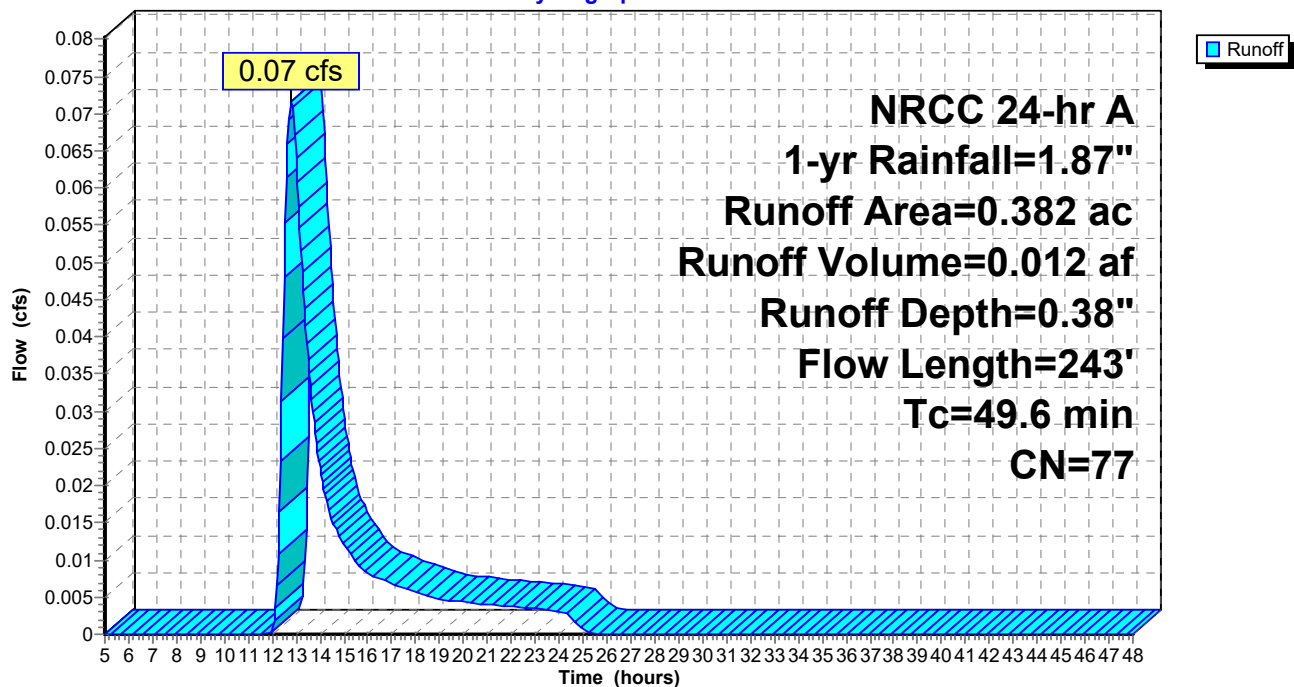
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NRCC 24-hr A 1-yr Rainfall=1.87"

Area (ac)	CN	Description
* 0.001	77	D - 77 - Deciduous Forest
* 0.260	77	D - 77 - Mixed Forest
* 0.121	78	D - 78 - Meadowed, grass, non-grazed land
0.382	77	Weighted Average
0.382		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
44.9	100	0.0050	0.04		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.22"
4.7	143	0.0105	0.51		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
49.6	243	Total			

Subcatchment 20S: DA 21

Hydrograph



DA 20-26

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NRCC 24-hr A 1-yr Rainfall=1.87"

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Summary for Subcatchment 21S: DA 22

Runoff = 14.29 cfs @ 13.82 hrs, Volume= 4.139 af, Depth= 0.45"
 Routed to Pond 19P : Culvert 022

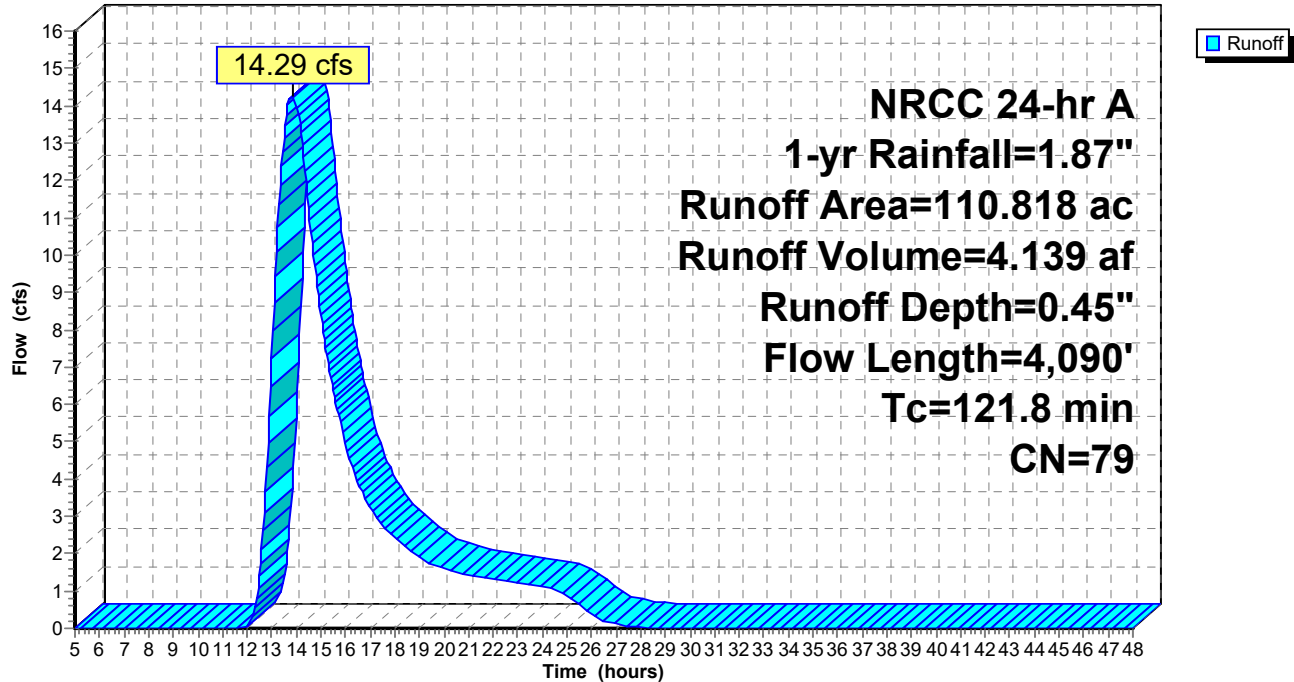
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NRCC 24-hr A 1-yr Rainfall=1.87"

Area (ac)	CN	Description
* 3.220	80	D - 80 - Developed open space
* 2.932	80	D - 80 - Developed open space
* 0.003	80	D - 80 - Developed open space
* 10.164	82	D - 82 - Developed Low intensity
* 6.410	82	D - 82 - Developed Low intensity
* 0.607	82	D - 82 - Developed Low intensity
* 5.494	77	D - 77 - Deciduous Forest
* 15.746	78	D - 78 - Meadowed, grass, non-grazed land
* 63.740	78	D - 78 - Meadowed, grass, non-grazed land
* 2.502	78	D - 78 - Meadowed, grass, non-grazed land
110.818	79	Weighted Average
110.818		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	100	0.0300	0.17		Sheet Flow, 100' Sheet Grass: Short n= 0.150 P2= 2.22"
88.0	2,225	0.0071	0.42		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
23.8	1,765	0.0068	1.24		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
121.8	4,090	Total			

Subcatchment 21S: DA 22

Hydrograph



Summary for Subcatchment 22S: DA 23

Runoff = 0.09 cfs @ 12.57 hrs, Volume= 0.012 af, Depth= 0.38"
 Routed to Pond 17P : Culvert 023

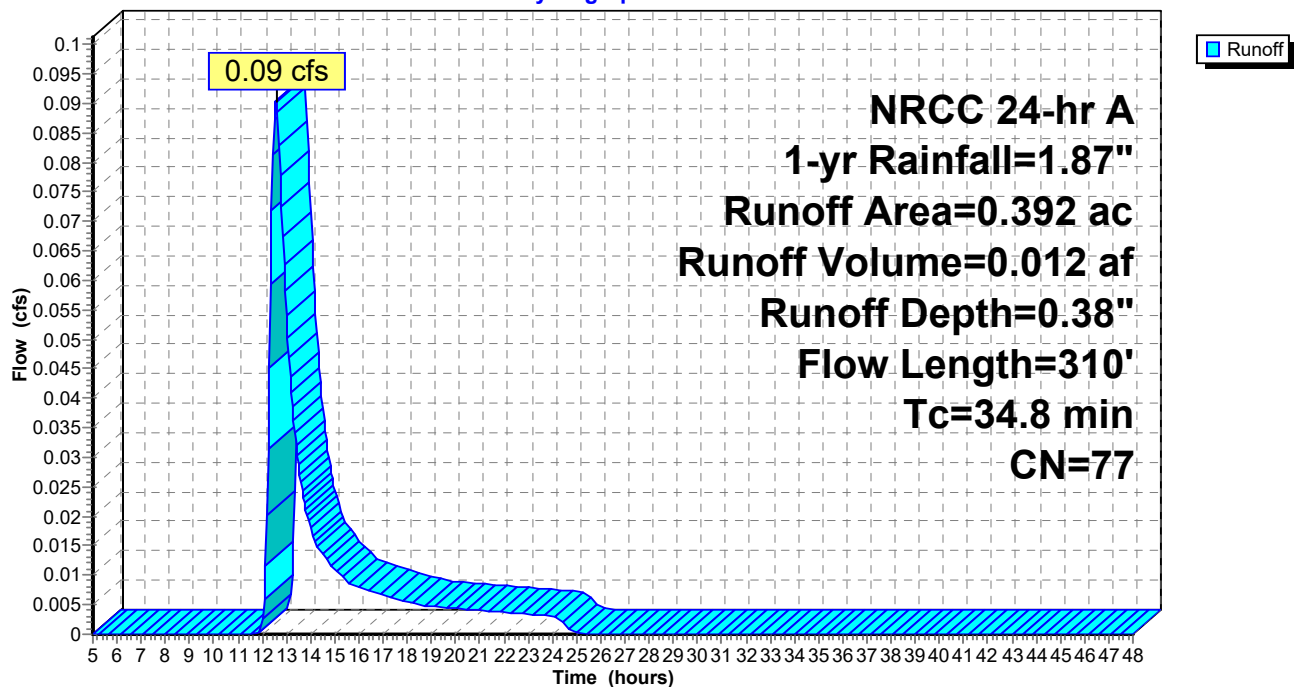
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NRCC 24-hr A 1-yr Rainfall=1.87"

Area (ac)	CN	Description
* 0.261	77	D - 77 - Deciduous Forest
* 0.017	77	D - 77 - Deciduous Forest
* 0.114	78	D - 78 - Meadowed, grass, non-grazed land
0.392	77	Weighted Average
0.392		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.9	100	0.0150	0.06		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.22"
5.9	210	0.0143	0.60		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
34.8	310	Total			

Subcatchment 22S: DA 23

Hydrograph



Summary for Pond 8P: Culvert 025

[57] Hint: Peaked at 610.41' (Flood elevation advised)

Inflow Area = 0.216 ac, 0.00% Impervious, Inflow Depth = 0.48" for 1-yr event
 Inflow = 0.11 cfs @ 12.24 hrs, Volume= 0.009 af
 Outflow = 0.11 cfs @ 12.24 hrs, Volume= 0.009 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.11 cfs @ 12.24 hrs, Volume= 0.009 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 610.41' @ 12.24 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	610.30'	18.0" Round Culvert 025 w/ 3.6" inside fill L= 46.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 610.00' / 608.50' S= 0.0325 ' / ' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 1.52 sf
#2	Primary	613.00'	100.0' long + 3.0 ' / ' SideZ x 20.0' 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

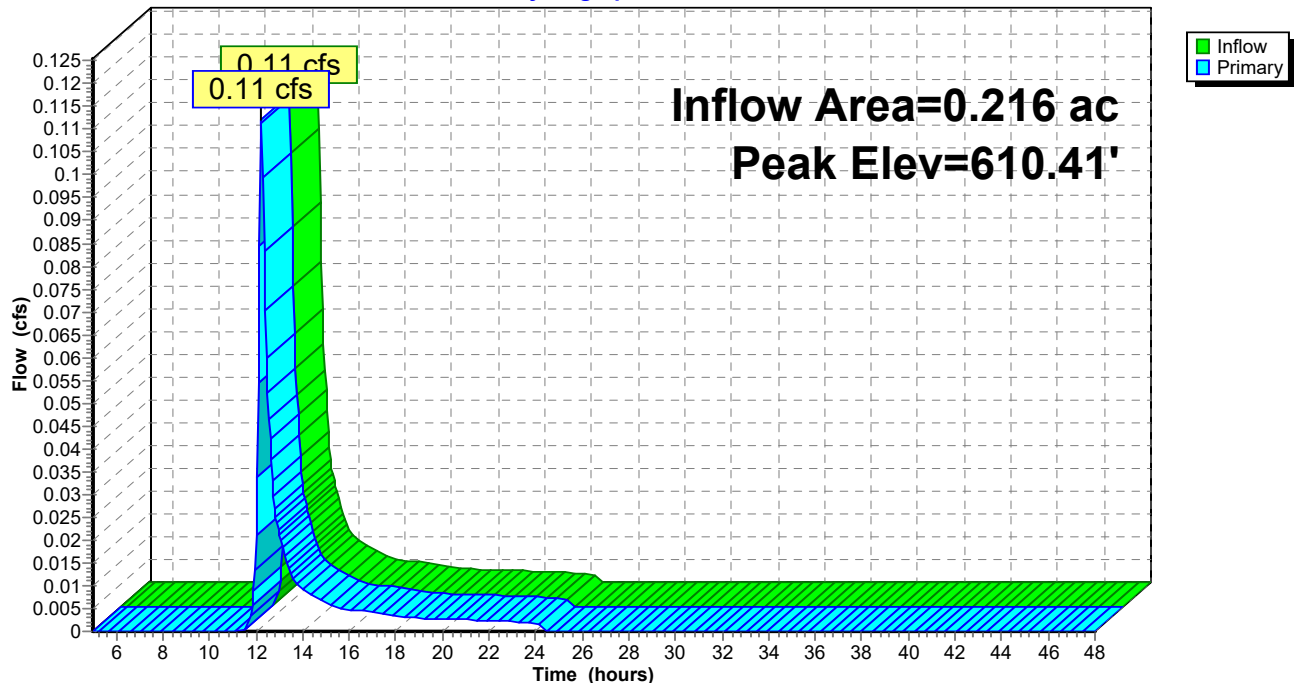
Primary OutFlow Max=0.11 cfs @ 12.24 hrs HW=610.41' (Free Discharge)

1=Culvert 025 (Inlet Controls 0.11 cfs @ 0.82 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 8P: Culvert 025

Hydrograph



Summary for Pond 9P: Culvert 026

[57] Hint: Peaked at 607.23' (Flood elevation advised)

Inflow Area = 2.726 ac, 0.00% Impervious, Inflow Depth = 0.56" for 1-yr event
 Inflow = 0.64 cfs @ 13.16 hrs, Volume= 0.128 af
 Outflow = 0.64 cfs @ 13.16 hrs, Volume= 0.128 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.64 cfs @ 13.16 hrs, Volume= 0.128 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 607.23' @ 13.16 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	606.90'	18.0" Round Culvert 026 w/ 3.6" inside fill L= 46.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 606.60' / 605.40' S= 0.0260 ' S Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.52 sf
#2	Primary	609.60'	100.0' long + 3.0 ' SideZ x 20.0' 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

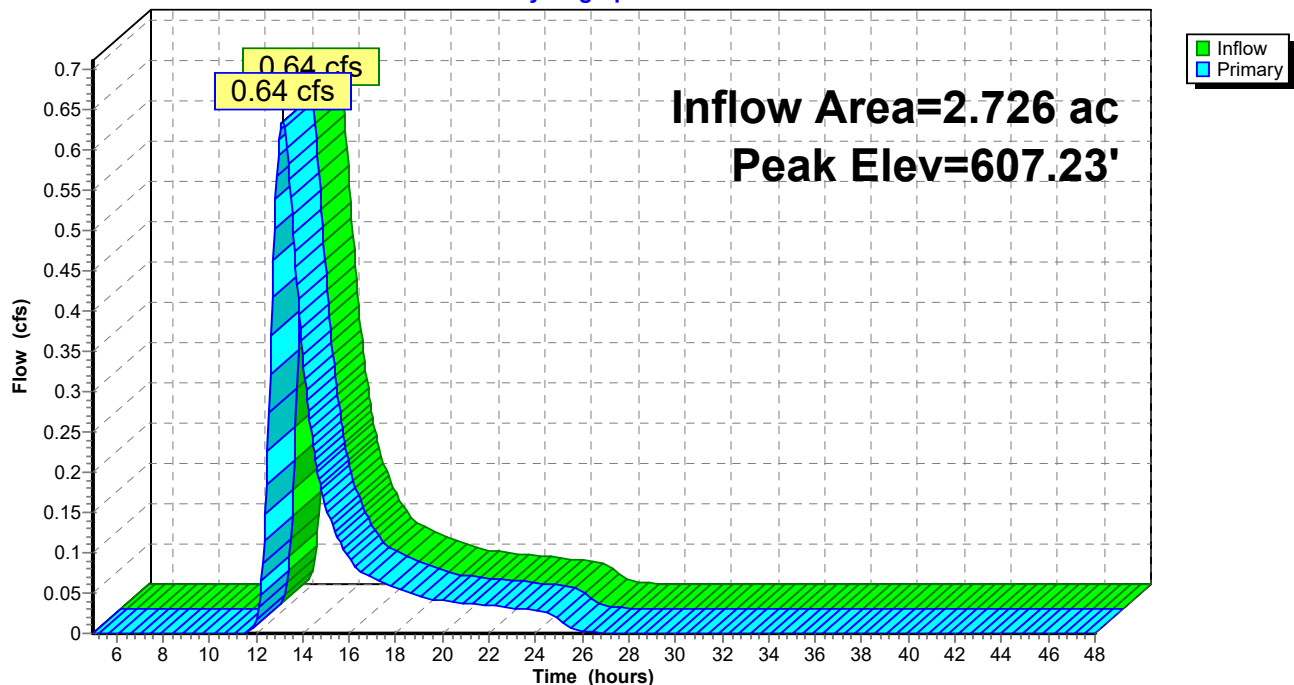
Primary OutFlow Max=0.64 cfs @ 13.16 hrs HW=607.23' (Free Discharge)

1=Culvert 026 (Inlet Controls 0.64 cfs @ 1.42 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 9P: Culvert 026

Hydrograph



Summary for Pond 15P: Culvert 024

[57] Hint: Peaked at 611.47' (Flood elevation advised)

Inflow Area = 12.746 ac, 0.00% Impervious, Inflow Depth = 0.48" for 1-yr event
 Inflow = 2.90 cfs @ 12.93 hrs, Volume= 0.515 af
 Outflow = 2.90 cfs @ 12.93 hrs, Volume= 0.515 af, Atten= 0%, Lag= 0.0 min
 Primary = 2.90 cfs @ 12.93 hrs, Volume= 0.515 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 611.47' @ 12.93 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	610.60'	18.0" Round Culvert 024 w/ 3.6" inside fill L= 46.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 610.30' / 608.50' S= 0.0390 ' S= 0.0390 ' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 1.52 sf
#2	Primary	613.30'	100.0' long + 3.0 ' SideZ x 20.0' 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

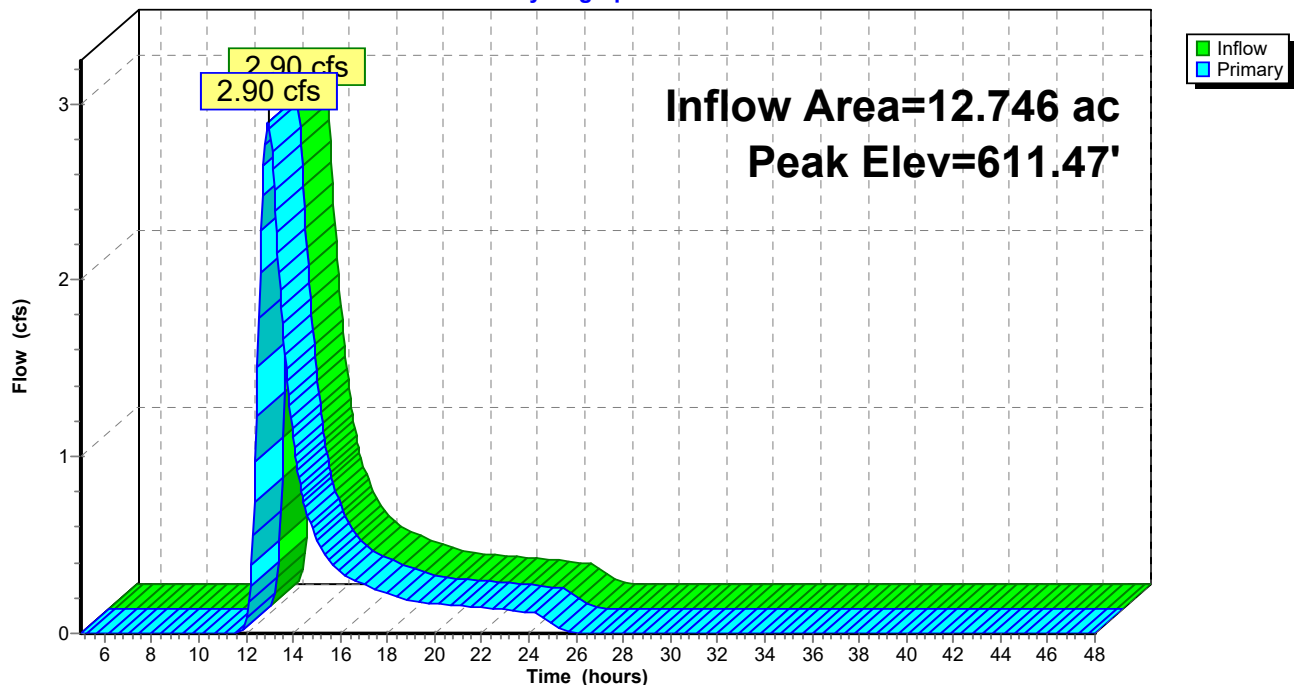
Primary OutFlow Max=2.89 cfs @ 12.93 hrs HW=611.47' (Free Discharge)

1=Culvert 024 (Inlet Controls 2.89 cfs @ 2.36 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 15P: Culvert 024

Hydrograph



Summary for Pond 17P: Culvert 023

Inflow Area = 0.392 ac, 0.00% Impervious, Inflow Depth = 0.38" for 1-yr event
 Inflow = 0.09 cfs @ 12.57 hrs, Volume= 0.012 af
 Outflow = 0.09 cfs @ 12.57 hrs, Volume= 0.012 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.09 cfs @ 12.57 hrs, Volume= 0.012 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 612.25' @ 12.57 hrs

Flood Elev= 920.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	612.22'	18.0" Round Culvert 023 w/ 3.6" inside fill L= 27.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 611.92' / 611.15' S= 0.0285 ' S= 0.0285 ' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 1.52 sf
#2	Primary	614.15'	100.0' long + 3.0 ' SideZ x 20.0' breadth Road 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

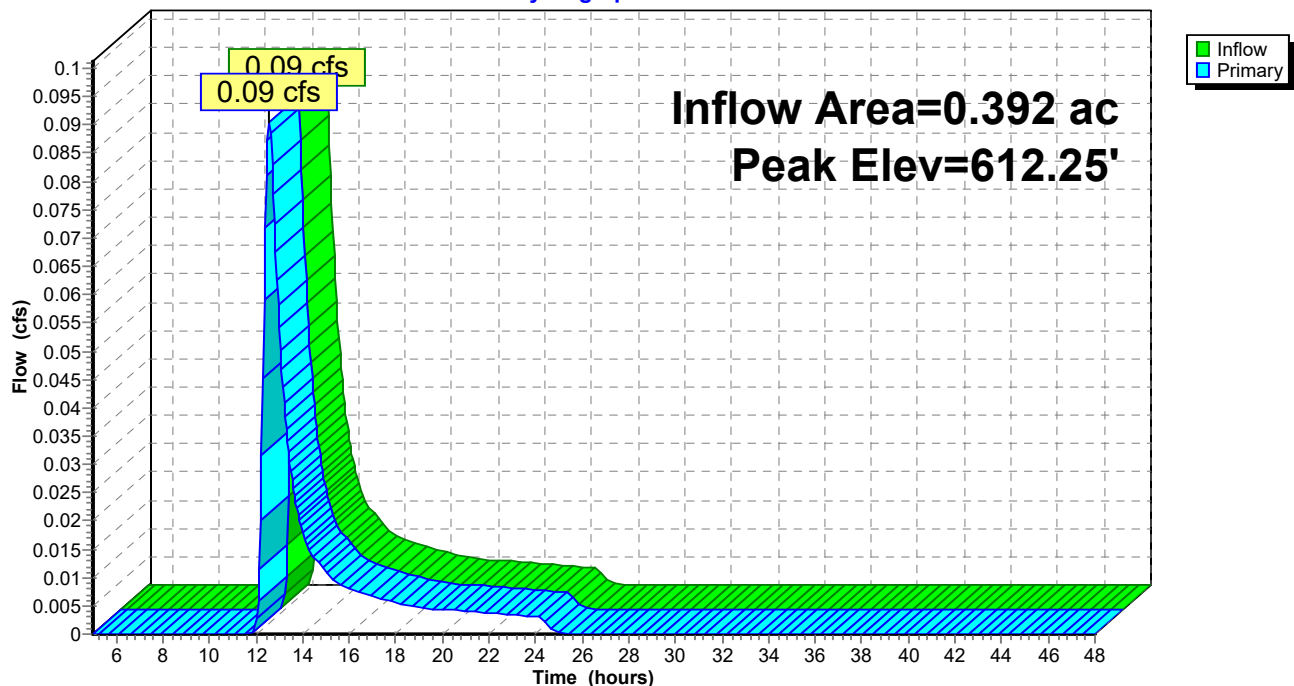
Primary OutFlow Max=0.01 cfs @ 12.57 hrs HW=612.25' (Free Discharge)

1=Culvert 023 (Inlet Controls 0.01 cfs @ 0.42 fps)

2=Road (Controls 0.00 cfs)

Pond 17P: Culvert 023

Hydrograph



Summary for Pond 18P: Culvert 021

[57] Hint: Peaked at 615.48' (Flood elevation advised)

Inflow Area = 0.382 ac, 0.00% Impervious, Inflow Depth = 0.38" for 1-yr event
 Inflow = 0.07 cfs @ 12.80 hrs, Volume= 0.012 af
 Outflow = 0.07 cfs @ 12.80 hrs, Volume= 0.012 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.07 cfs @ 12.80 hrs, Volume= 0.012 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 615.48' @ 12.80 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	615.40'	18.0" Round Culvert 021 w/ 3.6" inside fill L= 27.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 614.90' / 615.10' S= -0.0074 ' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 1.52 sf
#2	Primary	617.90'	100.0' long + 3.0 ' SideZ x 20.0' breadth Road 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

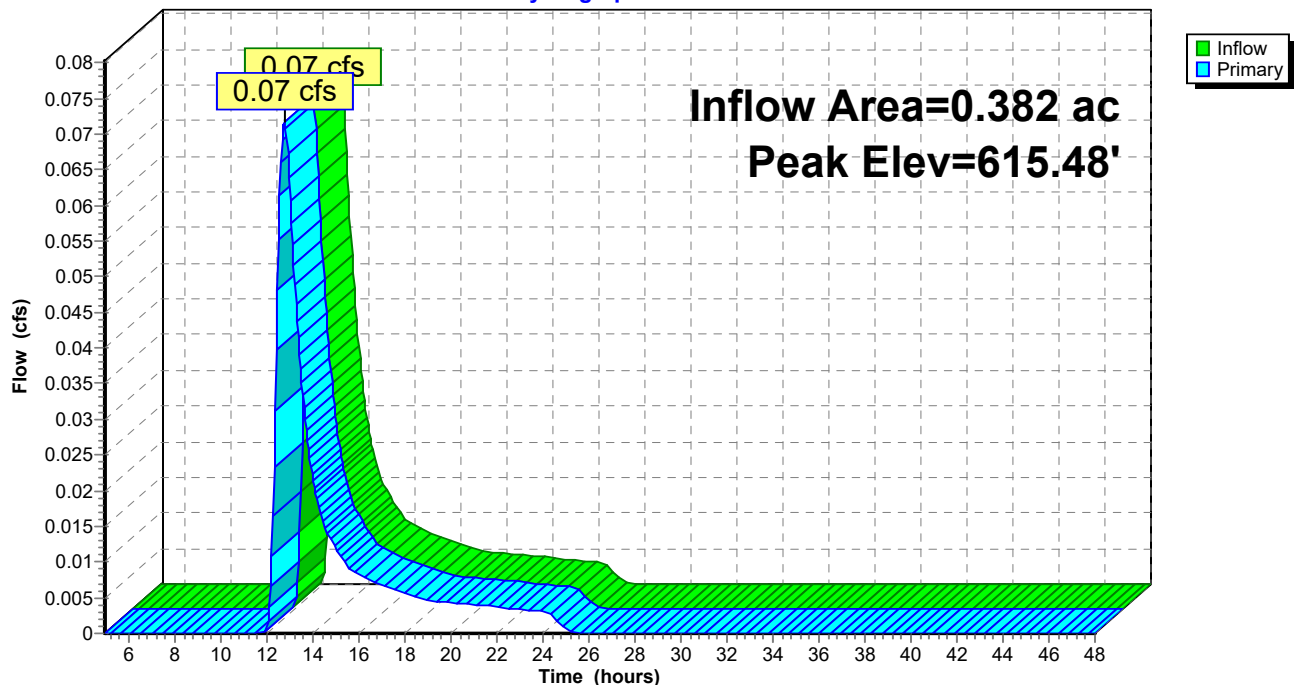
Primary OutFlow Max=0.07 cfs @ 12.80 hrs HW=615.48' (Free Discharge)

1=Culvert 021 (Inlet Controls 0.07 cfs @ 0.71 fps)

2=Road (Controls 0.00 cfs)

Pond 18P: Culvert 021

Hydrograph



Summary for Pond 19P: Culvert 022

[57] Hint: Peaked at 612.72' (Flood elevation advised)

Inflow Area = 110.818 ac, 0.00% Impervious, Inflow Depth = 0.45" for 1-yr event
 Inflow = 14.29 cfs @ 13.82 hrs, Volume= 4.139 af
 Outflow = 14.29 cfs @ 13.82 hrs, Volume= 4.139 af, Atten= 0%, Lag= 0.0 min
 Primary = 14.29 cfs @ 13.82 hrs, Volume= 4.139 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 612.72' @ 13.82 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	611.50'	60.0" Round Culvert 022 w/ 12.0" inside fill L= 37.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 610.50' / 610.40' S= 0.0027 ' S Cc= 0.900 n= 0.012, Flow Area= 16.84 sf
#2	Primary	617.00'	100.0' long + 3.0 ' SideZ x 20.0' breadth Road 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

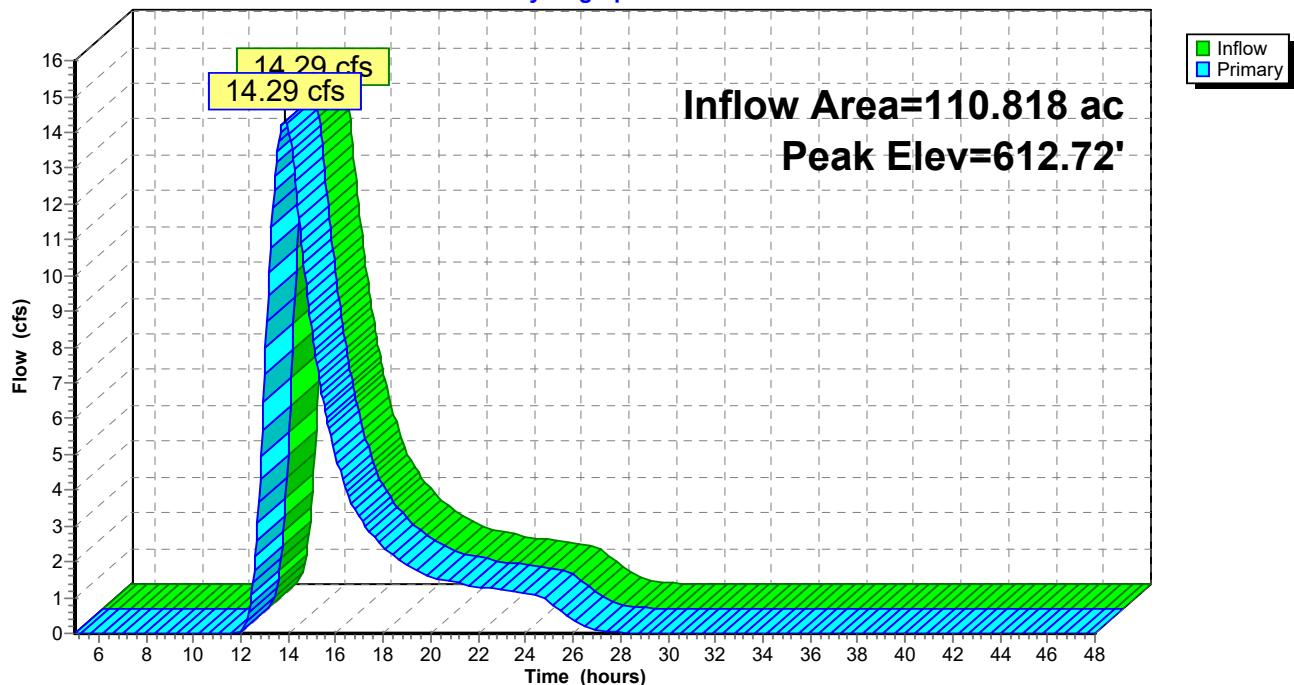
Primary OutFlow Max=14.28 cfs @ 13.82 hrs HW=612.72' (Free Discharge)

1=Culvert 022 (Barrel Controls 14.28 cfs @ 3.47 fps)

2=Road (Controls 0.00 cfs)

Pond 19P: Culvert 022

Hydrograph



Summary for Pond 20P: Culvert 020

[57] Hint: Peaked at 619.35' (Flood elevation advised)

Inflow Area = 0.088 ac, 0.00% Impervious, Inflow Depth = 0.48" for 1-yr event
 Inflow = 0.04 cfs @ 12.34 hrs, Volume= 0.004 af
 Outflow = 0.04 cfs @ 12.34 hrs, Volume= 0.004 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.04 cfs @ 12.34 hrs, Volume= 0.004 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 619.35' @ 12.34 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	619.30'	18.0" Round Culvert 020 w/ 3.6" inside fill L= 46.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 618.60' / 619.00' S= -0.0087 ' S Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 1.52 sf
#2	Primary	622.00'	100.0' long + 3.0 ' SideZ x 20.0' 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

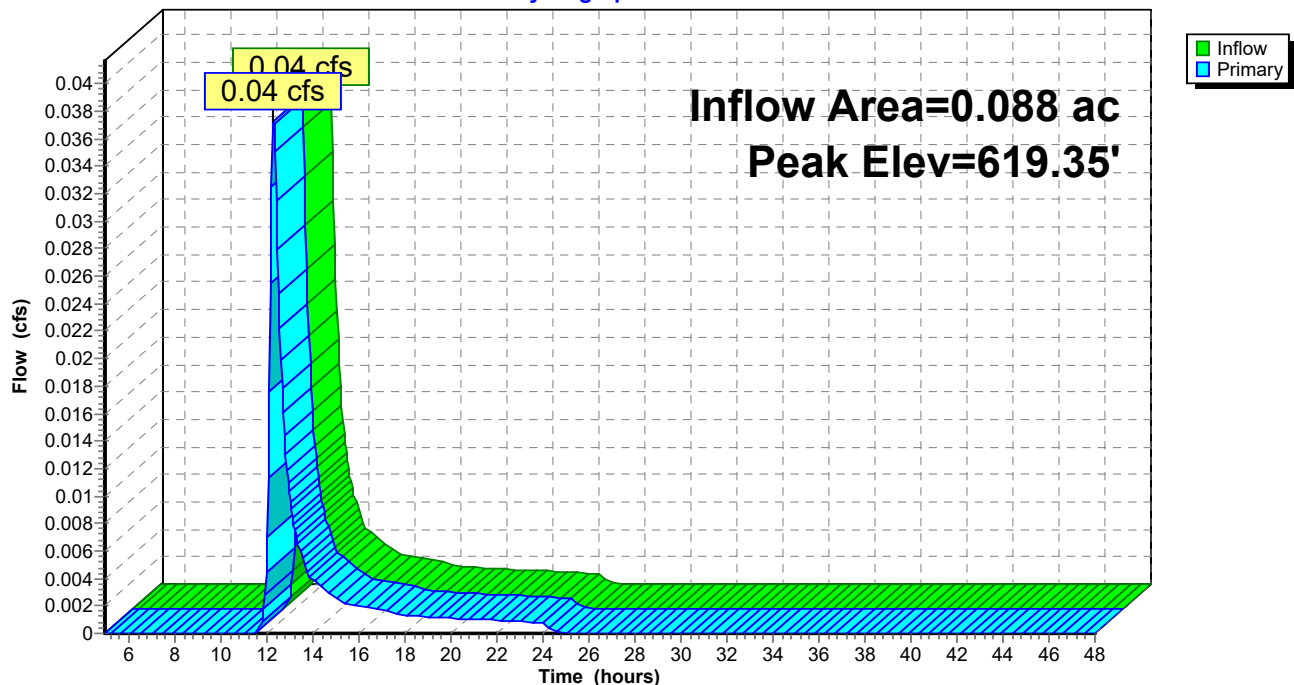
Primary OutFlow Max=0.04 cfs @ 12.34 hrs HW=619.35' (Free Discharge)

1=Culvert 020 (Inlet Controls 0.04 cfs @ 0.58 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 20P: Culvert 020

Hydrograph



DA 20-26

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NRCC 24-hr A 10-yr Rainfall=3.26"

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Time span=5.00-48.00 hrs, dt=0.05 hrs, 861 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 3S: DA 25 Runoff Area=0.216 ac 0.00% Impervious Runoff Depth=1.45"
Flow Length=190' Tc=13.4 min CN=80 Runoff=0.37 cfs 0.026 af

Subcatchment 4S: DA 26 Runoff Area=2.726 ac 0.00% Impervious Runoff Depth=1.59"
Flow Length=2,922' Tc=77.6 min CN=82 Runoff=1.92 cfs 0.360 af

Subcatchment 14S: DA 24 Runoff Area=12.746 ac 0.00% Impervious Runoff Depth=1.45"
Flow Length=1,498' Tc=60.9 min CN=80 Runoff=9.52 cfs 1.538 af

Subcatchment 16S: DA 20 Runoff Area=0.088 ac 0.00% Impervious Runoff Depth=1.45"
Flow Length=100' Slope=0.0050 '/' Tc=20.5 min CN=80 Runoff=0.12 cfs 0.011 af

Subcatchment 20S: DA 21 Runoff Area=0.382 ac 0.00% Impervious Runoff Depth=1.25"
Flow Length=243' Tc=49.6 min CN=77 Runoff=0.28 cfs 0.040 af

Subcatchment 21S: DA 22 Runoff Area=110.818 ac 0.00% Impervious Runoff Depth=1.38"
Flow Length=4,090' Tc=121.8 min CN=79 Runoff=49.18 cfs 12.762 af

Subcatchment 22S: DA 23 Runoff Area=0.392 ac 0.00% Impervious Runoff Depth=1.25"
Flow Length=310' Tc=34.8 min CN=77 Runoff=0.35 cfs 0.041 af

Pond 8P: Culvert 025 Peak Elev=610.53' Inflow=0.37 cfs 0.026 af
Outflow=0.37 cfs 0.026 af

Pond 9P: Culvert 026 Peak Elev=607.56' Inflow=1.92 cfs 0.360 af
Outflow=1.92 cfs 0.360 af

Pond 15P: Culvert 024 Peak Elev=613.32' Inflow=9.52 cfs 1.538 af
Outflow=9.52 cfs 1.538 af

Pond 17P: Culvert 023 Peak Elev=612.32' Inflow=0.35 cfs 0.041 af
Outflow=0.35 cfs 0.041 af

Pond 18P: Culvert 021 Peak Elev=615.59' Inflow=0.28 cfs 0.040 af
Outflow=0.28 cfs 0.040 af

Pond 19P: Culvert 022 Peak Elev=614.25' Inflow=49.18 cfs 12.762 af
Outflow=49.18 cfs 12.762 af

Pond 20P: Culvert 020 Peak Elev=619.41' Inflow=0.12 cfs 0.011 af
Outflow=0.12 cfs 0.011 af

Total Runoff Area = 127.368 ac Runoff Volume = 14.778 af Average Runoff Depth = 1.39"
100.00% Pervious = 127.368 ac 0.00% Impervious = 0.000 ac

DA 20-26

Prepared by Fisher Associates

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NRCC 24-hr A 10-yr Rainfall=3.26"

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Summary for Subcatchment 3S: DA 25

Runoff = 0.37 cfs @ 12.22 hrs, Volume= 0.026 af, Depth= 1.45"
 Routed to Pond 8P : Culvert 025

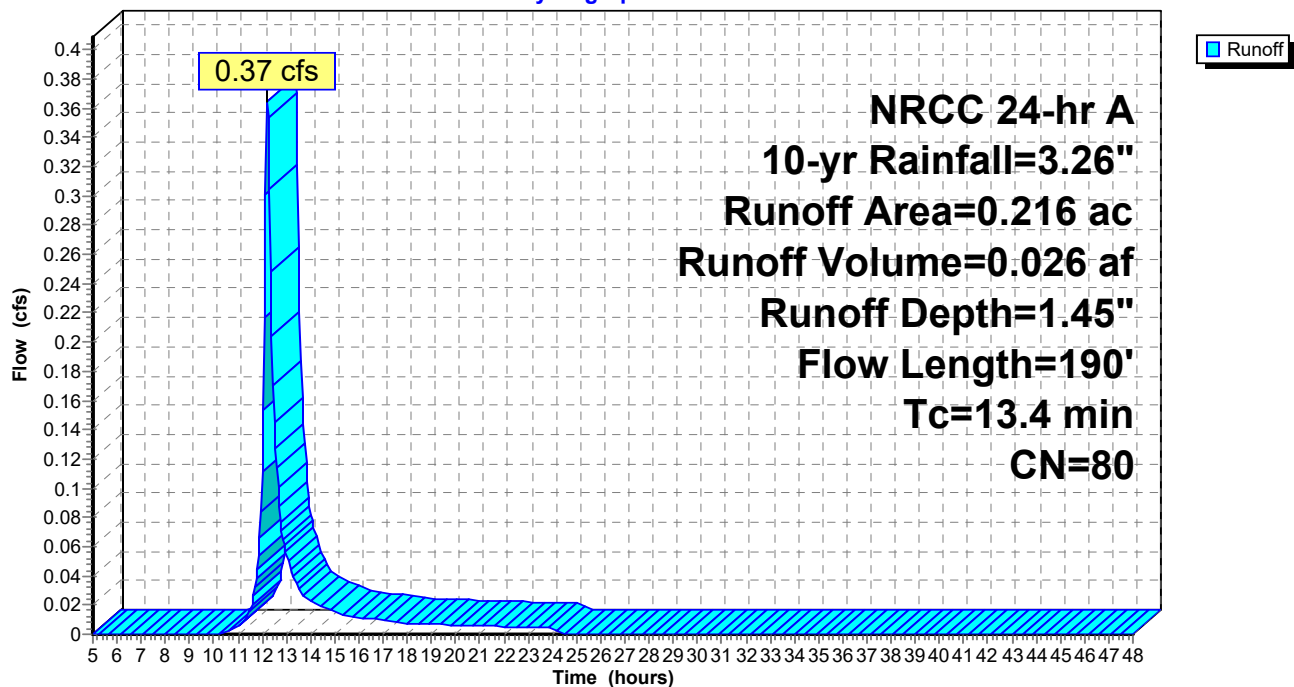
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NRCC 24-hr A 10-yr Rainfall=3.26"

Area (ac)	CN	Description
* 0.124	80	D - 80 - Developed open space
* 0.049	80	D - 80 - Developed open space
* 0.043	82	D - 82 - Developed Low intensity
0.216	80	Weighted Average
0.216		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0350	0.18		Sheet Flow, 100' sheet Grass: Short n= 0.150 P2= 2.22"
4.0	90	0.0028	0.37		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
13.4	190	Total			

Subcatchment 3S: DA 25

Hydrograph



DA 20-26

Prepared by Fisher Associates

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NRCC 24-hr A 10-yr Rainfall=3.26"

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Summary for Subcatchment 4S: DA 26

Runoff = 1.92 cfs @ 13.07 hrs, Volume= 0.360 af, Depth= 1.59"
Routed to Pond 9P : Culvert 026

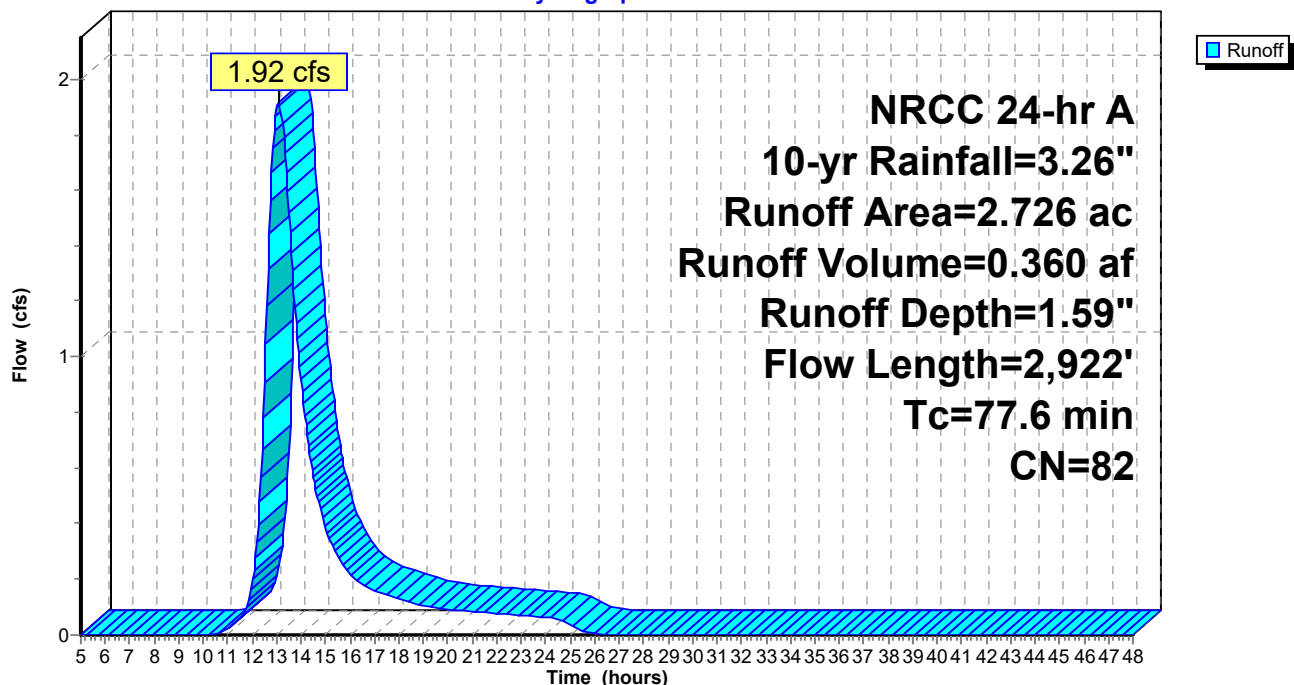
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 10-yr Rainfall=3.26"

Area (ac)	CN	Description
* 0.000	80	D - 80 - Developed open space
* 1.720	82	D - 82 - Developed Low intensity
* 0.770	82	D - 82 - Developed Low intensity
* 0.001	82	D - 82 - Developed Low intensity
* 0.211	85	D - 85 - Developed Med intensity
* 0.024	78	D - 78 - Meadowed, grass, non-grazed land
2.726	82	Weighted Average
2.726		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.6	100	0.0225	0.07		Sheet Flow, 100' sheet Woods: Light underbrush n= 0.400 P2= 2.22"
53.0	2,822	0.0035	0.89		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
77.6	2,922	Total			

Subcatchment 4S: DA 26

Hydrograph



DA 20-26

Prepared by Fisher Associates

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NRCC 24-hr A 10-yr Rainfall=3.26"

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Summary for Subcatchment 14S: DA 24

Runoff = 9.52 cfs @ 12.87 hrs, Volume= 1.538 af, Depth= 1.45"
 Routed to Pond 15P : Culvert 024

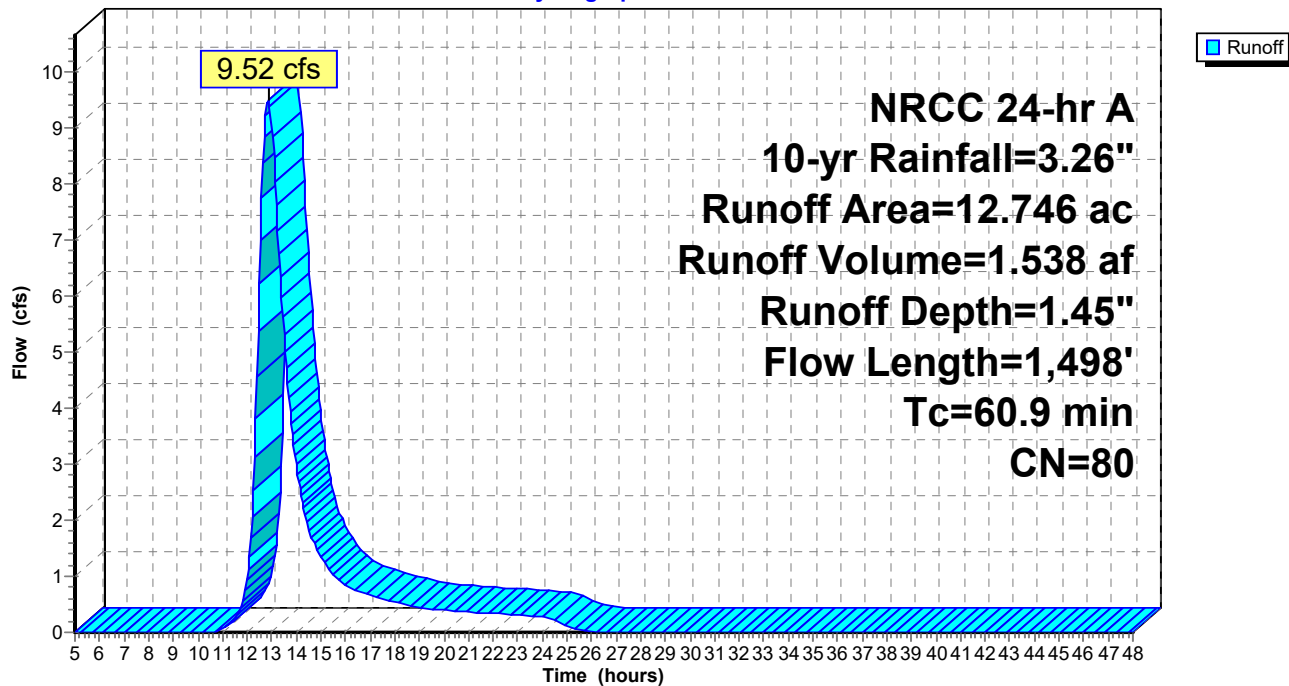
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NRCC 24-hr A 10-yr Rainfall=3.26"

Area (ac)	CN	Description
* 3.807	80	D - 80 - Developed open space
* 0.054	80	D - 80 - Developed open space
* 0.544	80	D - 80 - Developed open space
* 1.124	82	D - 82 - Developed Low intensity
* 0.289	77	D - 77 - Deciduous Forest
* 0.167	77	D - 77 - Deciduous Forest
* 3.445	78	D - 78 - Meadowed, grass, non-grazed land
* 1.976	78	D - 78 - Meadowed, grass, non-grazed land
* 0.287	78	D - 78 - Meadowed, grass, non-grazed land
* 0.002	90	D - 90 - Woody Wetlands
* 1.051	90	D - 90 - Woody Wetlands
12.746	80	Weighted Average
12.746		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0350	0.18		Sheet Flow, 100' sheet Grass: Short n= 0.150 P2= 2.22"
7.3	379	0.0152	0.86		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
44.2	1,019	0.0059	0.38		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
60.9	1,498	Total			

Subcatchment 14S: DA 24

Hydrograph



DA 20-26

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NRCC 24-hr A 10-yr Rainfall=3.26"

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Summary for Subcatchment 16S: DA 20

Runoff = 0.12 cfs @ 12.31 hrs, Volume= 0.011 af, Depth= 1.45"
Routed to Pond 20P : Culvert 020

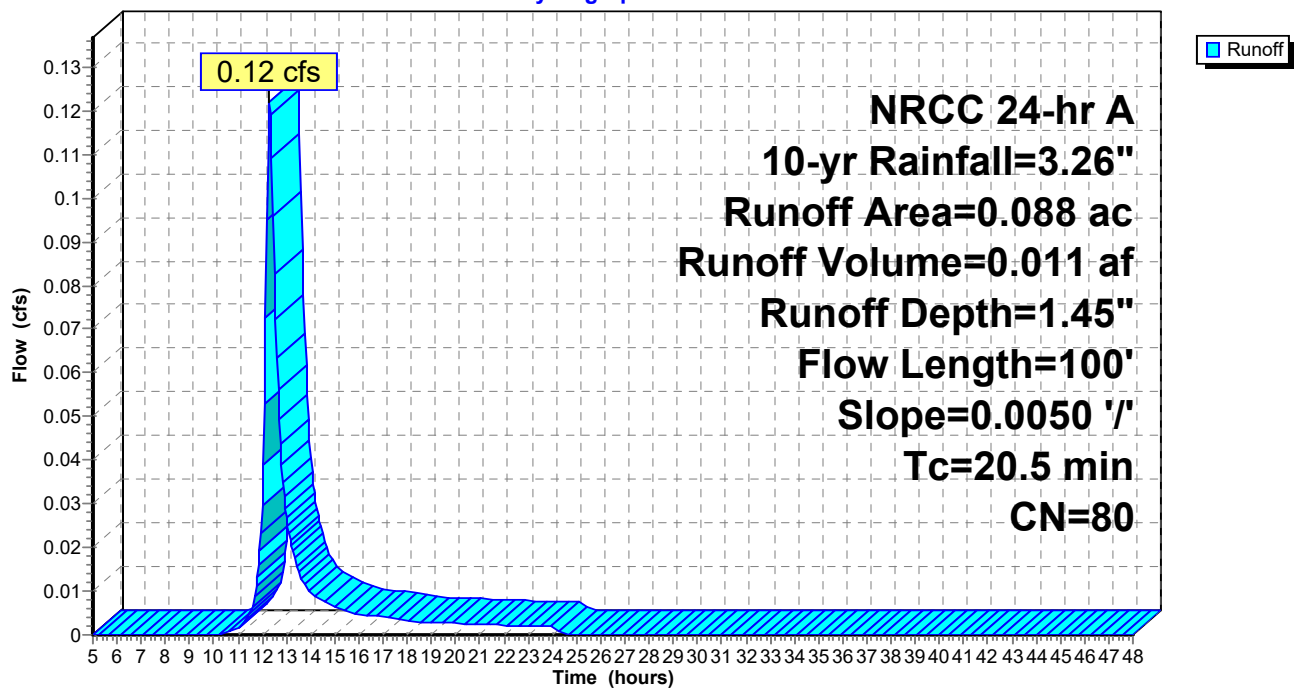
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 10-yr Rainfall=3.26"

Area (ac)	CN	Description
* 0.088	80	D - 80 - Developed open space
0.088		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.5	100	0.0050	0.08		Sheet Flow, 100' Sheet
Grass: Short n= 0.150 P2= 2.22"					

Subcatchment 16S: DA 20

Hydrograph



DA 20-26

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NRCC 24-hr A 10-yr Rainfall=3.26"

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Summary for Subcatchment 20S: DA 21

Runoff = 0.28 cfs @ 12.72 hrs, Volume= 0.040 af, Depth= 1.25"
Routed to Pond 18P : Culvert 021

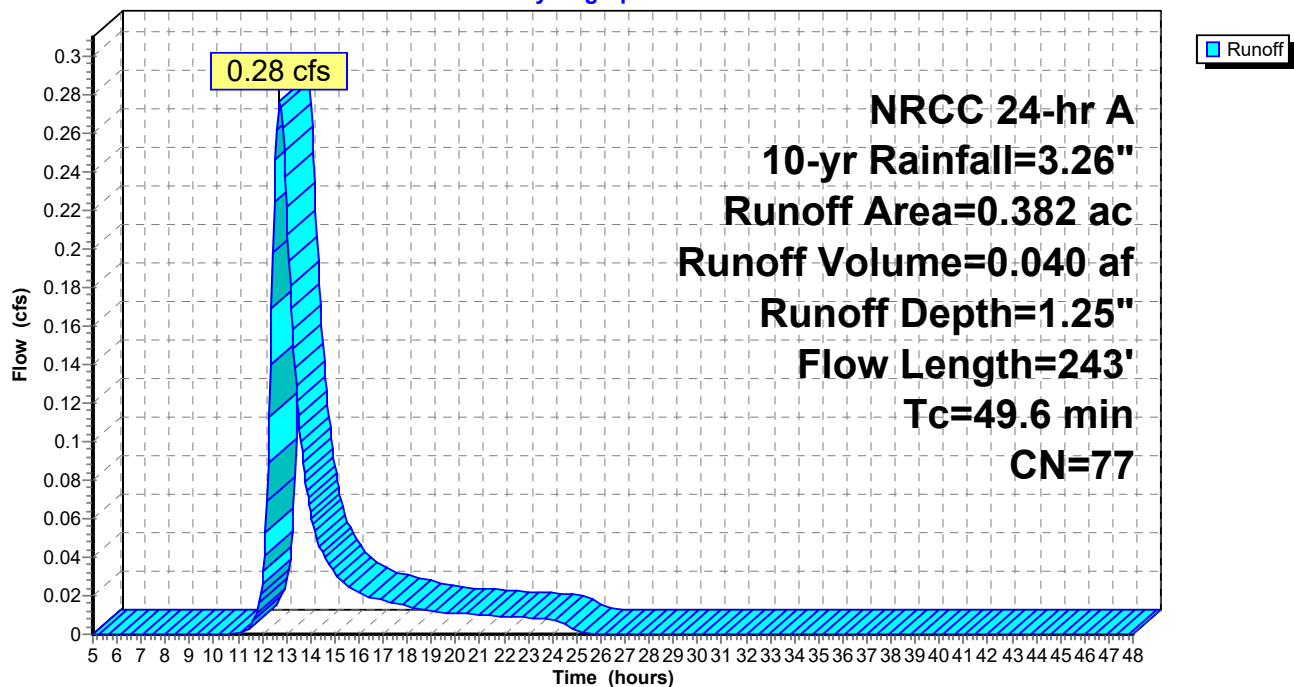
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 10-yr Rainfall=3.26"

Area (ac)	CN	Description
* 0.001	77	D - 77 - Deciduous Forest
* 0.260	77	D - 77 - Mixed Forest
* 0.121	78	D - 78 - Meadowed, grass, non-grazed land
0.382	77	Weighted Average
0.382		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
44.9	100	0.0050	0.04		Sheet Flow, 100' Sheet Woods: Light underbrush n= 0.400 P2= 2.22"
4.7	143	0.0105	0.51		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
49.6	243	Total			

Subcatchment 20S: DA 21

Hydrograph



DA 20-26

Prepared by Fisher Associates

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NRCC 24-hr A 10-yr Rainfall=3.26"

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Summary for Subcatchment 21S: DA 22

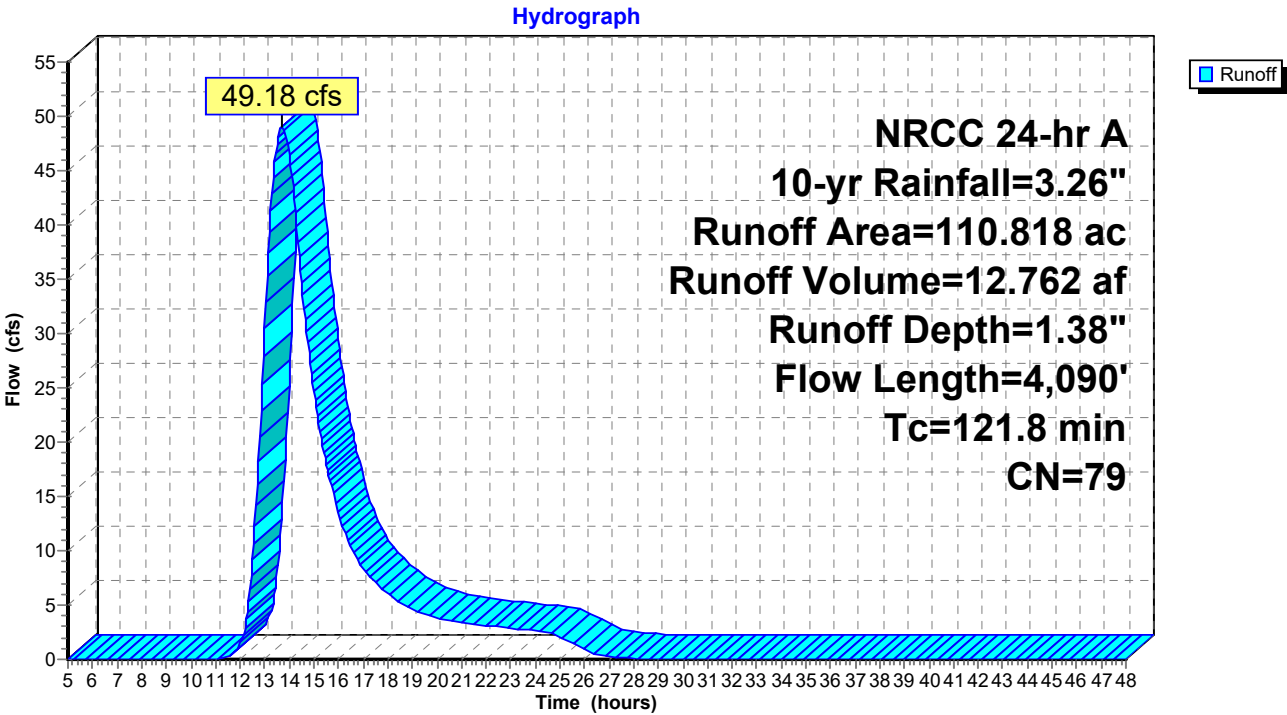
Runoff = 49.18 cfs @ 13.68 hrs, Volume= 12.762 af, Depth= 1.38"
 Routed to Pond 19P : Culvert 022

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NRCC 24-hr A 10-yr Rainfall=3.26"

Area (ac)	CN	Description
* 3.220	80	D - 80 - Developed open space
* 2.932	80	D - 80 - Developed open space
* 0.003	80	D - 80 - Developed open space
* 10.164	82	D - 82 - Developed Low intensity
* 6.410	82	D - 82 - Developed Low intensity
* 0.607	82	D - 82 - Developed Low intensity
* 5.494	77	D - 77 - Deciduous Forest
* 15.746	78	D - 78 - Meadowed, grass, non-grazed land
* 63.740	78	D - 78 - Meadowed, grass, non-grazed land
* 2.502	78	D - 78 - Meadowed, grass, non-grazed land
110.818	79	Weighted Average
110.818		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	100	0.0300	0.17		Sheet Flow, 100' Sheet Grass: Short n= 0.150 P2= 2.22"
88.0	2,225	0.0071	0.42		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
23.8	1,765	0.0068	1.24		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
121.8	4,090	Total			

Subcatchment 21S: DA 22



Summary for Subcatchment 22S: DA 23

Runoff = 0.35 cfs @ 12.51 hrs, Volume= 0.041 af, Depth= 1.25"
 Routed to Pond 17P : Culvert 023

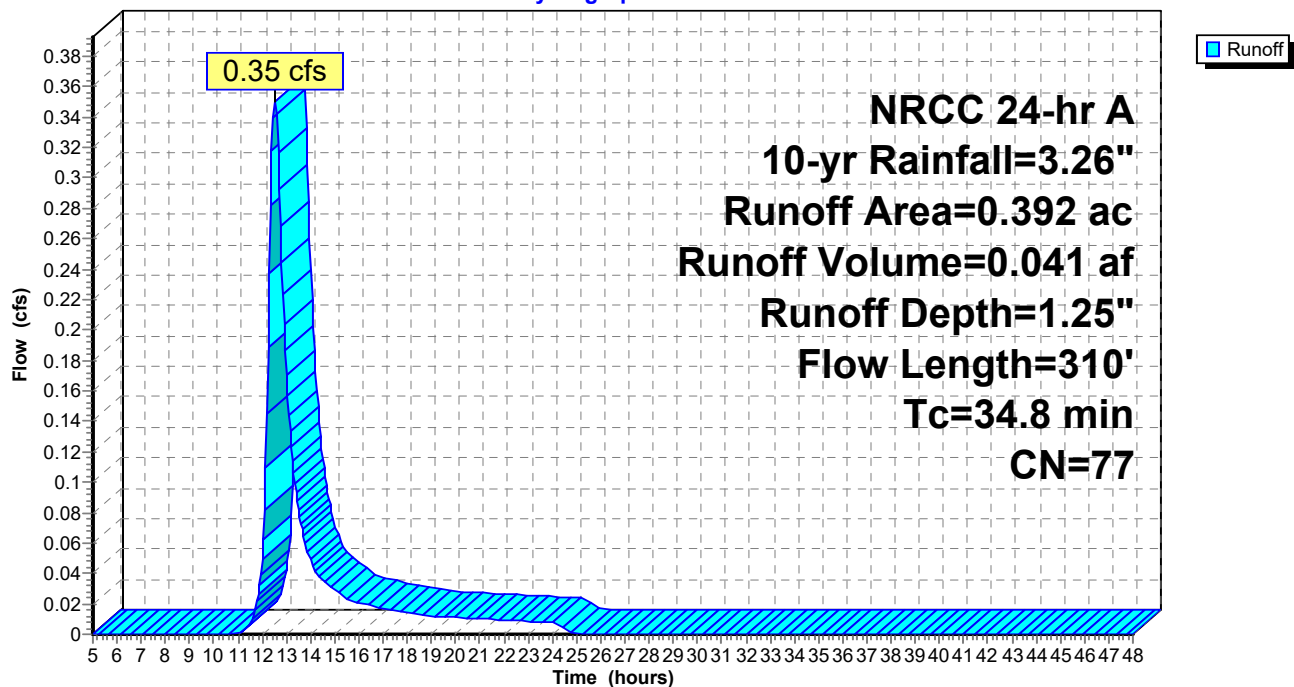
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NRCC 24-hr A 10-yr Rainfall=3.26"

Area (ac)	CN	Description
* 0.261	77	D - 77 - Deciduous Forest
* 0.017	77	D - 77 - Deciduous Forest
* 0.114	78	D - 78 - Meadowed, grass, non-grazed land
0.392	77	Weighted Average
0.392		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.9	100	0.0150	0.06		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.22"
5.9	210	0.0143	0.60		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
34.8	310	Total			

Subcatchment 22S: DA 23

Hydrograph



Summary for Pond 8P: Culvert 025

[57] Hint: Peaked at 610.53' (Flood elevation advised)

Inflow Area = 0.216 ac, 0.00% Impervious, Inflow Depth = 1.45" for 10-yr event
 Inflow = 0.37 cfs @ 12.22 hrs, Volume= 0.026 af
 Outflow = 0.37 cfs @ 12.22 hrs, Volume= 0.026 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.37 cfs @ 12.22 hrs, Volume= 0.026 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 610.53' @ 12.22 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	610.30'	18.0" Round Culvert 025 w/ 3.6" inside fill L= 46.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 610.00' / 608.50' S= 0.0325 ' S Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 1.52 sf
#2	Primary	613.00'	100.0' long + 3.0 ' SideZ x 20.0' 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

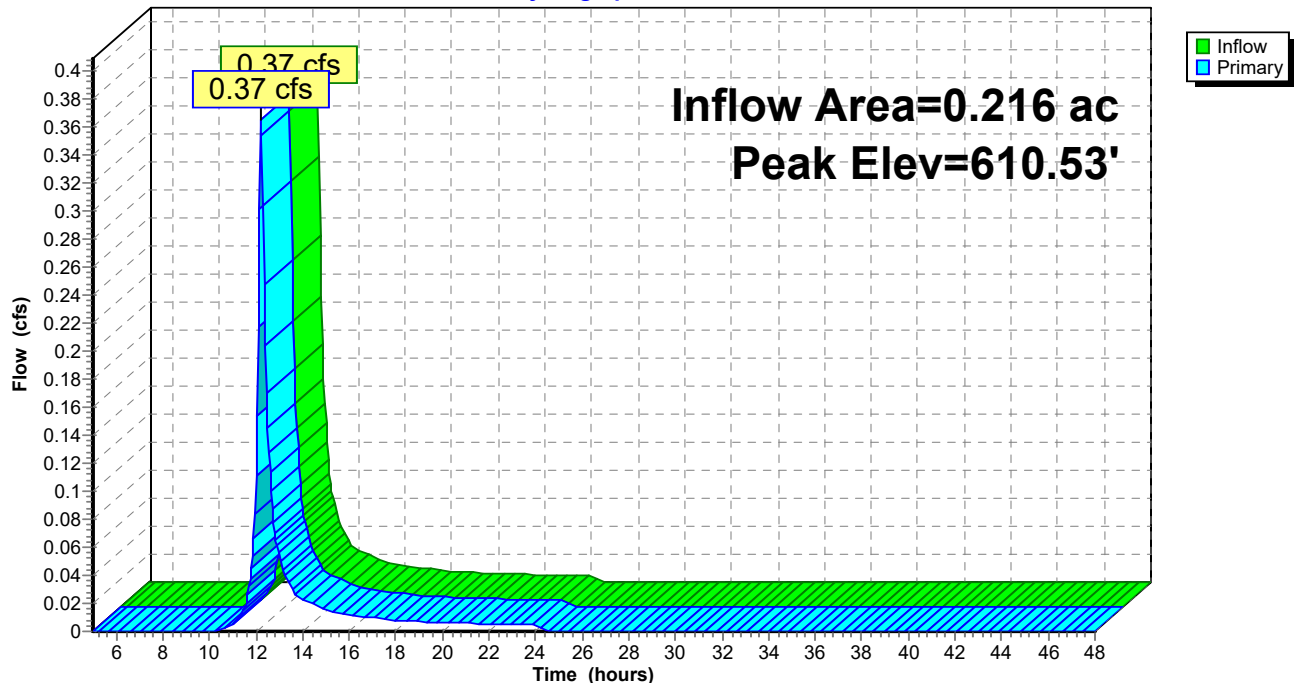
Primary OutFlow Max=0.36 cfs @ 12.22 hrs HW=610.53' (Free Discharge)

1=Culvert 025 (Inlet Controls 0.36 cfs @ 1.19 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 8P: Culvert 025

Hydrograph



Summary for Pond 9P: Culvert 026

[57] Hint: Peaked at 607.56' (Flood elevation advised)

Inflow Area = 2.726 ac, 0.00% Impervious, Inflow Depth = 1.59" for 10-yr event
 Inflow = 1.92 cfs @ 13.07 hrs, Volume= 0.360 af
 Outflow = 1.92 cfs @ 13.07 hrs, Volume= 0.360 af, Atten= 0%, Lag= 0.0 min
 Primary = 1.92 cfs @ 13.07 hrs, Volume= 0.360 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 607.56' @ 13.07 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	606.90'	18.0" Round Culvert 026 w/ 3.6" inside fill L= 46.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 606.60' / 605.40' S= 0.0260 1' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 1.52 sf
#2	Primary	609.60'	100.0' long + 3.0 1' SideZ x 20.0' 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

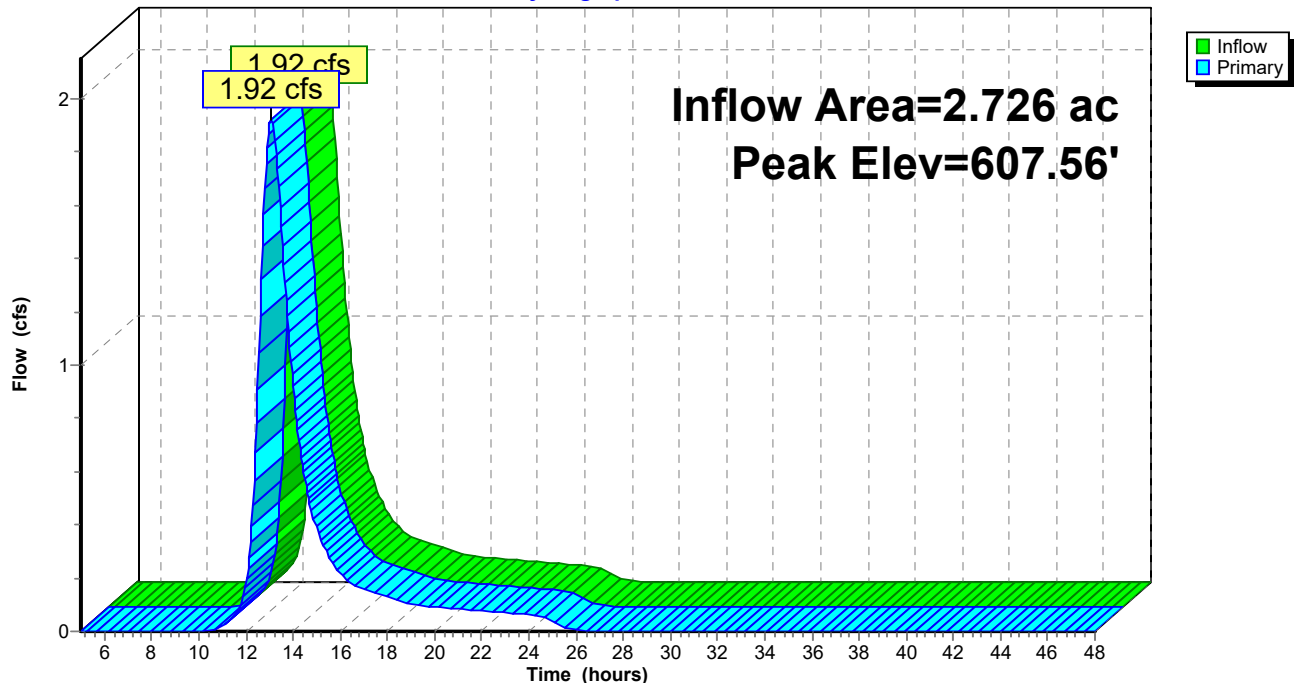
Primary OutFlow Max=1.92 cfs @ 13.07 hrs HW=607.56' (Free Discharge)

1=Culvert 026 (Inlet Controls 1.92 cfs @ 2.03 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 9P: Culvert 026

Hydrograph



Summary for Pond 15P: Culvert 024

[57] Hint: Peaked at 613.32' (Flood elevation advised)

Inflow Area = 12.746 ac, 0.00% Impervious, Inflow Depth = 1.45" for 10-yr event
 Inflow = 9.52 cfs @ 12.87 hrs, Volume= 1.538 af
 Outflow = 9.52 cfs @ 12.87 hrs, Volume= 1.538 af, Atten= 0%, Lag= 0.0 min
 Primary = 9.52 cfs @ 12.87 hrs, Volume= 1.538 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 613.32' @ 12.87 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	610.60'	18.0" Round Culvert 024 w/ 3.6" inside fill L= 46.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 610.30' / 608.50' S= 0.0390 ' S= 0.0390 ' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 1.52 sf
#2	Primary	613.30'	100.0' long + 3.0 ' SideZ x 20.0' 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

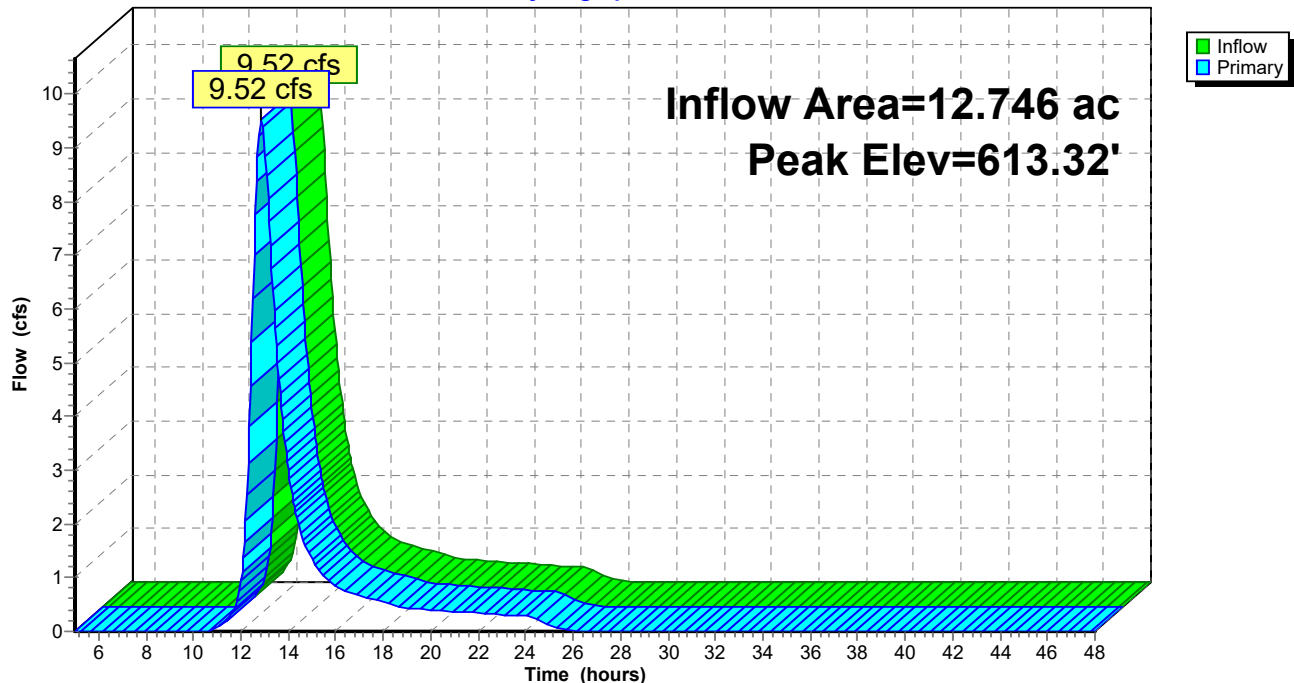
Primary OutFlow Max=9.45 cfs @ 12.87 hrs HW=613.32' (Free Discharge)

1=Culvert 024 (Inlet Controls 8.48 cfs @ 5.60 fps)

2=Broad-Crested Rectangular Weir (Weir Controls 0.97 cfs @ 0.41 fps)

Pond 15P: Culvert 024

Hydrograph



Summary for Pond 17P: Culvert 023

Inflow Area = 0.392 ac, 0.00% Impervious, Inflow Depth = 1.25" for 10-yr event
 Inflow = 0.35 cfs @ 12.51 hrs, Volume= 0.041 af
 Outflow = 0.35 cfs @ 12.51 hrs, Volume= 0.041 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.35 cfs @ 12.51 hrs, Volume= 0.041 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 612.32' @ 12.51 hrs

Flood Elev= 920.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	612.22'	18.0" Round Culvert 023 w/ 3.6" inside fill L= 27.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 611.92' / 611.15' S= 0.0285 ' S= 0.0285 ' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 1.52 sf
#2	Primary	614.15'	100.0' long + 3.0 ' SideZ x 20.0' breadth Road 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

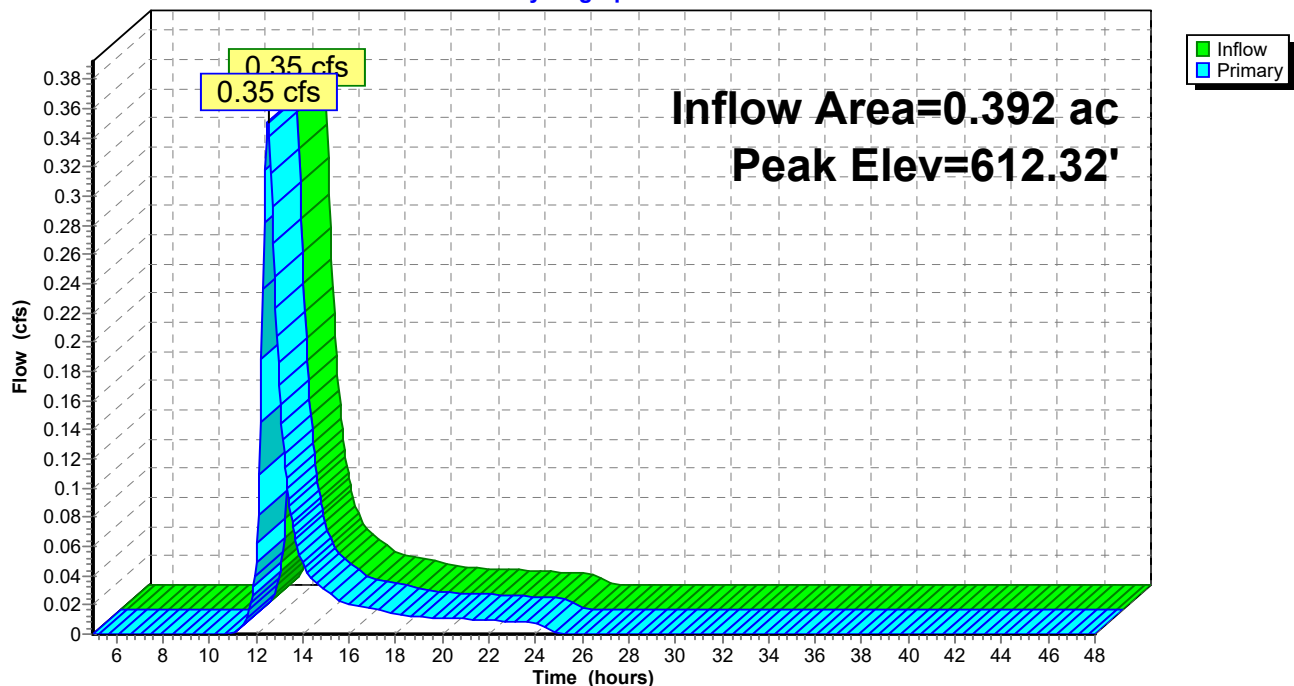
Primary OutFlow Max=0.10 cfs @ 12.51 hrs HW=612.32' (Free Discharge)

1=Culvert 023 (Inlet Controls 0.10 cfs @ 0.80 fps)

2=Road (Controls 0.00 cfs)

Pond 17P: Culvert 023

Hydrograph



Summary for Pond 18P: Culvert 021

[57] Hint: Peaked at 615.59' (Flood elevation advised)

Inflow Area = 0.382 ac, 0.00% Impervious, Inflow Depth = 1.25" for 10-yr event
 Inflow = 0.28 cfs @ 12.72 hrs, Volume= 0.040 af
 Outflow = 0.28 cfs @ 12.72 hrs, Volume= 0.040 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.28 cfs @ 12.72 hrs, Volume= 0.040 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 615.59' @ 12.72 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	615.40'	18.0" Round Culvert 021 w/ 3.6" inside fill L= 27.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 614.90' / 615.10' S= -0.0074 ' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 1.52 sf
#2	Primary	617.90'	100.0' long + 3.0 ' SideZ x 20.0' breadth Road 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

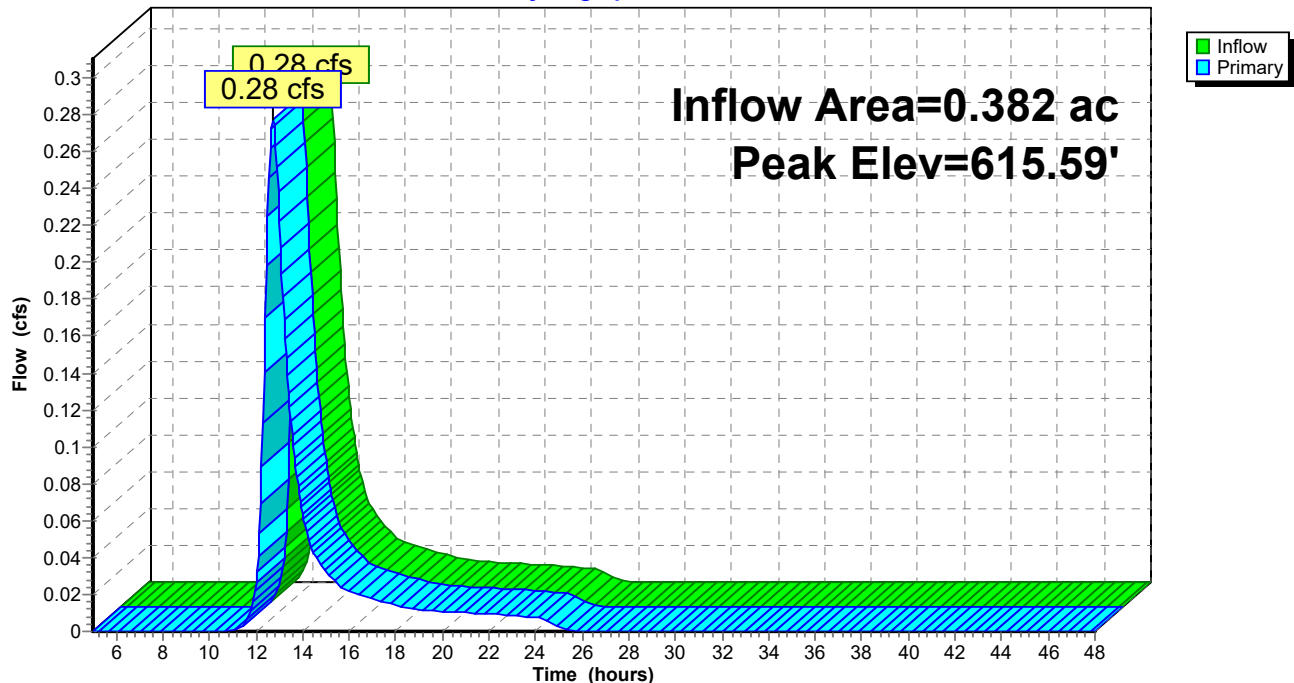
Primary OutFlow Max=0.28 cfs @ 12.72 hrs HW=615.59' (Free Discharge)

1=Culvert 021 (Inlet Controls 0.28 cfs @ 1.09 fps)

2=Road (Controls 0.00 cfs)

Pond 18P: Culvert 021

Hydrograph



Summary for Pond 19P: Culvert 022

[57] Hint: Peaked at 614.25' (Flood elevation advised)

Inflow Area = 110.818 ac, 0.00% Impervious, Inflow Depth = 1.38" for 10-yr event
 Inflow = 49.18 cfs @ 13.68 hrs, Volume= 12.762 af
 Outflow = 49.18 cfs @ 13.68 hrs, Volume= 12.762 af, Atten= 0%, Lag= 0.0 min
 Primary = 49.18 cfs @ 13.68 hrs, Volume= 12.762 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 614.25' @ 13.68 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	611.50'	60.0" Round Culvert 022 w/ 12.0" inside fill L= 37.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 610.50' / 610.40' S= 0.0027 ' S= 0.0027 ' Cc= 0.900 n= 0.012, Flow Area= 16.84 sf
#2	Primary	617.00'	100.0' long + 3.0 ' SideZ x 20.0' breadth Road 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

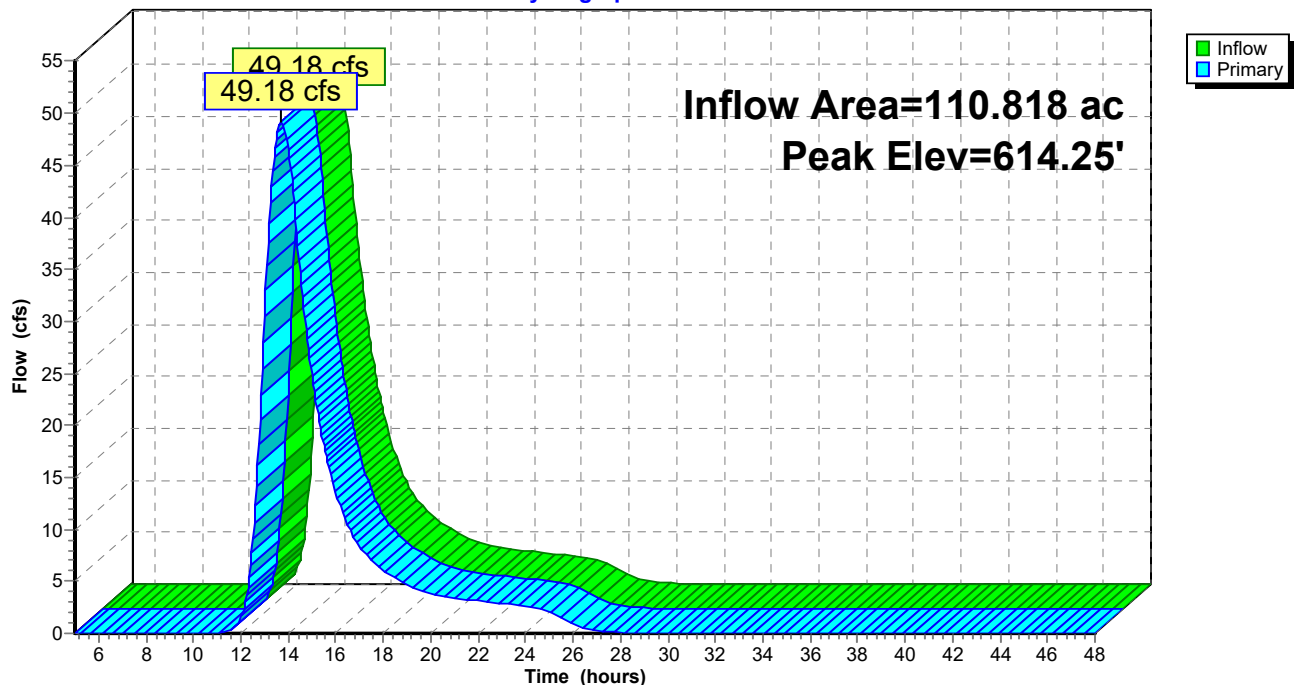
Primary OutFlow Max=49.15 cfs @ 13.68 hrs HW=614.25' (Free Discharge)

1=Culvert 022 (Barrel Controls 49.15 cfs @ 5.01 fps)

2=Road (Controls 0.00 cfs)

Pond 19P: Culvert 022

Hydrograph



Summary for Pond 20P: Culvert 020

[57] Hint: Peaked at 619.41' (Flood elevation advised)

Inflow Area = 0.088 ac, 0.00% Impervious, Inflow Depth = 1.45" for 10-yr event
 Inflow = 0.12 cfs @ 12.31 hrs, Volume= 0.011 af
 Outflow = 0.12 cfs @ 12.31 hrs, Volume= 0.011 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.12 cfs @ 12.31 hrs, Volume= 0.011 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 619.41' @ 12.31 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	619.30'	18.0" Round Culvert 020 w/ 3.6" inside fill L= 46.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 618.60' / 619.00' S= -0.0087 ' S Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 1.52 sf
#2	Primary	622.00'	100.0' long + 3.0 ' SideZ x 20.0' 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

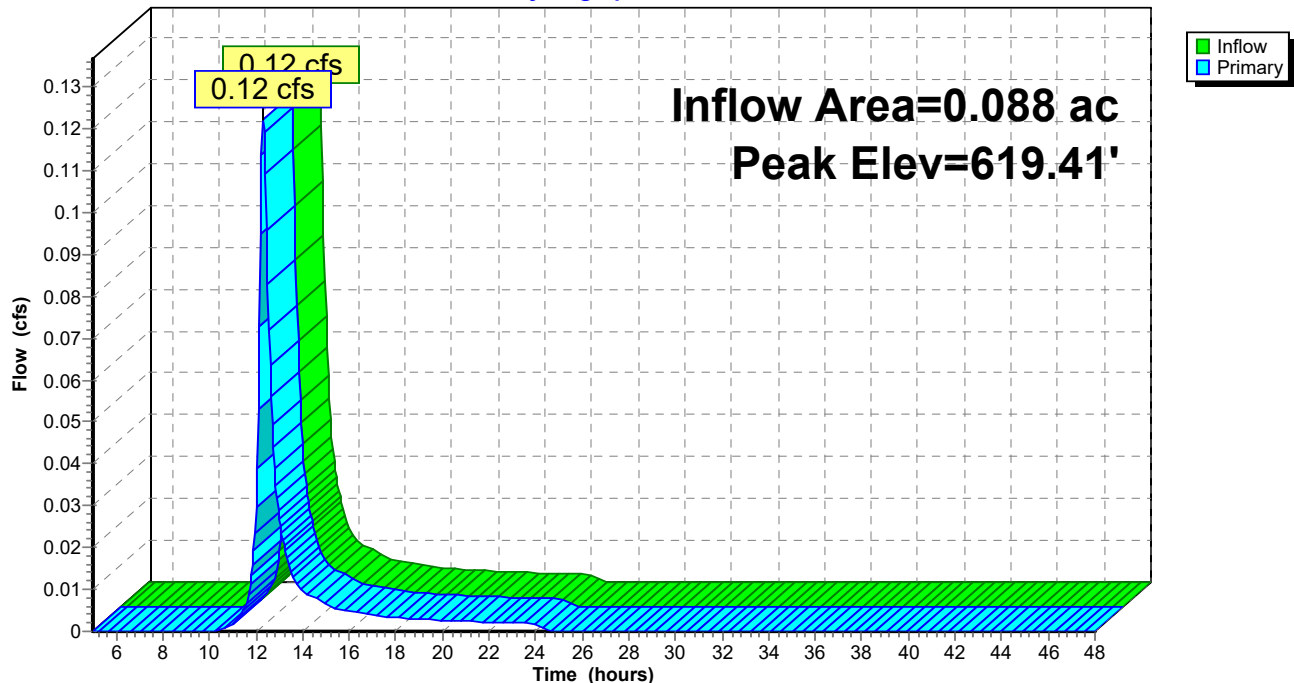
Primary OutFlow Max=0.12 cfs @ 12.31 hrs HW=619.41' (Free Discharge)

1=Culvert 020 (Inlet Controls 0.12 cfs @ 0.84 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 20P: Culvert 020

Hydrograph



DA 20-26

Prepared by Fisher Associates

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NRCC 24-hr A 100-yr Rainfall=4.91"

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Time span=5.00-48.00 hrs, dt=0.05 hrs, 861 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 3S: DA 25 Runoff Area=0.216 ac 0.00% Impervious Runoff Depth=2.81"
Flow Length=190' Tc=13.4 min CN=80 Runoff=0.71 cfs 0.051 af

Subcatchment 4S: DA 26 Runoff Area=2.726 ac 0.00% Impervious Runoff Depth=3.00"
Flow Length=2,922' Tc=77.6 min CN=82 Runoff=3.67 cfs 0.681 af

Subcatchment 14S: DA 24 Runoff Area=12.746 ac 0.00% Impervious Runoff Depth=2.81"
Flow Length=1,498' Tc=60.9 min CN=80 Runoff=18.81 cfs 2.989 af

Subcatchment 16S: DA 20 Runoff Area=0.088 ac 0.00% Impervious Runoff Depth=2.81"
Flow Length=100' Slope=0.0050 '/' Tc=20.5 min CN=80 Runoff=0.24 cfs 0.021 af

Subcatchment 20S: DA 21 Runoff Area=0.382 ac 0.00% Impervious Runoff Depth=2.55"
Flow Length=243' Tc=49.6 min CN=77 Runoff=0.58 cfs 0.081 af

Subcatchment 21S: DA 22 Runoff Area=110.818 ac 0.00% Impervious Runoff Depth=2.72"
Flow Length=4,090' Tc=121.8 min CN=79 Runoff=99.41 cfs 25.159 af

Subcatchment 22S: DA 23 Runoff Area=0.392 ac 0.00% Impervious Runoff Depth=2.55"
Flow Length=310' Tc=34.8 min CN=77 Runoff=0.73 cfs 0.083 af

Pond 8P: Culvert 025 Peak Elev=610.65' Inflow=0.71 cfs 0.051 af
Outflow=0.71 cfs 0.051 af

Pond 9P: Culvert 026 Peak Elev=607.92' Inflow=3.67 cfs 0.681 af
Outflow=3.67 cfs 0.681 af

Pond 15P: Culvert 024 Peak Elev=613.41' Inflow=18.81 cfs 2.989 af
Outflow=18.81 cfs 2.989 af

Pond 17P: Culvert 023 Peak Elev=612.43' Inflow=0.73 cfs 0.083 af
Outflow=0.73 cfs 0.083 af

Pond 18P: Culvert 021 Peak Elev=615.71' Inflow=0.58 cfs 0.081 af
Outflow=0.58 cfs 0.081 af

Pond 19P: Culvert 022 Peak Elev=616.11' Inflow=99.41 cfs 25.159 af
Outflow=99.41 cfs 25.159 af

Pond 20P: Culvert 020 Peak Elev=619.47' Inflow=0.24 cfs 0.021 af
Outflow=0.24 cfs 0.021 af

Total Runoff Area = 127.368 ac Runoff Volume = 29.065 af Average Runoff Depth = 2.74"
100.00% Pervious = 127.368 ac 0.00% Impervious = 0.000 ac

Summary for Subcatchment 3S: DA 25

Runoff = 0.71 cfs @ 12.22 hrs, Volume= 0.051 af, Depth= 2.81"
 Routed to Pond 8P : Culvert 025

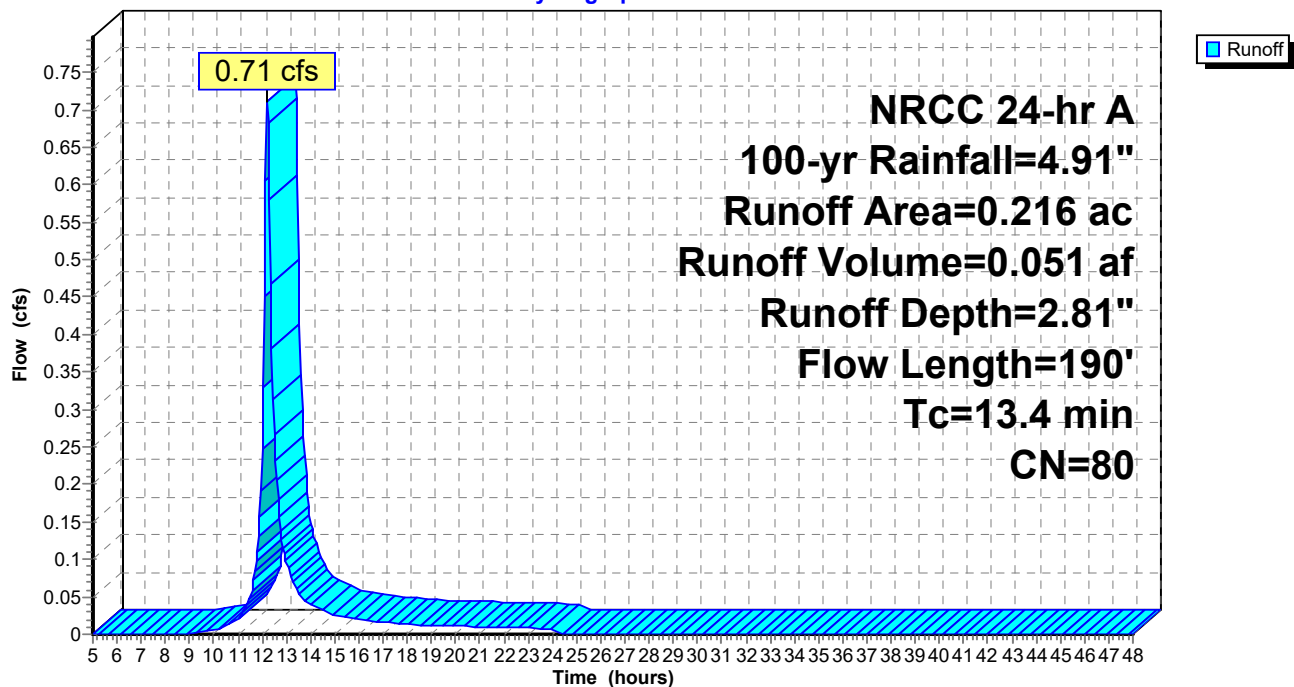
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NRCC 24-hr A 100-yr Rainfall=4.91"

Area (ac)	CN	Description
* 0.124	80	D - 80 - Developed open space
* 0.049	80	D - 80 - Developed open space
* 0.043	82	D - 82 - Developed Low intensity
0.216	80	Weighted Average
0.216		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0350	0.18		Sheet Flow, 100' sheet Grass: Short n= 0.150 P2= 2.22"
4.0	90	0.0028	0.37		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
13.4	190	Total			

Subcatchment 3S: DA 25

Hydrograph



DA 20-26

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NRCC 24-hr A 100-yr Rainfall=4.91"

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Summary for Subcatchment 4S: DA 26

Runoff = 3.67 cfs @ 13.04 hrs, Volume= 0.681 af, Depth= 3.00"
 Routed to Pond 9P : Culvert 026

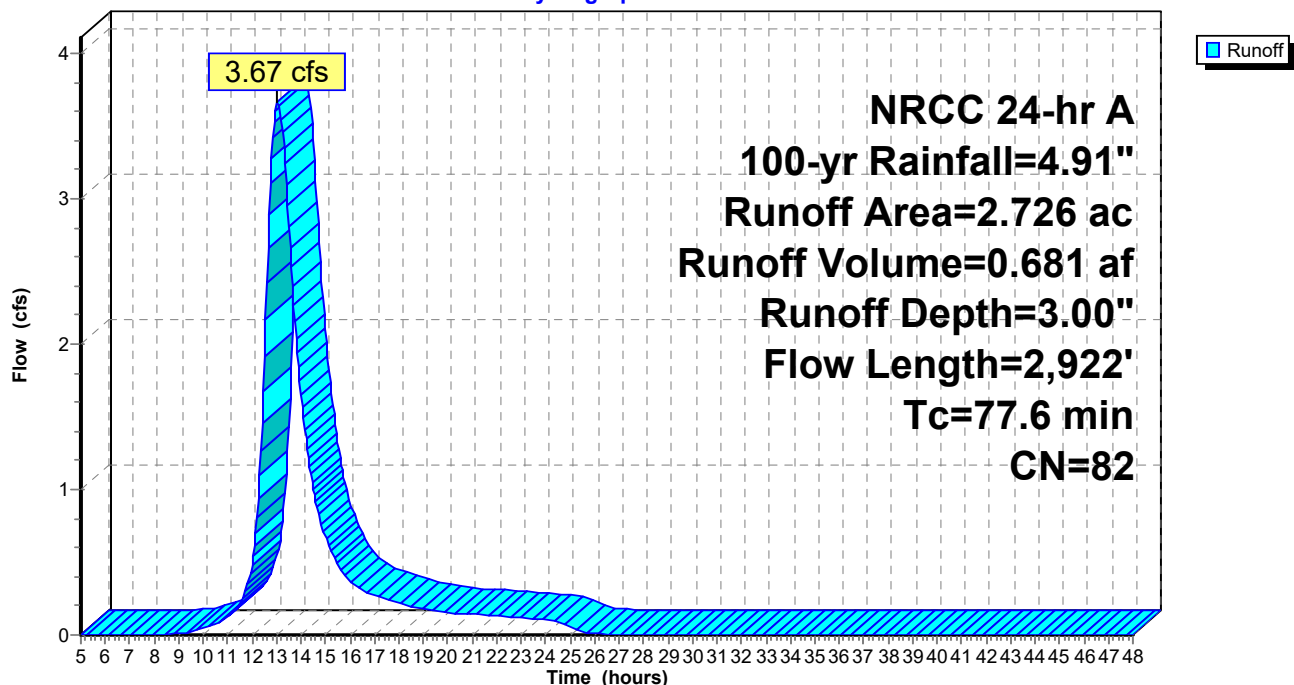
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NRCC 24-hr A 100-yr Rainfall=4.91"

Area (ac)	CN	Description
* 0.000	80	D - 80 - Developed open space
* 1.720	82	D - 82 - Developed Low intensity
* 0.770	82	D - 82 - Developed Low intensity
* 0.001	82	D - 82 - Developed Low intensity
* 0.211	85	D - 85 - Developed Med intensity
* 0.024	78	D - 78 - Meadowed, grass, non-grazed land
2.726	82	Weighted Average
2.726		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
24.6	100	0.0225	0.07		Sheet Flow, 100' sheet Woods: Light underbrush n= 0.400 P2= 2.22"
53.0	2,822	0.0035	0.89		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
77.6	2,922	Total			

Subcatchment 4S: DA 26

Hydrograph



DA 20-26

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NRCC 24-hr A 100-yr Rainfall=4.91"

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Summary for Subcatchment 14S: DA 24

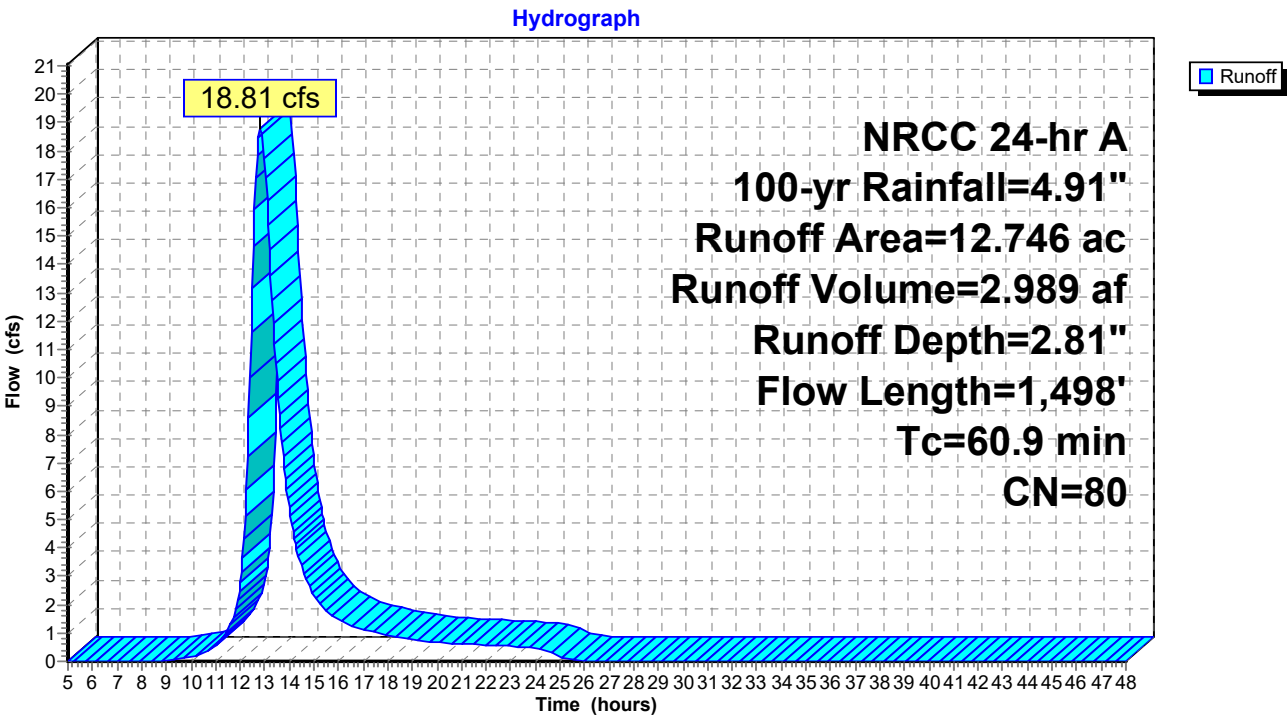
Runoff = 18.81 cfs @ 12.83 hrs, Volume= 2.989 af, Depth= 2.81"
 Routed to Pond 15P : Culvert 024

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NRCC 24-hr A 100-yr Rainfall=4.91"

Area (ac)	CN	Description
* 3.807	80	D - 80 - Developed open space
* 0.054	80	D - 80 - Developed open space
* 0.544	80	D - 80 - Developed open space
* 1.124	82	D - 82 - Developed Low intensity
* 0.289	77	D - 77 - Deciduous Forest
* 0.167	77	D - 77 - Deciduous Forest
* 3.445	78	D - 78 - Meadowed, grass, non-grazed land
* 1.976	78	D - 78 - Meadowed, grass, non-grazed land
* 0.287	78	D - 78 - Meadowed, grass, non-grazed land
* 0.002	90	D - 90 - Woody Wetlands
* 1.051	90	D - 90 - Woody Wetlands
12.746	80	Weighted Average
12.746		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.4	100	0.0350	0.18		Sheet Flow, 100' sheet Grass: Short n= 0.150 P2= 2.22"
7.3	379	0.0152	0.86		Shallow Concentrated Flow, Short Grass Pasture Kv= 7.0 fps
44.2	1,019	0.0059	0.38		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
60.9	1,498	Total			

Subcatchment 14S: DA 24



DA 20-26

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NRCC 24-hr A 100-yr Rainfall=4.91"

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Summary for Subcatchment 16S: DA 20

Runoff = 0.24 cfs @ 12.30 hrs, Volume= 0.021 af, Depth= 2.81"
Routed to Pond 20P : Culvert 020

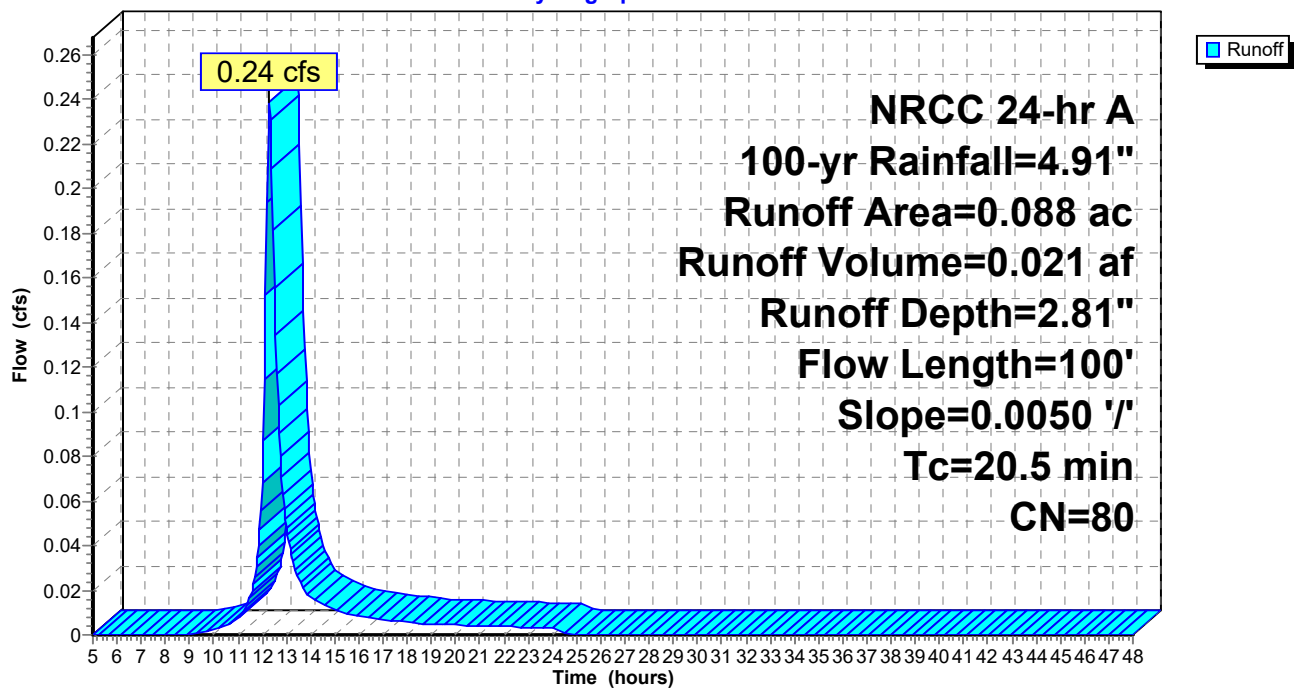
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NRCC 24-hr A 100-yr Rainfall=4.91"

Area (ac)	CN	Description
* 0.088	80	D - 80 - Developed open space
0.088		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.5	100	0.0050	0.08		Sheet Flow, 100' Sheet
Grass: Short n= 0.150 P2= 2.22"					

Subcatchment 16S: DA 20

Hydrograph



DA 20-26

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NRCC 24-hr A 100-yr Rainfall=4.91"

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Summary for Subcatchment 20S: DA 21

Runoff = 0.58 cfs @ 12.70 hrs, Volume= 0.081 af, Depth= 2.55"
 Routed to Pond 18P : Culvert 021

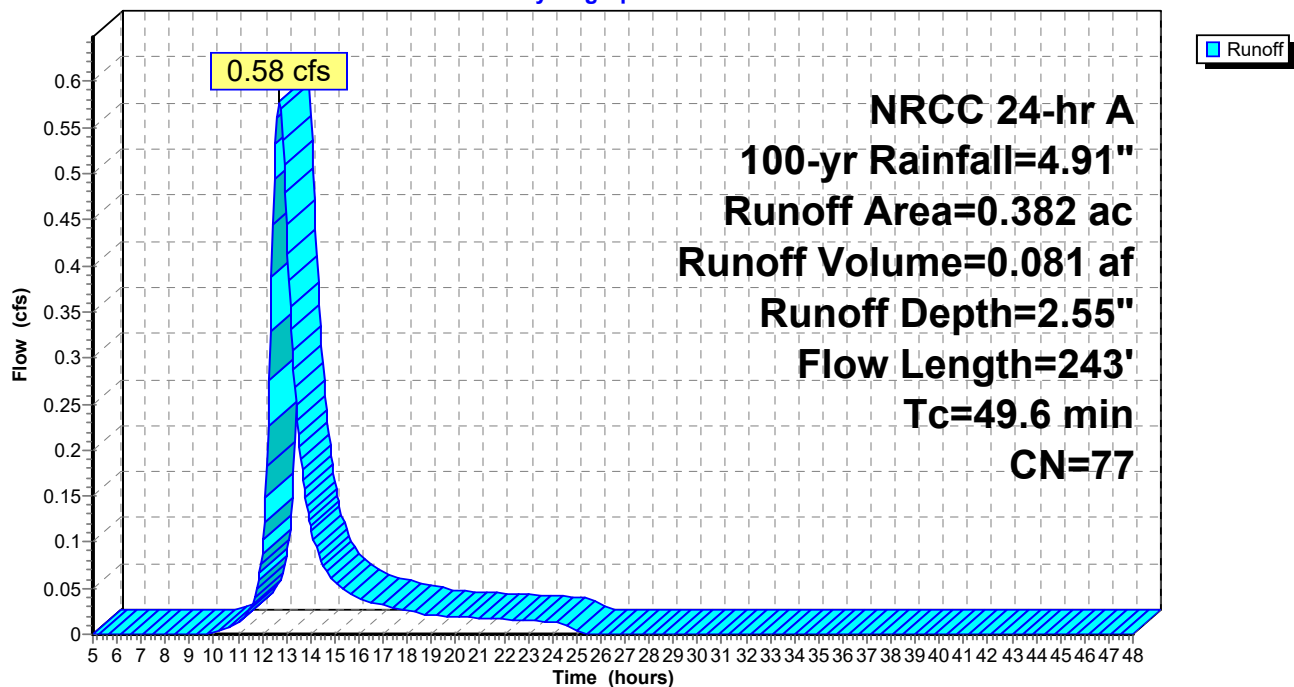
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NRCC 24-hr A 100-yr Rainfall=4.91"

Area (ac)	CN	Description
* 0.001	77	D - 77 - Deciduous Forest
* 0.260	77	D - 77 - Mixed Forest
* 0.121	78	D - 78 - Meadowed, grass, non-grazed land
0.382	77	Weighted Average
0.382		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
44.9	100	0.0050	0.04		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.22"
4.7	143	0.0105	0.51		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
49.6	243	Total			

Subcatchment 20S: DA 21

Hydrograph



DA 20-26

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NRCC 24-hr A 100-yr Rainfall=4.91"

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Summary for Subcatchment 21S: DA 22

Runoff = 99.41 cfs @ 13.66 hrs, Volume= 25.159 af, Depth= 2.72"
 Routed to Pond 19P : Culvert 022

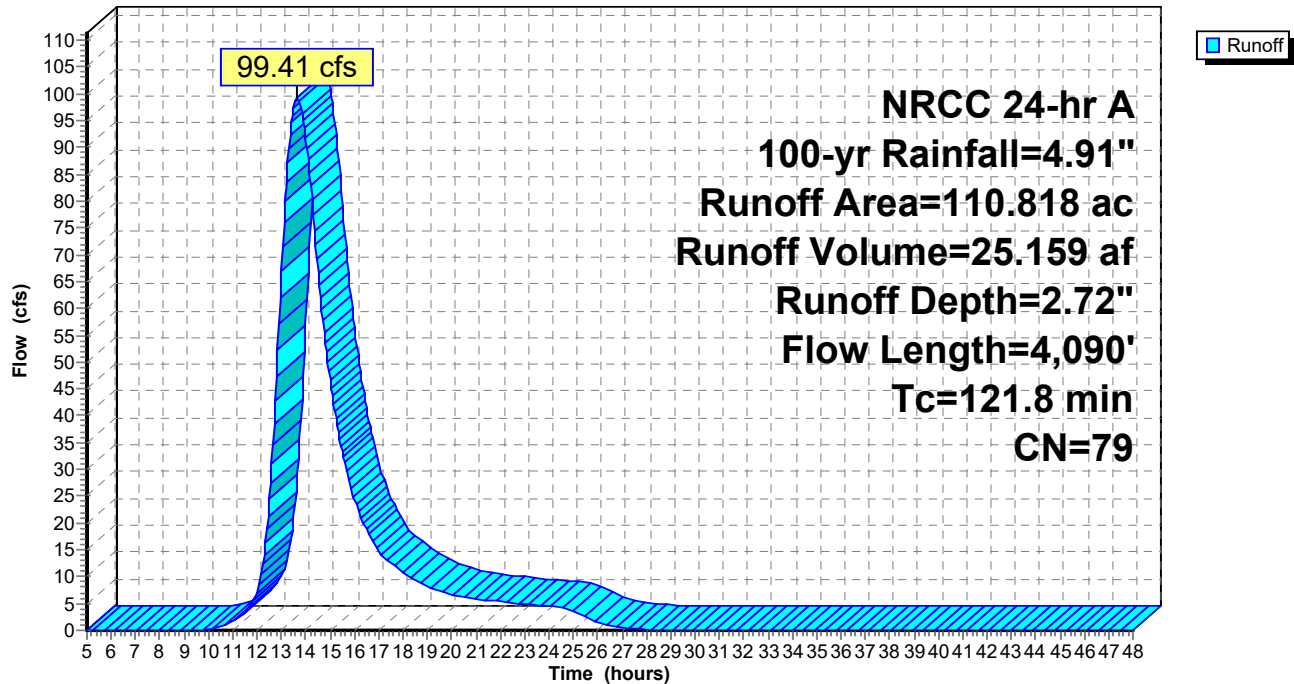
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NRCC 24-hr A 100-yr Rainfall=4.91"

Area (ac)	CN	Description
* 3.220	80	D - 80 - Developed open space
* 2.932	80	D - 80 - Developed open space
* 0.003	80	D - 80 - Developed open space
* 10.164	82	D - 82 - Developed Low intensity
* 6.410	82	D - 82 - Developed Low intensity
* 0.607	82	D - 82 - Developed Low intensity
* 5.494	77	D - 77 - Deciduous Forest
* 15.746	78	D - 78 - Meadowed, grass, non-grazed land
* 63.740	78	D - 78 - Meadowed, grass, non-grazed land
* 2.502	78	D - 78 - Meadowed, grass, non-grazed land
110.818	79	Weighted Average
110.818		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.0	100	0.0300	0.17		Sheet Flow, 100' Sheet Grass: Short n= 0.150 P2= 2.22"
88.0	2,225	0.0071	0.42		Shallow Concentrated Flow, Woodland Kv= 5.0 fps
23.8	1,765	0.0068	1.24		Shallow Concentrated Flow, Grassed Waterway Kv= 15.0 fps
121.8	4,090	Total			

Subcatchment 21S: DA 22

Hydrograph



Summary for Subcatchment 22S: DA 23

Runoff = 0.73 cfs @ 12.50 hrs, Volume= 0.083 af, Depth= 2.55"
 Routed to Pond 17P : Culvert 023

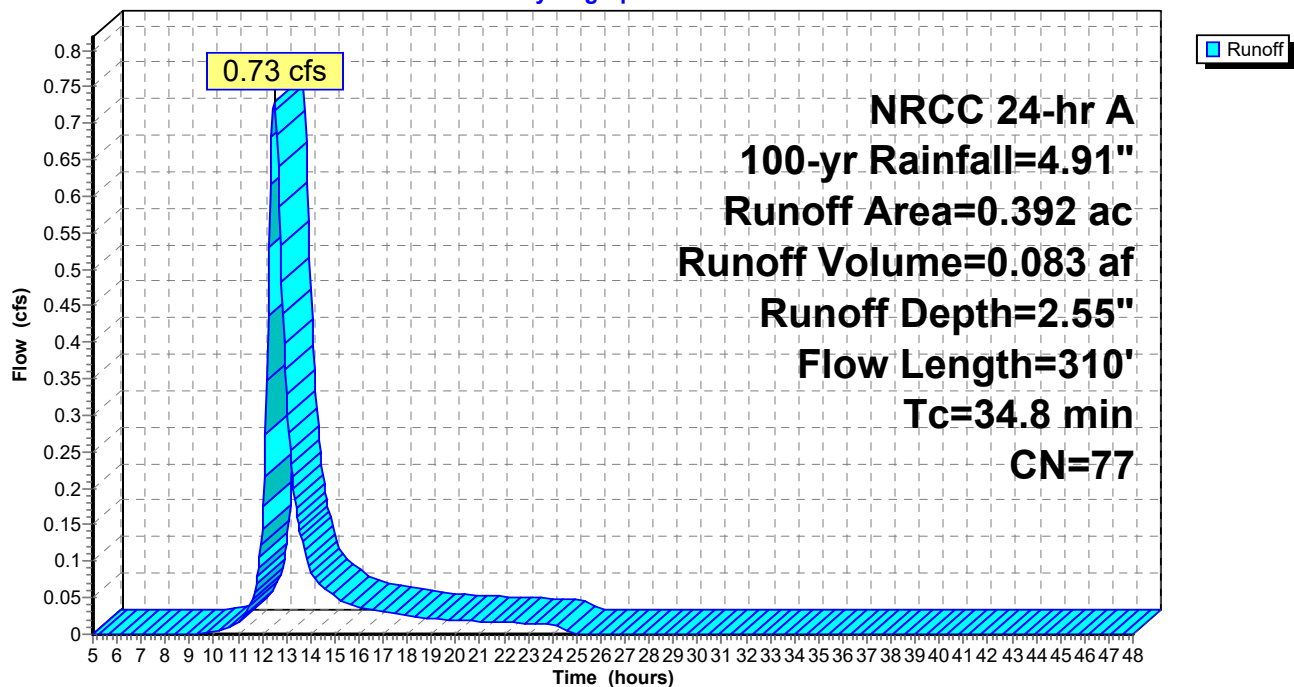
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NRCC 24-hr A 100-yr Rainfall=4.91"

Area (ac)	CN	Description
* 0.261	77	D - 77 - Deciduous Forest
* 0.017	77	D - 77 - Deciduous Forest
* 0.114	78	D - 78 - Meadowed, grass, non-grazed land
0.392	77	Weighted Average
0.392		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.9	100	0.0150	0.06		Sheet Flow, 100' Sheet
					Woods: Light underbrush n= 0.400 P2= 2.22"
5.9	210	0.0143	0.60		Shallow Concentrated Flow,
					Woodland Kv= 5.0 fps
34.8	310	Total			

Subcatchment 22S: DA 23

Hydrograph



Summary for Pond 8P: Culvert 025

[57] Hint: Peaked at 610.65' (Flood elevation advised)

Inflow Area = 0.216 ac, 0.00% Impervious, Inflow Depth = 2.81" for 100-yr event
 Inflow = 0.71 cfs @ 12.22 hrs, Volume= 0.051 af
 Outflow = 0.71 cfs @ 12.22 hrs, Volume= 0.051 af, Atten= 0%, Lag= 0.0 min
 Primary = 0.71 cfs @ 12.22 hrs, Volume= 0.051 af

Routing by Stor-Ind method, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs

Peak Elev= 610.65' @ 12.22 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	610.30'	18.0" Round Culvert 025 w/ 3.6" inside fill L= 46.2' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 610.00' / 608.50' S= 0.0325 ' / ' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 1.52 sf
#2	Primary	613.00'	100.0' long + 3.0 ' / ' SideZ x 20.0' 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=0.70 cfs @ 12.22 hrs HW=610.65' (Free Discharge)

1=Culvert 025 (Inlet Controls 0.70 cfs @ 1.46 fps)

2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 8P: Culvert 025

Hydrograph

