



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

Appendix G

Stormwater Pollution Prevention Plan

Part 5 of 8

CULVERTS 27-47

NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

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= 2.21"
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			

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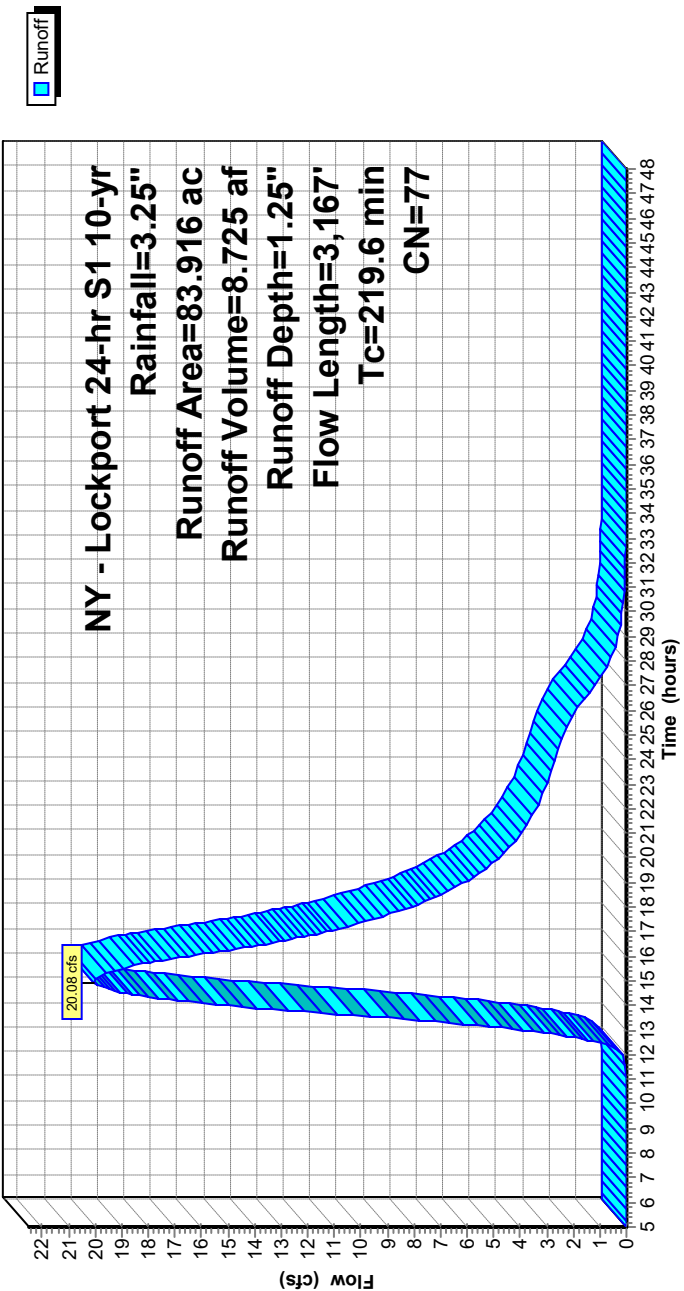
NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

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Subcatchment 63S: DA 32

Hydrograph



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NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

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Summary for Subcatchment 64S: DA 33

Runoff = 2.27 cfs @ 12.62 hrs, Volume= 0.382 af, Depth= 0.54"
 Routed to Pond 78P : Culvert 033

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

Area (ac)	CN	Description
* 0.131	61	B-75% GRASS COVER, GOOD
* 0.456	69	B-50-75% GRASS COVER, FAIR
* 2.999	58	B-MEADOW, NON-GRAZED
* 3.353	58	B-MEADOW, NON-GRAZED
* 0.019	80	D-75% GRASS COVER, GOOD
* 0.541	84	D-50-75% GRASS COVER, FAIR
* 0.959	78	D-MEADOW, NON-GRAZED
8.458	63	Weighted Average
8.458		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	100	0.0340	0.17		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.21"
2.3	150	0.0250	1.11		Shallow Concentrated Flow, 150
					Short Grass Pasture Kv= 7.0 fps
2.1	147	0.0290	1.19		Shallow Concentrated Flow, 147
					Short Grass Pasture Kv= 7.0 fps
2.1	160	0.0320	1.25		Shallow Concentrated Flow, 160
					Short Grass Pasture Kv= 7.0 fps
2.1	160	0.0320	1.25		Shallow Concentrated Flow, 160
					Short Grass Pasture Kv= 7.0 fps
4.2	167	0.0090	0.66		Shallow Concentrated Flow, 167
					Short Grass Pasture Kv= 7.0 fps
13.6	362	0.0040	0.44		Shallow Concentrated Flow, 362
					Short Grass Pasture Kv= 7.0 fps
3.0	300	0.0560	1.66		Shallow Concentrated Flow, 300
					Short Grass Pasture Kv= 7.0 fps
38.9	1,546	Total			

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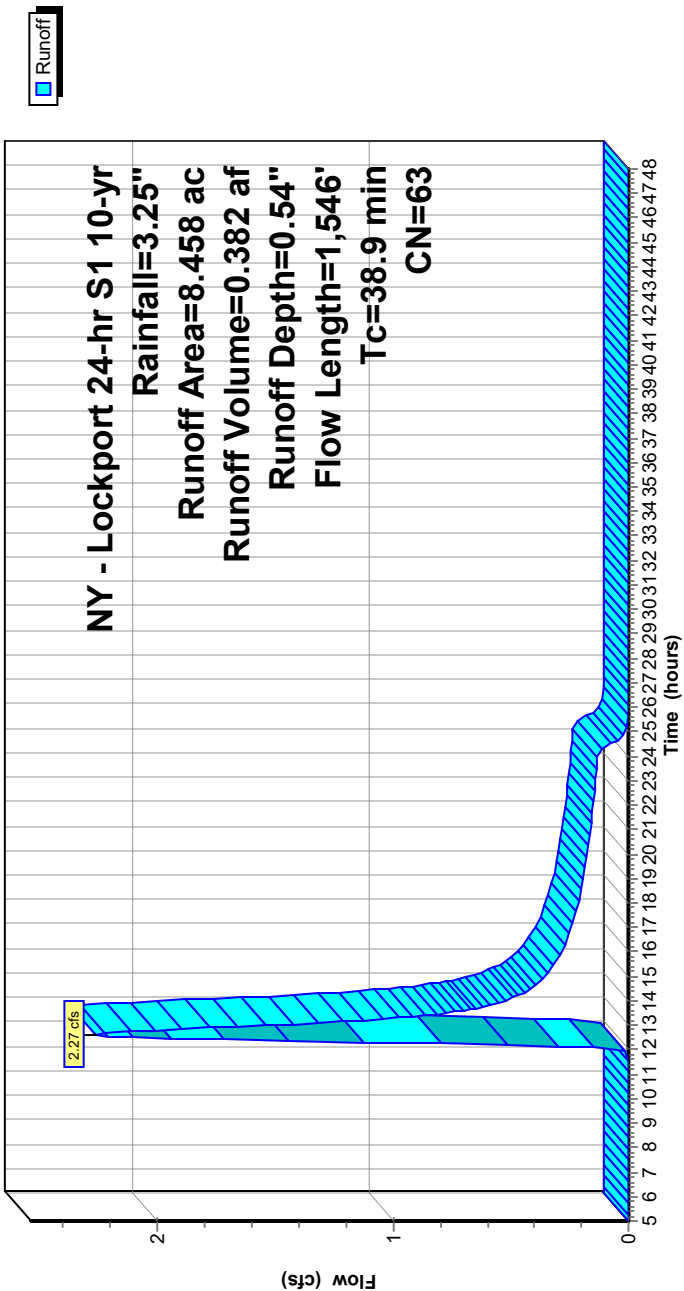
NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

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Subcatchment 64S: DA 33

Hydrograph



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NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

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Summary for Subcatchment 65S: DA 34

Runoff = 0.57 cfs @ 14.57 hrs, Volume= 0.227 af, Depth= 0.91"
 Routed to Pond 79P : Culvert 034

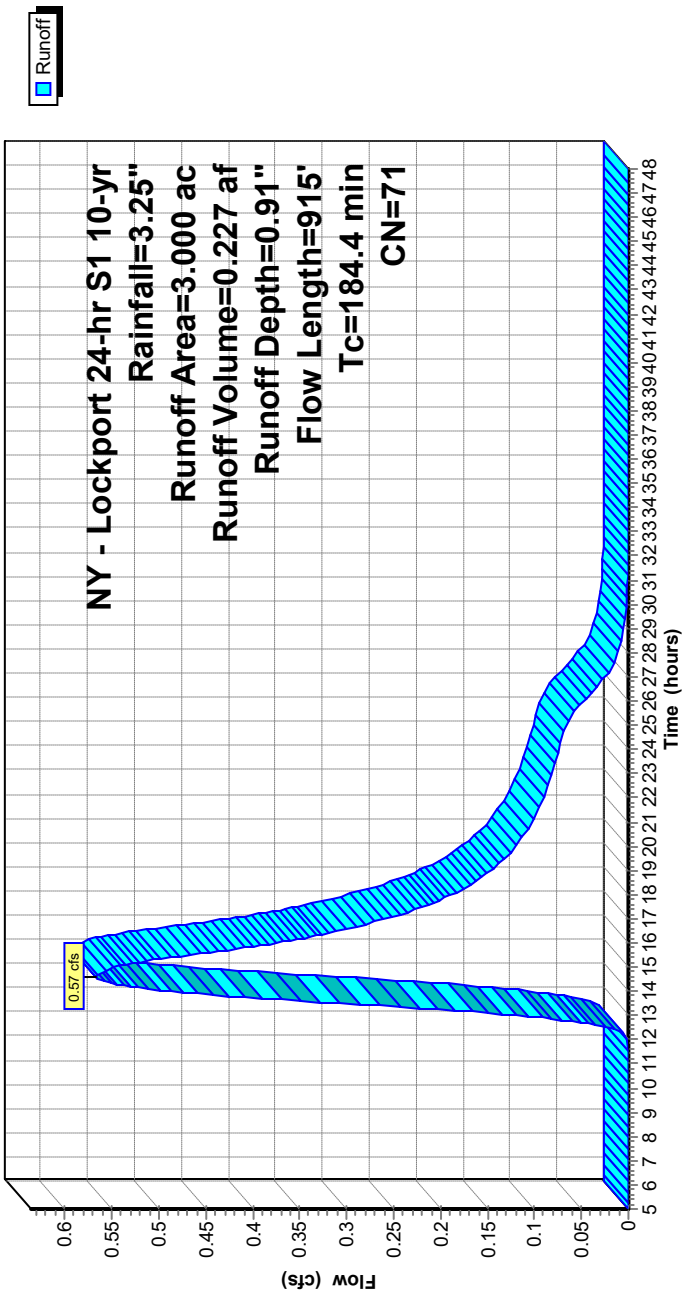
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

Area (ac)	CN	Description
* 0.033	58	B-MEADOW, NON-GRAZED
* 0.719	58	B-MEADOW, NON-GRAZED
* 0.039	80	D-75% GRASS COVER, GOOD
* 0.086	84	D-50-75% GRASS COVER, FAIR
* 0.864	78	D-MEADOW, NON-GRAZED
* 0.126	78	D-MEADOW, NON-GRAZED
* 1.133	71	C-MEADOW, NON-GRAZED
3.000	71	Weighted Average
3.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
98.2	100	0.0001	0.02		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.21"
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
184.4	915	Total			

Subcatchment 65S: DA 34

Hydrograph



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Summary for Subcatchment 66S: DA 36

Runoff = 4.72 cfs @ 12.48 hrs, Volume= 0.594 af, Depth= 1.01"
 Routed to Pond 80P : Culvert 036

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

Area (ac)	CN	Description
* 1.408	30	A-MEADOW, NON-GRAZED
* 3.440	78	D-MEADOW, NON-GRAZED
* 0.677	78	D-MEADOW, NON-GRAZED
* 1.498	98	D-WATER SURFACE, 0% IMP
7.023	73	Weighted Average
5.525		78.67% Pervious Area
1.498		21.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	100	0.0390	0.18		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.21"
0.9	77	0.0420	1.43		Shallow Concentrated Flow, 77
					Short Grass Pasture Kv= 7.0 fps
2.2	234	0.0640	1.77		Shallow Concentrated Flow, 234
					Short Grass Pasture Kv= 7.0 fps
2.8	268	0.0520	1.60		Shallow Concentrated Flow, 268
					Short Grass Pasture Kv= 7.0 fps
4.0	256	0.0230	1.06		Shallow Concentrated Flow, 256
					Short Grass Pasture Kv= 7.0 fps
8.5	225	0.0040	0.44		Shallow Concentrated Flow, 225
					Short Grass Pasture Kv= 7.0 fps
5.0	114	0.0030	0.38		Shallow Concentrated Flow, 114
					Short Grass Pasture Kv= 7.0 fps
2.4	91	0.0080	0.63		Shallow Concentrated Flow, 91
					Short Grass Pasture Kv= 7.0 fps
34.8	1,365	Total			

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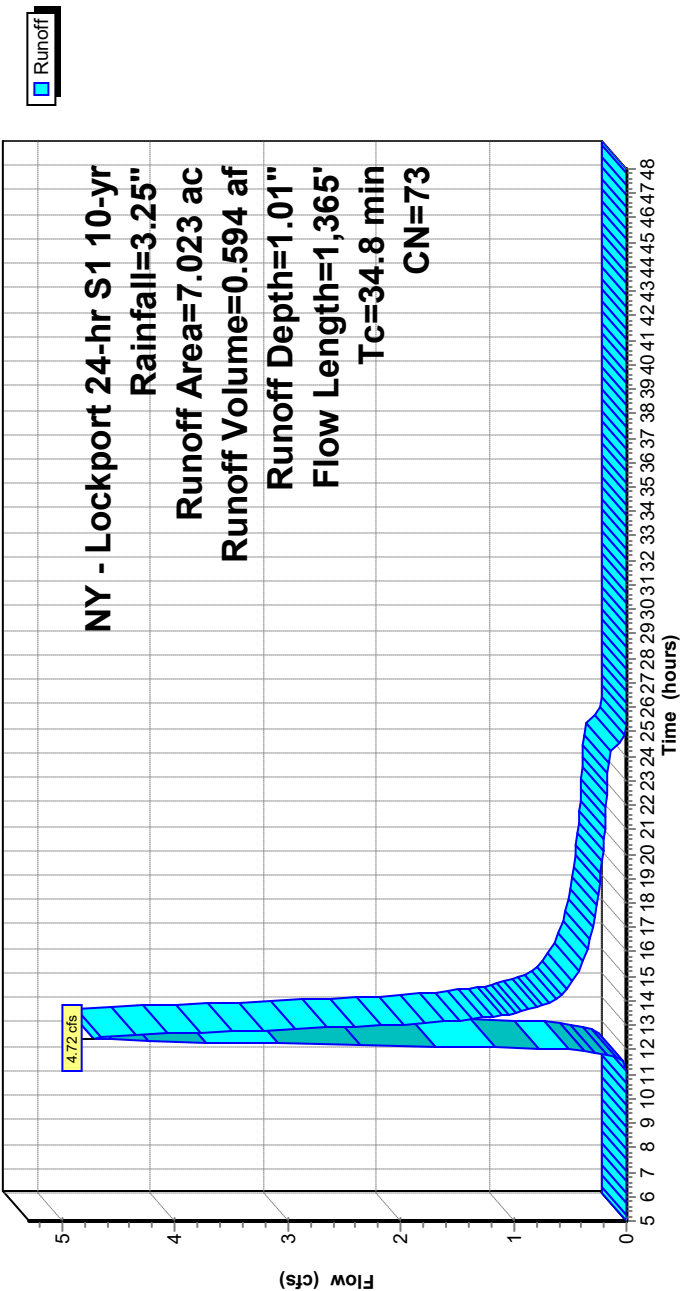
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Subcatchment 66S: DA 36

Hydrograph



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NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

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Summary for Subcatchment 67S: DA 37

Runoff = 0.20 cfs @ 12.50 hrs, Volume= 0.045 af, Depth= 0.21"
 Routed to Pond 81P : Culvert 037

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

Area (ac)	CN	Description
* 1.353	30	A-MEADOW, NON-GRAZED
* 1.222	78	D-MEADOW, NON-GRAZED
2.575	53	Weighted Average
2.575		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.6	100	0.0590	0.22		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.21"
0.4	41	0.0520	1.60		Shallow Concentrated Flow, 41
					Short Grass Pasture Kv= 7.0 fps
0.6	48	0.0420	1.43		Shallow Concentrated Flow, 48
					Short Grass Pasture Kv= 7.0 fps
0.6	76	0.0800	1.98		Shallow Concentrated Flow, 76
					Short Grass Pasture Kv= 7.0 fps
1.0	71	0.0290	1.19		Shallow Concentrated Flow, 71
					Short Grass Pasture Kv= 7.0 fps
0.9	82	0.0470	1.52		Shallow Concentrated Flow, 82
					Short Grass Pasture Kv= 7.0 fps
1.1	79	0.0290	1.19		Shallow Concentrated Flow, 79
					Short Grass Pasture Kv= 7.0 fps
12.2	497	Total			

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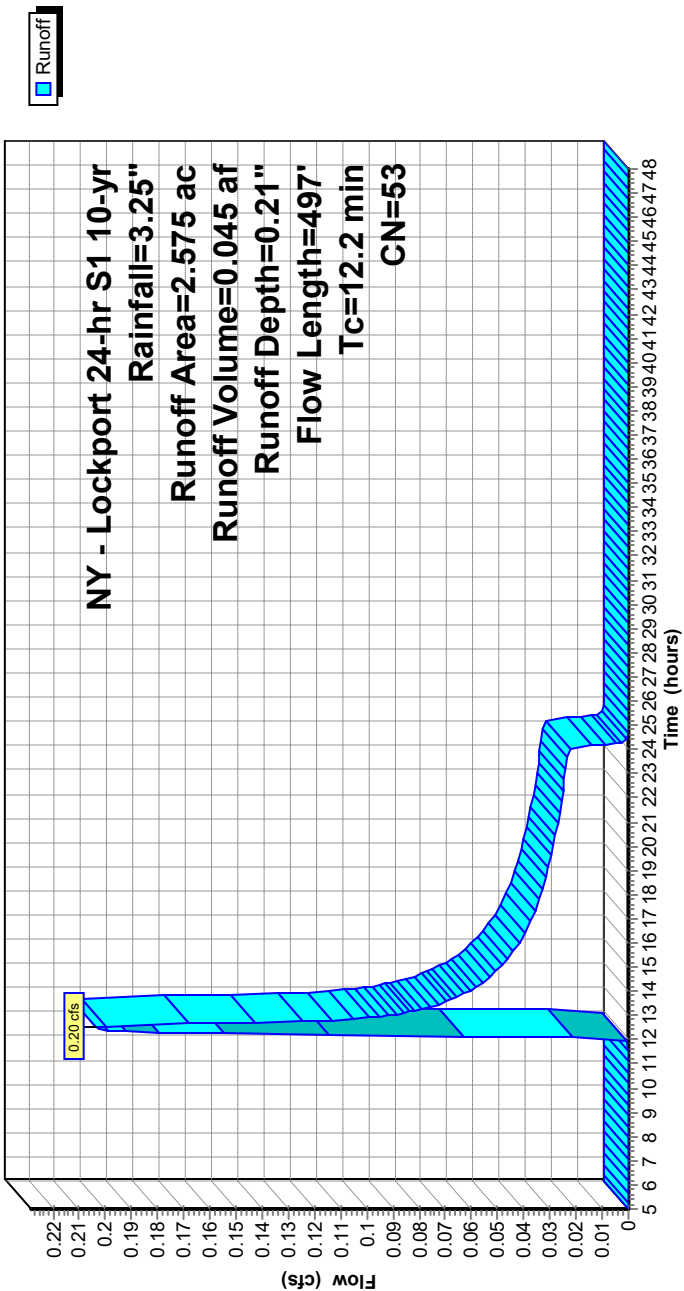
NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

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Subcatchment 67S: DA 37

Hydrograph



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NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

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Summary for Subcatchment 68S: DA 38

[45] Hint: Runoff=Zero

Runoff = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"
 Routed to Pond 82P : Culvert 038

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

Area (ac)	CN	Description
* 0.011	39	A-75% GRASS COVER, GOOD
* 0.256	49	A-50-75% GRASS COVER, FAIR
* 4.945	30	A-MEADOW, NON-GRAZED
* 0.148	69	B-50-75% GRASS COVER, FAIR
* 0.007	58	B-MEADOW, NON-GRAZED
* 0.056	78	D-MEADOW, NON-GRAZED
5.423	33	Weighted Average
5.423		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.0400	0.19		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.21"
2.3	130	0.0180	0.94		Shallow Concentrated Flow, 130
					Short Grass Pasture Kv= 7.0 fps
2.3	179	0.0350	1.31		Shallow Concentrated Flow, 179
					Short Grass Pasture Kv= 7.0 fps
2.8	236	0.0410	1.42		Shallow Concentrated Flow, 236
					Short Grass Pasture Kv= 7.0 fps
0.9	80	0.0470	1.52		Shallow Concentrated Flow, 80
					Short Grass Pasture Kv= 7.0 fps
1.8	132	0.0310	1.23		Shallow Concentrated Flow, 132
					Short Grass Pasture Kv= 7.0 fps
3.2	152	0.0130	0.80		Shallow Concentrated Flow, 152
					Short Grass Pasture Kv= 7.0 fps
22.2	1,009	Total			

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NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

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Subcatchment 68S: DA 38

Hydrograph



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Summary for Subcatchment 69S: DA 39

Runoff = 0.17 cfs @ 12.26 hrs, Volume= 0.023 af, Depth= 0.39"
Routed to Pond 83P : Culvert 039

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

Area (ac)	CN	Description
* 0.131	49	A-50-75% GRASS COVER, FAIR
* 0.104	30	A-MEADOW, NON-GRAZED
* 0.443	69	B-50-75% GRASS COVER, FAIR
* 0.039	58	B-MEADOW, NON-GRAZED

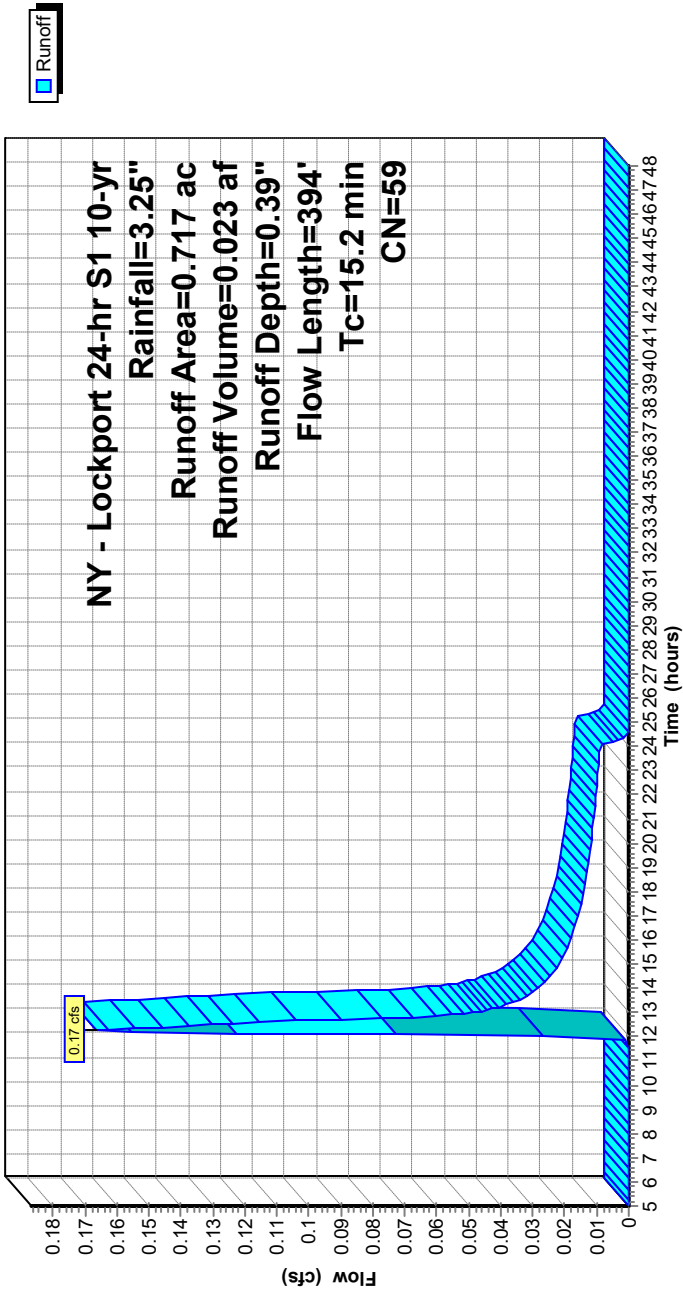
0.717 59 Weighted Average
0.717 100.00% Pervious Area

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= 2.21"
1.3	123	0.0480	1.53		Shallow Concentrated Flow, 123 Short Grass Pasture Kv= 7.0 fps
4.3	171	0.0090	0.66		Shallow Concentrated Flow, 171 Short Grass Pasture Kv= 7.0 fps

15.2 394 Total

Subcatchment 69S: DA 39

Hydrograph



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NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

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Summary for Subcatchment 70S: DA 40

Runoff = 10.88 cfs @ 13.14 hrs, Volume= 2.273 af, Depth= 1.31"
 Routed to Pond 84P : Culvert 040

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

Area (ac)	CN	Description
* 0.117	49	A-50-75% GRASS COVER, FAIR
* 0.133	30	A-MEADOW, NON-GRAZED
* 0.857	80	D-75% GRASS COVER, GOOD
* 0.371	84	D-50-75% GRASS COVER, FAIR
* 0.267	79	D-WOOD/GRASS COMC., GOOD
* 18.654	78	D-MEADOW, NON-GRAZED
* 0.418	98	D-WATER SURFACE, 0% IMP
20.817	78	Weighted Average
20.399		97.99% Pervious Area
0.418		2.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.2	100	0.0030	0.07		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.21"
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
84.9	1,139	Total			

CULVERTS 27-47

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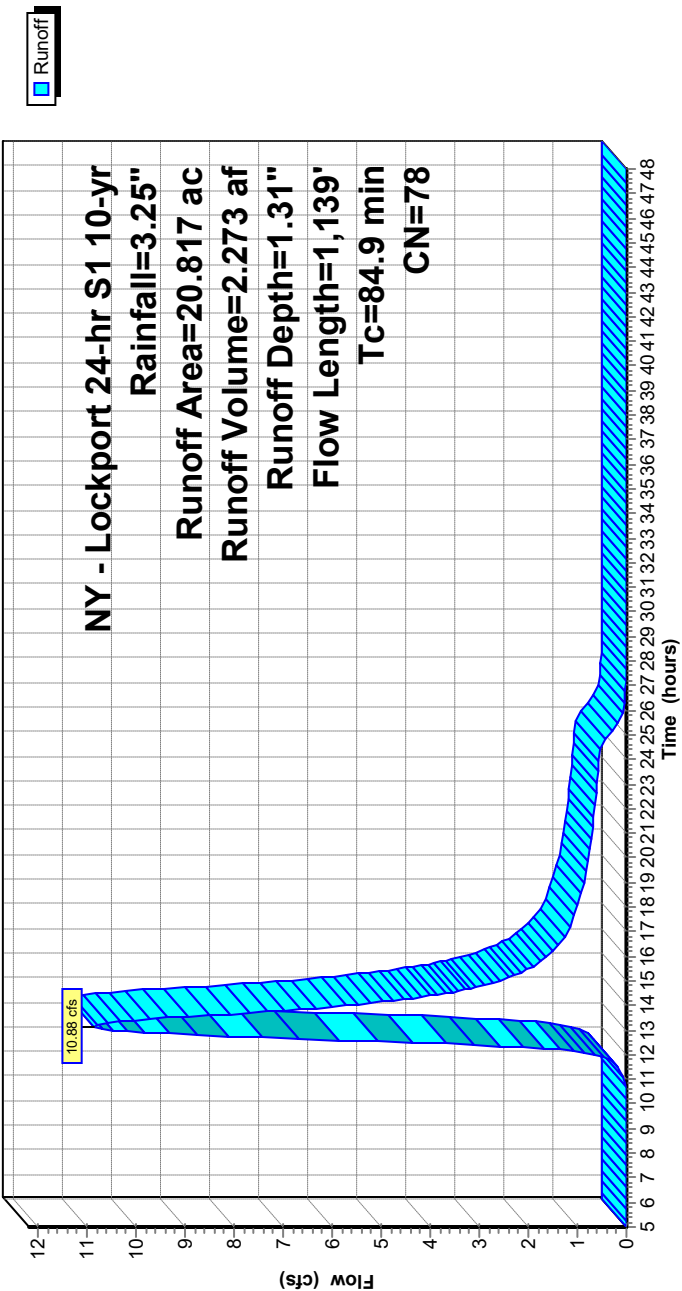
NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

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Subcatchment 70S: DA 40

Hydrograph



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Summary for Subcatchment 71S: DA 41

Runoff = 0.43 cfs @ 13.46 hrs, Volume= 0.111 af, Depth= 1.31"
Routed to Pond 86P : Culvert 041

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

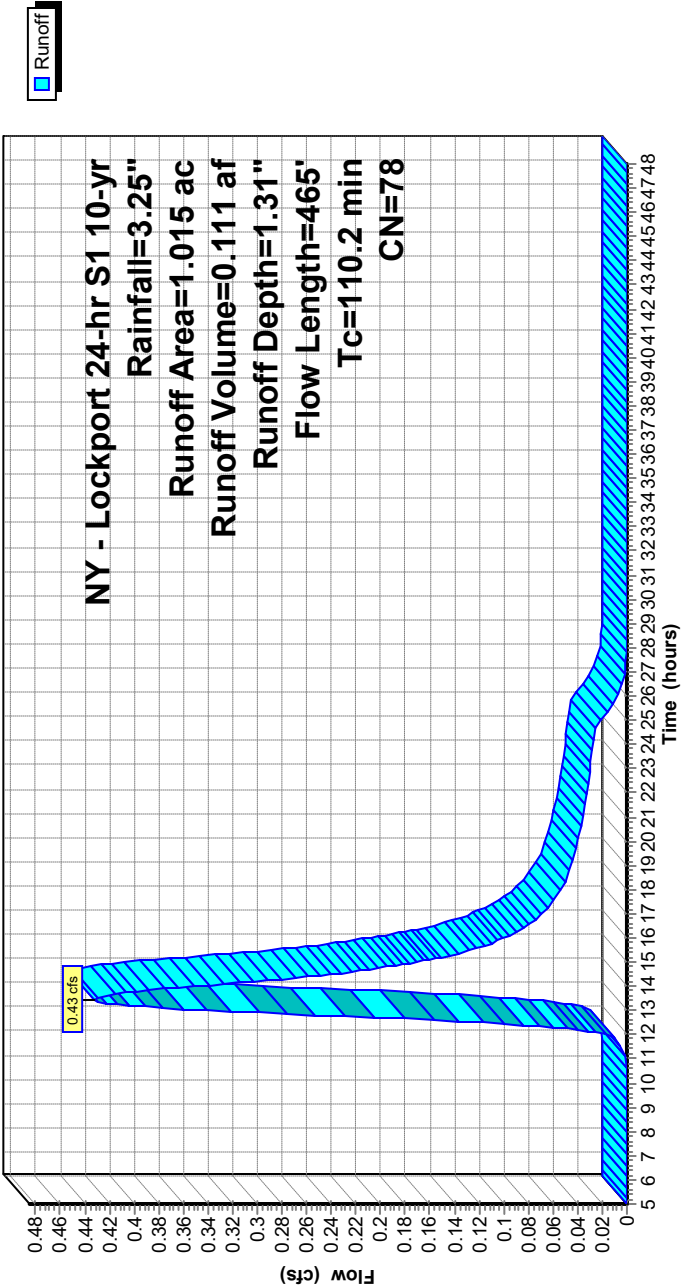
Area (ac)	CN	Description
* 0.185	78	D-MEADOW, NON-GRAZED
* 0.830	78	D-MEADOW, NON-GRAZED
1.015	78	Weighted Average
1.015		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
98.2	100	0.0001	0.02		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.21"
8.5	252	0.0050	0.49		Shallow Concentrated Flow, 252
					Short Grass Pasture Kv= 7.0 fps
3.5	113	0.0060	0.54		Shallow Concentrated Flow, 113
					Short Grass Pasture Kv= 7.0 fps

110.2	465	Total
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Subcatchment 71S: DA 41

Hydrograph



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Summary for Subcatchment 72S: DA 45

Runoff = 5.09 cfs @ 13.79 hrs, Volume= 1.513 af, Depth= 1.37"
 Routed to Pond 87P : Culvert 045

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

Area (ac)	CN	Description
* 0.839	80	D-75% GRASS COVER, GOOD
* 0.532	84	D-50-75% GRASS COVER, FAIR
* 1.189	79	D-WOODS/GRASS COMB., FAIR
* 0.421	78	D-MEADOW, NON-GRAZED
* 0.610	80	D-75% GRASS COVER, GOOD
* 0.552	79	D-WOODS/GRASS COMB., FAIR
* 1.693	78	D-MEADOW, NON-GRAZED
* 0.909	80	D-75% GRASS COVER, GOOD
* 0.118	84	D-50-75% GRASS COVER, FAIR
* 6.345	78	D-MEADOW, NON-GRAZED
13.208	79	Weighted Average
13.208		100.00% Pervious 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= 2.21"
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			

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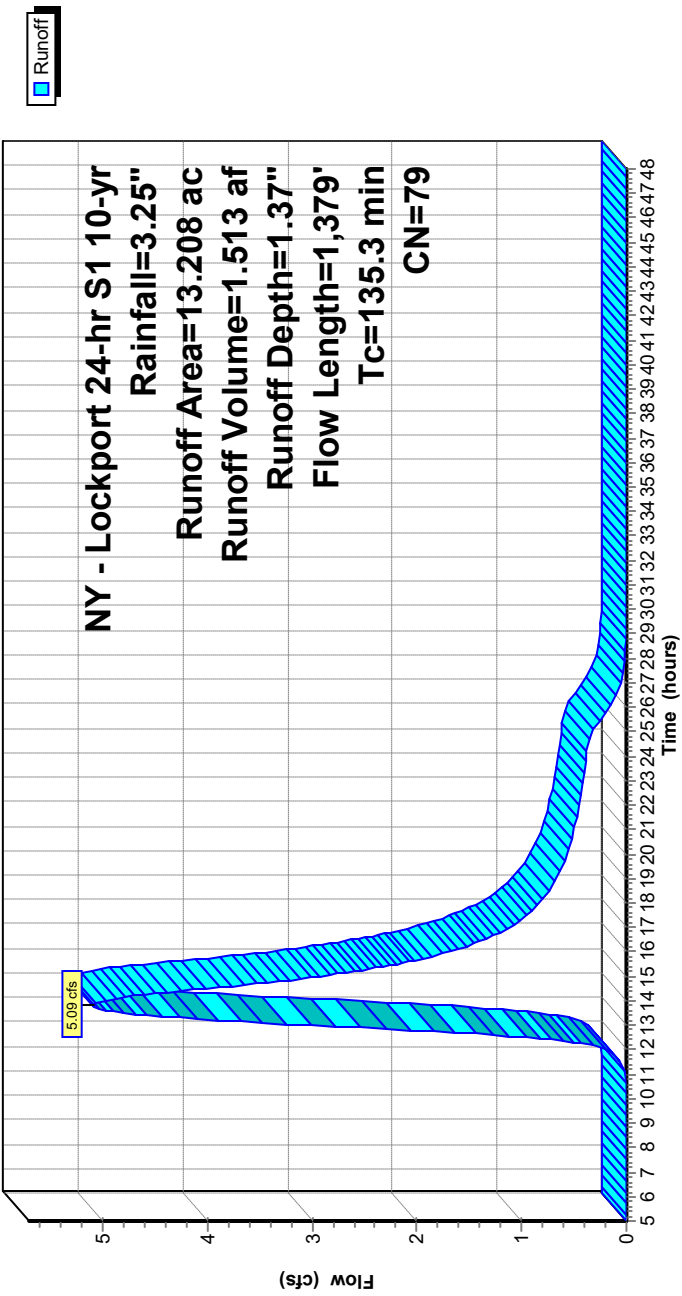
NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

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Subcatchment 72S: DA 45

Hydrograph



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Summary for Subcatchment 73S: DA 48

Runoff = 12.93 cfs @ 12.45 hrs, Volume= 1.554 af, Depth= 1.19"
 Routed to Pond 89P : Culvert 048

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

Area (ac)	CN	Description
* 0.687	61	B-75% GRASS COVER, GOOD
* 0.310	69	B-50-75% GRASS COVER, FAIR
* 2.053	58	B-MEADOW, NON-GRAZED
* 0.028	80	D-75% GRASS COVER, GOOD
* 2.330	78	D-MEADOW, NON-GRAZED
* 9.450	78	D-MEADOW, NON-GRAZED
* 0.765	98	D-WATER SURFACE, 0% IMP
* 0.085	98	D-WATER SURFACE, 0% IMP
15.708	76	Weighted Average
14.858		94.59% Pervious Area
0.850		5.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.5	100	0.0120	0.12		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.21"
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
34.0	1,032	Total			

CULVERTS 27-47

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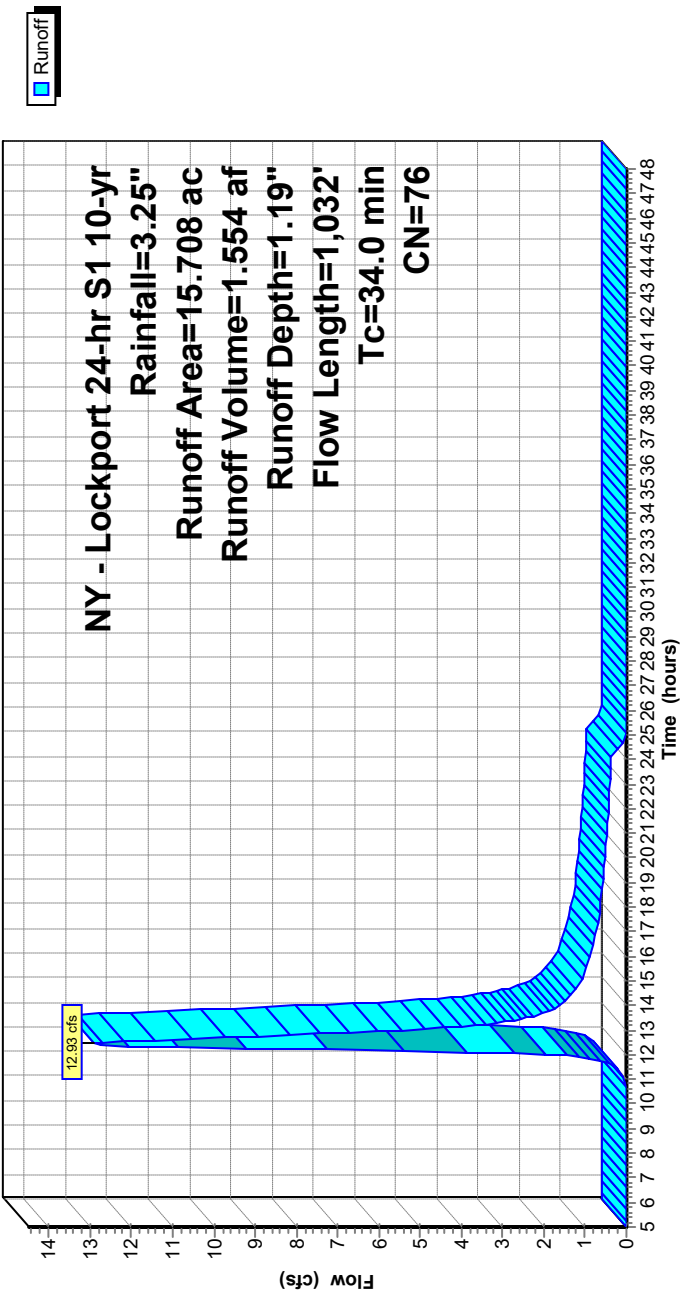
NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

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Subcatchment 73S: DA 48

Hydrograph



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NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

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Summary for Subcatchment 74S: DA 49

Runoff = 0.63 cfs @ 13.73 hrs, Volume= 0.188 af, Depth= 0.86"
 Routed to Pond 91P : Culvert 049

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

Area (ac)	CN	Description
* 0.260	61	B-75% GRASS COVER, GOOD
* 1.275	69	B-50-75% GRASS COVER, FAIR
* 0.458	58	B-MEADOW, NON-GRAZED
* 0.108	80	D-75% GRASS COVER, GOOD
* 0.524	84	D-50-75% GRASS COVER, FAIR
* 0.000	78	D-MEADOW, NON-GRAZED
2.625	70	Weighted Average
2.625		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
98.2	100	0.0001	0.02		Sheet Flow, 100 Grass: Short n= 0.150 P2= 2.21"
6.5	300	0.0120	0.77		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
5.1	204	0.0090	0.66		Shallow Concentrated Flow, 204 Short Grass Pasture Kv= 7.0 fps
7.2	235	0.0060	0.54		Shallow Concentrated Flow, 235 Short Grass Pasture Kv= 7.0 fps
4.3	267	0.0220	1.04		Shallow Concentrated Flow, 267 Short Grass Pasture Kv= 7.0 fps
121.3	1,106	Total			

CULVERTS 27-47

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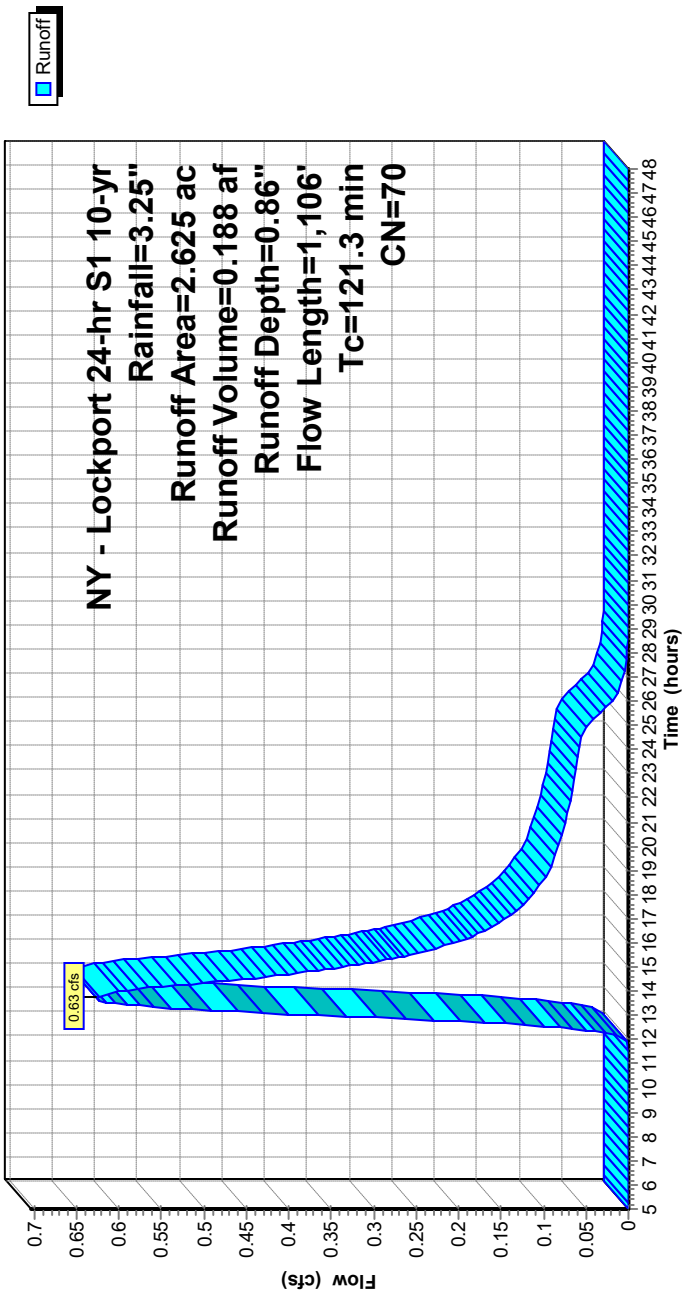
NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

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Subcatchment 74S: DA 49

Hydrograph



CULVERTS 27-47

NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

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Summary for Subcatchment 75S: DA 50

Runoff = 1.54 cfs @ 12.42 hrs, Volume= 0.188 af, Depth= 0.86"
 Routed to Pond 92P : Culvert 050

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
 NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

Area (ac)	CN	Description
* 0.260	61	B-75% GRASS COVER, GOOD
* 1.275	69	B-50-75% GRASS COVER, FAIR
* 0.458	58	B-MEADOW, NON-GRAZED
* 0.108	80	D-75% GRASS COVER, GOOD
* 0.524	84	D-50-75% GRASS COVER, FAIR
* 0.000	78	D-MEADOW, NON-GRAZED
2.625	70	Weighted Average
2.625		100.00% Pervious 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= 2.21"
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			

CULVERTS 27-47

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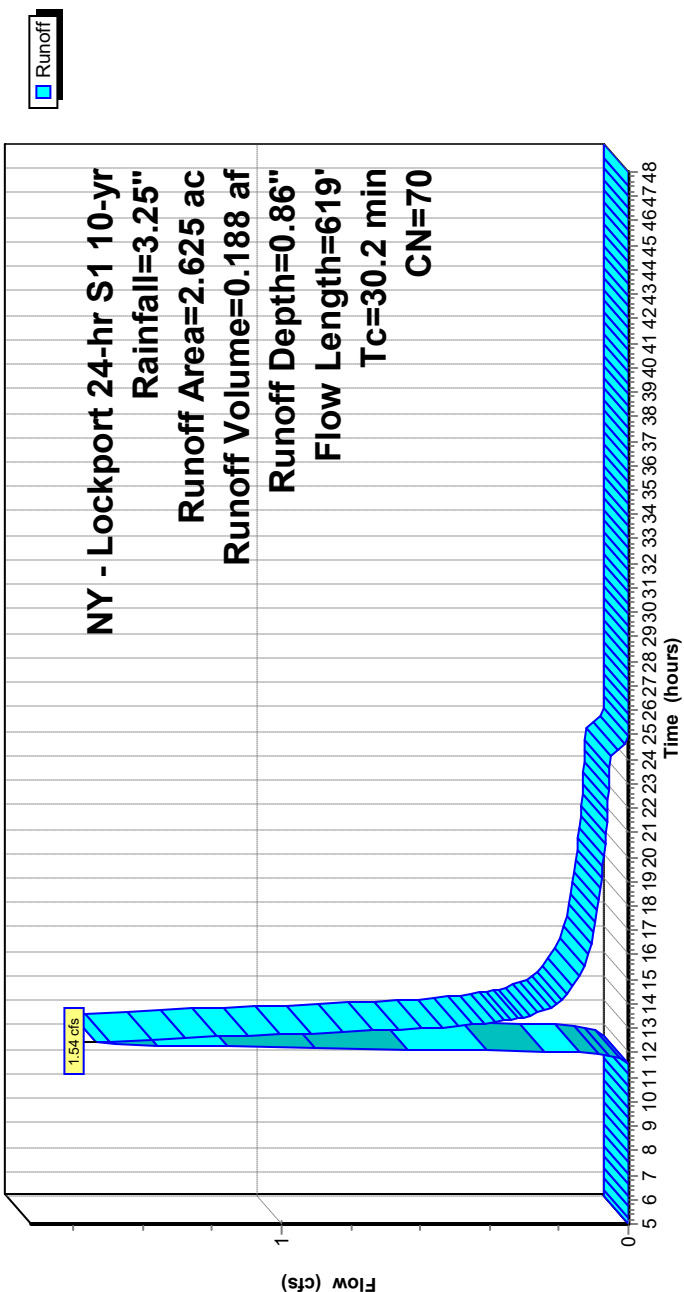
NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

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Subcatchment 75S: DA 50

Hydrograph



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Summary for Subcatchment 76S: DA 54

Runoff = 0.09 cfs @ 13.28 hrs, Volume= 0.020 af, Depth= 1.51"
Routed to Pond 93P : Culvert 054

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-48.00 hrs, dt= 0.05 hrs
NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

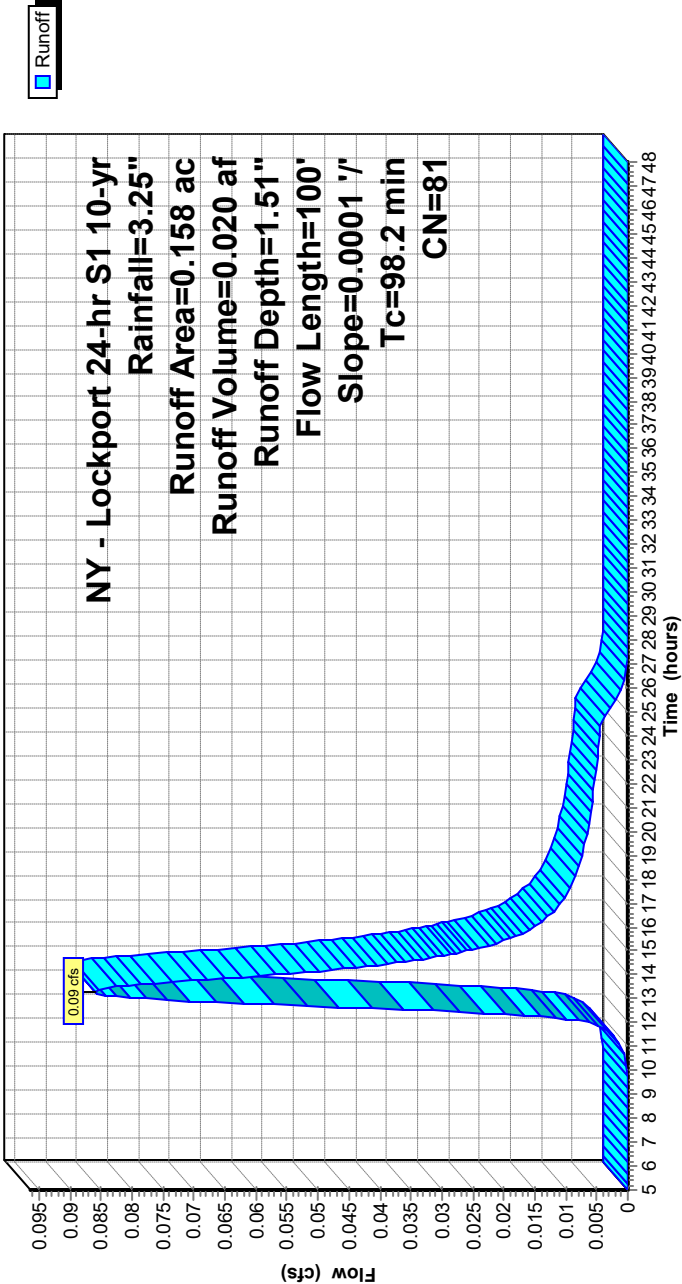
Area (ac)	CN	Description
* 0.090	84	D-50-75% GRASS COVER, FAIR
* 0.067	78	D-MEADOW, NON-GRAZED
* 0.001	78	D-MEADOW, NON-GRAZED

0.158 81 Weighted Average
0.158 100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
98.2	100	0.0001	0.02		
Sheet Flow, 100					
Grass: Short n= 0.150 P2= 2.21"					

Subcatchment 76S: DA 54

Hydrograph



CULVERTS 27-47

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NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

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Summary for Pond 77P: Culvert 032

[58] Hint: Peaked 0.15' above defined flood level

Inflow Area = 83.916 ac, 0.00% Impervious, Inflow Depth = 1.25" for 10-yr event
Inflow = 20.08 cfs @ 14.91 hrs, Volume= 8.725 af
Outflow = 20.08 cfs @ 14.91 hrs, Volume= 8.725 af, Atten= 0%, Lag= 0.0 min
Primary = 20.08 cfs @ 14.91 hrs, Volume= 8.725 af

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

Peak Elev= 616.15' @ 14.91 hrs

Flood Elev= 616.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	615.20'	24.0" Round Culvert 001 w/ 2.4" inside fill L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 615.00' / 614.48' S= 0.0173 '/' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 2.98 sf
#2	Primary	616.00'	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

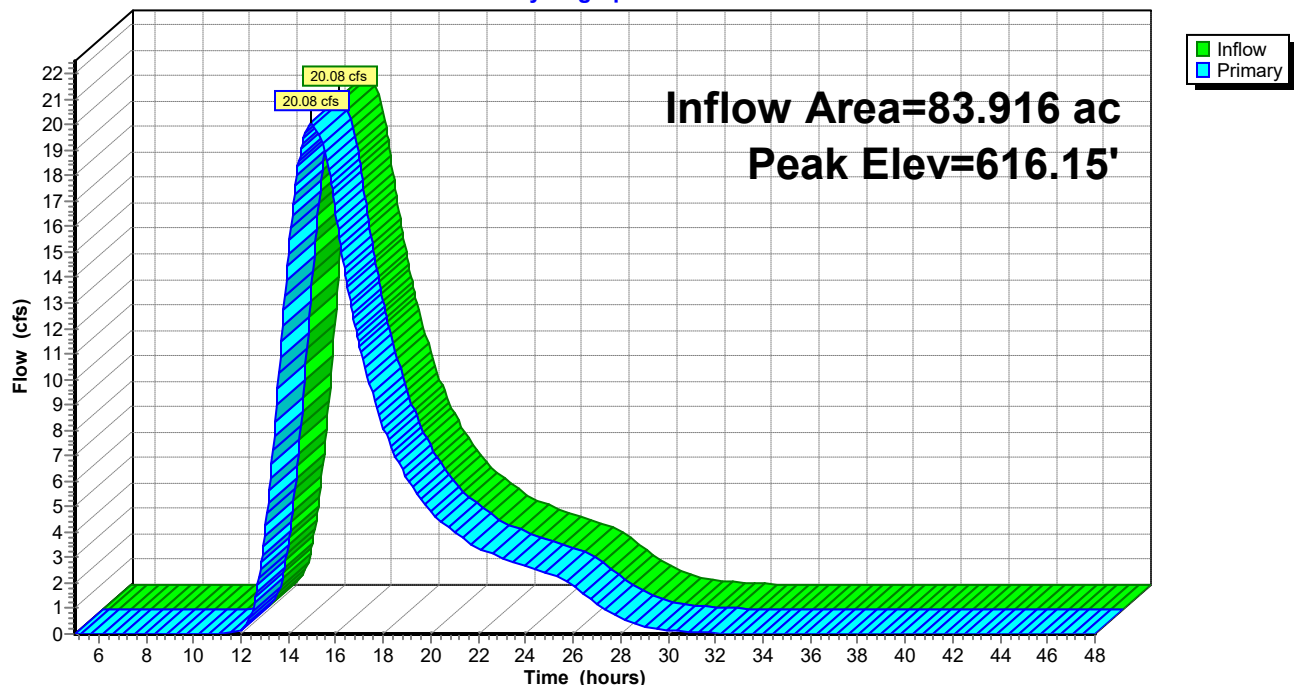
Primary OutFlow Max=20.06 cfs @ 14.91 hrs HW=616.15' (Free Discharge)

1=Culvert 001 (Inlet Controls 4.07 cfs @ 2.38 fps)

2=Broad-Crested Rectangular Weir (Weir Controls 15.99 cfs @ 1.04 fps)

Pond 77P: Culvert 032

Hydrograph



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Summary for Pond 78P: Culvert 033

Inflow Area = 8.458 ac, 0.00% Impervious, Inflow Depth = 0.54" for 10-yr event
Inflow = 2.27 cfs @ 12.62 hrs, Volume= 0.382 af
Outflow = 2.27 cfs @ 12.62 hrs, Volume= 0.382 af, Atten= 0%, Lag= 0.0 min
Primary = 2.27 cfs @ 12.62 hrs, Volume= 0.382 af

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

Peak Elev= 645.96' @ 12.62 hrs

Flood Elev= 646.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	645.20'	18.0" Round Culvert 001 w/ 2.4" inside fill L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 645.00' / 644.22' S= 0.0260 '/' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 1.63 sf
#2	Primary	646.00'	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

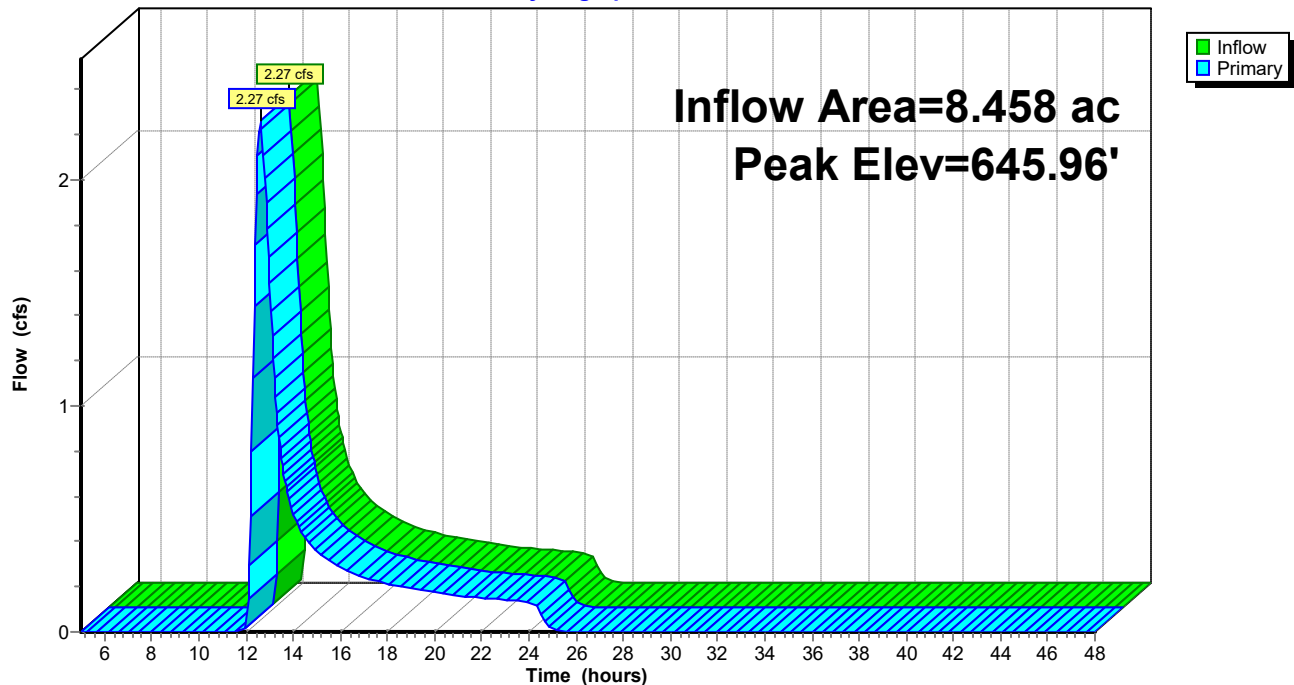
Primary OutFlow Max=2.26 cfs @ 12.62 hrs HW=645.96' (Free Discharge)

1=Culvert 001 (Inlet Controls 2.26 cfs @ 2.15 fps)

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

Pond 78P: Culvert 033

Hydrograph



CULVERTS 27-47

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NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

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Summary for Pond 79P: Culvert 034

Inflow Area = 3.000 ac, 0.00% Impervious, Inflow Depth = 0.91" for 10-yr event
Inflow = 0.57 cfs @ 14.57 hrs, Volume= 0.227 af
Outflow = 0.57 cfs @ 14.57 hrs, Volume= 0.227 af, Atten= 0%, Lag= 0.0 min
Primary = 0.57 cfs @ 14.57 hrs, Volume= 0.227 af

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

Peak Elev= 647.09' @ 14.57 hrs

Flood Elev= 647.50'

Device	Routing	Invert	Outlet Devices
#1	Primary	646.75'	15.0" Round Culvert 001 w/ 3.0" inside fill L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 646.50' / 645.72' S= 0.0260 '/ Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 1.05 sf
#2	Primary	647.50'	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

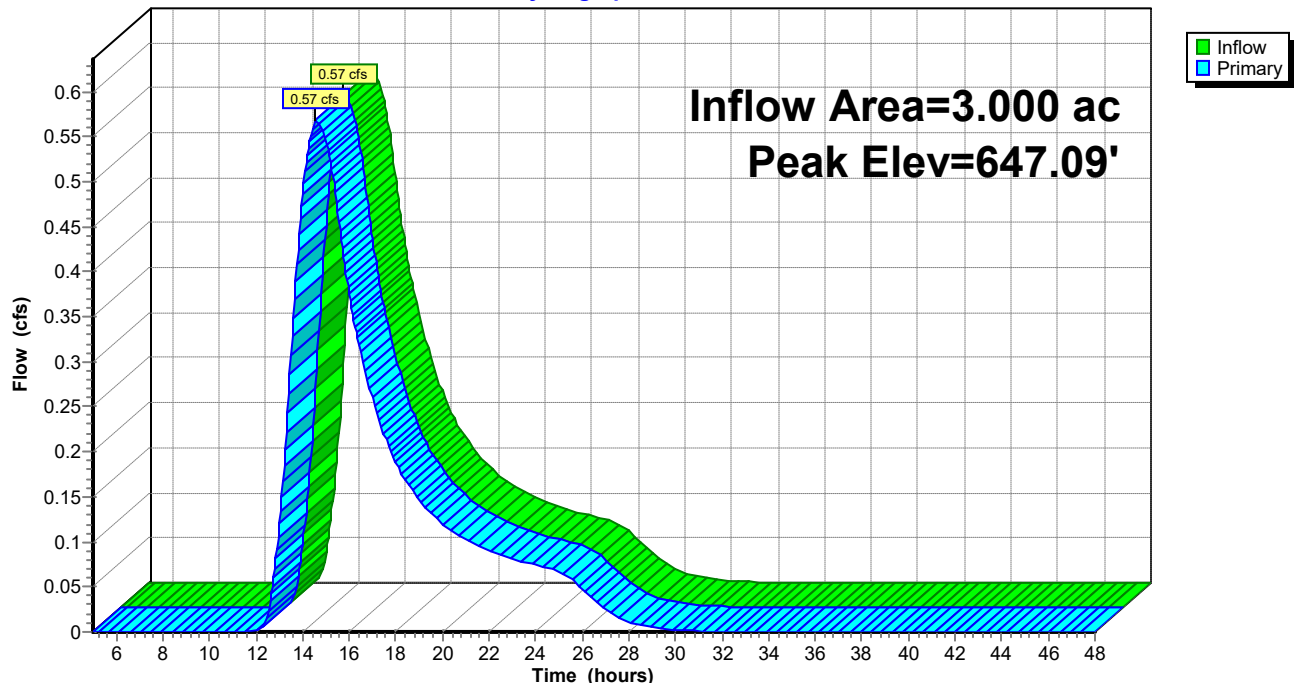
Primary OutFlow Max=0.57 cfs @ 14.57 hrs HW=647.09' (Free Discharge)

1=Culvert 001 (Inlet Controls 0.57 cfs @ 1.44 fps)

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

Pond 79P: Culvert 034

Hydrograph



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Summary for Pond 80P: Culvert 036

[58] Hint: Peaked 0.03' above defined flood level

Inflow Area = 7.023 ac, 21.33% Impervious, Inflow Depth = 1.01" for 10-yr event
Inflow = 4.72 cfs @ 12.48 hrs, Volume= 0.594 af
Outflow = 4.72 cfs @ 12.48 hrs, Volume= 0.594 af, Atten= 0%, Lag= 0.0 min
Primary = 4.72 cfs @ 12.48 hrs, Volume= 0.594 af

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

Peak Elev= 634.03' @ 12.48 hrs

Flood Elev= 634.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	633.00'	18.0" Round Culvert 001 w/ 2.4" inside fill L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 632.80' / 632.02' S= 0.0260 '/' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 1.63 sf
#2	Primary	634.00'	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

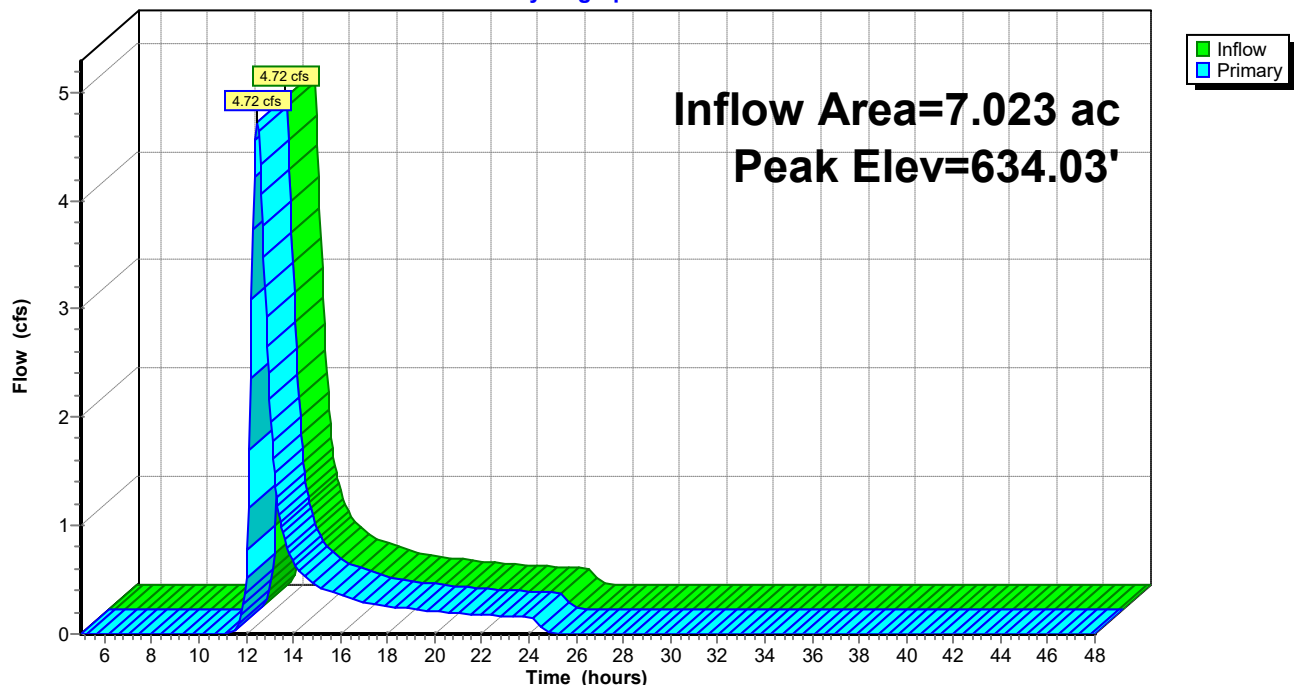
Primary OutFlow Max=4.69 cfs @ 12.48 hrs HW=634.03' (Free Discharge)

1=Culvert 001 (Inlet Controls 3.60 cfs @ 2.56 fps)

2=Broad-Crested Rectangular Weir (Weir Controls 1.10 cfs @ 0.43 fps)

Pond 80P: Culvert 036

Hydrograph



CULVERTS 27-47

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Summary for Pond 81P: Culvert 037

Inflow Area = 2.575 ac, 0.00% Impervious, Inflow Depth = 0.21" for 10-yr event
Inflow = 0.20 cfs @ 12.50 hrs, Volume= 0.045 af
Outflow = 0.20 cfs @ 12.50 hrs, Volume= 0.045 af, Atten= 0%, Lag= 0.0 min
Primary = 0.20 cfs @ 12.50 hrs, Volume= 0.045 af

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

Peak Elev= 651.68' @ 12.50 hrs

Flood Elev= 652.31'

Device	Routing	Invert	Outlet Devices
#1	Primary	651.51'	18.0" Round Culvert 001 w/ 2.4" inside fill L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 651.31' / 650.53' S= 0.0260 '/' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 1.63 sf
#2	Primary	652.31'	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

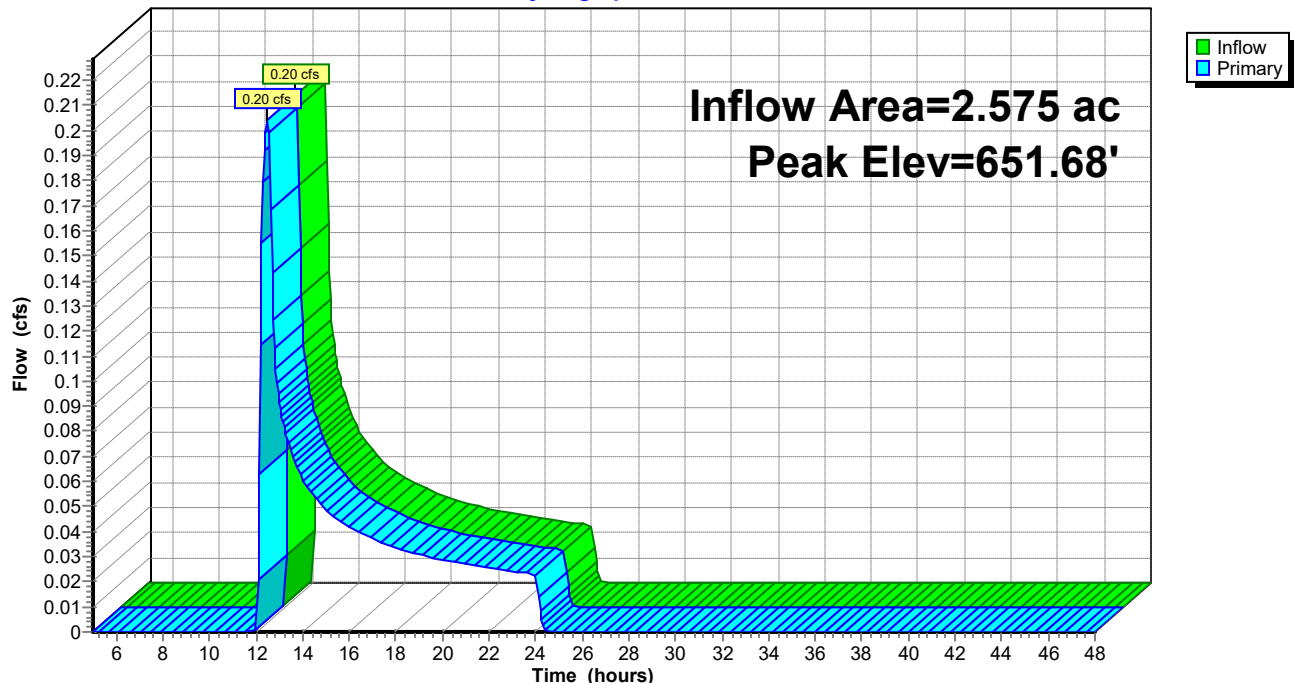
Primary OutFlow Max=0.20 cfs @ 12.50 hrs HW=651.68' (Free Discharge)

1=Culvert 001 (Inlet Controls 0.20 cfs @ 1.02 fps)

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

Pond 81P: Culvert 037

Hydrograph



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Summary for Pond 82P: Culvert 038

Inflow Area = 5.423 ac, 0.00% Impervious, Inflow Depth = 0.00" for 10-yr event
Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

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

Peak Elev= 644.69' @ 5.00 hrs

Flood Elev= 645.44'

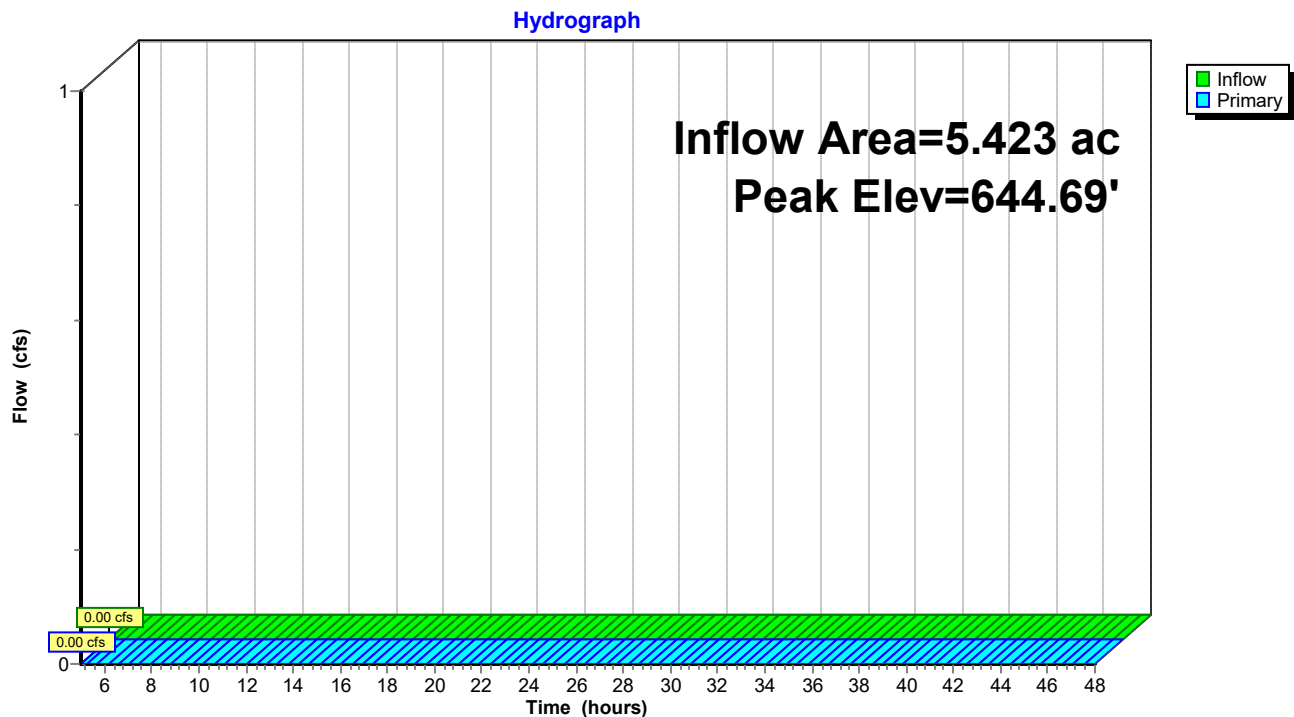
Device	Routing	Invert	Outlet Devices
#1	Primary	644.69'	15.0" Round Culvert 001 w/ 3.0" inside fill L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 644.44' / 643.66' S= 0.0260 '/' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 1.05 sf
#2	Primary	645.44'	100.0' long + 3.0 ' SideZ 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=644.69' (Free Discharge)

1=Culvert 001 (Controls 0.00 cfs)

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

Pond 82P: Culvert 038



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Summary for Pond 83P: Culvert 039

Inflow Area = 0.717 ac, 0.00% Impervious, Inflow Depth = 0.39" for 10-yr event
Inflow = 0.17 cfs @ 12.26 hrs, Volume= 0.023 af
Outflow = 0.17 cfs @ 12.26 hrs, Volume= 0.023 af, Atten= 0%, Lag= 0.0 min
Primary = 0.17 cfs @ 12.26 hrs, Volume= 0.023 af

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

Peak Elev= 642.32' @ 12.26 hrs

Flood Elev= 642.92'

Device	Routing	Invert	Outlet Devices
#1	Primary	642.17'	15.0" Round Culvert 001 w/ 3.0" inside fill L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 641.92' / 641.14' S= 0.0260 '/' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 1.05 sf
#2	Primary	642.92'	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

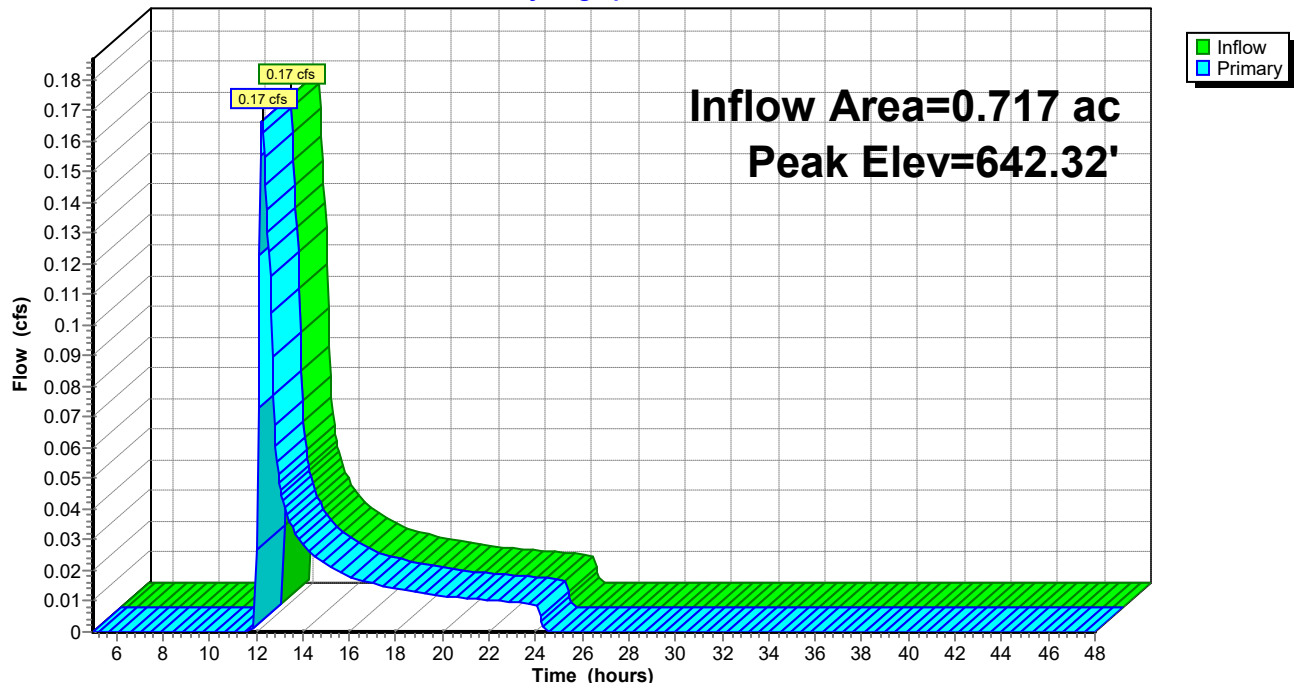
Primary OutFlow Max=0.17 cfs @ 12.26 hrs HW=642.32' (Free Discharge)

1=Culvert 001 (Inlet Controls 0.17 cfs @ 0.98 fps)

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

Pond 83P: Culvert 039

Hydrograph



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Summary for Pond 84P: Culvert 040

[58] Hint: Peaked 0.08' above defined flood level

Inflow Area = 20.817 ac, 2.01% Impervious, Inflow Depth = 1.31" for 10-yr event
Inflow = 10.88 cfs @ 13.14 hrs, Volume= 2.273 af
Outflow = 10.88 cfs @ 13.14 hrs, Volume= 2.273 af, Atten= 0%, Lag= 0.0 min
Primary = 10.88 cfs @ 13.14 hrs, Volume= 2.273 af

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

Peak Elev= 636.13' @ 13.14 hrs

Flood Elev= 636.05'

Device	Routing	Invert	Outlet Devices
#1	Primary	635.25'	36.0" Round Culvert 001 w/ 2.4" inside fill L= 36.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 635.05' / 634.27' S= 0.0217 '/' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 6.87 sf
#2	Primary	636.05'	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

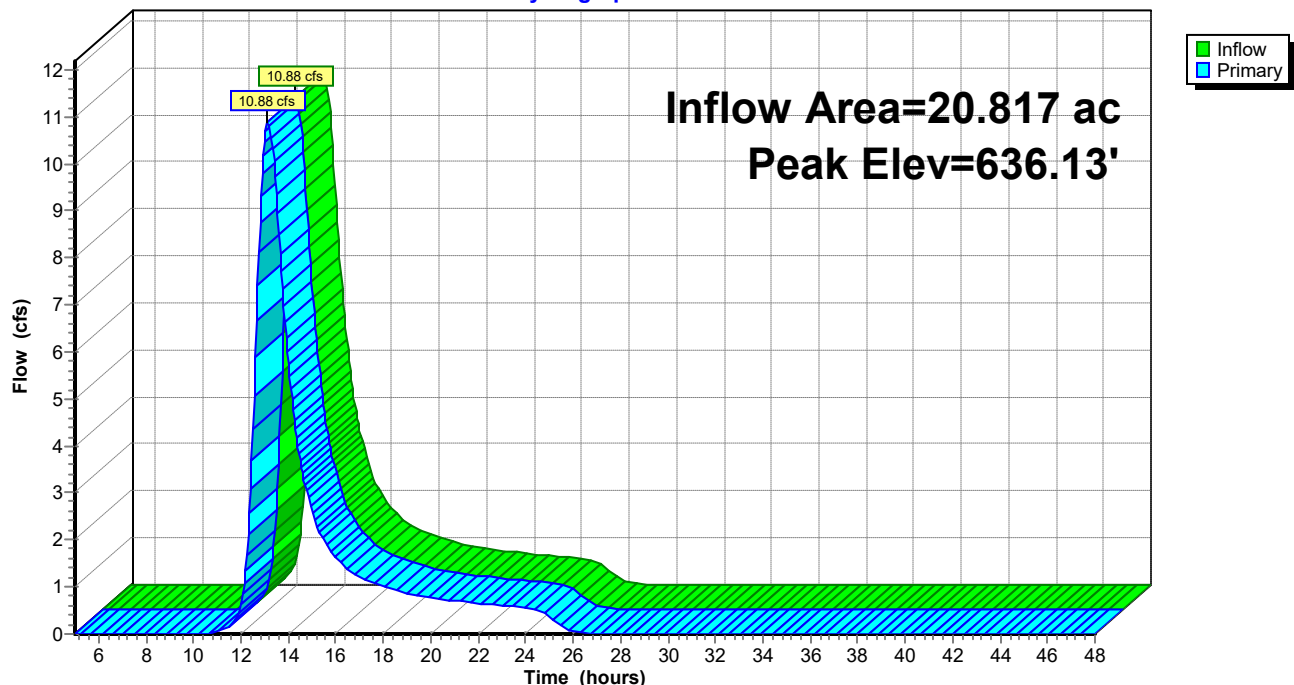
Primary OutFlow Max=10.80 cfs @ 13.14 hrs HW=636.13' (Free Discharge)

1=Culvert 001 (Inlet Controls 4.71 cfs @ 2.25 fps)

2=Broad-Crested Rectangular Weir (Weir Controls 6.10 cfs @ 0.76 fps)

Pond 84P: Culvert 040

Hydrograph



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Summary for Pond 86P: Culvert 041

Inflow Area = 1.015 ac, 0.00% Impervious, Inflow Depth = 1.31" for 10-yr event
Inflow = 0.43 cfs @ 13.46 hrs, Volume= 0.111 af
Outflow = 0.43 cfs @ 13.46 hrs, Volume= 0.111 af, Atten= 0%, Lag= 0.0 min
Primary = 0.43 cfs @ 13.46 hrs, Volume= 0.111 af

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

Peak Elev= 637.47' @ 13.46 hrs

Flood Elev= 638.00'

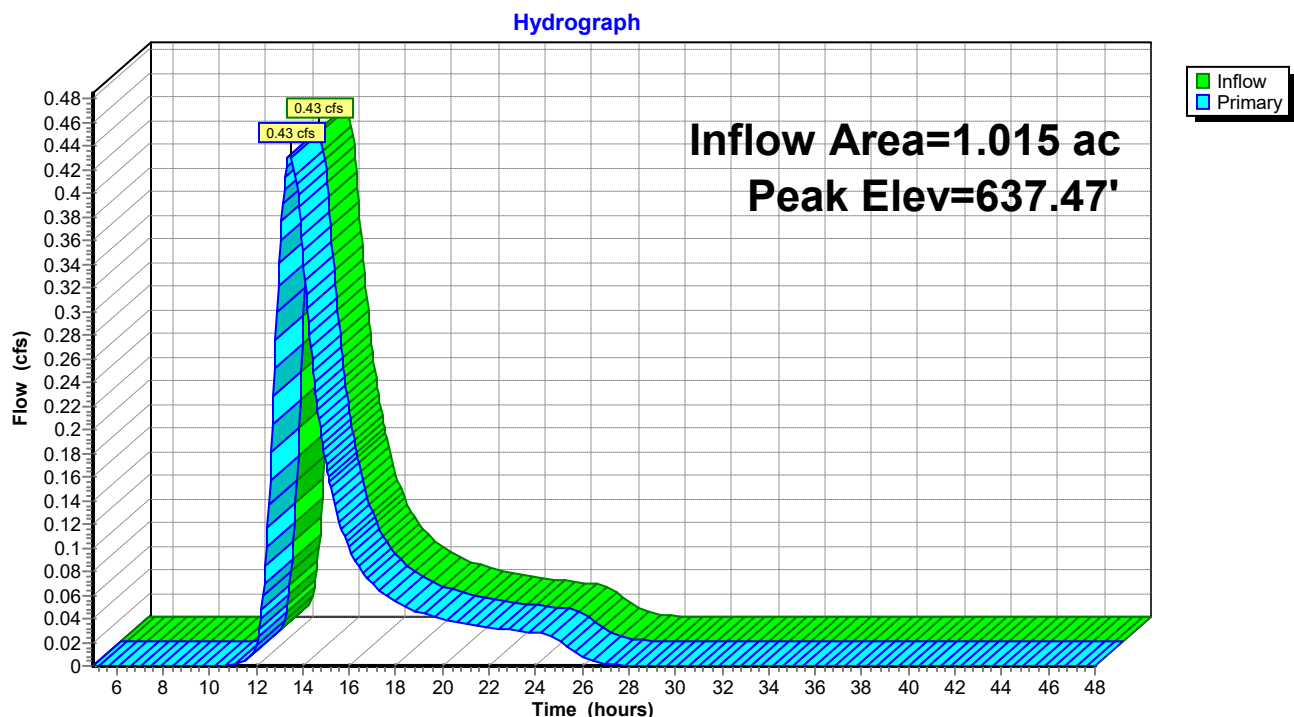
Device	Routing	Invert	Outlet Devices
#1	Primary	637.20'	18.0" Round Culvert 001 w/ 2.4" inside fill L= 36.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 637.00' / 636.22' S= 0.0217 ' S= 0.0217 ' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 1.63 sf
#2	Primary	638.00'	100.0' long + 3.0 ' 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=0.43 cfs @ 13.46 hrs HW=637.47' (Free Discharge)

1=Culvert 001 (Inlet Controls 0.43 cfs @ 1.29 fps)

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

Pond 86P: Culvert 041



CULVERTS 27-47

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NY - Lockport 24-hr S1 10-yr Rainfall=3.25"

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Summary for Pond 87P: Culvert 045

[58] Hint: Peaked 0.04' above defined flood level

Inflow Area = 13.208 ac, 0.00% Impervious, Inflow Depth = 1.37" for 10-yr event
Inflow = 5.09 cfs @ 13.79 hrs, Volume= 1.513 af
Outflow = 5.09 cfs @ 13.79 hrs, Volume= 1.513 af, Atten= 0%, Lag= 0.0 min
Primary = 5.09 cfs @ 13.79 hrs, Volume= 1.513 af

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

Peak Elev= 636.04' @ 13.79 hrs

Flood Elev= 636.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	635.20'	18.0" Round Culvert 001 w/ 2.4" inside fill L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 635.00' / 634.22' S= 0.0260 '/' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 1.63 sf
#2	Primary	636.00'	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

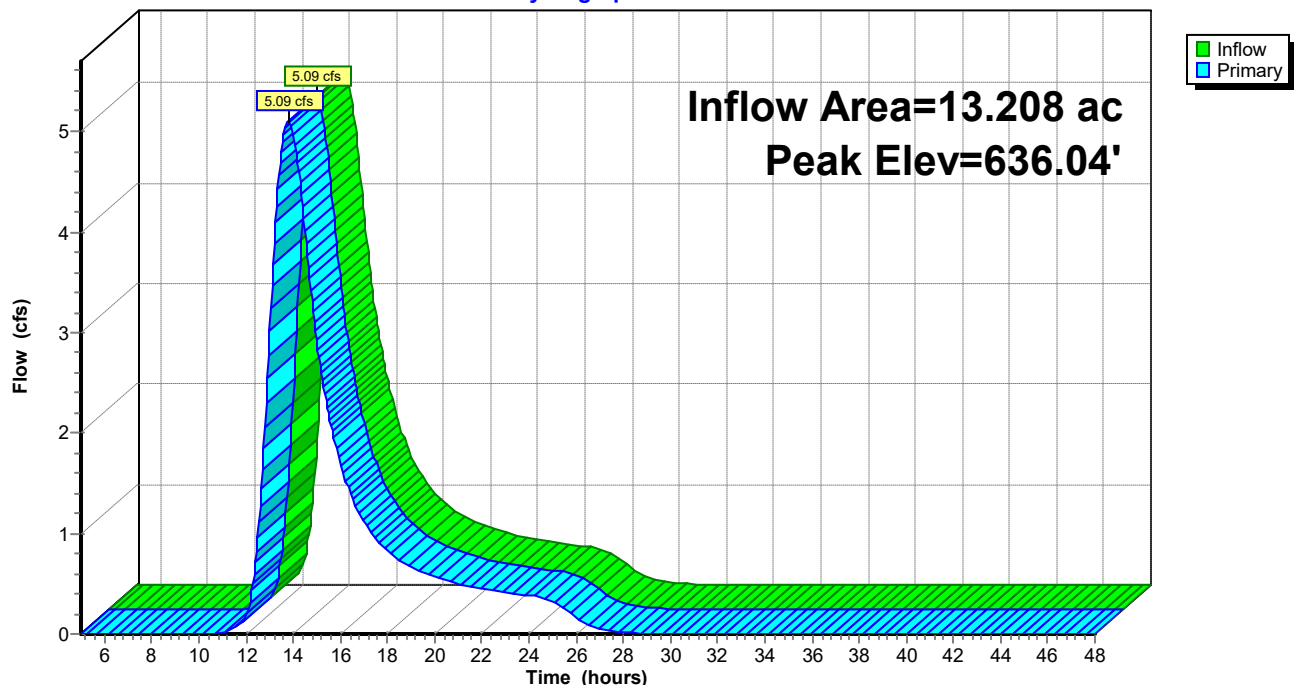
Primary OutFlow Max=5.08 cfs @ 13.79 hrs HW=636.04' (Free Discharge)

1=Culvert 001 (Inlet Controls 2.67 cfs @ 2.28 fps)

2=Broad-Crested Rectangular Weir (Weir Controls 2.41 cfs @ 0.56 fps)

Pond 87P: Culvert 045

Hydrograph



CULVERTS 27-47

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Summary for Pond 89P: Culvert 048

[58] Hint: Peaked 0.10' above defined flood level

Inflow Area = 15.708 ac, 5.41% Impervious, Inflow Depth = 1.19" for 10-yr event
Inflow = 12.93 cfs @ 12.45 hrs, Volume= 1.554 af
Outflow = 12.93 cfs @ 12.45 hrs, Volume= 1.554 af, Atten= 0%, Lag= 0.0 min
Primary = 12.93 cfs @ 12.45 hrs, Volume= 1.554 af

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

Peak Elev= 636.10' @ 12.45 hrs

Flood Elev= 636.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	635.20'	36.0" Round Culvert w/ 2.4" inside fill L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 635.00' / 634.22' S= 0.0260 '/' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 6.87 sf
#2	Primary	636.00'	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

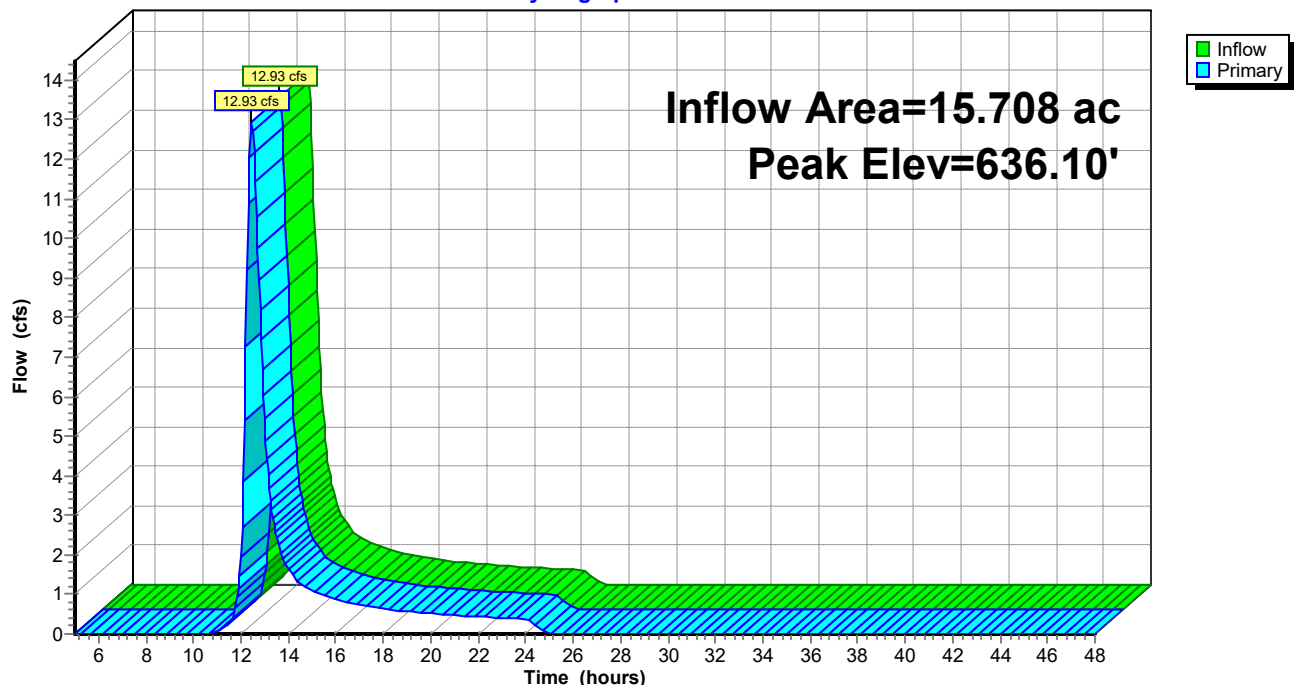
Primary OutFlow Max=12.92 cfs @ 12.45 hrs HW=636.10' (Free Discharge)

1=Culvert (Inlet Controls 4.86 cfs @ 2.27 fps)

2=Broad-Crested Rectangular Weir (Weir Controls 8.07 cfs @ 0.83 fps)

Pond 89P: Culvert 048

Hydrograph



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Summary for Pond 91P: Culvert 049

Inflow Area = 2.625 ac, 0.00% Impervious, Inflow Depth = 0.86" for 10-yr event
Inflow = 0.63 cfs @ 13.73 hrs, Volume= 0.188 af
Outflow = 0.63 cfs @ 13.73 hrs, Volume= 0.188 af, Atten= 0%, Lag= 0.0 min
Primary = 0.63 cfs @ 13.73 hrs, Volume= 0.188 af

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

Peak Elev= 637.51' @ 13.73 hrs

Flood Elev= 638.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	637.20'	24.0" Round Culvert 001 w/ 2.4" inside fill L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 637.00' / 636.22' S= 0.0260 ' / Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 2.98 sf
#2	Primary	638.00'	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

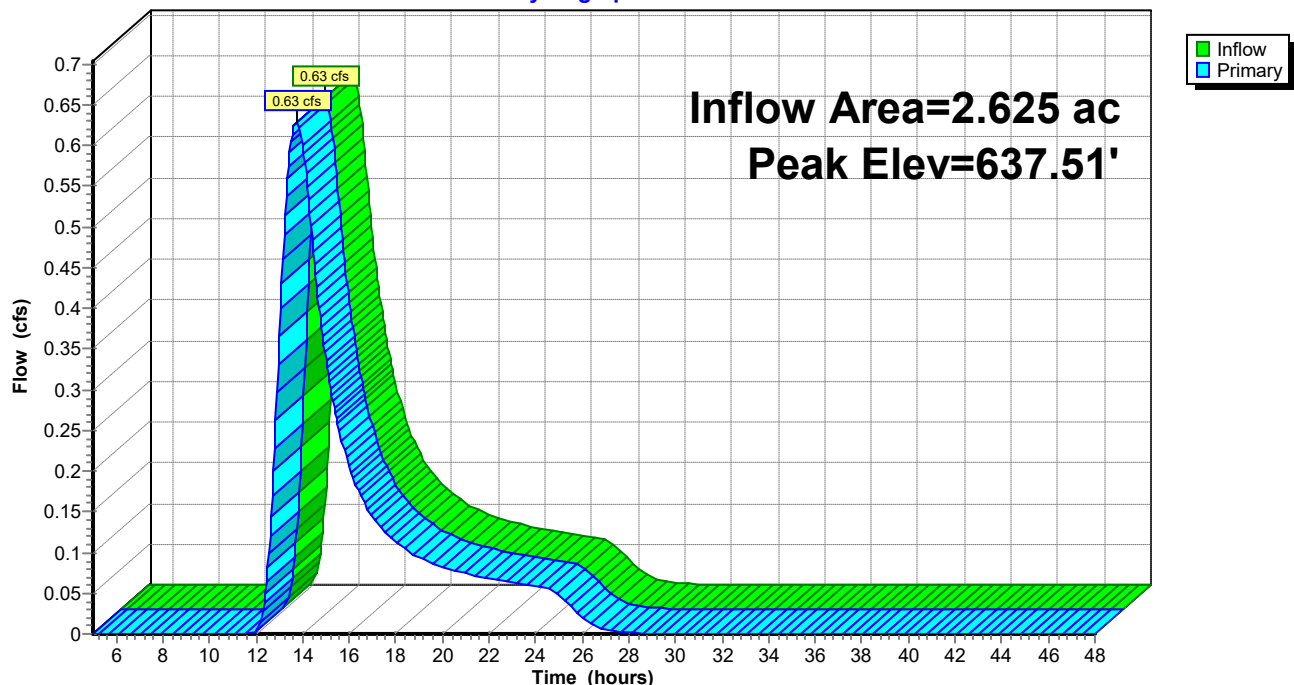
Primary OutFlow Max=0.63 cfs @ 13.73 hrs HW=637.51' (Free Discharge)

1=Culvert 001 (Inlet Controls 0.63 cfs @ 1.36 fps)

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

Pond 91P: Culvert 049

Hydrograph



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Summary for Pond 92P: Culvert 050

Inflow Area = 2.625 ac, 0.00% Impervious, Inflow Depth = 0.86" for 10-yr event
Inflow = 1.54 cfs @ 12.42 hrs, Volume= 0.188 af
Outflow = 1.54 cfs @ 12.42 hrs, Volume= 0.188 af, Atten= 0%, Lag= 0.0 min
Primary = 1.54 cfs @ 12.42 hrs, Volume= 0.188 af

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

Peak Elev= 637.73' @ 12.42 hrs

Flood Elev= 638.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	637.20'	24.0" Round Culvert 039 w/ 2.4" inside fill L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 637.00' / 636.22' S= 0.0260 '/' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 2.98 sf
#2	Primary	638.00'	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

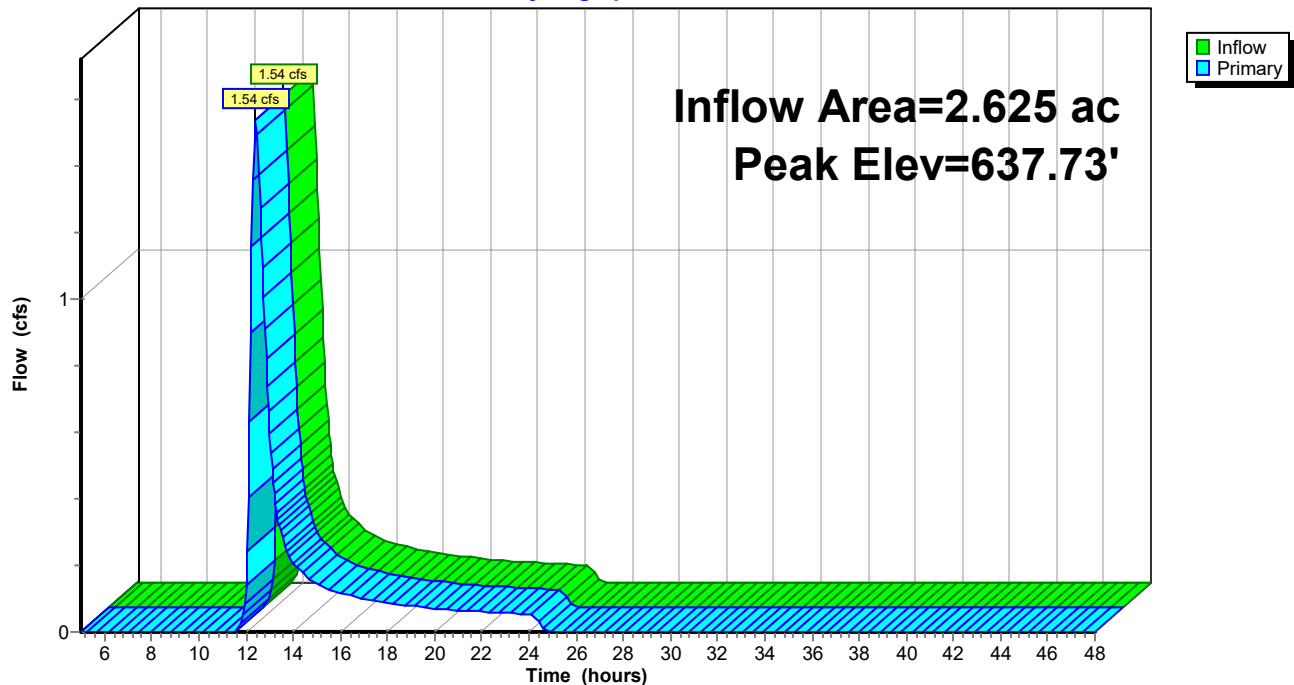
Primary OutFlow Max=1.53 cfs @ 12.42 hrs HW=637.73' (Free Discharge)

1=Culvert 039 (Inlet Controls 1.53 cfs @ 1.76 fps)

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

Pond 92P: Culvert 050

Hydrograph



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Summary for Pond 93P: Culvert 054

Inflow Area = 0.158 ac, 0.00% Impervious, Inflow Depth = 1.51" for 10-yr event
Inflow = 0.09 cfs @ 13.28 hrs, Volume= 0.020 af
Outflow = 0.09 cfs @ 13.28 hrs, Volume= 0.020 af, Atten= 0%, Lag= 0.0 min
Primary = 0.09 cfs @ 13.28 hrs, Volume= 0.020 af

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

Peak Elev= 641.29' @ 13.28 hrs

Flood Elev= 642.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	641.20'	24.0" Round Culvert 001 w/ 2.4" inside fill L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 641.00' / 640.22' S= 0.0260 ' / Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 2.98 sf
#2	Primary	642.00'	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

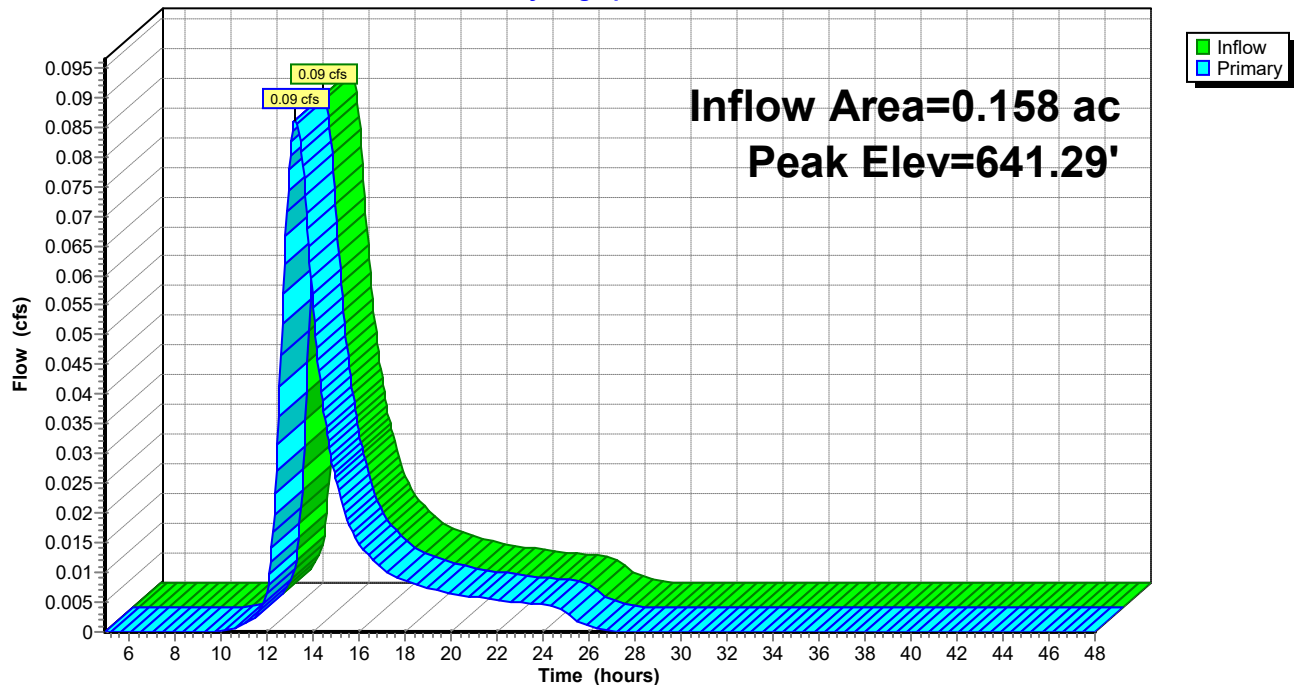
Primary OutFlow Max=0.09 cfs @ 13.28 hrs HW=641.29' (Free Discharge)

1=Culvert 001 (Inlet Controls 0.09 cfs @ 0.75 fps)

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

Pond 93P: Culvert 054

Hydrograph



CULVERTS 27-47

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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 63S: DA 32	Runoff Area=83.916 ac 0.00% Impervious Runoff Depth=2.52" Flow Length=3,167' Tc=219.6 min CN=77 Runoff=43.39 cfs 17.643 af
Subcatchment 64S: DA 33	Runoff Area=8.458 ac 0.00% Impervious Runoff Depth=1.43" Flow Length=1,546' Tc=38.9 min CN=63 Runoff=7.73 cfs 1.010 af
Subcatchment 65S: DA 34	Runoff Area=3.000 ac 0.00% Impervious Runoff Depth=2.03" Flow Length=915' Tc=184.4 min CN=71 Runoff=1.40 cfs 0.507 af
Subcatchment 66S: DA 36	Runoff Area=7.023 ac 21.33% Impervious Runoff Depth=2.19" Flow Length=1,365' Tc=34.8 min CN=73 Runoff=11.29 cfs 1.280 af
Subcatchment 67S: DA 37	Runoff Area=2.575 ac 0.00% Impervious Runoff Depth=0.81" Flow Length=497' Tc=12.2 min CN=53 Runoff=1.82 cfs 0.173 af
Subcatchment 68S: DA 38	Runoff Area=5.423 ac 0.00% Impervious Runoff Depth=0.03" Flow Length=1,009' Tc=22.2 min CN=33 Runoff=0.02 cfs 0.014 af
Subcatchment 69S: DA 39	Runoff Area=0.717 ac 0.00% Impervious Runoff Depth=1.17" Flow Length=394' Tc=15.2 min CN=59 Runoff=0.82 cfs 0.070 af
Subcatchment 70S: DA 40	Runoff Area=20.817 ac 2.01% Impervious Runoff Depth=2.61" Flow Length=1,139' Tc=84.9 min CN=78 Runoff=23.22 cfs 4.528 af
Subcatchment 71S: DA 41	Runoff Area=1.015 ac 0.00% Impervious Runoff Depth=2.61" Flow Length=465' Tc=110.2 min CN=78 Runoff=0.92 cfs 0.221 af
Subcatchment 72S: DA 45	Runoff Area=13.208 ac 0.00% Impervious Runoff Depth=2.70" Flow Length=1,379' Tc=135.3 min CN=79 Runoff=10.67 cfs 2.970 af
Subcatchment 73S: DA 48	Runoff Area=15.708 ac 5.41% Impervious Runoff Depth=2.44" Flow Length=1,032' Tc=34.0 min CN=76 Runoff=28.83 cfs 3.190 af
Subcatchment 74S: DA 49	Runoff Area=2.625 ac 0.00% Impervious Runoff Depth=1.95" Flow Length=1,106' Tc=121.3 min CN=70 Runoff=1.62 cfs 0.426 af
Subcatchment 75S: DA 50	Runoff Area=2.625 ac 0.00% Impervious Runoff Depth=1.95" Flow Length=619' Tc=30.2 min CN=70 Runoff=4.01 cfs 0.426 af
Subcatchment 76S: DA 54	Runoff Area=0.158 ac 0.00% Impervious Runoff Depth=2.88" Flow Length=100' Slope=0.0001 '/' Tc=98.2 min CN=81 Runoff=0.17 cfs 0.038 af
Pond 77P: Culvert 032	Peak Elev=616.27' Inflow=43.39 cfs 17.643 af Outflow=43.39 cfs 17.643 af
Pond 78P: Culvert 033	Peak Elev=646.07' Inflow=7.73 cfs 1.010 af Outflow=7.73 cfs 1.010 af

CULVERTS 27-47

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

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Pond 79P: Culvert 034	Peak Elev=647.35' Inflow=1.40 cfs 0.507 af Outflow=1.40 cfs 0.507 af
Pond 80P: Culvert 036	Peak Elev=634.09' Inflow=11.29 cfs 1.280 af Outflow=11.29 cfs 1.280 af
Pond 81P: Culvert 037	Peak Elev=652.17' Inflow=1.82 cfs 0.173 af Outflow=1.82 cfs 0.173 af
Pond 82P: Culvert 038	Peak Elev=644.73' Inflow=0.02 cfs 0.014 af Outflow=0.02 cfs 0.014 af
Pond 83P: Culvert 039	Peak Elev=642.60' Inflow=0.82 cfs 0.070 af Outflow=0.82 cfs 0.070 af
Pond 84P: Culvert 040	Peak Elev=636.21' Inflow=23.22 cfs 4.528 af Outflow=23.22 cfs 4.528 af
Pond 86P: Culvert 041	Peak Elev=637.63' Inflow=0.92 cfs 0.221 af Outflow=0.92 cfs 0.221 af
Pond 87P: Culvert 045	Peak Elev=636.09' Inflow=10.67 cfs 2.970 af Outflow=10.67 cfs 2.970 af
Pond 89P: Culvert 048	Peak Elev=636.19' Inflow=28.83 cfs 3.190 af Outflow=28.83 cfs 3.190 af
Pond 91P: Culvert 049	Peak Elev=637.74' Inflow=1.62 cfs 0.426 af Outflow=1.62 cfs 0.426 af
Pond 92P: Culvert 050	Peak Elev=638.02' Inflow=4.01 cfs 0.426 af Outflow=4.01 cfs 0.426 af
Pond 93P: Culvert 054	Peak Elev=641.34' Inflow=0.17 cfs 0.038 af Outflow=0.17 cfs 0.038 af

Total Runoff Area = 167.268 ac Runoff Volume = 32.496 af Average Runoff Depth = 2.33"
98.35% Pervious = 164.502 ac 1.65% Impervious = 2.766 ac

CULVERTS 27-47

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

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Summary for Subcatchment 63S: DA 32

Runoff = 43.39 cfs @ 14.89 hrs, Volume= 17.643 af, Depth= 2.52"
Routed to Pond 77P : Culvert 032

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

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
* 24.498	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
* 7.496	82	D-MEADOW, NON-GRAZED
* 0.043	90	D-WATER SURFACE, 0% IMP
83.916	77	Weighted Average
83.916		100.00% Pervious Area

CULVERTS 27-47

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

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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= 2.21"
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			

CULVERTS 27-47

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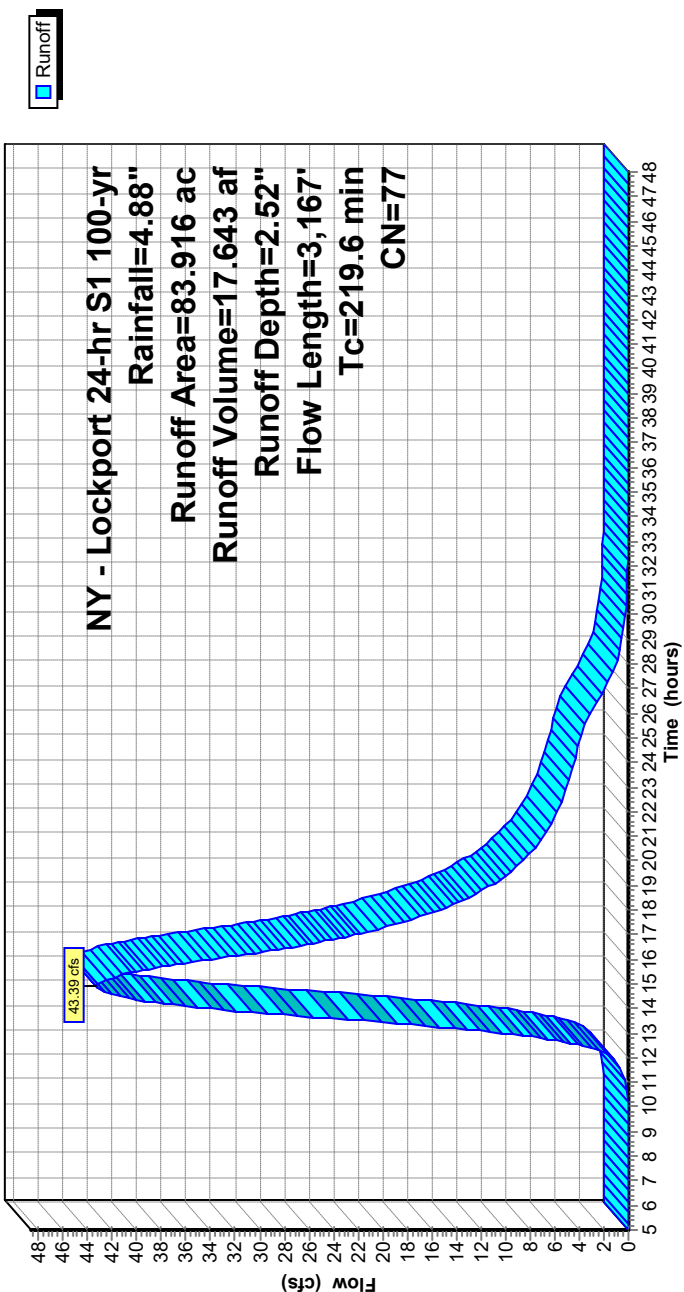
NY - Lockport 24-hr S1 100-yr Rainfall=4.88"

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Subcatchment 63S: DA 32

Hydrograph



CULVERTS 27-47

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

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Summary for Subcatchment 64S: DA 33

Runoff = 7.73 cfs @ 12.54 hrs, Volume= 1.010 af, Depth= 1.43"
 Routed to Pond 78P : Culvert 033

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

Area (ac)	CN	Description
* 0.131	61	B-75% GRASS COVER, GOOD
* 0.456	69	B-50-75% GRASS COVER, FAIR
* 2.999	58	B-MEADOW, NON-GRAZED
* 3.353	58	B-MEADOW, NON-GRAZED
* 0.019	80	D-75% GRASS COVER, GOOD
* 0.541	84	D-50-75% GRASS COVER, FAIR
* 0.959	78	D-MEADOW, NON-GRAZED
8.458	63	Weighted Average
8.458		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.5	100	0.0340	0.17		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.21"
2.3	150	0.0250	1.11		Shallow Concentrated Flow, 150
					Short Grass Pasture Kv= 7.0 fps
2.1	147	0.0290	1.19		Shallow Concentrated Flow, 147
					Short Grass Pasture Kv= 7.0 fps
2.1	160	0.0320	1.25		Shallow Concentrated Flow, 160
					Short Grass Pasture Kv= 7.0 fps
2.1	160	0.0320	1.25		Shallow Concentrated Flow, 160
					Short Grass Pasture Kv= 7.0 fps
4.2	167	0.0090	0.66		Shallow Concentrated Flow, 167
					Short Grass Pasture Kv= 7.0 fps
13.6	362	0.0040	0.44		Shallow Concentrated Flow, 362
					Short Grass Pasture Kv= 7.0 fps
3.0	300	0.0560	1.66		Shallow Concentrated Flow, 300
					Short Grass Pasture Kv= 7.0 fps
38.9	1,546	Total			

CULVERTS 27-47

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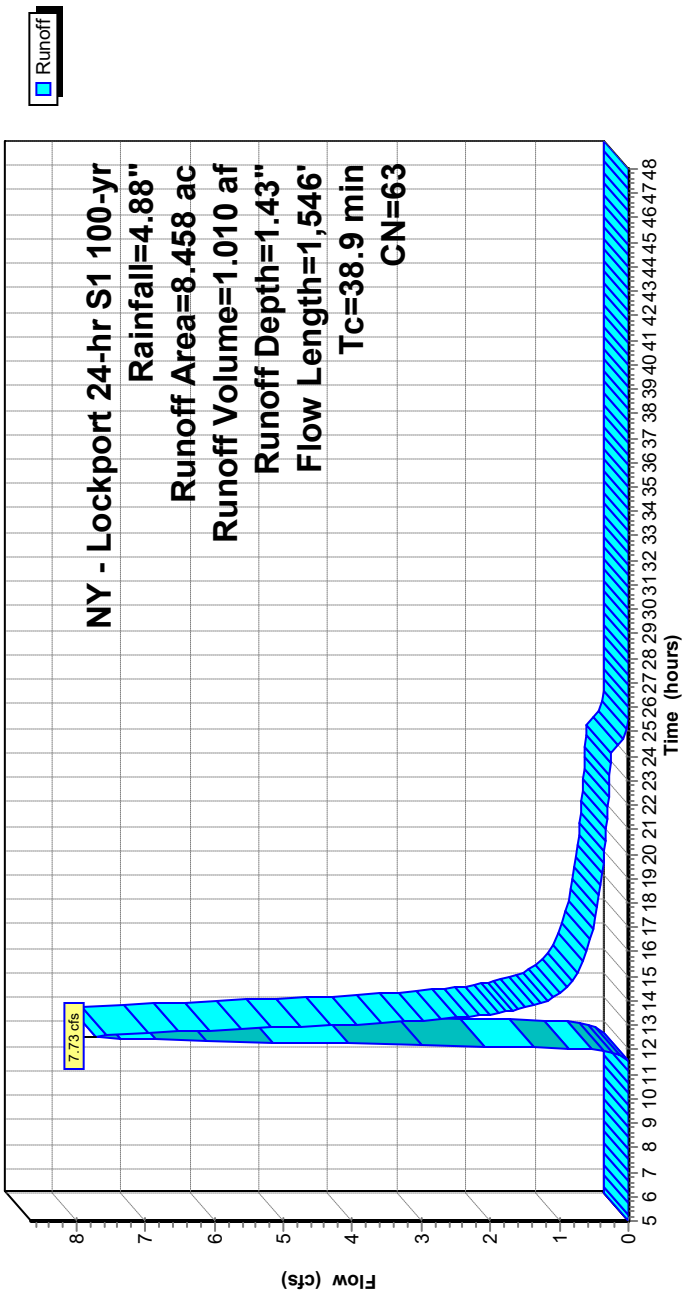
NY - Lockport 24-hr S1 100-yr Rainfall=4.88"

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Subcatchment 64S: DA 33

Hydrograph



CULVERTS 27-47

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

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Summary for Subcatchment 65S: DA 34

Runoff = 1.40 cfs @ 14.54 hrs, Volume= 0.507 af, Depth= 2.03"
 Routed to Pond 79P : Culvert 034

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

Area (ac)	CN	Description
* 0.033	58	B-MEADOW, NON-GRAZED
* 0.719	58	B-MEADOW, NON-GRAZED
* 0.039	80	D-75% GRASS COVER, GOOD
* 0.086	84	D-50-75% GRASS COVER, FAIR
* 0.864	78	D-MEADOW, NON-GRAZED
* 0.126	78	D-MEADOW, NON-GRAZED
* 1.133	71	C-MEADOW, NON-GRAZED
3.000	71	Weighted Average
3.000		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
98.2	100	0.0001	0.02		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.21"
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
184.4	915	Total			

CULVERTS 27-47

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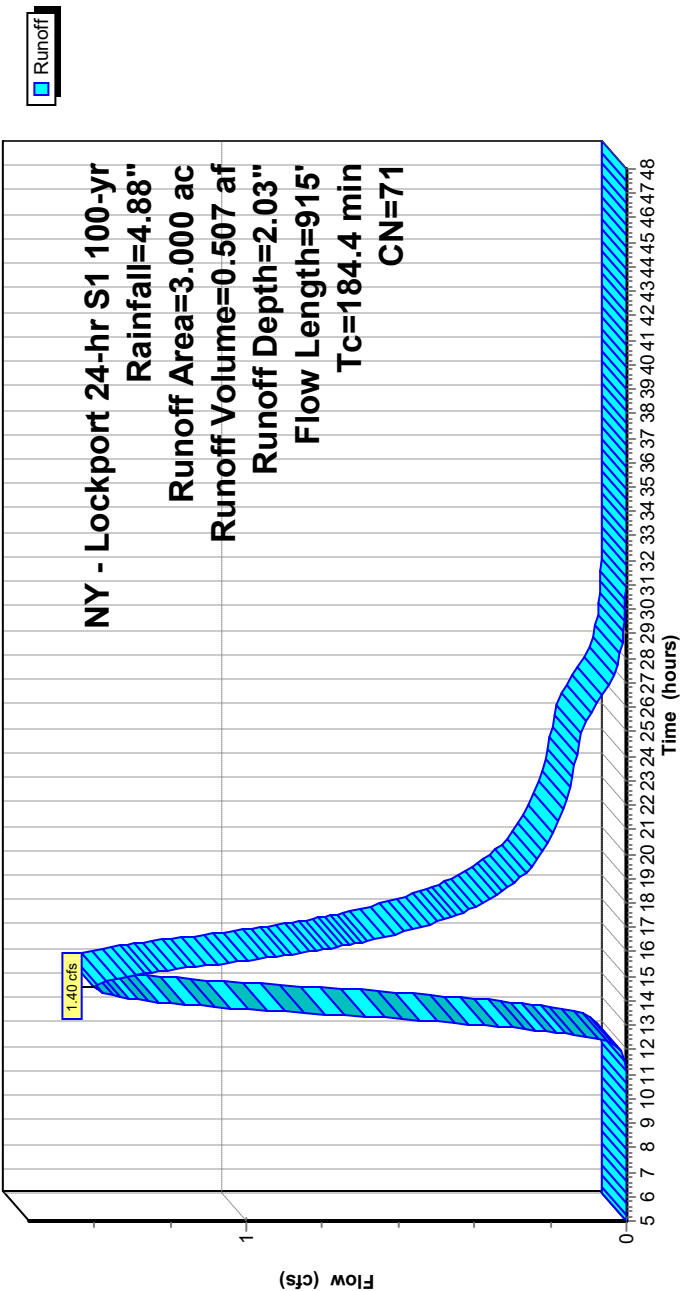
NY - Lockport 24-hr S1 100-yr Rainfall=4.88"

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Subcatchment 65S: DA 34

Hydrograph



CULVERTS 27-47

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

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Summary for Subcatchment 66S: DA 36

Runoff = 11.29 cfs @ 12.45 hrs, Volume= 1.280 af, Depth= 2.19"
 Routed to Pond 80P : Culvert 036

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

Area (ac)	CN	Description
* 1.408	30	A-MEADOW, NON-GRAZED
* 3.440	78	D-MEADOW, NON-GRAZED
* 0.677	78	D-MEADOW, NON-GRAZED
* 1.498	98	D-WATER SURFACE, 0% IMP
7.023	73	Weighted Average
5.525		78.67% Pervious Area
1.498		21.33% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	100	0.0390	0.18		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.21"
0.9	77	0.0420	1.43		Shallow Concentrated Flow, 77
					Short Grass Pasture Kv= 7.0 fps
2.2	234	0.0640	1.77		Shallow Concentrated Flow, 234
					Short Grass Pasture Kv= 7.0 fps
2.8	268	0.0520	1.60		Shallow Concentrated Flow, 268
					Short Grass Pasture Kv= 7.0 fps
4.0	256	0.0230	1.06		Shallow Concentrated Flow, 256
					Short Grass Pasture Kv= 7.0 fps
8.5	225	0.0040	0.44		Shallow Concentrated Flow, 225
					Short Grass Pasture Kv= 7.0 fps
5.0	114	0.0030	0.38		Shallow Concentrated Flow, 114
					Short Grass Pasture Kv= 7.0 fps
2.4	91	0.0080	0.63		Shallow Concentrated Flow, 91
					Short Grass Pasture Kv= 7.0 fps
34.8	1,365	Total			

CULVERTS 27-47

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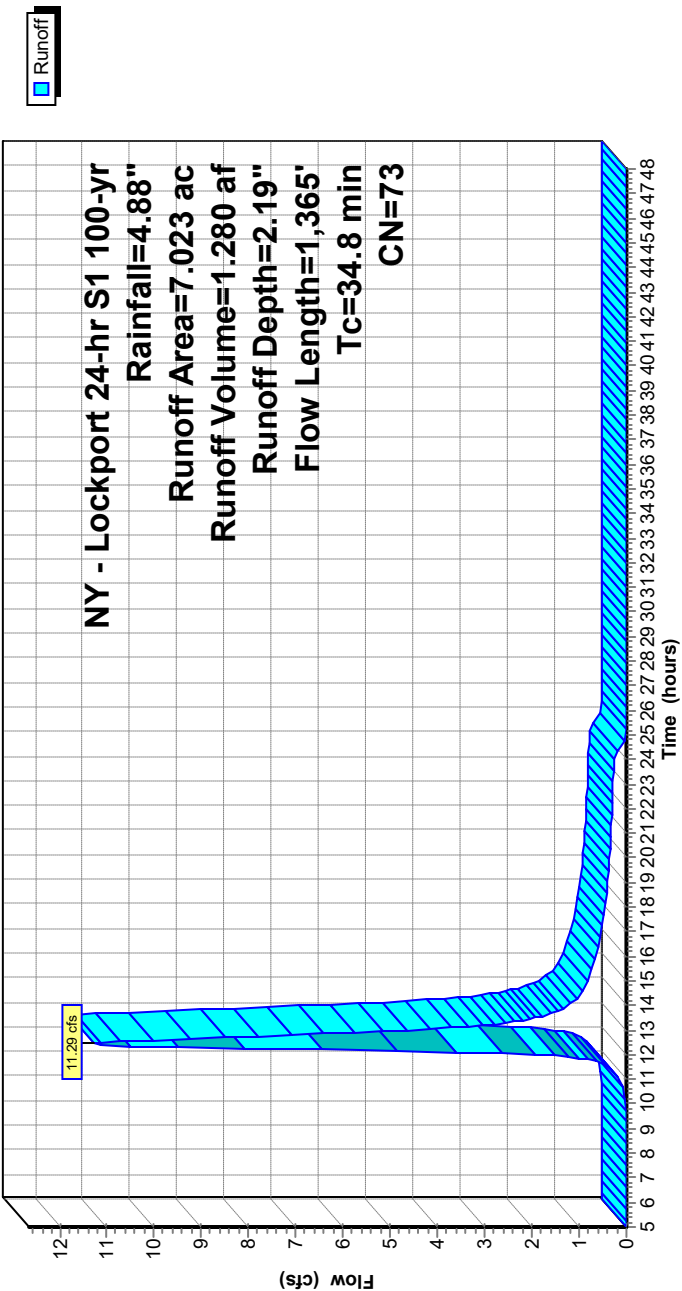
NY - Lockport 24-hr S1 100-yr Rainfall=4.88"

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Subcatchment 66S: DA 36

Hydrograph



CULVERTS 27-47

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

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Summary for Subcatchment 67S: DA 37

Runoff = 1.82 cfs @ 12.17 hrs, Volume= 0.173 af, Depth= 0.81"
 Routed to Pond 81P : Culvert 037

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

Area (ac)	CN	Description
* 1.353	30	A-MEADOW, NON-GRAZED
* 1.222	78	D-MEADOW, NON-GRAZED
2.575	53	Weighted Average
2.575		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.6	100	0.0590	0.22		Sheet Flow, 100 Grass: Short n= 0.150 P2= 2.21"
0.4	41	0.0520	1.60		Shallow Concentrated Flow, 41 Short Grass Pasture Kv= 7.0 fps
0.6	48	0.0420	1.43		Shallow Concentrated Flow, 48 Short Grass Pasture Kv= 7.0 fps
0.6	76	0.0800	1.98		Shallow Concentrated Flow, 76 Short Grass Pasture Kv= 7.0 fps
1.0	71	0.0290	1.19		Shallow Concentrated Flow, 71 Short Grass Pasture Kv= 7.0 fps
0.9	82	0.0470	1.52		Shallow Concentrated Flow, 82 Short Grass Pasture Kv= 7.0 fps
1.1	79	0.0290	1.19		Shallow Concentrated Flow, 79 Short Grass Pasture Kv= 7.0 fps
12.2	497	Total			

CULVERTS 27-47

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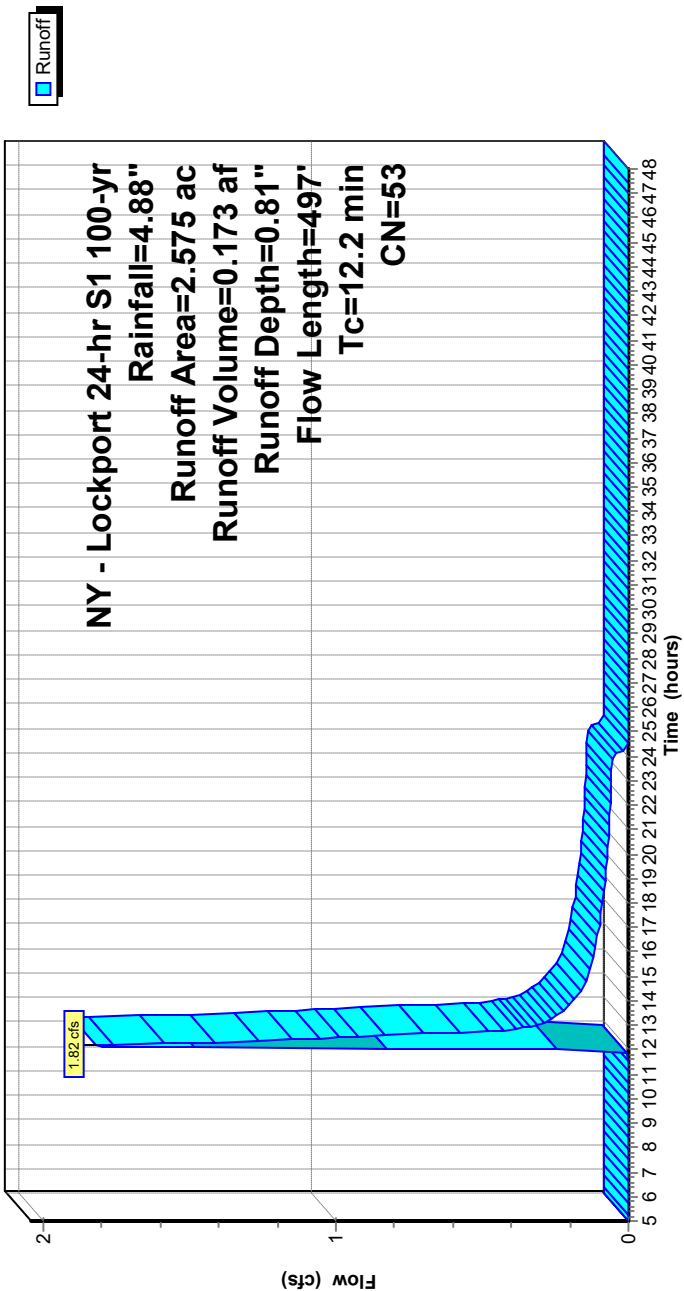
NY - Lockport 24-hr S1 100-yr Rainfall=4.88"

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Subcatchment 67S: DA 37

Hydrograph



CULVERTS 27-47

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

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Summary for Subcatchment 68S: DA 38

Runoff = 0.02 cfs @ 21.18 hrs, Volume= 0.014 af, Depth= 0.03"
 Routed to Pond 82P : Culvert 038

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

Area (ac)	CN	Description
* 0.011	39	A-75% GRASS COVER, GOOD
* 0.256	49	A-50-75% GRASS COVER, FAIR
* 4.945	30	A-MEADOW, NON-GRAZED
* 0.148	69	B-50-75% GRASS COVER, FAIR
* 0.007	58	B-MEADOW, NON-GRAZED
* 0.056	78	D-MEADOW, NON-GRAZED
5.423	33	Weighted Average
5.423		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
8.9	100	0.0400	0.19		Sheet Flow, 100 Grass: Short n= 0.150 P2= 2.21"
2.3	130	0.0180	0.94		Shallow Concentrated Flow, 130 Short Grass Pasture Kv= 7.0 fps
2.3	179	0.0350	1.31		Shallow Concentrated Flow, 179 Short Grass Pasture Kv= 7.0 fps
2.8	236	0.0410	1.42		Shallow Concentrated Flow, 236 Short Grass Pasture Kv= 7.0 fps
0.9	80	0.0470	1.52		Shallow Concentrated Flow, 80 Short Grass Pasture Kv= 7.0 fps
1.8	132	0.0310	1.23		Shallow Concentrated Flow, 132 Short Grass Pasture Kv= 7.0 fps
3.2	152	0.0130	0.80		Shallow Concentrated Flow, 152 Short Grass Pasture Kv= 7.0 fps
22.2	1,009	Total			

CULVERTS 27-47

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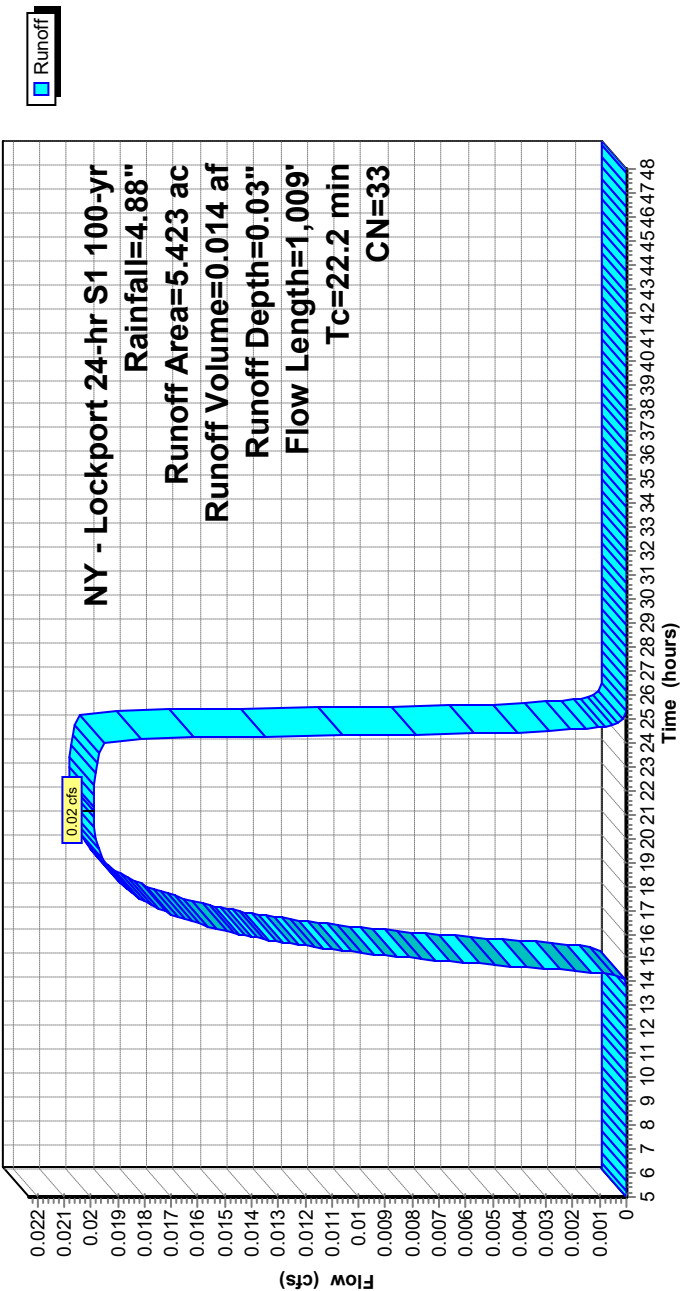
NY - Lockport 24-hr S1 100-yr Rainfall=4.88"

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Subcatchment 68S: DA 38

Hydrograph



CULVERTS 27-47

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Summary for Subcatchment 69S: DA 39

Runoff = 0.82 cfs @ 12.19 hrs, Volume= 0.070 af, Depth= 1.17"
Routed to Pond 83P : Culvert 039

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

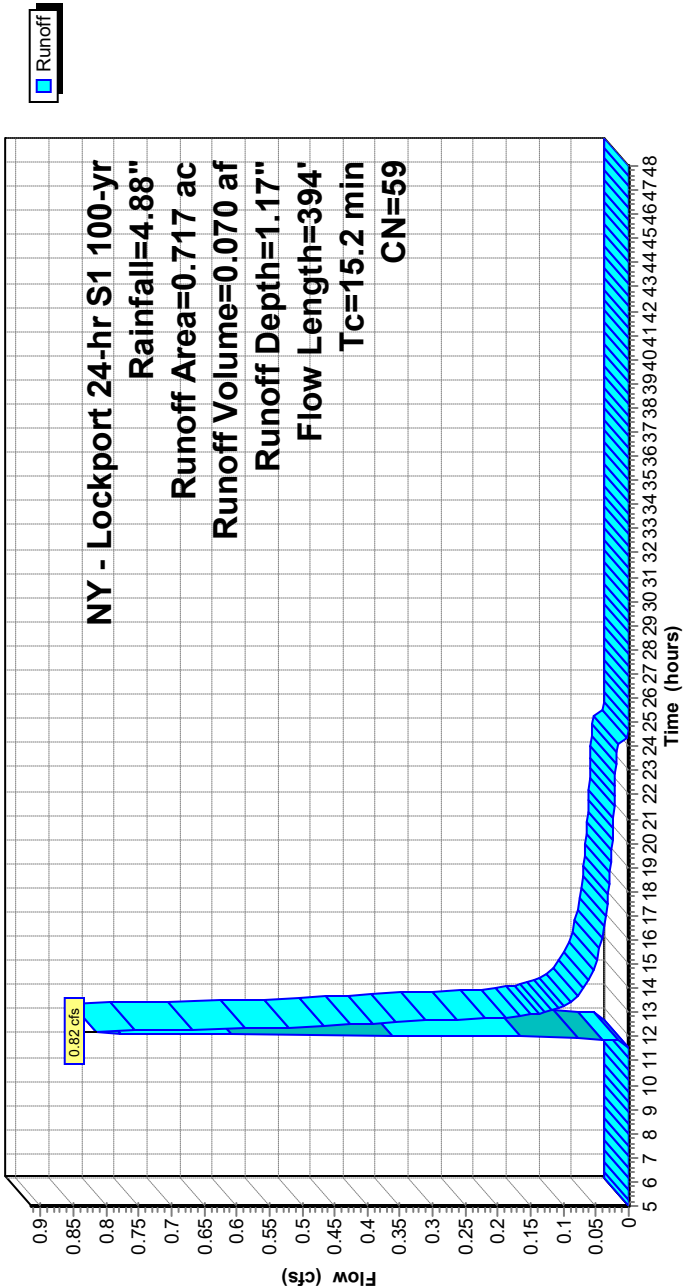
Area (ac)	CN	Description
* 0.131	49	A-50-75% GRASS COVER, FAIR
* 0.104	30	A-MEADOW, NON-GRAZED
* 0.443	69	B-50-75% GRASS COVER, FAIR
* 0.039	58	B-MEADOW, NON-GRAZED

0.717 59 Weighted Average
0.717 100.00% Pervious 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= 2.21"
1.3	123	0.0480	1.53		Shallow Concentrated Flow, 123 Short Grass Pasture Kv= 7.0 fps
4.3	171	0.0090	0.66		Shallow Concentrated Flow, 171 Short Grass Pasture Kv= 7.0 fps
15.2	394	Total			

Subcatchment 69S: DA 39

Hydrograph



CULVERTS 27-47

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

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Summary for Subcatchment 70S: DA 40

Runoff = 23.22 cfs @ 13.11 hrs, Volume= 4.528 af, Depth= 2.61"
 Routed to Pond 84P : Culvert 040

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

Area (ac)	CN	Description
* 0.117	49	A-50-75% GRASS COVER, FAIR
* 0.133	30	A-MEADOW, NON-GRAZED
* 0.857	80	D-75% GRASS COVER, GOOD
* 0.371	84	D-50-75% GRASS COVER, FAIR
* 0.267	79	D-WOOD/GRASS COMC., GOOD
* 18.654	78	D-MEADOW, NON-GRAZED
* 0.418	98	D-WATER SURFACE, 0% IMP
20.817	78	Weighted Average
20.399		97.99% Pervious Area
0.418		2.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.2	100	0.0030	0.07		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.21"
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
84.9	1,139	Total			

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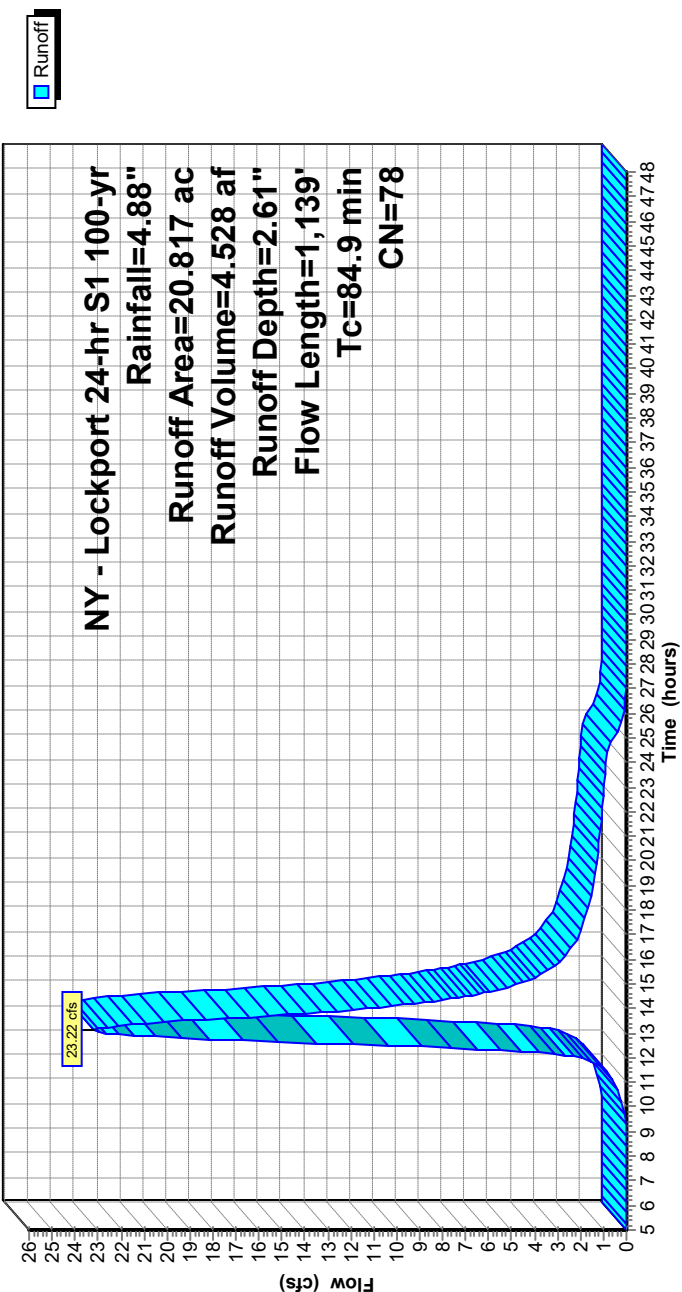
NY - Lockport 24-hr S1 100-yr Rainfall=4.88"

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Subcatchment 70S: DA 40

Hydrograph



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Summary for Subcatchment 71S: DA 41

Runoff = 0.92 cfs @ 13.39 hrs, Volume= 0.221 af, Depth= 2.61"
Routed to Pond 86P : Culvert 041

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

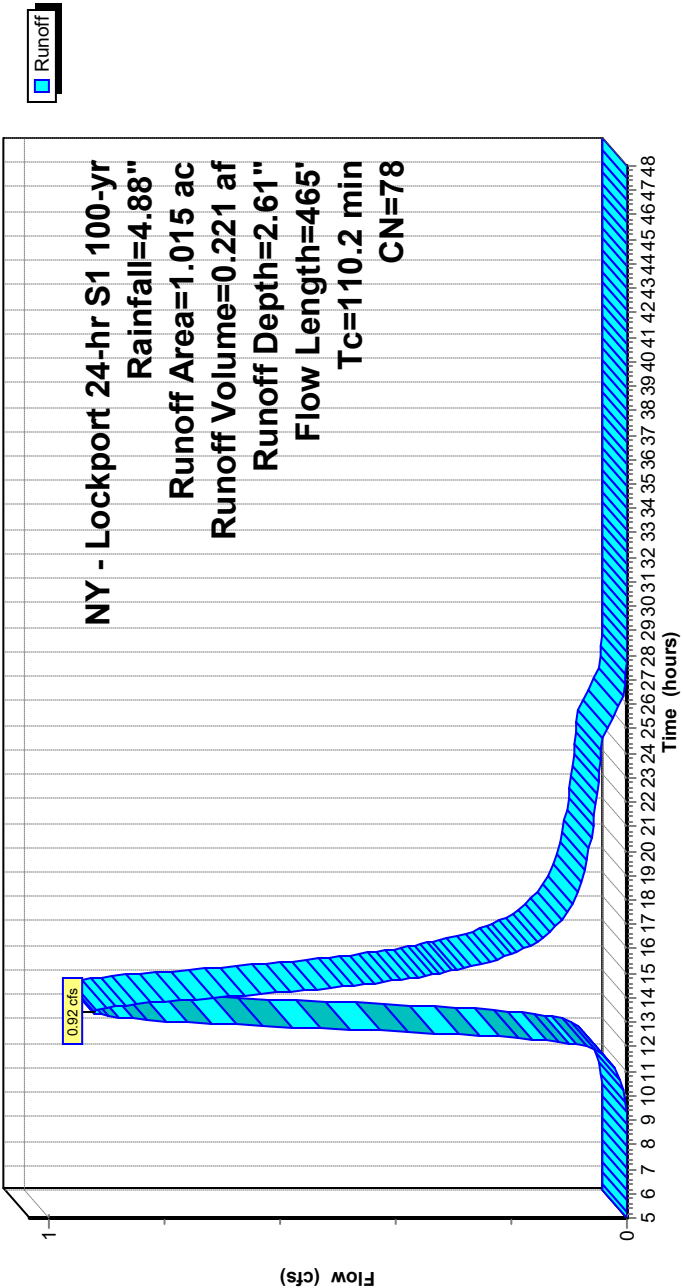
Area (ac)	CN	Description
* 0.185	78	D-MEADOW, NON-GRAZED
* 0.830	78	D-MEADOW, NON-GRAZED
1.015	78	Weighted Average
1.015		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
98.2	100	0.0001	0.02		Sheet Flow, 100 Grass: Short n= 0.150 P2= 2.21"
8.5	252	0.0050	0.49		Shallow Concentrated Flow, 252 Short Grass Pasture Kv= 7.0 fps
3.5	113	0.0060	0.54		Shallow Concentrated Flow, 113 Short Grass Pasture Kv= 7.0 fps

110.2	465	Total
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Subcatchment 71S: DA 41

Hydrograph



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

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Summary for Subcatchment 72S: DA 45

Runoff = 10.67 cfs @ 13.71 hrs, Volume= 2.970 af, Depth= 2.70"
 Routed to Pond 87P : Culvert 045

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

Area (ac)	CN	Description
* 0.839	80	D-75% GRASS COVER, GOOD
* 0.532	84	D-50-75% GRASS COVER, FAIR
* 1.189	79	D-WOODS/GRASS COMB., FAIR
* 0.421	78	D-MEADOW, NON-GRAZED
* 0.610	80	D-75% GRASS COVER, GOOD
* 0.552	79	D-WOODS/GRASS COMB., FAIR
* 1.693	78	D-MEADOW, NON-GRAZED
* 0.909	80	D-75% GRASS COVER, GOOD
* 0.118	84	D-50-75% GRASS COVER, FAIR
* 6.345	78	D-MEADOW, NON-GRAZED
13.208	79	Weighted Average
13.208		100.00% Pervious 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= 2.21"
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			

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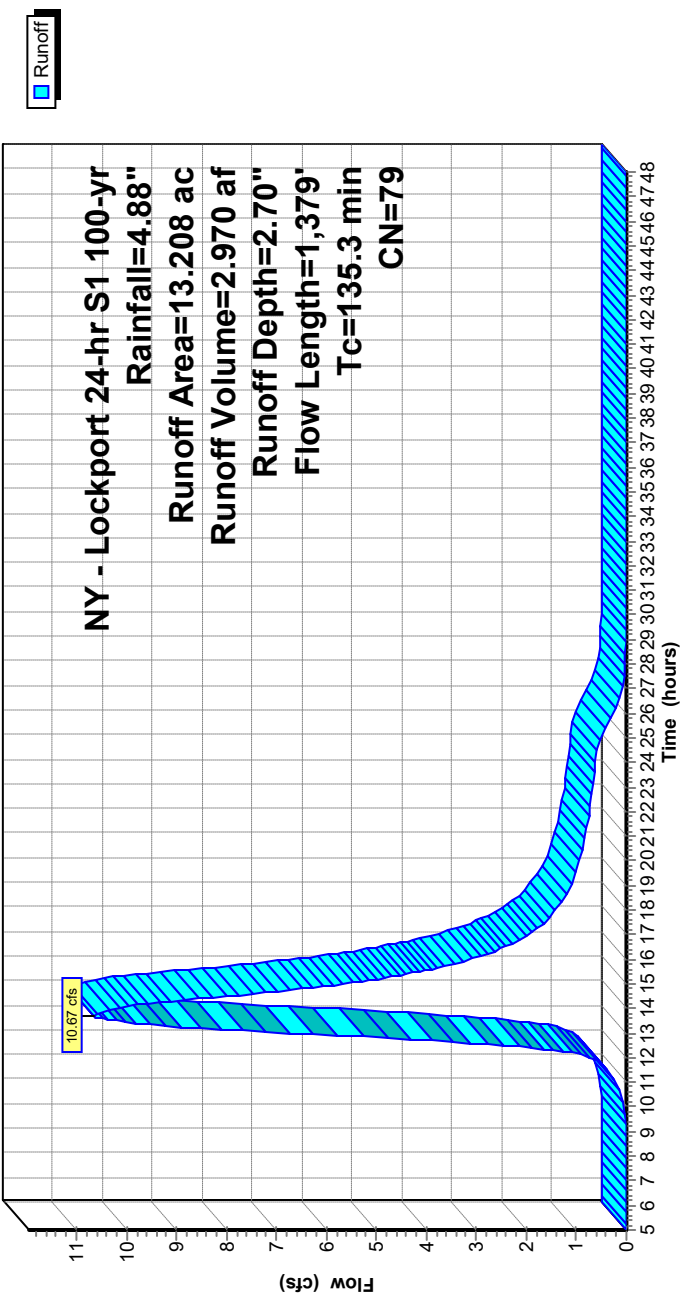
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Subcatchment 72S: DA 45

Hydrograph



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

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Summary for Subcatchment 73S: DA 48

Runoff = 28.83 cfs @ 12.43 hrs, Volume= 3.190 af, Depth= 2.44"
 Routed to Pond 89P : Culvert 048

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

Area (ac)	CN	Description
* 0.687	61	B-75% GRASS COVER, GOOD
* 0.310	69	B-50-75% GRASS COVER, FAIR
* 2.053	58	B-MEADOW, NON-GRAZED
* 0.028	80	D-75% GRASS COVER, GOOD
* 2.330	78	D-MEADOW, NON-GRAZED
* 9.450	78	D-MEADOW, NON-GRAZED
* 0.765	98	D-WATER SURFACE, 0% IMP
* 0.085	98	D-WATER SURFACE, 0% IMP
15.708	76	Weighted Average
14.858		94.59% Pervious Area
0.850		5.41% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
14.5	100	0.0120	0.12		Sheet Flow, 100
					Grass: Short n= 0.150 P2= 2.21"
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
34.0	1,032	Total			

CULVERTS 27-47

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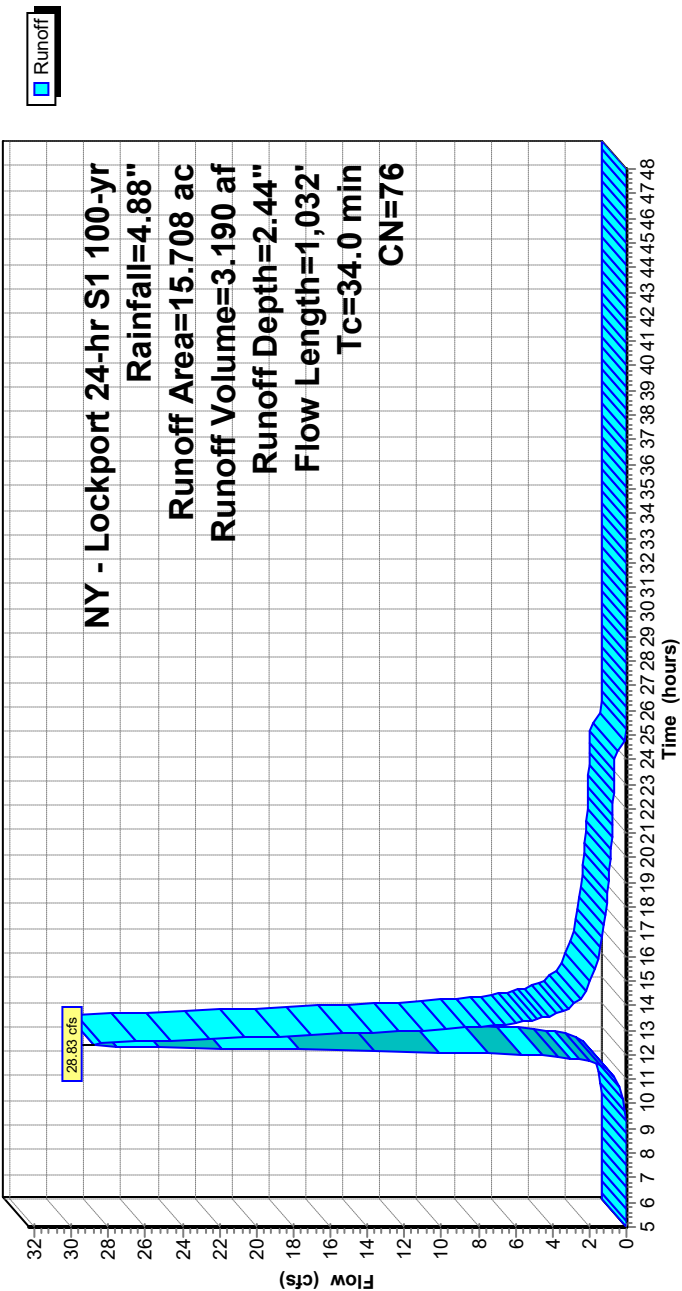
NY - Lockport 24-hr S1 100-yr Rainfall=4.88"

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Subcatchment 73S: DA 48

Hydrograph



CULVERTS 27-47

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

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Summary for Subcatchment 74S: DA 49

Runoff = 1.62 cfs @ 13.62 hrs, Volume= 0.426 af, Depth= 1.95"
 Routed to Pond 91P : Culvert 049

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

Area (ac)	CN	Description
* 0.260	61	B-75% GRASS COVER, GOOD
* 1.275	69	B-50-75% GRASS COVER, FAIR
* 0.458	58	B-MEADOW, NON-GRAZED
* 0.108	80	D-75% GRASS COVER, GOOD
* 0.524	84	D-50-75% GRASS COVER, FAIR
* 0.000	78	D-MEADOW, NON-GRAZED
2.625	70	Weighted Average
2.625		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
98.2	100	0.0001	0.02		Sheet Flow, 100 Grass: Short n= 0.150 P2= 2.21"
6.5	300	0.0120	0.77		Shallow Concentrated Flow, 300 Short Grass Pasture Kv= 7.0 fps
5.1	204	0.0090	0.66		Shallow Concentrated Flow, 204 Short Grass Pasture Kv= 7.0 fps
7.2	235	0.0060	0.54		Shallow Concentrated Flow, 235 Short Grass Pasture Kv= 7.0 fps
4.3	267	0.0220	1.04		Shallow Concentrated Flow, 267 Short Grass Pasture Kv= 7.0 fps
121.3	1,106	Total			

CULVERTS 27-47

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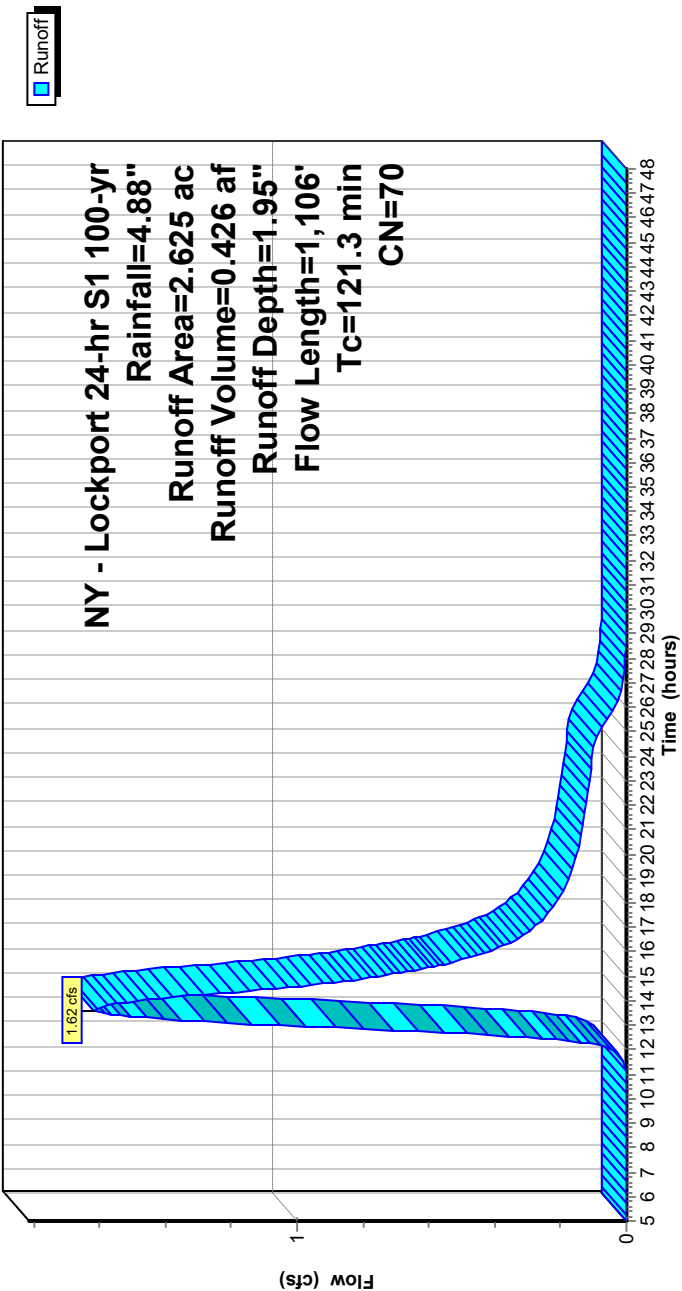
NY - Lockport 24-hr S1 100-yr Rainfall=4.88"

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Subcatchment 74S: DA 49

Hydrograph



CULVERTS 27-47

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

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Summary for Subcatchment 75S: DA 50

Runoff = 4.01 cfs @ 12.39 hrs, Volume= 0.426 af, Depth= 1.95"
 Routed to Pond 92P : Culvert 050

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

Area (ac)	CN	Description
* 0.260	61	B-75% GRASS COVER, GOOD
* 1.275	69	B-50-75% GRASS COVER, FAIR
* 0.458	58	B-MEADOW, NON-GRAZED
* 0.108	80	D-75% GRASS COVER, GOOD
* 0.524	84	D-50-75% GRASS COVER, FAIR
* 0.000	78	D-MEADOW, NON-GRAZED
2.625	70	Weighted Average
2.625		100.00% Pervious 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= 2.21"
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			

CULVERTS 27-47

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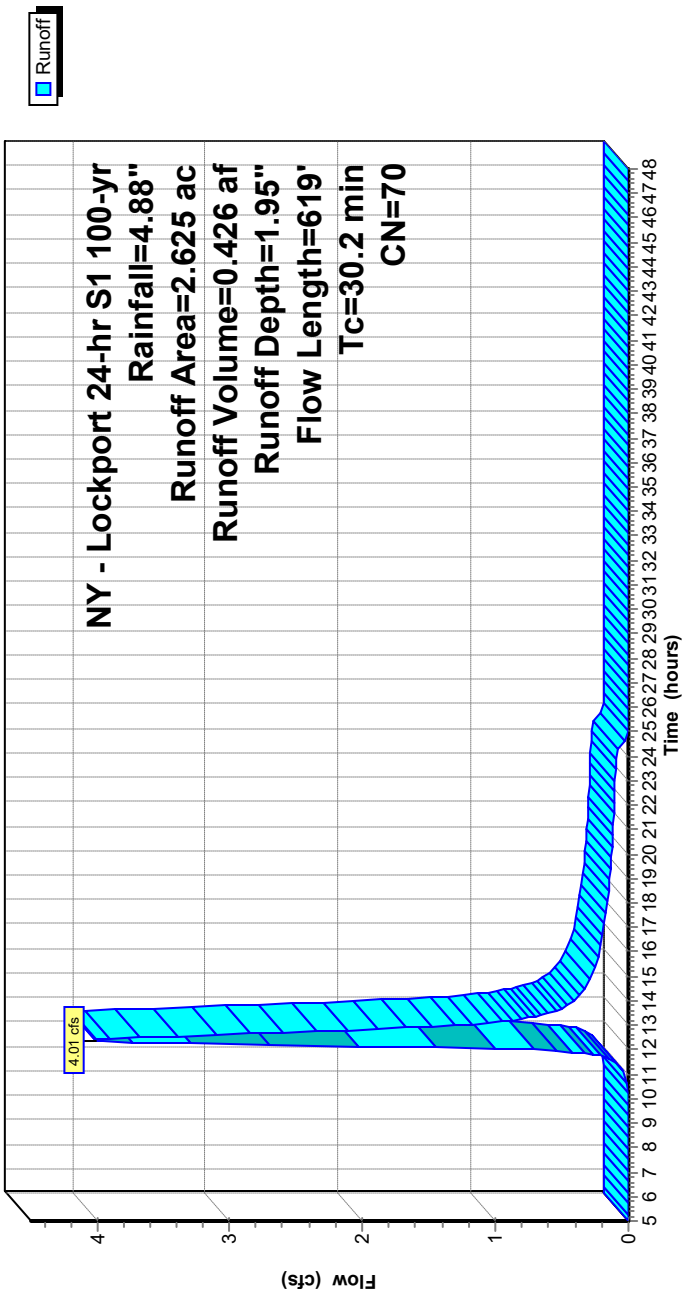
NY - Lockport 24-hr S1 100-yr Rainfall=4.88"

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Subcatchment 75S: DA 50

Hydrograph



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Summary for Subcatchment 76S: DA 54

Runoff = 0.17 cfs @ 13.23 hrs, Volume= 0.038 af, Depth= 2.88"
Routed to Pond 93P : Culvert 054

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

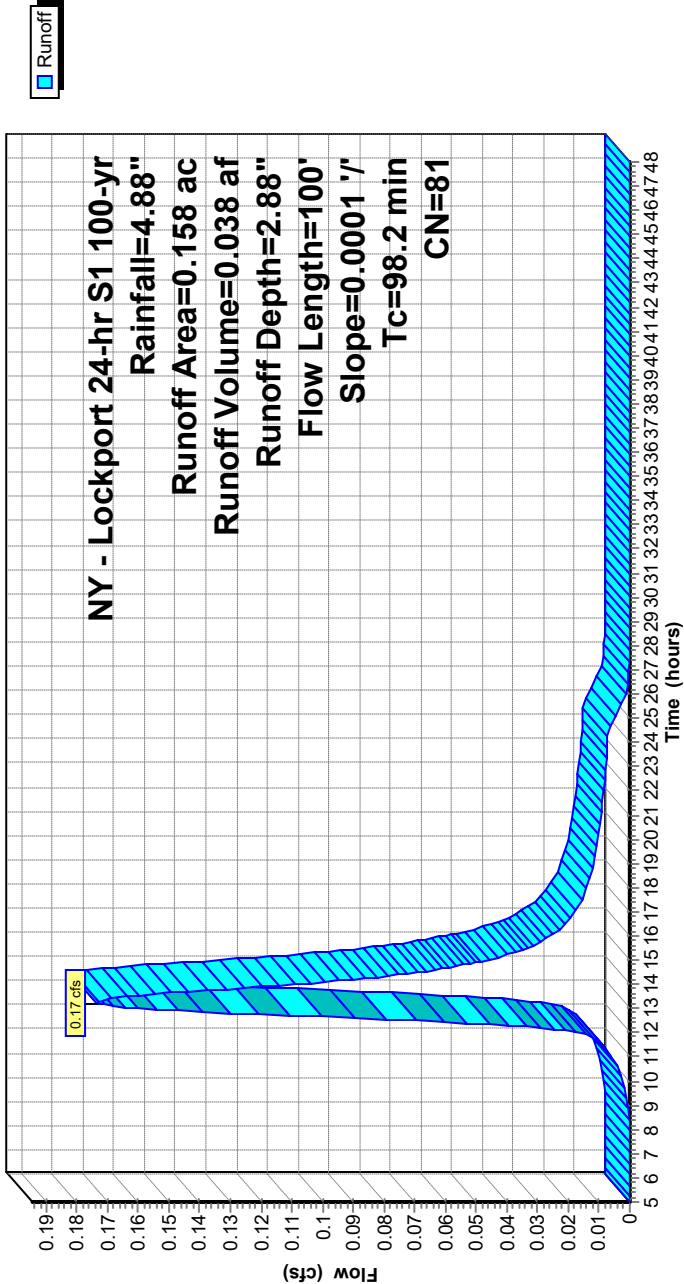
Area (ac)	CN	Description
* 0.090	84	D-50-75% GRASS COVER, FAIR
* 0.067	78	D-MEADOW, NON-GRAZED
* 0.001	78	D-MEADOW, NON-GRAZED

0.158 81 Weighted Average
0.158 100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
98.2	100	0.0001	0.02		
Sheet Flow, 100					
Grass: Short n= 0.150 P2= 2.21"					

Subcatchment 76S: DA 54

Hydrograph



CULVERTS 27-47

Prepared by Fisher Associates

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

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Summary for Pond 77P: Culvert 032

[58] Hint: Peaked 0.27' above defined flood level

Inflow Area = 83.916 ac, 0.00% Impervious, Inflow Depth = 2.52" for 100-yr event
Inflow = 43.39 cfs @ 14.89 hrs, Volume= 17.643 af
Outflow = 43.39 cfs @ 14.89 hrs, Volume= 17.643 af, Atten= 0%, Lag= 0.0 min
Primary = 43.39 cfs @ 14.89 hrs, Volume= 17.643 af

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

Peak Elev= 616.27' @ 14.89 hrs

Flood Elev= 616.00'

Device	Routing	Invert	Outlet Devices
#1	Primary	615.20'	24.0" Round Culvert 001 w/ 2.4" inside fill L= 30.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 615.00' / 614.48' S= 0.0173 '/' Cc= 0.900 n= 0.012 Steel, smooth, Flow Area= 2.98 sf
#2	Primary	616.00'	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=43.36 cfs @ 14.89 hrs HW=616.27' (Free Discharge)

1=Culvert 001 (Inlet Controls 4.94 cfs @ 2.54 fps)

2=Broad-Crested Rectangular Weir (Weir Controls 38.42 cfs @ 1.40 fps)

Pond 77P: Culvert 032

Hydrograph

