

POST DEVEL

Prepared by Fuller Engineering & Land Surveying, LLC
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#245 Route 32 Montville, CT
Type III 24-hr 25-YEAR Rainfall=6.15"
Printed 3/15/2022
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Summary for Subcatchment 1S: #245 Route 32 - Un-Developed

Runoff = 0.73 cfs @ 12.43 hrs, Volume= 4,004 cf, Depth> 2.44"

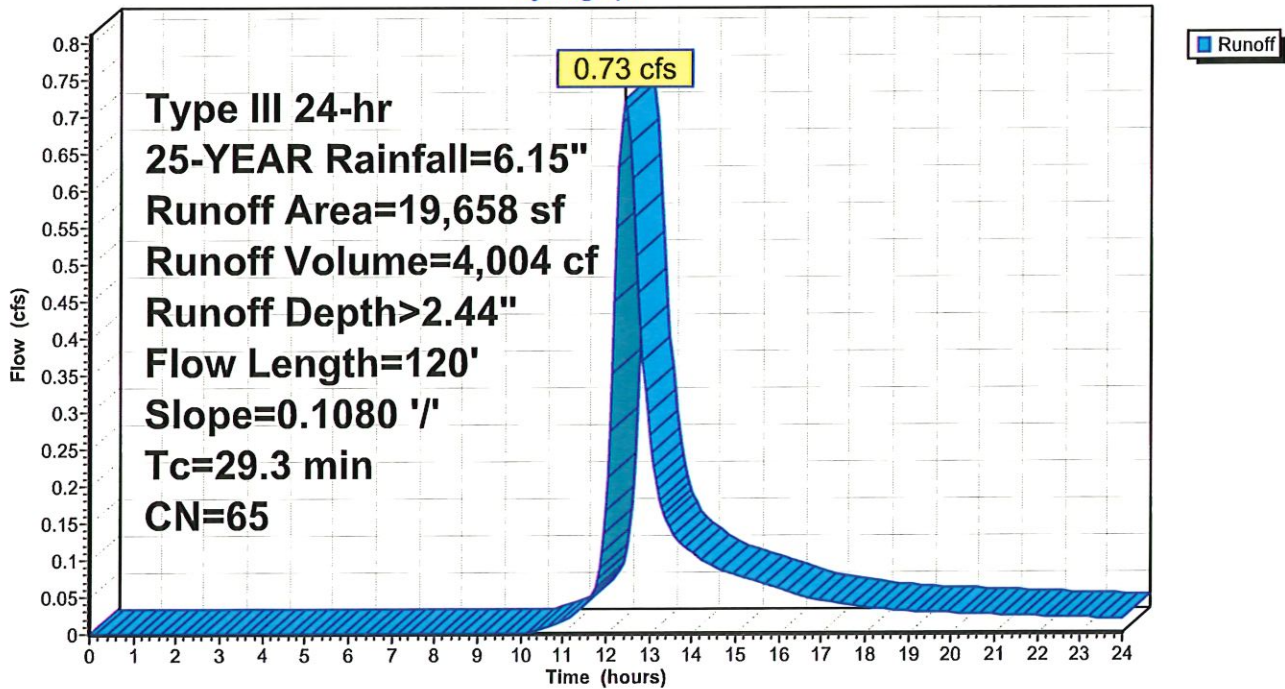
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YEAR Rainfall=6.15"

Area (sf)	CN	Description
19,658	65	Brush, Good, HSG C
19,658		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	120	0.1080	0.74		Lag/CN Method, Overland Flow
26.6					Direct Entry, HydroStatic Seepage from Wall
29.3	120	Total			

Subcatchment 1S: #245 Route 32 - Un-Developed

Hydrograph



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Hydrograph for Subcatchment 1S: #245 Route 32 - Un-Developed

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	13.00	4.61	1.40	0.27
0.25	0.02	0.00	0.00	13.25	4.72	1.47	0.18
0.50	0.03	0.00	0.00	13.50	4.82	1.53	0.14
0.75	0.05	0.00	0.00	13.75	4.91	1.59	0.12
1.00	0.06	0.00	0.00	14.00	4.99	1.65	0.11
1.25	0.08	0.00	0.00	14.25	5.06	1.69	0.10
1.50	0.09	0.00	0.00	14.50	5.13	1.74	0.09
1.75	0.11	0.00	0.00	14.75	5.19	1.78	0.09
2.00	0.12	0.00	0.00	15.00	5.25	1.82	0.08
2.25	0.14	0.00	0.00	15.25	5.31	1.86	0.08
2.50	0.15	0.00	0.00	15.50	5.36	1.90	0.07
2.75	0.17	0.00	0.00	15.75	5.41	1.93	0.07
3.00	0.19	0.00	0.00	16.00	5.45	1.96	0.06
3.25	0.21	0.00	0.00	16.25	5.49	1.99	0.06
3.50	0.23	0.00	0.00	16.50	5.53	2.01	0.05
3.75	0.24	0.00	0.00	16.75	5.56	2.04	0.05
4.00	0.26	0.00	0.00	17.00	5.59	2.06	0.05
4.25	0.28	0.00	0.00	17.25	5.62	2.08	0.04
4.50	0.31	0.00	0.00	17.50	5.65	2.10	0.04
4.75	0.33	0.00	0.00	17.75	5.68	2.12	0.04
5.00	0.35	0.00	0.00	18.00	5.71	2.14	0.04
5.25	0.37	0.00	0.00	18.25	5.73	2.16	0.03
5.50	0.39	0.00	0.00	18.50	5.76	2.17	0.03
5.75	0.42	0.00	0.00	18.75	5.78	2.19	0.03
6.00	0.44	0.00	0.00	19.00	5.80	2.21	0.03
6.25	0.47	0.00	0.00	19.25	5.82	2.22	0.03
6.50	0.50	0.00	0.00	19.50	5.84	2.24	0.03
6.75	0.53	0.00	0.00	19.75	5.87	2.25	0.03
7.00	0.56	0.00	0.00	20.00	5.89	2.27	0.03
7.25	0.59	0.00	0.00	20.25	5.91	2.28	0.03
7.50	0.62	0.00	0.00	20.50	5.92	2.30	0.03
7.75	0.66	0.00	0.00	20.75	5.94	2.31	0.03
8.00	0.70	0.00	0.00	21.00	5.96	2.32	0.03
8.25	0.74	0.00	0.00	21.25	5.98	2.34	0.02
8.50	0.79	0.00	0.00	21.50	6.00	2.35	0.02
8.75	0.84	0.00	0.00	21.75	6.01	2.36	0.02
9.00	0.90	0.00	0.00	22.00	6.03	2.37	0.02
9.25	0.96	0.00	0.00	22.25	6.05	2.39	0.02
9.50	1.02	0.00	0.00	22.50	6.06	2.40	0.02
9.75	1.09	0.00	0.00	22.75	6.08	2.41	0.02
10.00	1.16	0.00	0.00	23.00	6.09	2.42	0.02
10.25	1.24	0.00	0.00	23.25	6.11	2.43	0.02
10.50	1.33	0.01	0.01	23.50	6.12	2.44	0.02
10.75	1.43	0.02	0.01	23.75	6.14	2.45	0.02
11.00	1.54	0.04	0.02	24.00	6.15	2.46	0.02
11.25	1.67	0.06	0.02				
11.50	1.83	0.09	0.04				
11.75	2.18	0.19	0.06				
12.00	3.07	0.54	0.17				
12.25	3.97	1.01	0.55				
12.50	4.32	1.22	0.70				
12.75	4.48	1.32	0.46				

POST DEVEL

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Summary for Subcatchment 2S: NEW CONDO DEVELOPMENT

Runoff = 2.46 cfs @ 12.39 hrs, Volume= 14,025 cf, Depth> 5.19"

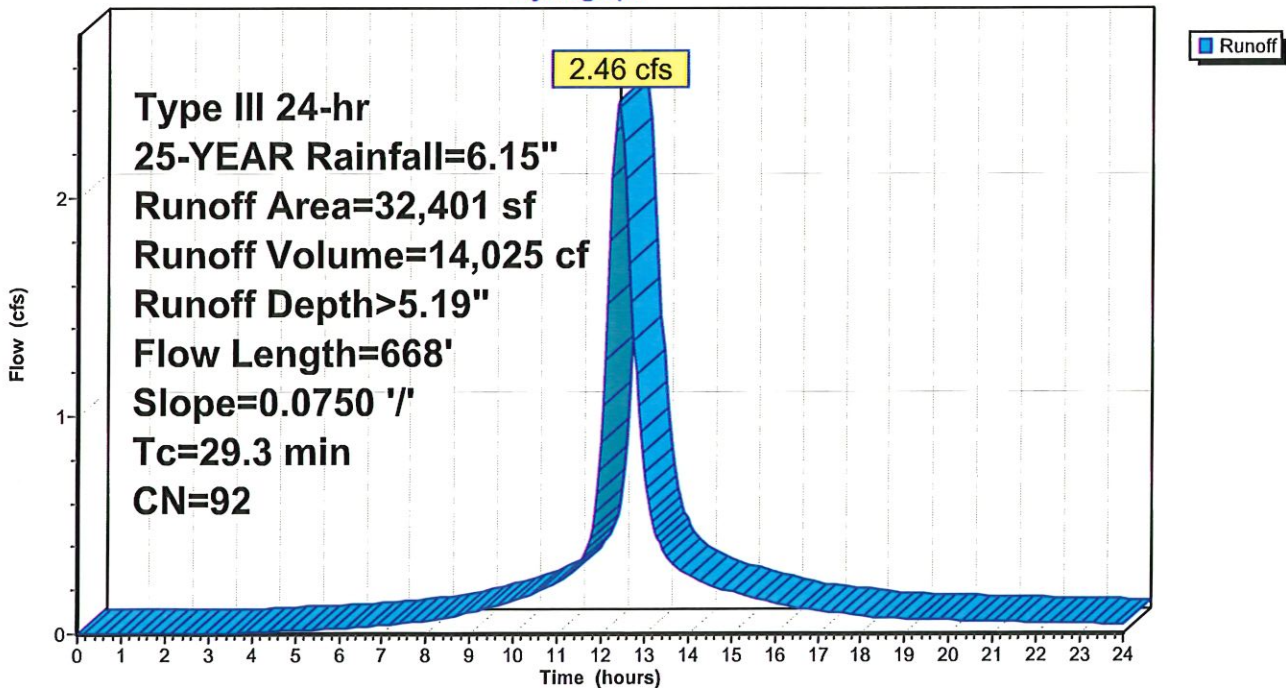
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YEAR Rainfall=6.15"

Area (sf)	CN	Description
20,385	98	Roofs, HSG B
12,016	81	1/3 acre lots, 30% imp, HSG C
32,401	92	Weighted Average
8,411		25.96% Pervious Area
23,990		74.04% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
18.5					Direct Entry, DIRECT
0.6	456		12.69		Lake or Reservoir, DETENTION Mean Depth= 5.00'
10.2	212	0.0750	0.35		Sheet Flow, OverLand Flow Grass: Short n= 0.150 P2= 3.40"
29.3	668	Total			

Subcatchment 2S: NEW CONDO DEVELOPMENT

Hydrograph



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Hydrograph for Subcatchment 2S: NEW CONDO DEVELOPMENT

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	13.00	4.61	3.71	0.74
0.25	0.02	0.00	0.00	13.25	4.72	3.82	0.48
0.50	0.03	0.00	0.00	13.50	4.82	3.91	0.36
0.75	0.05	0.00	0.00	13.75	4.91	4.00	0.30
1.00	0.06	0.00	0.00	14.00	4.99	4.08	0.27
1.25	0.08	0.00	0.00	14.25	5.06	4.15	0.24
1.50	0.09	0.00	0.00	14.50	5.13	4.22	0.22
1.75	0.11	0.00	0.00	14.75	5.19	4.28	0.21
2.00	0.12	0.00	0.00	15.00	5.25	4.34	0.19
2.25	0.14	0.00	0.00	15.25	5.31	4.39	0.18
2.50	0.15	0.00	0.00	15.50	5.36	4.44	0.17
2.75	0.17	0.00	0.00	15.75	5.41	4.49	0.15
3.00	0.19	0.00	0.00	16.00	5.45	4.53	0.14
3.25	0.21	0.00	0.00	16.25	5.49	4.57	0.13
3.50	0.23	0.00	0.00	16.50	5.53	4.60	0.12
3.75	0.24	0.01	0.00	16.75	5.56	4.64	0.11
4.00	0.26	0.01	0.01	17.00	5.59	4.67	0.11
4.25	0.28	0.01	0.01	17.25	5.62	4.70	0.10
4.50	0.31	0.02	0.01	17.50	5.65	4.73	0.09
4.75	0.33	0.02	0.01	17.75	5.68	4.76	0.09
5.00	0.35	0.03	0.02	18.00	5.71	4.78	0.08
5.25	0.37	0.04	0.02	18.25	5.73	4.81	0.08
5.50	0.39	0.04	0.02	18.50	5.76	4.83	0.07
5.75	0.42	0.05	0.02	18.75	5.78	4.85	0.07
6.00	0.44	0.06	0.03	19.00	5.80	4.87	0.07
6.25	0.47	0.07	0.03	19.25	5.82	4.90	0.07
6.50	0.50	0.09	0.03	19.50	5.84	4.92	0.07
6.75	0.53	0.10	0.04	19.75	5.87	4.94	0.06
7.00	0.56	0.12	0.04	20.00	5.89	4.96	0.06
7.25	0.59	0.13	0.05	20.25	5.91	4.98	0.06
7.50	0.62	0.15	0.05	20.50	5.92	5.00	0.06
7.75	0.66	0.18	0.06	20.75	5.94	5.01	0.06
8.00	0.70	0.20	0.06	21.00	5.96	5.03	0.06
8.25	0.74	0.23	0.07	21.25	5.98	5.05	0.05
8.50	0.79	0.26	0.08	21.50	6.00	5.07	0.05
8.75	0.84	0.29	0.09	21.75	6.01	5.08	0.05
9.00	0.90	0.33	0.10	22.00	6.03	5.10	0.05
9.25	0.96	0.37	0.11	22.25	6.05	5.12	0.05
9.50	1.02	0.42	0.12	22.50	6.06	5.13	0.05
9.75	1.09	0.47	0.14	22.75	6.08	5.15	0.05
10.00	1.16	0.53	0.15	23.00	6.09	5.16	0.05
10.25	1.24	0.59	0.17	23.25	6.11	5.18	0.04
10.50	1.33	0.66	0.18	23.50	6.12	5.19	0.04
10.75	1.43	0.74	0.21	23.75	6.14	5.20	0.04
11.00	1.54	0.83	0.24	24.00	6.15	5.22	0.04
11.25	1.67	0.94	0.27				
11.50	1.83	1.09	0.32				
11.75	2.18	1.40	0.44				
12.00	3.07	2.23	0.88				
12.25	3.97	3.08	2.09				
12.50	4.32	3.42	2.26				
12.75	4.48	3.59	1.35				

POST DEVEL

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Summary for Subcatchment 3S: Urban Residential wth Open Space

Runoff = 2.06 cfs @ 12.39 hrs, Volume= 11,665 cf, Depth> 5.08"

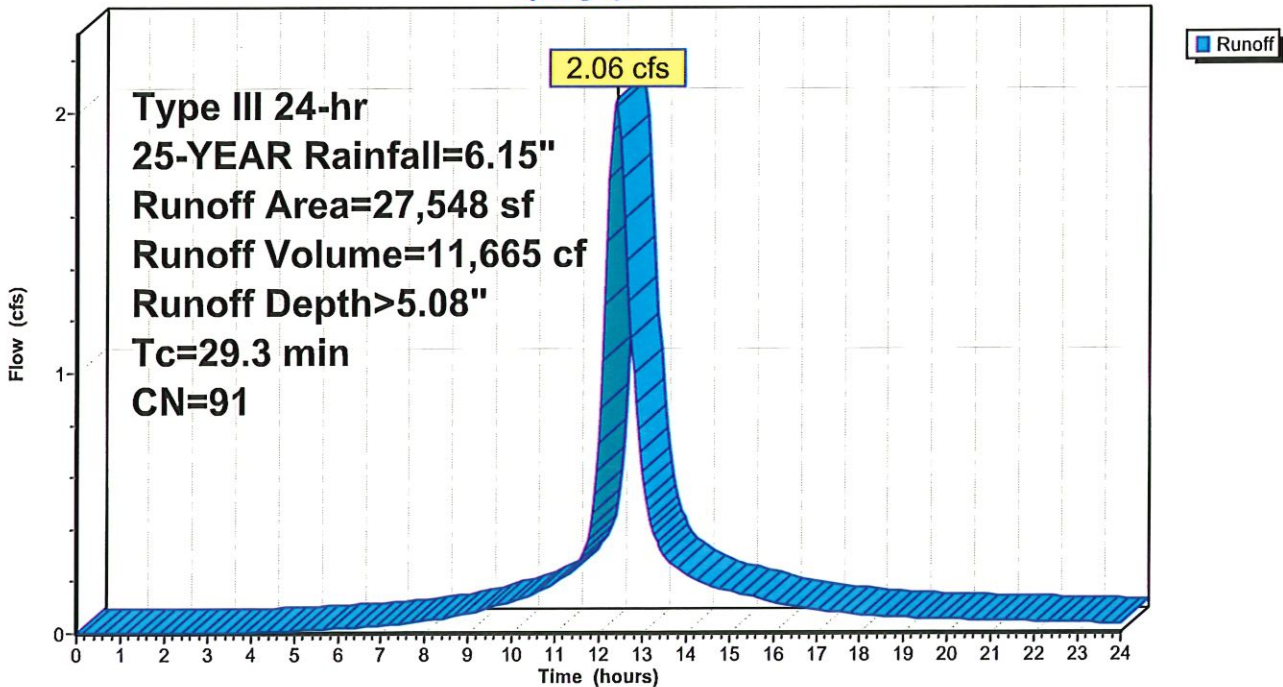
Runoff by SCS TR-20 method, UH=SCS, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-YEAR Rainfall=6.15"

Area (sf)	CN	Description
6,310	69	50-75% Grass cover, Fair, HSG B
21,238	98	Paved parking, HSG C
27,548	91	Weighted Average
6,310		22.91% Pervious Area
21,238		77.09% Impervious Area

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

Subcatchment 3S: Urban Residential wth Open Space

Hydrograph



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Hydrograph for Subcatchment 3S: Urban Residential wth Open Space

Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)	Time (hours)	Precip. (inches)	Excess (inches)	Runoff (cfs)
0.00	0.00	0.00	0.00	13.00	4.61	3.61	0.62
0.25	0.02	0.00	0.00	13.25	4.72	3.71	0.40
0.50	0.03	0.00	0.00	13.50	4.82	3.81	0.30
0.75	0.05	0.00	0.00	13.75	4.91	3.89	0.26
1.00	0.06	0.00	0.00	14.00	4.99	3.97	0.23
1.25	0.08	0.00	0.00	14.25	5.06	4.04	0.21
1.50	0.09	0.00	0.00	14.50	5.13	4.11	0.19
1.75	0.11	0.00	0.00	14.75	5.19	4.17	0.17
2.00	0.12	0.00	0.00	15.00	5.25	4.23	0.16
2.25	0.14	0.00	0.00	15.25	5.31	4.28	0.15
2.50	0.15	0.00	0.00	15.50	5.36	4.33	0.14
2.75	0.17	0.00	0.00	15.75	5.41	4.38	0.13
3.00	0.19	0.00	0.00	16.00	5.45	4.42	0.12
3.25	0.21	0.00	0.00	16.25	5.49	4.46	0.11
3.50	0.23	0.00	0.00	16.50	5.53	4.49	0.10
3.75	0.24	0.00	0.00	16.75	5.56	4.53	0.09
4.00	0.26	0.00	0.00	17.00	5.59	4.56	0.09
4.25	0.28	0.01	0.00	17.25	5.62	4.59	0.08
4.50	0.31	0.01	0.01	17.50	5.65	4.62	0.08
4.75	0.33	0.01	0.01	17.75	5.68	4.65	0.07
5.00	0.35	0.02	0.01	18.00	5.71	4.67	0.07
5.25	0.37	0.03	0.01	18.25	5.73	4.69	0.07
5.50	0.39	0.03	0.01	18.50	5.76	4.72	0.06
5.75	0.42	0.04	0.02	18.75	5.78	4.74	0.06
6.00	0.44	0.05	0.02	19.00	5.80	4.76	0.06
6.25	0.47	0.06	0.02	19.25	5.82	4.78	0.06
6.50	0.50	0.07	0.02	19.50	5.84	4.81	0.06
6.75	0.53	0.08	0.03	19.75	5.87	4.83	0.05
7.00	0.56	0.10	0.03	20.00	5.89	4.85	0.05
7.25	0.59	0.11	0.03	20.25	5.91	4.86	0.05
7.50	0.62	0.13	0.04	20.50	5.92	4.88	0.05
7.75	0.66	0.15	0.04	20.75	5.94	4.90	0.05
8.00	0.70	0.17	0.05	21.00	5.96	4.92	0.05
8.25	0.74	0.19	0.05	21.25	5.98	4.94	0.05
8.50	0.79	0.22	0.06	21.50	6.00	4.95	0.05
8.75	0.84	0.25	0.07	21.75	6.01	4.97	0.04
9.00	0.90	0.29	0.08	22.00	6.03	4.99	0.04
9.25	0.96	0.33	0.09	22.25	6.05	5.00	0.04
9.50	1.02	0.37	0.10	22.50	6.06	5.02	0.04
9.75	1.09	0.42	0.11	22.75	6.08	5.03	0.04
10.00	1.16	0.48	0.12	23.00	6.09	5.05	0.04
10.25	1.24	0.54	0.13	23.25	6.11	5.06	0.04
10.50	1.33	0.61	0.15	23.50	6.12	5.08	0.04
10.75	1.43	0.68	0.17	23.75	6.14	5.09	0.04
11.00	1.54	0.77	0.19	24.00	6.15	5.10	0.03
11.25	1.67	0.88	0.22				
11.50	1.83	1.02	0.26				
11.75	2.18	1.33	0.36				
12.00	3.07	2.14	0.73				
12.25	3.97	2.98	1.75				
12.50	4.32	3.32	1.90				
12.75	4.48	3.48	1.14				

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Summary for Reach 1R: DROP MANHOLE

Inflow Area = 59,949 sf, 75.44% Impervious, Inflow Depth = 1.47" for 25-YEAR event
Inflow = 3.82 cfs @ 12.57 hrs, Volume= 7,342 cf
Outflow = 3.82 cfs @ 12.57 hrs, Volume= 7,342 cf, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
Max. Velocity= 99.87 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 99.87 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 12.57 hrs
Average Depth at Peak Storage= 0.02'
Bank-Full Depth= 12.00' Flow Area= 19.6 sf, Capacity= 2,269.48 cfs

Custom stage-perimeter table, n= 0.013 Concrete pipe, bends & connections
100 Intermediate values determined by Multi-point interpolation
Length= 12.0' Slope= 0.7633 '/'
Inlet Invert= 61.16', Outlet Invert= 52.00'



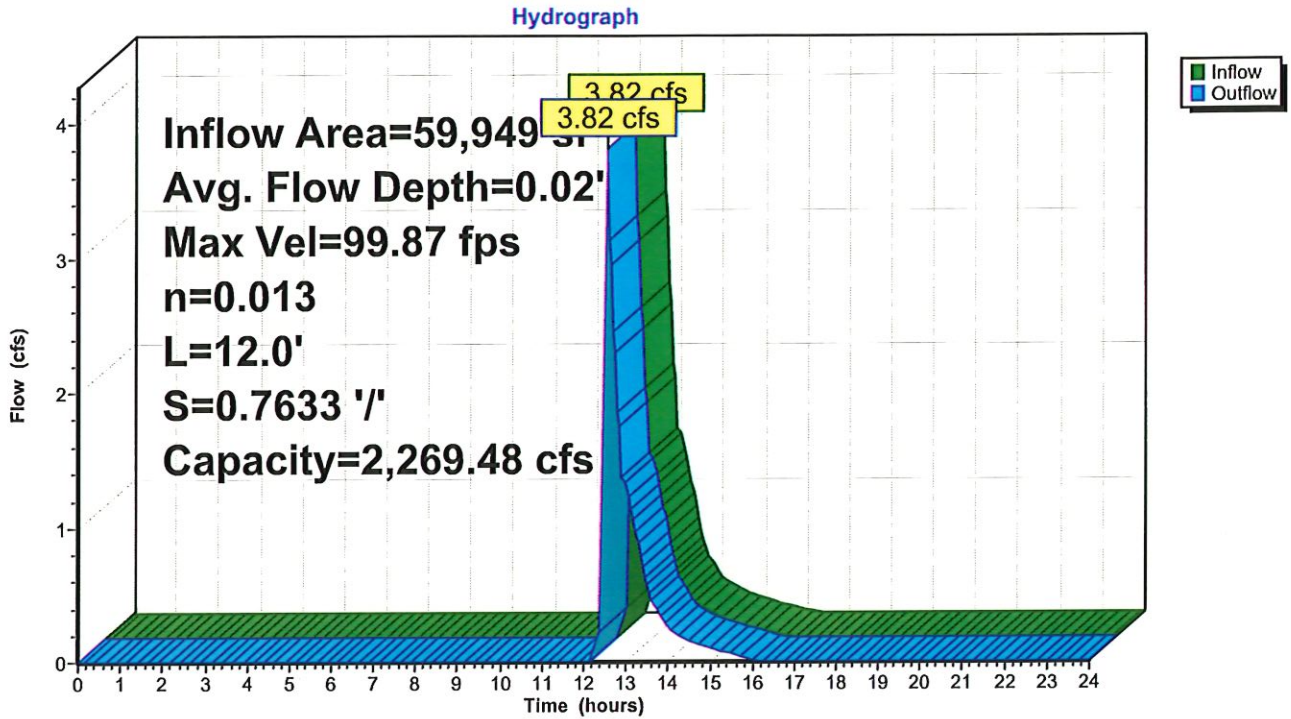
Depth (feet)	End Area (sq-ft)	Perim. (feet)	Storage (cubic-feet)	Discharge (cfs)
0.00	0.0	0.0	0	0.00
6.00	12.6	12.6	151	1,258.35
12.00	19.6	15.7	235	2,269.48

POST DEVEL

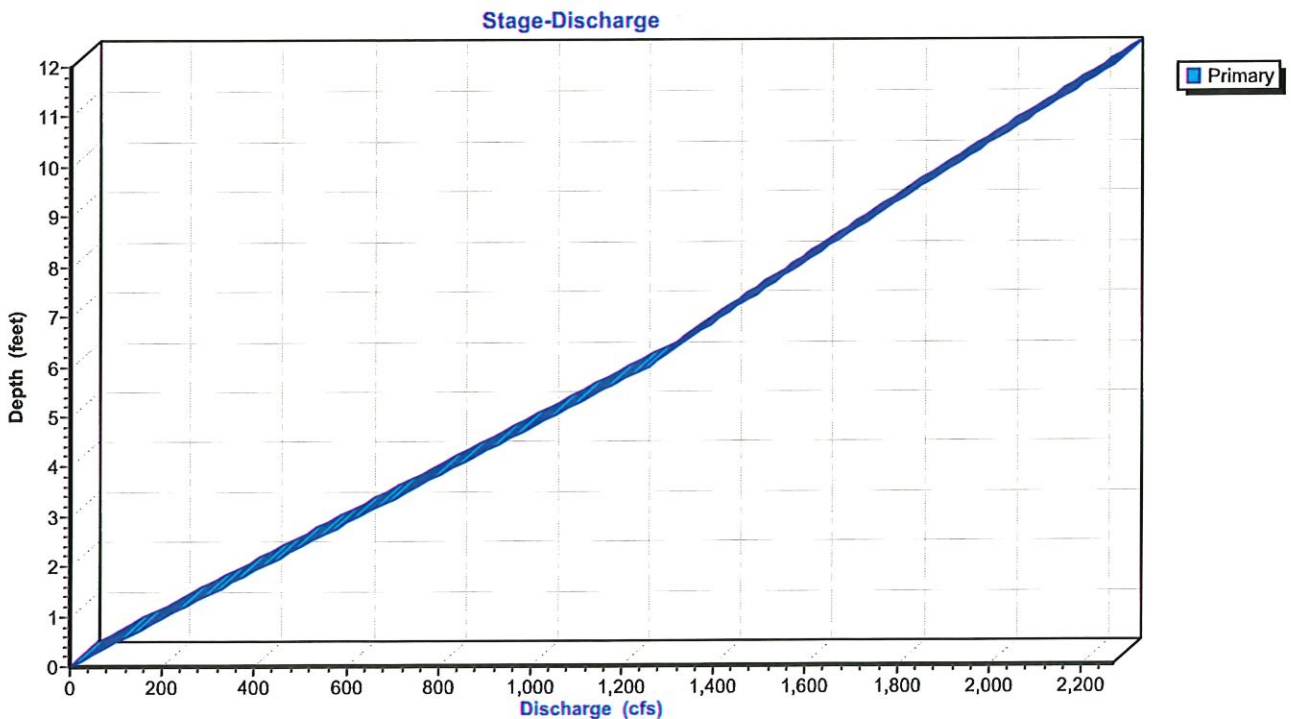
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Type III 24-hr 25-YEAR Rainfall=6.15"
Printed 3/15/2022
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Reach 1R: DROP MANHOLE



Reach 1R: DROP MANHOLE

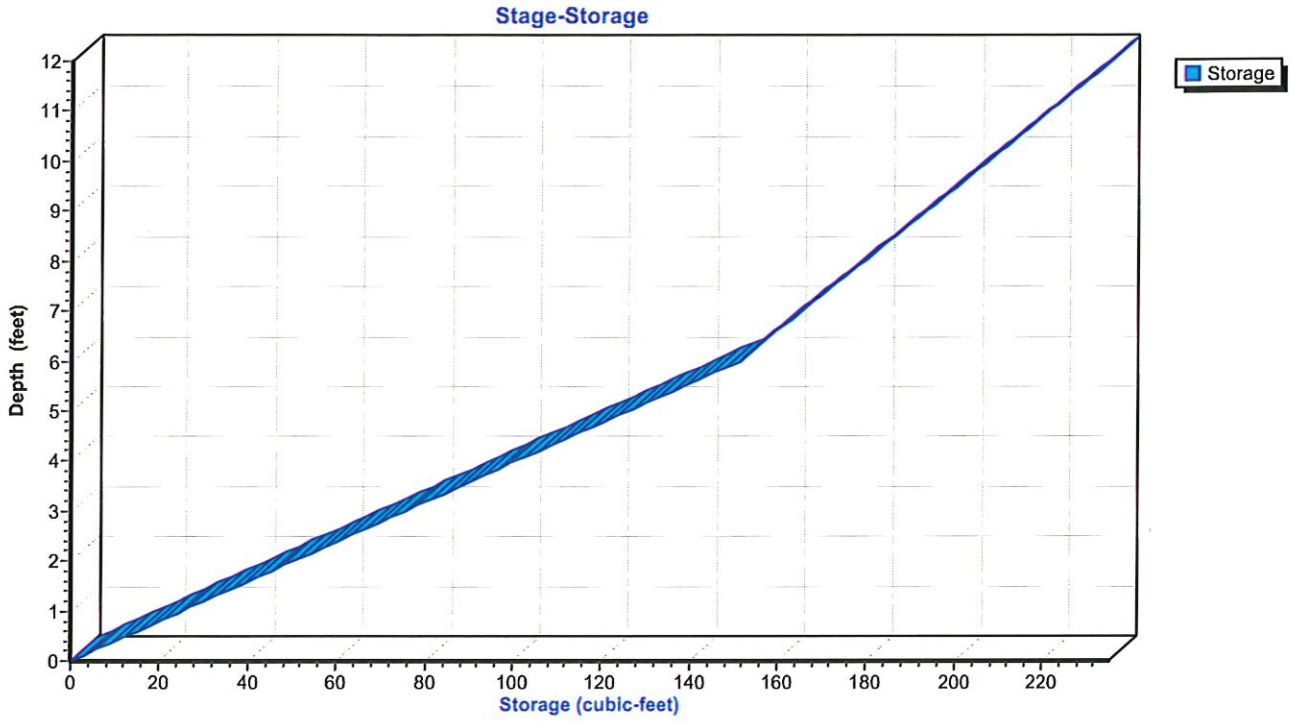


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Reach 1R: DROP MANHOLE



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Hydrograph for Reach 1R: DROP MANHOLE

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)
0.00	0.00	0	61.16	0.00
0.50	0.00	0	61.16	0.00
1.00	0.00	0	61.16	0.00
1.50	0.00	0	61.16	0.00
2.00	0.00	0	61.16	0.00
2.50	0.00	0	61.16	0.00
3.00	0.00	0	61.16	0.00
3.50	0.00	0	61.16	0.00
4.00	0.00	0	61.16	0.00
4.50	0.00	0	61.16	0.00
5.00	0.00	0	61.16	0.00
5.50	0.00	0	61.16	0.00
6.00	0.00	0	61.16	0.00
6.50	0.00	0	61.16	0.00
7.00	0.00	0	61.16	0.00
7.50	0.00	0	61.16	0.00
8.00	0.00	0	61.16	0.00
8.50	0.00	0	61.16	0.00
9.00	0.00	0	61.16	0.00
9.50	0.00	0	61.16	0.00
10.00	0.00	0	61.16	0.00
10.50	0.00	0	61.16	0.00
11.00	0.00	0	61.16	0.00
11.50	0.00	0	61.16	0.00
12.00	0.00	0	61.16	0.00
12.50	1.10	0	61.17	1.09
13.00	1.34	0	61.17	1.34
13.50	0.57	0	61.16	0.57
14.00	0.26	0	61.16	0.26
14.50	0.16	0	61.16	0.17
15.00	0.11	0	61.16	0.11
15.50	0.06	0	61.16	0.06
16.00	0.02	0	61.16	0.02
16.50	0.00	0	61.16	0.00
17.00	0.00	0	61.16	0.00
17.50	0.00	0	61.16	0.00
18.00	0.00	0	61.16	0.00
18.50	0.00	0	61.16	0.00
19.00	0.00	0	61.16	0.00
19.50	0.00	0	61.16	0.00
20.00	0.00	0	61.16	0.00
20.50	0.00	0	61.16	0.00
21.00	0.00	0	61.16	0.00
21.50	0.00	0	61.16	0.00
22.00	0.00	0	61.16	0.00
22.50	0.00	0	61.16	0.00
23.00	0.00	0	61.16	0.00
23.50	0.00	0	61.16	0.00
24.00	0.00	0	61.16	0.00

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Stage-Discharge for Reach 1R: DROP MANHOLE

Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)	Elevation (feet)	Velocity (ft/sec)	Discharge (cfs)
61.16	0.00	0.00	68.96	105.55	1,551.54
61.31	99.87	31.46	69.11	105.98	1,576.44
61.46	99.87	62.92	69.26	106.40	1,601.39
61.61	99.87	94.38	69.41	106.82	1,626.41
61.76	99.87	125.84	69.56	107.24	1,651.49
61.91	99.87	157.29	69.71	107.65	1,676.64
62.06	99.87	188.75	69.86	108.05	1,701.84
62.21	99.87	220.21	70.01	108.45	1,727.10
62.36	99.87	251.67	70.16	108.85	1,752.42
62.51	99.87	283.13	70.31	109.23	1,777.80
62.66	99.87	314.59	70.46	109.62	1,803.23
62.81	99.87	346.05	70.61	110.00	1,828.72
62.96	99.87	377.51	70.76	110.37	1,854.25
63.11	99.87	408.97	70.91	110.74	1,879.85
63.26	99.87	440.42	71.06	111.11	1,905.50
63.41	99.87	471.88	71.21	111.47	1,931.19
63.56	99.87	503.34	71.36	111.82	1,956.93
63.71	99.87	534.80	71.51	112.18	1,982.73
63.86	99.87	566.26	71.66	112.52	2,008.57
64.01	99.87	597.72	71.81	112.87	2,034.46
64.16	99.87	629.18	71.96	113.21	2,060.40
64.31	99.87	660.64	72.11	113.54	2,086.38
64.46	99.87	692.10	72.26	113.88	2,112.41
64.61	99.87	723.55	72.41	114.20	2,138.48
64.76	99.87	755.01	72.56	114.53	2,164.59
64.91	99.87	786.47	72.71	114.85	2,190.76
65.06	99.87	817.93	72.86	115.17	2,216.96
65.21	99.87	849.39	73.01	115.48	2,243.20
65.36	99.87	880.85	73.16	115.79	2,269.48
65.51	99.87	912.31			
65.66	99.87	943.77			
65.81	99.87	975.22			
65.96	99.87	1,006.68			
66.11	99.87	1,038.14			
66.26	99.87	1,069.60			
66.41	99.87	1,101.06			
66.56	99.87	1,132.52			
66.71	99.87	1,163.98			
66.86	99.87	1,195.44			
67.01	99.87	1,226.90			
67.16	99.87	1,258.35			
67.31	100.38	1,282.37			
67.46	100.88	1,306.46			
67.61	101.38	1,330.63			
67.76	101.87	1,354.88			
67.91	102.35	1,379.21			
68.06	102.83	1,403.62			
68.21	103.30	1,428.10			
68.36	103.76	1,452.64			
68.51	104.22	1,477.27			
68.66	104.67	1,501.96			
68.81	105.11	1,526.72			

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Stage-Area-Storage for Reach 1R: DROP MANHOLE

Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)	Elevation (feet)	End-Area (sq-ft)	Storage (cubic-feet)
61.16	0.0	0	68.96	14.7	176
61.31	0.3	4	69.11	14.9	178
61.46	0.6	8	69.26	15.1	181
61.61	0.9	11	69.41	15.2	183
61.76	1.3	15	69.56	15.4	185
61.91	1.6	19	69.71	15.6	187
62.06	1.9	23	69.86	15.8	189
62.21	2.2	26	70.01	15.9	191
62.36	2.5	30	70.16	16.1	193
62.51	2.8	34	70.31	16.3	195
62.66	3.1	38	70.46	16.4	197
62.81	3.5	42	70.61	16.6	200
62.96	3.8	45	70.76	16.8	202
63.11	4.1	49	70.91	17.0	204
63.26	4.4	53	71.06	17.2	206
63.41	4.7	57	71.21	17.3	208
63.56	5.0	60	71.36	17.5	210
63.71	5.4	64	71.51	17.7	212
63.86	5.7	68	71.66	17.9	214
64.01	6.0	72	71.81	18.0	216
64.16	6.3	76	71.96	18.2	218
64.31	6.6	79	72.11	18.4	220
64.46	6.9	83	72.26	18.6	223
64.61	7.2	87	72.41	18.7	225
64.76	7.6	91	72.56	18.9	227
64.91	7.9	95	72.71	19.1	229
65.06	8.2	98	72.86	19.3	231
65.21	8.5	102	73.01	19.4	233
65.36	8.8	106	73.16	19.6	235
65.51	9.1	110			
65.66	9.4	113			
65.81	9.8	117			
65.96	10.1	121			
66.11	10.4	125			
66.26	10.7	129			
66.41	11.0	132			
66.56	11.3	136			
66.71	11.7	140			
66.86	12.0	144			
67.01	12.3	147			
67.16	12.6	151			
67.31	12.8	153			
67.46	12.9	155			
67.61	13.1	158			
67.76	13.3	160			
67.91	13.5	162			
68.06	13.7	164			
68.21	13.8	166			
68.36	14.0	168			
68.51	14.2	170			
68.66	14.3	172			
68.81	14.5	174			

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Summary for Pond 1P: 60 CONCRETE GALLEY'S

[93] Warning: Storage range exceeded by 4.26'

Inflow Area = 59,949 sf, 75.44% Impervious, Inflow Depth > 5.14" for 25-YEAR event
 Inflow = 4.52 cfs @ 12.39 hrs, Volume= 25,690 cf
 Outflow = 4.10 cfs @ 12.57 hrs, Volume= 22,025 cf, Atten= 9%, Lag= 10.7 min
 Discarded = 0.28 cfs @ 12.56 hrs, Volume= 14,683 cf
 Primary = 3.82 cfs @ 12.57 hrs, Volume= 7,342 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 66.76' @ 12.56 hrs Surf.Area= 2,574 sf Storage= 8,014 cf

Plug-Flow detention time= 160.0 min calculated for 22,025 cf (86% of inflow)
 Center-of-Mass det. time= 99.9 min (896.8 - 796.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	57.33'	2,401 cf	21.10'W x 122.00'L x 5.17'H Field A 13,300 cf Overall - 7,298 cf Embedded = 6,002 cf x 40.0% Voids
#2A	57.83'	5,614 cf	Galley 4x8x4 x 60 Inside #1 Inside= 42.0"W x 43.0"H => 12.47 sf x 7.50'L = 93.6 cf Outside= 52.8"W x 48.0"H => 15.20 sf x 8.00'L = 121.6 cf
		8,014 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	61.50'	8.0" Vert. Orifice/Grate C= 0.600
#2	Discarded	57.33'	4.000 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 0.00'

Discarded OutFlow Max=0.28 cfs @ 12.56 hrs HW=66.21' (Free Discharge)
 ↳2=Exfiltration (Controls 0.28 cfs)

Primary OutFlow Max=3.49 cfs @ 12.57 hrs HW=66.14' (Free Discharge)
 ↳1=Orifice/Grate (Orifice Controls 3.49 cfs @ 9.99 fps)

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Pond 1P: 60 CONCRETE GALLEY'S - Chamber Wizard Field A

Chamber Model = Galley 4x8x4

Inside= 42.0"W x 43.0"H => 12.47 sf x 7.50'L = 93.6 cf

Outside= 52.8"W x 48.0"H => 15.20 sf x 8.00'L = 121.6 cf

52.8" Wide + 6.0" Spacing = 58.8" C-C Row Spacing

15 Chambers/Row x 8.00' Long = 120.00' Row Length +12.0" End Stone x 2 = 122.00' Base Length

4 Rows x 52.8" Wide + 6.0" Spacing x 3 + 12.0" Side Stone x 2 = 21.10' Base Width

6.0" Base + 48.0" Chamber Height + 8.0" Cover = 5.17' Field Height

60 Chambers x 93.6 cf = 5,613.7 cf Chamber Storage

60 Chambers x 121.6 cf = 7,298.2 cf Displacement

13,300.0 cf Field - 7,298.2 cf Chambers = 6,001.9 cf Stone x 40.0% Voids = 2,400.7 cf Stone Storage

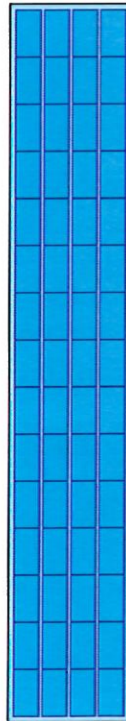
Stone + Chamber Storage = 8,014.5 cf = 0.184 af

Overall Storage Efficiency = 60.3%

60 Chambers

492.6 cy Field

222.3 cy Stone

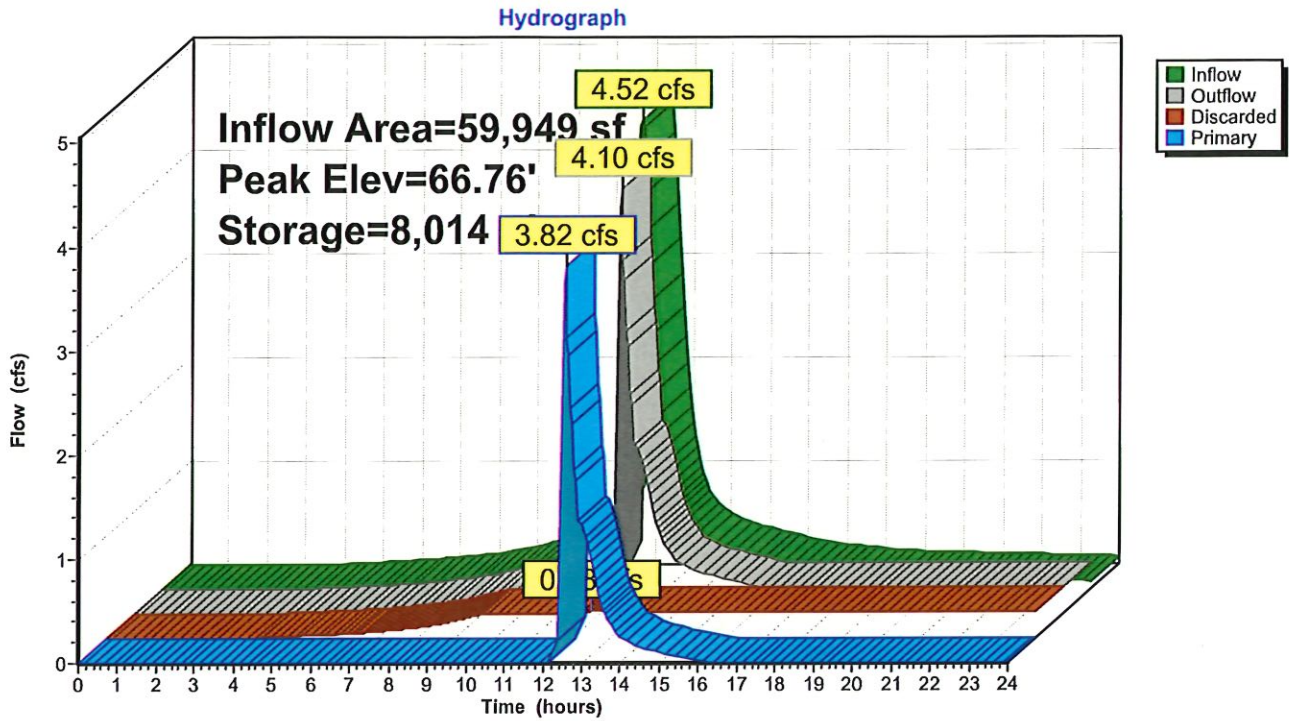


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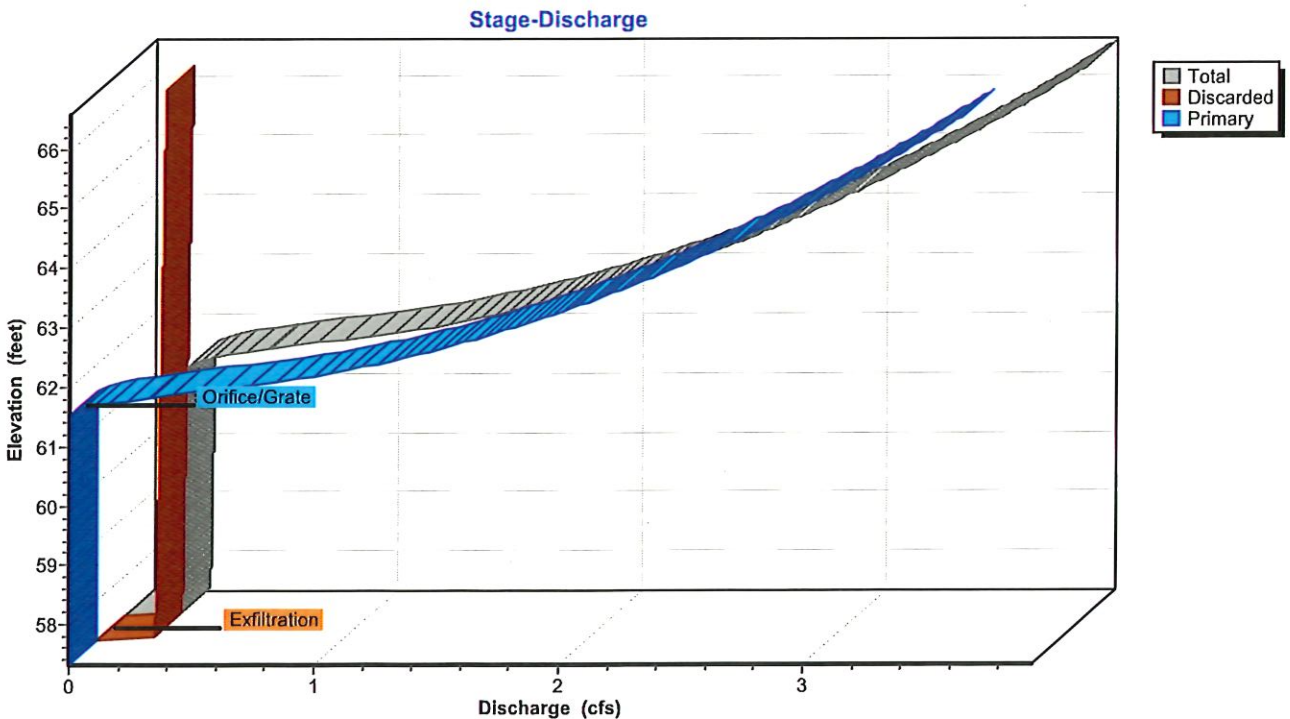
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Pond 1P: 60 CONCRETE GALLEY'S



Pond 1P: 60 CONCRETE GALLEY'S

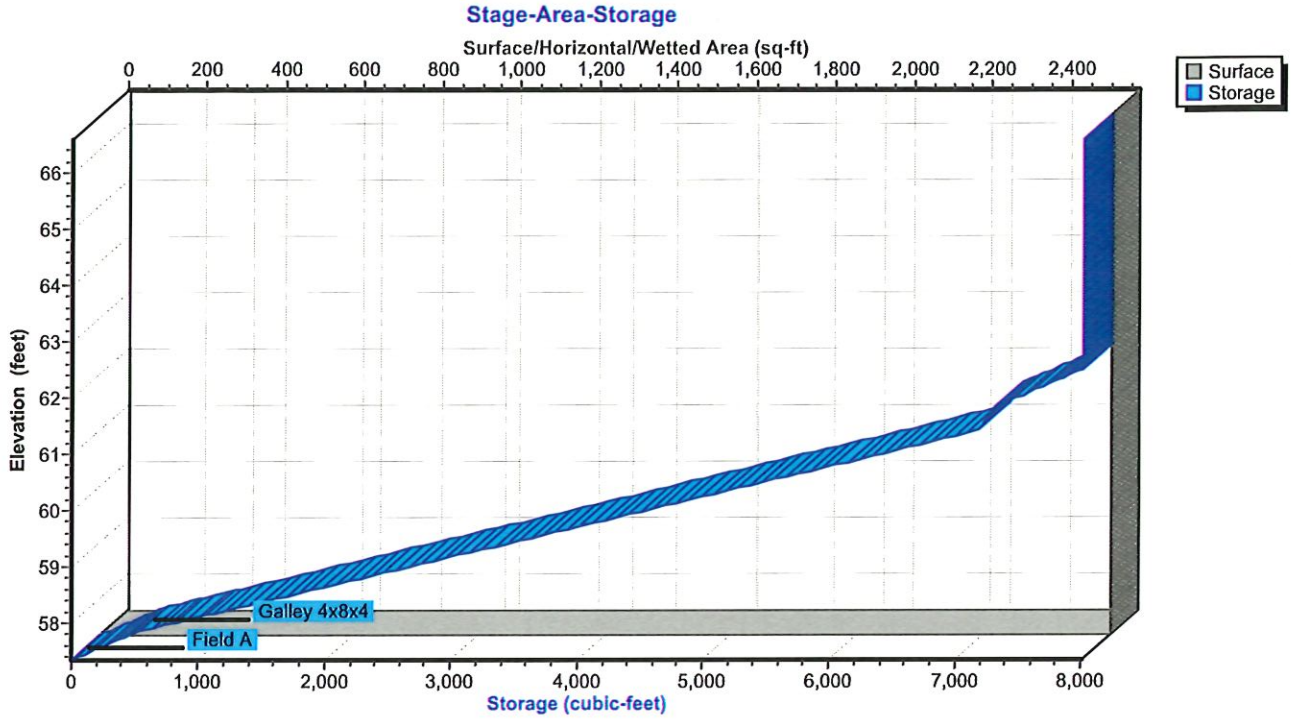


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#245 Route 32 Montville, CT
Type III 24-hr 25-YEAR Rainfall=6.15"
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Pond 1P: 60 CONCRETE GALLEY'S



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Hydrograph for Pond 1P: 60 CONCRETE GALLEY'S

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	57.33	0.00	0.00	0.00
0.50	0.00	0	57.33	0.00	0.00	0.00
1.00	0.00	0	57.33	0.00	0.00	0.00
1.50	0.00	0	57.33	0.00	0.00	0.00
2.00	0.00	0	57.33	0.00	0.00	0.00
2.50	0.00	0	57.33	0.00	0.00	0.00
3.00	0.00	0	57.33	0.00	0.00	0.00
3.50	0.00	0	57.33	0.00	0.00	0.00
4.00	0.01	2	57.33	0.01	0.01	0.00
4.50	0.02	4	57.33	0.02	0.02	0.00
5.00	0.03	6	57.34	0.03	0.03	0.00
5.50	0.04	8	57.34	0.03	0.03	0.00
6.00	0.04	10	57.34	0.04	0.04	0.00
6.50	0.06	12	57.34	0.05	0.05	0.00
7.00	0.07	15	57.35	0.07	0.07	0.00
7.50	0.09	20	57.35	0.09	0.09	0.00
8.00	0.11	24	57.35	0.11	0.11	0.00
8.50	0.14	30	57.36	0.13	0.13	0.00
9.00	0.18	38	57.37	0.17	0.17	0.00
9.50	0.22	48	57.38	0.22	0.22	0.00
10.00	0.27	73	57.40	0.24	0.24	0.00
10.50	0.33	184	57.51	0.24	0.24	0.00
11.00	0.43	435	57.75	0.24	0.24	0.00
11.50	0.59	886	58.03	0.24	0.24	0.00
12.00	1.61	2,076	58.66	0.24	0.24	0.00
12.50	4.16	7,769	62.26	1.35	0.26	1.10
13.00	1.37	7,983	62.47	1.60	0.26	1.34
13.50	0.66	7,448	61.95	0.82	0.26	0.57
14.00	0.50	7,313	61.78	0.51	0.26	0.26
14.50	0.41	7,293	61.72	0.42	0.26	0.16
15.00	0.36	7,279	61.68	0.36	0.26	0.11
15.50	0.31	7,264	61.63	0.32	0.26	0.06
16.00	0.26	7,244	61.57	0.27	0.26	0.02
16.50	0.22	7,202	61.44	0.26	0.26	0.00
17.00	0.19	7,113	61.37	0.26	0.26	0.00
17.50	0.17	6,985	61.30	0.25	0.25	0.00
18.00	0.15	6,820	61.21	0.25	0.25	0.00
18.50	0.14	6,620	61.10	0.25	0.25	0.00
19.00	0.13	6,398	60.98	0.25	0.25	0.00
19.50	0.12	6,165	60.85	0.25	0.25	0.00
20.00	0.11	5,922	60.72	0.25	0.25	0.00
20.50	0.11	5,669	60.59	0.25	0.25	0.00
21.00	0.10	5,407	60.45	0.25	0.25	0.00
21.50	0.10	5,137	60.30	0.25	0.25	0.00
22.00	0.09	4,861	60.15	0.25	0.25	0.00
22.50	0.09	4,576	60.00	0.25	0.25	0.00
23.00	0.08	4,285	59.84	0.25	0.25	0.00
23.50	0.08	3,986	59.68	0.25	0.25	0.00
24.00	0.08	3,680	59.52	0.25	0.25	0.00

POST DEVEL

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Stage-Discharge for Pond 1P: 60 CONCRETE GALLEY'S

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
57.33	0.00	0.00	0.00	62.53	1.66	0.26	1.40
57.43	0.24	0.24	0.00	62.63	1.76	0.26	1.50
57.53	0.24	0.24	0.00	62.73	1.85	0.26	1.59
57.63	0.24	0.24	0.00	62.83	1.94	0.26	1.68
57.73	0.24	0.24	0.00	62.93	2.02	0.26	1.76
57.83	0.24	0.24	0.00	63.03	2.10	0.26	1.84
57.93	0.24	0.24	0.00	63.13	2.18	0.26	1.91
58.03	0.24	0.24	0.00	63.23	2.25	0.26	1.99
58.13	0.24	0.24	0.00	63.33	2.32	0.26	2.06
58.23	0.24	0.24	0.00	63.43	2.39	0.26	2.12
58.33	0.24	0.24	0.00	63.53	2.45	0.26	2.19
58.43	0.24	0.24	0.00	63.63	2.52	0.26	2.25
58.53	0.24	0.24	0.00	63.73	2.58	0.26	2.31
58.63	0.24	0.24	0.00	63.83	2.64	0.27	2.37
58.73	0.24	0.24	0.00	63.93	2.70	0.27	2.43
58.83	0.24	0.24	0.00	64.03	2.76	0.27	2.49
58.93	0.25	0.25	0.00	64.13	2.81	0.27	2.55
59.03	0.25	0.25	0.00	64.23	2.87	0.27	2.60
59.13	0.25	0.25	0.00	64.33	2.92	0.27	2.66
59.23	0.25	0.25	0.00	64.43	2.98	0.27	2.71
59.33	0.25	0.25	0.00	64.53	3.03	0.27	2.76
59.43	0.25	0.25	0.00	64.63	3.08	0.27	2.81
59.53	0.25	0.25	0.00	64.73	3.13	0.27	2.86
59.63	0.25	0.25	0.00	64.83	3.18	0.27	2.91
59.73	0.25	0.25	0.00	64.93	3.23	0.27	2.96
59.83	0.25	0.25	0.00	65.03	3.28	0.27	3.01
59.93	0.25	0.25	0.00	65.13	3.32	0.27	3.05
60.03	0.25	0.25	0.00	65.23	3.37	0.27	3.10
60.13	0.25	0.25	0.00	65.33	3.41	0.27	3.14
60.23	0.25	0.25	0.00	65.43	3.46	0.27	3.19
60.33	0.25	0.25	0.00	65.53	3.50	0.27	3.23
60.43	0.25	0.25	0.00	65.63	3.55	0.27	3.27
60.53	0.25	0.25	0.00	65.73	3.59	0.27	3.32
60.63	0.25	0.25	0.00	65.83	3.63	0.27	3.36
60.73	0.25	0.25	0.00	65.93	3.68	0.27	3.40
60.83	0.25	0.25	0.00	66.03	3.72	0.27	3.44
60.93	0.25	0.25	0.00	66.13	3.76	0.27	3.48
61.03	0.25	0.25	0.00	66.23	3.80	0.28	3.52
61.13	0.25	0.25	0.00	66.33	3.84	0.28	3.56
61.23	0.25	0.25	0.00	66.43	3.88	0.28	3.60
61.33	0.25	0.25	0.00	66.53	3.92	0.28	3.64
61.43	0.26	0.26	0.00				
61.53	0.26	0.26	0.00				
61.63	0.32	0.26	0.06				
61.73	0.43	0.26	0.17				
61.83	0.59	0.26	0.34				
61.93	0.79	0.26	0.53				
62.03	1.00	0.26	0.74				
62.13	1.18	0.26	0.92				
62.23	1.32	0.26	1.06				
62.33	1.44	0.26	1.18				
62.43	1.56	0.26	1.30				

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Stage-Area-Storage for Pond 1P: 60 CONCRETE GALLEY'S

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
57.33	2,574	0	62.53	2,574	8,014
57.43	2,574	103	62.63	2,574	8,014
57.53	2,574	206	62.73	2,574	8,014
57.63	2,574	309	62.83	2,574	8,014
57.73	2,574	412	62.93	2,574	8,014
57.83	2,574	515	63.03	2,574	8,014
57.93	2,574	697	63.13	2,574	8,014
58.03	2,574	880	63.23	2,574	8,014
58.13	2,574	1,066	63.33	2,574	8,014
58.23	2,574	1,255	63.43	2,574	8,014
58.33	2,574	1,444	63.53	2,574	8,014
58.43	2,574	1,633	63.63	2,574	8,014
58.53	2,574	1,822	63.73	2,574	8,014
58.63	2,574	2,010	63.83	2,574	8,014
58.73	2,574	2,198	63.93	2,574	8,014
58.83	2,574	2,387	64.03	2,574	8,014
58.93	2,574	2,575	64.13	2,574	8,014
59.03	2,574	2,763	64.23	2,574	8,014
59.13	2,574	2,950	64.33	2,574	8,014
59.23	2,574	3,138	64.43	2,574	8,014
59.33	2,574	3,326	64.53	2,574	8,014
59.43	2,574	3,513	64.63	2,574	8,014
59.53	2,574	3,700	64.73	2,574	8,014
59.63	2,574	3,887	64.83	2,574	8,014
59.73	2,574	4,074	64.93	2,574	8,014
59.83	2,574	4,261	65.03	2,574	8,014
59.93	2,574	4,448	65.13	2,574	8,014
60.03	2,574	4,634	65.23	2,574	8,014
60.13	2,574	4,820	65.33	2,574	8,014
60.23	2,574	5,007	65.43	2,574	8,014
60.33	2,574	5,193	65.53	2,574	8,014
60.43	2,574	5,379	65.63	2,574	8,014
60.53	2,574	5,564	65.73	2,574	8,014
60.63	2,574	5,750	65.83	2,574	8,014
60.73	2,574	5,935	65.93	2,574	8,014
60.83	2,574	6,121	66.03	2,574	8,014
60.93	2,574	6,306	66.13	2,574	8,014
61.03	2,574	6,491	66.23	2,574	8,014
61.13	2,574	6,676	66.33	2,574	8,014
61.23	2,574	6,861	66.43	2,574	8,014
61.33	2,574	7,046	66.53	2,574	8,014
61.43	2,574	7,200			
61.53	2,574	7,232			
61.63	2,574	7,264			
61.73	2,574	7,296			
61.83	2,574	7,328			
61.93	2,574	7,431			
62.03	2,574	7,534			
62.13	2,574	7,637			
62.23	2,574	7,740			
62.33	2,574	7,843			
62.43	2,574	7,946			

POST DEVEL

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Summary for Pond 2P: Level Spreader

- [93] Warning: Storage range exceeded by 0.88'
- [88] Warning: Qout>Qin may require Finer Routing>1
- [85] Warning: Oscillations may require Finer Routing>1
- [62] Hint: Exceeded Reach 1R OUTLET depth by 1.53' @ 12.60 hrs

Inflow Area = 59,949 sf, 75.44% Impervious, Inflow Depth = 1.47" for 25-YEAR event
 Inflow = 3.82 cfs @ 12.57 hrs, Volume= 7,342 cf
 Outflow = 3.87 cfs @ 12.57 hrs, Volume= 7,145 cf, Atten= 0%, Lag= 0.3 min
 Discarded = 0.00 cfs @ 0.00 hrs, Volume= 0 cf
 Primary = 3.87 cfs @ 12.57 hrs, Volume= 7,145 cf

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs
 Peak Elev= 53.55' @ 12.55 hrs Surf.Area= 147 sf Storage= 209 cf

Plug-Flow detention time= 5.1 min calculated for 7,130 cf (97% of inflow)
 Center-of-Mass det. time= 1.4 min (790.4 - 789.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	49.50'	161 cf	3.50'W x 42.00'L x 3.17'H Field A 465 cf Overall - 64 cf Embedded = 401 cf x 40.0% Voids
#2A	50.00'	48 cf	ADS N-12 15 x 2 Inside #1 Inside= 14.8"W x 14.8"H => 1.20 sf x 20.00'L = 24.0 cf Outside= 18.0"W x 18.0"H => 1.60 sf x 20.00'L = 31.9 cf
209 cf			Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	49.50'	3.500 in/hr Exfiltration over Surface area Conductivity to Groundwater Elevation = 49.50'
#2	Primary	53.50'	84.0" x 504.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.00 cfs @ 0.00 hrs HW=49.50' (Free Discharge)
 ↑1=Exfiltration (Controls 0.00 cfs)

Primary OutFlow Max=3.29 cfs @ 12.57 hrs HW=53.55' (Free Discharge)
 ↑2=Orifice/Grate (Weir Controls 3.29 cfs @ 0.71 fps)

POST DEVEL

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Type III 24-hr 25-YEAR Rainfall=6.15"
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Pond 2P: Level Spreader - Chamber Wizard Field A

Chamber Model = ADS N-12 15

Inside= 14.8"W x 14.8"H => 1.20 sf x 20.00'L = 24.0 cf

Outside= 18.0"W x 18.0"H => 1.60 sf x 20.00'L = 31.9 cf

18.0" Wide + 6.0" Spacing = 24.0" C-C Row Spacing

2 Chambers/Row x 20.00' Long = 40.00' Row Length +12.0" End Stone x 2 = 42.00' Base Length

1 Rows x 18.0" Wide + 12.0" Side Stone x 2 = 3.50' Base Width

6.0" Base + 18.0" Chamber Height + 14.0" Cover = 3.17' Field Height

2 Chambers x 24.0 cf = 48.0 cf Chamber Storage

2 Chambers x 31.9 cf = 63.8 cf Displacement

465.3 cf Field - 63.8 cf Chambers = 401.5 cf Stone x 40.0% Voids = 160.6 cf Stone Storage

Stone + Chamber Storage = 208.6 cf = 0.005 af

Overall Storage Efficiency = 44.8%

2 Chambers

17.2 cy Field

14.9 cy Stone



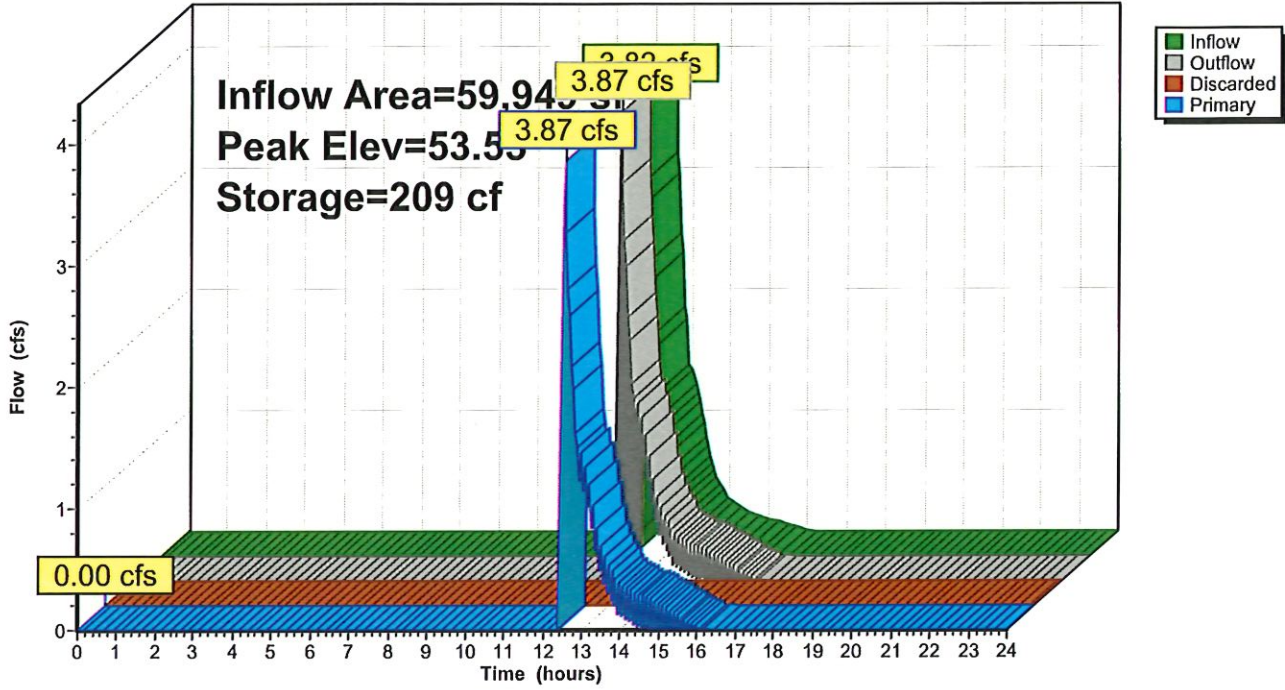
POST DEVEL

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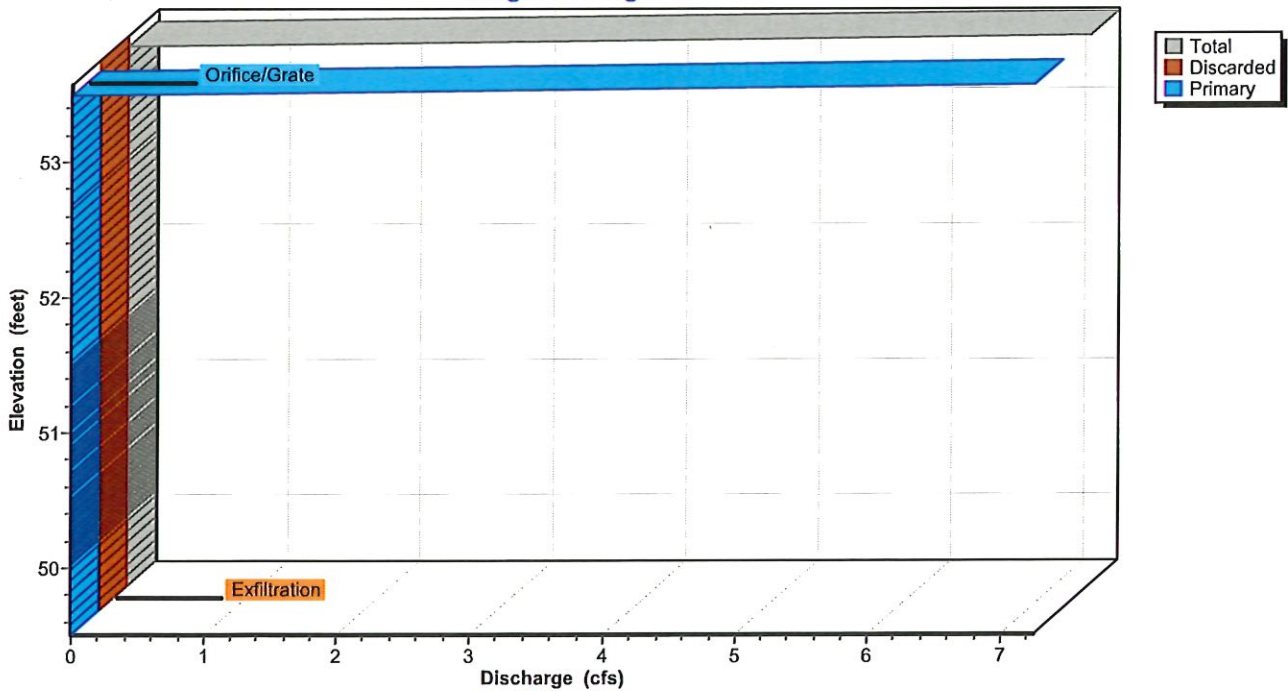
Pond 2P: Level Spreader

Hydrograph



Pond 2P: Level Spreader

Stage-Discharge

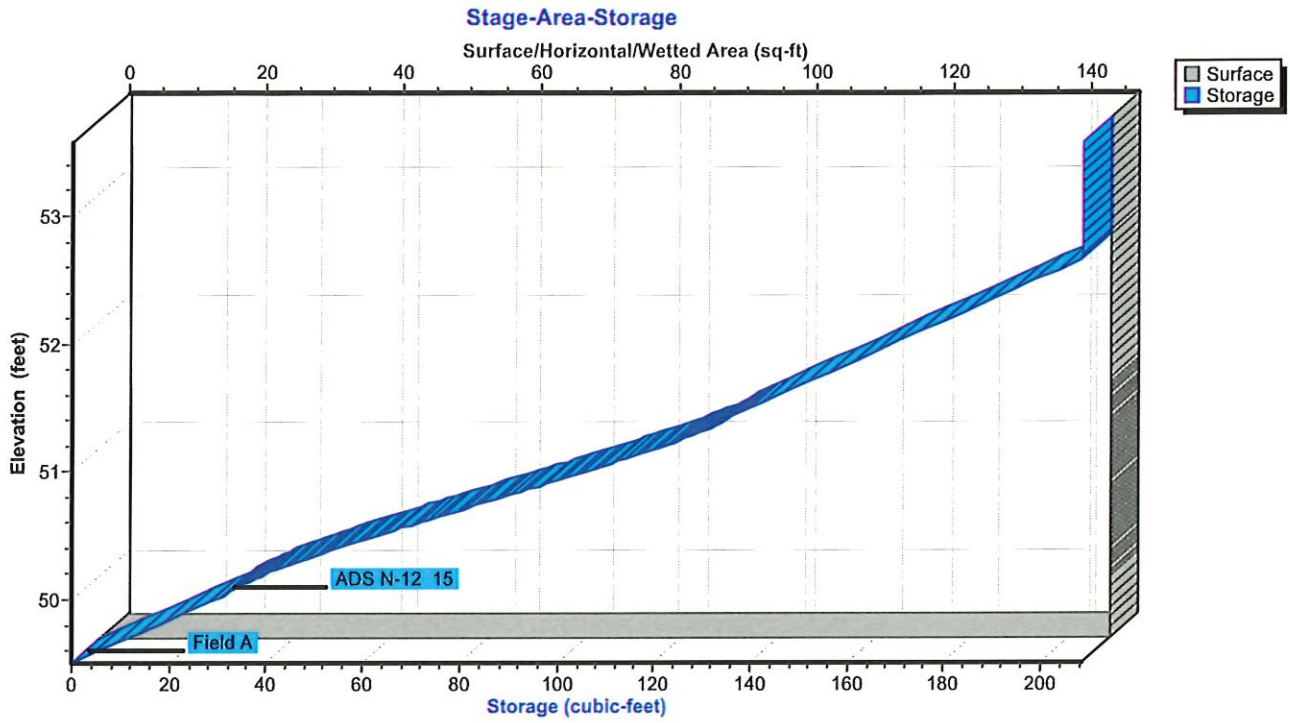


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Pond 2P: Level Spreader



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Hydrograph for Pond 2P: Level Spreader

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.00	0.00	0	49.50	0.00	0.00	0.00
0.50	0.00	0	49.50	0.00	0.00	0.00
1.00	0.00	0	49.50	0.00	0.00	0.00
1.50	0.00	0	49.50	0.00	0.00	0.00
2.00	0.00	0	49.50	0.00	0.00	0.00
2.50	0.00	0	49.50	0.00	0.00	0.00
3.00	0.00	0	49.50	0.00	0.00	0.00
3.50	0.00	0	49.50	0.00	0.00	0.00
4.00	0.00	0	49.50	0.00	0.00	0.00
4.50	0.00	0	49.50	0.00	0.00	0.00
5.00	0.00	0	49.50	0.00	0.00	0.00
5.50	0.00	0	49.50	0.00	0.00	0.00
6.00	0.00	0	49.50	0.00	0.00	0.00
6.50	0.00	0	49.50	0.00	0.00	0.00
7.00	0.00	0	49.50	0.00	0.00	0.00
7.50	0.00	0	49.50	0.00	0.00	0.00
8.00	0.00	0	49.50	0.00	0.00	0.00
8.50	0.00	0	49.50	0.00	0.00	0.00
9.00	0.00	0	49.50	0.00	0.00	0.00
9.50	0.00	0	49.50	0.00	0.00	0.00
10.00	0.00	0	49.50	0.00	0.00	0.00
10.50	0.00	0	49.50	0.00	0.00	0.00
11.00	0.00	0	49.50	0.00	0.00	0.00
11.50	0.00	0	49.50	0.00	0.00	0.00
12.00	0.00	0	49.50	0.00	0.00	0.00
12.50	1.09	98	50.91	0.00	0.00	0.00
13.00	1.34	209	53.52	1.47	0.00	1.47
13.50	0.57	209	53.51	0.70	0.00	0.70
14.00	0.26	209	53.51	0.39	0.00	0.39
14.50	0.17	209	53.50	0.30	0.00	0.30
15.00	0.11	209	53.50	0.22	0.00	0.22
15.50	0.06	209	53.50	0.13	0.00	0.13
16.00	0.02	209	53.50	0.04	0.00	0.04
16.50	0.00	209	53.50	0.00	0.00	0.00
17.00	0.00	209	53.50	0.00	0.00	0.00
17.50	0.00	209	53.50	0.00	0.00	0.00
18.00	0.00	209	53.50	0.00	0.00	0.00
18.50	0.00	209	53.50	0.00	0.00	0.00
19.00	0.00	209	53.50	0.00	0.00	0.00
19.50	0.00	209	53.50	0.00	0.00	0.00
20.00	0.00	209	53.50	0.00	0.00	0.00
20.50	0.00	209	53.50	0.00	0.00	0.00
21.00	0.00	209	53.50	0.00	0.00	0.00
21.50	0.00	209	53.50	0.00	0.00	0.00
22.00	0.00	209	53.50	0.00	0.00	0.00
22.50	0.00	209	53.50	0.00	0.00	0.00
23.00	0.00	209	53.50	0.00	0.00	0.00
23.50	0.00	209	53.50	0.00	0.00	0.00
24.00	0.00	209	53.50	0.00	0.00	0.00

POST DEVEL

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Stage-Discharge for Pond 2P: Level Spreader

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
49.50	0.00	0.00	0.00	52.10	0.00	0.00	0.00
49.55	0.00	0.00	0.00	52.15	0.00	0.00	0.00
49.60	0.00	0.00	0.00	52.20	0.00	0.00	0.00
49.65	0.00	0.00	0.00	52.25	0.00	0.00	0.00
49.70	0.00	0.00	0.00	52.30	0.00	0.00	0.00
49.75	0.00	0.00	0.00	52.35	0.00	0.00	0.00
49.80	0.00	0.00	0.00	52.40	0.00	0.00	0.00
49.85	0.00	0.00	0.00	52.45	0.00	0.00	0.00
49.90	0.00	0.00	0.00	52.50	0.00	0.00	0.00
49.95	0.00	0.00	0.00	52.55	0.00	0.00	0.00
50.00	0.00	0.00	0.00	52.60	0.00	0.00	0.00
50.05	0.00	0.00	0.00	52.65	0.00	0.00	0.00
50.10	0.00	0.00	0.00	52.70	0.00	0.00	0.00
50.15	0.00	0.00	0.00	52.75	0.00	0.00	0.00
50.20	0.00	0.00	0.00	52.80	0.00	0.00	0.00
50.25	0.00	0.00	0.00	52.85	0.00	0.00	0.00
50.30	0.00	0.00	0.00	52.90	0.00	0.00	0.00
50.35	0.00	0.00	0.00	52.95	0.00	0.00	0.00
50.40	0.00	0.00	0.00	53.00	0.00	0.00	0.00
50.45	0.00	0.00	0.00	53.05	0.00	0.00	0.00
50.50	0.00	0.00	0.00	53.10	0.00	0.00	0.00
50.55	0.00	0.00	0.00	53.15	0.00	0.00	0.00
50.60	0.00	0.00	0.00	53.20	0.00	0.00	0.00
50.65	0.00	0.00	0.00	53.25	0.00	0.00	0.00
50.70	0.00	0.00	0.00	53.30	0.00	0.00	0.00
50.75	0.00	0.00	0.00	53.35	0.00	0.00	0.00
50.80	0.00	0.00	0.00	53.40	0.00	0.00	0.00
50.85	0.00	0.00	0.00	53.45	0.00	0.00	0.00
50.90	0.00	0.00	0.00	53.50	0.00	0.00	0.00
50.95	0.00	0.00	0.00	53.55	3.58	0.00	3.58
51.00	0.00	0.00	0.00				
51.05	0.00	0.00	0.00				
51.10	0.00	0.00	0.00				
51.15	0.00	0.00	0.00				
51.20	0.00	0.00	0.00				
51.25	0.00	0.00	0.00				
51.30	0.00	0.00	0.00				
51.35	0.00	0.00	0.00				
51.40	0.00	0.00	0.00				
51.45	0.00	0.00	0.00				
51.50	0.00	0.00	0.00				
51.55	0.00	0.00	0.00				
51.60	0.00	0.00	0.00				
51.65	0.00	0.00	0.00				
51.70	0.00	0.00	0.00				
51.75	0.00	0.00	0.00				
51.80	0.00	0.00	0.00				
51.85	0.00	0.00	0.00				
51.90	0.00	0.00	0.00				
51.95	0.00	0.00	0.00				
52.00	0.00	0.00	0.00				
52.05	0.00	0.00	0.00				

POST DEVEL

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Stage-Area-Storage for Pond 2P: Level Spreader

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
49.50	147	0	52.10	147	175
49.55	147	3	52.15	147	178
49.60	147	6	52.20	147	181
49.65	147	9	52.25	147	184
49.70	147	12	52.30	147	187
49.75	147	15	52.35	147	190
49.80	147	18	52.40	147	193
49.85	147	21	52.45	147	196
49.90	147	24	52.50	147	199
49.95	147	26	52.55	147	202
50.00	147	29	52.60	147	205
50.05	147	32	52.65	147	208
50.10	147	35	52.70	147	209
50.15	147	37	52.75	147	209
50.20	147	40	52.80	147	209
50.25	147	44	52.85	147	209
50.30	147	47	52.90	147	209
50.35	147	51	52.95	147	209
50.40	147	55	53.00	147	209
50.45	147	59	53.05	147	209
50.50	147	63	53.10	147	209
50.55	147	68	53.15	147	209
50.60	147	72	53.20	147	209
50.65	147	76	53.25	147	209
50.70	147	80	53.30	147	209
50.75	147	85	53.35	147	209
50.80	147	89	53.40	147	209
50.85	147	93	53.45	147	209
50.90	147	98	53.50	147	209
50.95	147	102	53.55	147	209
51.00	147	106			
51.05	147	110			
51.10	147	114			
51.15	147	118			
51.20	147	122			
51.25	147	126			
51.30	147	129			
51.35	147	132			
51.40	147	135			
51.45	147	137			
51.50	147	140			
51.55	147	143			
51.60	147	146			
51.65	147	149			
51.70	147	152			
51.75	147	155			
51.80	147	158			
51.85	147	161			
51.90	147	164			
51.95	147	166			
52.00	147	169			
52.05	147	172			

POST DEVEL

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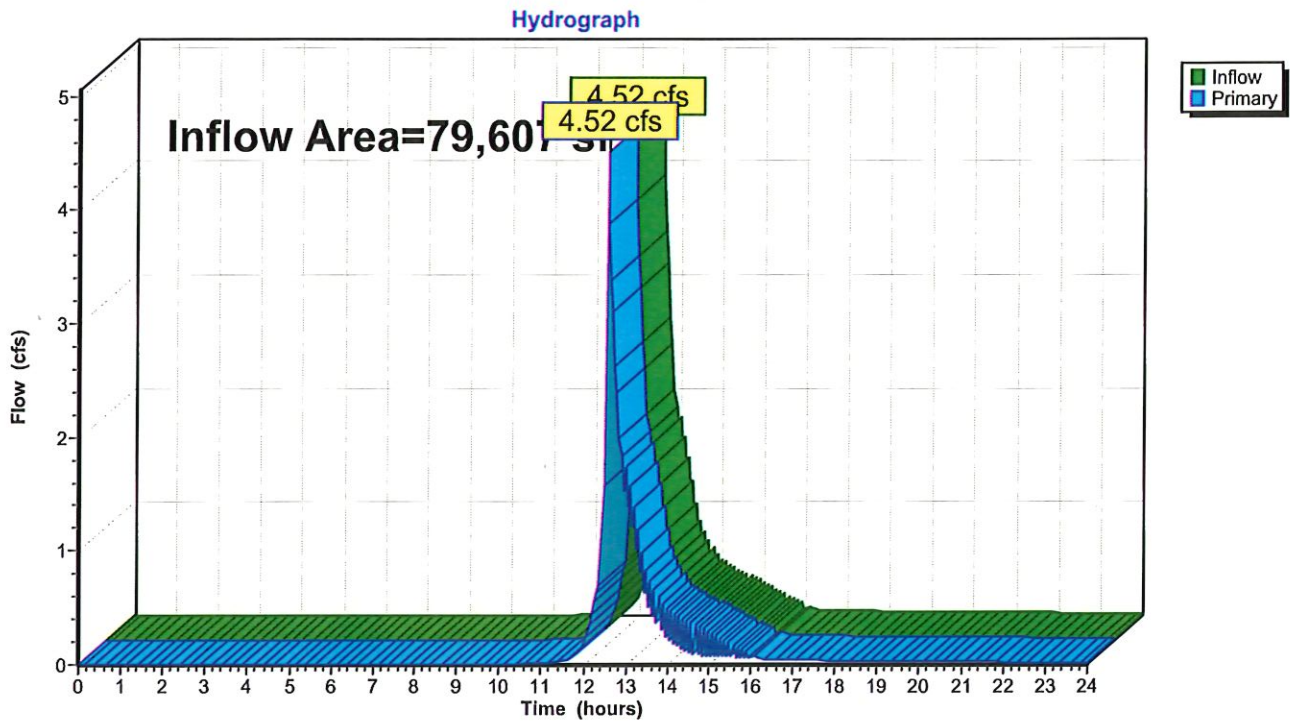
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Summary for Link 1L: POC "A" LOW POINT AT S.E. END OF PARCEL

Inflow Area = 79,607 sf, 56.81% Impervious, Inflow Depth > 1.68" for 25-YEAR event
Inflow = 4.52 cfs @ 12.57 hrs, Volume= 11,149 cf
Primary = 4.52 cfs @ 12.57 hrs, Volume= 11,149 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.05 hrs

Link 1L: POC "A" LOW POINT AT S.E. END OF PARCEL



POST DEVEL

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Hydrograph for Link 1L: POC "A" LOW POINT AT S.E. END OF PARCEL

Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)	Time (hours)	Inflow (cfs)	Elevation (feet)	Primary (cfs)
0.00	0.00	0.00	0.00	13.00	1.74	0.00	1.74
0.25	0.00	0.00	0.00	13.25	1.02	0.00	1.02
0.50	0.00	0.00	0.00	13.50	0.84	0.00	0.84
0.75	0.00	0.00	0.00	13.75	0.36	0.00	0.36
1.00	0.00	0.00	0.00	14.00	0.50	0.00	0.50
1.25	0.00	0.00	0.00	14.25	0.17	0.00	0.17
1.50	0.00	0.00	0.00	14.50	0.39	0.00	0.39
1.75	0.00	0.00	0.00	14.75	0.09	0.00	0.09
2.00	0.00	0.00	0.00	15.00	0.30	0.00	0.30
2.25	0.00	0.00	0.00	15.25	0.08	0.00	0.08
2.50	0.00	0.00	0.00	15.50	0.20	0.00	0.20
2.75	0.00	0.00	0.00	15.75	0.07	0.00	0.07
3.00	0.00	0.00	0.00	16.00	0.10	0.00	0.10
3.25	0.00	0.00	0.00	16.25	0.06	0.00	0.06
3.50	0.00	0.00	0.00	16.50	0.05	0.00	0.05
3.75	0.00	0.00	0.00	16.75	0.05	0.00	0.05
4.00	0.00	0.00	0.00	17.00	0.05	0.00	0.05
4.25	0.00	0.00	0.00	17.25	0.04	0.00	0.04
4.50	0.00	0.00	0.00	17.50	0.04	0.00	0.04
4.75	0.00	0.00	0.00	17.75	0.04	0.00	0.04
5.00	0.00	0.00	0.00	18.00	0.04	0.00	0.04
5.25	0.00	0.00	0.00	18.25	0.03	0.00	0.03
5.50	0.00	0.00	0.00	18.50	0.03	0.00	0.03
5.75	0.00	0.00	0.00	18.75	0.03	0.00	0.03
6.00	0.00	0.00	0.00	19.00	0.03	0.00	0.03
6.25	0.00	0.00	0.00	19.25	0.03	0.00	0.03
6.50	0.00	0.00	0.00	19.50	0.03	0.00	0.03
6.75	0.00	0.00	0.00	19.75	0.03	0.00	0.03
7.00	0.00	0.00	0.00	20.00	0.03	0.00	0.03
7.25	0.00	0.00	0.00	20.25	0.03	0.00	0.03
7.50	0.00	0.00	0.00	20.50	0.03	0.00	0.03
7.75	0.00	0.00	0.00	20.75	0.03	0.00	0.03
8.00	0.00	0.00	0.00	21.00	0.03	0.00	0.03
8.25	0.00	0.00	0.00	21.25	0.02	0.00	0.02
8.50	0.00	0.00	0.00	21.50	0.02	0.00	0.02
8.75	0.00	0.00	0.00	21.75	0.02	0.00	0.02
9.00	0.00	0.00	0.00	22.00	0.02	0.00	0.02
9.25	0.00	0.00	0.00	22.25	0.02	0.00	0.02
9.50	0.00	0.00	0.00	22.50	0.02	0.00	0.02
9.75	0.00	0.00	0.00	22.75	0.02	0.00	0.02
10.00	0.00	0.00	0.00	23.00	0.02	0.00	0.02
10.25	0.00	0.00	0.00	23.25	0.02	0.00	0.02
10.50	0.01	0.00	0.01	23.50	0.02	0.00	0.02
10.75	0.01	0.00	0.01	23.75	0.02	0.00	0.02
11.00	0.02	0.00	0.02	24.00	0.02	0.00	0.02
11.25	0.02	0.00	0.02				
11.50	0.04	0.00	0.04				
11.75	0.06	0.00	0.06				
12.00	0.17	0.00	0.17				
12.25	0.55	0.00	0.55				
12.50	0.70	0.00	0.70				
12.75	2.63	0.00	2.63				

APPENDIX "M"

**HYDROCAD – OTHER STORM FREQUENCY SUMMARIES
2, 5, 10, & 50 YEAR STORMS**

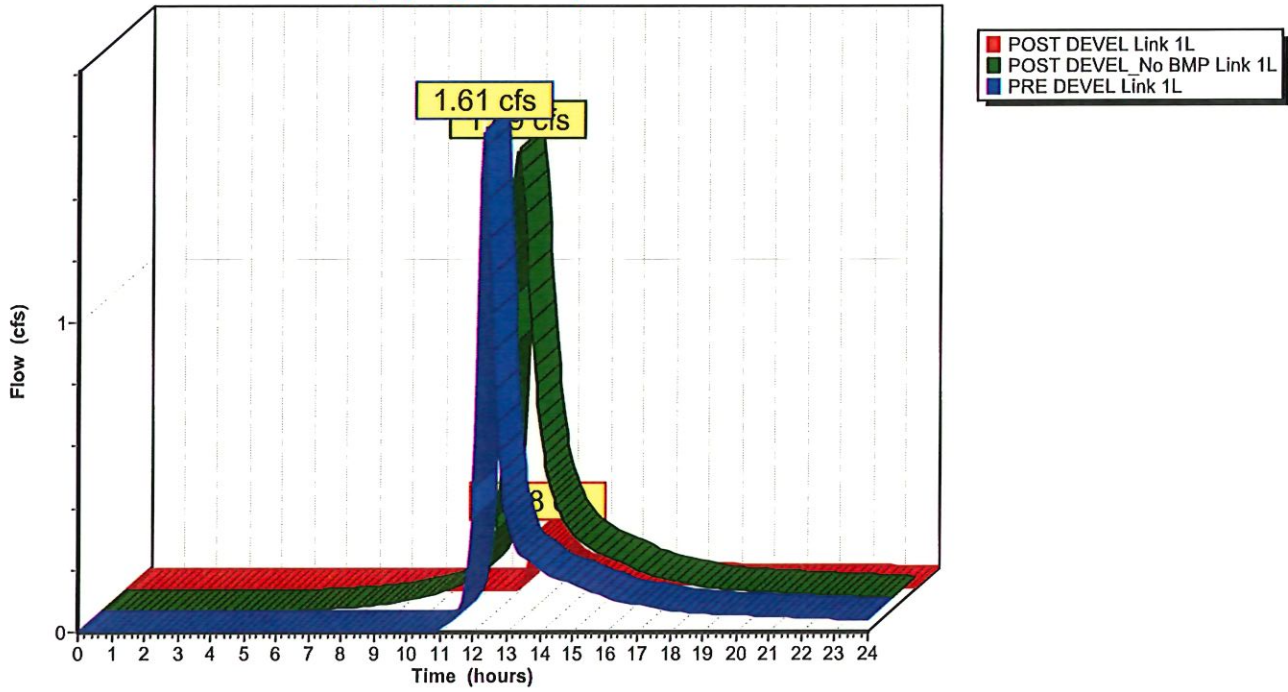
PRE DEVEL

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Type III 24-hr 2-YEAR Rainfall= 3.46"

Printed 3/15/2022

Primary Hydrograph Comparison

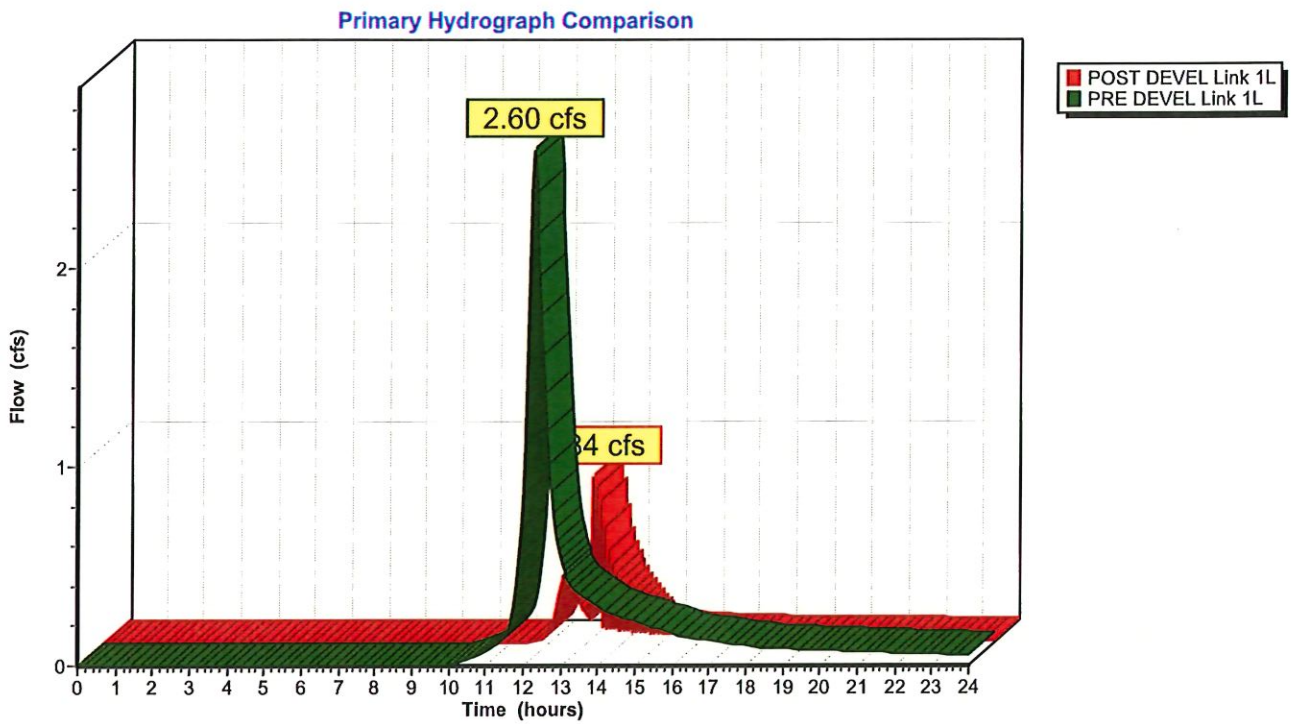


POST DEVEL

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Type III 24-hr 5-YEAR Rainfall=4.36"

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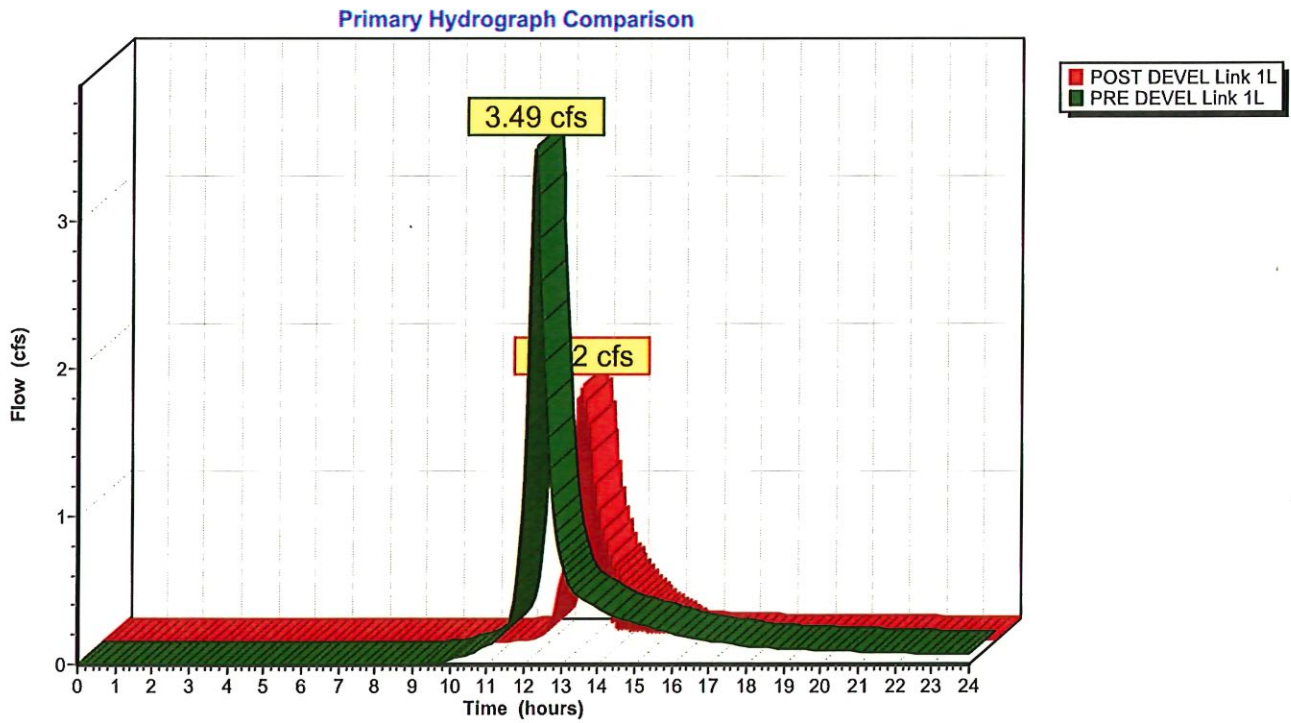


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Type III 24-hr 10-YEAR Rainfall=5.12"

Printed 3/15/2022



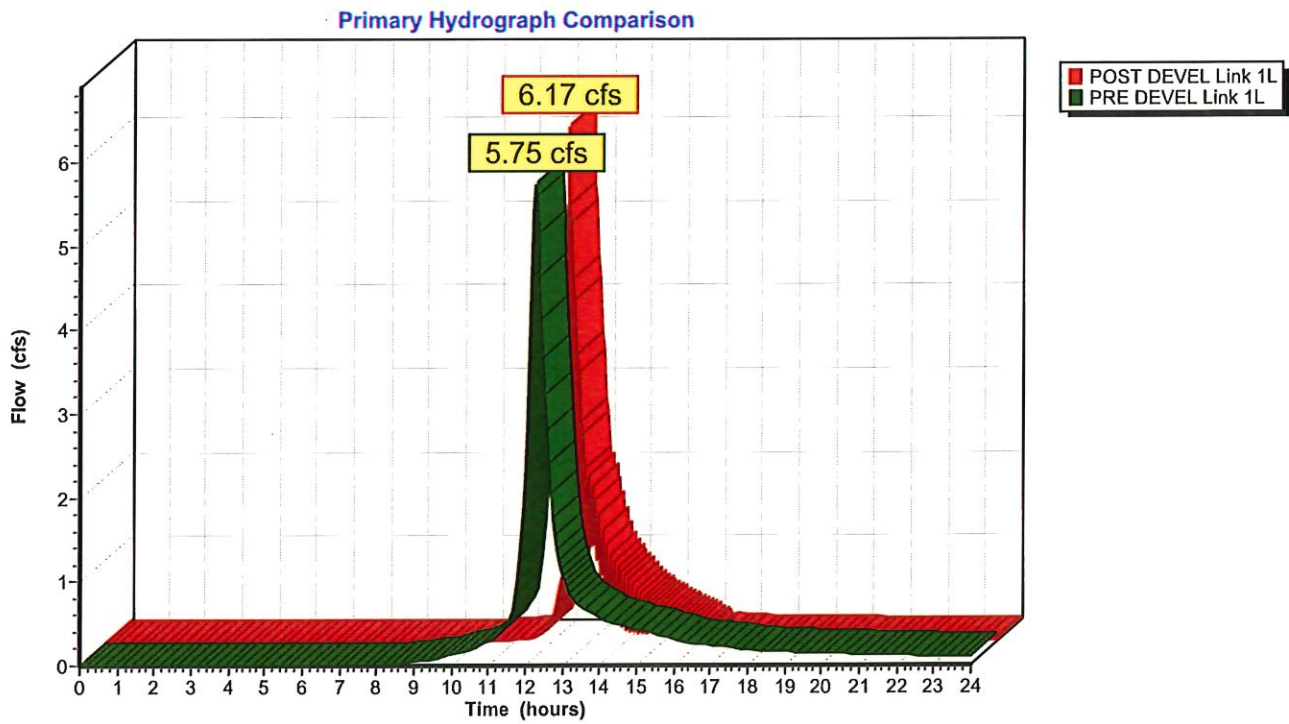
POST DEVEL

Prepared by Fuller Engineering & Land Surveying, LLC

HydroCAD® 10.00 s/n 02123 © 2011 HydroCAD Software Solutions LLC

Type III 24-hr 50-YEAR Rainfall=6.93"

Printed 3/15/2022



APPENDIX "O"
OPERATIONS AND MAINTENANCE PLAN

Appendix O
Operations and Maintenance Plan
#245 Norwich New London Tpke. Route 32 Montville, CT
March 8, 2022

Scope:

The purpose of the Operations and Maintenance Plan is to ensure that the existing and proposed stormwater components installed at #245 Route 32, Norwich New London Turnpike Montville, CT are maintained in operational condition throughout the life of the project. The service procedures associated with this plan shall be performed as required by the parties legally responsible for their maintenance.

Recommended Frequency of Service:

As further defined below, all stormwater components should be checked on a periodic basis and kept in full working order. Ultimately, the required frequency of inspection and service will depend on runoff quantities, pollutant loading, and clogging due to debris. At a minimum, we recommend that all stormwater components be inspected and serviced twice per year, once before winter begins and once during spring cleanup.

Qualified Inspector:

The inspections must be completed by an individual experienced in the construction and maintenance of stormwater drainage systems. Once every five years the inspections must be completed by a professional engineer.

Service Procedures:

1. **Catch Basins & Drainage Inlets:**

- a. Catch basins and drainage inlets shall be completely cleaned of accumulated debris and sediments at the completion of construction.
- b. For the first year, catch basins and drainage inlets shall be inspected on a quarterly basis.
- c. Any accumulated debris within the catch basins/inlets shall be removed and any repairs as required.
- d. From the second year onward, visual inspections shall occur twice per year, once in the spring and once in the fall, after fall cleanup of leaves has occurred.
- e. Accumulated debris within the catch basins/inlets shall be removed and repairs made as required.
- f. Accumulated sediments shall be removed at which time they are within 12 inches of the invert of the outlet pipe.
- g. Any additional maintenance required per the manufacturer's specifications shall also be completed.

2. **Storm Drainage Piping and Manholes/Junction Boxes:**

- a. All storm drainage piping shall be completely flushed of debris and accumulated sediment at the completion of construction.
- b. Manholes/Junction Boxes shall be inspected and repaired on an annual basis.

- c. Unless system performance indicates degradation of piping, comprehensive video inspection of storm drainage piping shall occur once every ten years.
- d. Any additional maintenance required per the manufacturer's specifications shall also be completed.

3. Stormwater Inlet/Control Structures:

- a. All control structures (orifice, weir, etc.) shall be completely cleaned of accumulated debris and sediments at the completion of construction. Any repairs shall be performed.
- b. For the first year, control structures (orifice, weir, etc.) shall be inspected on a quarterly basis.
- c. Any accumulated debris shall be removed and any repairs made to the control structures (orifice, weir, etc.) as required.
- d. From the second year onward, visual inspections shall occur twice per year, once in the spring and once in the fall, after fall cleanup of leaves has occurred.
- e. Accumulated debris shall be removed and repairs made as required.
- f. Any additional maintenance required per the manufacturer's specifications shall also be completed.

4. Drywells and Infiltration Systems:

- a. All drywells/infiltrators shall be completely cleaned of accumulated debris and sediments upon the completion of construction.
- b. For the first year, the drywells/infiltrators shall be inspected on a quarterly basis.
- c. Any accumulated debris within the drywells/infiltrators shall be removed and any repairs made to the units as required.
- d. From the second year onward, visual inspection shall occur twice per year, once in the spring and once in the fall, after fall cleanup of leaves has occurred.
- e. Accumulated debris within the units shall be removed and repairs made as required.
- f. Any additional maintenance required per the manufacturer's specifications shall also be completed.

5. Roof Gutters:

- a. Remove accumulated debris and inspect for damage. Any damage should be repaired as required.

Disposal of Debris and Sediment:

All debris and sediment removed from the stormwater structures and bioretention/biofiltration basins shall be disposed of legally. There shall be no dumping of silt or debris into or in proximity to any inland or tidal wetlands.

Maintenance Records:

The Owners(s) must maintain all records (logs, invoices, reports, data, etc.) and have them readily available for inspection at all times.

Operations and Maintenance Log (Page 1 of 3)

#245 Route 32 Norwich New London Tpke. Montville, CT

March 8, 2022 30,

Type of Inspection: Spring Fall Other

Inspector's Name: _____ Date of Inspection: _____

Affiliation: _____ Phone #: _____

Catch Basins & Drainage Inlets:

- Has accumulated debris been removed from grates? Yes No N/A
- Do any basins require additional repair? (identify below): Yes No N/A
- Have sumps been cleaned of sediment? Yes No N/A

Notes:

Storm Drainage Piping and Manholes/Junction Boxes:

- Has accumulated debris been removed? Yes No N/A
- Do any manholes require additional repair? (identify below): Yes No N/A
- Is there any evidence of stormwater piping failure? Yes No N/A
- Has a comprehensive video inspection been completed? Yes No N/A

Notes:

Stormwater Control Structures:

- Has accumulated debris been removed? Yes No N/A
- Are any repairs required? (identify below): Yes No N/A
- Have orifices and weirs been cleaned of debris? Yes No N/A

Notes:

Operations and Maintenance Log (Page 2 of 3)

#245 Route 32 Norwich New London Tpke., Montville, CT

March 8, 2022

Drainage Outfalls/Splash Pads/Scour Holes/Level Spreaders:

- Have all drainage outlets been cleared of debris? Yes No N/A
- Have all outlet protections been inspected/repared? Yes No N/A
- Have all erosion issues been repaired? Yes No N/A

Notes:

Drywells and Infiltration Systems:

- Have units been cleared of debris/sediments? Yes No N/A
- Do units require additional repair? (identify below): Yes No N/A
- Has draining times of system been verified? Yes No N/A

Notes:

Roof Gutters:

- Has accumulated debris been removed from gutters? Yes No N/A
- Do any gutters require additional repair? (identify below): Yes No N/A

Notes:

Operations and Maintenance Log (Page 3 of 3)

#245 Route 32 Norwich New London Tpke. Montville CT

March 8, 2022

Please make additional notes/observations and particular concerns below. Also record any additional maintenance that has been performed:

Signature of Inspector:

Date:

FULLER ENGINEERING & LAND SURVEYING, LLC

525 John Street • Second Floor

Bridgeport, CT 06604

(203) 333-9465 (203) 336-1769 FAX

Information prepared for:

WESTERN GROUP, LLC

#245 Route 32

Montville, CT

&

Town of Montville

Department of Public Works / Engineering Department

Project Name: Wilton's Way Proposed Residential Development

**Sanitary Sewer
Report Section**

Documentation Revised: August 11, 2022

Documentation

Dated: January 25, 2022

Revised: March 8, 2022

FULLER ENGINEERING AND LAND SURVEYING, LLC
525 John Street – Second Floor – Bridgeport, CT 06604

Phone: (203) 333-9465

Fax: (203) 336-1769

PROJECT: RESIDENTIAL DEVELOPMENT @ #245 ROUTE 32
 LOCATION: 245 NORWICH-NEW LONDON ROAD (ROUTE 32)
 CLIENT: WESTERN GROUP, LLC

Revised: 8/10/2022

SUMMATION OF PROPOSED SEWAGE FLOW:

	QTY (unit or sqft)	GPD/UNIT	TOTAL GPD	
STUDIO	0	200	-	
1 BEDROOM	0	200	-	
2 BEDROOM	0	300	-	
3 BEDROOM	22	400	8,800.00	
			-	
TOTAL	22		8,800.00	GPD

7.48 GAL	1 CF	1,176.47 CF/day
1 day	24 hour	49.01960784 CF/HR
1 hour	3600 sec	0.013616558 CFS
MGD=	0.00880	MGD*4= 0.0352

INCLUDE PEAKING FACTOR OF 4

0.054466231 CFS

where:

GPD = Gallons per Day

MGD = Millions Gallons per Day

FULLER ENGINEERING AND LAND SURVEYING, LLC
525 John Street – Second Floor – Bridgeport, CT 06604

Phone: (203) 333-9465

Fax: (203) 336-1769

PROJECT: WILTONS WAY

LOCATION: #245 NORWICH-NEW LONDON ROAD (CT ROUTE 32)

MONTVILLE, CT

CLIENT: WESTERN GROUP, LLC

DATE: 8/10/2022

SUMMATION OF PROPOSED SEWAGE FLOW: (PEAK PUMPING FACTOR)

	QTY (unit or sqft)	GPD/UNIT	TOTAL GPD	
WH 483-92 Triplex	2	5000	10,000.00	
Grinder Pump			-	
			-	
			-	
TOTAL	2		10,000.00	GPD

7.48 GAL	1 CF	1,336.90 CF/day
1 day	24 hour	55.70409982 CF/HR
1 hour	3600 sec	0.015473361 CFS
MGD=	0.01000	MGD*4= 0.04

PEAKING FACTOR INCLUDED IN PUMP SPEC.

0.015473361 CFS

where:

GPD = Gallons per Day

MGD = Millions Gallons per Day

FULLER ENGINEERING AND LAND SURVEYING, LLC
525 John Street – Second Floor – Bridgeport, CT 06604

Phone: (203) 333-9465

Fax: (203) 336-1769

CONVEYANCE CALCULATIONS:

PROJECT: RESIDENTIAL DEVELOPMENT @ #245 ROUTE 32

LOCATION: 245 NORWICH-NEW LONDON ROAD (ROUTE 32) MONTVILLE, CT

CLIENT: WESTERN GROUP, LLC

PIPE: Existing 8" Sanitary Sewer in Town Road

Pipe Diameter: 8 inches

MANNINGS EQUATION

$$R = \frac{A}{P_w} \quad 0.166667$$

Where	R:	Hydraulic radius (ft)	
	A:	Cross-sectional area (ft ²)	0.349066
	P _w :	Wetted Perimeter (ft)	2.094395

$$V = \frac{k R^{2/3} S^{1/2}}{n} \quad 2.452942$$

Where	V:	Mean Velocity (ft/s)	
	k:	1.49 for U.S. customary units, or 1.0 for S.I. units	
	n:	Manning's roughness value	0.012
	R:	Hydraulic Radius (ft)	0.166667
	S:	friction Slope (ft/ft)	0.004255

$$Q = VA \quad 0.856238 \text{ cfs}$$

Where	Q:	Flow Rate(cfs)	
	V:	Average velocity (ft/s)	

The Q for the proposed buildings plus storm infiltration going in to the system is 0.054 cfs which is less than the calculated Q; therefore OK
The Existing 8" Lateral at 0.0043 slope is adequate.

Notes:

1. Storm runoff infiltration is considered at part of the safety factor.
2. Sewer system from development will be a force main system. Each building complex is to have its own gravity sewer lateral to a 6" sanitary sewer which feeds the communal pump sta.s.

FULLER ENGINEERING AND LAND SURVEYING, LLC
525 John Street – Second Floor – Bridgeport, CT 06604

Phone: (203) 333-9465

Fax: (203) 336-1769

CONVEYANCE CALCULATIONS:

PROJECT: RESIDENTIAL DEVELOPMENT @ #245 ROUTE 32

LOCATION: 245 NORWICH-NEW LONDON ROAD (ROUTE 32) MONTVILLE, CT

CLIENT: WESTERN GROUP, LLC

PIPE: Existing 6" Sanitary Lateral (Use Existing House Stub)

Pipe Diameter: 6 inches

MANNINGS EQUATION

$$R = \frac{A}{P_w} \quad 0.125$$

Where	R:	Hydraulic radius (ft)	
	A:	Cross-sectional area (ft ²)	0.19635
	P _w :	Wetted Perimeter (ft)	1.570796

$$V = \frac{k R^{2/3} S^{1/2}}{n} \quad 2.172917$$

Where	V:	Mean Velocity (ft/s)	
	k:	1.49 for U.S. customary units, or 1.0 for S.I. units	
	n:	Manning's roughness value	0.012
	R:	Hydraulic Radius (ft)	0.125
	S:	friction Slope (ft/ft)	0.0049

$$Q = VA \quad 0.426651 \text{ cfs}$$

Where	Q:	Flow Rate(cfs)	
	V:	Average velocity (ft/s)	

The Q for the proposed buildings plus storm infiltration going in to the system is 0.054 cfs which is less than the calculated Q; therefore OK
The Existing 6" Lateral at 0.0049 slope is adequate.

Notes:

1. San. Lateral @ 0.0049 ft/ft is a min. slope, actual pipe slope may be > therefore increasing capacity.
2. Storm runoff infiltration is considered as part of the safety factor.
3. Sewer system from development will be a force main system. Each building complex is to have its own 4" Sanitary Sewer Lateral to the common 6" Sewer which feeds the pump stations.

FULLER ENGINEERING AND LAND SURVEYING, LLC
525 John Street – Second Floor – Bridgeport, CT 06604

Phone: (203) 333-9465

Fax: (203) 336-1769

CONVEYANCE CALCULATIONS:

PROJECT: RESIDENTIAL DEVELOPMENT @ #245 ROUTE 32

LOCATION: 245 NORWICH-NEW LONDON ROAD (ROUTE 32) MONTVILLE, CT

CLIENT: WESTERN GROUP, LLC

PIPE: New 4" Sanitary Lateral (from each Unit)

Pipe Diameter: 4 inches

MANNINGS EQUATION

$$R = \frac{A}{P_w} \quad 0.083333$$

Where R: Hydraulic radius (ft)
A: Cross-sectional area (ft²) 0.087266
P_w: Wetted Perimeter (ft) 1.047198

$$V = \frac{k R^{2/3} S^{1/2}}{n} \quad 2.171153$$

Where V: Mean Velocity (ft/s)
k: 1.49 for U.S. customary units, or 1.0 for S.I. units
n: Manning's roughness value 0.012
R: Hydraulic Radius (ft) 0.083333
S: friction Slope (ft/ft) 0.0084

$$Q = VA \quad 0.189469 \text{ cfs}$$

Where Q: Flow Rate(cfs)
V: Average velocity (ft/s)

The Q for each proposed building unit (3 bedroom @ 400 GPD) going in to the system is 0.0024 cfs which is less than the calculated Q; therefore OK
The New 4" Lateral at 0.0084 slope is adequate.

Notes:

1. San. Lat. @ 0.0084 ft/ft is a min. slope, prop. slope called out @ 0.01 ft/ft will increase capacity.
2. Sewer system from development will be a force main system. Each building complex is to have its own 4" Sanitary Sewer Lateral to the common 6" Sewer which feeds the pump stations.

Table 1 - Average Daily Flow on Specific Developments

TYPE OF DEVELOPMENT	UNIT	ADF (GPD/UNIT)
Auditorium	Seat	5
Automobile parking	1000 Gross square feet	25
Automobile repair garage	1000 Gross square feet	100
Bar	Seat	20
Bar: Public Areas & Tables	15 Gross square feet	20
Barber Shop	1000 Gross square feet	50
Beauty Salon	1000 Gross square feet	200
Carwash	Square feet inside	240
Church	Seat	5
Community center	Occupant	5
Country Club	Member	20
Factories (Exclusive of industrial waste)	Employee/shift	25
Factories (add for showers)	Employee/shift	+10
Gymnasium	1000 Gross square feet	300
Hospital - Convalescent/Rest Homes	Bed	150
Hospital	Bed	250
Jail	Inmate	85
Laboratory - commercial	1000 Gross square feet	300
Laundromat	Washer	400
Library / Museum	1000 Gross square feet	25
Manufacturing - industry	1000 Gross square feet	100
Medical building	1000 Gross square feet	300
Motel/Hotel	Room	100
Motel/Hotel (with cooking facilities)	Room	150
Office building	1000 Gross square feet	200
Residential -		
- single family dwelling, Townhouses	Dwelling unit	400
- bachelor/single, artist dwelling	Dwelling unit	100
- 1 Bedroom apartment or condo	Dwelling unit	200
- 2 Bedroom apartment or condo	Dwelling unit	300
- 3 Bedroom apartment of condo	Dwelling unit	400
- boarding house	Bed	85
- mobile home	Unit	200
- guest house with kitchen	Dwelling unit	300
Restaurant - fixed seat	Seat	50 or
Restaurant (dining area)	15 Gross square feet	50
Restaurant - Bakery, Doughnut Shop, take out	1000 Gross square feet	300
School - day care center	Child	10
School - elementary / junior high	Student	10
School - high school	Student	15
School - kindergarten	35 Gross square feet	10
Stadium/Theater - fixed seat	Seat	5
Stores, Shopping Centers, and Malls	1000 Gross square feet	100
University or College	Student	20
University Dormitory	Student	100
Veterinarian	1000 Gross square feet	300
Warehouse	1000 Gross square feet	25

Table 1 Notes:

Gross square feet: area included within the exterior of the surrounding walls of a building excluding courts.

Example Calculation - Assume a 10,000 sq. ft. office building is proposed. The estimated average daily flow is calculated as 10,000 sq. ft. x 200 gpd/1000 sq. ft. = 2000 gpd.

Table 2 - Average Flow Rate based on Land Use and Area Density

LAND USE / AREA DENSITY	UNIT	ADF (GPD/UNIT)
Low Density Residential (Single Family) (10 people / acre)	acre	1,000
Medium Density (Multi-Family) Residential (12 to 15 people / acre)	acre	1,200 - 1,500
High Density (Multi-Family) Residential (20 to 75 people / acre)	acre	2,000 - 7,500
Office & Institutional	acre	5,000
Commercial & Light Industrial	acre	5,000
Industrial	acre	10,000

The design Flow shall be calculated as follows:

$$\text{Design Flow} = \text{Average Daily Flow} \times \text{Peaking Factor}$$

where:

Design Flow = Flow used to design a sanitary sewer facility, gpd.

Average Daily Flow = Estimated average daily flow, gpd.

Peaking Factor = Ratio of peak hourly flow to average daily flow. A peaking factor of four (4) shall be used for all calculations unless directed otherwise by the Authority.

Note:

All developments with proposed ADF above 2,000 gpd are required to evaluate the capacity of the existing sanitary sewer system.

NOTE: Reference CT-DPH Code Technical Standards Section IV. Design Flows, Table 4. (Although the code is for Onsite Sewage Disposal, the Design Flows shall be similar for the Sanitary Sewer System).

EXHIBIT “C”

CT ECO – Environmental Conditions Online

Erosion Susceptibility Map



Legend

Basin Line

- Major Basin
- Regional Basin
- Subregional Basin
- Local Basin
- Basin Reach

Erosion Susceptibility

- Most Susceptible to Erosion
- Highly Susceptible to Erosion
- Surficial Materials Susceptible to E
- Soils Susceptible to Erosion

Geographic Names7

Geographic Place 3

Airport

- Airport
- Heliport

Railroad

Streets

- Interstate Highway
- US Highway
- State Highway
- Primary limited-access
- Ramp
- Street
- Ferry crossing

County Line

Notes

1: 4,514

This map is intended for general planning, management, education, and research purposes only. Data shown on this map may not be complete or current. The data shown may have been compiled at different times and at different map scales, which may not match the scale at which the data is shown on this map.

THIS MAP IS NOT TO BE USED FOR NAVIGATION

EXHIBIT “D”

CT ECO – Environmental Conditions Online

Soil Parent Material Map

(Probable Underlying Soil Type)

SOIL PARENT MATERIAL - #245 ROUTE 32 MONTVILLE, CT



Legend

Impervious Cover 2012

- Not Impervious
- Buildings
- Roads
- Other Impervious

Soil Parent Material

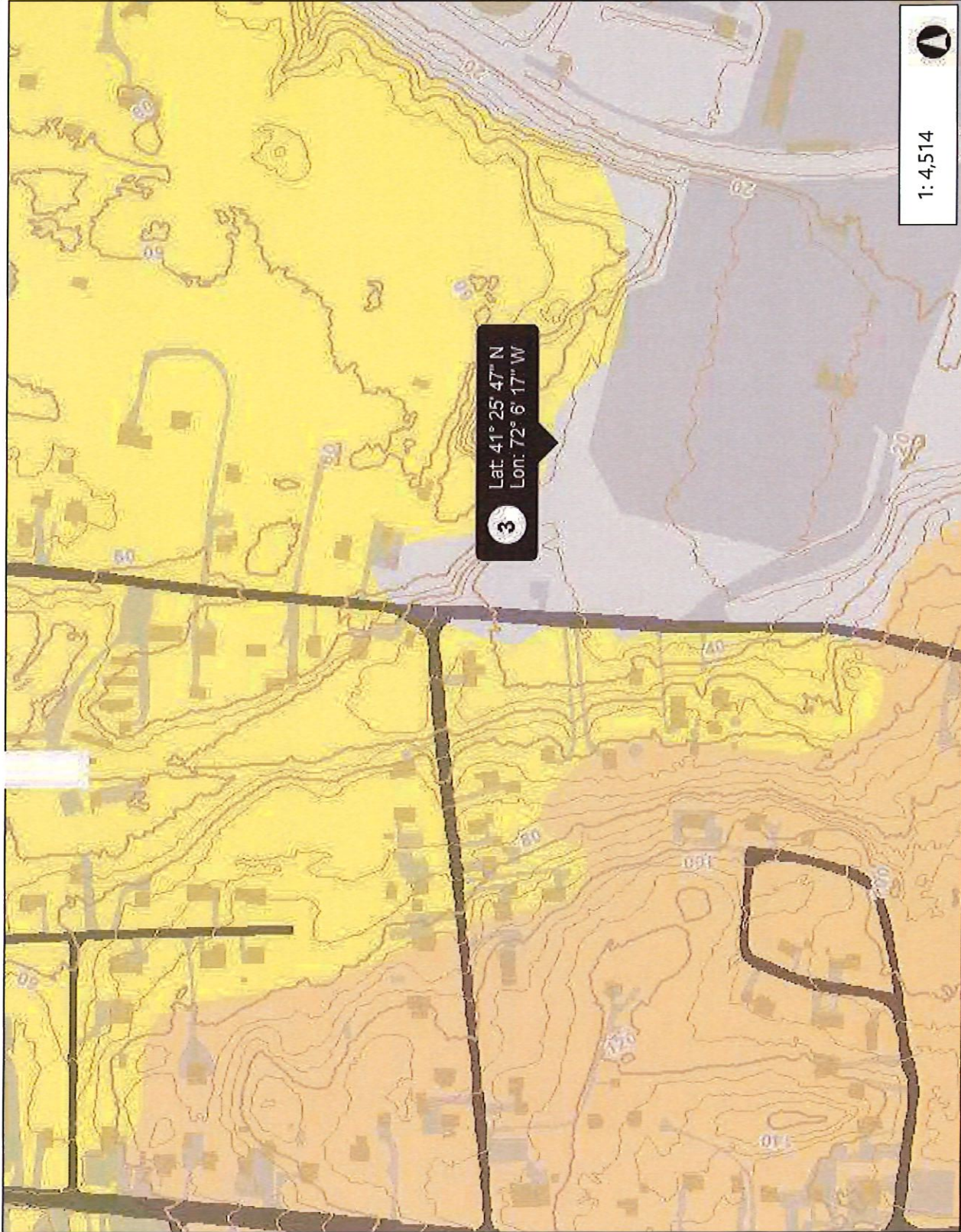
- Moderate to Bedrock
- Moderate - Shallow to Bedrock
- Shallow to Bedrock
- Glaciofluvial - Shallow to Bedrock
- Glaciofluvial
- Melt-out Till
- Melt-out Till - Moderate to Bedrock
- Melt-out Till - Shallow to Bedrock
- Deep Organic - Inland
- Shallow Organic - Inland
- Deep Organic - Tidal
- Shallow Organic - Tidal
- Alluvial/Floodplain
- Glaciolacustrine
- Lodgement Till
- Urban Influenced

Geographic Names 7

Geographic Place 3

- Airport
- Airport

Notes



1: 4,514

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EXHIBIT “E”

FEMA – Federal Emergency Management Agency

FIRM – Insurance Rate Map

