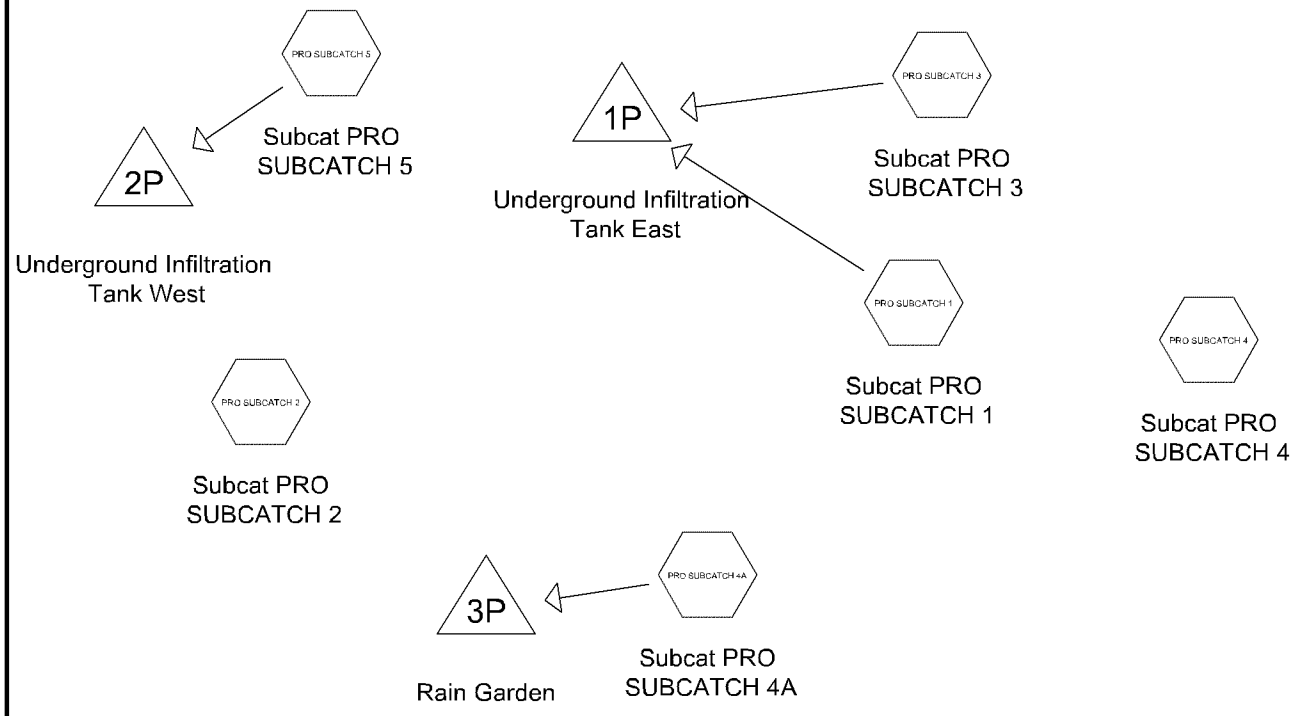


Subcat Reach Pond Link

Routing Diagram for 2023-09-14 Proposed 23421
Prepared by BKBM Engineers, Printed 10/11/2023

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.563	61	>75% Grass cover, Good, HSG B (PRO SUBCATCH 1, PRO SUBCATCH 2, PRO SUBCATCH 3, PRO SUBCATCH 4, PRO SUBCATCH 4A, PRO SUBCATCH 5)
1.291	98	Roofs, HSG B (PRO SUBCATCH 1, PRO SUBCATCH 2, PRO SUBCATCH 3, PRO SUBCATCH 4, PRO SUBCATCH 4A, PRO SUBCATCH 5)
1.854	**87**	**TOTAL AREA**

Summary for Subcatchment PRO SUBCATCH 1: Subcat PRO SUBCATCH 1

Runoff = 0.95 cfs @ 11.96 hrs, Volume= 0.047 af, Depth= 0.89"
Routed to Pond 1P : Underground Infiltration Tank East

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 1.1 Rainfall=1.10"

Area (ac)	CN	Description
0.000	61	>75% Grass cover, Good, HSG B
0.632	98	Roofs, HSG B
0.632	98	Weighted Average
0.000	61	0.02% Pervious Area
0.632	98	99.98% Impervious Area

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

Hydrograph for Subcatchment PRO SUBCATCH 1: Subcat PRO SUBCATCH 1

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	**0.00**	0.00	0.00
2.01	0.02	0.00	0.00	0.00
4.01	0.05	0.00	0.00	0.00
6.01	0.09	0.00	0.01	0.00
8.01	0.13	0.00	0.03	0.01
10.01	0.20	0.00	0.07	**0.02**
12.01	0.73	0.00	0.53	**0.72**
14.01	0.90	0.00	0.70	0.03
16.01	0.97	0.00	0.76	0.02
18.01	1.01	0.00	0.80	0.01
20.01	1.05	0.00	0.84	0.01
22.01	**1.07**	0.00	**0.86**	0.01
24.01	**1.10**	0.00	**0.89**	0.01
26.01	1.10	0.00	0.89	0.00
28.01	1.10	0.00	0.89	0.00
30.01	1.10	0.00	0.89	0.00
32.01	1.10	0.00	0.89	0.00
34.01	1.10	0.00	0.89	0.00
36.01	1.10	0.00	0.89	0.00
38.01	1.10	0.00	0.89	0.00
40.01	1.10	0.00	0.89	0.00
42.01	1.10	0.00	0.89	0.00
44.01	1.10	0.00	0.89	0.00
46.01	1.10	0.00	0.89	0.00
48.01	1.10	0.00	0.89	0.00
50.01	1.10	0.00	0.89	0.00
52.01	1.10	0.00	0.89	0.00
54.01	1.10	0.00	0.89	0.00
56.01	1.10	0.00	0.89	0.00
58.01	1.10	0.00	0.89	0.00
60.01	1.10	0.00	0.89	0.00
62.01	1.10	0.00	0.89	0.00
64.01	1.10	0.00	0.89	0.00
66.01	1.10	0.00	0.89	0.00
68.01	1.10	0.00	0.89	0.00
70.01	1.10	0.00	0.89	0.00
72.01	1.10	0.00	0.89	0.00
74.01	1.10	0.00	0.89	0.00
76.01	1.10	0.00	0.89	0.00
78.01	1.10	0.00	0.89	0.00

Summary for Subcatchment PRO SUBCATCH 2: Subcat PRO SUBCATCH 2

Runoff = 0.10 cfs @ 11.96 hrs, Volume= 0.005 af, Depth= 0.20"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 1.1 Rainfall=1.10"

Area (ac)	CN	Description
0.215	61	>75% Grass cover, Good, HSG B
0.064	98	Roofs, HSG B
0.279	70	Weighted Average
0.215	61	76.99% Pervious Area
0.064	98	23.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	28	0.0470	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.82"
2.5	36	0.0970	0.24		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.82"
0.1	36	0.0420	4.16		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
5.3	100	Total			

Hydrograph for Subcatchment PRO SUBCATCH 2: Subcat PRO SUBCATCH 2

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	**0.00**	0.00	0.00
2.01	0.02	0.00	0.00	0.00
4.01	0.05	0.00	0.00	0.00
6.01	0.09	0.00	0.01	0.00
8.01	0.13	0.00	0.03	0.00
10.01	0.20	0.00	0.07	**0.00**
12.01	0.73	0.00	0.53	**0.08**
14.01	0.90	0.00	0.70	0.00
16.01	0.97	0.00	0.76	0.00
18.01	1.01	0.00	0.80	0.00
20.01	1.05	0.00	0.84	0.00
22.01	**1.07**	0.00	**0.86**	0.00
24.01	**1.10**	0.00	**0.89**	0.00
26.01	1.10	0.00	0.89	0.00
28.01	1.10	0.00	0.89	0.00
30.01	1.10	0.00	0.89	0.00
32.01	1.10	0.00	0.89	0.00
34.01	1.10	0.00	0.89	0.00
36.01	1.10	0.00	0.89	0.00
38.01	1.10	0.00	0.89	0.00
40.01	1.10	0.00	0.89	0.00
42.01	1.10	0.00	0.89	0.00
44.01	1.10	0.00	0.89	0.00
46.01	1.10	0.00	0.89	0.00
48.01	1.10	0.00	0.89	0.00
50.01	1.10	0.00	0.89	0.00
52.01	1.10	0.00	0.89	0.00
54.01	1.10	0.00	0.89	0.00
56.01	1.10	0.00	0.89	0.00
58.01	1.10	0.00	0.89	0.00
60.01	1.10	0.00	0.89	0.00
62.01	1.10	0.00	0.89	0.00
64.01	1.10	0.00	0.89	0.00
66.01	1.10	0.00	0.89	0.00
68.01	1.10	0.00	0.89	0.00
70.01	1.10	0.00	0.89	0.00
72.01	1.10	0.00	0.89	0.00
74.01	1.10	0.00	0.89	0.00
76.01	1.10	0.00	0.89	0.00
78.01	1.10	0.00	0.89	0.00

Summary for Subcatchment PRO SUBCATCH 3: Subcat PRO SUBCATCH 3

Runoff = 0.71 cfs @ 11.96 hrs, Volume= 0.035 af, Depth= 0.65"
Routed to Pond 1P : Underground Infiltration Tank East

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 1.1 Rainfall=1.10"

Area (ac)	CN	Description
0.178	61	>75% Grass cover, Good, HSG B
0.474	98	Roofs, HSG B
0.653	88	Weighted Average
0.178	61	27.34% Pervious Area
0.474	98	72.66% Impervious Area

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

Hydrograph for Subcatchment PRO SUBCATCH 3: Subcat PRO SUBCATCH 3

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	**0.00**	0.00	0.00
2.01	0.02	0.00	0.00	0.00
4.01	0.05	0.00	0.00	0.00
6.01	0.09	0.00	0.01	0.00
8.01	0.13	0.00	0.03	0.01
10.01	0.20	0.00	0.07	**0.01**
12.01	0.73	0.00	0.53	**0.54**
14.01	0.90	0.00	0.70	0.02
16.01	0.97	0.00	0.76	0.01
18.01	1.01	0.00	0.80	0.01
20.01	1.05	0.00	0.84	0.01
22.01	**1.07**	0.00	**0.86**	0.01
24.01	**1.10**	0.00	**0.89**	0.01
26.01	1.10	0.00	0.89	0.00
28.01	1.10	0.00	0.89	0.00
30.01	1.10	0.00	0.89	0.00
32.01	1.10	0.00	0.89	0.00
34.01	1.10	0.00	0.89	0.00
36.01	1.10	0.00	0.89	0.00
38.01	1.10	0.00	0.89	0.00
40.01	1.10	0.00	0.89	0.00
42.01	1.10	0.00	0.89	0.00
44.01	1.10	0.00	0.89	0.00
46.01	1.10	0.00	0.89	0.00
48.01	1.10	0.00	0.89	0.00
50.01	1.10	0.00	0.89	0.00
52.01	1.10	0.00	0.89	0.00
54.01	1.10	0.00	0.89	0.00
56.01	1.10	0.00	0.89	0.00
58.01	1.10	0.00	0.89	0.00
60.01	1.10	0.00	0.89	0.00
62.01	1.10	0.00	0.89	0.00
64.01	1.10	0.00	0.89	0.00
66.01	1.10	0.00	0.89	0.00
68.01	1.10	0.00	0.89	0.00
70.01	1.10	0.00	0.89	0.00
72.01	1.10	0.00	0.89	0.00
74.01	1.10	0.00	0.89	0.00
76.01	1.10	0.00	0.89	0.00
78.01	1.10	0.00	0.89	0.00

Summary for Subcatchment PRO SUBCATCH 4: Subcat PRO SUBCATCH 4

Runoff = 0.03 cfs @ 11.96 hrs, Volume= 0.001 af, Depth= 0.19"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 1.1 Rainfall=1.10"

Area (ac)	CN	Description
0.071	61	>75% Grass cover, Good, HSG B
0.019	98	Roofs, HSG B
0.091	69	Weighted Average
0.071	61	78.56% Pervious Area
0.019	98	21.44% Impervious Area

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

Hydrograph for Subcatchment PRO SUBCATCH 4: Subcat PRO SUBCATCH 4

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	**0.00**	0.00	0.00
2.01	0.02	0.00	0.00	0.00
4.01	0.05	0.00	0.00	0.00
6.01	0.09	0.00	0.01	0.00
8.01	0.13	0.00	0.03	0.00
10.01	0.20	0.00	0.07	**0.00**
12.01	0.73	0.00	0.53	**0.02**
14.01	0.90	0.00	0.70	0.00
16.01	0.97	0.00	0.76	0.00
18.01	1.01	0.00	0.80	0.00
20.01	1.05	0.00	0.84	0.00
22.01	**1.07**	0.00	**0.86**	0.00
24.01	**1.10**	0.00	**0.89**	0.00
26.01	1.10	0.00	0.89	0.00
28.01	1.10	0.00	0.89	0.00
30.01	1.10	0.00	0.89	0.00
32.01	1.10	0.00	0.89	0.00
34.01	1.10	0.00	0.89	0.00
36.01	1.10	0.00	0.89	0.00
38.01	1.10	0.00	0.89	0.00
40.01	1.10	0.00	0.89	0.00
42.01	1.10	0.00	0.89	0.00
44.01	1.10	0.00	0.89	0.00
46.01	1.10	0.00	0.89	0.00
48.01	1.10	0.00	0.89	0.00
50.01	1.10	0.00	0.89	0.00
52.01	1.10	0.00	0.89	0.00
54.01	1.10	0.00	0.89	0.00
56.01	1.10	0.00	0.89	0.00
58.01	1.10	0.00	0.89	0.00
60.01	1.10	0.00	0.89	0.00
62.01	1.10	0.00	0.89	0.00
64.01	1.10	0.00	0.89	0.00
66.01	1.10	0.00	0.89	0.00
68.01	1.10	0.00	0.89	0.00
70.01	1.10	0.00	0.89	0.00
72.01	1.10	0.00	0.89	0.00
74.01	1.10	0.00	0.89	0.00
76.01	1.10	0.00	0.89	0.00
78.01	1.10	0.00	0.89	0.00

Summary for Subcatchment PRO SUBCATCH 4A: Subcat PRO SUBCATCH 4A

Runoff = 0.12 cfs @ 11.96 hrs, Volume= 0.006 af, Depth= 0.44"
Routed to Pond 3P : Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 1.1 Rainfall=1.10"

Area (ac)	CN	Description
0.078	61	>75% Grass cover, Good, HSG B
0.077	98	Roofs, HSG B
0.155	79	Weighted Average
0.078	61	50.44% Pervious Area
0.077	98	49.56% Impervious Area

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

Hydrograph for Subcatchment PRO SUBCATCH 4A: Subcat PRO SUBCATCH 4A

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	**0.00**	0.00	0.00
2.01	0.02	0.00	0.00	0.00
4.01	0.05	0.00	0.00	0.00
6.01	0.09	0.00	0.01	0.00
8.01	0.13	0.00	0.03	0.00
10.01	0.20	0.00	0.07	**0.00**
12.01	0.73	0.00	0.53	**0.09**
14.01	0.90	0.00	0.70	0.00
16.01	0.97	0.00	0.76	0.00
18.01	1.01	0.00	0.80	0.00
20.01	1.05	0.00	0.84	0.00
22.01	**1.07**	0.00	**0.86**	0.00
24.01	**1.10**	0.00	**0.89**	0.00
26.01	1.10	0.00	0.89	0.00
28.01	1.10	0.00	0.89	0.00
30.01	1.10	0.00	0.89	0.00
32.01	1.10	0.00	0.89	0.00
34.01	1.10	0.00	0.89	0.00
36.01	1.10	0.00	0.89	0.00
38.01	1.10	0.00	0.89	0.00
40.01	1.10	0.00	0.89	0.00
42.01	1.10	0.00	0.89	0.00
44.01	1.10	0.00	0.89	0.00
46.01	1.10	0.00	0.89	0.00
48.01	1.10	0.00	0.89	0.00
50.01	1.10	0.00	0.89	0.00
52.01	1.10	0.00	0.89	0.00
54.01	1.10	0.00	0.89	0.00
56.01	1.10	0.00	0.89	0.00
58.01	1.10	0.00	0.89	0.00
60.01	1.10	0.00	0.89	0.00
62.01	1.10	0.00	0.89	0.00
64.01	1.10	0.00	0.89	0.00
66.01	1.10	0.00	0.89	0.00
68.01	1.10	0.00	0.89	0.00
70.01	1.10	0.00	0.89	0.00
72.01	1.10	0.00	0.89	0.00
74.01	1.10	0.00	0.89	0.00
76.01	1.10	0.00	0.89	0.00
78.01	1.10	0.00	0.89	0.00

Summary for Subcatchment PRO SUBCATCH 5: Subcat PRO SUBCATCH 5

Runoff = 0.04 cfs @ 11.96 hrs, Volume= 0.002 af, Depth= 0.48"
Routed to Pond 2P : Underground Infiltration Tank West

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 1.1 Rainfall=1.10"

Area (ac)	CN	Description
0.021	61	>75% Grass cover, Good, HSG B
0.024	98	Roofs, HSG B
0.044	81	Weighted Average
0.021	61	46.35% Pervious Area
0.024	98	53.65% Impervious Area

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

Hydrograph for Subcatchment PRO SUBCATCH 5: Subcat PRO SUBCATCH 5

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	**0.00**	0.00	0.00
2.01	0.02	0.00	0.00	0.00
4.01	0.05	0.00	0.00	0.00
6.01	0.09	0.00	0.01	0.00
8.01	0.13	0.00	0.03	0.00
10.01	0.20	0.00	0.07	**0.00**
12.01	0.73	0.00	0.53	**0.03**
14.01	0.90	0.00	0.70	0.00
16.01	0.97	0.00	0.76	0.00
18.01	1.01	0.00	0.80	0.00
20.01	1.05	0.00	0.84	0.00
22.01	**1.07**	0.00	**0.86**	0.00
24.01	**1.10**	0.00	**0.89**	0.00
26.01	1.10	0.00	0.89	0.00
28.01	1.10	0.00	0.89	0.00
30.01	1.10	0.00	0.89	0.00
32.01	1.10	0.00	0.89	0.00
34.01	1.10	0.00	0.89	0.00
36.01	1.10	0.00	0.89	0.00
38.01	1.10	0.00	0.89	0.00
40.01	1.10	0.00	0.89	0.00
42.01	1.10	0.00	0.89	0.00
44.01	1.10	0.00	0.89	0.00
46.01	1.10	0.00	0.89	0.00
48.01	1.10	0.00	0.89	0.00
50.01	1.10	0.00	0.89	0.00
52.01	1.10	0.00	0.89	0.00
54.01	1.10	0.00	0.89	0.00
56.01	1.10	0.00	0.89	0.00
58.01	1.10	0.00	0.89	0.00
60.01	1.10	0.00	0.89	0.00
62.01	1.10	0.00	0.89	0.00
64.01	1.10	0.00	0.89	0.00
66.01	1.10	0.00	0.89	0.00
68.01	1.10	0.00	0.89	0.00
70.01	1.10	0.00	0.89	0.00
72.01	1.10	0.00	0.89	0.00
74.01	1.10	0.00	0.89	0.00
76.01	1.10	0.00	0.89	0.00
78.01	1.10	0.00	0.89	0.00

Summary for Pond 1P: Underground Infiltration Tank East

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=170)

Inflow Area = 1.285 ac, 86.10% Impervious, Inflow Depth = 0.76" for 1.1 event
Inflow = 1.67 cfs @ 11.96 hrs, Volume= 0.082 af
Outflow = 0.09 cfs @ 12.85 hrs, Volume= 0.082 af, Atten= 95%, Lag= 53.3 min
Discarded = 0.09 cfs @ 12.85 hrs, Volume= 0.082 af
Primary = 0.00 cfs @ 0.01 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Peak Elev= 843.76' @ 12.85 hrs Surf.Area= 4,637 sf Storage= 1,540 cf
Flood Elev= 845.50' Surf.Area= 4,956 sf Storage= 7,577 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 140.3 min (920.8 - 780.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	843.00'	6,117 cf	**30.00'W x 150.00'L x 5.00'H Field A Z=0.5** 24,792 cf Overall - 9,500 cf Embedded = 15,291 cf x 40.0% Voids
#2A	843.50'	9,500 cf	**CMP Round 48** x 35 Inside #1 Effective Size= 48.0"W x 48.0"H => 12.57 sf x 20.00'L = 251.3 cf Overall Size= 48.0"W x 48.0"H x 20.00'L 35 Chambers in 5 Rows 28.00' Header x 12.57 sf x 2 = 703.7 cf Inside
		15,617 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	843.00'	**0.800 in/hr Exfiltration over Surface area**
#2	Primary	845.50'	**10.0" Round 10" PVC** L= 230.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 845.50' / 838.00' S= 0.0326 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf

Discarded OutFlow Max=0.09 cfs @ 12.85 hrs HW=843.76' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.09 cfs)

Primary OutFlow Max=0.00 cfs @ 0.01 hrs HW=843.00' (Free Discharge)
↑**2=10" PVC** (Controls 0.00 cfs)

Pond 1P: Underground Infiltration Tank East - Chamber Wizard Field A

Chamber Model = CMP Round 48 (Round Corrugated Metal Pipe)
Effective Size= 48.0"W x 48.0"H => 12.57 sf x 20.00'L = 251.3 cf
Overall Size= 48.0"W x 48.0"H x 20.00'L

48.0" Wide + 24.0" Spacing = 72.0" C-C Row Spacing

7 Chambers/Row x 20.00' Long +4.00' Header x 2 = 148.00' Row Length +12.0" End Stone x 2 = 150.00' Base Length
5 Rows x 48.0" Wide + 24.0" Spacing x 4 + 12.0" Side Stone x 2 = 30.00' Base Width
6.0" Stone Base + 48.0" Chamber Height + 6.0" Stone Cover = 5.00' Field Height

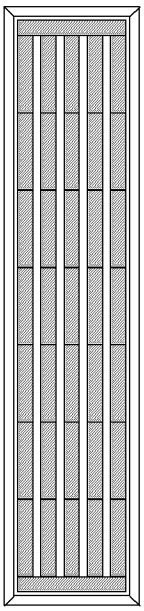
0.5 '/' Side-Z x Height = 30.0" Flare/Side
Base Length + Flare x 2 = 155.00' Top Length
Base Width + Flare x 2 = 35.00' Top Width

35 Chambers x 251.3 cf + 28.00' Header x 12.57 sf x 2 = 9,500.2 cf Chamber Storage

24,791.7 cf Field - 9,500.2 cf Chambers = 15,291.5 cf Stone x 40.0% Voids = 6,116.6 cf Stone Storage

Chamber Storage + Stone Storage = 15,616.8 cf = 0.359 af
Overall Storage Efficiency = 63.0%
Overall System Size = 150.00' x 30.00' x 5.00'

35 Chambers
918.2 cy Field
566.4 cy Stone



Hydrograph for Pond 1P: Underground Infiltration Tank East

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.01	0.00	0	843.00	0.00	0.00	**0.00**
2.01	0.00	0	843.00	0.00	0.00	0.00
4.01	0.00	0	843.00	0.00	0.00	0.00
6.01	0.01	0	843.00	0.01	0.01	0.00
8.01	0.01	0	843.00	0.01	0.01	0.00
10.01	**0.03**	0	843.00	0.03	0.03	0.00
12.01	**1.26**	**1,179**	**843.62**	**0.09**	**0.09**	0.00
14.01	0.05	**1,440**	**843.72**	**0.09**	**0.09**	0.00
16.01	0.03	1,084	843.58	0.09	0.09	0.00
18.01	0.02	649	843.36	0.08	0.08	0.00
20.01	0.02	178	843.10	0.08	0.08	0.00
22.01	0.01	0	843.00	0.00	0.00	0.00
24.01	0.01	0	843.00	0.00	0.00	0.00
26.01	0.00	0	843.00	0.00	0.00	0.00
28.01	0.00	0	843.00	0.00	0.00	0.00
30.01	0.00	0	843.00	0.00	0.00	0.00
32.01	0.00	0	843.00	0.00	0.00	0.00
34.01	0.00	0	843.00	0.00	0.00	0.00
36.01	0.00	0	843.00	0.00	0.00	0.00
38.01	0.00	0	843.00	0.00	0.00	0.00
40.01	0.00	0	843.00	0.00	0.00	0.00
42.01	0.00	0	843.00	0.00	0.00	0.00
44.01	0.00	0	843.00	0.00	0.00	0.00
46.01	0.00	0	843.00	0.00	0.00	0.00
48.01	0.00	0	843.00	0.00	0.00	0.00
50.01	0.00	0	843.00	0.00	0.00	0.00
52.01	0.00	0	843.00	0.00	0.00	0.00
54.01	0.00	0	843.00	0.00	0.00	0.00
56.01	0.00	0	843.00	0.00	0.00	0.00
58.01	0.00	0	843.00	0.00	0.00	0.00
60.01	0.00	0	843.00	0.00	0.00	0.00
62.01	0.00	0	843.00	0.00	0.00	0.00
64.01	0.00	0	843.00	0.00	0.00	0.00
66.01	0.00	0	843.00	0.00	0.00	0.00
68.01	0.00	0	843.00	0.00	0.00	0.00
70.01	0.00	0	843.00	0.00	0.00	0.00
72.01	0.00	0	843.00	0.00	0.00	0.00
74.01	0.00	0	843.00	0.00	0.00	0.00
76.01	0.00	0	843.00	0.00	0.00	0.00
78.01	0.00	0	843.00	0.00	0.00	0.00

Stage-Discharge for Pond 1P: Underground Infiltration Tank East

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
843.00	0.00	0.00	0.00
843.05	0.08	0.08	0.00
843.10	0.08	0.08	0.00
843.15	0.08	0.08	0.00
843.20	0.08	0.08	0.00
843.25	0.08	0.08	0.00
843.30	0.08	0.08	0.00
843.35	0.08	0.08	0.00
843.40	0.08	0.08	0.00
843.45	0.08	0.08	0.00
843.50	0.09	0.09	0.00
843.55	0.09	0.09	0.00
843.60	0.09	0.09	0.00
843.65	0.09	0.09	0.00
843.70	0.09	0.09	0.00
843.75	0.09	0.09	0.00
843.80	0.09	0.09	0.00
843.85	0.09	0.09	0.00
843.90	0.09	0.09	0.00
843.95	0.09	0.09	0.00
844.00	0.09	0.09	0.00
844.05	0.09	0.09	0.00
844.10	0.09	0.09	0.00
844.15	0.09	0.09	0.00
844.20	0.09	0.09	0.00
844.25	0.09	0.09	0.00
844.30	0.09	0.09	0.00
844.35	0.09	0.09	0.00
844.40	0.09	0.09	0.00
844.45	0.09	0.09	0.00
844.50	0.09	0.09	0.00
844.55	0.09	0.09	0.00
844.60	0.09	0.09	0.00
844.65	0.09	0.09	0.00
844.70	0.09	0.09	0.00
844.75	0.09	0.09	0.00
844.80	0.09	0.09	0.00
844.85	0.09	0.09	0.00
844.90	0.09	0.09	0.00
844.95	0.09	0.09	0.00
845.00	0.09	0.09	0.00
845.05	0.09	0.09	0.00
845.10	0.09	0.09	0.00
845.15	0.09	0.09	0.00
845.20	0.09	0.09	0.00
845.25	0.09	0.09	0.00
845.30	0.09	0.09	0.00
845.35	0.09	0.09	0.00
845.40	0.09	0.09	0.00
845.45	0.09	0.09	0.00
845.50	0.09	0.09	0.00
845.55	0.10	0.09	0.01
845.60	0.13	0.09	0.04
845.65	0.18	0.09	0.09
845.70	0.25	0.09	0.15
845.75	0.33	0.09	0.23
845.80	0.42	0.09	0.33
845.85	0.53	0.09	0.44
845.90	0.65	0.09	0.56
845.95	0.78	0.09	0.69
846.00	0.92	0.09	0.82
846.05	1.06	0.09	0.96
846.10	1.20	0.09	1.11
846.15	1.35	0.09	1.25
846.20	1.49	0.09	1.39
846.25	1.62	0.09	1.52
846.30	1.73	0.09	1.64
846.35	1.82	0.09	1.73
846.40	1.92	0.09	1.83
846.45	2.01	0.10	1.92
846.50	2.10	0.10	2.01
846.55	2.19	0.10	2.09
846.60	2.27	0.10	2.17
846.65	2.34	0.10	2.25
846.70	2.42	0.10	2.32
846.75	2.49	0.10	2.40
846.80	2.56	0.10	2.47
846.85	2.63	0.10	2.54
846.90	2.70	0.10	2.60
846.95	2.77	0.10	2.67
847.00	2.83	0.10	2.73
847.05	2.89	0.10	2.80
847.10	2.95	0.10	2.86
847.15	3.01	0.10	2.92
847.20	3.07	0.10	2.98
847.25	3.13	0.10	3.03
847.30	3.19	0.10	3.09
847.35	3.24	0.10	3.14
847.40	3.30	0.10	3.20
847.45	3.35	0.10	3.25
847.50	3.40	0.10	3.30
847.55	3.46	0.10	3.36
847.60	3.51	0.10	3.41
847.65	3.56	0.10	3.46
847.70	3.61	0.10	3.51
847.75	3.66	0.10	3.56
847.80	3.70	0.10	3.60
847.85	3.75	0.10	3.65
847.90	3.80	0.10	3.70
847.95	3.85	0.10	3.74
848.00	**3.89**	**0.10**	**3.79**

Stage-Area-Storage for Pond 1P: Underground Infiltration Tank East

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
843.00	4,500	0
843.05	4,509	90
843.10	4,518	180
843.15	4,527	271
843.20	4,536	361
843.25	4,545	452
843.30	4,554	543
843.35	4,563	634
843.40	4,572	726
843.45	4,581	817
843.50	4,590	909
843.55	4,599	1,014
843.60	4,608	1,131
843.65	4,617	1,255
843.70	4,626	1,384
843.75	4,636	1,519
843.80	4,645	1,657
843.85	4,654	1,800
843.90	4,663	1,946
843.95	4,672	2,095
844.00	4,681	2,247
844.05	4,690	2,402
844.10	4,699	2,560
844.15	4,708	2,720
844.20	4,717	2,882
844.25	4,727	3,046
844.30	4,736	3,213
844.35	4,745	3,381
844.40	4,754	3,551
844.45	4,763	3,723
844.50	4,772	3,896
844.55	4,781	4,071
844.60	4,791	4,247
844.65	4,800	4,424
844.70	4,809	4,603
844.75	4,818	4,783
844.80	4,827	4,964
844.85	4,836	5,146
844.90	4,846	5,329
844.95	4,855	5,513
845.00	4,864	5,697
845.05	4,873	5,883
845.10	4,882	6,069
845.15	4,892	6,256
845.20	4,901	6,443
845.25	4,910	6,631
845.30	4,919	6,820
845.35	4,929	7,009
845.40	4,938	7,198
845.45	4,947	7,387
845.50	4,956	7,577
845.55	4,966	7,767
845.60	4,975	7,957
845.65	4,984	8,147
845.70	4,993	8,337
845.75	5,003	8,527
845.80	5,012	8,717
845.85	5,021	8,907
845.90	5,030	9,097
845.95	5,040	9,286
846.00	5,049	9,475
846.05	5,058	9,664
846.10	5,068	9,852
846.15	5,077	10,040
846.20	5,086	10,227
846.25	5,096	10,413
846.30	5,105	10,599
846.35	5,114	10,784
846.40	5,124	10,967
846.45	5,133	11,150
846.50	5,142	11,332
846.55	5,152	11,513
846.60	5,161	11,693
846.65	5,170	11,871
846.70	5,180	12,048
846.75	5,189	12,224
846.80	5,198	12,397
846.85	5,208	12,569
846.90	5,217	12,739
846.95	5,227	12,908
847.00	5,236	13,073
847.05	5,245	13,237
847.10	5,255	13,398
847.15	5,264	13,556
847.20	5,274	13,711
847.25	5,283	13,862
847.30	5,292	14,010
847.35	5,302	14,153
847.40	5,311	14,290
847.45	5,321	14,421
847.50	5,330	14,541
847.55	5,340	14,648
847.60	5,349	14,755
847.65	5,359	14,862
847.70	5,368	14,969
847.75	5,378	15,077
847.80	5,387	15,184
847.85	5,397	15,292
847.90	5,406	15,400
847.95	5,416	15,508
848.00	**5,425**	**15,617**

Summary for Pond 2P: Underground Infiltration Tank West

[87] Warning: Oscillations may require smaller dt or Finer Routing (severity=215)

Inflow Area = 0.044 ac, 53.65% Impervious, Inflow Depth = 0.48" for 1.1 event
Inflow = 0.04 cfs @ 11.96 hrs, Volume= 0.002 af
Outflow = 0.00 cfs @ 12.69 hrs, Volume= 0.002 af, Atten= 94%, Lag= 44.1 min
Discarded = 0.00 cfs @ 12.69 hrs, Volume= 0.002 af
Primary = 0.00 cfs @ 0.01 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Peak Elev= 839.43' @ 12.69 hrs Surf.Area= 196 sf Storage= 32 cf
Flood Elev= 840.50' Surf.Area= 234 sf Storage= 172 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 121.4 min (901.9 - 780.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	839.00'	219 cf	**7.00'W x 26.00'L x 3.00'H Field A Z=0.5** 704 cf Overall - 157 cf Embedded = 546 cf x 40.0% Voids
#2A	839.50'	157 cf	**CMP Round 24** x 2 Inside #1 Effective Size= 24.0"W x 24.0"H => 3.14 sf x 20.00'L = 62.8 cf Overall Size= 24.0"W x 24.0"H x 20.00'L 2 Chambers in 2 Rows 5.00' Header x 3.14 sf x 2 = 31.4 cf Inside
		376 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	840.50'	**6.0" Round Culvert** L= 10.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 840.50' / 840.18' S= 0.0302 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf
#2	Discarded	839.00'	**0.450 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.00 cfs @ 12.69 hrs HW=839.43' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.00 cfs @ 0.01 hrs HW=839.00' (Free Discharge)
↑—**1=Culvert** (Controls 0.00 cfs)

Pond 2P: Underground Infiltration Tank West - Chamber Wizard Field A

Chamber Model = CMP Round 24 (Round Corrugated Metal Pipe)
Effective Size= 24.0"W x 24.0"H => 3.14 sf x 20.00'L = 62.8 cf
Overall Size= 24.0"W x 24.0"H x 20.00'L

24.0" Wide + 12.0" Spacing = 36.0" C-C Row Spacing

1 Chambers/Row x 20.00' Long +2.00' Header x 2 = 24.00' Row Length +12.0" End Stone x 2 = 26.00' Base Length
2 Rows x 24.0" Wide + 12.0" Spacing x 1 + 12.0" Side Stone x 2 = 7.00' Base Width
6.0" Stone Base + 24.0" Chamber Height + 6.0" Stone Cover = 3.00' Field Height

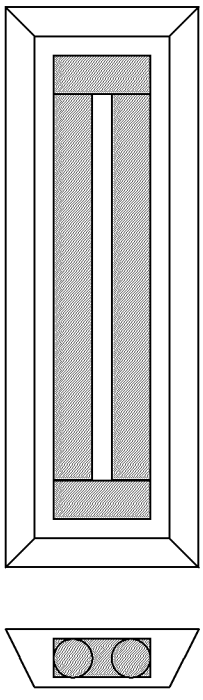
0.5 '/' Side-Z x Height = 18.0" Flare/Side
Base Length + Flare x 2 = 29.00' Top Length
Base Width + Flare x 2 = 10.00' Top Width

2 Chambers x 62.8 cf + 5.00' Header x 3.14 sf x 2 = 157.1 cf Chamber Storage

703.5 cf Field - 157.1 cf Chambers = 546.4 cf Stone x 40.0% Voids = 218.6 cf Stone Storage

Chamber Storage + Stone Storage = 375.6 cf = 0.009 af
Overall Storage Efficiency = 53.4%
Overall System Size = 26.00' x 7.00' x 3.00'

2 Chambers
26.1 cy Field
20.2 cy Stone



Hydrograph for Pond 2P: Underground Infiltration Tank West

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.01	0.00	0	839.00	0.00	0.00	**0.00**
2.01	0.00	0	839.00	0.00	0.00	0.00
4.01	0.00	0	839.00	0.00	0.00	0.00
6.01	0.00	0	839.00	0.00	0.00	0.00
8.01	0.00	0	839.00	0.00	0.00	0.00
10.01	**0.00**	0	839.00	0.00	0.00	0.00
12.01	**0.03**	**25**	**839.33**	**0.00**	**0.00**	0.00
14.01	0.00	**29**	**839.39**	**0.00**	**0.00**	0.00
16.01	0.00	20	839.27	0.00	0.00	0.00
18.01	0.00	10	839.13	0.00	0.00	0.00
20.01	0.00	0	839.00	0.00	0.00	0.00
22.01	0.00	0	839.00	0.00	0.00	0.00
24.01	0.00	0	839.00	0.00	0.00	0.00
26.01	0.00	0	839.00	0.00	0.00	0.00
28.01	0.00	0	839.00	0.00	0.00	0.00
30.01	0.00	0	839.00	0.00	0.00	0.00
32.01	0.00	0	839.00	0.00	0.00	0.00
34.01	0.00	0	839.00	0.00	0.00	0.00
36.01	0.00	0	839.00	0.00	0.00	0.00
38.01	0.00	0	839.00	0.00	0.00	0.00
40.01	0.00	0	839.00	0.00	0.00	0.00
42.01	0.00	0	839.00	0.00	0.00	0.00
44.01	0.00	0	839.00	0.00	0.00	0.00
46.01	0.00	0	839.00	0.00	0.00	0.00
48.01	0.00	0	839.00	0.00	0.00	0.00
50.01	0.00	0	839.00	0.00	0.00	0.00
52.01	0.00	0	839.00	0.00	0.00	0.00
54.01	0.00	0	839.00	0.00	0.00	0.00
56.01	0.00	0	839.00	0.00	0.00	0.00
58.01	0.00	0	839.00	0.00	0.00	0.00
60.01	0.00	0	839.00	0.00	0.00	0.00
62.01	0.00	0	839.00	0.00	0.00	0.00
64.01	0.00	0	839.00	0.00	0.00	0.00
66.01	0.00	0	839.00	0.00	0.00	0.00
68.01	0.00	0	839.00	0.00	0.00	0.00
70.01	0.00	0	839.00	0.00	0.00	0.00
72.01	0.00	0	839.00	0.00	0.00	0.00
74.01	0.00	0	839.00	0.00	0.00	0.00
76.01	0.00	0	839.00	0.00	0.00	0.00
78.01	0.00	0	839.00	0.00	0.00	0.00

Stage-Discharge for Pond 2P: Underground Infiltration Tank West

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
839.00	0.00	0.00	0.00
839.05	0.00	0.00	0.00
839.10	0.00	0.00	0.00
839.15	0.00	0.00	0.00
839.20	0.00	0.00	0.00
839.25	0.00	0.00	0.00
839.30	0.00	0.00	0.00
839.35	0.00	0.00	0.00
839.40	0.00	0.00	0.00
839.45	0.00	0.00	0.00
839.50	0.00	0.00	0.00
839.55	0.00	0.00	0.00
839.60	0.00	0.00	0.00
839.65	0.00	0.00	0.00
839.70	0.00	0.00	0.00
839.75	0.00	0.00	0.00
839.80	0.00	0.00	0.00
839.85	0.00	0.00	0.00
839.90	0.00	0.00	0.00
839.95	0.00	0.00	0.00
840.00	0.00	0.00	0.00
840.05	0.00	0.00	0.00
840.10	0.00	0.00	0.00
840.15	0.00	0.00	0.00
840.20	0.00	0.00	0.00
840.25	0.00	0.00	0.00
840.30	0.00	0.00	0.00
840.35	0.00	0.00	0.00
840.40	0.00	0.00	0.00
840.45	0.00	0.00	0.00
840.50	0.00	0.00	0.00
840.55	0.01	0.00	0.01
840.60	0.03	0.00	0.03
840.65	0.07	0.00	0.07
840.70	0.11	0.00	0.11
840.75	0.17	0.00	0.17
840.80	0.23	0.00	0.23
840.85	0.30	0.00	0.30
840.90	0.37	0.00	0.36
840.95	0.43	0.00	0.43
841.00	0.48	0.00	0.47
841.05	0.52	0.00	0.52
841.10	0.56	0.00	0.56
841.15	0.60	0.00	0.60
841.20	0.64	0.00	0.63
841.25	0.67	0.00	0.67
841.30	0.70	0.00	0.70
841.35	0.74	0.00	0.73
841.40	0.77	0.00	0.76
841.45	0.79	0.00	0.79
841.50	0.82	0.00	0.82
841.55	0.85	0.00	0.85
841.60	0.87	0.00	0.87
841.65	0.90	0.00	0.90
841.70	0.92	0.00	0.92
841.75	0.95	0.00	0.95
841.80	0.97	0.00	0.97
841.85	0.99	0.00	0.99
841.90	1.02	0.00	1.01
841.95	1.04	0.00	1.04
842.00	**1.06**	**0.00**	**1.06**

Stage-Area-Storage for Pond 2P: Underground Infiltration Tank West

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
839.00	182	0
839.05	184	4
839.10	185	7
839.15	187	11
839.20	189	15
839.25	190	19
839.30	192	22
839.35	194	26
839.40	195	30
839.45	197	34
839.50	199	38
839.55	200	43
839.60	202	48
839.65	204	53
839.70	206	59
839.75	207	65
839.80	209	71
839.85	211	78
839.90	213	84
839.95	214	91
840.00	216	98
840.05	218	105
840.10	220	112
840.15	221	119
840.20	223	126
840.25	225	134
840.30	227	141
840.35	228	149
840.40	230	156
840.45	232	164
840.50	234	172
840.55	236	179
840.60	237	187
840.65	239	195
840.70	241	203
840.75	243	210
840.80	245	218
840.85	246	226
840.90	248	234
840.95	250	241
841.00	252	249
841.05	254	257
841.10	256	264
841.15	258	272
841.20	259	279
841.25	261	286
841.30	263	293
841.35	265	300
841.40	267	307
841.45	269	314
841.50	271	320
841.55	273	325
841.60	275	330
841.65	276	336
841.70	278	342
841.75	280	347
841.80	282	353
841.85	284	358
841.90	286	364
841.95	288	370
842.00	**290**	**376**

Summary for Pond 3P: Rain Garden

Inflow Area = 0.155 ac, 49.56% Impervious, Inflow Depth = 0.44" for 1.1 event
Inflow = 0.12 cfs @ 11.96 hrs, Volume= 0.006 af
Outflow = 0.00 cfs @ 13.38 hrs, Volume= 0.006 af, Atten= 96%, Lag= 85.2 min
Discarded = 0.00 cfs @ 13.38 hrs, Volume= 0.006 af
Primary = 0.00 cfs @ 0.01 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Peak Elev= 850.88' @ 13.38 hrs Surf.Area= 413 sf Storage= 125 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 286.8 min (1,067.3 - 780.5)

Volume	Invert	Avail.Storage	Storage Description
#1	850.50'	1,975 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
850.50	253	0	0
851.50	678	466	466
852.50	1,161	920	1,385
853.00	1,200	590	1,975

Device	Routing	Invert	Outlet Devices
#1	Discarded	850.50'	**0.450 in/hr Exfiltration over Surface area**
#2	Primary	852.75'	**10.0' long + 0.5 '/' SideZ x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Discarded OutFlow Max=0.00 cfs @ 13.38 hrs HW=850.88' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.00 cfs @ 0.01 hrs HW=850.50' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Hydrograph for Pond 3P: Rain Garden

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.01	0.00	0	850.50	0.00	0.00	**0.00**
2.01	0.00	0	850.50	0.00	0.00	0.00
4.01	0.00	0	850.50	0.00	0.00	0.00
6.01	0.00	0	850.50	0.00	0.00	0.00
8.01	0.00	0	850.50	0.00	0.00	0.00
10.01	**0.00**	0	850.50	0.00	0.00	0.00
12.01	**0.09**	**94**	**850.80**	**0.00**	**0.00**	0.00
14.01	0.00	**124**	**850.87**	**0.00**	**0.00**	0.00
16.01	0.00	112	850.84	0.00	0.00	0.00
18.01	0.00	95	850.80	0.00	0.00	0.00
20.01	0.00	76	850.75	0.00	0.00	0.00
22.01	0.00	58	850.70	0.00	0.00	0.00
24.01	0.00	40	850.64	0.00	0.00	0.00
26.01	0.00	18	850.57	0.00	0.00	0.00
28.01	0.00	0	850.50	0.00	0.00	0.00
30.01	0.00	0	850.50	0.00	0.00	0.00
32.01	0.00	0	850.50	0.00	0.00	0.00
34.01	0.00	0	850.50	0.00	0.00	0.00
36.01	0.00	0	850.50	0.00	0.00	0.00
38.01	0.00	0	850.50	0.00	0.00	0.00
40.01	0.00	0	850.50	0.00	0.00	0.00
42.01	0.00	0	850.50	0.00	0.00	0.00
44.01	0.00	0	850.50	0.00	0.00	0.00
46.01	0.00	0	850.50	0.00	0.00	0.00
48.01	0.00	0	850.50	0.00	0.00	0.00
50.01	0.00	0	850.50	0.00	0.00	0.00
52.01	0.00	0	850.50	0.00	0.00	0.00
54.01	0.00	0	850.50	0.00	0.00	0.00
56.01	0.00	0	850.50	0.00	0.00	0.00
58.01	0.00	0	850.50	0.00	0.00	0.00
60.01	0.00	0	850.50	0.00	0.00	0.00
62.01	0.00	0	850.50	0.00	0.00	0.00
64.01	0.00	0	850.50	0.00	0.00	0.00
66.01	0.00	0	850.50	0.00	0.00	0.00
68.01	0.00	0	850.50	0.00	0.00	0.00
70.01	0.00	0	850.50	0.00	0.00	0.00
72.01	0.00	0	850.50	0.00	0.00	0.00
74.01	0.00	0	850.50	0.00	0.00	0.00
76.01	0.00	0	850.50	0.00	0.00	0.00
78.01	0.00	0	850.50	0.00	0.00	0.00

Stage-Discharge for Pond 3P: Rain Garden

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
850.50	0.00	0.00	0.00
850.55	0.00	0.00	0.00
850.60	0.00	0.00	0.00
850.65	0.00	0.00	0.00
850.70	0.00	0.00	0.00
850.75	0.00	0.00	0.00
850.80	0.00	0.00	0.00
850.85	0.00	0.00	0.00
850.90	0.00	0.00	0.00
850.95	0.00	0.00	0.00
851.00	0.00	0.00	0.00
851.05	0.01	0.01	0.00
851.10	0.01	0.01	0.00
851.15	0.01	0.01	0.00
851.20	0.01	0.01	0.00
851.25	0.01	0.01	0.00
851.30	0.01	0.01	0.00
851.35	0.01	0.01	0.00
851.40	0.01	0.01	0.00
851.45	0.01	0.01	0.00
851.50	0.01	0.01	0.00
851.55	0.01	0.01	0.00
851.60	0.01	0.01	0.00
851.65	0.01	0.01	0.00
851.70	0.01	0.01	0.00
851.75	0.01	0.01	0.00
851.80	0.01	0.01	0.00
851.85	0.01	0.01	0.00
851.90	0.01	0.01	0.00
851.95	0.01	0.01	0.00
852.00	0.01	0.01	0.00
852.05	0.01	0.01	0.00
852.10	0.01	0.01	0.00
852.15	0.01	0.01	0.00
852.20	0.01	0.01	0.00
852.25	0.01	0.01	0.00
852.30	0.01	0.01	0.00
852.35	0.01	0.01	0.00
852.40	0.01	0.01	0.00
852.45	0.01	0.01	0.00
852.50	0.01	0.01	0.00
852.55	0.01	0.01	0.00
852.60	0.01	0.01	0.00
852.65	0.01	0.01	0.00
852.70	0.01	0.01	0.00
852.75	0.01	0.01	0.00
852.80	0.31	0.01	0.30
852.85	0.87	0.01	0.85
852.90	1.58	0.01	1.57
852.95	2.44	0.01	2.43
853.00	**3.42**	**0.01**	**3.41**

Stage-Area-Storage for Pond 3P: Rain Garden

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
850.50	253	0
850.55	274	13
850.60	296	27
850.65	317	43
850.70	338	59
850.75	359	77
850.80	380	95
850.85	402	115
850.90	423	135
850.95	444	157
851.00	466	180
851.05	487	203
851.10	508	228
851.15	529	254
851.20	551	281
851.25	572	309
851.30	593	338
851.35	614	369
851.40	635	400
851.45	657	432
851.50	678	466
851.55	702	500
851.60	726	536
851.65	750	573
851.70	775	611
851.75	799	650
851.80	823	691
851.85	847	732
851.90	871	775
851.95	895	820
852.00	920	865
852.05	944	911
852.10	968	959
852.15	992	1,008
852.20	1,016	1,058
852.25	1,040	1,110
852.30	1,064	1,162
852.35	1,089	1,216
852.40	1,113	1,271
852.45	1,137	1,328
852.50	1,161	1,385
852.55	1,165	1,443
852.60	1,169	1,501
852.65	1,173	1,560
852.70	1,177	1,619
852.75	1,181	1,678
852.80	1,184	1,737
852.85	1,188	1,796
852.90	1,192	1,856
852.95	1,196	1,915
853.00	**1,200**	**1,975**

Summary for Subcatchment PRO SUBCATCH 1: Subcat PRO SUBCATCH 1

Runoff = 2.61 cfs @ 11.96 hrs, Volume= 0.137 af, Depth= 2.61"
Routed to Pond 1P : Underground Infiltration Tank East

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-yr Rainfall=2.84"

Area (ac)	CN	Description
0.000	61	>75% Grass cover, Good, HSG B
0.632	98	Roofs, HSG B
0.632	98	Weighted Average
0.000	61	0.02% Pervious Area
0.632	98	99.98% Impervious Area

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

Hydrograph for Subcatchment PRO SUBCATCH 1: Subcat PRO SUBCATCH 1

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	0.00	0.00	0.00
2.01	0.06	0.00	0.00	0.00
4.01	0.14	0.00	0.03	0.01
6.01	0.23	0.00	0.09	0.02
8.01	0.34	0.00	0.18	0.03
10.01	0.52	0.00	0.33	**0.06**
12.01	1.89	0.05	1.66	**1.96**
14.01	2.33	0.15	2.10	0.07
16.01	2.50	0.20	2.27	0.04
18.01	2.62	0.23	2.39	0.03
20.01	2.70	0.26	2.47	0.02
22.01	**2.78**	**0.28**	**2.54**	0.02
24.01	**2.84**	**0.31**	**2.61**	0.02
26.01	2.84	0.31	2.61	0.00
28.01	2.84	0.31	2.61	0.00
30.01	2.84	0.31	2.61	0.00
32.01	2.84	0.31	2.61	0.00
34.01	2.84	0.31	2.61	0.00
36.01	2.84	0.31	2.61	0.00
38.01	2.84	0.31	2.61	0.00
40.01	2.84	0.31	2.61	0.00
42.01	2.84	0.31	2.61	0.00
44.01	2.84	0.31	2.61	0.00
46.01	2.84	0.31	2.61	0.00
48.01	2.84	0.31	2.61	0.00
50.01	2.84	0.31	2.61	0.00
52.01	2.84	0.31	2.61	0.00
54.01	2.84	0.31	2.61	0.00
56.01	2.84	0.31	2.61	0.00
58.01	2.84	0.31	2.61	0.00
60.01	2.84	0.31	2.61	0.00
62.01	2.84	0.31	2.61	0.00
64.01	2.84	0.31	2.61	0.00
66.01	2.84	0.31	2.61	0.00
68.01	2.84	0.31	2.61	0.00
70.01	2.84	0.31	2.61	0.00
72.01	2.84	0.31	2.61	0.00
74.01	2.84	0.31	2.61	0.00
76.01	2.84	0.31	2.61	0.00
78.01	2.84	0.31	2.61	0.00

Summary for Subcatchment PRO SUBCATCH 2: Subcat PRO SUBCATCH 2

Runoff = 0.33 cfs @ 11.97 hrs, Volume= 0.019 af, Depth= 0.84"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-yr Rainfall=2.84"

Area (ac)	CN	Description
0.215	61	>75% Grass cover, Good, HSG B
0.064	98	Roofs, HSG B
0.279	70	Weighted Average
0.215	61	76.99% Pervious Area
0.064	98	23.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	28	0.0470	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.82"
2.5	36	0.0970	0.24		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.82"
0.1	36	0.0420	4.16		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
5.3	100	Total			

Hydrograph for Subcatchment PRO SUBCATCH 2: Subcat PRO SUBCATCH 2

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	0.00	0.00	0.00
2.01	0.06	0.00	0.00	0.00
4.01	0.14	0.00	0.03	0.00
6.01	0.23	0.00	0.09	0.00
8.01	0.34	0.00	0.18	0.00
10.01	0.52	0.00	0.33	**0.01**
12.01	1.89	0.05	1.66	**0.29**
14.01	2.33	0.15	2.10	0.01
16.01	2.50	0.20	2.27	0.01
18.01	2.62	0.23	2.39	0.01
20.01	2.70	0.26	2.47	0.01
22.01	**2.78**	**0.28**	**2.54**	0.00
24.01	**2.84**	**0.31**	**2.61**	0.00
26.01	2.84	0.31	2.61	0.00
28.01	2.84	0.31	2.61	0.00
30.01	2.84	0.31	2.61	0.00
32.01	2.84	0.31	2.61	0.00
34.01	2.84	0.31	2.61	0.00
36.01	2.84	0.31	2.61	0.00
38.01	2.84	0.31	2.61	0.00
40.01	2.84	0.31	2.61	0.00
42.01	2.84	0.31	2.61	0.00
44.01	2.84	0.31	2.61	0.00
46.01	2.84	0.31	2.61	0.00
48.01	2.84	0.31	2.61	0.00
50.01	2.84	0.31	2.61	0.00
52.01	2.84	0.31	2.61	0.00
54.01	2.84	0.31	2.61	0.00
56.01	2.84	0.31	2.61	0.00
58.01	2.84	0.31	2.61	0.00
60.01	2.84	0.31	2.61	0.00
62.01	2.84	0.31	2.61	0.00
64.01	2.84	0.31	2.61	0.00
66.01	2.84	0.31	2.61	0.00
68.01	2.84	0.31	2.61	0.00
70.01	2.84	0.31	2.61	0.00
72.01	2.84	0.31	2.61	0.00
74.01	2.84	0.31	2.61	0.00
76.01	2.84	0.31	2.61	0.00
78.01	2.84	0.31	2.61	0.00

Summary for Subcatchment PRO SUBCATCH 3: Subcat PRO SUBCATCH 3

Runoff = 2.02 cfs @ 11.96 hrs, Volume= 0.108 af, Depth= 1.98"
Routed to Pond 1P : Underground Infiltration Tank East

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-yr Rainfall=2.84"

Area (ac)	CN	Description
0.178	61	>75% Grass cover, Good, HSG B
0.474	98	Roofs, HSG B
0.653	88	Weighted Average
0.178	61	27.34% Pervious Area
0.474	98	72.66% Impervious Area

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

Hydrograph for Subcatchment PRO SUBCATCH 3: Subcat PRO SUBCATCH 3

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	0.00	0.00	0.00
2.01	0.06	0.00	0.00	0.00
4.01	0.14	0.00	0.03	0.01
6.01	0.23	0.00	0.09	0.02
8.01	0.34	0.00	0.18	0.02
10.01	0.52	0.00	0.33	**0.05**
12.01	1.89	0.05	1.66	**1.54**
14.01	2.33	0.15	2.10	0.06
16.01	2.50	0.20	2.27	0.04
18.01	2.62	0.23	2.39	0.03
20.01	2.70	0.26	2.47	0.02
22.01	**2.78**	**0.28**	**2.54**	0.02
24.01	**2.84**	**0.31**	**2.61**	0.02
26.01	2.84	0.31	2.61	0.00
28.01	2.84	0.31	2.61	0.00
30.01	2.84	0.31	2.61	0.00
32.01	2.84	0.31	2.61	0.00
34.01	2.84	0.31	2.61	0.00
36.01	2.84	0.31	2.61	0.00
38.01	2.84	0.31	2.61	0.00
40.01	2.84	0.31	2.61	0.00
42.01	2.84	0.31	2.61	0.00
44.01	2.84	0.31	2.61	0.00
46.01	2.84	0.31	2.61	0.00
48.01	2.84	0.31	2.61	0.00
50.01	2.84	0.31	2.61	0.00
52.01	2.84	0.31	2.61	0.00
54.01	2.84	0.31	2.61	0.00
56.01	2.84	0.31	2.61	0.00
58.01	2.84	0.31	2.61	0.00
60.01	2.84	0.31	2.61	0.00
62.01	2.84	0.31	2.61	0.00
64.01	2.84	0.31	2.61	0.00
66.01	2.84	0.31	2.61	0.00
68.01	2.84	0.31	2.61	0.00
70.01	2.84	0.31	2.61	0.00
72.01	2.84	0.31	2.61	0.00
74.01	2.84	0.31	2.61	0.00
76.01	2.84	0.31	2.61	0.00
78.01	2.84	0.31	2.61	0.00

Summary for Subcatchment PRO SUBCATCH 4: Subcat PRO SUBCATCH 4

Runoff = 0.10 cfs @ 11.97 hrs, Volume= 0.006 af, Depth= 0.80"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-yr Rainfall=2.84"

Area (ac)	CN	Description
0.071	61	>75% Grass cover, Good, HSG B
0.019	98	Roofs, HSG B
0.091	69	Weighted Average
0.071	61	78.56% Pervious Area
0.019	98	21.44% Impervious Area

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

Hydrograph for Subcatchment PRO SUBCATCH 4: Subcat PRO SUBCATCH 4

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	0.00	0.00	0.00
2.01	0.06	0.00	0.00	0.00
4.01	0.14	0.00	0.03	0.00
6.01	0.23	0.00	0.09	0.00
8.01	0.34	0.00	0.18	0.00
10.01	0.52	0.00	0.33	**0.00**
12.01	1.89	0.05	1.66	**0.09**
14.01	2.33	0.15	2.10	0.00
16.01	2.50	0.20	2.27	0.00
18.01	2.62	0.23	2.39	0.00
20.01	2.70	0.26	2.47	0.00
22.01	**2.78**	**0.28**	**2.54**	0.00
24.01	**2.84**	**0.31**	**2.61**	0.00
26.01	2.84	0.31	2.61	0.00
28.01	2.84	0.31	2.61	0.00
30.01	2.84	0.31	2.61	0.00
32.01	2.84	0.31	2.61	0.00
34.01	2.84	0.31	2.61	0.00
36.01	2.84	0.31	2.61	0.00
38.01	2.84	0.31	2.61	0.00
40.01	2.84	0.31	2.61	0.00
42.01	2.84	0.31	2.61	0.00
44.01	2.84	0.31	2.61	0.00
46.01	2.84	0.31	2.61	0.00
48.01	2.84	0.31	2.61	0.00
50.01	2.84	0.31	2.61	0.00
52.01	2.84	0.31	2.61	0.00
54.01	2.84	0.31	2.61	0.00
56.01	2.84	0.31	2.61	0.00
58.01	2.84	0.31	2.61	0.00
60.01	2.84	0.31	2.61	0.00
62.01	2.84	0.31	2.61	0.00
64.01	2.84	0.31	2.61	0.00
66.01	2.84	0.31	2.61	0.00
68.01	2.84	0.31	2.61	0.00
70.01	2.84	0.31	2.61	0.00
72.01	2.84	0.31	2.61	0.00
74.01	2.84	0.31	2.61	0.00
76.01	2.84	0.31	2.61	0.00
78.01	2.84	0.31	2.61	0.00

Summary for Subcatchment PRO SUBCATCH 4A: Subcat PRO SUBCATCH 4A

Runoff = 0.34 cfs @ 11.96 hrs, Volume= 0.019 af, Depth= 1.45"
Routed to Pond 3P : Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-yr Rainfall=2.84"

Area (ac)	CN	Description
0.078	61	>75% Grass cover, Good, HSG B
0.077	98	Roofs, HSG B
0.155	79	Weighted Average
0.078	61	50.44% Pervious Area
0.077	98	49.56% Impervious Area

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

Hydrograph for Subcatchment PRO SUBCATCH 4A: Subcat PRO SUBCATCH 4A

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	0.00	0.00	0.00
2.01	0.06	0.00	0.00	0.00
4.01	0.14	0.00	0.03	0.00
6.01	0.23	0.00	0.09	0.00
8.01	0.34	0.00	0.18	0.00
10.01	0.52	0.00	0.33	**0.01**
12.01	1.89	0.05	1.66	**0.27**
14.01	2.33	0.15	2.10	0.01
16.01	2.50	0.20	2.27	0.01
18.01	2.62	0.23	2.39	0.01
20.01	2.70	0.26	2.47	0.00
22.01	**2.78**	**0.28**	**2.54**	0.00
24.01	**2.84**	**0.31**	**2.61**	0.00
26.01	2.84	0.31	2.61	0.00
28.01	2.84	0.31	2.61	0.00
30.01	2.84	0.31	2.61	0.00
32.01	2.84	0.31	2.61	0.00
34.01	2.84	0.31	2.61	0.00
36.01	2.84	0.31	2.61	0.00
38.01	2.84	0.31	2.61	0.00
40.01	2.84	0.31	2.61	0.00
42.01	2.84	0.31	2.61	0.00
44.01	2.84	0.31	2.61	0.00
46.01	2.84	0.31	2.61	0.00
48.01	2.84	0.31	2.61	0.00
50.01	2.84	0.31	2.61	0.00
52.01	2.84	0.31	2.61	0.00
54.01	2.84	0.31	2.61	0.00
56.01	2.84	0.31	2.61	0.00
58.01	2.84	0.31	2.61	0.00
60.01	2.84	0.31	2.61	0.00
62.01	2.84	0.31	2.61	0.00
64.01	2.84	0.31	2.61	0.00
66.01	2.84	0.31	2.61	0.00
68.01	2.84	0.31	2.61	0.00
70.01	2.84	0.31	2.61	0.00
72.01	2.84	0.31	2.61	0.00
74.01	2.84	0.31	2.61	0.00
76.01	2.84	0.31	2.61	0.00
78.01	2.84	0.31	2.61	0.00

Summary for Subcatchment PRO SUBCATCH 5: Subcat PRO SUBCATCH 5

Runoff = 0.10 cfs @ 11.96 hrs, Volume= 0.006 af, Depth= 1.54"
Routed to Pond 2P : Underground Infiltration Tank West

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 2-yr Rainfall=2.84"

Area (ac)	CN	Description
0.021	61	>75% Grass cover, Good, HSG B
0.024	98	Roofs, HSG B
0.044	81	Weighted Average
0.021	61	46.35% Pervious Area
0.024	98	53.65% Impervious Area

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

Hydrograph for Subcatchment PRO SUBCATCH 5: Subcat PRO SUBCATCH 5

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	0.00	0.00	0.00
2.01	0.06	0.00	0.00	0.00
4.01	0.14	0.00	0.03	0.00
6.01	0.23	0.00	0.09	0.00
8.01	0.34	0.00	0.18	0.00
10.01	0.52	0.00	0.33	**0.00**
12.01	1.89	0.05	1.66	**0.08**
14.01	2.33	0.15	2.10	0.00
16.01	2.50	0.20	2.27	0.00
18.01	2.62	0.23	2.39	0.00
20.01	2.70	0.26	2.47	0.00
22.01	**2.78**	**0.28**	**2.54**	0.00
24.01	**2.84**	**0.31**	**2.61**	0.00
26.01	2.84	0.31	2.61	0.00
28.01	2.84	0.31	2.61	0.00
30.01	2.84	0.31	2.61	0.00
32.01	2.84	0.31	2.61	0.00
34.01	2.84	0.31	2.61	0.00
36.01	2.84	0.31	2.61	0.00
38.01	2.84	0.31	2.61	0.00
40.01	2.84	0.31	2.61	0.00
42.01	2.84	0.31	2.61	0.00
44.01	2.84	0.31	2.61	0.00
46.01	2.84	0.31	2.61	0.00
48.01	2.84	0.31	2.61	0.00
50.01	2.84	0.31	2.61	0.00
52.01	2.84	0.31	2.61	0.00
54.01	2.84	0.31	2.61	0.00
56.01	2.84	0.31	2.61	0.00
58.01	2.84	0.31	2.61	0.00
60.01	2.84	0.31	2.61	0.00
62.01	2.84	0.31	2.61	0.00
64.01	2.84	0.31	2.61	0.00
66.01	2.84	0.31	2.61	0.00
68.01	2.84	0.31	2.61	0.00
70.01	2.84	0.31	2.61	0.00
72.01	2.84	0.31	2.61	0.00
74.01	2.84	0.31	2.61	0.00
76.01	2.84	0.31	2.61	0.00
78.01	2.84	0.31	2.61	0.00

Summary for Pond 1P: Underground Infiltration Tank East

Inflow Area = 1.285 ac, 86.10% Impervious, Inflow Depth = 2.29" for 2-yr event
Inflow = 4.63 cfs @ 11.96 hrs, Volume= 0.245 af
Outflow = 0.09 cfs @ 15.44 hrs, Volume= 0.245 af, Atten= 98%, Lag= 209.2 min
Discarded = 0.09 cfs @ 15.44 hrs, Volume= 0.245 af
Primary = 0.00 cfs @ 0.01 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Peak Elev= 845.10' @ 15.44 hrs Surf.Area= 4,883 sf Storage= 6,073 cf
Flood Elev= 845.50' Surf.Area= 4,956 sf Storage= 7,577 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 604.3 min (1,361.8 - 757.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	843.00'	6,117 cf	**30.00'W x 150.00'L x 5.00'H Field A Z=0.5** 24,792 cf Overall - 9,500 cf Embedded = 15,291 cf x 40.0% Voids
#2A	843.50'	9,500 cf	**CMP Round 48** x 35 Inside #1 Effective Size= 48.0"W x 48.0"H => 12.57 sf x 20.00'L = 251.3 cf Overall Size= 48.0"W x 48.0"H x 20.00'L 35 Chambers in 5 Rows 28.00' Header x 12.57 sf x 2 = 703.7 cf Inside
		15,617 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	843.00'	**0.800 in/hr Exfiltration over Surface area**
#2	Primary	845.50'	**10.0" Round 10" PVC** L= 230.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 845.50' / 838.00' S= 0.0326 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf

Discarded OutFlow Max=0.09 cfs @ 15.44 hrs HW=845.10' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.09 cfs)

Primary OutFlow Max=0.00 cfs @ 0.01 hrs HW=843.00' (Free Discharge)
↑—**2=10" PVC** (Controls 0.00 cfs)

Pond 1P: Underground Infiltration Tank East - Chamber Wizard Field A

Chamber Model = CMP Round 48 (Round Corrugated Metal Pipe)
Effective Size= 48.0"W x 48.0"H => 12.57 sf x 20.00'L = 251.3 cf
Overall Size= 48.0"W x 48.0"H x 20.00'L

48.0" Wide + 24.0" Spacing = 72.0" C-C Row Spacing

7 Chambers/Row x 20.00' Long +4.00' Header x 2 = 148.00' Row Length +12.0" End Stone x 2 = 150.00' Base Length
5 Rows x 48.0" Wide + 24.0" Spacing x 4 + 12.0" Side Stone x 2 = 30.00' Base Width
6.0" Stone Base + 48.0" Chamber Height + 6.0" Stone Cover = 5.00' Field Height

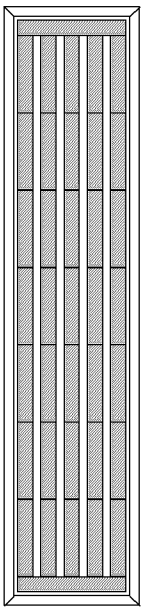
0.5 '/' Side-Z x Height = 30.0" Flare/Side
Base Length + Flare x 2 = 155.00' Top Length
Base Width + Flare x 2 = 35.00' Top Width

35 Chambers x 251.3 cf + 28.00' Header x 12.57 sf x 2 = 9,500.2 cf Chamber Storage

24,791.7 cf Field - 9,500.2 cf Chambers = 15,291.5 cf Stone x 40.0% Voids = 6,116.6 cf Stone Storage

Chamber Storage + Stone Storage = 15,616.8 cf = 0.359 af
Overall Storage Efficiency = 63.0%
Overall System Size = 150.00' x 30.00' x 5.00'

35 Chambers
918.2 cy Field
566.4 cy Stone



Hydrograph for Pond 1P: Underground Infiltration Tank East

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.01	0.00	0	843.00	0.00	0.00	**0.00**
2.01	0.01	0	843.00	0.01	0.01	0.00
4.01	0.02	0	843.00	0.02	0.02	0.00
6.01	0.04	0	843.00	0.04	0.04	0.00
8.01	0.06	0	843.00	0.06	0.06	0.00
10.01	**0.11**	41	843.02	0.08	0.08	0.00
12.01	**3.50**	4,201	844.59	0.09	0.09	0.00
14.01	0.13	**5,989**	**845.08**	**0.09**	**0.09**	0.00
16.01	0.08	**6,060**	**845.10**	**0.09**	**0.09**	0.00
18.01	0.06	5,902	845.06	0.09	0.09	0.00
20.01	0.04	5,627	844.98	0.09	0.09	0.00
22.01	0.04	5,280	844.89	0.09	0.09	0.00
24.01	0.04	4,912	844.79	0.09	0.09	0.00
26.01	0.00	4,280	844.61	0.09	0.09	0.00
28.01	0.00	3,643	844.43	0.09	0.09	0.00
30.01	0.00	3,011	844.24	0.09	0.09	0.00
32.01	0.00	2,383	844.04	0.09	0.09	0.00
34.01	0.00	1,761	843.84	0.09	0.09	0.00
36.01	0.00	1,143	843.61	0.09	0.09	0.00
38.01	0.00	532	843.29	0.08	0.08	0.00
40.01	0.00	0	843.00	0.00	0.00	0.00
42.01	0.00	0	843.00	0.00	0.00	0.00
44.01	0.00	0	843.00	0.00	0.00	0.00
46.01	0.00	0	843.00	0.00	0.00	0.00
48.01	0.00	0	843.00	0.00	0.00	0.00
50.01	0.00	0	843.00	0.00	0.00	0.00
52.01	0.00	0	843.00	0.00	0.00	0.00
54.01	0.00	0	843.00	0.00	0.00	0.00
56.01	0.00	0	843.00	0.00	0.00	0.00
58.01	0.00	0	843.00	0.00	0.00	0.00
60.01	0.00	0	843.00	0.00	0.00	0.00
62.01	0.00	0	843.00	0.00	0.00	0.00
64.01	0.00	0	843.00	0.00	0.00	0.00
66.01	0.00	0	843.00	0.00	0.00	0.00
68.01	0.00	0	843.00	0.00	0.00	0.00
70.01	0.00	0	843.00	0.00	0.00	0.00
72.01	0.00	0	843.00	0.00	0.00	0.00
74.01	0.00	0	843.00	0.00	0.00	0.00
76.01	0.00	0	843.00	0.00	0.00	0.00
78.01	0.00	0	843.00	0.00	0.00	0.00

Stage-Discharge for Pond 1P: Underground Infiltration Tank East

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
843.00	0.00	0.00	0.00
843.05	0.08	0.08	0.00
843.10	0.08	0.08	0.00
843.15	0.08	0.08	0.00
843.20	0.08	0.08	0.00
843.25	0.08	0.08	0.00
843.30	0.08	0.08	0.00
843.35	0.08	0.08	0.00
843.40	0.08	0.08	0.00
843.45	0.08	0.08	0.00
843.50	0.09	0.09	0.00
843.55	0.09	0.09	0.00
843.60	0.09	0.09	0.00
843.65	0.09	0.09	0.00
843.70	0.09	0.09	0.00
843.75	0.09	0.09	0.00
843.80	0.09	0.09	0.00
843.85	0.09	0.09	0.00
843.90	0.09	0.09	0.00
843.95	0.09	0.09	0.00
844.00	0.09	0.09	0.00
844.05	0.09	0.09	0.00
844.10	0.09	0.09	0.00
844.15	0.09	0.09	0.00
844.20	0.09	0.09	0.00
844.25	0.09	0.09	0.00
844.30	0.09	0.09	0.00
844.35	0.09	0.09	0.00
844.40	0.09	0.09	0.00
844.45	0.09	0.09	0.00
844.50	0.09	0.09	0.00
844.55	0.09	0.09	0.00
844.60	0.09	0.09	0.00
844.65	0.09	0.09	0.00
844.70	0.09	0.09	0.00
844.75	0.09	0.09	0.00
844.80	0.09	0.09	0.00
844.85	0.09	0.09	0.00
844.90	0.09	0.09	0.00
844.95	0.09	0.09	0.00
845.00	0.09	0.09	0.00
845.05	0.09	0.09	0.00
845.10	0.09	0.09	0.00
845.15	0.09	0.09	0.00
845.20	0.09	0.09	0.00
845.25	0.09	0.09	0.00
845.30	0.09	0.09	0.00
845.35	0.09	0.09	0.00
845.40	0.09	0.09	0.00
845.45	0.09	0.09	0.00
845.50	0.09	0.09	0.00
845.55	0.10	0.09	0.01
845.60	0.13	0.09	0.04
845.65	0.18	0.09	0.09
845.70	0.25	0.09	0.15
845.75	0.33	0.09	0.23
845.80	0.42	0.09	0.33
845.85	0.53	0.09	0.44
845.90	0.65	0.09	0.56
845.95	0.78	0.09	0.69
846.00	0.92	0.09	0.82
846.05	1.06	0.09	0.96
846.10	1.20	0.09	1.11
846.15	1.35	0.09	1.25
846.20	1.49	0.09	1.39
846.25	1.62	0.09	1.52
846.30	1.73	0.09	1.64
846.35	1.82	0.09	1.73
846.40	1.92	0.09	1.83
846.45	2.01	0.10	1.92
846.50	2.10	0.10	2.01
846.55	2.19	0.10	2.09
846.60	2.27	0.10	2.17
846.65	2.34	0.10	2.25
846.70	2.42	0.10	2.32
846.75	2.49	0.10	2.40
846.80	2.56	0.10	2.47
846.85	2.63	0.10	2.54
846.90	2.70	0.10	2.60
846.95	2.77	0.10	2.67
847.00	2.83	0.10	2.73
847.05	2.89	0.10	2.80
847.10	2.95	0.10	2.86
847.15	3.01	0.10	2.92
847.20	3.07	0.10	2.98
847.25	3.13	0.10	3.03
847.30	3.19	0.10	3.09
847.35	3.24	0.10	3.14
847.40	3.30	0.10	3.20
847.45	3.35	0.10	3.25
847.50	3.40	0.10	3.30
847.55	3.46	0.10	3.36
847.60	3.51	0.10	3.41
847.65	3.56	0.10	3.46
847.70	3.61	0.10	3.51
847.75	3.66	0.10	3.56
847.80	3.70	0.10	3.60
847.85	3.75	0.10	3.65
847.90	3.80	0.10	3.70
847.95	3.85	0.10	3.74
848.00	**3.89**	**0.10**	**3.79**

Stage-Area-Storage for Pond 1P: Underground Infiltration Tank East

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
843.00	4,500	0
843.05	4,509	90
843.10	4,518	180
843.15	4,527	271
843.20	4,536	361
843.25	4,545	452
843.30	4,554	543
843.35	4,563	634
843.40	4,572	726
843.45	4,581	817
843.50	4,590	909
843.55	4,599	1,014
843.60	4,608	1,131
843.65	4,617	1,255
843.70	4,626	1,384
843.75	4,636	1,519
843.80	4,645	1,657
843.85	4,654	1,800
843.90	4,663	1,946
843.95	4,672	2,095
844.00	4,681	2,247
844.05	4,690	2,402
844.10	4,699	2,560
844.15	4,708	2,720
844.20	4,717	2,882
844.25	4,727	3,046
844.30	4,736	3,213
844.35	4,745	3,381
844.40	4,754	3,551
844.45	4,763	3,723
844.50	4,772	3,896
844.55	4,781	4,071
844.60	4,791	4,247
844.65	4,800	4,424
844.70	4,809	4,603
844.75	4,818	4,783
844.80	4,827	4,964
844.85	4,836	5,146
844.90	4,846	5,329
844.95	4,855	5,513
845.00	4,864	5,697
845.05	4,873	5,883
845.10	4,882	6,069
845.15	4,892	6,256
845.20	4,901	6,443
845.25	4,910	6,631
845.30	4,919	6,820
845.35	4,929	7,009
845.40	4,938	7,198
845.45	4,947	7,387
845.50	4,956	7,577
845.55	4,966	7,767
845.60	4,975	7,957
845.65	4,984	8,147
845.70	4,993	8,337
845.75	5,003	8,527
845.80	5,012	8,717
845.85	5,021	8,907
845.90	5,030	9,097
845.95	5,040	9,286
846.00	5,049	9,475
846.05	5,058	9,664
846.10	5,068	9,852
846.15	5,077	10,040
846.20	5,086	10,227
846.25	5,096	10,413
846.30	5,105	10,599
846.35	5,114	10,784
846.40	5,124	10,967
846.45	5,133	11,150
846.50	5,142	11,332
846.55	5,152	11,513
846.60	5,161	11,693
846.65	5,170	11,871
846.70	5,180	12,048
846.75	5,189	12,224
846.80	5,198	12,397
846.85	5,208	12,569
846.90	5,217	12,739
846.95	5,227	12,908
847.00	5,236	13,073
847.05	5,245	13,237
847.10	5,255	13,398
847.15	5,264	13,556
847.20	5,274	13,711
847.25	5,283	13,862
847.30	5,292	14,010
847.35	5,302	14,153
847.40	5,311	14,290
847.45	5,321	14,421
847.50	5,330	14,541
847.55	5,340	14,648
847.60	5,349	14,755
847.65	5,359	14,862
847.70	5,368	14,969
847.75	5,378	15,077
847.80	5,387	15,184
847.85	5,397	15,292
847.90	5,406	15,400
847.95	5,416	15,508
848.00	**5,425**	**15,617**

Summary for Pond 2P: Underground Infiltration Tank West

Inflow Area = 0.044 ac, 53.65% Impervious, Inflow Depth = 1.54" for 2-yr event
Inflow = 0.10 cfs @ 11.96 hrs, Volume= 0.006 af
Outflow = 0.00 cfs @ 15.39 hrs, Volume= 0.006 af, Atten= 98%, Lag= 206.1 min
Discarded = 0.00 cfs @ 15.39 hrs, Volume= 0.006 af
Primary = 0.00 cfs @ 0.01 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Peak Elev= 840.26' @ 15.39 hrs Surf.Area= 225 sf Storage= 135 cf
Flood Elev= 840.50' Surf.Area= 234 sf Storage= 172 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 544.0 min (1,314.4 - 770.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	839.00'	219 cf	**7.00'W x 26.00'L x 3.00'H Field A Z=0.5** 704 cf Overall - 157 cf Embedded = 546 cf x 40.0% Voids
#2A	839.50'	157 cf	**CMP Round 24** x 2 Inside #1 Effective Size= 24.0"W x 24.0"H => 3.14 sf x 20.00'L = 62.8 cf Overall Size= 24.0"W x 24.0"H x 20.00'L 2 Chambers in 2 Rows 5.00' Header x 3.14 sf x 2 = 31.4 cf Inside
		376 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	840.50'	**6.0" Round Culvert** L= 10.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 840.50' / 840.18' S= 0.0302 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf
#2	Discarded	839.00'	**0.450 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.00 cfs @ 15.39 hrs HW=840.26' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.00 cfs @ 0.01 hrs HW=839.00' (Free Discharge)
↑—**1=Culvert** (Controls 0.00 cfs)

Pond 2P: Underground Infiltration Tank West - Chamber Wizard Field A

Chamber Model = CMP Round 24 (Round Corrugated Metal Pipe)
Effective Size= 24.0"W x 24.0"H => 3.14 sf x 20.00'L = 62.8 cf
Overall Size= 24.0"W x 24.0"H x 20.00'L

24.0" Wide + 12.0" Spacing = 36.0" C-C Row Spacing

1 Chambers/Row x 20.00' Long +2.00' Header x 2 = 24.00' Row Length +12.0" End Stone x 2 = 26.00' Base Length
2 Rows x 24.0" Wide + 12.0" Spacing x 1 + 12.0" Side Stone x 2 = 7.00' Base Width
6.0" Stone Base + 24.0" Chamber Height + 6.0" Stone Cover = 3.00' Field Height

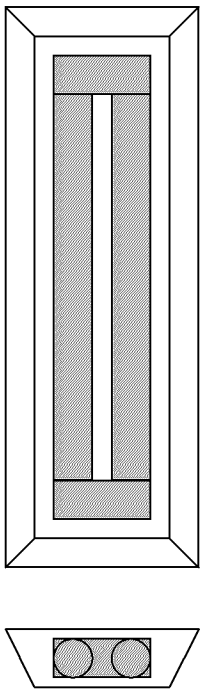
0.5 '/' Side-Z x Height = 18.0" Flare/Side
Base Length + Flare x 2 = 29.00' Top Length
Base Width + Flare x 2 = 10.00' Top Width

2 Chambers x 62.8 cf + 5.00' Header x 3.14 sf x 2 = 157.1 cf Chamber Storage

703.5 cf Field - 157.1 cf Chambers = 546.4 cf Stone x 40.0% Voids = 218.6 cf Stone Storage

Chamber Storage + Stone Storage = 375.6 cf = 0.009 af
Overall Storage Efficiency = 53.4%
Overall System Size = 26.00' x 7.00' x 3.00'

2 Chambers
26.1 cy Field
20.2 cy Stone



Hydrograph for Pond 2P: Underground Infiltration Tank West

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.01	0.00	0	839.00	0.00	0.00	**0.00**
2.01	0.00	0	839.00	0.00	0.00	0.00
4.01	0.00	0	839.00	0.00	0.00	0.00
6.01	0.00	0	839.00	0.00	0.00	0.00
8.01	0.00	0	839.00	0.00	0.00	0.00
10.01	**0.00**	0	839.01	0.00	0.00	0.00
12.01	**0.08**	91	839.95	0.00	0.00	0.00
14.01	0.00	**133**	**840.25**	**0.00**	**0.00**	0.00
16.01	0.00	**135**	**840.26**	**0.00**	**0.00**	0.00
18.01	0.00	131	840.23	0.00	0.00	0.00
20.01	0.00	124	840.18	0.00	0.00	0.00
22.01	0.00	115	840.12	0.00	0.00	0.00
24.01	0.00	106	840.06	0.00	0.00	0.00
26.01	0.00	90	839.94	0.00	0.00	0.00
28.01	0.00	74	839.82	0.00	0.00	0.00
30.01	0.00	59	839.70	0.00	0.00	0.00
32.01	0.00	43	839.56	0.00	0.00	0.00
34.01	0.00	29	839.38	0.00	0.00	0.00
36.01	0.00	14	839.19	0.00	0.00	0.00
38.01	0.00	0	839.00	0.00	0.00	0.00
40.01	0.00	0	839.00	0.00	0.00	0.00
42.01	0.00	0	839.00	0.00	0.00	0.00
44.01	0.00	0	839.00	0.00	0.00	0.00
46.01	0.00	0	839.00	0.00	0.00	0.00
48.01	0.00	0	839.00	0.00	0.00	0.00
50.01	0.00	0	839.00	0.00	0.00	0.00
52.01	0.00	0	839.00	0.00	0.00	0.00
54.01	0.00	0	839.00	0.00	0.00	0.00
56.01	0.00	0	839.00	0.00	0.00	0.00
58.01	0.00	0	839.00	0.00	0.00	0.00
60.01	0.00	0	839.00	0.00	0.00	0.00
62.01	0.00	0	839.00	0.00	0.00	0.00
64.01	0.00	0	839.00	0.00	0.00	0.00
66.01	0.00	0	839.00	0.00	0.00	0.00
68.01	0.00	0	839.00	0.00	0.00	0.00
70.01	0.00	0	839.00	0.00	0.00	0.00
72.01	0.00	0	839.00	0.00	0.00	0.00
74.01	0.00	0	839.00	0.00	0.00	0.00
76.01	0.00	0	839.00	0.00	0.00	0.00
78.01	0.00	0	839.00	0.00	0.00	0.00

Stage-Discharge for Pond 2P: Underground Infiltration Tank West

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
839.00	0.00	0.00	0.00
839.05	0.00	0.00	0.00
839.10	0.00	0.00	0.00
839.15	0.00	0.00	0.00
839.20	0.00	0.00	0.00
839.25	0.00	0.00	0.00
839.30	0.00	0.00	0.00
839.35	0.00	0.00	0.00
839.40	0.00	0.00	0.00
839.45	0.00	0.00	0.00
839.50	0.00	0.00	0.00
839.55	0.00	0.00	0.00
839.60	0.00	0.00	0.00
839.65	0.00	0.00	0.00
839.70	0.00	0.00	0.00
839.75	0.00	0.00	0.00
839.80	0.00	0.00	0.00
839.85	0.00	0.00	0.00
839.90	0.00	0.00	0.00
839.95	0.00	0.00	0.00
840.00	0.00	0.00	0.00
840.05	0.00	0.00	0.00
840.10	0.00	0.00	0.00
840.15	0.00	0.00	0.00
840.20	0.00	0.00	0.00
840.25	0.00	0.00	0.00
840.30	0.00	0.00	0.00
840.35	0.00	0.00	0.00
840.40	0.00	0.00	0.00
840.45	0.00	0.00	0.00
840.50	0.00	0.00	0.00
840.55	0.01	0.00	0.01
840.60	0.03	0.00	0.03
840.65	0.07	0.00	0.07
840.70	0.11	0.00	0.11
840.75	0.17	0.00	0.17
840.80	0.23	0.00	0.23
840.85	0.30	0.00	0.30
840.90	0.37	0.00	0.36
840.95	0.43	0.00	0.43
841.00	0.48	0.00	0.47
841.05	0.52	0.00	0.52
841.10	0.56	0.00	0.56
841.15	0.60	0.00	0.60
841.20	0.64	0.00	0.63
841.25	0.67	0.00	0.67
841.30	0.70	0.00	0.70
841.35	0.74	0.00	0.73
841.40	0.77	0.00	0.76
841.45	0.79	0.00	0.79
841.50	0.82	0.00	0.82
841.55	0.85	0.00	0.85
841.60	0.87	0.00	0.87
841.65	0.90	0.00	0.90
841.70	0.92	0.00	0.92
841.75	0.95	0.00	0.95
841.80	0.97	0.00	0.97
841.85	0.99	0.00	0.99
841.90	1.02	0.00	1.01
841.95	1.04	0.00	1.04
842.00	**1.06**	**0.00**	**1.06**

Stage-Area-Storage for Pond 2P: Underground Infiltration Tank West

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
839.00	182	0
839.05	184	4
839.10	185	7
839.15	187	11
839.20	189	15
839.25	190	19
839.30	192	22
839.35	194	26
839.40	195	30
839.45	197	34
839.50	199	38
839.55	200	43
839.60	202	48
839.65	204	53
839.70	206	59
839.75	207	65
839.80	209	71
839.85	211	78
839.90	213	84
839.95	214	91
840.00	216	98
840.05	218	105
840.10	220	112
840.15	221	119
840.20	223	126
840.25	225	134
840.30	227	141
840.35	228	149
840.40	230	156
840.45	232	164
840.50	234	172
840.55	236	179
840.60	237	187
840.65	239	195
840.70	241	203
840.75	243	210
840.80	245	218
840.85	246	226
840.90	248	234
840.95	250	241
841.00	252	249
841.05	254	257
841.10	256	264
841.15	258	272
841.20	259	279
841.25	261	286
841.30	263	293
841.35	265	300
841.40	267	307
841.45	269	314
841.50	271	320
841.55	273	325
841.60	275	330
841.65	276	336
841.70	278	342
841.75	280	347
841.80	282	353
841.85	284	358
841.90	286	364
841.95	288	370
842.00	**290**	**376**

Summary for Pond 3P: Rain Garden

Inflow Area = 0.155 ac, 49.56% Impervious, Inflow Depth = 1.45" for 2-yr event
Inflow = 0.34 cfs @ 11.96 hrs, Volume= 0.019 af
Outflow = 0.01 cfs @ 15.70 hrs, Volume= 0.019 af, Atten= 98%, Lag= 224.2 min
Discarded = 0.01 cfs @ 15.70 hrs, Volume= 0.019 af
Primary = 0.00 cfs @ 0.01 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Peak Elev= 851.54' @ 15.70 hrs Surf.Area= 698 sf Storage= 494 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 751.3 min (1,524.3 - 773.1)

Volume	Invert	Avail.Storage	Storage Description
#1	850.50'	1,975 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
850.50	253	0	0
851.50	678	466	466
852.50	1,161	920	1,385
853.00	1,200	590	1,975

Device	Routing	Invert	Outlet Devices
#1	Discarded	850.50'	**0.450 in/hr Exfiltration over Surface area**
#2	Primary	852.75'	**10.0' long + 0.5 '/' SideZ x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Discarded OutFlow Max=0.01 cfs @ 15.70 hrs HW=851.54' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 0.01 hrs HW=850.50' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Hydrograph for Pond 3P: Rain Garden

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.01	0.00	0	850.50	0.00	0.00	**0.00**
2.01	0.00	0	850.50	0.00	0.00	0.00
4.01	0.00	0	850.50	0.00	0.00	0.00
6.01	0.00	0	850.50	0.00	0.00	0.00
8.01	0.00	6	850.52	0.00	0.00	0.00
10.01	**0.01**	26	850.60	0.00	0.00	0.00
12.01	**0.27**	338	851.30	0.01	0.01	0.00
14.01	0.01	**485**	**851.53**	**0.01**	**0.01**	0.00
16.01	0.01	**494**	**851.54**	**0.01**	**0.01**	0.00
18.01	0.01	484	851.53	0.01	0.01	0.00
20.01	0.00	466	851.50	0.01	0.01	0.00
22.01	0.00	442	851.47	0.01	0.01	0.00
24.01	0.00	418	851.43	0.01	0.01	0.00
26.01	0.00	371	851.35	0.01	0.01	0.00
28.01	0.00	326	851.28	0.01	0.01	0.00
30.01	0.00	283	851.20	0.01	0.01	0.00
32.01	0.00	243	851.13	0.01	0.01	0.00
34.01	0.00	205	851.05	0.01	0.01	0.00
36.01	0.00	170	850.98	0.00	0.00	0.00
38.01	0.00	137	850.90	0.00	0.00	0.00
40.01	0.00	106	850.83	0.00	0.00	0.00
42.01	0.00	78	850.75	0.00	0.00	0.00
44.01	0.00	52	850.68	0.00	0.00	0.00
46.01	0.00	29	850.60	0.00	0.00	0.00
48.01	0.00	8	850.53	0.00	0.00	0.00
50.01	0.00	0	850.50	0.00	0.00	0.00
52.01	0.00	0	850.50	0.00	0.00	0.00
54.01	0.00	0	850.50	0.00	0.00	0.00
56.01	0.00	0	850.50	0.00	0.00	0.00
58.01	0.00	0	850.50	0.00	0.00	0.00
60.01	0.00	0	850.50	0.00	0.00	0.00
62.01	0.00	0	850.50	0.00	0.00	0.00
64.01	0.00	0	850.50	0.00	0.00	0.00
66.01	0.00	0	850.50	0.00	0.00	0.00
68.01	0.00	0	850.50	0.00	0.00	0.00
70.01	0.00	0	850.50	0.00	0.00	0.00
72.01	0.00	0	850.50	0.00	0.00	0.00
74.01	0.00	0	850.50	0.00	0.00	0.00
76.01	0.00	0	850.50	0.00	0.00	0.00
78.01	0.00	0	850.50	0.00	0.00	0.00

Stage-Discharge for Pond 3P: Rain Garden

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
850.50	0.00	0.00	0.00
850.55	0.00	0.00	0.00
850.60	0.00	0.00	0.00
850.65	0.00	0.00	0.00
850.70	0.00	0.00	0.00
850.75	0.00	0.00	0.00
850.80	0.00	0.00	0.00
850.85	0.00	0.00	0.00
850.90	0.00	0.00	0.00
850.95	0.00	0.00	0.00
851.00	0.00	0.00	0.00
851.05	0.01	0.01	0.00
851.10	0.01	0.01	0.00
851.15	0.01	0.01	0.00
851.20	0.01	0.01	0.00
851.25	0.01	0.01	0.00
851.30	0.01	0.01	0.00
851.35	0.01	0.01	0.00
851.40	0.01	0.01	0.00
851.45	0.01	0.01	0.00
851.50	0.01	0.01	0.00
851.55	0.01	0.01	0.00
851.60	0.01	0.01	0.00
851.65	0.01	0.01	0.00
851.70	0.01	0.01	0.00
851.75	0.01	0.01	0.00
851.80	0.01	0.01	0.00
851.85	0.01	0.01	0.00
851.90	0.01	0.01	0.00
851.95	0.01	0.01	0.00
852.00	0.01	0.01	0.00
852.05	0.01	0.01	0.00
852.10	0.01	0.01	0.00
852.15	0.01	0.01	0.00
852.20	0.01	0.01	0.00
852.25	0.01	0.01	0.00
852.30	0.01	0.01	0.00
852.35	0.01	0.01	0.00
852.40	0.01	0.01	0.00
852.45	0.01	0.01	0.00
852.50	0.01	0.01	0.00
852.55	0.01	0.01	0.00
852.60	0.01	0.01	0.00
852.65	0.01	0.01	0.00
852.70	0.01	0.01	0.00
852.75	0.01	0.01	0.00
852.80	0.31	0.01	0.30
852.85	0.87	0.01	0.85
852.90	1.58	0.01	1.57
852.95	2.44	0.01	2.43
853.00	**3.42**	**0.01**	**3.41**

Stage-Area-Storage for Pond 3P: Rain Garden

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
850.50	253	0
850.55	274	13
850.60	296	27
850.65	317	43
850.70	338	59
850.75	359	77
850.80	380	95
850.85	402	115
850.90	423	135
850.95	444	157
851.00	466	180
851.05	487	203
851.10	508	228
851.15	529	254
851.20	551	281
851.25	572	309
851.30	593	338
851.35	614	369
851.40	635	400
851.45	657	432
851.50	678	466
851.55	702	500
851.60	726	536
851.65	750	573
851.70	775	611
851.75	799	650
851.80	823	691
851.85	847	732
851.90	871	775
851.95	895	820
852.00	920	865
852.05	944	911
852.10	968	959
852.15	992	1,008
852.20	1,016	1,058
852.25	1,040	1,110
852.30	1,064	1,162
852.35	1,089	1,216
852.40	1,113	1,271
852.45	1,137	1,328
852.50	1,161	1,385
852.55	1,165	1,443
852.60	1,169	1,501
852.65	1,173	1,560
852.70	1,177	1,619
852.75	1,181	1,678
852.80	1,184	1,737
852.85	1,188	1,796
852.90	1,192	1,856
852.95	1,196	1,915
853.00	**1,200**	**1,975**

Summary for Subcatchment PRO SUBCATCH 1: Subcat PRO SUBCATCH 1

Runoff = 3.94 cfs @ 11.96 hrs, Volume= 0.211 af, Depth= 4.01"
Routed to Pond 1P : Underground Infiltration Tank East

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=4.25"

Area (ac)	CN	Description
0.000	61	>75% Grass cover, Good, HSG B
0.632	98	Roofs, HSG B
0.632	98	Weighted Average
0.000	61	0.02% Pervious Area
0.632	98	99.98% Impervious Area

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

Hydrograph for Subcatchment PRO SUBCATCH 1: Subcat PRO SUBCATCH 1

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	0.00	0.00	0.00
2.01	0.09	0.00	0.01	0.01
4.01	0.20	0.00	0.07	0.03
6.01	0.34	0.00	0.18	0.04
8.01	0.51	0.00	0.33	0.05
10.01	0.77	0.00	0.57	**0.10**
12.01	2.83	0.30	2.60	**2.96**
14.01	3.49	0.57	3.25	0.10
16.01	3.74	0.68	3.51	0.06
18.01	3.92	0.77	3.68	0.05
20.01	4.05	0.84	3.81	0.04
22.01	**4.15**	**0.89**	**3.92**	0.03
24.01	**4.25**	**0.94**	**4.01**	0.03
26.01	4.25	0.94	4.01	0.00
28.01	4.25	0.94	4.01	0.00
30.01	4.25	0.94	4.01	0.00
32.01	4.25	0.94	4.01	0.00
34.01	4.25	0.94	4.01	0.00
36.01	4.25	0.94	4.01	0.00
38.01	4.25	0.94	4.01	0.00
40.01	4.25	0.94	4.01	0.00
42.01	4.25	0.94	4.01	0.00
44.01	4.25	0.94	4.01	0.00
46.01	4.25	0.94	4.01	0.00
48.01	4.25	0.94	4.01	0.00
50.01	4.25	0.94	4.01	0.00
52.01	4.25	0.94	4.01	0.00
54.01	4.25	0.94	4.01	0.00
56.01	4.25	0.94	4.01	0.00
58.01	4.25	0.94	4.01	0.00
60.01	4.25	0.94	4.01	0.00
62.01	4.25	0.94	4.01	0.00
64.01	4.25	0.94	4.01	0.00
66.01	4.25	0.94	4.01	0.00
68.01	4.25	0.94	4.01	0.00
70.01	4.25	0.94	4.01	0.00
72.01	4.25	0.94	4.01	0.00
74.01	4.25	0.94	4.01	0.00
76.01	4.25	0.94	4.01	0.00
78.01	4.25	0.94	4.01	0.00

Summary for Subcatchment PRO SUBCATCH 2: Subcat PRO SUBCATCH 2

Runoff = 0.74 cfs @ 11.97 hrs, Volume= 0.038 af, Depth= 1.65"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=4.25"

Area (ac)	CN	Description
0.215	61	>75% Grass cover, Good, HSG B
0.064	98	Roofs, HSG B
0.279	70	Weighted Average
0.215	61	76.99% Pervious Area
0.064	98	23.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	28	0.0470	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.82"
2.5	36	0.0970	0.24		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.82"
0.1	36	0.0420	4.16		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
5.3	100	Total			

Hydrograph for Subcatchment PRO SUBCATCH 2: Subcat PRO SUBCATCH 2

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	0.00	0.00	0.00
2.01	0.09	0.00	0.01	0.00
4.01	0.20	0.00	0.07	0.00
6.01	0.34	0.00	0.18	0.00
8.01	0.51	0.00	0.33	0.01
10.01	0.77	0.00	0.57	**0.01**
12.01	2.83	0.30	2.60	**0.62**
14.01	3.49	0.57	3.25	0.03
16.01	3.74	0.68	3.51	0.02
18.01	3.92	0.77	3.68	0.01
20.01	4.05	0.84	3.81	0.01
22.01	**4.15**	**0.89**	**3.92**	0.01
24.01	**4.25**	**0.94**	**4.01**	0.01
26.01	4.25	0.94	4.01	0.00
28.01	4.25	0.94	4.01	0.00
30.01	4.25	0.94	4.01	0.00
32.01	4.25	0.94	4.01	0.00
34.01	4.25	0.94	4.01	0.00
36.01	4.25	0.94	4.01	0.00
38.01	4.25	0.94	4.01	0.00
40.01	4.25	0.94	4.01	0.00
42.01	4.25	0.94	4.01	0.00
44.01	4.25	0.94	4.01	0.00
46.01	4.25	0.94	4.01	0.00
48.01	4.25	0.94	4.01	0.00
50.01	4.25	0.94	4.01	0.00
52.01	4.25	0.94	4.01	0.00
54.01	4.25	0.94	4.01	0.00
56.01	4.25	0.94	4.01	0.00
58.01	4.25	0.94	4.01	0.00
60.01	4.25	0.94	4.01	0.00
62.01	4.25	0.94	4.01	0.00
64.01	4.25	0.94	4.01	0.00
66.01	4.25	0.94	4.01	0.00
68.01	4.25	0.94	4.01	0.00
70.01	4.25	0.94	4.01	0.00
72.01	4.25	0.94	4.01	0.00
74.01	4.25	0.94	4.01	0.00
76.01	4.25	0.94	4.01	0.00
78.01	4.25	0.94	4.01	0.00

Summary for Subcatchment PRO SUBCATCH 3: Subcat PRO SUBCATCH 3

Runoff = 3.24 cfs @ 11.96 hrs, Volume= 0.173 af, Depth= 3.17"
Routed to Pond 1P : Underground Infiltration Tank East

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=4.25"

Area (ac)	CN	Description
0.178	61	>75% Grass cover, Good, HSG B
0.474	98	Roofs, HSG B
0.653	88	Weighted Average
0.178	61	27.34% Pervious Area
0.474	98	72.66% Impervious Area

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

Hydrograph for Subcatchment PRO SUBCATCH 3: Subcat PRO SUBCATCH 3

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	0.00	0.00	0.00
2.01	0.09	0.00	0.01	0.01
4.01	0.20	0.00	0.07	0.02
6.01	0.34	0.00	0.18	0.03
8.01	0.51	0.00	0.33	0.04
10.01	0.77	0.00	0.57	**0.08**
12.01	2.83	0.30	2.60	**2.47**
14.01	3.49	0.57	3.25	0.09
16.01	3.74	0.68	3.51	0.06
18.01	3.92	0.77	3.68	0.04
20.01	4.05	0.84	3.81	0.03
22.01	**4.15**	**0.89**	**3.92**	0.03
24.01	**4.25**	**0.94**	**4.01**	0.03
26.01	4.25	0.94	4.01	0.00
28.01	4.25	0.94	4.01	0.00
30.01	4.25	0.94	4.01	0.00
32.01	4.25	0.94	4.01	0.00
34.01	4.25	0.94	4.01	0.00
36.01	4.25	0.94	4.01	0.00
38.01	4.25	0.94	4.01	0.00
40.01	4.25	0.94	4.01	0.00
42.01	4.25	0.94	4.01	0.00
44.01	4.25	0.94	4.01	0.00
46.01	4.25	0.94	4.01	0.00
48.01	4.25	0.94	4.01	0.00
50.01	4.25	0.94	4.01	0.00
52.01	4.25	0.94	4.01	0.00
54.01	4.25	0.94	4.01	0.00
56.01	4.25	0.94	4.01	0.00
58.01	4.25	0.94	4.01	0.00
60.01	4.25	0.94	4.01	0.00
62.01	4.25	0.94	4.01	0.00
64.01	4.25	0.94	4.01	0.00
66.01	4.25	0.94	4.01	0.00
68.01	4.25	0.94	4.01	0.00
70.01	4.25	0.94	4.01	0.00
72.01	4.25	0.94	4.01	0.00
74.01	4.25	0.94	4.01	0.00
76.01	4.25	0.94	4.01	0.00
78.01	4.25	0.94	4.01	0.00

Summary for Subcatchment PRO SUBCATCH 4: Subcat PRO SUBCATCH 4

Runoff = 0.24 cfs @ 11.97 hrs, Volume= 0.012 af, Depth= 1.60"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=4.25"

Area (ac)	CN	Description
0.071	61	>75% Grass cover, Good, HSG B
0.019	98	Roofs, HSG B
0.091	69	Weighted Average
0.071	61	78.56% Pervious Area
0.019	98	21.44% Impervious Area

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

Hydrograph for Subcatchment PRO SUBCATCH 4: Subcat PRO SUBCATCH 4

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	0.00	0.00	0.00
2.01	0.09	0.00	0.01	0.00
4.01	0.20	0.00	0.07	0.00
6.01	0.34	0.00	0.18	0.00
8.01	0.51	0.00	0.33	0.00
10.01	0.77	0.00	0.57	**0.00**
12.01	2.83	0.30	2.60	**0.19**
14.01	3.49	0.57	3.25	0.01
16.01	3.74	0.68	3.51	0.01
18.01	3.92	0.77	3.68	0.00
20.01	4.05	0.84	3.81	0.00
22.01	**4.15**	**0.89**	**3.92**	0.00
24.01	**4.25**	**0.94**	**4.01**	0.00
26.01	4.25	0.94	4.01	0.00
28.01	4.25	0.94	4.01	0.00
30.01	4.25	0.94	4.01	0.00
32.01	4.25	0.94	4.01	0.00
34.01	4.25	0.94	4.01	0.00
36.01	4.25	0.94	4.01	0.00
38.01	4.25	0.94	4.01	0.00
40.01	4.25	0.94	4.01	0.00
42.01	4.25	0.94	4.01	0.00
44.01	4.25	0.94	4.01	0.00
46.01	4.25	0.94	4.01	0.00
48.01	4.25	0.94	4.01	0.00
50.01	4.25	0.94	4.01	0.00
52.01	4.25	0.94	4.01	0.00
54.01	4.25	0.94	4.01	0.00
56.01	4.25	0.94	4.01	0.00
58.01	4.25	0.94	4.01	0.00
60.01	4.25	0.94	4.01	0.00
62.01	4.25	0.94	4.01	0.00
64.01	4.25	0.94	4.01	0.00
66.01	4.25	0.94	4.01	0.00
68.01	4.25	0.94	4.01	0.00
70.01	4.25	0.94	4.01	0.00
72.01	4.25	0.94	4.01	0.00
74.01	4.25	0.94	4.01	0.00
76.01	4.25	0.94	4.01	0.00
78.01	4.25	0.94	4.01	0.00

Summary for Subcatchment PRO SUBCATCH 4A: Subcat PRO SUBCATCH 4A

Runoff = 0.60 cfs @ 11.96 hrs, Volume= 0.032 af, Depth= 2.47"
Routed to Pond 3P : Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=4.25"

Area (ac)	CN	Description
0.078	61	>75% Grass cover, Good, HSG B
0.077	98	Roofs, HSG B
0.155	79	Weighted Average
0.078	61	50.44% Pervious Area
0.077	98	49.56% Impervious Area

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

Hydrograph for Subcatchment PRO SUBCATCH 4A: Subcat PRO SUBCATCH 4A

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	0.00	0.00	0.00
2.01	0.09	0.00	0.01	0.00
4.01	0.20	0.00	0.07	0.00
6.01	0.34	0.00	0.18	0.00
8.01	0.51	0.00	0.33	0.01
10.01	0.77	0.00	0.57	**0.01**
12.01	2.83	0.30	2.60	**0.47**
14.01	3.49	0.57	3.25	0.02
16.01	3.74	0.68	3.51	0.01
18.01	3.92	0.77	3.68	0.01
20.01	4.05	0.84	3.81	0.01
22.01	**4.15**	**0.89**	**3.92**	0.01
24.01	**4.25**	**0.94**	**4.01**	0.01
26.01	4.25	0.94	4.01	0.00
28.01	4.25	0.94	4.01	0.00
30.01	4.25	0.94	4.01	0.00
32.01	4.25	0.94	4.01	0.00
34.01	4.25	0.94	4.01	0.00
36.01	4.25	0.94	4.01	0.00
38.01	4.25	0.94	4.01	0.00
40.01	4.25	0.94	4.01	0.00
42.01	4.25	0.94	4.01	0.00
44.01	4.25	0.94	4.01	0.00
46.01	4.25	0.94	4.01	0.00
48.01	4.25	0.94	4.01	0.00
50.01	4.25	0.94	4.01	0.00
52.01	4.25	0.94	4.01	0.00
54.01	4.25	0.94	4.01	0.00
56.01	4.25	0.94	4.01	0.00
58.01	4.25	0.94	4.01	0.00
60.01	4.25	0.94	4.01	0.00
62.01	4.25	0.94	4.01	0.00
64.01	4.25	0.94	4.01	0.00
66.01	4.25	0.94	4.01	0.00
68.01	4.25	0.94	4.01	0.00
70.01	4.25	0.94	4.01	0.00
72.01	4.25	0.94	4.01	0.00
74.01	4.25	0.94	4.01	0.00
76.01	4.25	0.94	4.01	0.00
78.01	4.25	0.94	4.01	0.00

Summary for Subcatchment PRO SUBCATCH 5: Subcat PRO SUBCATCH 5

Runoff = 0.18 cfs @ 11.96 hrs, Volume= 0.010 af, Depth= 2.59"
Routed to Pond 2P : Underground Infiltration Tank West

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 10-yr Rainfall=4.25"

Area (ac)	CN	Description
0.021	61	>75% Grass cover, Good, HSG B
0.024	98	Roofs, HSG B
0.044	81	Weighted Average
0.021	61	46.35% Pervious Area
0.024	98	53.65% Impervious Area

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

Hydrograph for Subcatchment PRO SUBCATCH 5: Subcat PRO SUBCATCH 5

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	0.00	0.00	0.00
2.01	0.09	0.00	0.01	0.00
4.01	0.20	0.00	0.07	0.00
6.01	0.34	0.00	0.18	0.00
8.01	0.51	0.00	0.33	0.00
10.01	0.77	0.00	0.57	**0.00**
12.01	2.83	0.30	2.60	**0.14**
14.01	3.49	0.57	3.25	0.01
16.01	3.74	0.68	3.51	0.00
18.01	3.92	0.77	3.68	0.00
20.01	4.05	0.84	3.81	0.00
22.01	**4.15**	**0.89**	**3.92**	0.00
24.01	**4.25**	**0.94**	**4.01**	0.00
26.01	4.25	0.94	4.01	0.00
28.01	4.25	0.94	4.01	0.00
30.01	4.25	0.94	4.01	0.00
32.01	4.25	0.94	4.01	0.00
34.01	4.25	0.94	4.01	0.00
36.01	4.25	0.94	4.01	0.00
38.01	4.25	0.94	4.01	0.00
40.01	4.25	0.94	4.01	0.00
42.01	4.25	0.94	4.01	0.00
44.01	4.25	0.94	4.01	0.00
46.01	4.25	0.94	4.01	0.00
48.01	4.25	0.94	4.01	0.00
50.01	4.25	0.94	4.01	0.00
52.01	4.25	0.94	4.01	0.00
54.01	4.25	0.94	4.01	0.00
56.01	4.25	0.94	4.01	0.00
58.01	4.25	0.94	4.01	0.00
60.01	4.25	0.94	4.01	0.00
62.01	4.25	0.94	4.01	0.00
64.01	4.25	0.94	4.01	0.00
66.01	4.25	0.94	4.01	0.00
68.01	4.25	0.94	4.01	0.00
70.01	4.25	0.94	4.01	0.00
72.01	4.25	0.94	4.01	0.00
74.01	4.25	0.94	4.01	0.00
76.01	4.25	0.94	4.01	0.00
78.01	4.25	0.94	4.01	0.00

Summary for Pond 1P: Underground Infiltration Tank East

[58] Hint: Peaked 0.31' above defined flood level

Inflow Area = 1.285 ac, 86.10% Impervious, Inflow Depth = 3.59" for 10-yr event
Inflow = 7.18 cfs @ 11.96 hrs, Volume= 0.384 af
Outflow = 0.44 cfs @ 12.59 hrs, Volume= 0.384 af, Atten= 94%, Lag= 38.0 min
Discarded = 0.09 cfs @ 12.59 hrs, Volume= 0.315 af
Primary = 0.35 cfs @ 12.59 hrs, Volume= 0.069 af

Routing by Dyn-Stor-Ind method, Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Peak Elev= 845.81' @ 12.59 hrs Surf.Area= 5,014 sf Storage= 8,754 cf
Flood Elev= 845.50' Surf.Area= 4,956 sf Storage= 7,577 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 646.4 min (1,397.2 - 750.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	843.00'	6,117 cf	**30.00'W x 150.00'L x 5.00'H Field A Z=0.5** 24,792 cf Overall - 9,500 cf Embedded = 15,291 cf x 40.0% Voids
#2A	843.50'	9,500 cf	**CMP Round 48** x 35 Inside #1 Effective Size= 48.0"W x 48.0"H => 12.57 sf x 20.00'L = 251.3 cf Overall Size= 48.0"W x 48.0"H x 20.00'L 35 Chambers in 5 Rows 28.00' Header x 12.57 sf x 2 = 703.7 cf Inside
		15,617 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	843.00'	**0.800 in/hr Exfiltration over Surface area**
#2	Primary	845.50'	**10.0" Round 10" PVC** L= 230.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 845.50' / 838.00' S= 0.0326 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf

Discarded OutFlow Max=0.09 cfs @ 12.59 hrs HW=845.81' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.09 cfs)

Primary OutFlow Max=0.35 cfs @ 12.59 hrs HW=845.81' (Free Discharge)
↑**2=10" PVC** (Inlet Controls 0.35 cfs @ 1.89 fps)

Pond 1P: Underground Infiltration Tank East - Chamber Wizard Field A

Chamber Model = CMP Round 48 (Round Corrugated Metal Pipe)
Effective Size= 48.0"W x 48.0"H => 12.57 sf x 20.00'L = 251.3 cf
Overall Size= 48.0"W x 48.0"H x 20.00'L

48.0" Wide + 24.0" Spacing = 72.0" C-C Row Spacing

7 Chambers/Row x 20.00' Long +4.00' Header x 2 = 148.00' Row Length +12.0" End Stone x 2 = 150.00' Base Length
5 Rows x 48.0" Wide + 24.0" Spacing x 4 + 12.0" Side Stone x 2 = 30.00' Base Width
6.0" Stone Base + 48.0" Chamber Height + 6.0" Stone Cover = 5.00' Field Height

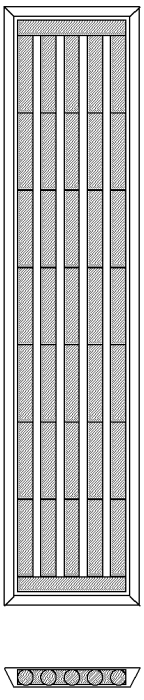
0.5 '/' Side-Z x Height = 30.0" Flare/Side
Base Length + Flare x 2 = 155.00' Top Length
Base Width + Flare x 2 = 35.00' Top Width

35 Chambers x 251.3 cf + 28.00' Header x 12.57 sf x 2 = 9,500.2 cf Chamber Storage

24,791.7 cf Field - 9,500.2 cf Chambers = 15,291.5 cf Stone x 40.0% Voids = 6,116.6 cf Stone Storage

Chamber Storage + Stone Storage = 15,616.8 cf = 0.359 af
Overall Storage Efficiency = 63.0%
Overall System Size = 150.00' x 30.00' x 5.00'

35 Chambers
918.2 cy Field
566.4 cy Stone



Hydrograph for Pond 1P: Underground Infiltration Tank East

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.01	0.00	0	843.00	0.00	0.00	0.00
2.01	0.02	0	843.00	0.02	0.02	0.00
4.01	0.05	0	843.00	0.05	0.05	0.00
6.01	0.07	0	843.00	0.07	0.07	0.00
8.01	0.09	18	843.01	0.08	0.08	0.00
10.01	**0.18**	368	843.20	0.08	0.08	0.00
12.01	**5.43**	**7,122**	**845.38**	**0.09**	**0.09**	**0.00**
14.01	0.19	**8,393**	**845.71**	**0.27**	**0.09**	**0.18**
16.01	0.12	8,061	845.63	0.16	0.09	0.06
18.01	0.09	7,867	845.58	0.12	0.09	0.02
20.01	0.07	7,691	845.53	0.10	0.09	0.00
22.01	0.06	7,488	845.48	0.09	0.09	0.00
24.01	0.06	7,255	845.42	0.09	0.09	0.00
26.01	0.00	6,612	845.24	0.09	0.09	0.00
28.01	0.00	5,960	845.07	0.09	0.09	0.00
30.01	0.00	5,312	844.90	0.09	0.09	0.00
32.01	0.00	4,668	844.72	0.09	0.09	0.00
34.01	0.00	4,028	844.54	0.09	0.09	0.00
36.01	0.00	3,393	844.35	0.09	0.09	0.00
38.01	0.00	2,763	844.16	0.09	0.09	0.00
40.01	0.00	2,137	843.96	0.09	0.09	0.00
42.01	0.00	1,517	843.75	0.09	0.09	0.00
44.01	0.00	902	843.50	0.08	0.08	0.00
46.01	0.00	294	843.16	0.08	0.08	0.00
48.01	0.00	0	843.00	0.00	0.00	0.00
50.01	0.00	0	843.00	0.00	0.00	0.00
52.01	0.00	0	843.00	0.00	0.00	0.00
54.01	0.00	0	843.00	0.00	0.00	0.00
56.01	0.00	0	843.00	0.00	0.00	0.00
58.01	0.00	0	843.00	0.00	0.00	0.00
60.01	0.00	0	843.00	0.00	0.00	0.00
62.01	0.00	0	843.00	0.00	0.00	0.00
64.01	0.00	0	843.00	0.00	0.00	0.00
66.01	0.00	0	843.00	0.00	0.00	0.00
68.01	0.00	0	843.00	0.00	0.00	0.00
70.01	0.00	0	843.00	0.00	0.00	0.00
72.01	0.00	0	843.00	0.00	0.00	0.00
74.01	0.00	0	843.00	0.00	0.00	0.00
76.01	0.00	0	843.00	0.00	0.00	0.00
78.01	0.00	0	843.00	0.00	0.00	0.00

Stage-Discharge for Pond 1P: Underground Infiltration Tank East

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
843.00	0.00	0.00	0.00
843.05	0.08	0.08	0.00
843.10	0.08	0.08	0.00
843.15	0.08	0.08	0.00
843.20	0.08	0.08	0.00
843.25	0.08	0.08	0.00
843.30	0.08	0.08	0.00
843.35	0.08	0.08	0.00
843.40	0.08	0.08	0.00
843.45	0.08	0.08	0.00
843.50	0.09	0.09	0.00
843.55	0.09	0.09	0.00
843.60	0.09	0.09	0.00
843.65	0.09	0.09	0.00
843.70	0.09	0.09	0.00
843.75	0.09	0.09	0.00
843.80	0.09	0.09	0.00
843.85	0.09	0.09	0.00
843.90	0.09	0.09	0.00
843.95	0.09	0.09	0.00
844.00	0.09	0.09	0.00
844.05	0.09	0.09	0.00
844.10	0.09	0.09	0.00
844.15	0.09	0.09	0.00
844.20	0.09	0.09	0.00
844.25	0.09	0.09	0.00
844.30	0.09	0.09	0.00
844.35	0.09	0.09	0.00
844.40	0.09	0.09	0.00
844.45	0.09	0.09	0.00
844.50	0.09	0.09	0.00
844.55	0.09	0.09	0.00
844.60	0.09	0.09	0.00
844.65	0.09	0.09	0.00
844.70	0.09	0.09	0.00
844.75	0.09	0.09	0.00
844.80	0.09	0.09	0.00
844.85	0.09	0.09	0.00
844.90	0.09	0.09	0.00
844.95	0.09	0.09	0.00
845.00	0.09	0.09	0.00
845.05	0.09	0.09	0.00
845.10	0.09	0.09	0.00
845.15	0.09	0.09	0.00
845.20	0.09	0.09	0.00
845.25	0.09	0.09	0.00
845.30	0.09	0.09	0.00
845.35	0.09	0.09	0.00
845.40	0.09	0.09	0.00
845.45	0.09	0.09	0.00
845.50	0.09	0.09	0.00
845.55	0.10	0.09	0.01
845.60	0.13	0.09	0.04
845.65	0.18	0.09	0.09
845.70	0.25	0.09	0.15
845.75	0.33	0.09	0.23
845.80	0.42	0.09	0.33
845.85	0.53	0.09	0.44
845.90	0.65	0.09	0.56
845.95	0.78	0.09	0.69
846.00	0.92	0.09	0.82
846.05	1.06	0.09	0.96
846.10	1.20	0.09	1.11
846.15	1.35	0.09	1.25
846.20	1.49	0.09	1.39
846.25	1.62	0.09	1.52
846.30	1.73	0.09	1.64
846.35	1.82	0.09	1.73
846.40	1.92	0.09	1.83
846.45	2.01	0.10	1.92
846.50	2.10	0.10	2.01
846.55	2.19	0.10	2.09
846.60	2.27	0.10	2.17
846.65	2.34	0.10	2.25
846.70	2.42	0.10	2.32
846.75	2.49	0.10	2.40
846.80	2.56	0.10	2.47
846.85	2.63	0.10	2.54
846.90	2.70	0.10	2.60
846.95	2.77	0.10	2.67
847.00	2.83	0.10	2.73
847.05	2.89	0.10	2.80
847.10	2.95	0.10	2.86
847.15	3.01	0.10	2.92
847.20	3.07	0.10	2.98
847.25	3.13	0.10	3.03
847.30	3.19	0.10	3.09
847.35	3.24	0.10	3.14
847.40	3.30	0.10	3.20
847.45	3.35	0.10	3.25
847.50	3.40	0.10	3.30
847.55	3.46	0.10	3.36
847.60	3.51	0.10	3.41
847.65	3.56	0.10	3.46
847.70	3.61	0.10	3.51
847.75	3.66	0.10	3.56
847.80	3.70	0.10	3.60
847.85	3.75	0.10	3.65
847.90	3.80	0.10	3.70
847.95	3.85	0.10	3.74
848.00	**3.89**	**0.10**	**3.79**

Stage-Area-Storage for Pond 1P: Underground Infiltration Tank East

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
843.00	4,500	0
843.05	4,509	90
843.10	4,518	180
843.15	4,527	271
843.20	4,536	361
843.25	4,545	452
843.30	4,554	543
843.35	4,563	634
843.40	4,572	726
843.45	4,581	817
843.50	4,590	909
843.55	4,599	1,014
843.60	4,608	1,131
843.65	4,617	1,255
843.70	4,626	1,384
843.75	4,636	1,519
843.80	4,645	1,657
843.85	4,654	1,800
843.90	4,663	1,946
843.95	4,672	2,095
844.00	4,681	2,247
844.05	4,690	2,402
844.10	4,699	2,560
844.15	4,708	2,720
844.20	4,717	2,882
844.25	4,727	3,046
844.30	4,736	3,213
844.35	4,745	3,381
844.40	4,754	3,551
844.45	4,763	3,723
844.50	4,772	3,896
844.55	4,781	4,071
844.60	4,791	4,247
844.65	4,800	4,424
844.70	4,809	4,603
844.75	4,818	4,783
844.80	4,827	4,964
844.85	4,836	5,146
844.90	4,846	5,329
844.95	4,855	5,513
845.00	4,864	5,697
845.05	4,873	5,883
845.10	4,882	6,069
845.15	4,892	6,256
845.20	4,901	6,443
845.25	4,910	6,631
845.30	4,919	6,820
845.35	4,929	7,009
845.40	4,938	7,198
845.45	4,947	7,387
845.50	4,956	7,577
845.55	4,966	7,767
845.60	4,975	7,957
845.65	4,984	8,147
845.70	4,993	8,337
845.75	5,003	8,527
845.80	5,012	8,717
845.85	5,021	8,907
845.90	5,030	9,097
845.95	5,040	9,286
846.00	5,049	9,475
846.05	5,058	9,664
846.10	5,068	9,852
846.15	5,077	10,040
846.20	5,086	10,227
846.25	5,096	10,413
846.30	5,105	10,599
846.35	5,114	10,784
846.40	5,124	10,967
846.45	5,133	11,150
846.50	5,142	11,332
846.55	5,152	11,513
846.60	5,161	11,693
846.65	5,170	11,871
846.70	5,180	12,048
846.75	5,189	12,224
846.80	5,198	12,397
846.85	5,208	12,569
846.90	5,217	12,739
846.95	5,227	12,908
847.00	5,236	13,073
847.05	5,245	13,237
847.10	5,255	13,398
847.15	5,264	13,556
847.20	5,274	13,711
847.25	5,283	13,862
847.30	5,292	14,010
847.35	5,302	14,153
847.40	5,311	14,290
847.45	5,321	14,421
847.50	5,330	14,541
847.55	5,340	14,648
847.60	5,349	14,755
847.65	5,359	14,862
847.70	5,368	14,969
847.75	5,378	15,077
847.80	5,387	15,184
847.85	5,397	15,292
847.90	5,406	15,400
847.95	5,416	15,508
848.00	**5,425**	**15,617**

Summary for Pond 2P: Underground Infiltration Tank West

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

Inflow Area = 0.044 ac, 53.65% Impervious, Inflow Depth = 2.59" for 10-yr event
Inflow = 0.18 cfs @ 11.96 hrs, Volume= 0.010 af
Outflow = 0.03 cfs @ 12.13 hrs, Volume= 0.010 af, Atten= 84%, Lag= 10.4 min
Discarded = 0.00 cfs @ 12.13 hrs, Volume= 0.007 af
Primary = 0.03 cfs @ 12.13 hrs, Volume= 0.002 af

Routing by Dyn-Stor-Ind method, Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Peak Elev= 840.60' @ 12.13 hrs Surf.Area= 237 sf Storage= 186 cf
Flood Elev= 840.50' Surf.Area= 234 sf Storage= 172 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 540.1 min (1,308.8 - 768.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	839.00'	219 cf	**7.00'W x 26.00'L x 3.00'H Field A Z=0.5** 704 cf Overall - 157 cf Embedded = 546 cf x 40.0% Voids
#2A	839.50'	157 cf	**CMP Round 24** x 2 Inside #1 Effective Size= 24.0"W x 24.0"H => 3.14 sf x 20.00'L = 62.8 cf Overall Size= 24.0"W x 24.0"H x 20.00'L 2 Chambers in 2 Rows 5.00' Header x 3.14 sf x 2 = 31.4 cf Inside
		376 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	840.50'	**6.0" Round Culvert** L= 10.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 840.50' / 840.18' S= 0.0302 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf
#2	Discarded	839.00'	**0.450 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.00 cfs @ 12.13 hrs HW=840.60' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.03 cfs @ 12.13 hrs HW=840.60' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 0.03 cfs @ 1.05 fps)

Pond 2P: Underground Infiltration Tank West - Chamber Wizard Field A

Chamber Model = CMP Round 24 (Round Corrugated Metal Pipe)
Effective Size= 24.0"W x 24.0"H => 3.14 sf x 20.00'L = 62.8 cf
Overall Size= 24.0"W x 24.0"H x 20.00'L

24.0" Wide + 12.0" Spacing = 36.0" C-C Row Spacing

1 Chambers/Row x 20.00' Long +2.00' Header x 2 = 24.00' Row Length +12.0" End Stone x 2 = 26.00' Base Length
2 Rows x 24.0" Wide + 12.0" Spacing x 1 + 12.0" Side Stone x 2 = 7.00' Base Width
6.0" Stone Base + 24.0" Chamber Height + 6.0" Stone Cover = 3.00' Field Height

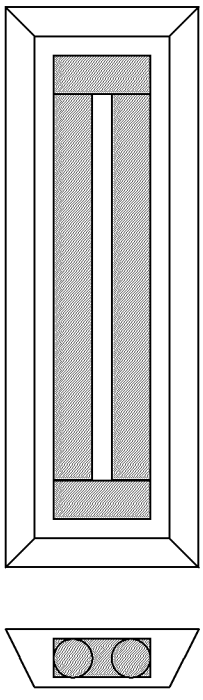
0.5 '/' Side-Z x Height = 18.0" Flare/Side
Base Length + Flare x 2 = 29.00' Top Length
Base Width + Flare x 2 = 10.00' Top Width

2 Chambers x 62.8 cf + 5.00' Header x 3.14 sf x 2 = 157.1 cf Chamber Storage

703.5 cf Field - 157.1 cf Chambers = 546.4 cf Stone x 40.0% Voids = 218.6 cf Stone Storage

Chamber Storage + Stone Storage = 375.6 cf = 0.009 af
Overall Storage Efficiency = 53.4%
Overall System Size = 26.00' x 7.00' x 3.00'

2 Chambers
26.1 cy Field
20.2 cy Stone



Hydrograph for Pond 2P: Underground Infiltration Tank West

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.01	0.00	0	839.00	0.00	0.00	0.00
2.01	0.00	0	839.00	0.00	0.00	0.00
4.01	0.00	0	839.00	0.00	0.00	0.00
6.01	0.00	0	839.00	0.00	0.00	0.00
8.01	0.00	0	839.00	0.00	0.00	0.00
10.01	**0.00**	7	839.09	0.00	0.00	0.00
12.01	**0.14**	**164**	**840.45**	**0.00**	**0.00**	**0.00**
14.01	0.01	**177**	**840.53**	**0.01**	**0.00**	**0.00**
16.01	0.00	175	840.52	0.00	0.00	0.00
18.01	0.00	173	840.51	0.00	0.00	0.00
20.01	0.00	171	840.50	0.00	0.00	0.00
22.01	0.00	167	840.47	0.00	0.00	0.00
24.01	0.00	162	840.44	0.00	0.00	0.00
26.01	0.00	145	840.33	0.00	0.00	0.00
28.01	0.00	128	840.21	0.00	0.00	0.00
30.01	0.00	112	840.10	0.00	0.00	0.00
32.01	0.00	95	839.98	0.00	0.00	0.00
34.01	0.00	79	839.86	0.00	0.00	0.00
36.01	0.00	64	839.74	0.00	0.00	0.00
38.01	0.00	48	839.60	0.00	0.00	0.00
40.01	0.00	33	839.44	0.00	0.00	0.00
42.01	0.00	19	839.25	0.00	0.00	0.00
44.01	0.00	5	839.06	0.00	0.00	0.00
46.01	0.00	0	839.00	0.00	0.00	0.00
48.01	0.00	0	839.00	0.00	0.00	0.00
50.01	0.00	0	839.00	0.00	0.00	0.00
52.01	0.00	0	839.00	0.00	0.00	0.00
54.01	0.00	0	839.00	0.00	0.00	0.00
56.01	0.00	0	839.00	0.00	0.00	0.00
58.01	0.00	0	839.00	0.00	0.00	0.00
60.01	0.00	0	839.00	0.00	0.00	0.00
62.01	0.00	0	839.00	0.00	0.00	0.00
64.01	0.00	0	839.00	0.00	0.00	0.00
66.01	0.00	0	839.00	0.00	0.00	0.00
68.01	0.00	0	839.00	0.00	0.00	0.00
70.01	0.00	0	839.00	0.00	0.00	0.00
72.01	0.00	0	839.00	0.00	0.00	0.00
74.01	0.00	0	839.00	0.00	0.00	0.00
76.01	0.00	0	839.00	0.00	0.00	0.00
78.01	0.00	0	839.00	0.00	0.00	0.00

Stage-Discharge for Pond 2P: Underground Infiltration Tank West

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
839.00	0.00	0.00	0.00
839.05	0.00	0.00	0.00
839.10	0.00	0.00	0.00
839.15	0.00	0.00	0.00
839.20	0.00	0.00	0.00
839.25	0.00	0.00	0.00
839.30	0.00	0.00	0.00
839.35	0.00	0.00	0.00
839.40	0.00	0.00	0.00
839.45	0.00	0.00	0.00
839.50	0.00	0.00	0.00
839.55	0.00	0.00	0.00
839.60	0.00	0.00	0.00
839.65	0.00	0.00	0.00
839.70	0.00	0.00	0.00
839.75	0.00	0.00	0.00
839.80	0.00	0.00	0.00
839.85	0.00	0.00	0.00
839.90	0.00	0.00	0.00
839.95	0.00	0.00	0.00
840.00	0.00	0.00	0.00
840.05	0.00	0.00	0.00
840.10	0.00	0.00	0.00
840.15	0.00	0.00	0.00
840.20	0.00	0.00	0.00
840.25	0.00	0.00	0.00
840.30	0.00	0.00	0.00
840.35	0.00	0.00	0.00
840.40	0.00	0.00	0.00
840.45	0.00	0.00	0.00
840.50	0.00	0.00	0.00
840.55	0.01	0.00	0.01
840.60	0.03	0.00	0.03
840.65	0.07	0.00	0.07
840.70	0.11	0.00	0.11
840.75	0.17	0.00	0.17
840.80	0.23	0.00	0.23
840.85	0.30	0.00	0.30
840.90	0.37	0.00	0.36
840.95	0.43	0.00	0.43
841.00	0.48	0.00	0.47
841.05	0.52	0.00	0.52
841.10	0.56	0.00	0.56
841.15	0.60	0.00	0.60
841.20	0.64	0.00	0.63
841.25	0.67	0.00	0.67
841.30	0.70	0.00	0.70
841.35	0.74	0.00	0.73
841.40	0.77	0.00	0.76
841.45	0.79	0.00	0.79
841.50	0.82	0.00	0.82
841.55	0.85	0.00	0.85
841.60	0.87	0.00	0.87
841.65	0.90	0.00	0.90
841.70	0.92	0.00	0.92
841.75	0.95	0.00	0.95
841.80	0.97	0.00	0.97
841.85	0.99	0.00	0.99
841.90	1.02	0.00	1.01
841.95	1.04	0.00	1.04
842.00	**1.06**	**0.00**	**1.06**

Stage-Area-Storage for Pond 2P: Underground Infiltration Tank West

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
839.00	182	0
839.05	184	4
839.10	185	7
839.15	187	11
839.20	189	15
839.25	190	19
839.30	192	22
839.35	194	26
839.40	195	30
839.45	197	34
839.50	199	38
839.55	200	43
839.60	202	48
839.65	204	53
839.70	206	59
839.75	207	65
839.80	209	71
839.85	211	78
839.90	213	84
839.95	214	91
840.00	216	98
840.05	218	105
840.10	220	112
840.15	221	119
840.20	223	126
840.25	225	134
840.30	227	141
840.35	228	149
840.40	230	156
840.45	232	164
840.50	234	172
840.55	236	179
840.60	237	187
840.65	239	195
840.70	241	203
840.75	243	210
840.80	245	218
840.85	246	226
840.90	248	234
840.95	250	241
841.00	252	249
841.05	254	257
841.10	256	264
841.15	258	272
841.20	259	279
841.25	261	286
841.30	263	293
841.35	265	300
841.40	267	307
841.45	269	314
841.50	271	320
841.55	273	325
841.60	275	330
841.65	276	336
841.70	278	342
841.75	280	347
841.80	282	353
841.85	284	358
841.90	286	364
841.95	288	370
842.00	**290**	**376**

Summary for Pond 3P: Rain Garden

Inflow Area = 0.155 ac, 49.56% Impervious, Inflow Depth = 2.47" for 10-yr event
Inflow = 0.60 cfs @ 11.96 hrs, Volume= 0.032 af
Outflow = 0.01 cfs @ 17.27 hrs, Volume= 0.032 af, Atten= 98%, Lag= 318.4 min
Discarded = 0.01 cfs @ 17.27 hrs, Volume= 0.032 af
Primary = 0.00 cfs @ 0.01 hrs, Volume= 0.000 af

Routing by Dyn-Stor-Ind method, Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Peak Elev= 852.06' @ 17.27 hrs Surf.Area= 947 sf Storage= 918 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 1,070.0 min (1,842.1 - 772.0)

Volume	Invert	Avail.Storage	Storage Description
#1	850.50'	1,975 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
850.50	253	0	0
851.50	678	466	466
852.50	1,161	920	1,385
853.00	1,200	590	1,975

Device	Routing	Invert	Outlet Devices
#1	Discarded	850.50'	**0.450 in/hr Exfiltration over Surface area**
#2	Primary	852.75'	**10.0' long + 0.5 '/' SideZ x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Discarded OutFlow Max=0.01 cfs @ 17.27 hrs HW=852.06' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.00 cfs @ 0.01 hrs HW=850.50' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Hydrograph for Pond 3P: Rain Garden

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.01	0.00	0	850.50	0.00	0.00	**0.00**
2.01	0.00	0	850.50	0.00	0.00	0.00
4.01	0.00	1	850.50	0.00	0.00	0.00
6.01	0.00	10	850.54	0.00	0.00	0.00
8.01	0.01	30	850.61	0.00	0.00	0.00
10.01	**0.01**	72	850.74	0.00	0.00	0.00
12.01	**0.47**	605	851.69	0.01	0.01	0.00
14.01	0.02	879	852.02	0.01	0.01	0.00
16.01	0.01	**915**	**852.05**	**0.01**	**0.01**	0.00
18.01	0.01	**917**	**852.06**	**0.01**	**0.01**	0.00
20.01	0.01	902	852.04	0.01	0.01	0.00
22.01	0.01	878	852.01	0.01	0.01	0.00
24.01	0.01	851	851.98	0.01	0.01	0.00
26.01	0.00	785	851.91	0.01	0.01	0.00
28.01	0.00	721	851.84	0.01	0.01	0.00
30.01	0.00	659	851.76	0.01	0.01	0.00
32.01	0.00	600	851.69	0.01	0.01	0.00
34.01	0.00	544	851.61	0.01	0.01	0.00
36.01	0.00	490	851.54	0.01	0.01	0.00
38.01	0.00	439	851.46	0.01	0.01	0.00
40.01	0.00	391	851.39	0.01	0.01	0.00
42.01	0.00	345	851.31	0.01	0.01	0.00
44.01	0.00	301	851.24	0.01	0.01	0.00
46.01	0.00	260	851.16	0.01	0.01	0.00
48.01	0.00	221	851.09	0.01	0.01	0.00
50.01	0.00	185	851.01	0.00	0.00	0.00
52.01	0.00	151	850.94	0.00	0.00	0.00
54.01	0.00	119	850.86	0.00	0.00	0.00
56.01	0.00	90	850.79	0.00	0.00	0.00
58.01	0.00	63	850.71	0.00	0.00	0.00
60.01	0.00	38	850.64	0.00	0.00	0.00
62.01	0.00	16	850.56	0.00	0.00	0.00
64.01	0.00	0	850.50	0.00	0.00	0.00
66.01	0.00	0	850.50	0.00	0.00	0.00
68.01	0.00	0	850.50	0.00	0.00	0.00
70.01	0.00	0	850.50	0.00	0.00	0.00
72.01	0.00	0	850.50	0.00	0.00	0.00
74.01	0.00	0	850.50	0.00	0.00	0.00
76.01	0.00	0	850.50	0.00	0.00	0.00
78.01	0.00	0	850.50	0.00	0.00	0.00

Stage-Discharge for Pond 3P: Rain Garden

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
850.50	0.00	0.00	0.00
850.55	0.00	0.00	0.00
850.60	0.00	0.00	0.00
850.65	0.00	0.00	0.00
850.70	0.00	0.00	0.00
850.75	0.00	0.00	0.00
850.80	0.00	0.00	0.00
850.85	0.00	0.00	0.00
850.90	0.00	0.00	0.00
850.95	0.00	0.00	0.00
851.00	0.00	0.00	0.00
851.05	0.01	0.01	0.00
851.10	0.01	0.01	0.00
851.15	0.01	0.01	0.00
851.20	0.01	0.01	0.00
851.25	0.01	0.01	0.00
851.30	0.01	0.01	0.00
851.35	0.01	0.01	0.00
851.40	0.01	0.01	0.00
851.45	0.01	0.01	0.00
851.50	0.01	0.01	0.00
851.55	0.01	0.01	0.00
851.60	0.01	0.01	0.00
851.65	0.01	0.01	0.00
851.70	0.01	0.01	0.00
851.75	0.01	0.01	0.00
851.80	0.01	0.01	0.00
851.85	0.01	0.01	0.00
851.90	0.01	0.01	0.00
851.95	0.01	0.01	0.00
852.00	0.01	0.01	0.00
852.05	0.01	0.01	0.00
852.10	0.01	0.01	0.00
852.15	0.01	0.01	0.00
852.20	0.01	0.01	0.00
852.25	0.01	0.01	0.00
852.30	0.01	0.01	0.00
852.35	0.01	0.01	0.00
852.40	0.01	0.01	0.00
852.45	0.01	0.01	0.00
852.50	0.01	0.01	0.00
852.55	0.01	0.01	0.00
852.60	0.01	0.01	0.00
852.65	0.01	0.01	0.00
852.70	0.01	0.01	0.00
852.75	0.01	0.01	0.00
852.80	0.31	0.01	0.30
852.85	0.87	0.01	0.85
852.90	1.58	0.01	1.57
852.95	2.44	0.01	2.43
853.00	**3.42**	**0.01**	**3.41**

Stage-Area-Storage for Pond 3P: Rain Garden

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
850.50	253	0
850.55	274	13
850.60	296	27
850.65	317	43
850.70	338	59
850.75	359	77
850.80	380	95
850.85	402	115
850.90	423	135
850.95	444	157
851.00	466	180
851.05	487	203
851.10	508	228
851.15	529	254
851.20	551	281
851.25	572	309
851.30	593	338
851.35	614	369
851.40	635	400
851.45	657	432
851.50	678	466
851.55	702	500
851.60	726	536
851.65	750	573
851.70	775	611
851.75	799	650
851.80	823	691
851.85	847	732
851.90	871	775
851.95	895	820
852.00	920	865
852.05	944	911
852.10	968	959
852.15	992	1,008
852.20	1,016	1,058
852.25	1,040	1,110
852.30	1,064	1,162
852.35	1,089	1,216
852.40	1,113	1,271
852.45	1,137	1,328
852.50	1,161	1,385
852.55	1,165	1,443
852.60	1,169	1,501
852.65	1,173	1,560
852.70	1,177	1,619
852.75	1,181	1,678
852.80	1,184	1,737
852.85	1,188	1,796
852.90	1,192	1,856
852.95	1,196	1,915
853.00	**1,200**	**1,975**

Summary for Subcatchment PRO SUBCATCH 1: Subcat PRO SUBCATCH 1

Runoff = 6.98 cfs @ 11.96 hrs, Volume= 0.382 af, Depth= 7.25"
Routed to Pond 1P : Underground Infiltration Tank East

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-yr Rainfall=7.49"

Area (ac)	CN	Description
0.000	61	>75% Grass cover, Good, HSG B
0.632	98	Roofs, HSG B
0.632	98	Weighted Average
0.000	61	0.02% Pervious Area
0.632	98	99.98% Impervious Area

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

Hydrograph for Subcatchment PRO SUBCATCH 1: Subcat PRO SUBCATCH 1

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	0.00	0.00	0.00
2.01	0.17	0.00	0.05	0.03
4.01	0.36	0.00	0.20	0.06
6.01	0.60	0.00	0.41	0.08
8.01	0.90	0.00	0.69	0.10
10.01	1.36	0.00	1.14	**0.18**
12.01	4.98	1.36	4.74	**5.23**
14.01	6.14	2.10	5.91	0.18
16.01	6.59	2.41	6.35	0.11
18.01	6.90	2.63	6.66	0.09
20.01	7.13	2.80	6.89	0.06
22.01	**7.32**	**2.93**	**7.08**	0.06
24.01	**7.49**	**3.06**	**7.25**	0.05
26.01	7.49	3.06	7.25	0.00
28.01	7.49	3.06	7.25	0.00
30.01	7.49	3.06	7.25	0.00
32.01	7.49	3.06	7.25	0.00
34.01	7.49	3.06	7.25	0.00
36.01	7.49	3.06	7.25	0.00
38.01	7.49	3.06	7.25	0.00
40.01	7.49	3.06	7.25	0.00
42.01	7.49	3.06	7.25	0.00
44.01	7.49	3.06	7.25	0.00
46.01	7.49	3.06	7.25	0.00
48.01	7.49	3.06	7.25	0.00
50.01	7.49	3.06	7.25	0.00
52.01	7.49	3.06	7.25	0.00
54.01	7.49	3.06	7.25	0.00
56.01	7.49	3.06	7.25	0.00
58.01	7.49	3.06	7.25	0.00
60.01	7.49	3.06	7.25	0.00
62.01	7.49	3.06	7.25	0.00
64.01	7.49	3.06	7.25	0.00
66.01	7.49	3.06	7.25	0.00
68.01	7.49	3.06	7.25	0.00
70.01	7.49	3.06	7.25	0.00
72.01	7.49	3.06	7.25	0.00
74.01	7.49	3.06	7.25	0.00
76.01	7.49	3.06	7.25	0.00
78.01	7.49	3.06	7.25	0.00

Summary for Subcatchment PRO SUBCATCH 2: Subcat PRO SUBCATCH 2

Runoff = 1.91 cfs @ 11.97 hrs, Volume= 0.094 af, Depth= 4.02"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-yr Rainfall=7.49"

Area (ac)	CN	Description
0.215	61	>75% Grass cover, Good, HSG B
0.064	98	Roofs, HSG B
0.279	70	Weighted Average
0.215	61	76.99% Pervious Area
0.064	98	23.01% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
2.7	28	0.0470	0.17		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.82"
2.5	36	0.0970	0.24		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.82"
0.1	36	0.0420	4.16		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
5.3	100	Total			

Hydrograph for Subcatchment PRO SUBCATCH 2: Subcat PRO SUBCATCH 2

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	0.00	0.00	0.00
2.01	0.17	0.00	0.05	0.00
4.01	0.36	0.00	0.20	0.01
6.01	0.60	0.00	0.41	0.01
8.01	0.90	0.00	0.69	0.01
10.01	1.36	0.00	1.14	**0.02**
12.01	4.98	1.36	4.74	**1.56**
14.01	6.14	2.10	5.91	0.06
16.01	6.59	2.41	6.35	0.04
18.01	6.90	2.63	6.66	0.03
20.01	7.13	2.80	6.89	0.02
22.01	**7.32**	**2.93**	**7.08**	0.02
24.01	**7.49**	**3.06**	**7.25**	0.02
26.01	7.49	3.06	7.25	0.00
28.01	7.49	3.06	7.25	0.00
30.01	7.49	3.06	7.25	0.00
32.01	7.49	3.06	7.25	0.00
34.01	7.49	3.06	7.25	0.00
36.01	7.49	3.06	7.25	0.00
38.01	7.49	3.06	7.25	0.00
40.01	7.49	3.06	7.25	0.00
42.01	7.49	3.06	7.25	0.00
44.01	7.49	3.06	7.25	0.00
46.01	7.49	3.06	7.25	0.00
48.01	7.49	3.06	7.25	0.00
50.01	7.49	3.06	7.25	0.00
52.01	7.49	3.06	7.25	0.00
54.01	7.49	3.06	7.25	0.00
56.01	7.49	3.06	7.25	0.00
58.01	7.49	3.06	7.25	0.00
60.01	7.49	3.06	7.25	0.00
62.01	7.49	3.06	7.25	0.00
64.01	7.49	3.06	7.25	0.00
66.01	7.49	3.06	7.25	0.00
68.01	7.49	3.06	7.25	0.00
70.01	7.49	3.06	7.25	0.00
72.01	7.49	3.06	7.25	0.00
74.01	7.49	3.06	7.25	0.00
76.01	7.49	3.06	7.25	0.00
78.01	7.49	3.06	7.25	0.00

Summary for Subcatchment PRO SUBCATCH 3: Subcat PRO SUBCATCH 3

Runoff = 6.24 cfs @ 11.96 hrs, Volume= 0.332 af, Depth= 6.11"
Routed to Pond 1P : Underground Infiltration Tank East

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-yr Rainfall=7.49"

Area (ac)	CN	Description
0.178	61	>75% Grass cover, Good, HSG B
0.474	98	Roofs, HSG B
0.653	88	Weighted Average
0.178	61	27.34% Pervious Area
0.474	98	72.66% Impervious Area

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

Hydrograph for Subcatchment PRO SUBCATCH 3: Subcat PRO SUBCATCH 3

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	0.00	0.00	0.00
2.01	0.17	0.00	0.05	0.03
4.01	0.36	0.00	0.20	0.04
6.01	0.60	0.00	0.41	0.06
8.01	0.90	0.00	0.69	0.08
10.01	1.36	0.00	1.14	**0.14**
12.01	4.98	1.36	4.74	**4.74**
14.01	6.14	2.10	5.91	0.17
16.01	6.59	2.41	6.35	0.11
18.01	6.90	2.63	6.66	0.08
20.01	7.13	2.80	6.89	0.06
22.01	**7.32**	**2.93**	**7.08**	0.06
24.01	**7.49**	**3.06**	**7.25**	0.05
26.01	7.49	3.06	7.25	0.00
28.01	7.49	3.06	7.25	0.00
30.01	7.49	3.06	7.25	0.00
32.01	7.49	3.06	7.25	0.00
34.01	7.49	3.06	7.25	0.00
36.01	7.49	3.06	7.25	0.00
38.01	7.49	3.06	7.25	0.00
40.01	7.49	3.06	7.25	0.00
42.01	7.49	3.06	7.25	0.00
44.01	7.49	3.06	7.25	0.00
46.01	7.49	3.06	7.25	0.00
48.01	7.49	3.06	7.25	0.00
50.01	7.49	3.06	7.25	0.00
52.01	7.49	3.06	7.25	0.00
54.01	7.49	3.06	7.25	0.00
56.01	7.49	3.06	7.25	0.00
58.01	7.49	3.06	7.25	0.00
60.01	7.49	3.06	7.25	0.00
62.01	7.49	3.06	7.25	0.00
64.01	7.49	3.06	7.25	0.00
66.01	7.49	3.06	7.25	0.00
68.01	7.49	3.06	7.25	0.00
70.01	7.49	3.06	7.25	0.00
72.01	7.49	3.06	7.25	0.00
74.01	7.49	3.06	7.25	0.00
76.01	7.49	3.06	7.25	0.00
78.01	7.49	3.06	7.25	0.00

Summary for Subcatchment PRO SUBCATCH 4: Subcat PRO SUBCATCH 4

Runoff = 0.62 cfs @ 11.96 hrs, Volume= 0.030 af, Depth= 3.96"

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-yr Rainfall=7.49"

Area (ac)	CN	Description
0.071	61	>75% Grass cover, Good, HSG B
0.019	98	Roofs, HSG B
0.091	69	Weighted Average
0.071	61	78.56% Pervious Area
0.019	98	21.44% Impervious Area

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

Hydrograph for Subcatchment PRO SUBCATCH 4: Subcat PRO SUBCATCH 4

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	0.00	0.00	0.00
2.01	0.17	0.00	0.05	0.00
4.01	0.36	0.00	0.20	0.00
6.01	0.60	0.00	0.41	0.00
8.01	0.90	0.00	0.69	0.00
10.01	1.36	0.00	1.14	**0.01**
12.01	4.98	1.36	4.74	**0.49**
14.01	6.14	2.10	5.91	0.02
16.01	6.59	2.41	6.35	0.01
18.01	6.90	2.63	6.66	0.01
20.01	7.13	2.80	6.89	0.01
22.01	**7.32**	**2.93**	**7.08**	0.01
24.01	**7.49**	**3.06**	**7.25**	0.01
26.01	7.49	3.06	7.25	0.00
28.01	7.49	3.06	7.25	0.00
30.01	7.49	3.06	7.25	0.00
32.01	7.49	3.06	7.25	0.00
34.01	7.49	3.06	7.25	0.00
36.01	7.49	3.06	7.25	0.00
38.01	7.49	3.06	7.25	0.00
40.01	7.49	3.06	7.25	0.00
42.01	7.49	3.06	7.25	0.00
44.01	7.49	3.06	7.25	0.00
46.01	7.49	3.06	7.25	0.00
48.01	7.49	3.06	7.25	0.00
50.01	7.49	3.06	7.25	0.00
52.01	7.49	3.06	7.25	0.00
54.01	7.49	3.06	7.25	0.00
56.01	7.49	3.06	7.25	0.00
58.01	7.49	3.06	7.25	0.00
60.01	7.49	3.06	7.25	0.00
62.01	7.49	3.06	7.25	0.00
64.01	7.49	3.06	7.25	0.00
66.01	7.49	3.06	7.25	0.00
68.01	7.49	3.06	7.25	0.00
70.01	7.49	3.06	7.25	0.00
72.01	7.49	3.06	7.25	0.00
74.01	7.49	3.06	7.25	0.00
76.01	7.49	3.06	7.25	0.00
78.01	7.49	3.06	7.25	0.00

Summary for Subcatchment PRO SUBCATCH 4A: Subcat PRO SUBCATCH 4A

Runoff = 1.29 cfs @ 11.96 hrs, Volume= 0.066 af, Depth= 5.14"
Routed to Pond 3P : Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-yr Rainfall=7.49"

Area (ac)	CN	Description
0.078	61	>75% Grass cover, Good, HSG B
0.077	98	Roofs, HSG B
0.155	79	Weighted Average
0.078	61	50.44% Pervious Area
0.077	98	49.56% Impervious Area

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

Hydrograph for Subcatchment PRO SUBCATCH 4A: Subcat PRO SUBCATCH 4A

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	0.00	0.00	0.00
2.01	0.17	0.00	0.05	0.00
4.01	0.36	0.00	0.20	0.01
6.01	0.60	0.00	0.41	0.01
8.01	0.90	0.00	0.69	0.01
10.01	1.36	0.00	1.14	**0.02**
12.01	4.98	1.36	4.74	**0.99**
14.01	6.14	2.10	5.91	0.04
16.01	6.59	2.41	6.35	0.02
18.01	6.90	2.63	6.66	0.02
20.01	7.13	2.80	6.89	0.01
22.01	**7.32**	**2.93**	**7.08**	0.01
24.01	**7.49**	**3.06**	**7.25**	0.01
26.01	7.49	3.06	7.25	0.00
28.01	7.49	3.06	7.25	0.00
30.01	7.49	3.06	7.25	0.00
32.01	7.49	3.06	7.25	0.00
34.01	7.49	3.06	7.25	0.00
36.01	7.49	3.06	7.25	0.00
38.01	7.49	3.06	7.25	0.00
40.01	7.49	3.06	7.25	0.00
42.01	7.49	3.06	7.25	0.00
44.01	7.49	3.06	7.25	0.00
46.01	7.49	3.06	7.25	0.00
48.01	7.49	3.06	7.25	0.00
50.01	7.49	3.06	7.25	0.00
52.01	7.49	3.06	7.25	0.00
54.01	7.49	3.06	7.25	0.00
56.01	7.49	3.06	7.25	0.00
58.01	7.49	3.06	7.25	0.00
60.01	7.49	3.06	7.25	0.00
62.01	7.49	3.06	7.25	0.00
64.01	7.49	3.06	7.25	0.00
66.01	7.49	3.06	7.25	0.00
68.01	7.49	3.06	7.25	0.00
70.01	7.49	3.06	7.25	0.00
72.01	7.49	3.06	7.25	0.00
74.01	7.49	3.06	7.25	0.00
76.01	7.49	3.06	7.25	0.00
78.01	7.49	3.06	7.25	0.00

Summary for Subcatchment PRO SUBCATCH 5: Subcat PRO SUBCATCH 5

Runoff = 0.38 cfs @ 11.96 hrs, Volume= 0.020 af, Depth= 5.31"
Routed to Pond 2P : Underground Infiltration Tank West

Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv., Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Type II 24-hr 100-yr Rainfall=7.49"

Area (ac)	CN	Description
0.021	61	>75% Grass cover, Good, HSG B
0.024	98	Roofs, HSG B
0.044	81	Weighted Average
0.021	61	46.35% Pervious Area
0.024	98	53.65% Impervious Area

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

Hydrograph for Subcatchment PRO SUBCATCH 5: Subcat PRO SUBCATCH 5

Time (hours)	Precip. (inches)	Perv.Excess (inches)	Imp.Excess (inches)	Runoff (cfs)
0.01	0.00	0.00	0.00	0.00
2.01	0.17	0.00	0.05	0.00
4.01	0.36	0.00	0.20	0.00
6.01	0.60	0.00	0.41	0.00
8.01	0.90	0.00	0.69	0.00
10.01	1.36	0.00	1.14	**0.01**
12.01	4.98	1.36	4.74	**0.29**
14.01	6.14	2.10	5.91	0.01
16.01	6.59	2.41	6.35	0.01
18.01	6.90	2.63	6.66	0.01
20.01	7.13	2.80	6.89	0.00
22.01	**7.32**	**2.93**	**7.08**	0.00
24.01	**7.49**	**3.06**	**7.25**	0.00
26.01	7.49	3.06	7.25	0.00
28.01	7.49	3.06	7.25	0.00
30.01	7.49	3.06	7.25	0.00
32.01	7.49	3.06	7.25	0.00
34.01	7.49	3.06	7.25	0.00
36.01	7.49	3.06	7.25	0.00
38.01	7.49	3.06	7.25	0.00
40.01	7.49	3.06	7.25	0.00
42.01	7.49	3.06	7.25	0.00
44.01	7.49	3.06	7.25	0.00
46.01	7.49	3.06	7.25	0.00
48.01	7.49	3.06	7.25	0.00
50.01	7.49	3.06	7.25	0.00
52.01	7.49	3.06	7.25	0.00
54.01	7.49	3.06	7.25	0.00
56.01	7.49	3.06	7.25	0.00
58.01	7.49	3.06	7.25	0.00
60.01	7.49	3.06	7.25	0.00
62.01	7.49	3.06	7.25	0.00
64.01	7.49	3.06	7.25	0.00
66.01	7.49	3.06	7.25	0.00
68.01	7.49	3.06	7.25	0.00
70.01	7.49	3.06	7.25	0.00
72.01	7.49	3.06	7.25	0.00
74.01	7.49	3.06	7.25	0.00
76.01	7.49	3.06	7.25	0.00
78.01	7.49	3.06	7.25	0.00

Summary for Pond 1P: Underground Infiltration Tank East

[58] Hint: Peaked 2.04' above defined flood level

Inflow Area = 1.285 ac, 86.10% Impervious, Inflow Depth = 6.67" for 100-yr event
Inflow = 13.22 cfs @ 11.96 hrs, Volume= 0.714 af
Outflow = 3.45 cfs @ 12.08 hrs, Volume= 0.714 af, Atten= 74%, Lag= 7.5 min
Discarded = 0.10 cfs @ 12.08 hrs, Volume= 0.345 af
Primary = 3.35 cfs @ 12.08 hrs, Volume= 0.369 af

Routing by Dyn-Stor-Ind method, Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Peak Elev= 847.54' @ 12.08 hrs Surf.Area= 5,338 sf Storage= 14,631 cf
Flood Elev= 845.50' Surf.Area= 4,956 sf Storage= 7,577 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 406.5 min (1,150.2 - 743.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	843.00'	6,117 cf	**30.00'W x 150.00'L x 5.00'H Field A Z=0.5** 24,792 cf Overall - 9,500 cf Embedded = 15,291 cf x 40.0% Voids
#2A	843.50'	9,500 cf	**CMP Round 48** x 35 Inside #1 Effective Size= 48.0"W x 48.0"H => 12.57 sf x 20.00'L = 251.3 cf Overall Size= 48.0"W x 48.0"H x 20.00'L 35 Chambers in 5 Rows 28.00' Header x 12.57 sf x 2 = 703.7 cf Inside
		15,617 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	843.00'	**0.800 in/hr Exfiltration over Surface area**
#2	Primary	845.50'	**10.0" Round 10" PVC** L= 230.0' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 845.50' / 838.00' S= 0.0326 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf

Discarded OutFlow Max=0.10 cfs @ 12.08 hrs HW=847.54' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.10 cfs)

Primary OutFlow Max=3.35 cfs @ 12.08 hrs HW=847.54' (Free Discharge)
↑**2=10" PVC** (Inlet Controls 3.35 cfs @ 6.14 fps)

Pond 1P: Underground Infiltration Tank East - Chamber Wizard Field A

Chamber Model = CMP Round 48 (Round Corrugated Metal Pipe)
Effective Size= 48.0"W x 48.0"H => 12.57 sf x 20.00'L = 251.3 cf
Overall Size= 48.0"W x 48.0"H x 20.00'L

48.0" Wide + 24.0" Spacing = 72.0" C-C Row Spacing

7 Chambers/Row x 20.00' Long +4.00' Header x 2 = 148.00' Row Length +12.0" End Stone x 2 = 150.00' Base Length
5 Rows x 48.0" Wide + 24.0" Spacing x 4 + 12.0" Side Stone x 2 = 30.00' Base Width
6.0" Stone Base + 48.0" Chamber Height + 6.0" Stone Cover = 5.00' Field Height

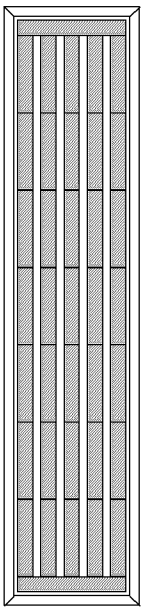
0.5 '/' Side-Z x Height = 30.0" Flare/Side
Base Length + Flare x 2 = 155.00' Top Length
Base Width + Flare x 2 = 35.00' Top Width

35 Chambers x 251.3 cf + 28.00' Header x 12.57 sf x 2 = 9,500.2 cf Chamber Storage

24,791.7 cf Field - 9,500.2 cf Chambers = 15,291.5 cf Stone x 40.0% Voids = 6,116.6 cf Stone Storage

Chamber Storage + Stone Storage = 15,616.8 cf = 0.359 af
Overall Storage Efficiency = 63.0%
Overall System Size = 150.00' x 30.00' x 5.00'

35 Chambers
918.2 cy Field
566.4 cy Stone



Hydrograph for Pond 1P: Underground Infiltration Tank East

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.01	0.00	0	843.00	0.00	0.00	0.00
2.01	0.06	0	843.00	0.06	0.06	0.00
4.01	0.10	26	843.01	0.08	0.08	0.00
6.01	0.14	276	843.15	0.08	0.08	0.00
8.01	0.18	802	843.44	0.08	0.08	0.00
10.01	**0.32**	1,939	843.90	0.09	0.09	0.00
12.01	**9.97**	**13,870**	**847.25**	**3.13**	**0.10**	**3.04**
14.01	0.36	**8,861**	**845.84**	**0.50**	**0.09**	**0.41**
16.01	0.22	8,379	845.71	0.26	0.09	0.17
18.01	0.17	8,180	845.66	0.19	0.09	0.10
20.01	0.12	8,022	845.62	0.15	0.09	0.05
22.01	0.11	7,911	845.59	0.12	0.09	0.03
24.01	0.10	7,844	845.57	0.11	0.09	0.02
26.01	0.00	7,187	845.40	0.09	0.09	0.00
28.01	0.00	6,531	845.22	0.09	0.09	0.00
30.01	0.00	5,879	845.05	0.09	0.09	0.00
32.01	0.00	5,231	844.87	0.09	0.09	0.00
34.01	0.00	4,588	844.70	0.09	0.09	0.00
36.01	0.00	3,949	844.52	0.09	0.09	0.00
38.01	0.00	3,315	844.33	0.09	0.09	0.00
40.01	0.00	2,685	844.14	0.09	0.09	0.00
42.01	0.00	2,060	843.94	0.09	0.09	0.00
44.01	0.00	1,440	843.72	0.09	0.09	0.00
46.01	0.00	825	843.45	0.08	0.08	0.00
48.01	0.00	218	843.12	0.08	0.08	0.00
50.01	0.00	0	843.00	0.00	0.00	0.00
52.01	0.00	0	843.00	0.00	0.00	0.00
54.01	0.00	0	843.00	0.00	0.00	0.00
56.01	0.00	0	843.00	0.00	0.00	0.00
58.01	0.00	0	843.00	0.00	0.00	0.00
60.01	0.00	0	843.00	0.00	0.00	0.00
62.01	0.00	0	843.00	0.00	0.00	0.00
64.01	0.00	0	843.00	0.00	0.00	0.00
66.01	0.00	0	843.00	0.00	0.00	0.00
68.01	0.00	0	843.00	0.00	0.00	0.00
70.01	0.00	0	843.00	0.00	0.00	0.00
72.01	0.00	0	843.00	0.00	0.00	0.00
74.01	0.00	0	843.00	0.00	0.00	0.00
76.01	0.00	0	843.00	0.00	0.00	0.00
78.01	0.00	0	843.00	0.00	0.00	0.00

Stage-Discharge for Pond 1P: Underground Infiltration Tank East

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
843.00	0.00	0.00	0.00
843.05	0.08	0.08	0.00
843.10	0.08	0.08	0.00
843.15	0.08	0.08	0.00
843.20	0.08	0.08	0.00
843.25	0.08	0.08	0.00
843.30	0.08	0.08	0.00
843.35	0.08	0.08	0.00
843.40	0.08	0.08	0.00
843.45	0.08	0.08	0.00
843.50	0.09	0.09	0.00
843.55	0.09	0.09	0.00
843.60	0.09	0.09	0.00
843.65	0.09	0.09	0.00
843.70	0.09	0.09	0.00
843.75	0.09	0.09	0.00
843.80	0.09	0.09	0.00
843.85	0.09	0.09	0.00
843.90	0.09	0.09	0.00
843.95	0.09	0.09	0.00
844.00	0.09	0.09	0.00
844.05	0.09	0.09	0.00
844.10	0.09	0.09	0.00
844.15	0.09	0.09	0.00
844.20	0.09	0.09	0.00
844.25	0.09	0.09	0.00
844.30	0.09	0.09	0.00
844.35	0.09	0.09	0.00
844.40	0.09	0.09	0.00
844.45	0.09	0.09	0.00
844.50	0.09	0.09	0.00
844.55	0.09	0.09	0.00
844.60	0.09	0.09	0.00
844.65	0.09	0.09	0.00
844.70	0.09	0.09	0.00
844.75	0.09	0.09	0.00
844.80	0.09	0.09	0.00
844.85	0.09	0.09	0.00
844.90	0.09	0.09	0.00
844.95	0.09	0.09	0.00
845.00	0.09	0.09	0.00
845.05	0.09	0.09	0.00
845.10	0.09	0.09	0.00
845.15	0.09	0.09	0.00
845.20	0.09	0.09	0.00
845.25	0.09	0.09	0.00
845.30	0.09	0.09	0.00
845.35	0.09	0.09	0.00
845.40	0.09	0.09	0.00
845.45	0.09	0.09	0.00
845.50	0.09	0.09	0.00
845.55	0.10	0.09	0.01
845.60	0.13	0.09	0.04
845.65	0.18	0.09	0.09
845.70	0.25	0.09	0.15
845.75	0.33	0.09	0.23
845.80	0.42	0.09	0.33
845.85	0.53	0.09	0.44
845.90	0.65	0.09	0.56
845.95	0.78	0.09	0.69
846.00	0.92	0.09	0.82
846.05	1.06	0.09	0.96
846.10	1.20	0.09	1.11
846.15	1.35	0.09	1.25
846.20	1.49	0.09	1.39
846.25	1.62	0.09	1.52
846.30	1.73	0.09	1.64
846.35	1.82	0.09	1.73
846.40	1.92	0.09	1.83
846.45	2.01	0.10	1.92
846.50	2.10	0.10	2.01
846.55	2.19	0.10	2.09
846.60	2.27	0.10	2.17
846.65	2.34	0.10	2.25
846.70	2.42	0.10	2.32
846.75	2.49	0.10	2.40
846.80	2.56	0.10	2.47
846.85	2.63	0.10	2.54
846.90	2.70	0.10	2.60
846.95	2.77	0.10	2.67
847.00	2.83	0.10	2.73
847.05	2.89	0.10	2.80
847.10	2.95	0.10	2.86
847.15	3.01	0.10	2.92
847.20	3.07	0.10	2.98
847.25	3.13	0.10	3.03
847.30	3.19	0.10	3.09
847.35	3.24	0.10	3.14
847.40	3.30	0.10	3.20
847.45	3.35	0.10	3.25
847.50	3.40	0.10	3.30
847.55	3.46	0.10	3.36
847.60	3.51	0.10	3.41
847.65	3.56	0.10	3.46
847.70	3.61	0.10	3.51
847.75	3.66	0.10	3.56
847.80	3.70	0.10	3.60
847.85	3.75	0.10	3.65
847.90	3.80	0.10	3.70
847.95	3.85	0.10	3.74
848.00	**3.89**	**0.10**	**3.79**

Stage-Area-Storage for Pond 1P: Underground Infiltration Tank East

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
843.00	4,500	0
843.05	4,509	90
843.10	4,518	180
843.15	4,527	271
843.20	4,536	361
843.25	4,545	452
843.30	4,554	543
843.35	4,563	634
843.40	4,572	726
843.45	4,581	817
843.50	4,590	909
843.55	4,599	1,014
843.60	4,608	1,131
843.65	4,617	1,255
843.70	4,626	1,384
843.75	4,636	1,519
843.80	4,645	1,657
843.85	4,654	1,800
843.90	4,663	1,946
843.95	4,672	2,095
844.00	4,681	2,247
844.05	4,690	2,402
844.10	4,699	2,560
844.15	4,708	2,720
844.20	4,717	2,882
844.25	4,727	3,046
844.30	4,736	3,213
844.35	4,745	3,381
844.40	4,754	3,551
844.45	4,763	3,723
844.50	4,772	3,896
844.55	4,781	4,071
844.60	4,791	4,247
844.65	4,800	4,424
844.70	4,809	4,603
844.75	4,818	4,783
844.80	4,827	4,964
844.85	4,836	5,146
844.90	4,846	5,329
844.95	4,855	5,513
845.00	4,864	5,697
845.05	4,873	5,883
845.10	4,882	6,069
845.15	4,892	6,256
845.20	4,901	6,443
845.25	4,910	6,631
845.30	4,919	6,820
845.35	4,929	7,009
845.40	4,938	7,198
845.45	4,947	7,387
845.50	4,956	7,577
845.55	4,966	7,767
845.60	4,975	7,957
845.65	4,984	8,147
845.70	4,993	8,337
845.75	5,003	8,527
845.80	5,012	8,717
845.85	5,021	8,907
845.90	5,030	9,097
845.95	5,040	9,286
846.00	5,049	9,475
846.05	5,058	9,664
846.10	5,068	9,852
846.15	5,077	10,040
846.20	5,086	10,227
846.25	5,096	10,413
846.30	5,105	10,599
846.35	5,114	10,784
846.40	5,124	10,967
846.45	5,133	11,150
846.50	5,142	11,332
846.55	5,152	11,513
846.60	5,161	11,693
846.65	5,170	11,871
846.70	5,180	12,048
846.75	5,189	12,224
846.80	5,198	12,397
846.85	5,208	12,569
846.90	5,217	12,739
846.95	5,227	12,908
847.00	5,236	13,073
847.05	5,245	13,237
847.10	5,255	13,398
847.15	5,264	13,556
847.20	5,274	13,711
847.25	5,283	13,862
847.30	5,292	14,010
847.35	5,302	14,153
847.40	5,311	14,290
847.45	5,321	14,421
847.50	5,330	14,541
847.55	5,340	14,648
847.60	5,349	14,755
847.65	5,359	14,862
847.70	5,368	14,969
847.75	5,378	15,077
847.80	5,387	15,184
847.85	5,397	15,292
847.90	5,406	15,400
847.95	5,416	15,508
848.00	**5,425**	**15,617**

Summary for Pond 2P: Underground Infiltration Tank West

[58] Hint: Peaked 0.39' above defined flood level

Inflow Area = 0.044 ac, 53.65% Impervious, Inflow Depth = 5.31" for 100-yr event
Inflow = 0.38 cfs @ 11.96 hrs, Volume= 0.020 af
Outflow = 0.35 cfs @ 11.98 hrs, Volume= 0.020 af, Atten= 7%, Lag= 1.6 min
Discarded = 0.00 cfs @ 11.98 hrs, Volume= 0.008 af
Primary = 0.35 cfs @ 11.98 hrs, Volume= 0.011 af

Routing by Dyn-Stor-Ind method, Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Peak Elev= 840.89' @ 11.98 hrs Surf.Area= 248 sf Storage= 232 cf
Flood Elev= 840.50' Surf.Area= 234 sf Storage= 172 cf

Plug-Flow detention time= (not calculated: outflow precedes inflow)
Center-of-Mass det. time= 297.0 min (1,062.3 - 765.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	839.00'	219 cf	**7.00'W x 26.00'L x 3.00'H Field A Z=0.5** 704 cf Overall - 157 cf Embedded = 546 cf x 40.0% Voids
#2A	839.50'	157 cf	**CMP Round 24** x 2 Inside #1 Effective Size= 24.0"W x 24.0"H => 3.14 sf x 20.00'L = 62.8 cf Overall Size= 24.0"W x 24.0"H x 20.00'L 2 Chambers in 2 Rows 5.00' Header x 3.14 sf x 2 = 31.4 cf Inside
		376 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	840.50'	**6.0" Round Culvert** L= 10.6' CPP, square edge headwall, Ke= 0.500 Inlet / Outlet Invert= 840.50' / 840.18' S= 0.0302 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.20 sf
#2	Discarded	839.00'	**0.450 in/hr Exfiltration over Surface area**

Discarded OutFlow Max=0.00 cfs @ 11.98 hrs HW=840.89' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.35 cfs @ 11.98 hrs HW=840.89' (Free Discharge)
↑—**1=Culvert** (Inlet Controls 0.35 cfs @ 2.13 fps)

Pond 2P: Underground Infiltration Tank West - Chamber Wizard Field A

Chamber Model = CMP Round 24 (Round Corrugated Metal Pipe)
Effective Size= 24.0"W x 24.0"H => 3.14 sf x 20.00'L = 62.8 cf
Overall Size= 24.0"W x 24.0"H x 20.00'L

24.0" Wide + 12.0" Spacing = 36.0" C-C Row Spacing

1 Chambers/Row x 20.00' Long +2.00' Header x 2 = 24.00' Row Length +12.0" End Stone x 2 = 26.00' Base Length
2 Rows x 24.0" Wide + 12.0" Spacing x 1 + 12.0" Side Stone x 2 = 7.00' Base Width
6.0" Stone Base + 24.0" Chamber Height + 6.0" Stone Cover = 3.00' Field Height

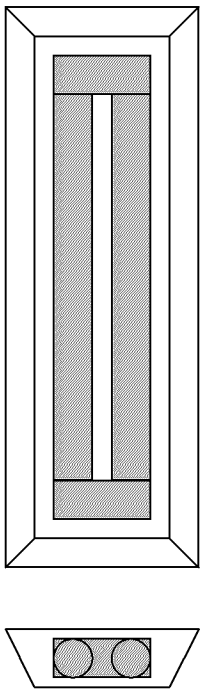
0.5 '/' Side-Z x Height = 18.0" Flare/Side
Base Length + Flare x 2 = 29.00' Top Length
Base Width + Flare x 2 = 10.00' Top Width

2 Chambers x 62.8 cf + 5.00' Header x 3.14 sf x 2 = 157.1 cf Chamber Storage

703.5 cf Field - 157.1 cf Chambers = 546.4 cf Stone x 40.0% Voids = 218.6 cf Stone Storage

Chamber Storage + Stone Storage = 375.6 cf = 0.009 af
Overall Storage Efficiency = 53.4%
Overall System Size = 26.00' x 7.00' x 3.00'

2 Chambers
26.1 cy Field
20.2 cy Stone



Hydrograph for Pond 2P: Underground Infiltration Tank West

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.01	0.00	0	839.00	0.00	0.00	0.00
2.01	0.00	0	839.00	0.00	0.00	0.00
4.01	0.00	0	839.00	0.00	0.00	0.00
6.01	0.00	5	839.07	0.00	0.00	0.00
8.01	0.00	15	839.20	0.00	0.00	0.00
10.01	**0.01**	**38**	**839.50**	**0.00**	**0.00**	**0.00**
12.01	**0.29**	**230**	**840.88**	**0.34**	**0.00**	**0.33**
14.01	0.01	180	840.55	0.01	0.00	0.01
16.01	0.01	178	840.54	0.01	0.00	0.00
18.01	0.01	176	840.53	0.01	0.00	0.00
20.01	0.00	175	840.52	0.00	0.00	0.00
22.01	0.00	175	840.52	0.00	0.00	0.00
24.01	0.00	174	840.52	0.00	0.00	0.00
26.01	0.00	157	840.40	0.00	0.00	0.00
28.01	0.00	140	840.29	0.00	0.00	0.00
30.01	0.00	123	840.18	0.00	0.00	0.00
32.01	0.00	107	840.06	0.00	0.00	0.00
34.01	0.00	90	839.94	0.00	0.00	0.00
36.01	0.00	75	839.82	0.00	0.00	0.00
38.01	0.00	59	839.70	0.00	0.00	0.00
40.01	0.00	44	839.56	0.00	0.00	0.00
42.01	0.00	29	839.38	0.00	0.00	0.00
44.01	0.00	14	839.20	0.00	0.00	0.00
46.01	0.00	1	839.01	0.00	0.00	0.00
48.01	0.00	0	839.00	0.00	0.00	0.00
50.01	0.00	0	839.00	0.00	0.00	0.00
52.01	0.00	0	839.00	0.00	0.00	0.00
54.01	0.00	0	839.00	0.00	0.00	0.00
56.01	0.00	0	839.00	0.00	0.00	0.00
58.01	0.00	0	839.00	0.00	0.00	0.00
60.01	0.00	0	839.00	0.00	0.00	0.00
62.01	0.00	0	839.00	0.00	0.00	0.00
64.01	0.00	0	839.00	0.00	0.00	0.00
66.01	0.00	0	839.00	0.00	0.00	0.00
68.01	0.00	0	839.00	0.00	0.00	0.00
70.01	0.00	0	839.00	0.00	0.00	0.00
72.01	0.00	0	839.00	0.00	0.00	0.00
74.01	0.00	0	839.00	0.00	0.00	0.00
76.01	0.00	0	839.00	0.00	0.00	0.00
78.01	0.00	0	839.00	0.00	0.00	0.00

Stage-Discharge for Pond 2P: Underground Infiltration Tank West

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
839.00	0.00	0.00	0.00
839.05	0.00	0.00	0.00
839.10	0.00	0.00	0.00
839.15	0.00	0.00	0.00
839.20	0.00	0.00	0.00
839.25	0.00	0.00	0.00
839.30	0.00	0.00	0.00
839.35	0.00	0.00	0.00
839.40	0.00	0.00	0.00
839.45	0.00	0.00	0.00
839.50	0.00	0.00	0.00
839.55	0.00	0.00	0.00
839.60	0.00	0.00	0.00
839.65	0.00	0.00	0.00
839.70	0.00	0.00	0.00
839.75	0.00	0.00	0.00
839.80	0.00	0.00	0.00
839.85	0.00	0.00	0.00
839.90	0.00	0.00	0.00
839.95	0.00	0.00	0.00
840.00	0.00	0.00	0.00
840.05	0.00	0.00	0.00
840.10	0.00	0.00	0.00
840.15	0.00	0.00	0.00
840.20	0.00	0.00	0.00
840.25	0.00	0.00	0.00
840.30	0.00	0.00	0.00
840.35	0.00	0.00	0.00
840.40	0.00	0.00	0.00
840.45	0.00	0.00	0.00
840.50	0.00	0.00	0.00
840.55	0.01	0.00	0.01
840.60	0.03	0.00	0.03
840.65	0.07	0.00	0.07
840.70	0.11	0.00	0.11
840.75	0.17	0.00	0.17
840.80	0.23	0.00	0.23
840.85	0.30	0.00	0.30
840.90	0.37	0.00	0.36
840.95	0.43	0.00	0.43
841.00	0.48	0.00	0.47
841.05	0.52	0.00	0.52
841.10	0.56	0.00	0.56
841.15	0.60	0.00	0.60
841.20	0.64	0.00	0.63
841.25	0.67	0.00	0.67
841.30	0.70	0.00	0.70
841.35	0.74	0.00	0.73
841.40	0.77	0.00	0.76
841.45	0.79	0.00	0.79
841.50	0.82	0.00	0.82
841.55	0.85	0.00	0.85
841.60	0.87	0.00	0.87
841.65	0.90	0.00	0.90
841.70	0.92	0.00	0.92
841.75	0.95	0.00	0.95
841.80	0.97	0.00	0.97
841.85	0.99	0.00	0.99
841.90	1.02	0.00	1.01
841.95	1.04	0.00	1.04
842.00	**1.06**	**0.00**	**1.06**

Stage-Area-Storage for Pond 2P: Underground Infiltration Tank West

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
839.00	182	0
839.05	184	4
839.10	185	7
839.15	187	11
839.20	189	15
839.25	190	19
839.30	192	22
839.35	194	26
839.40	195	30
839.45	197	34
839.50	199	38
839.55	200	43
839.60	202	48
839.65	204	53
839.70	206	59
839.75	207	65
839.80	209	71
839.85	211	78
839.90	213	84
839.95	214	91
840.00	216	98
840.05	218	105
840.10	220	112
840.15	221	119
840.20	223	126
840.25	225	134
840.30	227	141
840.35	228	149
840.40	230	156
840.45	232	164
840.50	234	172
840.55	236	179
840.60	237	187
840.65	239	195
840.70	241	203
840.75	243	210
840.80	245	218
840.85	246	226
840.90	248	234
840.95	250	241
841.00	252	249
841.05	254	257
841.10	256	264
841.15	258	272
841.20	259	279
841.25	261	286
841.30	263	293
841.35	265	300
841.40	267	307
841.45	269	314
841.50	271	320
841.55	273	325
841.60	275	330
841.65	276	336
841.70	278	342
841.75	280	347
841.80	282	353
841.85	284	358
841.90	286	364
841.95	288	370
842.00	**290**	**376**

Summary for Pond 3P: Rain Garden

Inflow Area = 0.155 ac, 49.56% Impervious, Inflow Depth = 5.14" for 100-yr event
Inflow = 1.29 cfs @ 11.96 hrs, Volume= 0.066 af
Outflow = 0.10 cfs @ 12.50 hrs, Volume= 0.065 af, Atten= 92%, Lag= 32.2 min
Discarded = 0.01 cfs @ 12.50 hrs, Volume= 0.053 af
Primary = 0.09 cfs @ 12.50 hrs, Volume= 0.012 af

Routing by Dyn-Stor-Ind method, Time Span= 0.01-80.00 hrs, dt= 0.01 hrs
Peak Elev= 852.77' @ 12.50 hrs Surf.Area= 1,182 sf Storage= 1,704 cf

Plug-Flow detention time= 1,222.6 min calculated for 0.065 af (99% of inflow)
Center-of-Mass det. time= 1,213.2 min (1,982.1 - 768.8)

Volume	Invert	Avail.Storage	Storage Description
#1	850.50'	1,975 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
850.50	253	0	0
851.50	678	466	466
852.50	1,161	920	1,385
853.00	1,200	590	1,975

Device	Routing	Invert	Outlet Devices
#1	Discarded	850.50'	**0.450 in/hr Exfiltration over Surface area**
#2	Primary	852.75'	**10.0' long + 0.5 '/' SideZ x 1.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 Coef. (English) 2.69 2.72 2.75 2.85 2.98 3.08 3.20 3.28 3.31 3.30 3.31 3.32

Discarded OutFlow Max=0.01 cfs @ 12.50 hrs HW=852.77' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.09 cfs @ 12.50 hrs HW=852.77' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Weir Controls 0.09 cfs @ 0.40 fps)

Hydrograph for Pond 3P: Rain Garden

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Outflow (cfs)	Discarded (cfs)	Primary (cfs)
0.01	0.00	0	850.50	0.00	0.00	0.00
2.01	0.00	2	850.51	0.00	0.00	0.00
4.01	0.01	22	850.58	0.00	0.00	0.00
6.01	0.01	58	850.70	0.00	0.00	0.00
8.01	0.01	109	850.84	0.00	0.00	0.00
10.01	**0.02**	198	851.04	0.01	0.01	0.00
12.01	**0.99**	**1,362**	**852.48**	**0.01**	**0.01**	**0.00**
14.01	0.04	**1,689**	**852.76**	**0.04**	**0.01**	**0.03**
16.01	0.02	1,684	852.76	0.02	0.01	0.01
18.01	0.02	1,682	852.75	0.02	0.01	0.01
20.01	0.01	1,679	852.75	0.01	0.01	0.00
22.01	0.01	1,678	852.75	0.01	0.01	0.00
24.01	0.01	1,674	852.75	0.01	0.01	0.00
26.01	0.00	1,588	852.67	0.01	0.01	0.00
28.01	0.00	1,500	852.60	0.01	0.01	0.00
30.01	0.00	1,413	852.52	0.01	0.01	0.00
32.01	0.00	1,326	852.45	0.01	0.01	0.00
34.01	0.00	1,242	852.37	0.01	0.01	0.00
36.01	0.00	1,161	852.30	0.01	0.01	0.00
38.01	0.00	1,083	852.22	0.01	0.01	0.00
40.01	0.00	1,007	852.15	0.01	0.01	0.00
42.01	0.00	934	852.07	0.01	0.01	0.00
44.01	0.00	864	852.00	0.01	0.01	0.00
46.01	0.00	796	851.92	0.01	0.01	0.00
48.01	0.00	731	851.85	0.01	0.01	0.00
50.01	0.00	669	851.77	0.01	0.01	0.00
52.01	0.00	610	851.70	0.01	0.01	0.00
54.01	0.00	553	851.62	0.01	0.01	0.00
56.01	0.00	499	851.55	0.01	0.01	0.00
58.01	0.00	448	851.47	0.01	0.01	0.00
60.01	0.00	399	851.40	0.01	0.01	0.00
62.01	0.00	353	851.32	0.01	0.01	0.00
64.01	0.00	309	851.25	0.01	0.01	0.00
66.01	0.00	267	851.17	0.01	0.01	0.00
68.01	0.00	228	851.10	0.01	0.01	0.00
70.01	0.00	191	851.02	0.00	0.00	0.00
72.01	0.00	156	850.95	0.00	0.00	0.00
74.01	0.00	124	850.87	0.00	0.00	0.00
76.01	0.00	95	850.80	0.00	0.00	0.00
78.01	0.00	67	850.72	0.00	0.00	0.00

Stage-Discharge for Pond 3P: Rain Garden

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
850.50	0.00	0.00	0.00
850.55	0.00	0.00	0.00
850.60	0.00	0.00	0.00
850.65	0.00	0.00	0.00
850.70	0.00	0.00	0.00
850.75	0.00	0.00	0.00
850.80	0.00	0.00	0.00
850.85	0.00	0.00	0.00
850.90	0.00	0.00	0.00
850.95	0.00	0.00	0.00
851.00	0.00	0.00	0.00
851.05	0.01	0.01	0.00
851.10	0.01	0.01	0.00
851.15	0.01	0.01	0.00
851.20	0.01	0.01	0.00
851.25	0.01	0.01	0.00
851.30	0.01	0.01	0.00
851.35	0.01	0.01	0.00
851.40	0.01	0.01	0.00
851.45	0.01	0.01	0.00
851.50	0.01	0.01	0.00
851.55	0.01	0.01	0.00
851.60	0.01	0.01	0.00
851.65	0.01	0.01	0.00
851.70	0.01	0.01	0.00
851.75	0.01	0.01	0.00
851.80	0.01	0.01	0.00
851.85	0.01	0.01	0.00
851.90	0.01	0.01	0.00
851.95	0.01	0.01	0.00
852.00	0.01	0.01	0.00
852.05	0.01	0.01	0.00
852.10	0.01	0.01	0.00
852.15	0.01	0.01	0.00
852.20	0.01	0.01	0.00
852.25	0.01	0.01	0.00
852.30	0.01	0.01	0.00
852.35	0.01	0.01	0.00
852.40	0.01	0.01	0.00
852.45	0.01	0.01	0.00
852.50	0.01	0.01	0.00
852.55	0.01	0.01	0.00
852.60	0.01	0.01	0.00
852.65	0.01	0.01	0.00
852.70	0.01	0.01	0.00
852.75	0.01	0.01	0.00
852.80	0.31	0.01	0.30
852.85	0.87	0.01	0.85
852.90	1.58	0.01	1.57
852.95	2.44	0.01	2.43
853.00	**3.42**	**0.01**	**3.41**

Stage-Area-Storage for Pond 3P: Rain Garden

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
850.50	253	0
850.55	274	13
850.60	296	27
850.65	317	43
850.70	338	59
850.75	359	77
850.80	380	95
850.85	402	115
850.90	423	135
850.95	444	157
851.00	466	180
851.05	487	203
851.10	508	228
851.15	529	254
851.20	551	281
851.25	572	309
851.30	593	338
851.35	614	369
851.40	635	400
851.45	657	432
851.50	678	466
851.55	702	500
851.60	726	536
851.65	750	573
851.70	775	611
851.75	799	650
851.80	823	691
851.85	847	732
851.90	871	775
851.95	895	820
852.00	920	865
852.05	944	911
852.10	968	959
852.15	992	1,008
852.20	1,016	1,058
852.25	1,040	1,110
852.30	1,064	1,162
852.35	1,089	1,216
852.40	1,113	1,271
852.45	1,137	1,328
852.50	1,161	1,385
852.55	1,165	1,443
852.60	1,169	1,501
852.65	1,173	1,560
852.70	1,177	1,619
852.75	1,181	1,678
852.80	1,184	1,737
852.85	1,188	1,796
852.90	1,192	1,856
852.95	1,196	1,915
853.00	**1,200**	**1,975**