STORMWATER MANAGEMENT REPORT

ROSEBROOK COMMONS
1747 WEST MAIN ROAD
MIDDLETOWN, RHODE ISLAND

Assessors Map 111, Lot 8 & 9

Prepared for:

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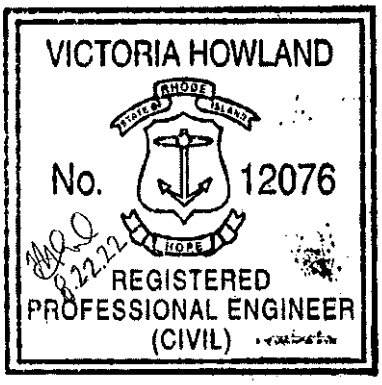

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completed to evaluate the performance of the tree box filter, two infiltration basins, seventeen bioretention areas, and at grade and underground detention systems during the design storm events.

The hydrologic model shows a decrease in the peak flow rate discharged to the design points for the 1-year, 2-year, 10-year, 25-year and 100-year frequency storms. The table below provides a summary of the peak flow rates for the existing and proposed conditions at each design point.

Table 1: Peak Flow Rate (CFS)

DESIGN POINTS	1-YEAR	2-YEAR	10-YEAR	25-YEAR	100-YEAR
DP1-Road Existing (MOHB)	2.05	2.60	4.36	5.69	8.42
DP1-Road Proposed (MOHB)	0.31	0.47	2.02	4.30	6.91
Change	-1.74	-2.13	-2.34	-1.39	-1.51
DP2-Wetland North (MOHB)	2.62	3.68	7.32	10.22	16.41
DP2- Wetland North Proposed (MOHB)	1.68	3.30	6.96	9.78	15.60
Change	-0.94	-0.38	-0.36	-0.44	-0.81
DP3- Wetland Southwest Existing (BB)	3.92	5.53	11.27	15.90	25.87
DP3- Wetland Southwest Proposed (BB)	2.47	4.55	11.07	14.94	25.52
Change	-1.45	-0.98	-0.20	-0.96	-0.35
DP4- Wetland Southeast Existing (BB)	3.17	4.32	8.29	11.39	17.97
DP4- Wetland Southeast Proposed (BB)	2.25	3.06	5.85	9.26	16.87
Change	-0.92	-1.26	-2.71	-2.13	-1.1

Table 1: Volumes to the RIDOT system (CF)

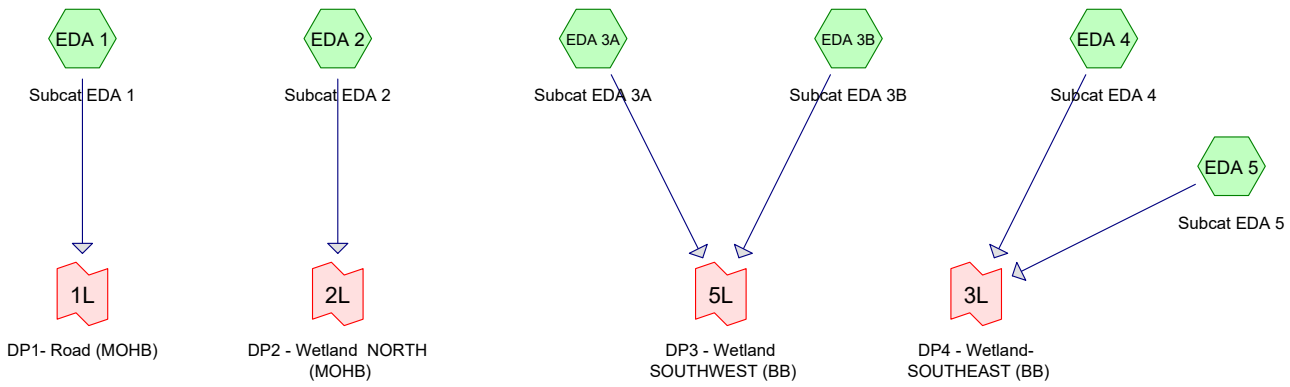
DESIGN POINTS	1-YEAR	2-YEAR	10-YEAR	25-YEAR	100-YEAR
DP1-Road Existing (MOHB)	6,487	8,248	14,125	18,662	28,279
DP1-Road Proposed (MOHB)	3,410	5,108	12,240	18,120	31,521
Change	-3,077	-3,140	-1,885	-542	3,242

Minimum Standard 6: Redevelopment and Infill Projects

The project does not qualify as a Redevelopment Project per Section 3.2.6 of the RISDISM. This minimum standard is not applicable.

APPENDIX B

Hydrologic Calculations – Existing and Proposed Conditions (REVISED)
Hydraulic Design Table 25-yr (REVISED)
Hydraulic Design Table 100-yr



Subcat Reach Pond Link

Routing Diagram for ex hydro
Prepared by Pare Corporation , Printed 8/22/2022
HydroCAD® 10.10-5a s/n 10894 © 2020 HydroCAD Software Solutions LLC

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment EDA 1: Subcat EDA 1 Runoff Area=47,424 sf 58.37% Impervious Runoff Depth=1.64"
Tc=6.0 min CN=88 Runoff=2.05 cfs 6,487 cf

Subcatchment EDA 2: Subcat EDA 2 Runoff Area=126,903 sf 2.25% Impervious Runoff Depth=0.99"
Flow Length=427' Tc=12.0 min CN=78 Runoff=2.62 cfs 10,456 cf

Subcatchment EDA 3A: Subcat EDA 3A Runoff Area=99,142 sf 0.96% Impervious Runoff Depth=0.69"
Flow Length=222' Slope=0.0420 '/' Tc=11.8 min CN=72 Runoff=1.31 cfs 5,716 cf

Subcatchment EDA 3B: Subcat EDA 3B Runoff Area=127,359 sf 17.18% Impervious Runoff Depth=1.10"
Flow Length=390' Tc=16.7 min CN=80 Runoff=2.65 cfs 11,697 cf

Subcatchment EDA 4: Subcat EDA 4 Runoff Area=98,048 sf 6.81% Impervious Runoff Depth=1.10"
Flow Length=435' Tc=13.9 min CN=80 Runoff=2.19 cfs 9,005 cf

Subcatchment EDA 5: Subcat EDA 5 Runoff Area=42,499 sf 0.00% Impervious Runoff Depth=1.10"
Flow Length=263' Tc=12.2 min CN=80 Runoff=0.99 cfs 3,903 cf

Link 1L: DP1- Road (MOHB) Inflow=2.05 cfs 6,487 cf
Primary=2.05 cfs 6,487 cf

Link 2L: DP2 - Wetland NORTH (MOHB) Inflow=2.62 cfs 10,456 cf
Primary=2.62 cfs 10,456 cf

Link 3L: DP4 - Wetland- SOUTHEAST (BB) Inflow=3.17 cfs 12,908 cf
Primary=3.17 cfs 12,908 cf

Link 5L: DP3 - Wetland SOUTHWEST (BB) Inflow=3.92 cfs 17,412 cf
Primary=3.92 cfs 17,412 cf

Total Runoff Area = 541,374 sf Runoff Volume = 47,263 cf Average Runoff Depth = 1.05"
88.91% Pervious = 481,324 sf 11.09% Impervious = 60,051 sf

Summary for Subcatchment EDA 1: Subcat EDA 1

Runoff = 2.05 cfs @ 12.09 hrs, Volume= 6,487 cf, Depth= 1.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
27,681	98	Paved parking, HSG C
2,637	70	Woods, Good, HSG C
17,106	74	>75% Grass cover, Good, HSG C
47,424	88	Weighted Average
19,743	73	41.63% Pervious Area
27,681	98	58.37% Impervious Area

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

Summary for Subcatchment EDA 2: Subcat EDA 2

Runoff = 2.62 cfs @ 12.18 hrs, Volume= 10,456 cf, Depth= 0.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
2,853	98	Paved parking, HSG C
25,778	74	>75% Grass cover, Good, HSG C
12,180	70	Woods, Good, HSG C
12,334	77	Woods, Good, HSG D
73,759	80	>75% Grass cover, Good, HSG D
126,903	78	Weighted Average
124,050	77	97.75% Pervious Area
2,853	98	2.25% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	50	0.0100	0.11		**Sheet Flow, Sheet** Grass: Short n= 0.150 P2= 3.30"
3.0	327	0.0130	1.84		**Shallow Concentrated Flow, Shallow 1** Unpaved Kv= 16.1 fps
1.7	50	0.0100	0.50		**Shallow Concentrated Flow, Shallow 2** Woodland Kv= 5.0 fps
12.0	427	Total			

Summary for Subcatchment EDA 3A: Subcat EDA 3A

Runoff = 1.31 cfs @ 12.19 hrs, Volume= 5,716 cf, Depth= 0.69"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
77,014	70	Woods, Good, HSG C
9,571	74	>75% Grass cover, Good, HSG C
952	98	Paved parking, HSG C
7,958	77	Woods, Good, HSG D
3,647	80	>75% Grass cover, Good, HSG D
99,142	72	Weighted Average
98,190	71	99.04% Pervious Area
952	98	0.96% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.0	50	0.0420	0.09		**Sheet Flow, Sheet** Woods: Light underbrush n= 0.400 P2= 3.30"
2.8	172	0.0420	1.02		**Shallow Concentrated Flow, Shallow** Woodland Kv= 5.0 fps
11.8	222	Total			

Summary for Subcatchment EDA 3B: Subcat EDA 3B

Runoff = 2.65 cfs @ 12.24 hrs, Volume= 11,697 cf, Depth= 1.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
948	70	Woods, Good, HSG C
72,329	74	>75% Grass cover, Good, HSG C
17,813	98	Paved parking, HSG C
4,071	98	Paved parking, HSG D
32,198	80	>75% Grass cover, Good, HSG D
127,359	80	Weighted Average
105,475	76	82.82% Pervious Area
21,884	98	17.18% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.2	25	0.0100	0.05		**Sheet Flow, Sheet 2** Woods: Light underbrush n= 0.400 P2= 3.30"
4.2	25	0.0100	0.10		**Sheet Flow, Sheet 2** Grass: Short n= 0.150 P2= 3.30"
1.7	176	0.0114	1.72		**Shallow Concentrated Flow, Shallow 1** Unpaved Kv= 16.1 fps
0.4	57	0.0120	2.22		**Shallow Concentrated Flow, Shallow 2** Paved Kv= 20.3 fps
1.2	107	0.0083	1.47		**Shallow Concentrated Flow, Shallow 3** Unpaved Kv= 16.1 fps
16.7	390	Total			

Summary for Subcatchment EDA 4: Subcat EDA 4

Runoff = 2.19 cfs @ 12.20 hrs, Volume= 9,005 cf, Depth= 1.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
17,709	74	>75% Grass cover, Good, HSG C
5,152	98	Paved parking, HSG C
73,658	80	>75% Grass cover, Good, HSG D
1,528	98	Paved parking, HSG D
98,048	80	Weighted Average
91,367	79	93.19% Pervious Area
6,680	98	6.81% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.6	50	0.0050	0.09		**Sheet Flow, Sheet** Grass: Short n= 0.150 P2= 3.30"
4.3	385	0.0100	1.50		**Shallow Concentrated Flow, Shallow** Grassed Waterway Kv= 15.0 fps
13.9	435	Total			

Summary for Subcatchment EDA 5: Subcat EDA 5

Runoff = 0.99 cfs @ 12.18 hrs, Volume= 3,903 cf, Depth= 1.10"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
1,792	74	>75% Grass cover, Good, HSG C
40,707	80	>75% Grass cover, Good, HSG D
42,499	80	Weighted Average
42,499	80	100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.6	50	0.0050	0.09		**Sheet Flow, Sheet** Grass: Short n= 0.150 P2= 3.30"
2.0	130	0.0050	1.06		**Shallow Concentrated Flow, Shallow** Grassed Waterway Kv= 15.0 fps
0.3	39	0.0250	2.37		**Shallow Concentrated Flow, Shallow 2** Grassed Waterway Kv= 15.0 fps
0.3	44	0.0220	2.22		**Shallow Concentrated Flow, Shallow 3** Grassed Waterway Kv= 15.0 fps
12.2	263	Total			

Summary for Link 1L: DP1- Road (MOHB)

Inflow Area = 47,424 sf, 58.37% Impervious, Inflow Depth = 1.64" for 1-Year event
Inflow = 2.05 cfs @ 12.09 hrs, Volume= 6,487 cf
Primary = 2.05 cfs @ 12.09 hrs, Volume= 6,487 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link 2L: DP2 - Wetland NORTH (MOHB)

Inflow Area = 126,903 sf, 2.25% Impervious, Inflow Depth = 0.99" for 1-Year event
Inflow = 2.62 cfs @ 12.18 hrs, Volume= 10,456 cf
Primary = 2.62 cfs @ 12.18 hrs, Volume= 10,456 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link 3L: DP4 - Wetland- SOUTHEAST (BB)

Inflow Area = 140,546 sf, 4.75% Impervious, Inflow Depth = 1.10" for 1-Year event
Inflow = 3.17 cfs @ 12.20 hrs, Volume= 12,908 cf
Primary = 3.17 cfs @ 12.20 hrs, Volume= 12,908 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Summary for Link 5L: DP3 - Wetland SOUTHWEST (BB)

Inflow Area = 226,500 sf, 10.08% Impervious, Inflow Depth = 0.92" for 1-Year event
Inflow = 3.92 cfs @ 12.22 hrs, Volume= 17,412 cf
Primary = 3.92 cfs @ 12.22 hrs, Volume= 17,412 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-48.00 hrs, dt= 0.05 hrs

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv.
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment EDA 1: Subcat EDA 1 Runoff Area=47,424 sf 58.37% Impervious Runoff Depth=0.60"
Tc=6.0 min CN=73/98 Runoff=0.68 cfs 2,358 cf

Subcatchment EDA 2: Subcat EDA 2 Runoff Area=126,903 sf 2.25% Impervious Runoff Depth=0.12"
Flow Length=427' Tc=12.0 min CN=77/98 Runoff=0.15 cfs 1,280 cf

Subcatchment EDA 3A: Subcat EDA 3A Runoff Area=99,142 sf 0.96% Impervious Runoff Depth=0.04"
Flow Length=222' Slope=0.0420 '/' Tc=11.8 min CN=71/98 Runoff=0.02 cfs 347 cf

Subcatchment EDA 3B: Subcat EDA 3B Runoff Area=127,359 sf 17.18% Impervious Runoff Depth=0.24"
Flow Length=390' Tc=16.7 min CN=76/98 Runoff=0.42 cfs 2,560 cf

Subcatchment EDA 4: Subcat EDA 4 Runoff Area=98,048 sf 6.81% Impervious Runoff Depth=0.19"
Flow Length=435' Tc=13.9 min CN=79/98 Runoff=0.24 cfs 1,571 cf

Subcatchment EDA 5: Subcat EDA 5 Runoff Area=42,499 sf 0.00% Impervious Runoff Depth=0.15"
Flow Length=263' Tc=12.2 min CN=80/0 Runoff=0.08 cfs 542 cf

Link 1L: DP1- Road (MOHB) Inflow=0.68 cfs 2,358 cf
Primary=0.68 cfs 2,358 cf

Link 2L: DP2 - Wetland NORTH (MOHB) Inflow=0.15 cfs 1,280 cf
Primary=0.15 cfs 1,280 cf

Link 3L: DP4 - Wetland- SOUTHEAST (BB) Inflow=0.33 cfs 2,113 cf
Primary=0.33 cfs 2,113 cf

Link 5L: DP3 - Wetland SOUTHWEST (BB) Inflow=0.44 cfs 2,907 cf
Primary=0.44 cfs 2,907 cf

Total Runoff Area = 541,374 sf Runoff Volume = 8,658 cf Average Runoff Depth = 0.19"
88.91% Pervious = 481,324 sf 11.09% Impervious = 60,051 sf

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment EDA 1: Subcat EDA 1 Runoff Area=47,424 sf 58.37% Impervious Runoff Depth=2.09"
Tc=6.0 min CN=88 Runoff=2.60 cfs 8,248 cf

Subcatchment EDA 2: Subcat EDA 2 Runoff Area=126,903 sf 2.25% Impervious Runoff Depth=1.35"
Flow Length=427' Tc=12.0 min CN=78 Runoff=3.68 cfs 14,246 cf

Subcatchment EDA 3A: Subcat EDA 3A Runoff Area=99,142 sf 0.96% Impervious Runoff Depth=0.99"
Flow Length=222' Slope=0.0420 '/' Tc=11.8 min CN=72 Runoff=2.00 cfs 8,198 cf

Subcatchment EDA 3B: Subcat EDA 3B Runoff Area=127,359 sf 17.18% Impervious Runoff Depth=1.48"
Flow Length=390' Tc=16.7 min CN=80 Runoff=3.62 cfs 15,700 cf

Subcatchment EDA 4: Subcat EDA 4 Runoff Area=98,048 sf 6.81% Impervious Runoff Depth=1.48"
Flow Length=435' Tc=13.9 min CN=80 Runoff=2.99 cfs 12,086 cf

Subcatchment EDA 5: Subcat EDA 5 Runoff Area=42,499 sf 0.00% Impervious Runoff Depth=1.48"
Flow Length=263' Tc=12.2 min CN=80 Runoff=1.36 cfs 5,239 cf

Link 1L: DP1- Road (MOHB) Inflow=2.60 cfs 8,248 cf
Primary=2.60 cfs 8,248 cf

Link 2L: DP2 - Wetland NORTH (MOHB) Inflow=3.68 cfs 14,246 cf
Primary=3.68 cfs 14,246 cf

Link 3L: DP4 - Wetland- SOUTHEAST (BB) Inflow=4.32 cfs 17,325 cf
Primary=4.32 cfs 17,325 cf

Link 5L: DP3 - Wetland SOUTHWEST (BB) Inflow=5.53 cfs 23,898 cf
Primary=5.53 cfs 23,898 cf

Total Runoff Area = 541,374 sf Runoff Volume = 63,717 cf Average Runoff Depth = 1.41"
88.91% Pervious = 481,324 sf 11.09% Impervious = 60,051 sf

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment EDA 1: Subcat EDA 1 Runoff Area=47,424 sf 58.37% Impervious Runoff Depth=3.57"
Tc=6.0 min CN=88 Runoff=4.36 cfs 14,125 cf

Subcatchment EDA 2: Subcat EDA 2 Runoff Area=126,903 sf 2.25% Impervious Runoff Depth=2.63"
Flow Length=427' Tc=12.0 min CN=78 Runoff=7.32 cfs 27,781 cf

Subcatchment EDA 3A: Subcat EDA 3A Runoff Area=99,142 sf 0.96% Impervious Runoff Depth=2.12"
Flow Length=222' Slope=0.0420 '/' Tc=11.8 min CN=72 Runoff=4.58 cfs 17,524 cf

Subcatchment EDA 3B: Subcat EDA 3B Runoff Area=127,359 sf 17.18% Impervious Runoff Depth=2.81"
Flow Length=390' Tc=16.7 min CN=80 Runoff=6.94 cfs 29,779 cf

Subcatchment EDA 4: Subcat EDA 4 Runoff Area=98,048 sf 6.81% Impervious Runoff Depth=2.81"
Flow Length=435' Tc=13.9 min CN=80 Runoff=5.73 cfs 22,925 cf

Subcatchment EDA 5: Subcat EDA 5 Runoff Area=42,499 sf 0.00% Impervious Runoff Depth=2.81"
Flow Length=263' Tc=12.2 min CN=80 Runoff=2.61 cfs 9,937 cf

Link 1L: DP1- Road (MOHB) Inflow=4.36 cfs 14,125 cf
Primary=4.36 cfs 14,125 cf

Link 2L: DP2 - Wetland NORTH (MOHB) Inflow=7.32 cfs 27,781 cf
Primary=7.32 cfs 27,781 cf

Link 3L: DP4 - Wetland- SOUTHEAST (BB) Inflow=8.29 cfs 32,862 cf
Primary=8.29 cfs 32,862 cf

Link 5L: DP3 - Wetland SOUTHWEST (BB) Inflow=11.27 cfs 47,303 cf
Primary=11.27 cfs 47,303 cf

Total Runoff Area = 541,374 sf Runoff Volume = 122,071 cf Average Runoff Depth = 2.71"
88.91% Pervious = 481,324 sf 11.09% Impervious = 60,051 sf

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment EDA 1: Subcat EDA 1 Runoff Area=47,424 sf 58.37% Impervious Runoff Depth=4.72"
Tc=6.0 min CN=88 Runoff=5.69 cfs 18,662 cf

Subcatchment EDA 2: Subcat EDA 2 Runoff Area=126,903 sf 2.25% Impervious Runoff Depth=3.67"
Flow Length=427' Tc=12.0 min CN=78 Runoff=10.22 cfs 38,784 cf

Subcatchment EDA 3A: Subcat EDA 3A Runoff Area=99,142 sf 0.96% Impervious Runoff Depth=3.08"
Flow Length=222' Slope=0.0420 '/' Tc=11.8 min CN=72 Runoff=6.72 cfs 25,407 cf

Subcatchment EDA 3B: Subcat EDA 3B Runoff Area=127,359 sf 17.18% Impervious Runoff Depth=3.87"
Flow Length=390' Tc=16.7 min CN=80 Runoff=9.54 cfs 41,090 cf

Subcatchment EDA 4: Subcat EDA 4 Runoff Area=98,048 sf 6.81% Impervious Runoff Depth=3.87"
Flow Length=435' Tc=13.9 min CN=80 Runoff=7.88 cfs 31,633 cf

Subcatchment EDA 5: Subcat EDA 5 Runoff Area=42,499 sf 0.00% Impervious Runoff Depth=3.87"
Flow Length=263' Tc=12.2 min CN=80 Runoff=3.58 cfs 13,712 cf

Link 1L: DP1- Road (MOHB) Inflow=5.69 cfs 18,662 cf
Primary=5.69 cfs 18,662 cf

Link 2L: DP2 - Wetland NORTH (MOHB) Inflow=10.22 cfs 38,784 cf
Primary=10.22 cfs 38,784 cf

Link 3L: DP4 - Wetland- SOUTHEAST (BB) Inflow=11.39 cfs 45,345 cf
Primary=11.39 cfs 45,345 cf

Link 5L: DP3 - Wetland SOUTHWEST (BB) Inflow=15.90 cfs 66,497 cf
Primary=15.90 cfs 66,497 cf

Total Runoff Area = 541,374 sf Runoff Volume = 169,288 cf Average Runoff Depth = 3.75"
88.91% Pervious = 481,324 sf 11.09% Impervious = 60,051 sf

Time span=0.00-48.00 hrs, dt=0.05 hrs, 961 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind method - Pond routing by Stor-Ind method

Subcatchment EDA 1: Subcat EDA 1 Runoff Area=47,424 sf 58.37% Impervious Runoff Depth=7.16"
Tc=6.0 min CN=88 Runoff=8.42 cfs 28,279 cf

Subcatchment EDA 2: Subcat EDA 2 Runoff Area=126,903 sf 2.25% Impervious Runoff Depth=5.95"
Flow Length=427' Tc=12.0 min CN=78 Runoff=16.41 cfs 62,903 cf

Subcatchment EDA 3A: Subcat EDA 3A Runoff Area=99,142 sf 0.96% Impervious Runoff Depth=5.22"
Flow Length=222' Slope=0.0420 '/' Tc=11.8 min CN=72 Runoff=11.44 cfs 43,166 cf

Subcatchment EDA 3B: Subcat EDA 3B Runoff Area=127,359 sf 17.18% Impervious Runoff Depth=6.19"
Flow Length=390' Tc=16.7 min CN=80 Runoff=15.11 cfs 65,692 cf

Subcatchment EDA 4: Subcat EDA 4 Runoff Area=98,048 sf 6.81% Impervious Runoff Depth=6.19"
Flow Length=435' Tc=13.9 min CN=80 Runoff=12.42 cfs 50,573 cf

Subcatchment EDA 5: Subcat EDA 5 Runoff Area=42,499 sf 0.00% Impervious Runoff Depth=6.19"
Flow Length=263' Tc=12.2 min CN=80 Runoff=5.65 cfs 21,921 cf

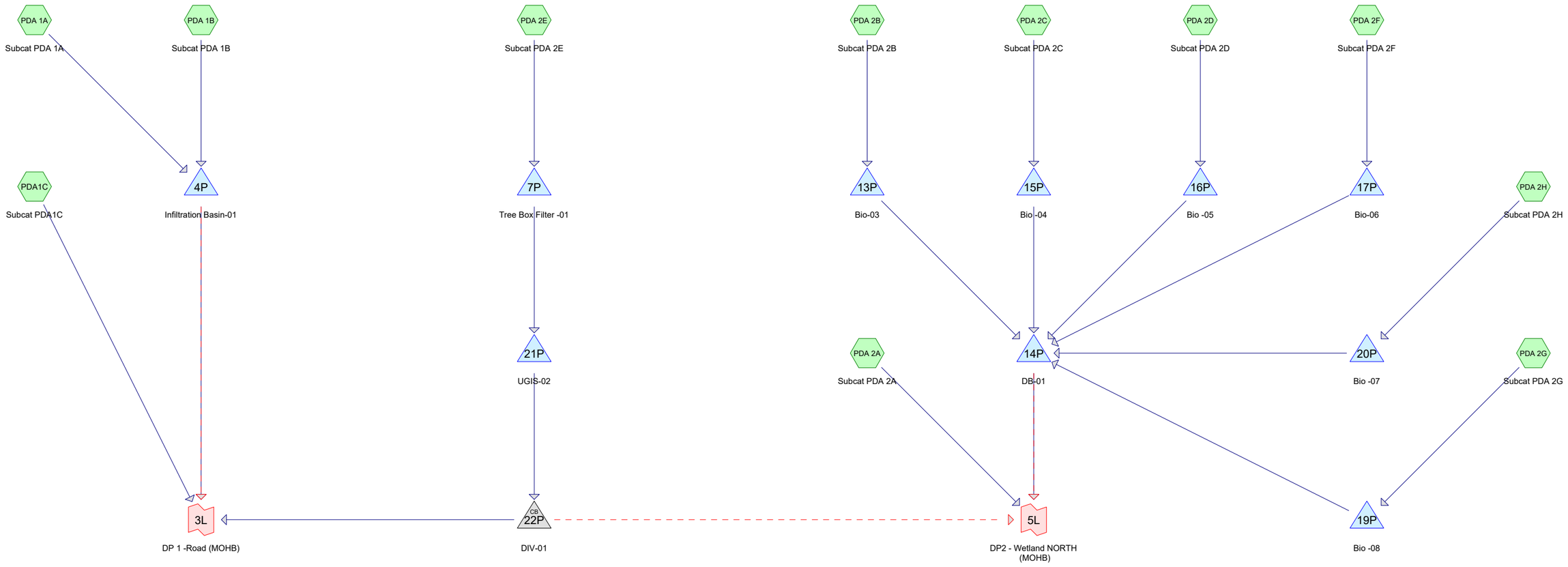
Link 1L: DP1- Road (MOHB) Inflow=8.42 cfs 28,279 cf
Primary=8.42 cfs 28,279 cf

Link 2L: DP2 - Wetland NORTH (MOHB) Inflow=16.41 cfs 62,903 cf
Primary=16.41 cfs 62,903 cf

Link 3L: DP4 - Wetland- SOUTHEAST (BB) Inflow=17.97 cfs 72,494 cf
Primary=17.97 cfs 72,494 cf

Link 5L: DP3 - Wetland SOUTHWEST (BB) Inflow=25.87 cfs 108,857 cf
Primary=25.87 cfs 108,857 cf

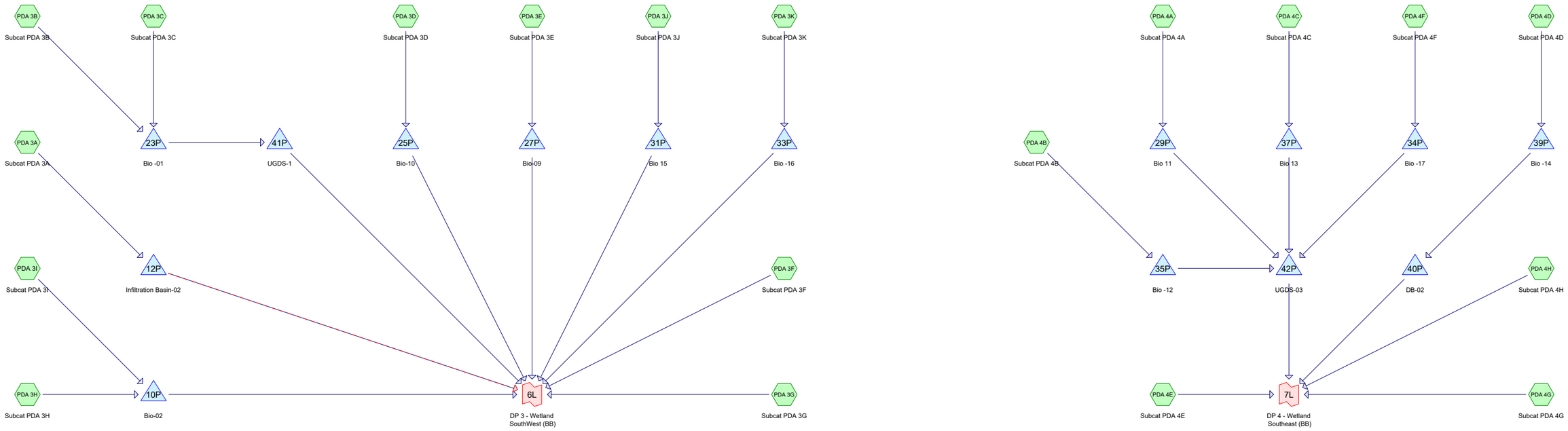
Total Runoff Area = 541,374 sf Runoff Volume = 272,534 cf Average Runoff Depth = 6.04"
88.91% Pervious = 481,324 sf 11.09% Impervious = 60,051 sf



Subcat | Reach | Pond | Link

Routing Diagram for pro hydro

Prepared by Pare Corporation , Printed 8/22/2022



Subcat Reach Pond Link

Routing Diagram for pro hydro

Prepared by Pare Corporation , Printed 8/22/2022

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PDA 1A: Subcat PDA 1A Runoff Area=26,484 sf 64.57% Impervious Runoff Depth=1.72"
Tc=6.0 min CN=89 Runoff=1.20 cfs 3,796 cf

Subcatchment PDA 1B: Subcat PDA 1B Runoff Area=7,838 sf 100.00% Impervious Runoff Depth=2.57"
Tc=6.0 min CN=98 Runoff=0.48 cfs 1,678 cf

Subcatchment PDA 2A: Subcat PDA 2A Runoff Area=52,452 sf 4.60% Impervious Runoff Depth=0.93"
Flow Length=375' Slope=0.0200 '/' Tc=11.0 min CN=77 Runoff=1.05 cfs 4,086 cf

Subcatchment PDA 2B: Subcat PDA 2B Runoff Area=39,263 sf 66.48% Impervious Runoff Depth=1.97"
Tc=6.0 min CN=92 Runoff=2.01 cfs 6,455 cf

Subcatchment PDA 2C: Subcat PDA 2C Runoff Area=4,298 sf 75.91% Impervious Runoff Depth=2.16"
Tc=6.0 min CN=94 Runoff=0.24 cfs 773 cf

Subcatchment PDA 2D: Subcat PDA 2D Runoff Area=4,291 sf 75.81% Impervious Runoff Depth=2.16"
Tc=6.0 min CN=94 Runoff=0.24 cfs 771 cf

Subcatchment PDA 2E: Subcat PDA 2E Runoff Area=27,979 sf 87.90% Impervious Runoff Depth=2.25"
Tc=6.0 min CN=95 Runoff=1.58 cfs 5,256 cf

Subcatchment PDA 2F: Subcat PDA 2F Runoff Area=4,106 sf 75.92% Impervious Runoff Depth=2.16"
Tc=6.0 min CN=94 Runoff=0.23 cfs 738 cf

Subcatchment PDA 2G: Subcat PDA 2G Runoff Area=12,646 sf 66.31% Impervious Runoff Depth=1.97"
Tc=6.0 min CN=92 Runoff=0.65 cfs 2,079 cf

Subcatchment PDA 2H: Subcat PDA 2H Runoff Area=4,227 sf 75.29% Impervious Runoff Depth=2.16"
Tc=6.0 min CN=94 Runoff=0.23 cfs 760 cf

Subcatchment PDA 3A: Subcat PDA 3A Runoff Area=50,013 sf 61.10% Impervious Runoff Depth=1.72"
Tc=6.0 min CN=89 Runoff=2.26 cfs 7,169 cf

Subcatchment PDA 3B: Subcat PDA 3B Runoff Area=12,000 sf 100.00% Impervious Runoff Depth=2.57"
Tc=6.0 min CN=98 Runoff=0.73 cfs 2,569 cf

Subcatchment PDA 3C: Subcat PDA 3C Runoff Area=20,479 sf 55.45% Impervious Runoff Depth=1.57"
Tc=6.0 min CN=87 Runoff=0.85 cfs 2,672 cf

Subcatchment PDA 3D: Subcat PDA 3D Runoff Area=4,377 sf 77.58% Impervious Runoff Depth=2.16"
Tc=6.0 min CN=94 Runoff=0.24 cfs 787 cf

Subcatchment PDA 3E: Subcat PDA 3E Runoff Area=10,567 sf 60.72% Impervious Runoff Depth=1.80"
Tc=6.0 min CN=90 Runoff=0.50 cfs 1,586 cf

Subcatchment PDA 3F: Subcat PDA 3F Runoff Area=46,282 sf 0.64% Impervious Runoff Depth=0.78"
Flow Length=86' Tc=7.7 min CN=74 Runoff=0.83 cfs 3,024 cf

Subcatchment PDA 3G: Subcat PDA 3G Runoff Area=6,443 sf 28.81% Impervious Runoff Depth=1.22"
Tc=6.0 min CN=82 Runoff=0.21 cfs 657 cf

Subcatchment PDA 3H: Subcat PDA 3H Runoff Area=20,855 sf 58.48% Impervious Runoff Depth=1.64"
Tc=6.0 min CN=88 Runoff=0.90 cfs 2,853 cf

Subcatchment PDA 3I: Subcat PDA 3I Runoff Area=4,778 sf 93.12% Impervious Runoff Depth=2.36"
Tc=6.0 min CN=96 Runoff=0.28 cfs 938 cf

Subcatchment PDA 3J: Subcat PDA 3J Runoff Area=4,712 sf 73.27% Impervious Runoff Depth=2.06"
Tc=6.0 min CN=93 Runoff=0.25 cfs 810 cf

Subcatchment PDA 3K: Subcat PDA 3K Runoff Area=13,806 sf 70.90% Impervious Runoff Depth=1.97"
Tc=6.0 min CN=92 Runoff=0.71 cfs 2,270 cf

Subcatchment PDA 4A: Subcat PDA 4A Runoff Area=42,711 sf 66.87% Impervious Runoff Depth=1.89"
Tc=6.0 min CN=91 Runoff=2.10 cfs 6,711 cf

Subcatchment PDA 4B: Subcat PDA 4B Runoff Area=4,401 sf 77.40% Impervious Runoff Depth=2.16"
Tc=6.0 min CN=94 Runoff=0.24 cfs 791 cf

Subcatchment PDA 4C: Subcat PDA 4C Runoff Area=13,049 sf 56.91% Impervious Runoff Depth=1.80"
Tc=6.0 min CN=90 Runoff=0.62 cfs 1,959 cf

Subcatchment PDA 4D: Subcat PDA 4D Runoff Area=8,397 sf 40.23% Impervious Runoff Depth=1.57"
Tc=6.0 min CN=87 Runoff=0.35 cfs 1,096 cf

Subcatchment PDA 4E: Subcat PDA 4E Runoff Area=36,641 sf 10.20% Impervious Runoff Depth=1.22"
Tc=6.0 min CN=82 Runoff=1.17 cfs 3,736 cf

Subcatchment PDA 4F: Subcat PDA 4F Runoff Area=4,393 sf 77.66% Impervious Runoff Depth=2.16"
Tc=6.0 min CN=94 Runoff=0.24 cfs 790 cf

Subcatchment PDA 4G: Subcat PDA 4G Runoff Area=34,103 sf 0.01% Impervious Runoff Depth=1.04"
Tc=6.0 min CN=79 Runoff=0.92 cfs 2,968 cf

Subcatchment PDA 4H: Subcat PDA 4H Runoff Area=5,987 sf 28.21% Impervious Runoff Depth=1.04"
Tc=6.0 min UI Adjusted CN=79 Runoff=0.16 cfs 521 cf

Subcatchment PDA1C: Subcat PDA1C Runoff Area=13,755 sf 3.60% Impervious Runoff Depth=0.78"
Tc=0.0 min CN=74 Runoff=0.31 cfs 899 cf

Pond 4P: Infiltration Basin-01 Peak Elev=147.90' Storage=3,130 cf Inflow=1.67 cfs 5,474 cf
Discarded=0.04 cfs 3,658 cf Primary=0.05 cfs 1,816 cf Secondary=0.00 cfs 0 cf Outflow=0.08 cfs 5,474 cf

Pond 7P: Tree Box Filter -01 Peak Elev=148.84' Storage=1,580 cf Inflow=1.58 cfs 5,256 cf
Discarded=0.01 cfs 2,082 cf Primary=1.46 cfs 3,033 cf Outflow=1.48 cfs 5,116 cf

Pond 10P: Bio-02 Peak Elev=147.79' Storage=1,662 cf Inflow=1.18 cfs 3,791 cf
Discarded=0.02 cfs 2,444 cf Primary=0.59 cfs 1,346 cf Outflow=0.60 cfs 3,791 cf

Pond 12P: Infiltration Basin-02 Peak Elev=146.76' Storage=3,409 cf Inflow=2.26 cfs 7,169 cf
Discarded=0.04 cfs 3,414 cf Primary=0.49 cfs 3,754 cf Secondary=0.00 cfs 0 cf Outflow=0.53 cfs 7,169 cf

Pond 13P: Bio-03 Peak Elev=146.42' Storage=3,105 cf Inflow=2.01 cfs 6,455 cf
Discarded=0.03 cfs 4,148 cf Primary=0.54 cfs 2,307 cf Outflow=0.57 cfs 6,455 cf

Pond 14P: DB-01 Peak Elev=144.57' Storage=187 cf Inflow=1.08 cfs 4,200 cf
Discarded=0.00 cfs 107 cf Primary=1.03 cfs 4,093 cf Secondary=0.00 cfs 0 cf Outflow=1.04 cfs 4,200 cf

Pond 15P: Bio -04 Peak Elev=149.27' Storage=288 cf Inflow=0.24 cfs 773 cf
Discarded=0.00 cfs 449 cf Primary=0.29 cfs 323 cf Outflow=0.29 cfs 773 cf

Pond 16P: Bio -05 Peak Elev=149.27' Storage=288 cf Inflow=0.24 cfs 771 cf
Discarded=0.00 cfs 449 cf Primary=0.29 cfs 322 cf Outflow=0.29 cfs 771 cf

Pond 17P: Bio-06 Peak Elev=149.27' Storage=286 cf Inflow=0.23 cfs 738 cf
Discarded=0.00 cfs 447 cf Primary=0.16 cfs 291 cf Outflow=0.16 cfs 738 cf

Pond 19P: Bio -08 Peak Elev=149.77' Storage=936 cf Inflow=0.65 cfs 2,079 cf
Discarded=0.01 cfs 1,439 cf Primary=0.31 cfs 640 cf Outflow=0.32 cfs 2,079 cf

Pond 20P: Bio -07 Peak Elev=149.27' Storage=284 cf Inflow=0.23 cfs 760 cf
Discarded=0.00 cfs 442 cf Primary=0.28 cfs 317 cf Outflow=0.29 cfs 760 cf

Pond 21P: UGIS-02 Peak Elev=144.86' Storage=1,777 cf Inflow=1.46 cfs 3,033 cf
Discarded=0.05 cfs 2,337 cf Primary=0.03 cfs 696 cf Outflow=0.08 cfs 3,033 cf

Pond 22P: DIV-01 Peak Elev=144.60' Inflow=0.03 cfs 696 cf
Primary=0.03 cfs 696 cf Secondary=0.00 cfs 0 cf Outflow=0.03 cfs 696 cf

Pond 23P: Bio -01 Peak Elev=148.04' Storage=2,607 cf Inflow=1.57 cfs 5,241 cf
Discarded=0.02 cfs 3,782 cf Primary=0.52 cfs 1,459 cf Outflow=0.54 cfs 5,241 cf

Pond 25P: Bio-10 Peak Elev=149.28' Storage=289 cf Inflow=0.24 cfs 787 cf
Discarded=0.00 cfs 450 cf Primary=0.34 cfs 337 cf Outflow=0.34 cfs 787 cf

Pond 27P: Bio-09 Peak Elev=147.77' Storage=745 cf Inflow=0.50 cfs 1,586 cf
Discarded=0.01 cfs 1,135 cf Primary=0.22 cfs 452 cf Outflow=0.23 cfs 1,586 cf

Pond 29P: Bio 11 Peak Elev=148.80' Storage=2,877 cf Inflow=2.10 cfs 6,711 cf
Discarded=0.03 cfs 4,212 cf Primary=1.12 cfs 2,499 cf Outflow=1.15 cfs 6,711 cf

Pond 31P: Bio 15 Peak Elev=149.78' Storage=289 cf Inflow=0.25 cfs 810 cf
Discarded=0.00 cfs 449 cf Primary=0.35 cfs 361 cf Outflow=0.36 cfs 810 cf

Pond 33P: Bio -16 Peak Elev=147.80' Storage=770 cf Inflow=0.71 cfs 2,270 cf
Discarded=0.01 cfs 1,276 cf Primary=0.76 cfs 994 cf Outflow=0.78 cfs 2,270 cf

Pond 34P: Bio -17 Peak Elev=149.28' Storage=289 cf Inflow=0.24 cfs 790 cf
Discarded=0.00 cfs 450 cf Primary=0.34 cfs 340 cf Outflow=0.34 cfs 790 cf

Pond 35P: Bio -12 Peak Elev=149.78' Storage=289 cf Inflow=0.24 cfs 791 cf
Discarded=0.00 cfs 450 cf Primary=0.34 cfs 341 cf Outflow=0.34 cfs 791 cf

Pond 37P: Bio 13 Peak Elev=148.63' Storage=832 cf Inflow=0.62 cfs 1,959 cf
Discarded=0.01 cfs 1,272 cf Primary=0.28 cfs 687 cf Outflow=0.29 cfs 1,959 cf

Pond 39P: Bio -14 Peak Elev=146.79' Storage=350 cf Inflow=0.35 cfs 1,096 cf
Discarded=0.00 cfs 528 cf Primary=0.25 cfs 568 cf Outflow=0.26 cfs 1,096 cf

Pond 40P: DB-02 Peak Elev=145.35' Storage=239 cf Inflow=0.25 cfs 568 cf
Discarded=0.01 cfs 247 cf Primary=0.02 cfs 321 cf Outflow=0.02 cfs 568 cf

Pond 41P: UGDS-1 Peak Elev=145.53' Storage=906 cf Inflow=0.52 cfs 1,459 cf
Outflow=0.03 cfs 1,449 cf

Pond 42P: UGDS-03 Peak Elev=146.50' Storage=2,521 cf Inflow=1.73 cfs 3,866 cf
Outflow=0.08 cfs 3,867 cf

Link 3L: DP 1 -Road (MOHB) Inflow=0.31 cfs 3,410 cf
Primary=0.31 cfs 3,410 cf

Link 5L: DP2 - Wetland NORTH (MOHB) Inflow=1.68 cfs 8,179 cf
Primary=1.68 cfs 8,179 cf

Link 6L: DP 3 - Wetland SouthWest (BB) Inflow=2.47 cfs 12,374 cf
Primary=2.47 cfs 12,374 cf

Link 7L: DP 4 - Wetland Southeast (BB) Inflow=2.25 cfs 11,412 cf
Primary=2.25 cfs 11,412 cf

Total Runoff Area = 541,332 sf Runoff Volume = 71,197 cf Average Runoff Depth = 1.58"
54.35% Pervious = 294,206 sf 45.65% Impervious = 247,126 sf

Summary for Subcatchment PDA 1A: Subcat PDA 1A

Runoff = 1.20 cfs @ 12.09 hrs, Volume= 3,796 cf, Depth= 1.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
16,165	98	Paved parking, HSG C
936	98	Unconnected pavement, HSG C
9,332	74	>75% Grass cover, Good, HSG C
51	72	Woods/grass comb., Good, HSG C
26,484	89	Weighted Average
9,383	74	35.43% Pervious Area
17,101	98	64.57% Impervious Area
936		5.47% Unconnected

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

Summary for Subcatchment PDA 1B: Subcat PDA 1B

Runoff = 0.48 cfs @ 12.09 hrs, Volume= 1,678 cf, Depth= 2.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
7,837	98	Roofs, HSG C
0	98	Unconnected pavement, HSG C
0	98	Paved parking, HSG C
0	74	>75% Grass cover, Good, HSG C
7,838	98	Weighted Average
0	74	0.00% Pervious Area
7,838	98	100.00% Impervious Area
0		0.00% Unconnected

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

Summary for Subcatchment PDA 2A: Subcat PDA 2A

Runoff = 1.05 cfs @ 12.17 hrs, Volume= 4,086 cf, Depth= 0.93"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
2,406	98	Paved parking, HSG C
0	98	Unconnected pavement, HSG C
22,135	74	>75% Grass cover, Good, HSG C
2,717	70	Woods, Good, HSG C
6,162	72	Woods/grass comb., Good, HSG C
7	98	Paved parking, HSG D
6,913	79	Woods/grass comb., Good, HSG D
1,976	77	Woods, Good, HSG D
10,135	80	>75% Grass cover, Good, HSG D
52,452	77	Weighted Average
50,039	76	95.40% Pervious Area
2,413	98	4.60% Impervious Area
0		0.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.5	50	0.0200	0.15		**Sheet Flow, Sheet** Grass: Short n= 0.150 P2= 3.30"
5.5	325	0.0200	0.99		**Shallow Concentrated Flow, Shallow** Short Grass Pasture Kv= 7.0 fps
11.0	375	Total			

Summary for Subcatchment PDA 2B: Subcat PDA 2B

Runoff = 2.01 cfs @ 12.09 hrs, Volume= 6,455 cf, Depth= 1.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
1,826	98	Paved parking, HSG C
1	98	Unconnected pavement, HSG C
439	74	>75% Grass cover, Good, HSG C
0	98	Roofs, HSG D
24,277	98	Paved parking, HSG D
12,721	80	>75% Grass cover, Good, HSG D
39,263	92	Weighted Average
13,159	80	33.52% Pervious Area
26,104	98	66.48% Impervious Area
1		0.01% Unconnected

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

Summary for Subcatchment PDA 2C: Subcat PDA 2C

Runoff = 0.24 cfs @ 12.09 hrs, Volume= 773 cf, Depth= 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
162	98	Roofs, HSG C
0	74	>75% Grass cover, Good, HSG C
2,911	98	Roofs, HSG D
189	98	Paved parking, HSG D
1,035	80	>75% Grass cover, Good, HSG D
4,298	94	Weighted Average
1,035	80	24.09% Pervious Area
3,262	98	75.91% Impervious Area

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

Summary for Subcatchment PDA 2D: Subcat PDA 2D

Runoff = 0.24 cfs @ 12.09 hrs, Volume= 771 cf, Depth= 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
3,058	98	Roofs, HSG D
194	98	Paved parking, HSG D
1,038	80	>75% Grass cover, Good, HSG D
4,291	94	Weighted Average
1,038	80	24.19% Pervious Area
3,253	98	75.81% Impervious Area

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

Summary for Subcatchment PDA 2E: Subcat PDA 2E

Runoff = 1.58 cfs @ 12.09 hrs, Volume= 5,256 cf, Depth= 2.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
0	98	Roofs, HSG C
1,435	98	Unconnected pavement, HSG C
3,385	74	>75% Grass cover, Good, HSG C
21,869	98	Paved parking, HSG C
1,289	98	Paved parking, HSG D
27,979	95	Weighted Average
3,385	74	12.10% Pervious Area
24,594	98	87.90% Impervious Area
1,435		5.84% Unconnected

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

Summary for Subcatchment PDA 2F: Subcat PDA 2F

Runoff = 0.23 cfs @ 12.09 hrs, Volume= 738 cf, Depth= 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
0	98	Paved parking, HSG D
3,117	98	Roofs, HSG D
989	80	>75% Grass cover, Good, HSG D
4,106	94	Weighted Average
989	80	24.08% Pervious Area
3,117	98	75.92% Impervious Area

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

Summary for Subcatchment PDA 2G: Subcat PDA 2G

Runoff = 0.65 cfs @ 12.09 hrs, Volume= 2,079 cf, Depth= 1.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
394	98	Paved parking, HSG C
1	98	Unconnected pavement, HSG C
0	74	>75% Grass cover, Good, HSG C
0	98	Roofs, HSG D
7,990	98	Paved parking, HSG D
1	98	Unconnected pavement, HSG D
4,260	80	>75% Grass cover, Good, HSG D
12,646	92	Weighted Average
4,260	80	33.69% Pervious Area
8,386	98	66.31% Impervious Area
1		0.02% Unconnected

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

Summary for Subcatchment PDA 2H: Subcat PDA 2H

Runoff = 0.23 cfs @ 12.09 hrs, Volume= 760 cf, Depth= 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
65	98	Paved parking, HSG D
3,117	98	Roofs, HSG D
1,044	80	>75% Grass cover, Good, HSG D
4,227	94	Weighted Average
1,044	80	24.71% Pervious Area
3,183	98	75.29% Impervious Area

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

Summary for Subcatchment PDA 3A: Subcat PDA 3A

Runoff = 2.26 cfs @ 12.09 hrs, Volume= 7,169 cf, Depth= 1.72"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
27,554	98	Paved parking, HSG C
0	98	Roofs, HSG C
3,006	98	Unconnected pavement, HSG C
19,446	74	>75% Grass cover, Good, HSG C
7	80	>75% Grass cover, Good, HSG D
50,013	89	Weighted Average
19,453	74	38.90% Pervious Area
30,561	98	61.10% Impervious Area
3,006		9.84% Unconnected

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

Summary for Subcatchment PDA 3B: Subcat PDA 3B

Runoff = 0.73 cfs @ 12.09 hrs, Volume= 2,569 cf, Depth= 2.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
12,000	98	Roofs, HSG C
12,000	98	100.00% Impervious Area

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

Summary for Subcatchment PDA 3C: Subcat PDA 3C

Runoff = 0.85 cfs @ 12.09 hrs, Volume= 2,672 cf, Depth= 1.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
11,142	98	Paved parking, HSG C
9,123	74	>75% Grass cover, Good, HSG C
214	98	Unconnected pavement, HSG C
20,479	87	Weighted Average
9,123	74	44.55% Pervious Area
11,356	98	55.45% Impervious Area
214		1.88% Unconnected

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

Summary for Subcatchment PDA 3D: Subcat PDA 3D

Runoff = 0.24 cfs @ 12.09 hrs, Volume= 787 cf, Depth= 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
364	98	Roofs, HSG C
0	74	>75% Grass cover, Good, HSG C
278	98	Paved parking, HSG D
2,753	98	Roofs, HSG D
981	80	>75% Grass cover, Good, HSG D
4,377	94	Weighted Average
981	80	22.42% Pervious Area
3,395	98	77.58% Impervious Area

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

Summary for Subcatchment PDA 3E: Subcat PDA 3E

Runoff = 0.50 cfs @ 12.09 hrs, Volume= 1,586 cf, Depth= 1.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
1,943	98	Paved parking, HSG C
0	98	Roofs, HSG C
2,093	74	>75% Grass cover, Good, HSG C
4,473	98	Paved parking, HSG D
2,059	80	>75% Grass cover, Good, HSG D
10,567	90	Weighted Average
4,151	77	39.28% Pervious Area
6,416	98	60.72% Impervious Area

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

Summary for Subcatchment PDA 3F: Subcat PDA 3F

Runoff = 0.83 cfs @ 12.12 hrs, Volume= 3,024 cf, Depth= 0.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
3	98	Paved parking, HSG C
14,209	70	Woods, Good, HSG C
16,363	74	>75% Grass cover, Good, HSG C
294	98	Unconnected pavement, HSG C
7,958	77	Woods, Good, HSG D
7,455	80	>75% Grass cover, Good, HSG D
46,282	74	Weighted Average
45,985	74	99.36% Pervious Area
297	98	0.64% Impervious Area
294		98.89% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.0	24	0.3300	0.40		**Sheet Flow, Sheet** Grass: Short n= 0.150 P2= 3.30"
6.0	26	0.0320	0.07		**Sheet Flow, Sheet 2** Woods: Light underbrush n= 0.400 P2= 3.30"
0.7	36	0.0320	0.89		**Shallow Concentrated Flow, Shallow** Woodland Kv= 5.0 fps
7.7	86	Total			

Summary for Subcatchment PDA 3G: Subcat PDA 3G

Runoff = 0.21 cfs @ 12.10 hrs, Volume= 657 cf, Depth= 1.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
743	98	Paved parking, HSG C
3,941	74	>75% Grass cover, Good, HSG C
1,113	98	Paved parking, HSG D
645	80	>75% Grass cover, Good, HSG D
6,443	82	Weighted Average
4,586	75	71.19% Pervious Area
1,856	98	28.81% Impervious Area

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

Summary for Subcatchment PDA 3H: Subcat PDA 3H

Runoff = 0.90 cfs @ 12.09 hrs, Volume= 2,853 cf, Depth= 1.64"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
32	98	Paved parking, HSG C
9,135	98	Roofs, HSG C
3,030	98	Unconnected pavement, HSG C
8,659	74	>75% Grass cover, Good, HSG C
20,855	88	Weighted Average
8,659	74	41.52% Pervious Area
12,196	98	58.48% Impervious Area
3,030		24.84% Unconnected

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

Summary for Subcatchment PDA 3I: Subcat PDA 3I

Runoff = 0.28 cfs @ 12.09 hrs, Volume= 938 cf, Depth= 2.36"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
3,223	98	Paved parking, HSG C
146	98	Unconnected pavement, HSG C
277	74	>75% Grass cover, Good, HSG C
1,079	98	Paved parking, HSG D
51	80	>75% Grass cover, Good, HSG D
4,778	96	Weighted Average
329	75	6.88% Pervious Area
4,449	98	93.12% Impervious Area
146		3.29% Unconnected

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

Summary for Subcatchment PDA 3J: Subcat PDA 3J

Runoff = 0.25 cfs @ 12.09 hrs, Volume= 810 cf, Depth= 2.06"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
3,058	98	Roofs, HSG D
395	98	Paved parking, HSG D
1,259	80	>75% Grass cover, Good, HSG D
4,712	93	Weighted Average
1,259	80	26.73% Pervious Area
3,453	98	73.27% Impervious Area

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

Summary for Subcatchment PDA 3K: Subcat PDA 3K

Runoff = 0.71 cfs @ 12.09 hrs, Volume= 2,270 cf, Depth= 1.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
1,496	98	Paved parking, HSG C
0	98	Roofs, HSG C
758	74	>75% Grass cover, Good, HSG C
8,292	98	Paved parking, HSG D
0	98	Roofs, HSG D
3,259	80	>75% Grass cover, Good, HSG D
13,806	92	Weighted Average
4,018	79	29.10% Pervious Area
9,788	98	70.90% Impervious Area

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

Summary for Subcatchment PDA 4A: Subcat PDA 4A

Runoff = 2.10 cfs @ 12.09 hrs, Volume= 6,711 cf, Depth= 1.89"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
15,027	98	Paved parking, HSG C
464	98	Roofs, HSG C
202	98	Unconnected pavement, HSG C
5,044	74	>75% Grass cover, Good, HSG C
5,496	98	Paved parking, HSG D
5,628	98	Roofs, HSG D
1,743	98	Unconnected pavement, HSG D
9,107	80	>75% Grass cover, Good, HSG D
42,711	91	Weighted Average
14,151	78	33.13% Pervious Area
28,561	98	66.87% Impervious Area
1,945		6.81% Unconnected

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

Summary for Subcatchment PDA 4B: Subcat PDA 4B

Runoff = 0.24 cfs @ 12.09 hrs, Volume= 791 cf, Depth= 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
995	80	>75% Grass cover, Good, HSG D
3,125	98	Roofs, HSG D
281	98	Paved parking, HSG D
4,401	94	Weighted Average
995	80	22.60% Pervious Area
3,406	98	77.40% Impervious Area

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

Summary for Subcatchment PDA 4C: Subcat PDA 4C

Runoff = 0.62 cfs @ 12.09 hrs, Volume= 1,959 cf, Depth= 1.80"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
7,426	98	Paved parking, HSG D
0	98	Roofs, HSG D
5,623	80	>75% Grass cover, Good, HSG D
13,049	90	Weighted Average
5,623	80	43.09% Pervious Area
7,426	98	56.91% Impervious Area

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

Summary for Subcatchment PDA 4D: Subcat PDA 4D

Runoff = 0.35 cfs @ 12.09 hrs, Volume= 1,096 cf, Depth= 1.57"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
3,112	98	Roofs, HSG D
45	98	Paved parking, HSG D
222	98	Unconnected pavement, HSG D
5,018	80	>75% Grass cover, Good, HSG D
8,397	87	Weighted Average
5,018	80	59.77% Pervious Area
3,378	98	40.23% Impervious Area
222		6.57% Unconnected

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

Summary for Subcatchment PDA 4E: Subcat PDA 4E

Runoff = 1.17 cfs @ 12.10 hrs, Volume= 3,736 cf, Depth= 1.22"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
807	98	Paved parking, HSG C
689	74	>75% Grass cover, Good, HSG C
2,844	98	Paved parking, HSG D
86	98	Unconnected pavement, HSG D
32,217	80	>75% Grass cover, Good, HSG D
36,641	82	Weighted Average
32,905	80	89.80% Pervious Area
3,736	98	10.20% Impervious Area
86		2.30% Unconnected

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

Summary for Subcatchment PDA 4F: Subcat PDA 4F

Runoff = 0.24 cfs @ 12.09 hrs, Volume= 790 cf, Depth= 2.16"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
653	98	Roofs, HSG C
981	80	>75% Grass cover, Good, HSG D
278	98	Paved parking, HSG D
2,481	98	Roofs, HSG D
4,393	94	Weighted Average
981	80	22.34% Pervious Area
3,412	98	77.66% Impervious Area

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

Summary for Subcatchment PDA 4G: Subcat PDA 4G

Runoff = 0.92 cfs @ 12.10 hrs, Volume= 2,968 cf, Depth= 1.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
3,142	74	>75% Grass cover, Good, HSG C
3	98	Paved parking, HSG C
30,957	80	>75% Grass cover, Good, HSG D
1	98	Paved parking, HSG D
34,103	79	Weighted Average
34,099	79	99.99% Pervious Area
4	98	0.01% Impervious Area

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

Summary for Subcatchment PDA 4H: Subcat PDA 4H

Runoff = 0.16 cfs @ 12.10 hrs, Volume= 521 cf, Depth= 1.04"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Adj	Description
174	98		Paved parking, HSG C
1,396	98		Unconnected pavement, HSG C
89	70		Woods, Good, HSG C
3,626	74		>75% Grass cover, Good, HSG C
82	98		Paved parking, HSG D
36	98		Unconnected pavement, HSG D
583	80		>75% Grass cover, Good, HSG D
5,987	81	79	Weighted Average, UI Adjusted
4,298	75	75	71.79% Pervious Area
1,689	98	98	28.21% Impervious Area
1,432			84.80% Unconnected

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

Summary for Subcatchment PDA1C: Subcat PDA1C

Runoff = 0.31 cfs @ 12.01 hrs, Volume= 899 cf, Depth= 0.78"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Type III 24-hr 1-Year Rainfall=2.80"

Area (sf)	CN	Description
10,283	74	>75% Grass cover, Good, HSG C
0	98	Paved parking, HSG C
495	98	Roofs, HSG C
2,977	72	Woods/grass comb., Good, HSG C
13,755	74	Weighted Average
13,260	74	96.40% Pervious Area
495	98	3.60% Impervious Area

Summary for Pond 4P: Infiltration Basin-01

Inflow Area = 34,322 sf, 72.66% Impervious, Inflow Depth = 1.91" for 1-Year event
Inflow = 1.67 cfs @ 12.09 hrs, Volume= 5,474 cf
Outflow = 0.08 cfs @ 14.64 hrs, Volume= 5,474 cf, Atten= 95%, Lag= 153.2 min
Discarded = 0.04 cfs @ 14.64 hrs, Volume= 3,658 cf
Primary = 0.05 cfs @ 14.64 hrs, Volume= 1,816 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 147.90' @ 14.64 hrs Surf.Area= 3,401 sf Storage= 3,130 cf

Plug-Flow detention time= 489.3 min calculated for 5,470 cf (100% of inflow)
Center-of-Mass det. time= 489.7 min (1,288.7 - 799.0)

Volume	Invert	Avail.Storage	Storage Description
#1	146.75'	7,510 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
146.75	1,677	0	0
147.00	2,415	512	512
148.00	3,510	2,963	3,474
149.00	4,562	4,036	7,510

Device	Routing	Invert	Outlet Devices
#1	Discarded	146.75'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'
#2	Device 3	148.25'	**16.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#3	Primary	146.75'	**12.0" Round Culvert** L= 27.0' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 146.75' / 141.00' S= 0.2130 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#4	Secondary	148.50'	**10.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#5	Device 3	147.25'	**1.5" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.04 cfs @ 14.64 hrs HW=147.90' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.05 cfs @ 14.64 hrs HW=147.90' TW=0.00' (Dynamic Tailwater)
└**3=Culvert** (Passes 0.05 cfs of 4.16 cfs potential flow)
  ├**2=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
  └**5=Orifice/Grate** (Orifice Controls 0.05 cfs @ 3.69 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=146.75' TW=0.00' (Dynamic Tailwater)
└**4=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Stage-Discharge for Pond 4P: Infiltration Basin-01

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
146.75	0.00	0.00	0.00	0.00
146.80	0.02	0.02	0.00	0.00
146.85	0.02	0.02	0.00	0.00
146.90	0.02	0.02	0.00	0.00
146.95	0.03	0.03	0.00	0.00
147.00	0.03	0.03	0.00	0.00
147.05	0.03	0.03	0.00	0.00
147.10	0.03	0.03	0.00	0.00
147.15	0.03	0.03	0.00	0.00
147.20	0.03	0.03	0.00	0.00
147.25	0.03	0.03	0.00	0.00
147.30	0.04	0.03	0.00	0.00
147.35	0.04	0.03	0.01	0.00
147.40	0.05	0.03	0.02	0.00
147.45	0.06	0.03	0.02	0.00
147.50	0.06	0.03	0.03	0.00
147.55	0.06	0.03	0.03	0.00
147.60	0.07	0.04	0.03	0.00
147.65	0.07	0.04	0.03	0.00
147.70	0.07	0.04	0.04	0.00
147.75	0.08	0.04	0.04	0.00
147.80	0.08	0.04	0.04	0.00
147.85	0.08	0.04	0.04	0.00
147.90	0.08	0.04	0.05	0.00
147.95	0.09	0.04	0.05	0.00
148.00	0.09	0.04	0.05	0.00
148.05	0.09	0.04	0.05	0.00
148.10	0.09	0.04	0.05	0.00
148.15	0.10	0.04	0.05	0.00
148.20	0.10	0.04	0.06	0.00
148.25	0.10	0.04	0.06	0.00
148.30	0.69	0.04	0.64	0.00
148.35	1.76	0.04	1.71	0.00
148.40	3.14	0.05	3.10	0.00
148.45	4.78	0.05	4.73	0.00
148.50	5.81	0.05	5.77	0.00
148.55	6.29	0.05	5.88	0.37
148.60	7.07	0.05	5.99	1.03
148.65	8.04	0.05	6.10	1.89
148.70	9.17	0.05	6.21	2.91
148.75	10.43	0.05	6.32	4.07
148.80	11.81	0.05	6.42	5.34
148.85	13.30	0.05	6.52	6.72
148.90	14.88	0.05	6.62	8.21
148.95	16.56	0.05	6.72	9.78
149.00	**18.32**	**0.05**	**6.82**	**11.45**

Stage-Area-Storage for Pond 4P: Infiltration Basin-01

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
146.75	1,677	0
146.80	1,825	88
146.85	1,972	182
146.90	2,120	285
146.95	2,267	394
147.00	2,415	512
147.05	2,470	634
147.10	2,524	758
147.15	2,579	886
147.20	2,634	1,016
147.25	2,689	1,149
147.30	2,744	1,285
147.35	2,798	1,424
147.40	2,853	1,565
147.45	2,908	1,709
147.50	2,963	1,856
147.55	3,017	2,005
147.60	3,072	2,158
147.65	3,127	2,313
147.70	3,181	2,470
147.75	3,236	2,631
147.80	3,291	2,794
147.85	3,346	2,960
147.90	3,401	3,128
147.95	3,455	3,300
148.00	3,510	3,474
148.05	3,563	3,651
148.10	3,615	3,830
148.15	3,668	4,012
148.20	3,720	4,197
148.25	3,773	4,384
148.30	3,826	4,574
148.35	3,878	4,767
148.40	3,931	4,962
148.45	3,983	5,160
148.50	4,036	5,361
148.55	4,089	5,564
148.60	4,141	5,769
148.65	4,194	5,978
148.70	4,246	6,189
148.75	4,299	6,402
148.80	4,352	6,619
148.85	4,404	6,838
148.90	4,457	7,059
148.95	4,509	7,283
149.00	**4,562**	**7,510**

Summary for Pond 7P: Tree Box Filter -01

Inflow Area = 27,979 sf, 87.90% Impervious, Inflow Depth = 2.25" for 1-Year event
Inflow = 1.58 cfs @ 12.09 hrs, Volume= 5,256 cf
Outflow = 1.48 cfs @ 12.11 hrs, Volume= 5,116 cf, Atten= 7%, Lag= 1.3 min
Discarded = 0.01 cfs @ 12.11 hrs, Volume= 2,082 cf
Primary = 1.46 cfs @ 12.11 hrs, Volume= 3,033 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 148.84' @ 12.11 hrs Surf.Area= 1,246 sf Storage= 1,580 cf

Plug-Flow detention time= 519.3 min calculated for 5,116 cf (97% of inflow)
Center-of-Mass det. time= 503.1 min (1,288.3 - 785.2)

Volume	Invert	Avail.Storage	Storage Description
#1	143.74'	2,506 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
143.74	422	0.0	0	0
143.75	422	33.0	1	1
147.74	422	33.0	556	557
147.75	610	100.0	5	562
148.75	1,200	100.0	905	1,467
149.50	1,571	100.0	1,039	2,506

Device	Routing	Invert	Outlet Devices
#1	Discarded	143.74'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'
#2	Primary	148.75'	**2.0" x 2.0" Horiz. Orifice/Grate X 6.00 columns** X 6 rows C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.01 cfs @ 12.11 hrs HW=148.84' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=1.45 cfs @ 12.11 hrs HW=148.84' TW=144.41' (Dynamic Tailwater)
↑—**2=Orifice/Grate** (Orifice Controls 1.45 cfs @ 1.45 fps)

Stage-Discharge for Pond 7P: Tree Box Filter -01

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
143.74	0.00	0.00	0.00
143.84	0.00	0.00	0.00
143.94	0.00	0.00	0.00
144.04	0.00	0.00	0.00
144.14	0.00	0.00	0.00
144.24	0.00	0.00	0.00
144.34	0.00	0.00	0.00
144.44	0.00	0.00	0.00
144.54	0.00	0.00	0.00
144.64	0.00	0.00	0.00
144.74	0.00	0.00	0.00
144.84	0.00	0.00	0.00
144.94	0.00	0.00	0.00
145.04	0.00	0.00	0.00
145.14	0.00	0.00	0.00
145.24	0.00	0.00	0.00
145.34	0.00	0.00	0.00
145.44	0.00	0.00	0.00
145.54	0.00	0.00	0.00
145.64	0.00	0.00	0.00
145.74	0.00	0.00	0.00
145.84	0.00	0.00	0.00
145.94	0.00	0.00	0.00
146.04	0.00	0.00	0.00
146.14	0.00	0.00	0.00
146.24	0.00	0.00	0.00
146.34	0.00	0.00	0.00
146.44	0.00	0.00	0.00
146.54	0.00	0.00	0.00
146.64	0.00	0.00	0.00
146.74	0.00	0.00	0.00
146.84	0.00	0.00	0.00
146.94	0.00	0.00	0.00
147.04	0.00	0.00	0.00
147.14	0.00	0.00	0.00
147.24	0.00	0.00	0.00
147.34	0.00	0.00	0.00
147.44	0.00	0.00	0.00
147.54	0.00	0.00	0.00
147.64	0.00	0.00	0.00
147.74	0.00	0.00	0.00
147.84	0.01	0.01	0.00
147.94	0.01	0.01	0.00
148.04	0.01	0.01	0.00
148.14	0.01	0.01	0.00
148.24	0.01	0.01	0.00
148.34	0.01	0.01	0.00
148.44	0.01	0.01	0.00
148.54	0.01	0.01	0.00
148.64	0.01	0.01	0.00
148.74	0.01	0.01	0.00
148.84	1.46	0.01	1.44
148.94	2.11	0.01	2.10
149.04	2.61	0.02	2.59
149.14	3.02	0.02	3.01
149.24	3.39	0.02	3.37
149.34	3.72	0.02	3.70
149.44	**4.02**	**0.02**	**4.00**

Stage-Area-Storage for Pond 7P: Tree Box Filter -01

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
143.74	422	0
143.84	422	14
143.94	422	28
144.04	422	42
144.14	422	56
144.24	422	70
144.34	422	84
144.44	422	97
144.54	422	111
144.64	422	125
144.74	422	139
144.84	422	153
144.94	422	167
145.04	422	181
145.14	422	195
145.24	422	209
145.34	422	223
145.44	422	237
145.54	422	251
145.64	422	265
145.74	422	279
145.84	422	292
145.94	422	306
146.04	422	320
146.14	422	334
146.24	422	348
146.34	422	362
146.44	422	376
146.54	422	390
146.64	422	404
146.74	422	418
146.84	422	432
146.94	422	446
147.04	422	460
147.14	422	473
147.24	422	487
147.34	422	501
147.44	422	515
147.54	422	529
147.64	422	543
147.74	422	557
147.84	663	619
147.94	722	689
148.04	781	764
148.14	840	845
148.24	899	932
148.34	958	1,025
148.44	1,017	1,124
148.54	1,076	1,228
148.64	1,135	1,339
148.74	1,194	1,455
148.84	1,245	1,577
148.94	1,294	1,704
149.04	1,343	1,836
149.14	1,393	1,973
149.24	1,442	2,115
149.34	1,492	2,261
149.44	**1,541**	**2,413**

Summary for Pond 10P: Bio-02

Inflow Area = 25,633 sf, 64.94% Impervious, Inflow Depth = 1.77" for 1-Year event
Inflow = 1.18 cfs @ 12.09 hrs, Volume= 3,791 cf
Outflow = 0.60 cfs @ 12.32 hrs, Volume= 3,791 cf, Atten= 49%, Lag= 13.6 min
Discarded = 0.02 cfs @ 12.32 hrs, Volume= 2,444 cf
Primary = 0.59 cfs @ 12.32 hrs, Volume= 1,346 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 147.79' @ 12.32 hrs Surf.Area= 1,408 sf Storage= 1,662 cf

Plug-Flow detention time= 776.2 min calculated for 3,788 cf (100% of inflow)
Center-of-Mass det. time= 777.4 min (1,587.5 - 810.1)

Volume	Invert	Avail.Storage	Storage Description
#1	143.99'	3,878 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
143.99	742	0.0	0	0
144.00	742	33.0	2	2
146.99	742	33.0	732	735
147.00	920	100.0	8	743
148.00	1,539	100.0	1,230	1,972
149.00	2,272	100.0	1,906	3,878

Device	Routing	Invert	Outlet Devices
#1	Discarded	143.99'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'
#2	Primary	147.75'	**2.0" x 2.0" Horiz. Orifice/Grate X 6.00 columns** X 6 rows C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.02 cfs @ 12.32 hrs HW=147.78' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.52 cfs @ 12.32 hrs HW=147.79' TW=0.00' (Dynamic Tailwater)
↑—**2=Orifice/Grate** (Weir Controls 0.52 cfs @ 0.61 fps)

Stage-Discharge for Pond 10P: Bio-02

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
143.99	0.00	0.00	0.00
144.04	0.01	0.01	0.00
144.09	0.01	0.01	0.00
144.14	0.01	0.01	0.00
144.19	0.01	0.01	0.00
144.24	0.01	0.01	0.00
144.29	0.01	0.01	0.00
144.34	0.01	0.01	0.00
144.39	0.01	0.01	0.00
144.44	0.01	0.01	0.00
144.49	0.01	0.01	0.00
144.54	0.01	0.01	0.00
144.59	0.01	0.01	0.00
144.64	0.01	0.01	0.00
144.69	0.01	0.01	0.00
144.74	0.01	0.01	0.00
144.79	0.01	0.01	0.00
144.84	0.01	0.01	0.00
144.89	0.01	0.01	0.00
144.94	0.01	0.01	0.00
144.99	0.01	0.01	0.00
145.04	0.01	0.01	0.00
145.09	0.01	0.01	0.00
145.14	0.01	0.01	0.00
145.19	0.01	0.01	0.00
145.24	0.01	0.01	0.00
145.29	0.01	0.01	0.00
145.34	0.01	0.01	0.00
145.39	0.01	0.01	0.00
145.44	0.01	0.01	0.00
145.49	0.01	0.01	0.00
145.54	0.01	0.01	0.00
145.59	0.01	0.01	0.00
145.64	0.01	0.01	0.00
145.69	0.01	0.01	0.00
145.74	0.01	0.01	0.00
145.79	0.01	0.01	0.00
145.84	0.01	0.01	0.00
145.89	0.01	0.01	0.00
145.94	0.01	0.01	0.00
145.99	0.01	0.01	0.00
146.04	0.01	0.01	0.00
146.09	0.01	0.01	0.00
146.14	0.01	0.01	0.00
146.19	0.01	0.01	0.00
146.24	0.01	0.01	0.00
146.29	0.01	0.01	0.00
146.34	0.01	0.01	0.00
146.39	0.01	0.01	0.00
146.44	0.01	0.01	0.00
146.49	0.01	0.01	0.00
146.54	0.01	0.01	0.00
146.59	0.01	0.01	0.00
146.64	0.01	0.01	0.00
146.69	0.01	0.01	0.00
146.74	0.01	0.01	0.00
146.79	0.01	0.01	0.00
146.84	0.01	0.01	0.00
146.89	0.01	0.01	0.00
146.94	0.01	0.01	0.00
146.99	0.01	0.01	0.00
147.04	0.01	0.01	0.00
147.09	0.01	0.01	0.00
147.14	0.01	0.01	0.00
147.19	0.01	0.01	0.00
147.24	0.01	0.01	0.00
147.29	0.01	0.01	0.00
147.34	0.01	0.01	0.00
147.39	0.01	0.01	0.00
147.44	0.01	0.01	0.00
147.49	0.01	0.01	0.00
147.54	0.01	0.01	0.00
147.59	0.01	0.01	0.00
147.64	0.02	0.02	0.00
147.69	0.02	0.02	0.00
147.74	0.02	0.02	0.00
147.79	0.64	0.02	0.63
147.84	1.46	0.02	1.44
147.89	1.82	0.02	1.80
147.94	2.12	0.02	2.10
147.99	2.38	0.02	2.36
148.04	2.61	0.02	2.59
148.09	2.83	0.02	2.81
148.14	3.03	0.02	3.01
148.19	3.21	0.02	3.19
148.24	3.39	0.02	3.37
148.29	3.56	0.02	3.54
148.34	3.72	0.02	3.70
148.39	3.87	0.02	3.85
148.44	4.02	0.02	4.00
148.49	4.16	0.02	4.14
148.54	4.30	0.02	4.28
148.59	4.44	0.02	4.41
148.64	4.57	0.02	4.54
148.69	4.69	0.02	4.67
148.74	4.81	0.02	4.79
148.79	4.93	0.02	4.91
148.84	5.05	0.02	5.03
148.89	5.17	0.03	5.14
148.94	5.28	0.03	5.25
148.99	**5.39**	**0.03**	**5.36**

Stage-Area-Storage for Pond 10P: Bio-02

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
143.99	742	0	146.59	742	637
144.04	742	12	146.64	742	649
144.09	742	24	146.69	742	661
144.14	742	37	146.74	742	673
144.19	742	49	146.79	742	686
144.24	742	61	146.84	742	698
144.29	742	73	146.89	742	710
144.34	742	86	146.94	742	722
144.39	742	98	146.99	742	735
144.44	742	110	147.04	945	780
144.49	742	122	147.09	976	828
144.54	742	135	147.14	1,007	878
144.59	742	147	147.19	1,038	929
144.64	742	159	147.24	1,069	982
144.69	742	171	147.29	1,100	1,036
144.74	742	184	147.34	1,130	1,091
144.79	742	196	147.39	1,161	1,149
144.84	742	208	147.44	1,192	1,208
144.89	742	220	147.49	1,223	1,268
144.94	742	233	147.54	1,254	1,330
144.99	742	245	147.59	1,285	1,393
145.04	742	257	147.64	1,316	1,458
145.09	742	269	147.69	1,347	1,525
145.14	742	282	147.74	1,378	1,593
145.19	742	294	147.79	1,409	1,663
145.24	742	306	147.84	1,440	1,734
145.29	742	318	147.89	1,471	1,807
145.34	742	331	147.94	1,502	1,881
145.39	742	343	147.99	1,533	1,957
145.44	742	355	148.04	1,568	2,035
145.49	742	367	148.09	1,605	2,114
145.54	742	380	148.14	1,642	2,195
145.59	742	392	148.19	1,678	2,278
145.64	742	404	148.24	1,715	2,363
145.69	742	416	148.29	1,752	2,450
145.74	742	429	148.34	1,788	2,538
145.79	742	441	148.39	1,825	2,628
145.84	742	453	148.44	1,862	2,721
145.89	742	465	148.49	1,898	2,814
145.94	742	477	148.54	1,935	2,910
145.99	742	490	148.59	1,971	3,008
146.04	742	502	148.64	2,008	3,107
146.09	742	514	148.69	2,045	3,209
146.14	742	526	148.74	2,081	3,312
146.19	742	539	148.79	2,118	3,417
146.24	742	551	148.84	2,155	3,524
146.29	742	563	148.89	2,191	3,632
146.34	742	575	148.94	2,228	3,743
146.39	742	588	148.99	**2,265**	**3,855**
146.44	742	600			
146.49	742	612			
146.54	742	624			

Summary for Pond 12P: Infiltration Basin-02

Inflow Area = 50,013 sf, 61.10% Impervious, Inflow Depth = 1.72" for 1-Year event
Inflow = 2.26 cfs @ 12.09 hrs, Volume= 7,169 cf
Outflow = 0.53 cfs @ 12.51 hrs, Volume= 7,169 cf, Atten= 77%, Lag= 24.8 min
Discarded = 0.04 cfs @ 12.51 hrs, Volume= 3,414 cf
Primary = 0.49 cfs @ 12.51 hrs, Volume= 3,754 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 146.76' @ 12.51 hrs Surf.Area= 3,116 sf Storage= 3,409 cf

Plug-Flow detention time= 456.7 min calculated for 7,164 cf (100% of inflow)
Center-of-Mass det. time= 457.6 min (1,274.2 - 816.5)

Volume	Invert	Avail.Storage	Storage Description
#1	145.00'	8,449 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
145.00	808	0	0
146.00	2,069	1,439	1,439
147.00	3,447	2,758	4,197
148.00	5,058	4,253	8,449

Device	Routing	Invert	Outlet Devices
#1	Discarded	145.00'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'
#2	Device 3	146.10'	**2.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#3	Primary	144.35'	**18.0" Round Culvert** L= 70.0' CMP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 144.35' / 144.00' S= 0.0050 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf
#4	Device 3	147.40'	**16.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#5	Device 3	146.60'	**2.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#6	Secondary	147.50'	**10.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Discarded OutFlow Max=0.04 cfs @ 12.51 hrs HW=146.76' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.04 cfs)

Primary OutFlow Max=0.49 cfs @ 12.51 hrs HW=146.76' TW=0.00' (Dynamic Tailwater)
└**3=Culvert** (Passes 0.49 cfs of 8.65 cfs potential flow)
  ├**2=Orifice/Grate** (Orifice Controls 0.08 cfs @ 3.66 fps)
  ├**4=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
  └**5=Sharp-Crested Rectangular Weir** (Weir Controls 0.41 cfs @ 1.31 fps)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=145.00' TW=0.00' (Dynamic Tailwater)
└**6=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Stage-Discharge for Pond 12P: Infiltration Basin-02

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
145.00	0.00	0.00	0.00	0.00
145.10	0.01	0.01	0.00	0.00
145.20	0.01	0.01	0.00	0.00
145.30	0.01	0.01	0.00	0.00
145.40	0.02	0.02	0.00	0.00
145.50	0.02	0.02	0.00	0.00
145.60	0.02	0.02	0.00	0.00
145.70	0.02	0.02	0.00	0.00
145.80	0.02	0.02	0.00	0.00
145.90	0.02	0.02	0.00	0.00
146.00	0.02	0.02	0.00	0.00
146.10	0.03	0.03	0.00	0.00
146.20	0.04	0.03	0.01	0.00
146.30	0.06	0.03	0.04	0.00
146.40	0.08	0.03	0.05	0.00
146.50	0.09	0.03	0.06	0.00
146.60	0.10	0.03	0.07	0.00
146.70	0.32	0.04	0.28	0.00
146.80	0.69	0.04	0.66	0.00
146.90	1.17	0.04	1.13	0.00
147.00	1.72	0.04	1.68	0.00
147.10	2.34	0.04	2.30	0.00
147.20	3.01	0.04	2.96	0.00
147.30	3.72	0.05	3.67	0.00
147.40	4.47	0.05	4.42	0.00
147.50	6.90	0.05	6.85	0.00
147.60	11.70	0.05	10.62	1.03
147.70	13.80	0.05	10.83	2.91
147.80	16.43	0.05	11.04	5.34
147.90	19.50	0.06	11.24	8.21
148.00	**22.94**	**0.06**	**11.44**	**11.45**

Stage-Area-Storage for Pond 12P: Infiltration Basin-02

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
145.00	808	0
145.05	871	42
145.10	934	87
145.15	997	135
145.20	1,060	187
145.25	1,123	241
145.30	1,186	299
145.35	1,249	360
145.40	1,312	424
145.45	1,375	491
145.50	1,439	562
145.55	1,502	635
145.60	1,565	712
145.65	1,628	792
145.70	1,691	875
145.75	1,754	961
145.80	1,817	1,050
145.85	1,880	1,142
145.90	1,943	1,238
145.95	2,006	1,337
146.00	2,069	1,439
146.05	2,138	1,544
146.10	2,207	1,652
146.15	2,276	1,764
146.20	2,345	1,880
146.25	2,414	1,999
146.30	2,482	2,121
146.35	2,551	2,247
146.40	2,620	2,376
146.45	2,689	2,509
146.50	2,758	2,645
146.55	2,827	2,785
146.60	2,896	2,928
146.65	2,965	3,074
146.70	3,034	3,224
146.75	3,103	3,378
146.80	3,171	3,535
146.85	3,240	3,695
146.90	3,309	3,859
146.95	3,378	4,026
147.00	3,447	4,197
147.05	3,528	4,371
147.10	3,608	4,549
147.15	3,689	4,732
147.20	3,769	4,918
147.25	3,850	5,109
147.30	3,930	5,303
147.35	4,011	5,502
147.40	4,091	5,704
147.45	4,172	5,911
147.50	4,253	6,121
147.55	4,333	6,336
147.60	4,414	6,555
147.65	4,494	6,777
147.70	4,575	7,004
147.75	4,655	7,235
147.80	4,736	7,470
147.85	4,816	7,708
147.90	4,897	7,951
147.95	4,977	8,198
148.00	**5,058**	**8,449**

Summary for Pond 13P: Bio-03

Inflow Area = 39,263 sf, 66.48% Impervious, Inflow Depth = 1.97" for 1-Year event
Inflow = 2.01 cfs @ 12.09 hrs, Volume= 6,455 cf
Outflow = 0.57 cfs @ 12.44 hrs, Volume= 6,455 cf, Atten= 71%, Lag= 21.2 min
Discarded = 0.03 cfs @ 12.44 hrs, Volume= 4,148 cf
Primary = 0.54 cfs @ 12.44 hrs, Volume= 2,307 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 146.42' @ 12.44 hrs Surf.Area= 2,738 sf Storage= 3,105 cf

Plug-Flow detention time= 718.2 min calculated for 6,451 cf (100% of inflow)
Center-of-Mass det. time= 719.4 min (1,522.1 - 802.7)

Volume	Invert	Avail.Storage	Storage Description
#1	142.49'	8,713 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
142.49	1,020	0.0	0	0
142.50	1,020	33.0	3	3
145.49	1,020	33.0	1,006	1,010
145.50	1,809	100.0	14	1,024
146.00	2,317	100.0	1,032	2,055
147.00	3,332	100.0	2,825	4,880
148.00	4,335	100.0	3,834	8,713

Device	Routing	Invert	Outlet Devices
#1	Discarded	142.49'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'
#2	Primary	146.25'	**2.5' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Discarded OutFlow Max=0.03 cfs @ 12.44 hrs HW=146.41' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.54 cfs @ 12.44 hrs HW=146.41' TW=144.56' (Dynamic Tailwater)
↑—**2=Sharp-Crested Rectangular Weir** (Weir Controls 0.54 cfs @ 1.33 fps)

Stage-Discharge for Pond 13P: Bio-03

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
142.49	0.00	0.00	0.00
142.59	0.01	0.01	0.00
142.69	0.01	0.01	0.00
142.79	0.01	0.01	0.00
142.89	0.01	0.01	0.00
142.99	0.01	0.01	0.00
143.09	0.01	0.01	0.00
143.19	0.01	0.01	0.00
143.29	0.01	0.01	0.00
143.39	0.01	0.01	0.00
143.49	0.01	0.01	0.00
143.59	0.01	0.01	0.00
143.69	0.01	0.01	0.00
143.79	0.01	0.01	0.00
143.89	0.01	0.01	0.00
143.99	0.01	0.01	0.00
144.09	0.01	0.01	0.00
144.19	0.01	0.01	0.00
144.29	0.01	0.01	0.00
144.39	0.01	0.01	0.00
144.49	0.01	0.01	0.00
144.59	0.01	0.01	0.00
144.69	0.01	0.01	0.00
144.79	0.01	0.01	0.00
144.89	0.01	0.01	0.00
144.99	0.01	0.01	0.00
145.09	0.01	0.01	0.00
145.19	0.01	0.01	0.00
145.29	0.01	0.01	0.00
145.39	0.01	0.01	0.00
145.49	0.01	0.01	0.00
145.59	0.02	0.02	0.00
145.69	0.02	0.02	0.00
145.79	0.02	0.02	0.00
145.89	0.03	0.03	0.00
145.99	0.03	0.03	0.00
146.09	0.03	0.03	0.00
146.19	0.03	0.03	0.00
146.29	0.10	0.03	0.07
146.39	0.45	0.03	0.42
146.49	0.98	0.03	0.94
146.59	1.61	0.03	1.58
146.69	2.34	0.03	2.30
146.79	3.14	0.04	3.10
146.89	4.01	0.04	3.97
146.99	4.93	0.04	4.90
147.09	5.91	0.04	5.87
147.19	6.93	0.04	6.89
147.29	7.99	0.04	7.95
147.39	9.09	0.04	9.04
147.49	10.21	0.04	10.17
147.59	11.37	0.05	11.32
147.69	12.55	0.05	12.50
147.79	13.75	0.05	13.70
147.89	14.97	0.05	14.92
147.99	**16.20**	**0.05**	**16.15**

Stage-Area-Storage for Pond 13P: Bio-03

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
142.49	1,020	0
142.59	1,020	34
142.69	1,020	67
142.79	1,020	101
142.89	1,020	135
142.99	1,020	168
143.09	1,020	202
143.19	1,020	236
143.29	1,020	269
143.39	1,020	303
143.49	1,020	337
143.59	1,020	370
143.69	1,020	404
143.79	1,020	438
143.89	1,020	471
143.99	1,020	505
144.09	1,020	539
144.19	1,020	572
144.29	1,020	606
144.39	1,020	640
144.49	1,020	673
144.59	1,020	707
144.69	1,020	741
144.79	1,020	774
144.89	1,020	808
144.99	1,020	842
145.09	1,020	875
145.19	1,020	909
145.29	1,020	942
145.39	1,020	976
145.49	1,020	1,010
145.59	1,900	1,191
145.69	2,002	1,386
145.79	2,104	1,591
145.89	2,205	1,807
145.99	2,307	2,032
146.09	2,408	2,268
146.19	2,510	2,514
146.29	2,611	2,770
146.39	2,713	3,036
146.49	2,814	3,313
146.59	2,916	3,599
146.69	3,017	3,896
146.79	3,119	4,203
146.89	3,220	4,520
146.99	3,322	4,847
147.09	3,422	5,184
147.19	3,523	5,531
147.29	3,623	5,888
147.39	3,723	6,256
147.49	3,823	6,633
147.59	3,924	7,020
147.69	4,024	7,418
147.79	4,124	7,825
147.89	4,225	8,243
147.99	**4,325**	**8,670**

Summary for Pond 14P: DB-01

Inflow Area = 68,830 sf, 68.73% Impervious, Inflow Depth = 0.73" for 1-Year event
Inflow = 1.08 cfs @ 12.35 hrs, Volume= 4,200 cf
Outflow = 1.04 cfs @ 12.40 hrs, Volume= 4,200 cf, Atten= 4%, Lag= 2.7 min
Discarded = 0.00 cfs @ 12.40 hrs, Volume= 107 cf
Primary = 1.03 cfs @ 12.40 hrs, Volume= 4,093 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 144.57' @ 12.40 hrs Surf.Area= 412 sf Storage= 187 cf

Plug-Flow detention time= 5.1 min calculated for 4,197 cf (100% of inflow)
Center-of-Mass det. time= 5.1 min (820.1 - 815.0)

Volume	Invert	Avail.Storage	Storage Description
#1	144.00'	3,756 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
144.00	240	0	0
145.00	540	390	390
146.00	896	718	1,108
147.00	1,310	1,103	2,211
148.00	1,780	1,545	3,756

Device	Routing	Invert	Outlet Devices
#1	Device 6	144.00'	**10.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Device 6	146.00'	**0.5' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#3	Device 6	146.50'	**1.5' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Device 6	146.90'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#5	Secondary	147.20'	**8.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#6	Primary	144.00'	**18.0" Round Culvert** L= 22.0' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 144.00' / 143.75' S= 0.0114 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.77 sf
#7	Device 6	147.50'	**16.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#8	Discarded	144.00'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'

Discarded OutFlow Max=0.00 cfs @ 12.40 hrs HW=144.57' (Free Discharge)
└**8=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=1.03 cfs @ 12.40 hrs HW=144.57' TW=0.00' (Dynamic Tailwater)
└**6=Culvert** (Passes 1.03 cfs of 1.56 cfs potential flow)
  ├**1=Orifice/Grate** (Orifice Controls 1.03 cfs @ 2.58 fps)
  ├**2=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
  ├**3=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
  ├**4=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
  └**7=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=144.00' TW=0.00' (Dynamic Tailwater)
└**5=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Stage-Discharge for Pond 14P: DB-01

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Secondary (cfs)
144.00	0.00	0.00	0.00	0.00
144.10	0.04	0.00	0.04	0.00
144.20	0.16	0.00	0.15	0.00
144.30	0.33	0.00	0.33	0.00
144.40	0.56	0.00	0.56	0.00
144.50	0.83	0.00	0.82	0.00
144.60	1.11	0.00	1.11	0.00
144.70	1.40	0.01	1.39	0.00
144.80	1.64	0.01	1.64	0.00
144.90	1.83	0.01	1.83	0.00
145.00	2.01	0.01	2.01	0.00
145.10	2.18	0.01	2.17	0.00
145.20	2.33	0.01	2.32	0.00
145.30	2.48	0.01	2.47	0.00
145.40	2.61	0.01	2.60	0.00
145.50	2.74	0.01	2.73	0.00
145.60	2.87	0.01	2.86	0.00
145.70	2.98	0.01	2.98	0.00
145.80	3.10	0.01	3.09	0.00
145.90	3.21	0.01	3.20	0.00
146.00	3.31	0.01	3.30	0.00
146.10	3.47	0.01	3.46	0.00
146.20	3.65	0.01	3.64	0.00
146.30	3.85	0.01	3.84	0.00
146.40	4.06	0.01	4.05	0.00
146.50	4.27	0.01	4.25	0.00
146.60	4.62	0.01	4.61	0.00
146.70	5.10	0.01	5.08	0.00
146.80	5.64	0.01	5.62	0.00
146.90	6.22	0.01	6.21	0.00
147.00	7.25	0.02	7.23	0.00
147.10	8.63	0.02	8.61	0.00
147.20	10.24	0.02	10.22	0.00
147.30	12.89	0.02	12.05	0.83
147.40	16.43	0.02	14.08	2.33
147.50	20.55	0.02	16.26	4.27
147.60	24.31	0.02	17.74	6.55
147.70	27.26	0.02	18.11	9.13
147.80	30.47	0.02	18.48	11.98
147.90	33.91	0.02	18.83	15.05
148.00	**37.55**	**0.02**	**19.19**	**18.34**

Stage-Area-Storage for Pond 14P: DB-01

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
144.00	240	0
144.05	255	12
144.10	270	25
144.15	285	39
144.20	300	54
144.25	315	69
144.30	330	86
144.35	345	102
144.40	360	120
144.45	375	138
144.50	390	158
144.55	405	177
144.60	420	198
144.65	435	219
144.70	450	241
144.75	465	264
144.80	480	288
144.85	495	312
144.90	510	338
144.95	525	363
145.00	540	390
145.05	558	417
145.10	576	446
145.15	593	475
145.20	611	505
145.25	629	536
145.30	647	568
145.35	665	601
145.40	682	634
145.45	700	669
145.50	718	705
145.55	736	741
145.60	754	778
145.65	771	816
145.70	789	855
145.75	807	895
145.80	825	936
145.85	843	978
145.90	860	1,020
145.95	878	1,064
146.00	896	1,108
146.05	917	1,153
146.10	937	1,200
146.15	958	1,247
146.20	979	1,295
146.25	1,000	1,345
146.30	1,020	1,395
146.35	1,041	1,447
146.40	1,062	1,500
146.45	1,082	1,553
146.50	1,103	1,608
146.55	1,124	1,663
146.60	1,144	1,720
146.65	1,165	1,778
146.70	1,186	1,837
146.75	1,207	1,896
146.80	1,227	1,957
146.85	1,248	2,019
146.90	1,269	2,082
146.95	1,289	2,146
147.00	1,310	2,211
147.05	1,334	2,277
147.10	1,357	2,344
147.15	1,381	2,413
147.20	1,404	2,482
147.25	1,428	2,553
147.30	1,451	2,625
147.35	1,474	2,698
147.40	1,498	2,773
147.45	1,521	2,848
147.50	1,545	2,925
147.55	1,569	3,003
147.60	1,592	3,082
147.65	1,616	3,162
147.70	1,639	3,243
147.75	1,663	3,326
147.80	1,686	3,409
147.85	1,709	3,494
147.90	1,733	3,580
147.95	1,756	3,668
148.00	**1,780**	**3,756**

Summary for Pond 15P: Bio -04

Inflow Area = 4,298 sf, 75.91% Impervious, Inflow Depth = 2.16" for 1-Year event
Inflow = 0.24 cfs @ 12.09 hrs, Volume= 773 cf
Outflow = 0.29 cfs @ 12.15 hrs, Volume= 773 cf, Atten= 0%, Lag= 3.9 min
Discarded = 0.00 cfs @ 12.15 hrs, Volume= 449 cf
Primary = 0.29 cfs @ 12.15 hrs, Volume= 323 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 149.27' @ 12.15 hrs Surf.Area= 282 sf Storage= 288 cf

Plug-Flow detention time= 661.4 min calculated for 772 cf (100% of inflow)
Center-of-Mass det. time= 662.7 min (1,454.3 - 791.6)

Volume	Invert	Avail.Storage	Storage Description
#1	145.49'	796 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
145.49	129	0.0	0	0
145.50	129	33.0	0	0
148.49	129	33.0	127	128
148.50	129	100.0	1	129
149.50	327	100.0	228	357
150.50	551	100.0	439	796

Device	Routing	Invert	Outlet Devices
#1	Discarded	145.49'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'
#2	Primary	149.25'	**2.0" x 2.0" Horiz. Orifice/Grate X 6.00 columns** X 6 rows C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.00 cfs @ 12.15 hrs HW=149.27' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.27 cfs @ 12.15 hrs HW=149.27' TW=144.26' (Dynamic Tailwater)
↑**2=Orifice/Grate** (Weir Controls 0.27 cfs @ 0.49 fps)

Stage-Discharge for Pond 15P: Bio -04

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
145.49	0.00	0.00	0.00
145.54	0.00	0.00	0.00
145.59	0.00	0.00	0.00
145.64	0.00	0.00	0.00
145.69	0.00	0.00	0.00
145.74	0.00	0.00	0.00
145.79	0.00	0.00	0.00
145.84	0.00	0.00	0.00
145.89	0.00	0.00	0.00
145.94	0.00	0.00	0.00
145.99	0.00	0.00	0.00
146.04	0.00	0.00	0.00
146.09	0.00	0.00	0.00
146.14	0.00	0.00	0.00
146.19	0.00	0.00	0.00
146.24	0.00	0.00	0.00
146.29	0.00	0.00	0.00
146.34	0.00	0.00	0.00
146.39	0.00	0.00	0.00
146.44	0.00	0.00	0.00
146.49	0.00	0.00	0.00
146.54	0.00	0.00	0.00
146.59	0.00	0.00	0.00
146.64	0.00	0.00	0.00
146.69	0.00	0.00	0.00
146.74	0.00	0.00	0.00
146.79	0.00	0.00	0.00
146.84	0.00	0.00	0.00
146.89	0.00	0.00	0.00
146.94	0.00	0.00	0.00
146.99	0.00	0.00	0.00
147.04	0.00	0.00	0.00
147.09	0.00	0.00	0.00
147.14	0.00	0.00	0.00
147.19	0.00	0.00	0.00
147.24	0.00	0.00	0.00
147.29	0.00	0.00	0.00
147.34	0.00	0.00	0.00
147.39	0.00	0.00	0.00
147.44	0.00	0.00	0.00
147.49	0.00	0.00	0.00
147.54	0.00	0.00	0.00
147.59	0.00	0.00	0.00
147.64	0.00	0.00	0.00
147.69	0.00	0.00	0.00
147.74	0.00	0.00	0.00
147.79	0.00	0.00	0.00
147.84	0.00	0.00	0.00
147.89	0.00	0.00	0.00
147.94	0.00	0.00	0.00
147.99	0.00	0.00	0.00
148.04	0.00	0.00	0.00
148.09	0.00	0.00	0.00
148.14	0.00	0.00	0.00
148.19	0.00	0.00	0.00
148.24	0.00	0.00	0.00
148.29	0.00	0.00	0.00
148.34	0.00	0.00	0.00
148.39	0.00	0.00	0.00
148.44	0.00	0.00	0.00
148.49	0.00	0.00	0.00
148.54	0.00	0.00	0.00
148.59	0.00	0.00	0.00
148.64	0.00	0.00	0.00
148.69	0.00	0.00	0.00
148.74	0.00	0.00	0.00
148.79	0.00	0.00	0.00
148.84	0.00	0.00	0.00
148.89	0.00	0.00	0.00
148.94	0.00	0.00	0.00
148.99	0.00	0.00	0.00
149.04	0.00	0.00	0.00
149.09	0.00	0.00	0.00
149.14	0.00	0.00	0.00
149.19	0.00	0.00	0.00
149.24	0.00	0.00	0.00
149.29	0.63	0.00	0.63
149.34	1.45	0.00	1.44
149.39	1.81	0.00	1.80
149.44	2.10	0.00	2.10
149.49	2.36	0.00	2.36
149.54	2.60	0.00	2.59
149.59	2.81	0.00	2.81
149.64	3.01	0.00	3.01
149.69	3.20	0.00	3.19
149.74	3.37	0.00	3.37
149.79	3.54	0.00	3.54
149.84	3.70	0.00	3.70
149.89	3.86	0.00	3.85
149.94	4.00	0.00	4.00
149.99	4.15	0.01	4.14
150.04	4.28	0.01	4.28
150.09	4.42	0.01	4.41
150.14	4.55	0.01	4.54
150.19	4.67	0.01	4.67
150.24	4.80	0.01	4.79
150.29	4.92	0.01	4.91
150.34	5.03	0.01	5.03
150.39	5.15	0.01	5.14
150.44	5.26	0.01	5.25
150.49	**5.37**	**0.01**	**5.36**

Stage-Area-Storage for Pond 15P: Bio -04

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
145.49	129	0
145.54	129	2
145.59	129	4
145.64	129	6
145.69	129	9
145.74	129	11
145.79	129	13
145.84	129	15
145.89	129	17
145.94	129	19
145.99	129	21
146.04	129	23
146.09	129	26
146.14	129	28
146.19	129	30
146.24	129	32
146.29	129	34
146.34	129	36
146.39	129	38
146.44	129	40
146.49	129	43
146.54	129	45
146.59	129	47
146.64	129	49
146.69	129	51
146.74	129	53
146.79	129	55
146.84	129	57
146.89	129	60
146.94	129	62
146.99	129	64
147.04	129	66
147.09	129	68
147.14	129	70
147.19	129	72
147.24	129	74
147.29	129	77
147.34	129	79
147.39	129	81
147.44	129	83
147.49	129	85
147.54	129	87
147.59	129	89
147.64	129	92
147.69	129	94
147.74	129	96
147.79	129	98
147.84	129	100
147.89	129	102
147.94	129	104
147.99	129	106
148.04	129	109
148.09	129	111
148.14	129	113
148.19	129	115
148.24	129	117
148.29	129	119
148.34	129	121
148.39	129	123
148.44	129	126
148.49	129	128
148.54	137	134
148.59	147	141
148.64	157	149
148.69	167	157
148.74	177	166
148.79	186	175
148.84	196	184
148.89	206	194
148.94	216	205
148.99	226	216
149.04	236	228
149.09	246	240
149.14	256	252
149.19	266	265
149.24	276	279
149.29	285	293
149.34	295	307
149.39	305	322
149.44	315	338
149.49	325	354
149.54	336	370
149.59	347	387
149.64	358	405
149.69	370	423
149.74	381	442
149.79	392	461
149.84	403	481
149.89	414	502
149.94	426	523
149.99	437	544
150.04	448	566
150.09	459	589
150.14	470	612
150.19	482	636
150.24	493	660
150.29	504	685
150.34	515	711
150.39	526	737
150.44	538	763
150.49	**549**	**791**

Summary for Pond 16P: Bio -05

Inflow Area = 4,291 sf, 75.81% Impervious, Inflow Depth = 2.16" for 1-Year event
Inflow = 0.24 cfs @ 12.09 hrs, Volume= 771 cf
Outflow = 0.29 cfs @ 12.15 hrs, Volume= 771 cf, Atten= 0%, Lag= 3.9 min
Discarded = 0.00 cfs @ 12.15 hrs, Volume= 449 cf
Primary = 0.29 cfs @ 12.15 hrs, Volume= 322 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 149.27' @ 12.15 hrs Surf.Area= 282 sf Storage= 288 cf

Plug-Flow detention time= 662.4 min calculated for 771 cf (100% of inflow)
Center-of-Mass det. time= 663.7 min (1,455.3 - 791.6)

Volume	Invert	Avail.Storage	Storage Description
#1	145.49'	796 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
145.49	129	0.0	0	0
145.50	129	33.0	0	0
148.49	129	33.0	127	128
148.50	129	100.0	1	129
149.50	327	100.0	228	357
150.50	551	100.0	439	796

Device	Routing	Invert	Outlet Devices
#1	Discarded	145.49'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'
#2	Primary	149.25'	**2.0" x 2.0" Horiz. Orifice/Grate X 6.00 columns** X 6 rows C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.00 cfs @ 12.15 hrs HW=149.27' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.27 cfs @ 12.15 hrs HW=149.27' TW=144.26' (Dynamic Tailwater)
↑**2=Orifice/Grate** (Weir Controls 0.27 cfs @ 0.49 fps)

Stage-Discharge for Pond 16P: Bio -05

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
145.49	0.00	0.00	0.00
145.54	0.00	0.00	0.00
145.59	0.00	0.00	0.00
145.64	0.00	0.00	0.00
145.69	0.00	0.00	0.00
145.74	0.00	0.00	0.00
145.79	0.00	0.00	0.00
145.84	0.00	0.00	0.00
145.89	0.00	0.00	0.00
145.94	0.00	0.00	0.00
145.99	0.00	0.00	0.00
146.04	0.00	0.00	0.00
146.09	0.00	0.00	0.00
146.14	0.00	0.00	0.00
146.19	0.00	0.00	0.00
146.24	0.00	0.00	0.00
146.29	0.00	0.00	0.00
146.34	0.00	0.00	0.00
146.39	0.00	0.00	0.00
146.44	0.00	0.00	0.00
146.49	0.00	0.00	0.00
146.54	0.00	0.00	0.00
146.59	0.00	0.00	0.00
146.64	0.00	0.00	0.00
146.69	0.00	0.00	0.00
146.74	0.00	0.00	0.00
146.79	0.00	0.00	0.00
146.84	0.00	0.00	0.00
146.89	0.00	0.00	0.00
146.94	0.00	0.00	0.00
146.99	0.00	0.00	0.00
147.04	0.00	0.00	0.00
147.09	0.00	0.00	0.00
147.14	0.00	0.00	0.00
147.19	0.00	0.00	0.00
147.24	0.00	0.00	0.00
147.29	0.00	0.00	0.00
147.34	0.00	0.00	0.00
147.39	0.00	0.00	0.00
147.44	0.00	0.00	0.00
147.49	0.00	0.00	0.00
147.54	0.00	0.00	0.00
147.59	0.00	0.00	0.00
147.64	0.00	0.00	0.00
147.69	0.00	0.00	0.00
147.74	0.00	0.00	0.00
147.79	0.00	0.00	0.00
147.84	0.00	0.00	0.00
147.89	0.00	0.00	0.00
147.94	0.00	0.00	0.00
147.99	0.00	0.00	0.00
148.04	0.00	0.00	0.00
148.09	0.00	0.00	0.00
148.14	0.00	0.00	0.00
148.19	0.00	0.00	0.00
148.24	0.00	0.00	0.00
148.29	0.00	0.00	0.00
148.34	0.00	0.00	0.00
148.39	0.00	0.00	0.00
148.44	0.00	0.00	0.00
148.49	0.00	0.00	0.00
148.54	0.00	0.00	0.00
148.59	0.00	0.00	0.00
148.64	0.00	0.00	0.00
148.69	0.00	0.00	0.00
148.74	0.00	0.00	0.00
148.79	0.00	0.00	0.00
148.84	0.00	0.00	0.00
148.89	0.00	0.00	0.00
148.94	0.00	0.00	0.00
148.99	0.00	0.00	0.00
149.04	0.00	0.00	0.00
149.09	0.00	0.00	0.00
149.14	0.00	0.00	0.00
149.19	0.00	0.00	0.00
149.24	0.00	0.00	0.00
149.29	0.63	0.00	0.63
149.34	1.45	0.00	1.44
149.39	1.81	0.00	1.80
149.44	2.10	0.00	2.10
149.49	2.36	0.00	2.36
149.54	2.60	0.00	2.59
149.59	2.81	0.00	2.81
149.64	3.01	0.00	3.01
149.69	3.20	0.00	3.19
149.74	3.37	0.00	3.37
149.79	3.54	0.00	3.54
149.84	3.70	0.00	3.70
149.89	3.86	0.00	3.85
149.94	4.00	0.00	4.00
149.99	4.15	0.01	4.14
150.04	4.28	0.01	4.28
150.09	4.42	0.01	4.41
150.14	4.55	0.01	4.54
150.19	4.67	0.01	4.67
150.24	4.80	0.01	4.79
150.29	4.92	0.01	4.91
150.34	5.03	0.01	5.03
150.39	5.15	0.01	5.14
150.44	5.26	0.01	5.25
150.49	**5.37**	**0.01**	**5.36**

Stage-Area-Storage for Pond 16P: Bio -05

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
145.49	129	0
145.54	129	2
145.59	129	4
145.64	129	6
145.69	129	9
145.74	129	11
145.79	129	13
145.84	129	15
145.89	129	17
145.94	129	19
145.99	129	21
146.04	129	23
146.09	129	26
146.14	129	28
146.19	129	30
146.24	129	32
146.29	129	34
146.34	129	36
146.39	129	38
146.44	129	40
146.49	129	43
146.54	129	45
146.59	129	47
146.64	129	49
146.69	129	51
146.74	129	53
146.79	129	55
146.84	129	57
146.89	129	60
146.94	129	62
146.99	129	64
147.04	129	66
147.09	129	68
147.14	129	70
147.19	129	72
147.24	129	74
147.29	129	77
147.34	129	79
147.39	129	81
147.44	129	83
147.49	129	85
147.54	129	87
147.59	129	89
147.64	129	92
147.69	129	94
147.74	129	96
147.79	129	98
147.84	129	100
147.89	129	102
147.94	129	104
147.99	129	106
148.04	129	109
148.09	129	111
148.14	129	113
148.19	129	115
148.24	129	117
148.29	129	119
148.34	129	121
148.39	129	123
148.44	129	126
148.49	129	128
148.54	137	134
148.59	147	141
148.64	157	149
148.69	167	157
148.74	177	166
148.79	186	175
148.84	196	184
148.89	206	194
148.94	216	205
148.99	226	216
149.04	236	228
149.09	246	240
149.14	256	252
149.19	266	265
149.24	276	279
149.29	285	293
149.34	295	307
149.39	305	322
149.44	315	338
149.49	325	354
149.54	336	370
149.59	347	387
149.64	358	405
149.69	370	423
149.74	381	442
149.79	392	461
149.84	403	481
149.89	414	502
149.94	426	523
149.99	437	544
150.04	448	566
150.09	459	589
150.14	470	612
150.19	482	636
150.24	493	660
150.29	504	685
150.34	515	711
150.39	526	737
150.44	538	763
150.49	**549**	**791**

Summary for Pond 17P: Bio-06

Inflow Area = 4,106 sf, 75.92% Impervious, Inflow Depth = 2.16" for 1-Year event
Inflow = 0.23 cfs @ 12.09 hrs, Volume= 738 cf
Outflow = 0.16 cfs @ 12.18 hrs, Volume= 738 cf, Atten= 28%, Lag= 5.5 min
Discarded = 0.00 cfs @ 12.20 hrs, Volume= 447 cf
Primary = 0.16 cfs @ 12.18 hrs, Volume= 291 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 149.27' @ 12.20 hrs Surf.Area= 281 sf Storage= 286 cf

Plug-Flow detention time= 688.4 min calculated for 738 cf (100% of inflow)
Center-of-Mass det. time= 689.6 min (1,481.2 - 791.6)

Volume	Invert	Avail.Storage	Storage Description
#1	145.49'	796 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
145.49	129	0.0	0	0
145.50	129	33.0	0	0
148.49	129	33.0	127	128
148.50	129	100.0	1	129
149.50	327	100.0	228	357
150.50	551	100.0	439	796

Device	Routing	Invert	Outlet Devices
#1	Discarded	145.49'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'
#2	Primary	149.25'	**2.0" x 2.0" Horiz. Orifice/Grate X 6.00 columns** X 6 rows C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.00 cfs @ 12.20 hrs HW=149.27' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.15 cfs @ 12.18 hrs HW=149.27' TW=144.34' (Dynamic Tailwater)
↑—**2=Orifice/Grate** (Weir Controls 0.15 cfs @ 0.41 fps)

Stage-Discharge for Pond 17P: Bio-06

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
145.49	0.00	0.00	0.00
145.54	0.00	0.00	0.00
145.59	0.00	0.00	0.00
145.64	0.00	0.00	0.00
145.69	0.00	0.00	0.00
145.74	0.00	0.00	0.00
145.79	0.00	0.00	0.00
145.84	0.00	0.00	0.00
145.89	0.00	0.00	0.00
145.94	0.00	0.00	0.00
145.99	0.00	0.00	0.00
146.04	0.00	0.00	0.00
146.09	0.00	0.00	0.00
146.14	0.00	0.00	0.00
146.19	0.00	0.00	0.00
146.24	0.00	0.00	0.00
146.29	0.00	0.00	0.00
146.34	0.00	0.00	0.00
146.39	0.00	0.00	0.00
146.44	0.00	0.00	0.00
146.49	0.00	0.00	0.00
146.54	0.00	0.00	0.00
146.59	0.00	0.00	0.00
146.64	0.00	0.00	0.00
146.69	0.00	0.00	0.00
146.74	0.00	0.00	0.00
146.79	0.00	0.00	0.00
146.84	0.00	0.00	0.00
146.89	0.00	0.00	0.00
146.94	0.00	0.00	0.00
146.99	0.00	0.00	0.00
147.04	0.00	0.00	0.00
147.09	0.00	0.00	0.00
147.14	0.00	0.00	0.00
147.19	0.00	0.00	0.00
147.24	0.00	0.00	0.00
147.29	0.00	0.00	0.00
147.34	0.00	0.00	0.00
147.39	0.00	0.00	0.00
147.44	0.00	0.00	0.00
147.49	0.00	0.00	0.00
147.54	0.00	0.00	0.00
147.59	0.00	0.00	0.00
147.64	0.00	0.00	0.00
147.69	0.00	0.00	0.00
147.74	0.00	0.00	0.00
147.79	0.00	0.00	0.00
147.84	0.00	0.00	0.00
147.89	0.00	0.00	0.00
147.94	0.00	0.00	0.00
147.99	0.00	0.00	0.00
148.04	0.00	0.00	0.00
148.09	0.00	0.00	0.00
148.14	0.00	0.00	0.00
148.19	0.00	0.00	0.00
148.24	0.00	0.00	0.00
148.29	0.00	0.00	0.00
148.34	0.00	0.00	0.00
148.39	0.00	0.00	0.00
148.44	0.00	0.00	0.00
148.49	0.00	0.00	0.00
148.54	0.00	0.00	0.00
148.59	0.00	0.00	0.00
148.64	0.00	0.00	0.00
148.69	0.00	0.00	0.00
148.74	0.00	0.00	0.00
148.79	0.00	0.00	0.00
148.84	0.00	0.00	0.00
148.89	0.00	0.00	0.00
148.94	0.00	0.00	0.00
148.99	0.00	0.00	0.00
149.04	0.00	0.00	0.00
149.09	0.00	0.00	0.00
149.14	0.00	0.00	0.00
149.19	0.00	0.00	0.00
149.24	0.00	0.00	0.00
149.29	0.63	0.00	0.63
149.34	1.45	0.00	1.44
149.39	1.81	0.00	1.80
149.44	2.10	0.00	2.10
149.49	2.36	0.00	2.36
149.54	2.60	0.00	2.59
149.59	2.81	0.00	2.81
149.64	3.01	0.00	3.01
149.69	3.20	0.00	3.19
149.74	3.37	0.00	3.37
149.79	3.54	0.00	3.54
149.84	3.70	0.00	3.70
149.89	3.86	0.00	3.85
149.94	4.00	0.00	4.00
149.99	4.15	0.01	4.14
150.04	4.28	0.01	4.28
150.09	4.42	0.01	4.41
150.14	4.55	0.01	4.54
150.19	4.67	0.01	4.67
150.24	4.80	0.01	4.79
150.29	4.92	0.01	4.91
150.34	5.03	0.01	5.03
150.39	5.15	0.01	5.14
150.44	5.26	0.01	5.25
150.49	**5.37**	**0.01**	**5.36**

Stage-Area-Storage for Pond 17P: Bio-06

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
145.49	129	0
145.54	129	2
145.59	129	4
145.64	129	6
145.69	129	9
145.74	129	11
145.79	129	13
145.84	129	15
145.89	129	17
145.94	129	19
145.99	129	21
146.04	129	23
146.09	129	26
146.14	129	28
146.19	129	30
146.24	129	32
146.29	129	34
146.34	129	36
146.39	129	38
146.44	129	40
146.49	129	43
146.54	129	45
146.59	129	47
146.64	129	49
146.69	129	51
146.74	129	53
146.79	129	55
146.84	129	57
146.89	129	60
146.94	129	62
146.99	129	64
147.04	129	66
147.09	129	68
147.14	129	70
147.19	129	72
147.24	129	74
147.29	129	77
147.34	129	79
147.39	129	81
147.44	129	83
147.49	129	85
147.54	129	87
147.59	129	89
147.64	129	92
147.69	129	94
147.74	129	96
147.79	129	98
147.84	129	100
147.89	129	102
147.94	129	104
147.99	129	106
148.04	129	109
148.09	129	111
148.14	129	113
148.19	129	115
148.24	129	117
148.29	129	119
148.34	129	121
148.39	129	123
148.44	129	126
148.49	129	128
148.54	137	134
148.59	147	141
148.64	157	149
148.69	167	157
148.74	177	166
148.79	186	175
148.84	196	184
148.89	206	194
148.94	216	205
148.99	226	216
149.04	236	228
149.09	246	240
149.14	256	252
149.19	266	265
149.24	276	279
149.29	285	293
149.34	295	307
149.39	305	322
149.44	315	338
149.49	325	354
149.54	336	370
149.59	347	387
149.64	358	405
149.69	370	423
149.74	381	442
149.79	392	461
149.84	403	481
149.89	414	502
149.94	426	523
149.99	437	544
150.04	448	566
150.09	459	589
150.14	470	612
150.19	482	636
150.24	493	660
150.29	504	685
150.34	515	711
150.39	526	737
150.44	538	763
150.49	**549**	**791**

Summary for Pond 19P: Bio -08

Inflow Area = 12,646 sf, 66.31% Impervious, Inflow Depth = 1.97" for 1-Year event
Inflow = 0.65 cfs @ 12.09 hrs, Volume= 2,079 cf
Outflow = 0.32 cfs @ 12.31 hrs, Volume= 2,079 cf, Atten= 51%, Lag= 13.1 min
Discarded = 0.01 cfs @ 12.31 hrs, Volume= 1,439 cf
Primary = 0.31 cfs @ 12.31 hrs, Volume= 640 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 149.77' @ 12.31 hrs Surf.Area= 1,032 sf Storage= 936 cf

Plug-Flow detention time= 708.6 min calculated for 2,078 cf (100% of inflow)
Center-of-Mass det. time= 709.8 min (1,512.5 - 802.7)

Volume	Invert	Avail.Storage	Storage Description
#1	145.99'	2,723 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
145.99	322	0.0	0	0
146.00	322	33.0	1	1
148.99	322	33.0	318	319
149.00	550	100.0	4	323
150.00	1,172	100.0	861	1,184
151.00	1,905	100.0	1,539	2,723

Device	Routing	Invert	Outlet Devices
#1	Discarded	145.99'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'
#2	Primary	149.75'	**2.0" x 2.0" Horiz. Orifice/Grate X 6.00 columns** X 6 rows C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.01 cfs @ 12.31 hrs HW=149.77' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.29 cfs @ 12.31 hrs HW=149.77' TW=144.53' (Dynamic Tailwater)
↑**2=Orifice/Grate** (Weir Controls 0.29 cfs @ 0.51 fps)

Stage-Discharge for Pond 19P: Bio -08

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
145.99	0.00	0.00	0.00
146.04	0.00	0.00	0.00
146.09	0.00	0.00	0.00
146.14	0.00	0.00	0.00
146.19	0.00	0.00	0.00
146.24	0.00	0.00	0.00
146.29	0.00	0.00	0.00
146.34	0.00	0.00	0.00
146.39	0.00	0.00	0.00
146.44	0.00	0.00	0.00
146.49	0.00	0.00	0.00
146.54	0.00	0.00	0.00
146.59	0.00	0.00	0.00
146.64	0.00	0.00	0.00
146.69	0.00	0.00	0.00
146.74	0.00	0.00	0.00
146.79	0.00	0.00	0.00
146.84	0.00	0.00	0.00
146.89	0.00	0.00	0.00
146.94	0.00	0.00	0.00
146.99	0.00	0.00	0.00
147.04	0.00	0.00	0.00
147.09	0.00	0.00	0.00
147.14	0.00	0.00	0.00
147.19	0.00	0.00	0.00
147.24	0.00	0.00	0.00
147.29	0.00	0.00	0.00
147.34	0.00	0.00	0.00
147.39	0.00	0.00	0.00
147.44	0.00	0.00	0.00
147.49	0.00	0.00	0.00
147.54	0.00	0.00	0.00
147.59	0.00	0.00	0.00
147.64	0.00	0.00	0.00
147.69	0.00	0.00	0.00
147.74	0.00	0.00	0.00
147.79	0.00	0.00	0.00
147.84	0.00	0.00	0.00
147.89	0.00	0.00	0.00
147.94	0.00	0.00	0.00
147.99	0.00	0.00	0.00
148.04	0.00	0.00	0.00
148.09	0.00	0.00	0.00
148.14	0.00	0.00	0.00
148.19	0.00	0.00	0.00
148.24	0.00	0.00	0.00
148.29	0.00	0.00	0.00
148.34	0.00	0.00	0.00
148.39	0.00	0.00	0.00
148.44	0.00	0.00	0.00
148.49	0.00	0.00	0.00
148.54	0.00	0.00	0.00
148.59	0.00	0.00	0.00
148.64	0.00	0.00	0.00
148.69	0.00	0.00	0.00
148.74	0.00	0.00	0.00
148.79	0.00	0.00	0.00
148.84	0.00	0.00	0.00
148.89	0.00	0.00	0.00
148.94	0.00	0.00	0.00
148.99	0.00	0.00	0.00
149.04	0.01	0.01	0.00
149.09	0.01	0.01	0.00
149.14	0.01	0.01	0.00
149.19	0.01	0.01	0.00
149.24	0.01	0.01	0.00
149.29	0.01	0.01	0.00
149.34	0.01	0.01	0.00
149.39	0.01	0.01	0.00
149.44	0.01	0.01	0.00
149.49	0.01	0.01	0.00
149.54	0.01	0.01	0.00
149.59	0.01	0.01	0.00
149.64	0.01	0.01	0.00
149.69	0.01	0.01	0.00
149.74	0.01	0.01	0.00
149.79	0.64	0.01	0.63
149.84	1.46	0.01	1.44
149.89	1.81	0.01	1.80
149.94	2.11	0.01	2.10
149.99	2.37	0.01	2.36
150.04	2.61	0.01	2.59
150.09	2.82	0.01	2.81
150.14	3.02	0.01	3.01
150.19	3.21	0.02	3.19
150.24	3.39	0.02	3.37
150.29	3.55	0.02	3.54
150.34	3.71	0.02	3.70
150.39	3.87	0.02	3.85
150.44	4.02	0.02	4.00
150.49	4.16	0.02	4.14
150.54	4.30	0.02	4.28
150.59	4.43	0.02	4.41
150.64	4.56	0.02	4.54
150.69	4.69	0.02	4.67
150.74	4.81	0.02	4.79
150.79	4.93	0.02	4.91
150.84	5.05	0.02	5.03
150.89	5.16	0.02	5.14
150.94	5.27	0.02	5.25
150.99	**5.38**	**0.02**	**5.36**

Stage-Area-Storage for Pond 19P: Bio -08

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
145.99	322	0	148.59	322	276
146.04	322	5	148.64	322	282
146.09	322	11	148.69	322	287
146.14	322	16	148.74	322	292
146.19	322	21	148.79	322	298
146.24	322	27	148.84	322	303
146.29	322	32	148.89	322	308
146.34	322	37	148.94	322	313
146.39	322	43	148.99	322	319
146.44	322	48	149.04	575	346
146.49	322	53	149.09	606	375
146.54	322	58	149.14	637	406
146.59	322	64	149.19	668	439
146.64	322	69	149.24	699	473
146.69	322	74	149.29	730	509
146.74	322	80	149.34	761	546
146.79	322	85	149.39	793	585
146.84	322	90	149.44	824	625
146.89	322	96	149.49	855	667
146.94	322	101	149.54	886	711
146.99	322	106	149.59	917	756
147.04	322	112	149.64	948	803
147.09	322	117	149.69	979	851
147.14	322	122	149.74	1,010	900
147.19	322	128	149.79	1,041	952
147.24	322	133	149.84	1,072	1,005
147.29	322	138	149.89	1,104	1,059
147.34	322	143	149.94	1,135	1,115
147.39	322	149	149.99	1,166	1,172
147.44	322	154	150.04	1,201	1,232
147.49	322	159	150.09	1,238	1,293
147.54	322	165	150.14	1,275	1,355
147.59	322	170	150.19	1,311	1,420
147.64	322	175	150.24	1,348	1,487
147.69	322	181	150.29	1,385	1,555
147.74	322	186	150.34	1,421	1,625
147.79	322	191	150.39	1,458	1,697
147.84	322	197	150.44	1,495	1,771
147.89	322	202	150.49	1,531	1,846
147.94	322	207	150.54	1,568	1,924
147.99	322	213	150.59	1,604	2,003
148.04	322	218	150.64	1,641	2,084
148.09	322	223	150.69	1,678	2,167
148.14	322	228	150.74	1,714	2,252
148.19	322	234	150.79	1,751	2,339
148.24	322	239	150.84	1,788	2,427
148.29	322	244	150.89	1,824	2,518
148.34	322	250	150.94	1,861	2,610
148.39	322	255	150.99	**1,898**	**2,704**
148.44	322	260			
148.49	322	266			
148.54	322	271			

Summary for Pond 20P: Bio -07

Inflow Area = 4,227 sf, 75.29% Impervious, Inflow Depth = 2.16" for 1-Year event
Inflow = 0.23 cfs @ 12.09 hrs, Volume= 760 cf
Outflow = 0.29 cfs @ 12.15 hrs, Volume= 760 cf, Atten= 0%, Lag= 3.9 min
Discarded = 0.00 cfs @ 12.15 hrs, Volume= 442 cf
Primary = 0.28 cfs @ 12.15 hrs, Volume= 317 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 149.27' @ 12.15 hrs Surf.Area= 278 sf Storage= 284 cf

Plug-Flow detention time= 663.4 min calculated for 760 cf (100% of inflow)
Center-of-Mass det. time= 663.3 min (1,454.9 - 791.6)

Volume	Invert	Avail.Storage	Storage Description
#1	145.49'	783 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
145.49	127	0.0	0	0
145.50	127	33.0	0	0
148.49	127	33.0	125	126
148.50	127	100.0	1	127
149.50	322	100.0	225	351
150.50	541	100.0	432	783

Device	Routing	Invert	Outlet Devices
#1	Discarded	145.49'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'
#2	Primary	149.25'	**2.0" x 2.0" Horiz. Orifice/Grate X 6.00 columns** X 6 rows C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.00 cfs @ 12.15 hrs HW=149.27' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.26 cfs @ 12.15 hrs HW=149.27' TW=144.26' (Dynamic Tailwater)
↑**2=Orifice/Grate** (Weir Controls 0.26 cfs @ 0.49 fps)

Stage-Discharge for Pond 20P: Bio -07

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
145.49	0.00	0.00	0.00
145.54	0.00	0.00	0.00
145.59	0.00	0.00	0.00
145.64	0.00	0.00	0.00
145.69	0.00	0.00	0.00
145.74	0.00	0.00	0.00
145.79	0.00	0.00	0.00
145.84	0.00	0.00	0.00
145.89	0.00	0.00	0.00
145.94	0.00	0.00	0.00
145.99	0.00	0.00	0.00
146.04	0.00	0.00	0.00
146.09	0.00	0.00	0.00
146.14	0.00	0.00	0.00
146.19	0.00	0.00	0.00
146.24	0.00	0.00	0.00
146.29	0.00	0.00	0.00
146.34	0.00	0.00	0.00
146.39	0.00	0.00	0.00
146.44	0.00	0.00	0.00
146.49	0.00	0.00	0.00
146.54	0.00	0.00	0.00
146.59	0.00	0.00	0.00
146.64	0.00	0.00	0.00
146.69	0.00	0.00	0.00
146.74	0.00	0.00	0.00
146.79	0.00	0.00	0.00
146.84	0.00	0.00	0.00
146.89	0.00	0.00	0.00
146.94	0.00	0.00	0.00
146.99	0.00	0.00	0.00
147.04	0.00	0.00	0.00
147.09	0.00	0.00	0.00
147.14	0.00	0.00	0.00
147.19	0.00	0.00	0.00
147.24	0.00	0.00	0.00
147.29	0.00	0.00	0.00
147.34	0.00	0.00	0.00
147.39	0.00	0.00	0.00
147.44	0.00	0.00	0.00
147.49	0.00	0.00	0.00
147.54	0.00	0.00	0.00
147.59	0.00	0.00	0.00
147.64	0.00	0.00	0.00
147.69	0.00	0.00	0.00
147.74	0.00	0.00	0.00
147.79	0.00	0.00	0.00
147.84	0.00	0.00	0.00
147.89	0.00	0.00	0.00
147.94	0.00	0.00	0.00
147.99	0.00	0.00	0.00
148.04	0.00	0.00	0.00
148.09	0.00	0.00	0.00
148.14	0.00	0.00	0.00
148.19	0.00	0.00	0.00
148.24	0.00	0.00	0.00
148.29	0.00	0.00	0.00
148.34	0.00	0.00	0.00
148.39	0.00	0.00	0.00
148.44	0.00	0.00	0.00
148.49	0.00	0.00	0.00
148.54	0.00	0.00	0.00
148.59	0.00	0.00	0.00
148.64	0.00	0.00	0.00
148.69	0.00	0.00	0.00
148.74	0.00	0.00	0.00
148.79	0.00	0.00	0.00
148.84	0.00	0.00	0.00
148.89	0.00	0.00	0.00
148.94	0.00	0.00	0.00
148.99	0.00	0.00	0.00
149.04	0.00	0.00	0.00
149.09	0.00	0.00	0.00
149.14	0.00	0.00	0.00
149.19	0.00	0.00	0.00
149.24	0.00	0.00	0.00
149.29	0.63	0.00	0.63
149.34	1.45	0.00	1.44
149.39	1.81	0.00	1.80
149.44	2.10	0.00	2.10
149.49	2.36	0.00	2.36
149.54	2.60	0.00	2.59
149.59	2.81	0.00	2.81
149.64	3.01	0.00	3.01
149.69	3.20	0.00	3.19
149.74	3.37	0.00	3.37
149.79	3.54	0.00	3.54
149.84	3.70	0.00	3.70
149.89	3.86	0.00	3.85
149.94	4.00	0.00	4.00
149.99	4.15	0.00	4.14
150.04	4.28	0.01	4.28
150.09	4.42	0.01	4.41
150.14	4.55	0.01	4.54
150.19	4.67	0.01	4.67
150.24	4.80	0.01	4.79
150.29	4.92	0.01	4.91
150.34	5.03	0.01	5.03
150.39	5.15	0.01	5.14
150.44	5.26	0.01	5.25
150.49	**5.37**	**0.01**	**5.36**

Stage-Area-Storage for Pond 20P: Bio -07

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
145.49	127	0
145.54	127	2
145.59	127	4
145.64	127	6
145.69	127	8
145.74	127	10
145.79	127	13
145.84	127	15
145.89	127	17
145.94	127	19
145.99	127	21
146.04	127	23
146.09	127	25
146.14	127	27
146.19	127	29
146.24	127	31
146.29	127	34
146.34	127	36
146.39	127	38
146.44	127	40
146.49	127	42
146.54	127	44
146.59	127	46
146.64	127	48
146.69	127	50
146.74	127	52
146.79	127	54
146.84	127	57
146.89	127	59
146.94	127	61
146.99	127	63
147.04	127	65
147.09	127	67
147.14	127	69
147.19	127	71
147.24	127	73
147.29	127	75
147.34	127	78
147.39	127	80
147.44	127	82
147.49	127	84
147.54	127	86
147.59	127	88
147.64	127	90
147.69	127	92
147.74	127	94
147.79	127	96
147.84	127	98
147.89	127	101
147.94	127	103
147.99	127	105
148.04	127	107
148.09	127	109
148.14	127	111
148.19	127	113
148.24	127	115
148.29	127	117
148.34	127	119
148.39	127	122
148.44	127	124
148.49	127	126
148.54	135	132
148.59	145	139
148.64	154	147
148.69	164	155
148.74	174	163
148.79	184	172
148.84	193	181
148.89	203	191
148.94	213	202
148.99	223	213
149.04	232	224
149.09	242	236
149.14	252	248
149.19	262	261
149.24	271	274
149.29	281	288
149.34	291	302
149.39	301	317
149.44	310	333
149.49	320	348
149.54	331	365
149.59	342	381
149.64	353	399
149.69	364	417
149.74	375	435
149.79	386	454
149.84	396	474
149.89	407	494
149.94	418	514
149.99	429	536
150.04	440	557
150.09	451	580
150.14	462	602
150.19	473	626
150.24	484	650
150.29	495	674
150.34	506	699
150.39	517	725
150.44	528	751
150.49	**539**	**778**

Summary for Pond 21P: UGIS-02

Inflow Area = 27,979 sf, 87.90% Impervious, Inflow Depth = 1.30" for 1-Year event
Inflow = 1.46 cfs @ 12.11 hrs, Volume= 3,033 cf
Outflow = 0.08 cfs @ 13.98 hrs, Volume= 3,033 cf, Atten= 95%, Lag= 111.9 min
Discarded = 0.05 cfs @ 12.05 hrs, Volume= 2,337 cf
Primary = 0.03 cfs @ 13.98 hrs, Volume= 696 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 144.86' @ 13.98 hrs Surf.Area= 4,135 sf Storage= 1,777 cf

Plug-Flow detention time= 278.3 min calculated for 3,031 cf (100% of inflow)
Center-of-Mass det. time= 278.2 min (1,084.9 - 806.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	144.05'	2,570 cf	**39.43'W x 104.87'L x 4.32'H Field A** 17,871 cf Overall - 10,084 cf Embedded = 7,786 cf x 33.0% Voids
#2A	144.55'	9,580 cf	**ACF R-Tank HD 2** x 1161 Inside #1 Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf 1161 Chambers in 27 Rows
		12,150 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Device 4	144.50'	**1.5" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Device 4	146.40'	**1.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#3	Device 4	147.00'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Primary	144.55'	**12.0" Round Culvert** L= 5.0' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 144.55' / 144.50' S= 0.0100 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#5	Discarded	144.05'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'

Discarded OutFlow Max=0.05 cfs @ 12.05 hrs HW=144.20' (Free Discharge)
└**5=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.03 cfs @ 13.98 hrs HW=144.86' TW=144.60' (Dynamic Tailwater)
└**4=Culvert** (Passes 0.03 cfs of 0.32 cfs potential flow)
  ├**1=Orifice/Grate** (Orifice Controls 0.03 cfs @ 2.42 fps)
  ├**2=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
  └**3=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 21P: UGIS-02 - Chamber Wizard Field A

Chamber Model = ACF R-Tank HD 2 (ACF Environmental R-Tank HD)
Inside= 15.7"W x 33.9"H => 3.52 sf x 2.35'L = 8.3 cf
Outside= 15.7"W x 33.9"H => 3.70 sf x 2.35'L = 8.7 cf

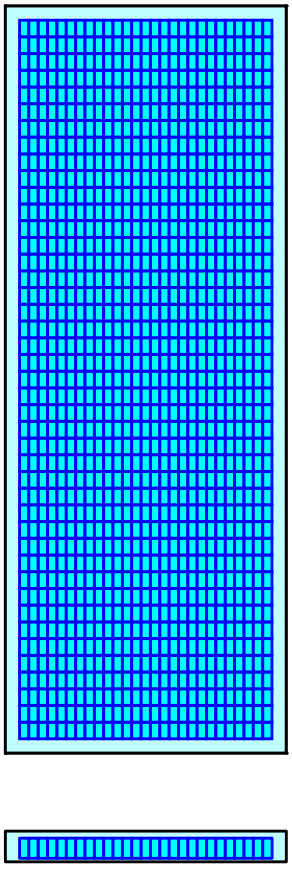
43 Chambers/Row x 2.35' Long = 100.87' Row Length +24.0" End Stone x 2 = 104.87' Base Length
27 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 39.43' Base Width
6.0" Stone Base + 33.9" Chamber Height + 12.0" Stone Cover = 4.32' Field Height

1,161 Chambers x 8.3 cf = 9,580.2 cf Chamber Storage
1,161 Chambers x 8.7 cf = 10,084.4 cf Displacement

17,870.9 cf Field - 10,084.4 cf Chambers = 7,786.5 cf Stone x 33.0% Voids = 2,569.5 cf Stone Storage

Chamber Storage + Stone Storage = 12,149.7 cf = 0.279 af
Overall Storage Efficiency = 68.0%
Overall System Size = 104.87' x 39.43' x 4.32'

1,161 Chambers
661.9 cy Field
288.4 cy Stone



Stage-Discharge for Pond 21P: UGIS-02

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
144.05	0.00	**0.00**	0.00
144.10	0.05	**0.05**	0.00
144.15	0.05	0.05	0.00
144.20	0.05	0.05	0.00
144.25	0.05	0.05	0.00
144.30	0.05	0.05	0.00
144.35	0.05	0.05	0.00
144.40	0.05	0.05	0.00
144.45	0.05	0.05	0.00
144.50	0.05	0.05	0.00
144.55	0.05	0.05	0.00
144.60	0.06	0.05	0.01
144.65	0.07	0.05	0.02
144.70	0.07	0.05	0.02
144.75	0.07	0.05	0.03
144.80	0.08	0.05	0.03
144.85	0.08	0.05	0.03
144.90	0.08	0.05	0.03
144.95	0.08	0.05	0.04
145.00	0.09	0.05	0.04
145.05	0.09	0.05	0.04
145.10	0.09	0.05	0.04
145.15	0.09	0.05	0.05
145.20	0.10	0.05	0.05
145.25	0.10	0.05	0.05
145.30	0.10	0.05	0.05
145.35	0.10	0.05	0.05
145.40	0.10	0.05	0.05
145.45	0.10	0.05	0.06
145.50	0.11	0.05	0.06
145.55	0.11	0.05	0.06
145.60	0.11	0.05	0.06
145.65	0.11	0.05	0.06
145.70	0.11	0.05	0.06
145.75	0.11	0.05	0.06
145.80	0.11	0.05	0.07
145.85	0.11	0.05	0.07
145.90	0.12	0.05	0.07
145.95	0.12	0.05	0.07
146.00	0.12	0.05	0.07
146.05	0.12	0.05	0.07
146.10	0.12	0.05	0.07
146.15	0.12	0.05	0.07
146.20	0.12	0.05	0.08
146.25	0.12	0.05	0.08
146.30	0.13	0.05	0.08
146.35	0.13	0.05	0.08
146.40	0.13	0.05	0.08
146.45	0.17	0.05	0.12
146.50	0.23	0.05	0.18
146.55	0.32	0.05	0.27
146.60	0.41	0.05	0.37
146.65	0.52	0.05	0.47
146.70	0.64	0.05	0.59
146.75	0.76	0.05	0.72
146.80	0.90	0.05	0.85
146.85	1.04	0.05	0.99
146.90	1.18	0.05	1.13
146.95	1.33	0.05	1.28
147.00	1.48	0.05	1.43
147.05	1.78	0.05	1.73
147.10	2.20	0.05	2.15
147.15	2.70	0.05	2.65
147.20	3.27	0.05	3.22
147.25	3.89	0.05	3.84
147.30	4.55	0.05	4.50
147.35	5.26	0.05	5.21
147.40	6.01	0.05	5.96
147.45	6.79	0.05	6.74
147.50	7.60	0.05	7.55
147.55	8.10	0.05	8.05
147.60	8.19	0.05	8.15
147.65	8.29	0.05	8.24
147.70	8.39	0.05	8.34
147.75	8.48	0.05	8.43
147.80	8.57	0.05	8.53
147.85	8.67	0.05	8.62
147.90	8.75	0.05	8.71
147.95	8.83	0.05	8.78
148.00	8.91	0.05	8.86
148.05	8.98	0.05	8.93
148.10	9.05	0.05	9.01
148.15	9.13	0.05	9.08
148.20	9.20	0.05	9.15
148.25	9.27	0.05	9.22
148.30	9.34	0.05	9.30
148.35	**9.42**	0.05	**9.37**

Stage-Area-Storage for Pond 21P: UGIS-02

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
144.05	**4,135**	0
144.10	4,135	68
144.15	4,135	136
144.20	4,135	205
144.25	4,135	273
144.30	4,135	341
144.35	4,135	409
144.40	4,135	478
144.45	4,135	546
144.50	4,135	614
144.55	4,135	682
144.60	4,135	861
144.65	4,135	1,040
144.70	4,135	1,219
144.75	4,135	1,398
144.80	4,135	1,577
144.85	4,135	1,757
144.90	4,135	1,936
144.95	4,135	2,115
145.00	4,135	2,294
145.05	4,135	2,473
145.10	4,135	2,652
145.15	4,135	2,831
145.20	4,135	3,010
145.25	4,135	3,189
145.30	4,135	3,368
145.35	4,135	3,547
145.40	4,135	3,726
145.45	4,135	3,905
145.50	4,135	4,084
145.55	4,135	4,263
145.60	4,135	4,442
145.65	4,135	4,621
145.70	4,135	4,800
145.75	4,135	4,979
145.80	4,135	5,158
145.85	4,135	5,337
145.90	4,135	5,516
145.95	4,135	5,695
146.00	4,135	5,874
146.05	4,135	6,053
146.10	4,135	6,232
146.15	4,135	6,411
146.20	4,135	6,590
146.25	4,135	6,769
146.30	4,135	6,948
146.35	4,135	7,127
146.40	4,135	7,306
146.45	4,135	7,485
146.50	4,135	7,665
146.55	4,135	7,844
146.60	4,135	8,023
146.65	4,135	8,202
146.70	4,135	8,381
146.75	4,135	8,560
146.80	4,135	8,739
146.85	4,135	8,918
146.90	4,135	9,097
146.95	4,135	9,276
147.00	4,135	9,455
147.05	4,135	9,634
147.10	4,135	9,813
147.15	4,135	9,992
147.20	4,135	10,171
147.25	4,135	10,350
147.30	4,135	10,529
147.35	4,135	10,708
147.40	4,135	10,824
147.45	4,135	10,892
147.50	4,135	10,960
147.55	4,135	11,029
147.60	4,135	11,097
147.65	4,135	11,165
147.70	4,135	11,233
147.75	4,135	11,302
147.80	4,135	11,370
147.85	4,135	11,438
147.90	4,135	11,506
147.95	4,135	11,575
148.00	4,135	11,643
148.05	4,135	11,711
148.10	4,135	11,779
148.15	4,135	11,847
148.20	4,135	11,916
148.25	4,135	11,984
148.30	4,135	12,052
148.35	4,135	**12,120**

Summary for Pond 22P: DIV-01

Inflow Area = 27,979 sf, 87.90% Impervious, Inflow Depth = 0.30" for 1-Year event
Inflow = 0.03 cfs @ 13.98 hrs, Volume= 696 cf
Outflow = 0.03 cfs @ 13.98 hrs, Volume= 696 cf, Atten= 0%, Lag= 0.0 min
Primary = 0.03 cfs @ 13.98 hrs, Volume= 696 cf
Secondary = 0.00 cfs @ 0.00 hrs, Volume= 0 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 144.60' @ 13.98 hrs

Device	Routing	Invert	Outlet Devices
#1	Device 2	144.50'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Primary	144.50'	**12.0" Round Culvert** L= 64.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 144.50' / 144.20' S= 0.0047 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#3	Secondary	145.00'	**5.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=0.03 cfs @ 13.98 hrs HW=144.60' TW=0.00' (Dynamic Tailwater)
↑—**2=Culvert** (Barrel Controls 0.03 cfs @ 1.05 fps)
↑—**1=Orifice/Grate** (Passes 0.03 cfs of 0.03 cfs potential flow)

Secondary OutFlow Max=0.00 cfs @ 0.00 hrs HW=144.50' TW=0.00' (Dynamic Tailwater)
↑—**3=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Stage-Discharge for Pond 22P: DIV-01

Elevation (feet)	Discharge (cfs)	Primary (cfs)	Secondary (cfs)
144.50	0.00	0.00	0.00
144.51	0.00	0.00	0.00
144.52	0.00	0.00	0.00
144.53	0.00	0.00	0.00
144.54	0.00	0.00	0.00
144.55	0.01	0.01	0.00
144.56	0.01	0.01	0.00
144.57	0.01	0.01	0.00
144.58	0.02	0.02	0.00
144.59	0.02	0.02	0.00
144.60	0.03	0.03	0.00
144.61	0.03	0.03	0.00
144.62	0.04	0.04	0.00
144.63	0.05	0.05	0.00
144.64	0.06	0.06	0.00
144.65	0.06	0.06	0.00
144.66	0.07	0.07	0.00
144.67	0.08	0.08	0.00
144.68	0.09	0.09	0.00
144.69	0.10	0.10	0.00
144.70	0.11	0.11	0.00
144.71	0.12	0.12	0.00
144.72	0.13	0.13	0.00
144.73	0.14	0.14	0.00
144.74	0.16	0.16	0.00
144.75	0.17	0.17	0.00
144.76	0.18	0.18	0.00
144.77	0.19	0.19	0.00
144.78	0.20	0.20	0.00
144.79	0.22	0.22	0.00
144.80	0.23	0.23	0.00
144.81	0.24	0.24	0.00
144.82	0.26	0.26	0.00
144.83	0.27	0.27	0.00
144.84	0.28	0.28	0.00
144.85	0.30	0.30	0.00
144.86	0.31	0.31	0.00
144.87	0.32	0.32	0.00
144.88	0.34	0.34	0.00
144.89	0.35	0.35	0.00
144.90	0.36	0.36	0.00
144.91	0.38	0.38	0.00
144.92	0.39	0.39	0.00
144.93	0.40	0.40	0.00
144.94	0.41	0.41	0.00
144.95	0.43	0.43	0.00
144.96	0.44	0.44	0.00
144.97	0.45	0.45	0.00
144.98	0.46	0.46	0.00
144.99	0.47	0.47	0.00
145.00	0.47	0.47	0.00
145.01	0.50	0.48	0.02
145.02	0.54	0.49	0.05
145.03	0.59	0.50	0.08
145.04	0.64	0.51	0.13
145.05	0.70	0.52	0.18
145.06	0.77	0.53	0.24
145.07	0.84	0.53	0.30
145.08	0.91	0.54	0.37
145.09	0.99	0.55	0.44
145.10	1.07	0.56	0.51
145.11	1.16	0.57	0.59
145.12	1.25	0.58	0.68
145.13	1.35	0.58	0.76
145.14	1.44	0.59	0.85
145.15	1.54	0.60	0.94
145.16	1.65	0.61	1.04
145.17	1.75	0.61	1.14
145.18	1.86	0.62	1.24
145.19	1.97	0.63	1.34
145.20	2.08	0.63	1.45
145.21	2.20	0.64	1.56
145.22	2.32	0.65	1.67
145.23	2.44	0.66	1.79
145.24	2.57	0.66	1.90
145.25	2.69	0.67	2.02
145.26	2.82	0.68	2.15
145.27	2.95	0.68	2.27
145.28	3.08	0.69	2.40
145.29	3.22	0.69	2.52
145.30	3.36	0.70	2.65
145.31	3.49	0.71	2.79
145.32	3.64	0.71	2.92
145.33	3.78	0.72	3.06
145.34	3.92	0.73	3.20
145.35	4.07	0.73	3.34
145.36	4.22	0.74	3.48
145.37	4.37	0.74	3.63
145.38	4.52	0.75	3.77
145.39	4.68	0.76	3.92
145.40	4.83	0.76	4.07
145.41	4.99	0.77	4.22
145.42	5.15	0.77	4.38
145.43	5.31	0.78	4.53
145.44	5.47	0.79	4.69
145.45	5.64	0.79	4.85
145.46	5.80	0.80	5.01
145.47	5.97	0.80	5.17
145.48	6.14	0.81	5.33
145.49	6.31	0.81	5.50
145.50	**6.48**	**0.82**	**5.66**

Stage-Area-Storage for Pond 22P: DIV-01

Elevation (feet)	Storage (cubic-feet)	Elevation (feet)	Storage (cubic-feet)
144.50	**0**	145.02	0
144.51	0	145.03	0
144.52	0	145.04	0
144.53	0	145.05	0
144.54	0	145.06	0
144.55	0	145.07	0
144.56	0	145.08	0
144.57	0	145.09	0
144.58	0	145.10	0
144.59	0	145.11	0
144.60	0	145.12	0
144.61	0	145.13	0
144.62	0	145.14	0
144.63	0	145.15	0
144.64	0	145.16	0
144.65	0	145.17	0
144.66	0	145.18	0
144.67	0	145.19	0
144.68	0	145.20	0
144.69	0	145.21	0
144.70	0	145.22	0
144.71	0	145.23	0
144.72	0	145.24	0
144.73	0	145.25	0
144.74	0	145.26	0
144.75	0	145.27	0
144.76	0	145.28	0
144.77	0	145.29	0
144.78	0	145.30	0
144.79	0	145.31	0
144.80	0	145.32	0
144.81	0	145.33	0
144.82	0	145.34	0
144.83	0	145.35	0
144.84	0	145.36	0
144.85	0	145.37	0
144.86	0	145.38	0
144.87	0	145.39	0
144.88	0	145.40	0
144.89	0	145.41	0
144.90	0	145.42	0
144.91	0	145.43	0
144.92	0	145.44	0
144.93	0	145.45	0
144.94	0	145.46	0
144.95	0	145.47	0
144.96	0	145.48	0
144.97	0	145.49	0
144.98	0	145.50	0
144.99	0		
145.00	0		
145.01	0		

Summary for Pond 23P: Bio -01

Inflow Area = 32,479 sf, 71.91% Impervious, Inflow Depth = 1.94" for 1-Year event
Inflow = 1.57 cfs @ 12.09 hrs, Volume= 5,241 cf
Outflow = 0.54 cfs @ 12.42 hrs, Volume= 5,241 cf, Atten= 66%, Lag= 19.9 min
Discarded = 0.02 cfs @ 12.42 hrs, Volume= 3,782 cf
Primary = 0.52 cfs @ 12.42 hrs, Volume= 1,459 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 148.04' @ 12.42 hrs Surf.Area= 2,011 sf Storage= 2,607 cf

Plug-Flow detention time= 924.5 min calculated for 5,237 cf (100% of inflow)
Center-of-Mass det. time= 925.8 min (1,718.4 - 792.6)

Volume	Invert	Avail.Storage	Storage Description
#1	143.99'	4,892 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
143.99	887	0.0	0	0
144.00	887	33.0	3	3
146.99	887	33.0	875	878
147.00	1,309	100.0	11	889
148.00	1,984	100.0	1,647	2,536
149.00	2,728	100.0	2,356	4,892

Device	Routing	Invert	Outlet Devices
#1	Primary	148.00'	**2.0" x 2.0" Horiz. Orifice/Grate X 6.00 columns** X 6 rows C= 0.600 Limited to weir flow at low heads
#2	Discarded	143.99'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'

Discarded OutFlow Max=0.02 cfs @ 12.42 hrs HW=148.03' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.47 cfs @ 12.42 hrs HW=148.03' TW=145.24' (Dynamic Tailwater)
↑—**1=Orifice/Grate** (Weir Controls 0.47 cfs @ 0.59 fps)

Stage-Discharge for Pond 23P: Bio -01

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
143.99	0.00	0.00	0.00
144.04	0.01	0.01	0.00
144.09	0.01	0.01	0.00
144.14	0.01	0.01	0.00
144.19	0.01	0.01	0.00
144.24	0.01	0.01	0.00
144.29	0.01	0.01	0.00
144.34	0.01	0.01	0.00
144.39	0.01	0.01	0.00
144.44	0.01	0.01	0.00
144.49	0.01	0.01	0.00
144.54	0.01	0.01	0.00
144.59	0.01	0.01	0.00
144.64	0.01	0.01	0.00
144.69	0.01	0.01	0.00
144.74	0.01	0.01	0.00
144.79	0.01	0.01	0.00
144.84	0.01	0.01	0.00
144.89	0.01	0.01	0.00
144.94	0.01	0.01	0.00
144.99	0.01	0.01	0.00
145.04	0.01	0.01	0.00
145.09	0.01	0.01	0.00
145.14	0.01	0.01	0.00
145.19	0.01	0.01	0.00
145.24	0.01	0.01	0.00
145.29	0.01	0.01	0.00
145.34	0.01	0.01	0.00
145.39	0.01	0.01	0.00
145.44	0.01	0.01	0.00
145.49	0.01	0.01	0.00
145.54	0.01	0.01	0.00
145.59	0.01	0.01	0.00
145.64	0.01	0.01	0.00
145.69	0.01	0.01	0.00
145.74	0.01	0.01	0.00
145.79	0.01	0.01	0.00
145.84	0.01	0.01	0.00
145.89	0.01	0.01	0.00
145.94	0.01	0.01	0.00
145.99	0.01	0.01	0.00
146.04	0.01	0.01	0.00
146.09	0.01	0.01	0.00
146.14	0.01	0.01	0.00
146.19	0.01	0.01	0.00
146.24	0.01	0.01	0.00
146.29	0.01	0.01	0.00
146.34	0.01	0.01	0.00
146.39	0.01	0.01	0.00
146.44	0.01	0.01	0.00
146.49	0.01	0.01	0.00
146.54	0.01	0.01	0.00
146.59	0.01	0.01	0.00
146.64	0.01	0.01	0.00
146.69	0.01	0.01	0.00
146.74	0.01	0.01	0.00
146.79	0.01	0.01	0.00
146.84	0.01	0.01	0.00
146.89	0.01	0.01	0.00
146.94	0.01	0.01	0.00
146.99	0.01	0.01	0.00
147.04	0.02	0.02	0.00
147.09	0.02	0.02	0.00
147.14	0.02	0.02	0.00
147.19	0.02	0.02	0.00
147.24	0.02	0.02	0.00
147.29	0.02	0.02	0.00
147.34	0.02	0.02	0.00
147.39	0.02	0.02	0.00
147.44	0.02	0.02	0.00
147.49	0.02	0.02	0.00
147.54	0.02	0.02	0.00
147.59	0.02	0.02	0.00
147.64	0.02	0.02	0.00
147.69	0.02	0.02	0.00
147.74	0.02	0.02	0.00
147.79	0.02	0.02	0.00
147.84	0.02	0.02	0.00
147.89	0.02	0.02	0.00
147.94	0.02	0.02	0.00
147.99	0.02	0.02	0.00
148.04	0.65	0.02	0.63
148.09	1.47	0.02	1.44
148.14	1.83	0.02	1.80
148.19	2.12	0.02	2.10
148.24	2.38	0.03	2.36
148.29	2.62	0.03	2.59
148.34	2.83	0.03	2.81
148.39	3.03	0.03	3.01
148.44	3.22	0.03	3.19
148.49	3.40	0.03	3.37
148.54	3.57	0.03	3.54
148.59	3.73	0.03	3.70
148.64	3.88	0.03	3.85
148.69	4.03	0.03	4.00
148.74	4.17	0.03	4.14
148.79	4.31	0.03	4.28
148.84	4.44	0.03	4.41
148.89	4.57	0.03	4.54
148.94	4.70	0.03	4.67
148.99	**4.82**	**0.03**	**4.79**

Stage-Area-Storage for Pond 23P: Bio -01

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
143.99	887	0	146.59	887	761
144.04	887	15	146.64	887	776
144.09	887	29	146.69	887	790
144.14	887	44	146.74	887	805
144.19	887	59	146.79	887	820
144.24	887	73	146.84	887	834
144.29	887	88	146.89	887	849
144.34	887	102	146.94	887	863
144.39	887	117	146.99	887	878
144.44	887	132	147.04	1,336	942
144.49	887	146	147.09	1,370	1,010
144.54	887	161	147.14	1,404	1,079
144.59	887	176	147.19	1,437	1,150
144.64	887	190	147.24	1,471	1,223
144.69	887	205	147.29	1,505	1,297
144.74	887	220	147.34	1,539	1,373
144.79	887	234	147.39	1,572	1,451
144.84	887	249	147.44	1,606	1,530
144.89	887	263	147.49	1,640	1,612
144.94	887	278	147.54	1,674	1,694
144.99	887	293	147.59	1,707	1,779
145.04	887	307	147.64	1,741	1,865
145.09	887	322	147.69	1,775	1,953
145.14	887	337	147.74	1,809	2,043
145.19	887	351	147.79	1,842	2,134
145.24	887	366	147.84	1,876	2,227
145.29	887	381	147.89	1,910	2,321
145.34	887	395	147.94	1,943	2,418
145.39	887	410	147.99	1,977	2,516
145.44	887	424	148.04	2,014	2,616
145.49	887	439	148.09	2,051	2,717
145.54	887	454	148.14	2,088	2,821
145.59	887	468	148.19	2,125	2,926
145.64	887	483	148.24	2,163	3,033
145.69	887	498	148.29	2,200	3,142
145.74	887	512	148.34	2,237	3,253
145.79	887	527	148.39	2,274	3,366
145.84	887	542	148.44	2,311	3,481
145.89	887	556	148.49	2,349	3,597
145.94	887	571	148.54	2,386	3,715
145.99	887	585	148.59	2,423	3,836
146.04	887	600	148.64	2,460	3,958
146.09	887	615	148.69	2,497	4,082
146.14	887	629	148.74	2,535	4,207
146.19	887	644	148.79	2,572	4,335
146.24	887	659	148.84	2,609	4,465
146.29	887	673	148.89	2,646	4,596
146.34	887	688	148.94	2,683	4,729
146.39	887	703	148.99	**2,721**	**4,864**
146.44	887	717			
146.49	887	732			
146.54	887	746			

Summary for Pond 25P: Bio-10

Inflow Area = 4,377 sf, 77.58% Impervious, Inflow Depth = 2.16" for 1-Year event
Inflow = 0.24 cfs @ 12.09 hrs, Volume= 787 cf
Outflow = 0.34 cfs @ 12.15 hrs, Volume= 787 cf, Atten= 0%, Lag= 3.8 min
Discarded = 0.00 cfs @ 12.15 hrs, Volume= 450 cf
Primary = 0.34 cfs @ 12.15 hrs, Volume= 337 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 149.28' @ 12.15 hrs Surf.Area= 283 sf Storage= 289 cf

Plug-Flow detention time= 652.3 min calculated for 787 cf (100% of inflow)
Center-of-Mass det. time= 652.2 min (1,443.8 - 791.6)

Volume	Invert	Avail.Storage	Storage Description
#1	145.49'	796 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
145.49	129	0.0	0	0
145.50	129	33.0	0	0
148.49	129	33.0	127	128
148.50	129	100.0	1	129
149.50	327	100.0	228	357
150.50	551	100.0	439	796

Device	Routing	Invert	Outlet Devices
#1	Discarded	145.49'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'
#2	Primary	149.25'	**2.0" x 2.0" Horiz. Orifice/Grate X 6.00 columns** X 6 rows C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.00 cfs @ 12.15 hrs HW=149.28' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.33 cfs @ 12.15 hrs HW=149.28' TW=0.00' (Dynamic Tailwater)
↑**2=Orifice/Grate** (Weir Controls 0.33 cfs @ 0.53 fps)

Stage-Discharge for Pond 25P: Bio-10

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
145.49	0.00	0.00	0.00
145.54	0.00	0.00	0.00
145.59	0.00	0.00	0.00
145.64	0.00	0.00	0.00
145.69	0.00	0.00	0.00
145.74	0.00	0.00	0.00
145.79	0.00	0.00	0.00
145.84	0.00	0.00	0.00
145.89	0.00	0.00	0.00
145.94	0.00	0.00	0.00
145.99	0.00	0.00	0.00
146.04	0.00	0.00	0.00
146.09	0.00	0.00	0.00
146.14	0.00	0.00	0.00
146.19	0.00	0.00	0.00
146.24	0.00	0.00	0.00
146.29	0.00	0.00	0.00
146.34	0.00	0.00	0.00
146.39	0.00	0.00	0.00
146.44	0.00	0.00	0.00
146.49	0.00	0.00	0.00
146.54	0.00	0.00	0.00
146.59	0.00	0.00	0.00
146.64	0.00	0.00	0.00
146.69	0.00	0.00	0.00
146.74	0.00	0.00	0.00
146.79	0.00	0.00	0.00
146.84	0.00	0.00	0.00
146.89	0.00	0.00	0.00
146.94	0.00	0.00	0.00
146.99	0.00	0.00	0.00
147.04	0.00	0.00	0.00
147.09	0.00	0.00	0.00
147.14	0.00	0.00	0.00
147.19	0.00	0.00	0.00
147.24	0.00	0.00	0.00
147.29	0.00	0.00	0.00
147.34	0.00	0.00	0.00
147.39	0.00	0.00	0.00
147.44	0.00	0.00	0.00
147.49	0.00	0.00	0.00
147.54	0.00	0.00	0.00
147.59	0.00	0.00	0.00
147.64	0.00	0.00	0.00
147.69	0.00	0.00	0.00
147.74	0.00	0.00	0.00
147.79	0.00	0.00	0.00
147.84	0.00	0.00	0.00
147.89	0.00	0.00	0.00
147.94	0.00	0.00	0.00
147.99	0.00	0.00	0.00
148.04	0.00	0.00	0.00
148.09	0.00	0.00	0.00
148.14	0.00	0.00	0.00
148.19	0.00	0.00	0.00
148.24	0.00	0.00	0.00
148.29	0.00	0.00	0.00
148.34	0.00	0.00	0.00
148.39	0.00	0.00	0.00
148.44	0.00	0.00	0.00
148.49	0.00	0.00	0.00
148.54	0.00	0.00	0.00
148.59	0.00	0.00	0.00
148.64	0.00	0.00	0.00
148.69	0.00	0.00	0.00
148.74	0.00	0.00	0.00
148.79	0.00	0.00	0.00
148.84	0.00	0.00	0.00
148.89	0.00	0.00	0.00
148.94	0.00	0.00	0.00
148.99	0.00	0.00	0.00
149.04	0.00	0.00	0.00
149.09	0.00	0.00	0.00
149.14	0.00	0.00	0.00
149.19	0.00	0.00	0.00
149.24	0.00	0.00	0.00
149.29	0.63	0.00	0.63
149.34	1.45	0.00	1.44
149.39	1.81	0.00	1.80
149.44	2.10	0.00	2.10
149.49	2.36	0.00	2.36
149.54	2.60	0.00	2.59
149.59	2.81	0.00	2.81
149.64	3.01	0.00	3.01
149.69	3.20	0.00	3.19
149.74	3.37	0.00	3.37
149.79	3.54	0.00	3.54
149.84	3.70	0.00	3.70
149.89	3.86	0.00	3.85
149.94	4.00	0.00	4.00
149.99	4.15	0.01	4.14
150.04	4.28	0.01	4.28
150.09	4.42	0.01	4.41
150.14	4.55	0.01	4.54
150.19	4.67	0.01	4.67
150.24	4.80	0.01	4.79
150.29	4.92	0.01	4.91
150.34	5.03	0.01	5.03
150.39	5.15	0.01	5.14
150.44	5.26	0.01	5.25
150.49	**5.37**	**0.01**	**5.36**

Stage-Area-Storage for Pond 25P: Bio-10

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
145.49	129	0	148.09	129	111
145.54	129	2	148.14	129	113
145.59	129	4	148.19	129	115
145.64	129	6	148.24	129	117
145.69	129	9	148.29	129	119
145.74	129	11	148.34	129	121
145.79	129	13	148.39	129	123
145.84	129	15	148.44	129	126
145.89	129	17	148.49	129	128
145.94	129	19	148.54	137	134
145.99	129	21	148.59	147	141
146.04	129	23	148.64	157	149
146.09	129	26	148.69	167	157
146.14	129	28	148.74	177	166
146.19	129	30	148.79	186	175
146.24	129	32	148.84	196	184
146.29	129	34	148.89	206	194
146.34	129	36	148.94	216	205
146.39	129	38	148.99	226	216
146.44	129	40	149.04	236	228
146.49	129	43	149.09	246	240
146.54	129	45	149.14	256	252
146.59	129	47	149.19	266	265
146.64	129	49	149.24	276	279
146.69	129	51	149.29	285	293
146.74	129	53	149.34	295	307
146.79	129	55	149.39	305	322
146.84	129	57	149.44	315	338
146.89	129	60	149.49	325	354
146.94	129	62	149.54	336	370
146.99	129	64	149.59	347	387
147.04	129	66	149.64	358	405
147.09	129	68	149.69	370	423
147.14	129	70	149.74	381	442
147.19	129	72	149.79	392	461
147.24	129	74	149.84	403	481
147.29	129	77	149.89	414	502
147.34	129	79	149.94	426	523
147.39	129	81	149.99	437	544
147.44	129	83	150.04	448	566
147.49	129	85	150.09	459	589
147.54	129	87	150.14	470	612
147.59	129	89	150.19	482	636
147.64	129	92	150.24	493	660
147.69	129	94	150.29	504	685
147.74	129	96	150.34	515	711
147.79	129	98	150.39	526	737
147.84	129	100	150.44	538	763
147.89	129	102	150.49	**549**	**791**
147.94	129	104			
147.99	129	106			
148.04	129	109			

Summary for Pond 27P: Bio-09

Inflow Area = 10,567 sf, 60.72% Impervious, Inflow Depth = 1.80" for 1-Year event
Inflow = 0.50 cfs @ 12.09 hrs, Volume= 1,586 cf
Outflow = 0.23 cfs @ 12.37 hrs, Volume= 1,586 cf, Atten= 54%, Lag= 16.5 min
Discarded = 0.01 cfs @ 12.37 hrs, Volume= 1,135 cf
Primary = 0.22 cfs @ 12.37 hrs, Volume= 452 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 147.77' @ 12.37 hrs Surf.Area= 790 sf Storage= 745 cf

Plug-Flow detention time= 754.8 min calculated for 1,586 cf (100% of inflow)
Center-of-Mass det. time= 754.8 min (1,566.9 - 812.2)

Volume	Invert	Avail.Storage	Storage Description
#1	143.99'	2,099 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
143.99	266	0.0	0	0
144.00	266	33.0	1	1
146.99	266	33.0	262	263
147.00	450	100.0	4	267
148.00	891	100.0	671	937
149.00	1,433	100.0	1,162	2,099

Device	Routing	Invert	Outlet Devices
#1	Primary	147.75'	**2.0" x 2.0" Horiz. Orifice/Grate X 6.00 columns** X 6 rows C= 0.600 Limited to weir flow at low heads
#2	Discarded	143.99'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'

Discarded OutFlow Max=0.01 cfs @ 12.37 hrs HW=147.77' (Free Discharge)
↑—**2=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.19 cfs @ 12.37 hrs HW=147.77' TW=0.00' (Dynamic Tailwater)
↑—**1=Orifice/Grate** (Weir Controls 0.19 cfs @ 0.44 fps)

Stage-Discharge for Pond 27P: Bio-09

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
143.99	0.00	0.00	0.00
144.04	0.00	0.00	0.00
144.09	0.00	0.00	0.00
144.14	0.00	0.00	0.00
144.19	0.00	0.00	0.00
144.24	0.00	0.00	0.00
144.29	0.00	0.00	0.00
144.34	0.00	0.00	0.00
144.39	0.00	0.00	0.00
144.44	0.00	0.00	0.00
144.49	0.00	0.00	0.00
144.54	0.00	0.00	0.00
144.59	0.00	0.00	0.00
144.64	0.00	0.00	0.00
144.69	0.00	0.00	0.00
144.74	0.00	0.00	0.00
144.79	0.00	0.00	0.00
144.84	0.00	0.00	0.00
144.89	0.00	0.00	0.00
144.94	0.00	0.00	0.00
144.99	0.00	0.00	0.00
145.04	0.00	0.00	0.00
145.09	0.00	0.00	0.00
145.14	0.00	0.00	0.00
145.19	0.00	0.00	0.00
145.24	0.00	0.00	0.00
145.29	0.00	0.00	0.00
145.34	0.00	0.00	0.00
145.39	0.00	0.00	0.00
145.44	0.00	0.00	0.00
145.49	0.00	0.00	0.00
145.54	0.00	0.00	0.00
145.59	0.00	0.00	0.00
145.64	0.00	0.00	0.00
145.69	0.00	0.00	0.00
145.74	0.00	0.00	0.00
145.79	0.00	0.00	0.00
145.84	0.00	0.00	0.00
145.89	0.00	0.00	0.00
145.94	0.00	0.00	0.00
145.99	0.00	0.00	0.00
146.04	0.00	0.00	0.00
146.09	0.00	0.00	0.00
146.14	0.00	0.00	0.00
146.19	0.00	0.00	0.00
146.24	0.00	0.00	0.00
146.29	0.00	0.00	0.00
146.34	0.00	0.00	0.00
146.39	0.00	0.00	0.00
146.44	0.00	0.00	0.00
146.49	0.00	0.00	0.00
146.54	0.00	0.00	0.00
146.59	0.00	0.00	0.00
146.64	0.00	0.00	0.00
146.69	0.00	0.00	0.00
146.74	0.00	0.00	0.00
146.79	0.00	0.00	0.00
146.84	0.00	0.00	0.00
146.89	0.00	0.00	0.00
146.94	0.00	0.00	0.00
146.99	0.00	0.00	0.00
147.04	0.01	0.01	0.00
147.09	0.01	0.01	0.00
147.14	0.01	0.01	0.00
147.19	0.01	0.01	0.00
147.24	0.01	0.01	0.00
147.29	0.01	0.01	0.00
147.34	0.01	0.01	0.00
147.39	0.01	0.01	0.00
147.44	0.01	0.01	0.00
147.49	0.01	0.01	0.00
147.54	0.01	0.01	0.00
147.59	0.01	0.01	0.00
147.64	0.01	0.01	0.00
147.69	0.01	0.01	0.00
147.74	0.01	0.01	0.00
147.79	0.64	0.01	0.63
147.84	1.45	0.01	1.44
147.89	1.81	0.01	1.80
147.94	2.11	0.01	2.10
147.99	2.37	0.01	2.36
148.04	2.60	0.01	2.59
148.09	2.82	0.01	2.81
148.14	3.02	0.01	3.01
148.19	3.21	0.01	3.19
148.24	3.38	0.01	3.37
148.29	3.55	0.01	3.54
148.34	3.71	0.01	3.70
148.39	3.86	0.01	3.85
148.44	4.01	0.01	4.00
148.49	4.16	0.01	4.14
148.54	4.29	0.01	4.28
148.59	4.43	0.01	4.41
148.64	4.56	0.01	4.54
148.69	4.68	0.01	4.67
148.74	4.81	0.01	4.79
148.79	4.93	0.02	4.91
148.84	5.04	0.02	5.03
148.89	5.16	0.02	5.14
148.94	5.27	0.02	5.25
148.99	**5.38**	**0.02**	**5.36**

Stage-Area-Storage for Pond 27P: Bio-09

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
143.99	266	0	146.59	266	228
144.04	266	4	146.64	266	233
144.09	266	9	146.69	266	237
144.14	266	13	146.74	266	241
144.19	266	18	146.79	266	246
144.24	266	22	146.84	266	250
144.29	266	26	146.89	266	255
144.34	266	31	146.94	266	259
144.39	266	35	146.99	266	263
144.44	266	40	147.04	468	285
144.49	266	44	147.09	490	309
144.54	266	48	147.14	512	334
144.59	266	53	147.19	534	360
144.64	266	57	147.24	556	388
144.69	266	61	147.29	578	416
144.74	266	66	147.34	600	445
144.79	266	70	147.39	622	476
144.84	266	75	147.44	644	508
144.89	266	79	147.49	666	540
144.94	266	83	147.54	688	574
144.99	266	88	147.59	710	609
145.04	266	92	147.64	732	645
145.09	266	97	147.69	754	682
145.14	266	101	147.74	776	721
145.19	266	105	147.79	798	760
145.24	266	110	147.84	820	801
145.29	266	114	147.89	842	842
145.34	266	119	147.94	865	885
145.39	266	123	147.99	887	929
145.44	266	127	148.04	913	973
145.49	266	132	148.09	940	1,020
145.54	266	136	148.14	967	1,067
145.59	266	140	148.19	994	1,116
145.64	266	145	148.24	1,021	1,167
145.69	266	149	148.29	1,048	1,219
145.74	266	154	148.34	1,075	1,272
145.79	266	158	148.39	1,102	1,326
145.84	266	162	148.44	1,129	1,382
145.89	266	167	148.49	1,157	1,439
145.94	266	171	148.54	1,184	1,498
145.99	266	176	148.59	1,211	1,557
146.04	266	180	148.64	1,238	1,619
146.09	266	184	148.69	1,265	1,681
146.14	266	189	148.74	1,292	1,745
146.19	266	193	148.79	1,319	1,810
146.24	266	198	148.84	1,346	1,877
146.29	266	202	148.89	1,373	1,945
146.34	266	206	148.94	1,400	2,014
146.39	266	211	148.99	**1,428**	**2,085**
146.44	266	215			
146.49	266	219			
146.54	266	224			

Summary for Pond 29P: Bio 11

Inflow Area = 42,711 sf, 66.87% Impervious, Inflow Depth = 1.89" for 1-Year event
Inflow = 2.10 cfs @ 12.09 hrs, Volume= 6,711 cf
Outflow = 1.15 cfs @ 12.27 hrs, Volume= 6,711 cf, Atten= 45%, Lag= 10.8 min
Discarded = 0.03 cfs @ 12.25 hrs, Volume= 4,212 cf
Primary = 1.12 cfs @ 12.27 hrs, Volume= 2,499 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 148.80' @ 12.25 hrs Surf.Area= 2,510 sf Storage= 2,877 cf

Plug-Flow detention time= 734.3 min calculated for 6,707 cf (100% of inflow)
Center-of-Mass det. time= 735.5 min (1,543.1 - 807.6)

Volume	Invert	Avail.Storage	Storage Description
#1	144.99'	6,574 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
144.99	1,161	0.0	0	0
145.00	1,161	33.0	4	4
147.99	1,161	33.0	1,146	1,149
148.00	1,798	100.0	15	1,164
149.00	2,693	100.0	2,246	3,410
150.00	3,636	100.0	3,165	6,574

Device	Routing	Invert	Outlet Devices
#1	Primary	148.75'	**6.0" x 1.0" Horiz. Orifice/Grate X 2.00 columns** X 7 rows C= 0.600 Limited to weir flow at low heads
#2	Primary	148.75'	**6.0" x 1.0" Horiz. Orifice/Grate X 2.00 columns** X 7 rows C= 0.600 Limited to weir flow at low heads
#3	Discarded	144.99'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'

Discarded OutFlow Max=0.03 cfs @ 12.25 hrs HW=148.80' (Free Discharge)
└**3=Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.99 cfs @ 12.27 hrs HW=148.79' TW=145.99' (Dynamic Tailwater)
├**1=Orifice/Grate** (Weir Controls 0.49 cfs @ 0.69 fps)
└**2=Orifice/Grate** (Weir Controls 0.49 cfs @ 0.69 fps)

Stage-Discharge for Pond 29P: Bio 11

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
144.99	0.00	0.00	0.00
145.04	0.01	0.01	0.00
145.09	0.01	0.01	0.00
145.14	0.01	0.01	0.00
145.19	0.01	0.01	0.00
145.24	0.01	0.01	0.00
145.29	0.01	0.01	0.00
145.34	0.01	0.01	0.00
145.39	0.01	0.01	0.00
145.44	0.01	0.01	0.00
145.49	0.01	0.01	0.00
145.54	0.01	0.01	0.00
145.59	0.01	0.01	0.00
145.64	0.01	0.01	0.00
145.69	0.01	0.01	0.00
145.74	0.01	0.01	0.00
145.79	0.01	0.01	0.00
145.84	0.01	0.01	0.00
145.89	0.01	0.01	0.00
145.94	0.01	0.01	0.00
145.99	0.01	0.01	0.00
146.04	0.01	0.01	0.00
146.09	0.01	0.01	0.00
146.14	0.01	0.01	0.00
146.19	0.01	0.01	0.00
146.24	0.01	0.01	0.00
146.29	0.01	0.01	0.00
146.34	0.01	0.01	0.00
146.39	0.01	0.01	0.00
146.44	0.01	0.01	0.00
146.49	0.01	0.01	0.00
146.54	0.01	0.01	0.00
146.59	0.01	0.01	0.00
146.64	0.01	0.01	0.00
146.69	0.01	0.01	0.00
146.74	0.01	0.01	0.00
146.79	0.01	0.01	0.00
146.84	0.01	0.01	0.00
146.89	0.01	0.01	0.00
146.94	0.01	0.01	0.00
146.99	0.01	0.01	0.00
147.04	0.01	0.01	0.00
147.09	0.01	0.01	0.00
147.14	0.01	0.01	0.00
147.19	0.01	0.01	0.00
147.24	0.01	0.01	0.00
147.29	0.01	0.01	0.00
147.34	0.01	0.01	0.00
147.39	0.01	0.01	0.00
147.44	0.01	0.01	0.00
147.49	0.01	0.01	0.00
147.54	0.01	0.01	0.00
147.59	0.01	0.01	0.00
147.64	0.01	0.01	0.00
147.69	0.01	0.01	0.00
147.74	0.01	0.01	0.00
147.79	0.01	0.01	0.00
147.84	0.01	0.01	0.00
147.89	0.01	0.01	0.00
147.94	0.01	0.01	0.00
147.99	0.01	0.01	0.00
148.04	0.02	0.02	0.00
148.09	0.02	0.02	0.00
148.14	0.02	0.02	0.00
148.19	0.02	0.02	0.00
148.24	0.02	0.02	0.00
148.29	0.02	0.02	0.00
148.34	0.02	0.02	0.00
148.39	0.02	0.02	0.00
148.44	0.03	0.03	0.00
148.49	0.03	0.03	0.00
148.54	0.03	0.03	0.00
148.59	0.03	0.03	0.00
148.64	0.03	0.03	0.00
148.69	0.03	0.03	0.00
148.74	0.03	0.03	0.00
148.79	0.88	0.03	0.85
148.84	1.71	0.03	1.69
148.89	2.13	0.03	2.10
148.94	2.48	0.03	2.45
148.99	2.78	0.03	2.75
149.04	3.06	0.03	3.03
149.09	3.31	0.03	3.28
149.14	3.54	0.03	3.51
149.19	3.76	0.03	3.73
149.24	3.97	0.03	3.93
149.29	4.16	0.03	4.13
149.34	4.35	0.03	4.31
149.39	4.53	0.04	4.49
149.44	4.70	0.04	4.67
149.49	4.87	0.04	4.83
149.54	5.03	0.04	4.99
149.59	5.19	0.04	5.15
149.64	5.34	0.04	5.30
149.69	5.49	0.04	5.45
149.74	5.63	0.04	5.59
149.79	5.77	0.04	5.73
149.84	5.91	0.04	5.86
149.89	6.04	0.04	6.00
149.94	6.17	0.04	6.13
149.99	**6.30**	**0.04**	**6.26**

Stage-Area-Storage for Pond 29P: Bio 11

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
144.99	1,161	0
145.04	1,161	19
145.09	1,161	38
145.14	1,161	57
145.19	1,161	77
145.24	1,161	96
145.29	1,161	115
145.34	1,161	134
145.39	1,161	153
145.44	1,161	172
145.49	1,161	192
145.54	1,161	211
145.59	1,161	230
145.64	1,161	249
145.69	1,161	268
145.74	1,161	287
145.79	1,161	307
145.84	1,161	326
145.89	1,161	345
145.94	1,161	364
145.99	1,161	383
146.04	1,161	402
146.09	1,161	421
146.14	1,161	441
146.19	1,161	460
146.24	1,161	479
146.29	1,161	498
146.34	1,161	517
146.39	1,161	536
146.44	1,161	556
146.49	1,161	575
146.54	1,161	594
146.59	1,161	613
146.64	1,161	632
146.69	1,161	651
146.74	1,161	670
146.79	1,161	690
146.84	1,161	709
146.89	1,161	728
146.94	1,161	747
146.99	1,161	766
147.04	1,161	785
147.09	1,161	805
147.14	1,161	824
147.19	1,161	843
147.24	1,161	862
147.29	1,161	881
147.34	1,161	900
147.39	1,161	920
147.44	1,161	939
147.49	1,161	958
147.54	1,161	977
147.59	1,161	996
147.64	1,161	1,015
147.69	1,161	1,034
147.74	1,161	1,054
147.79	1,161	1,073
147.84	1,161	1,092
147.89	1,161	1,111
147.94	1,161	1,130
147.99	1,161	1,149
148.04	1,834	1,237
148.09	1,879	1,330
148.14	1,923	1,425
148.19	1,968	1,522
148.24	2,013	1,621
148.29	2,058	1,723
148.34	2,102	1,827
148.39	2,147	1,933
148.44	2,192	2,042
148.49	2,237	2,153
148.54	2,281	2,266
148.59	2,326	2,381
148.64	2,371	2,498
148.69	2,416	2,618
148.74	2,460	2,740
148.79	2,505	2,864
148.84	2,550	2,990
148.89	2,595	3,119
148.94	2,639	3,250
148.99	2,684	3,383
149.04	2,731	3,518
149.09	2,778	3,656
149.14	2,825	3,796
149.19	2,872	3,938
149.24	2,919	4,083
149.29	2,966	4,230
149.34	3,014	4,380
149.39	3,061	4,532
149.44	3,108	4,686
149.49	3,155	4,842
149.54	3,202	5,001
149.59	3,249	5,163
149.64	3,297	5,326
149.69	3,344	5,492
149.74	3,391	5,661
149.79	3,438	5,831
149.84	3,485	6,004
149.89	3,532	6,180
149.94	3,579	6,358
149.99	**3,627**	**6,538**

Summary for Pond 31P: Bio 15

Inflow Area = 4,712 sf, 73.27% Impervious, Inflow Depth = 2.06" for 1-Year event
Inflow = 0.25 cfs @ 12.09 hrs, Volume= 810 cf
Outflow = 0.36 cfs @ 12.15 hrs, Volume= 810 cf, Atten= 0%, Lag= 3.7 min
Discarded = 0.00 cfs @ 12.15 hrs, Volume= 449 cf
Primary = 0.35 cfs @ 12.15 hrs, Volume= 361 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 149.78' @ 12.15 hrs Surf.Area= 283 sf Storage= 289 cf

Plug-Flow detention time= 633.8 min calculated for 810 cf (100% of inflow)
Center-of-Mass det. time= 635.1 min (1,432.4 - 797.4)

Volume	Invert	Avail.Storage	Storage Description
#1	145.99'	796 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
145.99	129	0.0	0	0
146.00	129	33.0	0	0
148.99	129	33.0	127	128
149.00	129	100.0	1	129
150.00	327	100.0	228	357
151.00	551	100.0	439	796

Device	Routing	Invert	Outlet Devices
#1	Discarded	145.99'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'
#2	Primary	149.75'	**2.0" x 2.0" Horiz. Orifice/Grate X 6.00 columns** X 6 rows C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.00 cfs @ 12.15 hrs HW=149.78' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.34 cfs @ 12.15 hrs HW=149.78' TW=0.00' (Dynamic Tailwater)
↑**2=Orifice/Grate** (Weir Controls 0.34 cfs @ 0.53 fps)

Stage-Discharge for Pond 31P: Bio 15

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
145.99	0.00	0.00	0.00
146.04	0.00	0.00	0.00
146.09	0.00	0.00	0.00
146.14	0.00	0.00	0.00
146.19	0.00	0.00	0.00
146.24	0.00	0.00	0.00
146.29	0.00	0.00	0.00
146.34	0.00	0.00	0.00
146.39	0.00	0.00	0.00
146.44	0.00	0.00	0.00
146.49	0.00	0.00	0.00
146.54	0.00	0.00	0.00
146.59	0.00	0.00	0.00
146.64	0.00	0.00	0.00
146.69	0.00	0.00	0.00
146.74	0.00	0.00	0.00
146.79	0.00	0.00	0.00
146.84	0.00	0.00	0.00
146.89	0.00	0.00	0.00
146.94	0.00	0.00	0.00
146.99	0.00	0.00	0.00
147.04	0.00	0.00	0.00
147.09	0.00	0.00	0.00
147.14	0.00	0.00	0.00
147.19	0.00	0.00	0.00
147.24	0.00	0.00	0.00
147.29	0.00	0.00	0.00
147.34	0.00	0.00	0.00
147.39	0.00	0.00	0.00
147.44	0.00	0.00	0.00
147.49	0.00	0.00	0.00
147.54	0.00	0.00	0.00
147.59	0.00	0.00	0.00
147.64	0.00	0.00	0.00
147.69	0.00	0.00	0.00
147.74	0.00	0.00	0.00
147.79	0.00	0.00	0.00
147.84	0.00	0.00	0.00
147.89	0.00	0.00	0.00
147.94	0.00	0.00	0.00
147.99	0.00	0.00	0.00
148.04	0.00	0.00	0.00
148.09	0.00	0.00	0.00
148.14	0.00	0.00	0.00
148.19	0.00	0.00	0.00
148.24	0.00	0.00	0.00
148.29	0.00	0.00	0.00
148.34	0.00	0.00	0.00
148.39	0.00	0.00	0.00
148.44	0.00	0.00	0.00
148.49	0.00	0.00	0.00
148.54	0.00	0.00	0.00
148.59	0.00	0.00	0.00
148.64	0.00	0.00	0.00
148.69	0.00	0.00	0.00
148.74	0.00	0.00	0.00
148.79	0.00	0.00	0.00
148.84	0.00	0.00	0.00
148.89	0.00	0.00	0.00
148.94	0.00	0.00	0.00
148.99	0.00	0.00	0.00
149.04	0.00	0.00	0.00
149.09	0.00	0.00	0.00
149.14	0.00	0.00	0.00
149.19	0.00	0.00	0.00
149.24	0.00	0.00	0.00
149.29	0.00	0.00	0.00
149.34	0.00	0.00	0.00
149.39	0.00	0.00	0.00
149.44	0.00	0.00	0.00
149.49	0.00	0.00	0.00
149.54	0.00	0.00	0.00
149.59	0.00	0.00	0.00
149.64	0.00	0.00	0.00
149.69	0.00	0.00	0.00
149.74	0.00	0.00	0.00
149.79	0.63	0.00	0.63
149.84	1.45	0.00	1.44
149.89	1.81	0.00	1.80
149.94	2.10	0.00	2.10
149.99	2.36	0.00	2.36
150.04	2.60	0.00	2.59
150.09	2.81	0.00	2.81
150.14	3.01	0.00	3.01
150.19	3.20	0.00	3.19
150.24	3.37	0.00	3.37
150.29	3.54	0.00	3.54
150.34	3.70	0.00	3.70
150.39	3.86	0.00	3.85
150.44	4.00	0.00	4.00
150.49	4.15	0.01	4.14
150.54	4.28	0.01	4.28
150.59	4.42	0.01	4.41
150.64	4.55	0.01	4.54
150.69	4.67	0.01	4.67
150.74	4.80	0.01	4.79
150.79	4.92	0.01	4.91
150.84	5.03	0.01	5.03
150.89	5.15	0.01	5.14
150.94	5.26	0.01	5.25
150.99	**5.37**	**0.01**	**5.36**

Stage-Area-Storage for Pond 31P: Bio 15

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
145.99	129	0	148.59	129	111
146.04	129	2	148.64	129	113
146.09	129	4	148.69	129	115
146.14	129	6	148.74	129	117
146.19	129	9	148.79	129	119
146.24	129	11	148.84	129	121
146.29	129	13	148.89	129	123
146.34	129	15	148.94	129	126
146.39	129	17	148.99	129	128
146.44	129	19	149.04	137	134
146.49	129	21	149.09	147	141
146.54	129	23	149.14	157	149
146.59	129	26	149.19	167	157
146.64	129	28	149.24	177	166
146.69	129	30	149.29	186	175
146.74	129	32	149.34	196	184
146.79	129	34	149.39	206	194
146.84	129	36	149.44	216	205
146.89	129	38	149.49	226	216
146.94	129	40	149.54	236	228
146.99	129	43	149.59	246	240
147.04	129	45	149.64	256	252
147.09	129	47	149.69	266	265
147.14	129	49	149.74	276	279
147.19	129	51	149.79	285	293
147.24	129	53	149.84	295	307
147.29	129	55	149.89	305	322
147.34	129	57	149.94	315	338
147.39	129	60	149.99	325	354
147.44	129	62	150.04	336	370
147.49	129	64	150.09	347	387
147.54	129	66	150.14	358	405
147.59	129	68	150.19	370	423
147.64	129	70	150.24	381	442
147.69	129	72	150.29	392	461
147.74	129	74	150.34	403	481
147.79	129	77	150.39	414	502
147.84	129	79	150.44	426	523
147.89	129	81	150.49	437	544
147.94	129	83	150.54	448	566
147.99	129	85	150.59	459	589
148.04	129	87	150.64	470	612
148.09	129	89	150.69	482	636
148.14	129	92	150.74	493	660
148.19	129	94	150.79	504	685
148.24	129	96	150.84	515	711
148.29	129	98	150.89	526	737
148.34	129	100	150.94	538	763
148.39	129	102	150.99	**549**	**791**
148.44	129	104			
148.49	129	106			
148.54	129	109			

Summary for Pond 33P: Bio -16

Inflow Area = 13,806 sf, 70.90% Impervious, Inflow Depth = 1.97" for 1-Year event
Inflow = 0.71 cfs @ 12.09 hrs, Volume= 2,270 cf
Outflow = 0.78 cfs @ 12.16 hrs, Volume= 2,270 cf, Atten= 0%, Lag= 4.0 min
Discarded = 0.01 cfs @ 12.16 hrs, Volume= 1,276 cf
Primary = 0.76 cfs @ 12.16 hrs, Volume= 994 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 147.80' @ 12.16 hrs Surf.Area= 1,002 sf Storage= 770 cf

Plug-Flow detention time= 453.6 min calculated for 2,268 cf (100% of inflow)
Center-of-Mass det. time= 454.5 min (1,257.1 - 802.7)

Volume	Invert	Avail.Storage	Storage Description
#1	145.19'	1,806 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
145.19	408	0.0	0	0
145.20	408	33.0	1	1
147.19	408	33.0	268	269
147.20	662	100.0	5	275
148.00	1,119	100.0	712	987
148.60	1,610	100.0	819	1,806

Device	Routing	Invert	Outlet Devices
#1	Discarded	145.19'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'
#2	Primary	147.75'	**2.0" x 2.0" Horiz. Orifice/Grate X 6.00 columns** X 6 rows C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.01 cfs @ 12.16 hrs HW=147.79' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.71 cfs @ 12.16 hrs HW=147.79' TW=0.00' (Dynamic Tailwater)
↑—**2=Orifice/Grate** (Weir Controls 0.71 cfs @ 0.68 fps)

Stage-Discharge for Pond 33P: Bio -16

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
145.19	0.00	0.00	0.00
145.24	0.00	0.00	0.00
145.29	0.00	0.00	0.00
145.34	0.00	0.00	0.00
145.39	0.00	0.00	0.00
145.44	0.00	0.00	0.00
145.49	0.00	0.00	0.00
145.54	0.00	0.00	0.00
145.59	0.00	0.00	0.00
145.64	0.00	0.00	0.00
145.69	0.00	0.00	0.00
145.74	0.00	0.00	0.00
145.79	0.00	0.00	0.00
145.84	0.00	0.00	0.00
145.89	0.00	0.00	0.00
145.94	0.00	0.00	0.00
145.99	0.00	0.00	0.00
146.04	0.00	0.00	0.00
146.09	0.00	0.00	0.00
146.14	0.00	0.00	0.00
146.19	0.00	0.00	0.00
146.24	0.00	0.00	0.00
146.29	0.00	0.00	0.00
146.34	0.00	0.00	0.00
146.39	0.00	0.00	0.00
146.44	0.00	0.00	0.00
146.49	0.00	0.00	0.00
146.54	0.00	0.00	0.00
146.59	0.00	0.00	0.00
146.64	0.00	0.00	0.00
146.69	0.00	0.00	0.00
146.74	0.00	0.00	0.00
146.79	0.00	0.00	0.00
146.84	0.00	0.00	0.00
146.89	0.00	0.00	0.00
146.94	0.00	0.00	0.00
146.99	0.00	0.00	0.00
147.04	0.00	0.00	0.00
147.09	0.00	0.00	0.00
147.14	0.00	0.00	0.00
147.19	0.00	0.00	0.00
147.24	0.01	0.01	0.00
147.29	0.01	0.01	0.00
147.34	0.01	0.01	0.00
147.39	0.01	0.01	0.00
147.44	0.01	0.01	0.00
147.49	0.01	0.01	0.00
147.54	0.01	0.01	0.00
147.59	0.01	0.01	0.00
147.64	0.01	0.01	0.00
147.69	0.01	0.01	0.00
147.74	0.01	0.01	0.00
147.79	0.64	0.01	0.63
147.84	1.46	0.01	1.44
147.89	1.81	0.01	1.80
147.94	2.11	0.01	2.10
147.99	2.37	0.01	2.36
148.04	2.61	0.01	2.59
148.09	2.82	0.01	2.81
148.14	3.02	0.01	3.01
148.19	3.21	0.01	3.19
148.24	3.39	0.02	3.37
148.29	3.55	0.02	3.54
148.34	3.71	0.02	3.70
148.39	3.87	0.02	3.85
148.44	4.02	0.02	4.00
148.49	4.16	0.02	4.14
148.54	4.30	0.02	4.28
148.59	**4.43**	**0.02**	**4.41**

Stage-Area-Storage for Pond 33P: Bio -16

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
145.19	408	0
145.24	408	7
145.29	408	13
145.34	408	20
145.39	408	27
145.44	408	34
145.49	408	40
145.54	408	47
145.59	408	54
145.64	408	61
145.69	408	67
145.74	408	74
145.79	408	81
145.84	408	88
145.89	408	94
145.94	408	101
145.99	408	108
146.04	408	114
146.09	408	121
146.14	408	128
146.19	408	135
146.24	408	141
146.29	408	148
146.34	408	155
146.39	408	162
146.44	408	168
146.49	408	175
146.54	408	182
146.59	408	188
146.64	408	195
146.69	408	202
146.74	408	209
146.79	408	215
146.84	408	222
146.89	408	229
146.94	408	236
146.99	408	242
147.04	408	249
147.09	408	256
147.14	408	263
147.19	408	269
147.24	685	302
147.29	713	337
147.34	742	373
147.39	771	411
147.44	799	450
147.49	828	491
147.54	856	533
147.59	885	576
147.64	913	621
147.69	942	668
147.74	970	715
147.79	999	765
147.84	1,028	815
147.89	1,056	867
147.94	1,085	921
147.99	1,113	976
148.04	1,152	1,032
148.09	1,193	1,091
148.14	1,234	1,152
148.19	1,274	1,214
148.24	1,315	1,279
148.29	1,356	1,346
148.34	1,397	1,415
148.39	1,438	1,486
148.44	1,479	1,559
148.49	1,520	1,634
148.54	1,561	1,711
148.59	**1,602**	**1,790**

Summary for Pond 34P: Bio -17

Inflow Area = 4,393 sf, 77.66% Impervious, Inflow Depth = 2.16" for 1-Year event
Inflow = 0.24 cfs @ 12.09 hrs, Volume= 790 cf
Outflow = 0.34 cfs @ 12.15 hrs, Volume= 790 cf, Atten= 0%, Lag= 3.8 min
Discarded = 0.00 cfs @ 12.15 hrs, Volume= 450 cf
Primary = 0.34 cfs @ 12.15 hrs, Volume= 340 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 149.28' @ 12.15 hrs Surf.Area= 283 sf Storage= 289 cf

Plug-Flow detention time= 648.8 min calculated for 789 cf (100% of inflow)
Center-of-Mass det. time= 650.1 min (1,441.6 - 791.6)

Volume	Invert	Avail.Storage	Storage Description
#1	145.49'	796 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
145.49	129	0.0	0	0
145.50	129	33.0	0	0
148.49	129	33.0	127	128
148.50	129	100.0	1	129
149.50	327	100.0	228	357
150.50	551	100.0	439	796

Device	Routing	Invert	Outlet Devices
#1	Discarded	145.49'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'
#2	Primary	149.25'	**2.0" x 2.0" Horiz. Orifice/Grate X 6.00 columns** X 6 rows C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.00 cfs @ 12.15 hrs HW=149.28' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.33 cfs @ 12.15 hrs HW=149.28' TW=145.92' (Dynamic Tailwater)
↑**2=Orifice/Grate** (Weir Controls 0.33 cfs @ 0.53 fps)

Stage-Discharge for Pond 34P: Bio -17

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
145.49	0.00	0.00	0.00
145.54	0.00	0.00	0.00
145.59	0.00	0.00	0.00
145.64	0.00	0.00	0.00
145.69	0.00	0.00	0.00
145.74	0.00	0.00	0.00
145.79	0.00	0.00	0.00
145.84	0.00	0.00	0.00
145.89	0.00	0.00	0.00
145.94	0.00	0.00	0.00
145.99	0.00	0.00	0.00
146.04	0.00	0.00	0.00
146.09	0.00	0.00	0.00
146.14	0.00	0.00	0.00
146.19	0.00	0.00	0.00
146.24	0.00	0.00	0.00
146.29	0.00	0.00	0.00
146.34	0.00	0.00	0.00
146.39	0.00	0.00	0.00
146.44	0.00	0.00	0.00
146.49	0.00	0.00	0.00
146.54	0.00	0.00	0.00
146.59	0.00	0.00	0.00
146.64	0.00	0.00	0.00
146.69	0.00	0.00	0.00
146.74	0.00	0.00	0.00
146.79	0.00	0.00	0.00
146.84	0.00	0.00	0.00
146.89	0.00	0.00	0.00
146.94	0.00	0.00	0.00
146.99	0.00	0.00	0.00
147.04	0.00	0.00	0.00
147.09	0.00	0.00	0.00
147.14	0.00	0.00	0.00
147.19	0.00	0.00	0.00
147.24	0.00	0.00	0.00
147.29	0.00	0.00	0.00
147.34	0.00	0.00	0.00
147.39	0.00	0.00	0.00
147.44	0.00	0.00	0.00
147.49	0.00	0.00	0.00
147.54	0.00	0.00	0.00
147.59	0.00	0.00	0.00
147.64	0.00	0.00	0.00
147.69	0.00	0.00	0.00
147.74	0.00	0.00	0.00
147.79	0.00	0.00	0.00
147.84	0.00	0.00	0.00
147.89	0.00	0.00	0.00
147.94	0.00	0.00	0.00
147.99	0.00	0.00	0.00
148.04	0.00	0.00	0.00
148.09	0.00	0.00	0.00
148.14	0.00	0.00	0.00
148.19	0.00	0.00	0.00
148.24	0.00	0.00	0.00
148.29	0.00	0.00	0.00
148.34	0.00	0.00	0.00
148.39	0.00	0.00	0.00
148.44	0.00	0.00	0.00
148.49	0.00	0.00	0.00
148.54	0.00	0.00	0.00
148.59	0.00	0.00	0.00
148.64	0.00	0.00	0.00
148.69	0.00	0.00	0.00
148.74	0.00	0.00	0.00
148.79	0.00	0.00	0.00
148.84	0.00	0.00	0.00
148.89	0.00	0.00	0.00
148.94	0.00	0.00	0.00
148.99	0.00	0.00	0.00
149.04	0.00	0.00	0.00
149.09	0.00	0.00	0.00
149.14	0.00	0.00	0.00
149.19	0.00	0.00	0.00
149.24	0.00	0.00	0.00
149.29	0.63	0.00	0.63
149.34	1.45	0.00	1.44
149.39	1.81	0.00	1.80
149.44	2.10	0.00	2.10
149.49	2.36	0.00	2.36
149.54	2.60	0.00	2.59
149.59	2.81	0.00	2.81
149.64	3.01	0.00	3.01
149.69	3.20	0.00	3.19
149.74	3.37	0.00	3.37
149.79	3.54	0.00	3.54
149.84	3.70	0.00	3.70
149.89	3.86	0.00	3.85
149.94	4.00	0.00	4.00
149.99	4.15	0.01	4.14
150.04	4.28	0.01	4.28
150.09	4.42	0.01	4.41
150.14	4.55	0.01	4.54
150.19	4.67	0.01	4.67
150.24	4.80	0.01	4.79
150.29	4.92	0.01	4.91
150.34	5.03	0.01	5.03
150.39	5.15	0.01	5.14
150.44	5.26	0.01	5.25
150.49	**5.37**	**0.01**	**5.36**

Stage-Area-Storage for Pond 34P: Bio -17

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
145.49	129	0
145.54	129	2
145.59	129	4
145.64	129	6
145.69	129	9
145.74	129	11
145.79	129	13
145.84	129	15
145.89	129	17
145.94	129	19
145.99	129	21
146.04	129	23
146.09	129	26
146.14	129	28
146.19	129	30
146.24	129	32
146.29	129	34
146.34	129	36
146.39	129	38
146.44	129	40
146.49	129	43
146.54	129	45
146.59	129	47
146.64	129	49
146.69	129	51
146.74	129	53
146.79	129	55
146.84	129	57
146.89	129	60
146.94	129	62
146.99	129	64
147.04	129	66
147.09	129	68
147.14	129	70
147.19	129	72
147.24	129	74
147.29	129	77
147.34	129	79
147.39	129	81
147.44	129	83
147.49	129	85
147.54	129	87
147.59	129	89
147.64	129	92
147.69	129	94
147.74	129	96
147.79	129	98
147.84	129	100
147.89	129	102
147.94	129	104
147.99	129	106
148.04	129	109
148.09	129	111
148.14	129	113
148.19	129	115
148.24	129	117
148.29	129	119
148.34	129	121
148.39	129	123
148.44	129	126
148.49	129	128
148.54	137	134
148.59	147	141
148.64	157	149
148.69	167	157
148.74	177	166
148.79	186	175
148.84	196	184
148.89	206	194
148.94	216	205
148.99	226	216
149.04	236	228
149.09	246	240
149.14	256	252
149.19	266	265
149.24	276	279
149.29	285	293
149.34	295	307
149.39	305	322
149.44	315	338
149.49	325	354
149.54	336	370
149.59	347	387
149.64	358	405
149.69	370	423
149.74	381	442
149.79	392	461
149.84	403	481
149.89	414	502
149.94	426	523
149.99	437	544
150.04	448	566
150.09	459	589
150.14	470	612
150.19	482	636
150.24	493	660
150.29	504	685
150.34	515	711
150.39	526	737
150.44	538	763
150.49	**549**	**791**

Summary for Pond 35P: Bio -12

Inflow Area = 4,401 sf, 77.40% Impervious, Inflow Depth = 2.16" for 1-Year event
Inflow = 0.24 cfs @ 12.09 hrs, Volume= 791 cf
Outflow = 0.34 cfs @ 12.15 hrs, Volume= 791 cf, Atten= 0%, Lag= 3.8 min
Discarded = 0.00 cfs @ 12.15 hrs, Volume= 450 cf
Primary = 0.34 cfs @ 12.15 hrs, Volume= 341 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 149.78' @ 12.15 hrs Surf.Area= 283 sf Storage= 289 cf

Plug-Flow detention time= 649.1 min calculated for 791 cf (100% of inflow)
Center-of-Mass det. time= 649.0 min (1,440.6 - 791.6)

Volume	Invert	Avail.Storage	Storage Description
#1	145.99'	796 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
145.99	129	0.0	0	0
146.00	129	33.0	0	0
148.99	129	33.0	127	128
149.00	129	100.0	1	129
150.00	327	100.0	228	357
151.00	551	100.0	439	796

Device	Routing	Invert	Outlet Devices
#1	Discarded	145.99'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'
#2	Primary	149.75'	**2.0" x 2.0" Horiz. Orifice/Grate X 6.00 columns** X 6 rows C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.00 cfs @ 12.15 hrs HW=149.78' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.33 cfs @ 12.15 hrs HW=149.78' TW=145.92' (Dynamic Tailwater)
↑—**2=Orifice/Grate** (Weir Controls 0.33 cfs @ 0.53 fps)

Stage-Discharge for Pond 35P: Bio -12

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
145.99	0.00	0.00	0.00
146.04	0.00	0.00	0.00
146.09	0.00	0.00	0.00
146.14	0.00	0.00	0.00
146.19	0.00	0.00	0.00
146.24	0.00	0.00	0.00
146.29	0.00	0.00	0.00
146.34	0.00	0.00	0.00
146.39	0.00	0.00	0.00
146.44	0.00	0.00	0.00
146.49	0.00	0.00	0.00
146.54	0.00	0.00	0.00
146.59	0.00	0.00	0.00
146.64	0.00	0.00	0.00
146.69	0.00	0.00	0.00
146.74	0.00	0.00	0.00
146.79	0.00	0.00	0.00
146.84	0.00	0.00	0.00
146.89	0.00	0.00	0.00
146.94	0.00	0.00	0.00
146.99	0.00	0.00	0.00
147.04	0.00	0.00	0.00
147.09	0.00	0.00	0.00
147.14	0.00	0.00	0.00
147.19	0.00	0.00	0.00
147.24	0.00	0.00	0.00
147.29	0.00	0.00	0.00
147.34	0.00	0.00	0.00
147.39	0.00	0.00	0.00
147.44	0.00	0.00	0.00
147.49	0.00	0.00	0.00
147.54	0.00	0.00	0.00
147.59	0.00	0.00	0.00
147.64	0.00	0.00	0.00
147.69	0.00	0.00	0.00
147.74	0.00	0.00	0.00
147.79	0.00	0.00	0.00
147.84	0.00	0.00	0.00
147.89	0.00	0.00	0.00
147.94	0.00	0.00	0.00
147.99	0.00	0.00	0.00
148.04	0.00	0.00	0.00
148.09	0.00	0.00	0.00
148.14	0.00	0.00	0.00
148.19	0.00	0.00	0.00
148.24	0.00	0.00	0.00
148.29	0.00	0.00	0.00
148.34	0.00	0.00	0.00
148.39	0.00	0.00	0.00
148.44	0.00	0.00	0.00
148.49	0.00	0.00	0.00
148.54	0.00	0.00	0.00
148.59	0.00	0.00	0.00
148.64	0.00	0.00	0.00
148.69	0.00	0.00	0.00
148.74	0.00	0.00	0.00
148.79	0.00	0.00	0.00
148.84	0.00	0.00	0.00
148.89	0.00	0.00	0.00
148.94	0.00	0.00	0.00
148.99	0.00	0.00	0.00
149.04	0.00	0.00	0.00
149.09	0.00	0.00	0.00
149.14	0.00	0.00	0.00
149.19	0.00	0.00	0.00
149.24	0.00	0.00	0.00
149.29	0.00	0.00	0.00
149.34	0.00	0.00	0.00
149.39	0.00	0.00	0.00
149.44	0.00	0.00	0.00
149.49	0.00	0.00	0.00
149.54	0.00	0.00	0.00
149.59	0.00	0.00	0.00
149.64	0.00	0.00	0.00
149.69	0.00	0.00	0.00
149.74	0.00	0.00	0.00
149.79	0.63	0.00	0.63
149.84	1.45	0.00	1.44
149.89	1.81	0.00	1.80
149.94	2.10	0.00	2.10
149.99	2.36	0.00	2.36
150.04	2.60	0.00	2.59
150.09	2.81	0.00	2.81
150.14	3.01	0.00	3.01
150.19	3.20	0.00	3.19
150.24	3.37	0.00	3.37
150.29	3.54	0.00	3.54
150.34	3.70	0.00	3.70
150.39	3.86	0.00	3.85
150.44	4.00	0.00	4.00
150.49	4.15	0.01	4.14
150.54	4.28	0.01	4.28
150.59	4.42	0.01	4.41
150.64	4.55	0.01	4.54
150.69	4.67	0.01	4.67
150.74	4.80	0.01	4.79
150.79	4.92	0.01	4.91
150.84	5.03	0.01	5.03
150.89	5.15	0.01	5.14
150.94	5.26	0.01	5.25
150.99	**5.37**	**0.01**	**5.36**

Stage-Area-Storage for Pond 35P: Bio -12

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
145.99	129	0	148.59	129	111
146.04	129	2	148.64	129	113
146.09	129	4	148.69	129	115
146.14	129	6	148.74	129	117
146.19	129	9	148.79	129	119
146.24	129	11	148.84	129	121
146.29	129	13	148.89	129	123
146.34	129	15	148.94	129	126
146.39	129	17	148.99	129	128
146.44	129	19	149.04	137	134
146.49	129	21	149.09	147	141
146.54	129	23	149.14	157	149
146.59	129	26	149.19	167	157
146.64	129	28	149.24	177	166
146.69	129	30	149.29	186	175
146.74	129	32	149.34	196	184
146.79	129	34	149.39	206	194
146.84	129	36	149.44	216	205
146.89	129	38	149.49	226	216
146.94	129	40	149.54	236	228
146.99	129	43	149.59	246	240
147.04	129	45	149.64	256	252
147.09	129	47	149.69	266	265
147.14	129	49	149.74	276	279
147.19	129	51	149.79	285	293
147.24	129	53	149.84	295	307
147.29	129	55	149.89	305	322
147.34	129	57	149.94	315	338
147.39	129	60	149.99	325	354
147.44	129	62	150.04	336	370
147.49	129	64	150.09	347	387
147.54	129	66	150.14	358	405
147.59	129	68	150.19	370	423
147.64	129	70	150.24	381	442
147.69	129	72	150.29	392	461
147.74	129	74	150.34	403	481
147.79	129	77	150.39	414	502
147.84	129	79	150.44	426	523
147.89	129	81	150.49	437	544
147.94	129	83	150.54	448	566
147.99	129	85	150.59	459	589
148.04	129	87	150.64	470	612
148.09	129	89	150.69	482	636
148.14	129	92	150.74	493	660
148.19	129	94	150.79	504	685
148.24	129	96	150.84	515	711
148.29	129	98	150.89	526	737
148.34	129	100	150.94	538	763
148.39	129	102	150.99	**549**	**791**
148.44	129	104			
148.49	129	106			
148.54	129	109			

Summary for Pond 37P: Bio 13

Inflow Area = 13,049 sf, 56.91% Impervious, Inflow Depth = 1.80" for 1-Year event
Inflow = 0.62 cfs @ 12.09 hrs, Volume= 1,959 cf
Outflow = 0.29 cfs @ 12.29 hrs, Volume= 1,959 cf, Atten= 53%, Lag= 12.0 min
Discarded = 0.01 cfs @ 12.29 hrs, Volume= 1,272 cf
Primary = 0.28 cfs @ 12.29 hrs, Volume= 687 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 148.63' @ 12.29 hrs Surf.Area= 877 sf Storage= 832 cf

Plug-Flow detention time= 688.4 min calculated for 1,959 cf (100% of inflow)
Center-of-Mass det. time= 688.4 min (1,500.5 - 812.2)

Volume	Invert	Avail.Storage	Storage Description
#1	144.84'	1,688 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
144.84	293	0.0	0	0
144.85	293	33.0	1	1
147.84	293	33.0	289	290
147.85	510	100.0	4	294
148.00	573	100.0	81	375
149.00	1,056	100.0	815	1,190
149.35	1,791	100.0	498	1,688

Device	Routing	Invert	Outlet Devices
#1	Discarded	144.84'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'
#2	Primary	148.60'	**6.0" x 1.0" Horiz. Orifice/Grate X 2.00 columns** X 7 rows C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.01 cfs @ 12.29 hrs HW=148.63' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.28 cfs @ 12.29 hrs HW=148.63' TW=146.02' (Dynamic Tailwater)
↑**2=Orifice/Grate** (Weir Controls 0.28 cfs @ 0.56 fps)

Stage-Discharge for Pond 37P: Bio 13

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
144.84	0.00	0.00	0.00
144.89	0.00	0.00	0.00
144.94	0.00	0.00	0.00
144.99	0.00	0.00	0.00
145.04	0.00	0.00	0.00
145.09	0.00	0.00	0.00
145.14	0.00	0.00	0.00
145.19	0.00	0.00	0.00
145.24	0.00	0.00	0.00
145.29	0.00	0.00	0.00
145.34	0.00	0.00	0.00
145.39	0.00	0.00	0.00
145.44	0.00	0.00	0.00
145.49	0.00	0.00	0.00
145.54	0.00	0.00	0.00
145.59	0.00	0.00	0.00
145.64	0.00	0.00	0.00
145.69	0.00	0.00	0.00
145.74	0.00	0.00	0.00
145.79	0.00	0.00	0.00
145.84	0.00	0.00	0.00
145.89	0.00	0.00	0.00
145.94	0.00	0.00	0.00
145.99	0.00	0.00	0.00
146.04	0.00	0.00	0.00
146.09	0.00	0.00	0.00
146.14	0.00	0.00	0.00
146.19	0.00	0.00	0.00
146.24	0.00	0.00	0.00
146.29	0.00	0.00	0.00
146.34	0.00	0.00	0.00
146.39	0.00	0.00	0.00
146.44	0.00	0.00	0.00
146.49	0.00	0.00	0.00
146.54	0.00	0.00	0.00
146.59	0.00	0.00	0.00
146.64	0.00	0.00	0.00
146.69	0.00	0.00	0.00
146.74	0.00	0.00	0.00
146.79	0.00	0.00	0.00
146.84	0.00	0.00	0.00
146.89	0.00	0.00	0.00
146.94	0.00	0.00	0.00
146.99	0.00	0.00	0.00
147.04	0.00	0.00	0.00
147.09	0.00	0.00	0.00
147.14	0.00	0.00	0.00
147.19	0.00	0.00	0.00
147.24	0.00	0.00	0.00
147.29	0.00	0.00	0.00
147.34	0.00	0.00	0.00
147.39	0.00	0.00	0.00
147.44	0.00	0.00	0.00
147.49	0.00	0.00	0.00
147.54	0.00	0.00	0.00
147.59	0.00	0.00	0.00
147.64	0.00	0.00	0.00
147.69	0.00	0.00	0.00
147.74	0.00	0.00	0.00
147.79	0.00	0.00	0.00
147.84	0.00	0.00	0.00
147.89	0.01	0.01	0.00
147.94	0.01	0.01	0.00
147.99	0.01	0.01	0.00
148.04	0.01	0.01	0.00
148.09	0.01	0.01	0.00
148.14	0.01	0.01	0.00
148.19	0.01	0.01	0.00
148.24	0.01	0.01	0.00
148.29	0.01	0.01	0.00
148.34	0.01	0.01	0.00
148.39	0.01	0.01	0.00
148.44	0.01	0.01	0.00
148.49	0.01	0.01	0.00
148.54	0.01	0.01	0.00
148.59	0.01	0.01	0.00
148.64	0.44	0.01	0.43
148.69	0.85	0.01	0.84
148.74	1.06	0.01	1.05
148.79	1.24	0.01	1.22
148.84	1.39	0.01	1.38
148.89	1.52	0.01	1.51
148.94	1.65	0.01	1.64
148.99	1.77	0.01	1.75
149.04	1.88	0.01	1.86
149.09	1.98	0.01	1.97
149.14	2.08	0.02	2.06
149.19	2.17	0.02	2.16
149.24	2.27	0.02	2.25
149.29	2.35	0.02	2.33
149.34	**2.44**	**0.02**	**2.42**

Stage-Area-Storage for Pond 37P: Bio 13

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
144.84	293	0
144.89	293	5
144.94	293	10
144.99	293	15
145.04	293	19
145.09	293	24
145.14	293	29
145.19	293	34
145.24	293	39
145.29	293	44
145.34	293	48
145.39	293	53
145.44	293	58
145.49	293	63
145.54	293	68
145.59	293	73
145.64	293	77
145.69	293	82
145.74	293	87
145.79	293	92
145.84	293	97
145.89	293	102
145.94	293	106
145.99	293	111
146.04	293	116
146.09	293	121
146.14	293	126
146.19	293	131
146.24	293	135
146.29	293	140
146.34	293	145
146.39	293	150
146.44	293	155
146.49	293	160
146.54	293	164
146.59	293	169
146.64	293	174
146.69	293	179
146.74	293	184
146.79	293	189
146.84	293	193
146.89	293	198
146.94	293	203
146.99	293	208
147.04	293	213
147.09	293	218
147.14	293	222
147.19	293	227
147.24	293	232
147.29	293	237
147.34	293	242
147.39	293	247
147.44	293	251
147.49	293	256
147.54	293	261
147.59	293	266
147.64	293	271
147.69	293	276
147.74	293	280
147.79	293	285
147.84	293	290
147.89	527	315
147.94	548	342
147.99	569	370
148.04	592	399
148.09	616	429
148.14	641	460
148.19	665	493
148.24	689	527
148.29	713	562
148.34	737	598
148.39	761	636
148.44	786	674
148.49	810	714
148.54	834	755
148.59	858	797
148.64	882	841
148.69	906	886
148.74	930	932
148.79	955	979
148.84	979	1,027
148.89	1,003	1,077
148.94	1,027	1,127
148.99	1,051	1,179
149.04	1,140	1,234
149.09	1,245	1,293
149.14	1,350	1,358
149.19	1,455	1,428
149.24	1,560	1,504
149.29	1,665	1,584
149.34	**1,770**	**1,670**

Summary for Pond 39P: Bio -14

Inflow Area = 8,397 sf, 40.23% Impervious, Inflow Depth = 1.57" for 1-Year event
Inflow = 0.35 cfs @ 12.09 hrs, Volume= 1,096 cf
Outflow = 0.26 cfs @ 12.18 hrs, Volume= 1,096 cf, Atten= 26%, Lag= 5.0 min
Discarded = 0.00 cfs @ 12.18 hrs, Volume= 528 cf
Primary = 0.25 cfs @ 12.18 hrs, Volume= 568 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 146.79' @ 12.18 hrs Surf.Area= 343 sf Storage= 350 cf

Plug-Flow detention time= 561.9 min calculated for 1,096 cf (100% of inflow)
Center-of-Mass det. time= 561.8 min (1,386.5 - 824.6)

Volume	Invert	Avail.Storage	Storage Description
#1	142.99'	968 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Voids (%)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
142.99	154	0.0	0	0
143.00	154	33.0	1	1
145.99	154	33.0	152	152
146.00	154	100.0	2	154
147.00	393	100.0	274	427
148.00	689	100.0	541	968

Device	Routing	Invert	Outlet Devices
#1	Discarded	142.99'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'
#2	Primary	146.75'	**10.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Discarded OutFlow Max=0.00 cfs @ 12.18 hrs HW=146.79' (Free Discharge)
1=Exfiltration (Exfiltration Controls 0.00 cfs)

Primary OutFlow Max=0.24 cfs @ 12.18 hrs HW=146.79' TW=145.07' (Dynamic Tailwater)
2=Sharp-Crested Rectangular Weir (Weir Controls 0.24 cfs @ 0.64 fps)

Stage-Discharge for Pond 39P: Bio -14

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)	Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
142.99	0.00	0.00	0.00	145.59	0.00	0.00	0.00
143.04	0.00	0.00	0.00	145.64	0.00	0.00	0.00
143.09	0.00	0.00	0.00	145.69	0.00	0.00	0.00
143.14	0.00	0.00	0.00	145.74	0.00	0.00	0.00
143.19	0.00	0.00	0.00	145.79	0.00	0.00	0.00
143.24	0.00	0.00	0.00	145.84	0.00	0.00	0.00
143.29	0.00	0.00	0.00	145.89	0.00	0.00	0.00
143.34	0.00	0.00	0.00	145.94	0.00	0.00	0.00
143.39	0.00	0.00	0.00	145.99	0.00	0.00	0.00
143.44	0.00	0.00	0.00	146.04	0.00	0.00	0.00
143.49	0.00	0.00	0.00	146.09	0.00	0.00	0.00
143.54	0.00	0.00	0.00	146.14	0.00	0.00	0.00
143.59	0.00	0.00	0.00	146.19	0.00	0.00	0.00
143.64	0.00	0.00	0.00	146.24	0.00	0.00	0.00
143.69	0.00	0.00	0.00	146.29	0.00	0.00	0.00
143.74	0.00	0.00	0.00	146.34	0.00	0.00	0.00
143.79	0.00	0.00	0.00	146.39	0.00	0.00	0.00
143.84	0.00	0.00	0.00	146.44	0.00	0.00	0.00
143.89	0.00	0.00	0.00	146.49	0.00	0.00	0.00
143.94	0.00	0.00	0.00	146.54	0.00	0.00	0.00
143.99	0.00	0.00	0.00	146.59	0.00	0.00	0.00
144.04	0.00	0.00	0.00	146.64	0.00	0.00	0.00
144.09	0.00	0.00	0.00	146.69	0.00	0.00	0.00
144.14	0.00	0.00	0.00	146.74	0.00	0.00	0.00
144.19	0.00	0.00	0.00	146.79	0.27	0.00	0.26
144.24	0.00	0.00	0.00	146.84	0.89	0.00	0.88
144.29	0.00	0.00	0.00	146.89	1.71	0.00	1.71
144.34	0.00	0.00	0.00	146.94	2.70	0.00	2.70
144.39	0.00	0.00	0.00	146.99	3.83	0.00	3.83
144.44	0.00	0.00	0.00	147.04	5.08	0.00	5.08
144.49	0.00	0.00	0.00	147.09	6.44	0.00	6.44
144.54	0.00	0.00	0.00	147.14	7.91	0.01	7.90
144.59	0.00	0.00	0.00	147.19	9.47	0.01	9.46
144.64	0.00	0.00	0.00	147.24	11.11	0.01	11.11
144.69	0.00	0.00	0.00	147.29	12.84	0.01	12.84
144.74	0.00	0.00	0.00	147.34	14.65	0.01	14.64
144.79	0.00	0.00	0.00	147.39	16.53	0.01	16.53
144.84	0.00	0.00	0.00	147.44	18.49	0.01	18.48
144.89	0.00	0.00	0.00	147.49	20.51	0.01	20.51
144.94	0.00	0.00	0.00	147.54	22.60	0.01	22.60
144.99	0.00	0.00	0.00	147.59	24.76	0.01	24.75
145.04	0.00	0.00	0.00	147.64	26.97	0.01	26.97
145.09	0.00	0.00	0.00	147.69	29.25	0.01	29.24
145.14	0.00	0.00	0.00	147.74	31.58	0.01	31.57
145.19	0.00	0.00	0.00	147.79	33.97	0.01	33.96
145.24	0.00	0.00	0.00	147.84	36.41	0.01	36.40
145.29	0.00	0.00	0.00	147.89	38.90	0.01	38.89
145.34	0.00	0.00	0.00	147.94	41.45	0.01	41.44
145.39	0.00	0.00	0.00	147.99	**44.04**	**0.01**	**44.03**
145.44	0.00	0.00	0.00				
145.49	0.00	0.00	0.00				
145.54	0.00	0.00	0.00				

Stage-Area-Storage for Pond 39P: Bio -14

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
142.99	154	0	145.59	154	132
143.04	154	3	145.64	154	135
143.09	154	5	145.69	154	137
143.14	154	8	145.74	154	140
143.19	154	10	145.79	154	142
143.24	154	13	145.84	154	145
143.29	154	15	145.89	154	147
143.34	154	18	145.94	154	150
143.39	154	20	145.99	154	152
143.44	154	23	146.04	164	160
143.49	154	25	146.09	176	169
143.54	154	28	146.14	187	178
143.59	154	30	146.19	199	188
143.64	154	33	146.24	211	198
143.69	154	36	146.29	223	209
143.74	154	38	146.34	235	220
143.79	154	41	146.39	247	232
143.84	154	43	146.44	259	245
143.89	154	46	146.49	271	258
143.94	154	48	146.54	283	272
143.99	154	51	146.59	295	286
144.04	154	53	146.64	307	302
144.09	154	56	146.69	319	317
144.14	154	58	146.74	331	333
144.19	154	61	146.79	343	350
144.24	154	64	146.84	355	368
144.29	154	66	146.89	367	386
144.34	154	69	146.94	379	404
144.39	154	71	146.99	391	424
144.44	154	74	147.04	405	443
144.49	154	76	147.09	420	464
144.54	154	79	147.14	434	485
144.59	154	81	147.19	449	508
144.64	154	84	147.24	464	530
144.69	154	86	147.29	479	554
144.74	154	89	147.34	494	578
144.79	154	91	147.39	508	603
144.84	154	94	147.44	523	629
144.89	154	97	147.49	538	656
144.94	154	99	147.54	553	683
144.99	154	102	147.59	568	711
145.04	154	104	147.64	582	740
145.09	154	107	147.69	597	769
145.14	154	109	147.74	612	799
145.19	154	112	147.79	627	830
145.24	154	114	147.84	642	862
145.29	154	117	147.89	656	895
145.34	154	119	147.94	671	928
145.39	154	122	147.99	**686**	**962**
145.44	154	125			
145.49	154	127			
145.54	154	130			

Summary for Pond 40P: DB-02

Inflow Area = 8,397 sf, 40.23% Impervious, Inflow Depth = 0.81" for 1-Year event
Inflow = 0.25 cfs @ 12.18 hrs, Volume= 568 cf
Outflow = 0.02 cfs @ 13.49 hrs, Volume= 568 cf, Atten= 90%, Lag= 78.8 min
Discarded = 0.01 cfs @ 13.49 hrs, Volume= 247 cf
Primary = 0.02 cfs @ 13.49 hrs, Volume= 321 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 145.35' @ 13.49 hrs Surf.Area= 729 sf Storage= 239 cf

Plug-Flow detention time= 119.0 min calculated for 568 cf (100% of inflow)
Center-of-Mass det. time= 118.9 min (950.1 - 831.2)

Volume	Invert	Avail.Storage	Storage Description
#1	145.00'	3,396 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
145.00	619	0	0
146.00	929	774	774
147.00	1,297	1,113	1,887
148.00	1,720	1,509	3,396

Device	Routing	Invert	Outlet Devices
#1	Device 4	144.95'	**1.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Device 4	145.70'	**0.5' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#3	Device 4	146.60'	**4.5' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Primary	145.00'	**12.0" Round Culvert** L= 61.0' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 145.00' / 144.50' S= 0.0082 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 0.79 sf
#5	Discarded	145.00'	**0.500 in/hr Exfiltration over Surface area** Phase-In= 0.02'

Discarded OutFlow Max=0.01 cfs @ 13.49 hrs HW=145.35' (Free Discharge)
└**5=Exfiltration** (Exfiltration Controls 0.01 cfs)

Primary OutFlow Max=0.02 cfs @ 13.49 hrs HW=145.35' TW=0.00' (Dynamic Tailwater)
└**4=Culvert** (Passes 0.02 cfs of 0.47 cfs potential flow)
  ├**1=Orifice/Grate** (Orifice Controls 0.02 cfs @ 2.87 fps)
  ├**2=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
  └**3=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Stage-Discharge for Pond 40P: DB-02

Elevation (feet)	Discharge (cfs)	Discarded (cfs)	Primary (cfs)
145.00	0.00	0.00	0.00
145.05	0.01	0.01	0.01
145.10	0.02	0.01	0.01
145.15	0.02	0.01	0.01
145.20	0.02	0.01	0.01
145.25	0.02	0.01	0.01
145.30	0.02	0.01	0.01
145.35	0.02	0.01	0.02
145.40	0.03	0.01	0.02
145.45	0.03	0.01	0.02
145.50	0.03	0.01	0.02
145.55	0.03	0.01	0.02
145.60	0.03	0.01	0.02
145.65	0.03	0.01	0.02
145.70	0.03	0.01	0.02
145.75	0.05	0.01	0.04
145.80	0.08	0.01	0.07
145.85	0.12	0.01	0.11
145.90	0.17	0.01	0.16
145.95	0.22	0.01	0.21
146.00	0.27	0.01	0.26
146.05	0.33	0.01	0.32
146.10	0.39	0.01	0.37
146.15	0.44	0.01	0.43
146.20	0.50	0.01	0.49
146.25	0.56	0.01	0.55
146.30	0.62	0.01	0.61
146.35	0.68	0.01	0.66
146.40	0.73	0.01	0.72
146.45	0.79	0.01	0.77
146.50	0.84	0.01	0.83
146.55	0.89	0.01	0.88
146.60	0.94	0.01	0.93
146.65	1.15	0.01	1.14
146.70	1.49	0.01	1.48
146.75	1.92	0.01	1.90
146.80	2.41	0.01	2.40
146.85	2.96	0.01	2.94
146.90	3.55	0.01	3.54
146.95	4.19	0.01	4.18
147.00	4.46	0.02	4.45
147.05	4.53	0.02	4.52
147.10	4.61	0.02	4.59
147.15	4.68	0.02	4.66
147.20	4.75	0.02	4.73
147.25	4.82	0.02	4.80
147.30	4.89	0.02	4.87
147.35	4.95	0.02	4.94
147.40	5.02	0.02	5.00
147.45	5.09	0.02	5.07
147.50	5.15	0.02	5.13
147.55	5.21	0.02	5.20
147.60	5.28	0.02	5.26
147.65	5.34	0.02	5.32
147.70	5.40	0.02	5.38
147.75	5.46	0.02	5.44
147.80	5.52	0.02	5.50
147.85	5.58	0.02	5.56
147.90	5.64	0.02	5.62
147.95	5.70	0.02	5.68
148.00	**5.76**	**0.02**	**5.74**

Stage-Area-Storage for Pond 40P: DB-02

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
145.00	619	0
145.05	635	31
145.10	650	63
145.15	666	96
145.20	681	130
145.25	697	164
145.30	712	200
145.35	727	236
145.40	743	272
145.45	758	310
145.50	774	348
145.55	790	387
145.60	805	427
145.65	821	468
145.70	836	509
145.75	852	551
145.80	867	594
145.85	882	638
145.90	898	683
145.95	913	728
146.00	929	774
146.05	947	821
146.10	966	869
146.15	984	917
146.20	1,003	967
146.25	1,021	1,018
146.30	1,039	1,069
146.35	1,058	1,122
146.40	1,076	1,175
146.45	1,095	1,229
146.50	1,113	1,285
146.55	1,131	1,341
146.60	1,150	1,398
146.65	1,168	1,456
146.70	1,187	1,514
146.75	1,205	1,574
146.80	1,223	1,635
146.85	1,242	1,697
146.90	1,260	1,759
146.95	1,279	1,823
147.00	1,297	1,887
147.05	1,318	1,952
147.10	1,339	2,019
147.15	1,360	2,086
147.20	1,382	2,155
147.25	1,403	2,224
147.30	1,424	2,295
147.35	1,445	2,367
147.40	1,466	2,440
147.45	1,487	2,513
147.50	1,509	2,588
147.55	1,530	2,664
147.60	1,551	2,741
147.65	1,572	2,819
147.70	1,593	2,899
147.75	1,614	2,979
147.80	1,635	3,060
147.85	1,657	3,142
147.90	1,678	3,226
147.95	1,699	3,310
148.00	**1,720**	**3,396**

Summary for Pond 41P: UGDS-1

Inflow Area = 32,479 sf, 71.91% Impervious, Inflow Depth = 0.54" for 1-Year event
Inflow = 0.52 cfs @ 12.42 hrs, Volume= 1,459 cf
Outflow = 0.03 cfs @ 15.80 hrs, Volume= 1,449 cf, Atten= 94%, Lag= 203.0 min
Primary = 0.03 cfs @ 15.80 hrs, Volume= 1,449 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 145.53' @ 15.80 hrs Surf.Area= 3,170 sf Storage= 906 cf

Plug-Flow detention time= 366.4 min calculated for 1,448 cf (99% of inflow)
Center-of-Mass det. time= 365.8 min (1,201.8 - 836.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	145.20'	1,367 cf	**72.24'W x 43.88'L x 3.17'H Field A** 10,034 cf Overall - 5,893 cf Embedded = 4,141 cf x 33.0% Voids
#2A	145.20'	5,598 cf	**ACF R-Tank HD 1.5** x 884 Inside #1 Inside= 15.7"W x 26.0"H => 2.70 sf x 2.35'L = 6.3 cf Outside= 15.7"W x 26.0"H => 2.84 sf x 2.35'L = 6.7 cf 884 Chambers in 52 Rows
		6,965 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Device 2	145.15'	**1.5" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Primary	145.20'	**15.0" Round Culvert** L= 68.0' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 145.20' / 143.75' S= 0.0213 '/' Cc= 0.900 n= 0.013 Corrugated PE, smooth interior, Flow Area= 1.23 sf
#3	Device 2	146.20'	**1.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#4	Device 2	147.20'	**4.0' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=0.03 cfs @ 15.80 hrs HW=145.53' TW=0.00' (Dynamic Tailwater)
└─**2=Culvert** (Passes 0.03 cfs of 0.70 cfs potential flow)
  ├─**1=Orifice/Grate** (Orifice Controls 0.03 cfs @ 2.72 fps)
  ├─**3=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)
  └─**4=Sharp-Crested Rectangular Weir** (Controls 0.00 cfs)

Pond 41P: UGDS-1 - Chamber Wizard Field A

Chamber Model = ACF R-Tank HD 1.5 (ACF Environmental R-Tank HD)
Inside= 15.7"W x 26.0"H => 2.70 sf x 2.35'L = 6.3 cf
Outside= 15.7"W x 26.0"H => 2.84 sf x 2.35'L = 6.7 cf

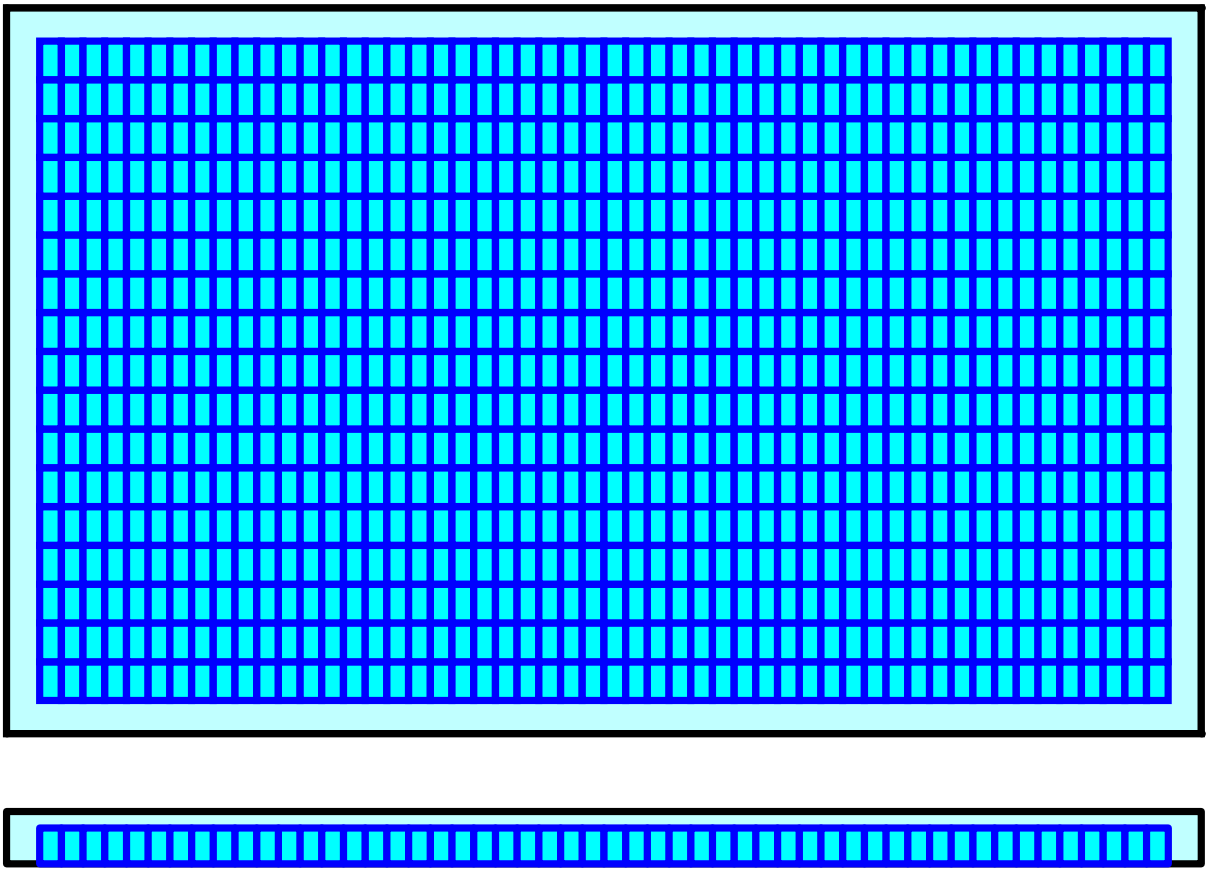
17 Chambers/Row x 2.35' Long = 39.88' Row Length +24.0" End Stone x 2 = 43.88' Base Length
52 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 72.24' Base Width
26.0" Chamber Height + 12.0" Stone Cover = 3.17' Field Height

884 Chambers x 6.3 cf = 5,598.1 cf Chamber Storage
884 Chambers x 6.7 cf = 5,892.7 cf Displacement

10,033.7 cf Field - 5,892.7 cf Chambers = 4,141.0 cf Stone x 33.0% Voids = 1,366.5 cf Stone Storage

Chamber Storage + Stone Storage = 6,964.6 cf = 0.160 af
Overall Storage Efficiency = 69.4%
Overall System Size = 43.88' x 72.24' x 3.17'

884 Chambers
371.6 cy Field
153.4 cy Stone



Stage-Discharge for Pond 41P: UGDS-1

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
145.20	0.00	146.24	0.09	147.28	3.26	148.32	10.95
145.22	0.00	146.26	0.11	147.30	3.44	148.34	10.98
145.24	0.01	146.28	0.13	147.32	3.63	148.36	**11.02**
145.26	0.01	146.30	0.16	147.34	3.84		
145.28	0.02	146.32	0.19	147.36	4.05		
145.30	0.02	146.34	0.23	147.38	4.28		
145.32	0.02	146.36	0.27	147.40	4.51		
145.34	0.02	146.38	0.30	147.42	4.75		
145.36	0.02	146.40	0.35	147.44	5.00		
145.38	0.02	146.42	0.39	147.46	5.26		
145.40	0.03	146.44	0.43	147.48	5.52		
145.42	0.03	146.46	0.48	147.50	5.79		
145.44	0.03	146.48	0.52	147.52	6.07		
145.46	0.03	146.50	0.57	147.54	6.35		
145.48	0.03	146.52	0.62	147.56	6.64		
145.50	0.03	146.54	0.67	147.58	6.93		
145.52	0.03	146.56	0.72	147.60	7.23		
145.54	0.03	146.58	0.78	147.62	7.54		
145.56	0.03	146.60	0.83	147.64	7.85		
145.58	0.04	146.62	0.89	147.66	8.16		
145.60	0.04	146.64	0.94	147.68	8.48		
145.62	0.04	146.66	1.00	147.70	8.81		
145.64	0.04	146.68	1.05	147.72	9.14		
145.66	0.04	146.70	1.11	147.74	9.47		
145.68	0.04	146.72	1.17	147.76	9.81		
145.70	0.04	146.74	1.23	147.78	10.02		
145.72	0.04	146.76	1.29	147.80	10.06		
145.74	0.04	146.78	1.35	147.82	10.09		
145.76	0.04	146.80	1.41	147.84	10.13		
145.78	0.04	146.82	1.47	147.86	10.16		
145.80	0.05	146.84	1.54	147.88	10.20		
145.82	0.05	146.86	1.60	147.90	10.23		
145.84	0.05	146.88	1.66	147.92	10.27		
145.86	0.05	146.90	1.72	147.94	10.30		
145.88	0.05	146.92	1.79	147.96	10.34		
145.90	0.05	146.94	1.85	147.98	10.37		
145.92	0.05	146.96	1.92	148.00	10.41		
145.94	0.05	146.98	1.98	148.02	10.44		
145.96	0.05	147.00	2.04	148.04	10.48		
145.98	0.05	147.02	2.11	148.06	10.51		
146.00	0.05	147.04	2.17	148.08	10.55		
146.02	0.05	147.06	2.24	148.10	10.58		
146.04	0.05	147.08	2.31	148.12	10.61		
146.06	0.05	147.10	2.37	148.14	10.65		
146.08	0.06	147.12	2.44	148.16	10.68		
146.10	0.06	147.14	2.50	148.18	10.72		
146.12	0.06	147.16	2.57	148.20	10.75		
146.14	0.06	147.18	2.63	148.22	10.78		
146.16	0.06	147.20	2.70	148.24	10.82		
146.18	0.06	147.22	2.80	148.26	10.85		
146.20	0.06	147.24	2.94	148.28	10.88		
146.22	0.07	147.26	3.09	148.30	10.92		

Stage-Area-Storage for Pond 41P: UGDS-1

Elevation (feet)	Storage (cubic-feet)
145.20	0
145.25	137
145.30	273
145.35	410
145.40	547
145.45	683
145.50	820
145.55	957
145.60	1,093
145.65	1,230
145.70	1,367
145.75	1,503
145.80	1,640
145.85	1,777
145.90	1,913
145.95	2,050
146.00	2,187
146.05	2,323
146.10	2,460
146.15	2,597
146.20	2,733
146.25	2,870
146.30	3,007
146.35	3,143
146.40	3,280
146.45	3,417
146.50	3,553
146.55	3,690
146.60	3,827
146.65	3,963
146.70	4,100
146.75	4,237
146.80	4,373
146.85	4,510
146.90	4,647
146.95	4,783
147.00	4,920
147.05	5,057
147.10	5,193
147.15	5,330
147.20	5,467
147.25	5,603
147.30	5,740
147.35	5,877
147.40	5,955
147.45	6,007
147.50	6,059
147.55	6,112
147.60	6,164
147.65	6,216
147.70	6,269
147.75	6,321
147.80	6,373
147.85	6,426
147.90	6,478
147.95	6,530
148.00	6,582
148.05	6,635
148.10	6,687
148.15	6,739
148.20	6,792
148.25	6,844
148.30	6,896
148.35	**6,949**

Summary for Pond 42P: UGDS-03

Inflow Area = 64,555 sf, 66.31% Impervious, Inflow Depth = 0.72" for 1-Year event
Inflow = 1.73 cfs @ 12.27 hrs, Volume= 3,866 cf
Outflow = 0.08 cfs @ 15.56 hrs, Volume= 3,867 cf, Atten= 95%, Lag= 197.7 min
Primary = 0.08 cfs @ 15.56 hrs, Volume= 3,867 cf

Routing by Dyn-Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs / 3
Peak Elev= 146.50' @ 15.56 hrs Surf.Area= 4,998 sf Storage= 2,521 cf

Plug-Flow detention time= 418.7 min calculated for 3,864 cf (100% of inflow)
Center-of-Mass det. time= 419.1 min (1,234.9 - 815.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	145.90'	1,200 cf	**69.62'W x 39.19'L x 3.17'H Field A** 8,635 cf Overall - 4,999 cf Embedded = 3,636 cf x 33.0% Voids
#2A	145.90'	4,750 cf	**ACF R-Tank LD 1.5** x 750 Inside #1 Inside= 15.7"W x 26.0"H => 2.70 sf x 2.35'L = 6.3 cf Outside= 15.7"W x 26.0"H => 2.84 sf x 2.35'L = 6.7 cf 750 Chambers in 50 Rows
#3B	145.90'	1,069 cf	**25.00'W x 90.79'L x 3.17'H Field B** 7,184 cf Overall - 3,946 cf Embedded = 3,238 cf x 33.0% Voids
#4B	145.90'	3,749 cf	**ACF R-Tank LD 1.5** x 592 Inside #3 Inside= 15.7"W x 26.0"H => 2.70 sf x 2.35'L = 6.3 cf Outside= 15.7"W x 26.0"H => 2.84 sf x 2.35'L = 6.7 cf 592 Chambers in 16 Rows
		10,767 cf	Total Available Storage

Storage Group A created with Chamber Wizard
Storage Group B created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Device 3	145.85'	**2.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads
#2	Device 3	146.75'	**1.3' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)
#3	Primary	145.85'	**18.0" Round Culvert** L= 53.0' RCP, rounded edge headwall, Ke= 0.100 Inlet / Outlet Invert= 145.85' / 145.40' S= 0.0085 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 1.77 sf
#4	Device 3	148.00'	**3.7' long Sharp-Crested Rectangular Weir** 2 End Contraction(s)

Primary OutFlow Max=0.08 cfs @ 15.56 hrs HW=146.50' TW=0.00' (Dynamic Tailwater)
↑**3=Culvert** (Passes 0.08 cfs of 2.03 cfs potential flow)
↑**1=Orifice/Grate** (Orifice Controls 0.08 cfs @ 3.62 fps)
2=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)
4=Sharp-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 42P: UGDS-03 - Chamber Wizard Field A

Chamber Model = ACF R-Tank LD 1.5 (ACF Environmental R-Tank LD)
Inside= 15.7"W x 26.0"H => 2.70 sf x 2.35'L = 6.3 cf
Outside= 15.7"W x 26.0"H => 2.84 sf x 2.35'L = 6.7 cf

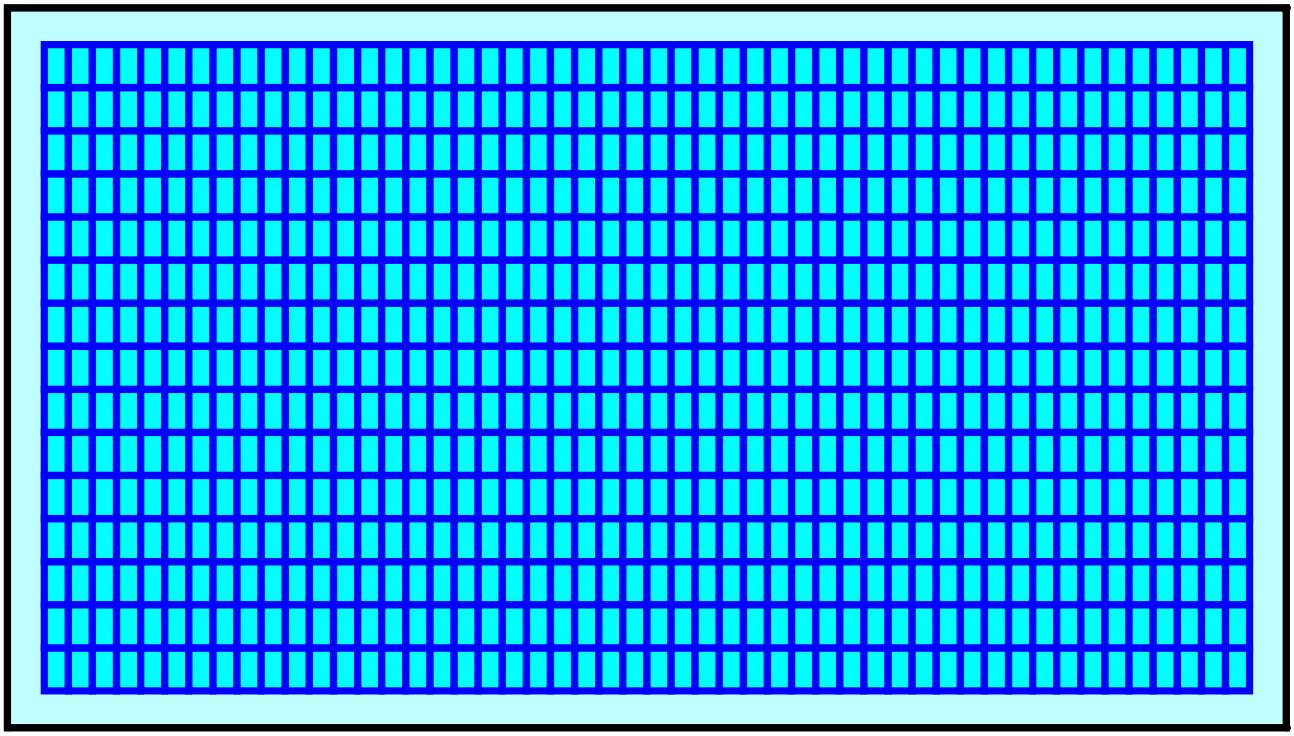
15 Chambers/Row x 2.35' Long = 35.19' Row Length +24.0" End Stone x 2 = 39.19' Base Length
50 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 69.62' Base Width
26.0" Chamber Height + 12.0" Stone Cover = 3.17' Field Height

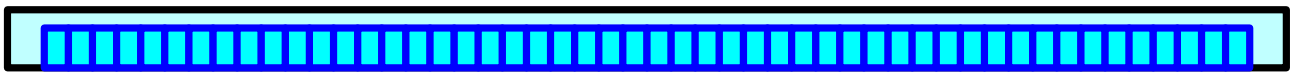
750 Chambers x 6.3 cf = 4,749.5 cf Chamber Storage
750 Chambers x 6.7 cf = 4,999.5 cf Displacement

8,635.3 cf Field - 4,999.5 cf Chambers = 3,635.8 cf Stone x 33.0% Voids = 1,199.8 cf Stone Storage

Chamber Storage + Stone Storage = 5,949.3 cf = 0.137 af
Overall Storage Efficiency = 68.9%
Overall System Size = 39.19' x 69.62' x 3.17'

750 Chambers
319.8 cy Field
134.7 cy Stone





Pond 42P: UGDS-03 - Chamber Wizard Field B

Chamber Model = ACF R-Tank LD 1.5 (ACF Environmental R-Tank LD)
Inside= 15.7"W x 26.0"H => 2.70 sf x 2.35'L = 6.3 cf
Outside= 15.7"W x 26.0"H => 2.84 sf x 2.35'L = 6.7 cf

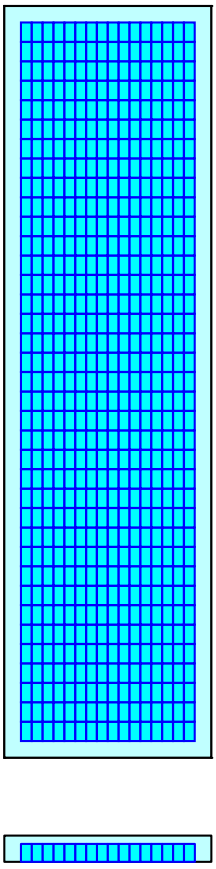
37 Chambers/Row x 2.35' Long = 86.79' Row Length +24.0" End Stone x 2 = 90.79' Base Length
16 Rows x 15.7" Wide + 24.0" Side Stone x 2 = 25.00' Base Width
26.0" Chamber Height + 12.0" Stone Cover = 3.17' Field Height

592 Chambers x 6.3 cf = 3,749.0 cf Chamber Storage
592 Chambers x 6.7 cf = 3,946.3 cf Displacement

7,184.2 cf Field - 3,946.3 cf Chambers = 3,237.9 cf Stone x 33.0% Voids = 1,068.5 cf Stone Storage

Chamber Storage + Stone Storage = 4,817.5 cf = 0.111 af
Overall Storage Efficiency = 67.1%
Overall System Size = 90.79' x 25.00' x 3.17'

592 Chambers
266.1 cy Field
119.9 cy Stone



Stage-Discharge for Pond 42P: UGDS-03

Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)	Elevation (feet)	Primary (cfs)
145.90	0.00	146.94	0.45	147.98	4.85	149.02	14.88
145.92	0.01	146.96	0.50	148.00	4.95	149.04	14.95
145.94	0.01	146.98	0.56	148.02	5.08	149.06	**15.02**
145.96	0.02	147.00	0.62	148.04	5.24		
145.98	0.02	147.02	0.68	148.06	5.42		
146.00	0.03	147.04	0.74	148.08	5.61		
146.02	0.03	147.06	0.81	148.10	5.82		
146.04	0.03	147.08	0.88	148.12	6.03		
146.06	0.04	147.10	0.95	148.14	6.26		
146.08	0.04	147.12	1.02	148.16	6.50		
146.10	0.04	147.14	1.09	148.18	6.74		
146.12	0.05	147.16	1.16	148.20	7.00		
146.14	0.05	147.18	1.24	148.22	7.26		
146.16	0.05	147.20	1.31	148.24	7.52		
146.18	0.05	147.22	1.39	148.26	7.80		
146.20	0.05	147.24	1.47	148.28	8.08		
146.22	0.06	147.26	1.55	148.30	8.36		
146.24	0.06	147.28	1.63	148.32	8.66		
146.26	0.06	147.30	1.71	148.34	8.96		
146.28	0.06	147.32	1.79	148.36	9.26		
146.30	0.06	147.34	1.88	148.38	9.57		
146.32	0.07	147.36	1.96	148.40	9.88		
146.34	0.07	147.38	2.05	148.42	10.20		
146.36	0.07	147.40	2.13	148.44	10.52		
146.38	0.07	147.42	2.22	148.46	10.85		
146.40	0.07	147.44	2.31	148.48	11.19		
146.42	0.07	147.46	2.40	148.50	11.52		
146.44	0.07	147.48	2.48	148.52	11.86		
146.46	0.08	147.50	2.57	148.54	12.21		
146.48	0.08	147.52	2.66	148.56	12.56		
146.50	0.08	147.54	2.76	148.58	12.91		
146.52	0.08	147.56	2.85	148.60	13.26		
146.54	0.08	147.58	2.94	148.62	13.40		
146.56	0.08	147.60	3.03	148.64	13.48		
146.58	0.08	147.62	3.12	148.66	13.56		
146.60	0.09	147.64	3.22	148.68	13.63		
146.62	0.09	147.66	3.31	148.70	13.71		
146.64	0.09	147.68	3.41	148.72	13.79		
146.66	0.09	147.70	3.50	148.74	13.86		
146.68	0.09	147.72	3.60	148.76	13.94		
146.70	0.09	147.74	3.69	148.78	14.01		
146.72	0.09	147.76	3.79	148.80	14.09		
146.74	0.09	147.78	3.88	148.82	14.16		
146.76	0.10	147.80	3.98	148.84	14.23		
146.78	0.12	147.82	4.07	148.86	14.31		
146.80	0.14	147.84	4.17	148.88	14.38		
146.82	0.18	147.86	4.27	148.90	14.45		
146.84	0.21	147.88	4.37	148.92	14.52		
146.86	0.25	147.90	4.46	148.94	14.60		
146.88	0.30	147.92	4.56	148.96	14.67		
146.90	0.34	147.94	4.66	148.98	14.74		
146.92	0.39	147.96	4.75	149.00	14.81		

Stage-Area-Storage for Pond 42P: UGDS-03

Elevation (feet)	Storage (cubic-feet)
145.90	0
145.95	211
146.00	421
146.05	632
146.10	842
146.15	1,053
146.20	1,263
146.25	1,474
146.30	1,684
146.35	1,895
146.40	2,105
146.45	2,316
146.50	2,526
146.55	2,737
146.60	2,947
146.65	3,158
146.70	3,369
146.75	3,579
146.80	3,790
146.85	4,000
146.90	4,211
146.95	4,421
147.00	4,632
147.05	4,842
147.10	5,053
147.15	5,263
147.20	5,474
147.25	5,684
147.30	5,895
147.35	6,105
147.40	6,316
147.45	6,527
147.50	6,737
147.55	6,948
147.60	7,158
147.65	7,369
147.70	7,579
147.75	7,790
147.80	8,000
147.85	8,211
147.90	8,421
147.95	8,632
148.00	8,842
148.05	9,053
148.10	9,175
148.15	9,257
148.20	9,340
148.25	9,422
148.30	9,505
148.35	9,587
148.40	9,669
148.45	9,752
148.50	9,834
148.55	9,917
148.60	9,999
148.65	10,082
148.70	10,164
148.75	10,247
148.80	10,329
148.85	10,412
148.90	10,494
148.95	10,577
149.00	10,659
149.05	**10,741**

Summary for Link 3L: DP 1 -Road (MOHB)

Inflow Area = 76,055 sf, 65.78% Impervious, Inflow Depth = 0.54" for 1-Year event
Inflow = 0.31 cfs @ 12.01 hrs, Volume= 3,410 cf
Primary = 0.31 cfs @ 12.01 hrs, Volume= 3,410 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Link 5L: DP2 - Wetland NORTH (MOHB)

Inflow Area = 121,282 sf, 40.99% Impervious, Inflow Depth = 0.81" for 1-Year event
Inflow = 1.68 cfs @ 12.34 hrs, Volume= 8,179 cf
Primary = 1.68 cfs @ 12.34 hrs, Volume= 8,179 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Link 6L: DP 3 - Wetland SouthWest (BB)

Inflow Area = 194,312 sf, 49.29% Impervious, Inflow Depth = 0.76" for 1-Year event
Inflow = 2.47 cfs @ 12.15 hrs, Volume= 12,374 cf
Primary = 2.47 cfs @ 12.15 hrs, Volume= 12,374 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Link 7L: DP 4 - Wetland Southeast (BB)

Inflow Area = 149,683 sf, 34.48% Impervious, Inflow Depth = 0.91" for 1-Year event
Inflow = 2.25 cfs @ 12.10 hrs, Volume= 11,412 cf
Primary = 2.25 cfs @ 12.10 hrs, Volume= 11,412 cf, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points x 3
Runoff by SCS TR-20 method, UH=SCS, Split Pervious/Imperv. UI as Pervious
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PDA 1A: Subcat PDA 1A Runoff Area=26,484 sf 61.04% Impervious Runoff Depth=0.64"
Tc=6.0 min CN=76/98 Runoff=0.40 cfs 1,402 cf

Subcatchment PDA 1B: Subcat PDA 1B Runoff Area=7,838 sf 100.00% Impervious Runoff Depth=0.99"
Tc=6.0 min CN=88/98 Runoff=0.19 cfs 644 cf

Subcatchment PDA 2A: Subcat PDA 2A Runoff Area=52,452 sf 4.60% Impervious Runoff Depth=0.13"
Flow Length=375' Slope=0.0200 '/' Tc=11.0 min CN=76/98 Runoff=0.06 cfs 560 cf

Subcatchment PDA 2B: Subcat PDA 2B Runoff Area=39,263 sf 66.48% Impervious Runoff Depth=0.71"
Tc=6.0 min CN=80/98 Runoff=0.67 cfs 2,312 cf

Subcatchment PDA 2C: Subcat PDA 2C Runoff Area=4,298 sf 75.91% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=80/98 Runoff=0.08 cfs 281 cf

Subcatchment PDA 2D: Subcat PDA 2D Runoff Area=4,291 sf 75.81% Impervious Runoff Depth=0.78"
Tc=6.0 min CN=80/98 Runoff=0.08 cfs 280 cf

Subcatchment PDA 2E: Subcat PDA 2E Runoff Area=27,979 sf 82.77% Impervious Runoff Depth=0.85"
Tc=6.0 min CN=81/98 Runoff=0.58 cfs 1,972 cf

Subcatchment PDA 2F: Subcat PDA 2F Runoff Area=4,106 sf 75.92% Impervious Runoff Depth=0.79"
Tc=6.0 min CN=80/98 Runoff=0.08 cfs 269 cf

Subcatchment PDA 2G: Subcat PDA 2G Runoff Area=12,646 sf 66.30% Impervious Runoff Depth=0.71"
Tc=6.0 min CN=80/98 Runoff=0.21 cfs 743 cf

Subcatchment PDA 2H: Subcat PDA 2H Runoff Area=4,227 sf 75.29% Impervious Runoff Depth=0.78"
Tc=6.0 min CN=80/98 Runoff=0.08 cfs 275 cf

Subcatchment PDA 3A: Subcat PDA 3A Runoff Area=50,013 sf 55.09% Impervious Runoff Depth=0.59"
Tc=6.0 min CN=77/98 Runoff=0.69 cfs 2,453 cf

Subcatchment PDA 3B: Subcat PDA 3B Runoff Area=12,000 sf 100.00% Impervious Runoff Depth=0.99"
Tc=6.0 min CN=0/98 Runoff=0.29 cfs 986 cf

Subcatchment PDA 3C: Subcat PDA 3C Runoff Area=20,479 sf 54.41% Impervious Runoff Depth=0.57"
Tc=6.0 min CN=75/98 Runoff=0.27 cfs 972 cf

Subcatchment PDA 3D: Subcat PDA 3D Runoff Area=4,377 sf 77.58% Impervious Runoff Depth=0.80"
Tc=6.0 min CN=80/98 Runoff=0.09 cfs 291 cf

Subcatchment PDA 3E: Subcat PDA 3E Runoff Area=10,567 sf 60.72% Impervious Runoff Depth=0.64"
Tc=6.0 min CN=77/98 Runoff=0.16 cfs 562 cf

Subcatchment PDA 3F: Subcat PDA 3F Runoff Area=46,282 sf 0.01% Impervious Runoff Depth=0.06"
Flow Length=86' Tc=7.7 min CN=74/98 Runoff=0.02 cfs 238 cf

Subcatchment PDA 3G: Subcat PDA 3G Runoff Area=6,443 sf 28.81% Impervious Runoff Depth=0.34"
Tc=6.0 min CN=75/98 Runoff=0.05 cfs 181 cf

Subcatchment PDA 3H: Subcat PDA 3H Runoff Area=20,855 sf 43.95% Impervious Runoff Depth=0.52"
Tc=6.0 min CN=80/98 Runoff=0.25 cfs 902 cf

Subcatchment PDA 3I: Subcat PDA 3I Runoff Area=4,778 sf 90.06% Impervious Runoff Depth=0.91"
Tc=6.0 min CN=82/98 Runoff=0.11 cfs 361 cf

Subcatchment PDA 3J: Subcat PDA 3J Runoff Area=4,712 sf 73.27% Impervious Runoff Depth=0.76"
Tc=6.0 min CN=80/98 Runoff=0.09 cfs 300 cf

Subcatchment PDA 3K: Subcat PDA 3K Runoff Area=13,806 sf 70.90% Impervious Runoff Depth=0.74"
Tc=6.0 min CN=79/98 Runoff=0.25 cfs 849 cf

Subcatchment PDA 4A: Subcat PDA 4A Runoff Area=42,711 sf 62.31% Impervious Runoff Depth=0.67"
Tc=6.0 min CN=80/98 Runoff=0.69 cfs 2,392 cf

Subcatchment PDA 4B: Subcat PDA 4B Runoff Area=4,401 sf 77.40% Impervious Runoff Depth=0.80"
Tc=6.0 min CN=80/98 Runoff=0.09 cfs 292 cf

Subcatchment PDA 4C: Subcat PDA 4C Runoff Area=13,049 sf 56.91% Impervious Runoff Depth=0.63"
Tc=6.0 min CN=80/98 Runoff=0.19 cfs 682 cf

Subcatchment PDA 4D: Subcat PDA 4D Runoff Area=8,397 sf 37.59% Impervious Runoff Depth=0.48"
Tc=6.0 min CN=81/98 Runoff=0.09 cfs 335 cf

Subcatchment PDA 4E: Subcat PDA 4E Runoff Area=36,641 sf 9.96% Impervious Runoff Depth=0.24"
Tc=6.0 min CN=80/98 Runoff=0.16 cfs 721 cf

Subcatchment PDA 4F: Subcat PDA 4F Runoff Area=4,393 sf 77.66% Impervious Runoff Depth=0.80"
Tc=6.0 min CN=80/98 Runoff=0.09 cfs 293 cf

Subcatchment PDA 4G: Subcat PDA 4G Runoff Area=34,103 sf 0.01% Impervious Runoff Depth=0.13"
Tc=6.0 min CN=79/98 Runoff=0.06 cfs 382 cf

Subcatchment PDA 4H: Subcat PDA 4H Runoff Area=5,987 sf 4.29% Impervious Runoff Depth=0.21"
Tc=6.0 min CN=81/98 Runoff=0.02 cfs 104 cf

Subcatchment PDA1C: Subcat PDA1C Runoff Area=13,755 sf 3.60% Impervious Runoff Depth=0.09"
Tc=0.0 min CN=74/98 Runoff=0.01 cfs 109 cf

Pond 4P: Infiltration Basin-01 Peak Elev=147.21' Storage=1,046 cf Inflow=0.59 cfs 2,046 cf
Discarded=0.03 cfs 2,046 cf Primary=0.00 cfs 0 cf Secondary=0.00 cfs 0 cf Outflow=0.03 cfs 2,046 cf

Pond 7P: Tree Box Filter -01 Peak Elev=148.69' Storage=1,402 cf Inflow=0.58 cfs 1,972 cf
Discarded=0.01 cfs 1,896 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 1,896 cf

Pond 10P: Bio-02 Peak Elev=147.04' Storage=779 cf Inflow=0.36 cfs 1,263 cf
Discarded=0.01 cfs 1,263 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 1,263 cf

Pond 12P: Infiltration Basin-02 Peak Elev=146.04' Storage=1,517 cf Inflow=0.69 cfs 2,453 cf
Discarded=0.02 cfs 2,453 cf Primary=0.00 cfs 0 cf Secondary=0.00 cfs 0 cf Outflow=0.02 cfs 2,453 cf

Pond 13P: Bio-03 Peak Elev=145.71' Storage=1,418 cf Inflow=0.67 cfs 2,312 cf
Discarded=0.02 cfs 2,312 cf Primary=0.00 cfs 0 cf Outflow=0.02 cfs 2,312 cf

Pond 14P: DB-01 Peak Elev=144.00' Storage=0 cf Inflow=0.00 cfs 0 cf
Discarded=0.00 cfs 0 cf Primary=0.00 cfs 0 cf Secondary=0.00 cfs 0 cf Outflow=0.00 cfs 0 cf

Pond 15P: Bio -04 Peak Elev=148.83' Storage=183 cf Inflow=0.08 cfs 281 cf
Discarded=0.00 cfs 281 cf Primary=0.00 cfs 0 cf Outflow=0.00 cfs 281 cf

Pond 16P: Bio -05 Peak Elev=148.83' Storage=182 cf Inflow=0.08 cfs 280 cf
Discarded=0.00 cfs 280 cf Primary=0.00 cfs 0 cf Outflow=0.00 cfs 280 cf

Pond 17P: Bio-06 Peak Elev=148.78' Storage=174 cf Inflow=0.08 cfs 269 cf
Discarded=0.00 cfs 269 cf Primary=0.00 cfs 0 cf Outflow=0.00 cfs 269 cf

Pond 19P: Bio -08 Peak Elev=149.21' Storage=453 cf Inflow=0.21 cfs 743 cf
Discarded=0.01 cfs 743 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 743 cf

Pond 20P: Bio -07 Peak Elev=148.82' Storage=178 cf Inflow=0.08 cfs 275 cf
Discarded=0.00 cfs 275 cf Primary=0.00 cfs 0 cf Outflow=0.00 cfs 275 cf

Pond 21P: UGIS-02 Peak Elev=144.05' Storage=0 cf Inflow=0.00 cfs 0 cf
Discarded=0.00 cfs 0 cf Primary=0.00 cfs 0 cf Outflow=0.00 cfs 0 cf

Pond 22P: DIV-01 Peak Elev=144.50' Inflow=0.00 cfs 0 cf
Primary=0.00 cfs 0 cf Secondary=0.00 cfs 0 cf Outflow=0.00 cfs 0 cf

Pond 23P: Bio -01 Peak Elev=147.25' Storage=1,241 cf Inflow=0.57 cfs 1,958 cf
Discarded=0.02 cfs 1,958 cf Primary=0.00 cfs 0 cf Outflow=0.02 cfs 1,958 cf

Pond 25P: Bio-10 Peak Elev=148.87' Storage=190 cf Inflow=0.09 cfs 291 cf
Discarded=0.00 cfs 291 cf Primary=0.00 cfs 0 cf Outflow=0.00 cfs 291 cf

Pond 27P: Bio-09 Peak Elev=147.15' Storage=339 cf Inflow=0.16 cfs 562 cf
Discarded=0.01 cfs 562 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 562 cf

Pond 29P: Bio 11 Peak Elev=148.16' Storage=1,473 cf Inflow=0.69 cfs 2,392 cf
Discarded=0.02 cfs 2,392 cf Primary=0.00 cfs 0 cf Outflow=0.02 cfs 2,392 cf

Pond 31P: Bio 15 Peak Elev=149.40' Storage=196 cf Inflow=0.09 cfs 300 cf
Discarded=0.00 cfs 300 cf Primary=0.00 cfs 0 cf Outflow=0.00 cfs 300 cf

Pond 33P: Bio -16 Peak Elev=147.50' Storage=502 cf Inflow=0.25 cfs 849 cf
Discarded=0.01 cfs 849 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 849 cf

Pond 34P: Bio -17 Peak Elev=148.87' Storage=191 cf Inflow=0.09 cfs 293 cf
Discarded=0.00 cfs 293 cf Primary=0.00 cfs 0 cf Outflow=0.00 cfs 293 cf

Pond 35P: Bio -12 Peak Elev=149.37' Storage=191 cf Inflow=0.09 cfs 292 cf
Discarded=0.00 cfs 292 cf Primary=0.00 cfs 0 cf Outflow=0.00 cfs 292 cf

Pond 37P: Bio 13 Peak Elev=148.07' Storage=416 cf Inflow=0.19 cfs 682 cf
Discarded=0.01 cfs 682 cf Primary=0.00 cfs 0 cf Outflow=0.01 cfs 682 cf

Pond 39P: Bio -14 Peak Elev=146.31' Storage=214 cf Inflow=0.09 cfs 335 cf
Discarded=0.00 cfs 335 cf Primary=0.00 cfs 0 cf Outflow=0.00 cfs 335 cf

Pond 40P: DB-02 Peak Elev=145.00' Storage=0 cf Inflow=0.00 cfs 0 cf
Discarded=0.00 cfs 0 cf Primary=0.00 cfs 0 cf Outflow=0.00 cfs 0 cf

Pond 41P: UGDS-1 Peak Elev=145.20' Storage=0 cf Inflow=0.00 cfs 0 cf
Outflow=0.00 cfs 0 cf

Pond 42P: UGDS-03 Peak Elev=145.90' Storage=0 cf Inflow=0.00 cfs 0 cf
Outflow=0.00 cfs 0 cf

Link 3L: DP 1 -Road (MOHB) Inflow=0.01 cfs 109 cf
Primary=0.01 cfs 109 cf

Link 5L: DP2 - Wetland NORTH (MOHB) Inflow=0.06 cfs 560 cf
Primary=0.06 cfs 560 cf

Link 6L: DP 3 - Wetland SouthWest (BB) Inflow=0.05 cfs 419 cf
Primary=0.05 cfs 419 cf

Link 7L: DP 4 - Wetland Southeast (BB) Inflow=0.24 cfs 1,207 cf
Primary=0.24 cfs 1,207 cf

Total Runoff Area = 541,332 sf Runoff Volume = 22,141 cf Average Runoff Depth = 0.49"
56.70% Pervious = 306,956 sf 43.30% Impervious = 234,376 sf

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PDA 1A: Subcat PDA 1A Runoff Area=26,484 sf 64.57% Impervious Runoff Depth=2.17"
Tc=6.0 min CN=89 Runoff=1.50 cfs 4,796 cf

Subcatchment PDA 1B: Subcat PDA 1B Runoff Area=7,838 sf 100.00% Impervious Runoff Depth=3.07"
Tc=6.0 min CN=98 Runoff=0.56 cfs 2,003 cf

Subcatchment PDA 2A: Subcat PDA 2A Runoff Area=52,452 sf 4.60% Impervious Runoff Depth=1.28"
Flow Length=375' Slope=0.0200 '/' Tc=11.0 min CN=77 Runoff=1.48 cfs 5,611 cf

Subcatchment PDA 2B: Subcat PDA 2B Runoff Area=39,263 sf 66.48% Impervious Runoff Depth=2.45"
Tc=6.0 min CN=92 Runoff=2.46 cfs 8,002 cf

Subcatchment PDA 2C: Subcat PDA 2C Runoff Area=4,298 sf 75.91% Impervious Runoff Depth=2.64"
Tc=6.0 min CN=94 Runoff=0.29 cfs 946 cf

Subcatchment PDA 2D: Subcat PDA 2D Runoff Area=4,291 sf 75.81% Impervious Runoff Depth=2.64"
Tc=6.0 min CN=94 Runoff=0.28 cfs 944 cf

Subcatchment PDA 2E: Subcat PDA 2E Runoff Area=27,979 sf 87.90% Impervious Runoff Depth=2.74"
Tc=6.0 min CN=95 Runoff=1.90 cfs 6,395 cf

Subcatchment PDA 2F: Subcat PDA 2F Runoff Area=4,106 sf 75.92% Impervious Runoff Depth=2.64"
Tc=6.0 min CN=94 Runoff=0.27 cfs 904 cf

Subcatchment PDA 2G: Subcat PDA 2G Runoff Area=12,646 sf 66.31% Impervious Runoff Depth=2.45"
Tc=6.0 min CN=92 Runoff=0.79 cfs 2,577 cf

Subcatchment PDA 2H: Subcat PDA 2H Runoff Area=4,227 sf 75.29% Impervious Runoff Depth=2.64"
Tc=6.0 min CN=94 Runoff=0.28 cfs 930 cf

Subcatchment PDA 3A: Subcat PDA 3A Runoff Area=50,013 sf 61.10% Impervious Runoff Depth=2.17"
Tc=6.0 min CN=89 Runoff=2.84 cfs 9,057 cf

Subcatchment PDA 3B: Subcat PDA 3B Runoff Area=12,000 sf 100.00% Impervious Runoff Depth=3.07"
Tc=6.0 min CN=98 Runoff=0.86 cfs 3,067 cf

Subcatchment PDA 3C: Subcat PDA 3C Runoff Area=20,479 sf 55.45% Impervious Runoff Depth=2.00"
Tc=6.0 min CN=87 Runoff=1.08 cfs 3,419 cf

Subcatchment PDA 3D: Subcat PDA 3D Runoff Area=4,377 sf 77.58% Impervious Runoff Depth=2.64"
Tc=6.0 min CN=94 Runoff=0.29 cfs 963 cf

Subcatchment PDA 3E: Subcat PDA 3E Runoff Area=10,567 sf 60.72% Impervious Runoff Depth=2.26"
Tc=6.0 min CN=90 Runoff=0.62 cfs 1,991 cf

Subcatchment PDA 3F: Subcat PDA 3F Runoff Area=46,282 sf 0.64% Impervious Runoff Depth=1.10"
Flow Length=86' Tc=7.7 min CN=74 Runoff=1.22 cfs 4,258 cf

Subcatchment PDA 3G: Subcat PDA 3G Runoff Area=6,443 sf 28.81% Impervious Runoff Depth=1.62"
Tc=6.0 min CN=82 Runoff=0.27 cfs 869 cf

Subcatchment PDA 3H: Subcat PDA 3H Runoff Area=20,855 sf 58.48% Impervious Runoff Depth=2.09"
Tc=6.0 min CN=88 Runoff=1.14 cfs 3,627 cf

Subcatchment PDA 3I: Subcat PDA 3I Runoff Area=4,778 sf 93.12% Impervious Runoff Depth=2.85"
Tc=6.0 min CN=96 Runoff=0.33 cfs 1,134 cf

Subcatchment PDA 3J: Subcat PDA 3J Runoff Area=4,712 sf 73.27% Impervious Runoff Depth=2.54"
Tc=6.0 min CN=93 Runoff=0.30 cfs 998 cf

Subcatchment PDA 3K: Subcat PDA 3K Runoff Area=13,806 sf 70.90% Impervious Runoff Depth=2.45"
Tc=6.0 min CN=92 Runoff=0.87 cfs 2,814 cf

Subcatchment PDA 4A: Subcat PDA 4A Runoff Area=42,711 sf 66.87% Impervious Runoff Depth=2.35"
Tc=6.0 min CN=91 Runoff=2.60 cfs 8,372 cf

Subcatchment PDA 4B: Subcat PDA 4B Runoff Area=4,401 sf 77.40% Impervious Runoff Depth=2.64"
Tc=6.0 min CN=94 Runoff=0.29 cfs 969 cf

Subcatchment PDA 4C: Subcat PDA 4C Runoff Area=13,049 sf 56.91% Impervious Runoff Depth=2.26"
Tc=6.0 min CN=90 Runoff=0.77 cfs 2,459 cf

Subcatchment PDA 4D: Subcat PDA 4D Runoff Area=8,397 sf 40.23% Impervious Runoff Depth=2.00"
Tc=6.0 min CN=87 Runoff=0.44 cfs 1,402 cf

Subcatchment PDA 4E: Subcat PDA 4E Runoff Area=36,641 sf 10.20% Impervious Runoff Depth=1.62"
Tc=6.0 min CN=82 Runoff=1.56 cfs 4,943 cf

Subcatchment PDA 4F: Subcat PDA 4F Runoff Area=4,393 sf 77.66% Impervious Runoff Depth=2.64"
Tc=6.0 min CN=94 Runoff=0.29 cfs 967 cf

Subcatchment PDA 4G: Subcat PDA 4G Runoff Area=34,103 sf 0.01% Impervious Runoff Depth=1.41"
Tc=6.0 min CN=79 Runoff=1.26 cfs 4,014 cf

Subcatchment PDA 4H: Subcat PDA 4H Runoff Area=5,987 sf 28.21% Impervious Runoff Depth=1.41"
Tc=6.0 min UI Adjusted CN=79 Runoff=0.22 cfs 705 cf

Subcatchment PDA1C: Subcat PDA1C Runoff Area=13,755 sf 3.60% Impervious Runoff Depth=1.10"
Tc=0.0 min CN=74 Runoff=0.45 cfs 1,265 cf

Pond 4P: Infiltration Basin-01 Peak Elev=148.15' Storage=4,028 cf Inflow=2.07 cfs 6,799 cf
Discarded=0.04 cfs 4,224 cf Primary=0.05 cfs 2,575 cf Secondary=0.00 cfs 0 cf Outflow=0.10 cfs 6,799 cf

Pond 7P: Tree Box Filter -01 Peak Elev=148.88' Storage=1,624 cf Inflow=1.90 cfs 6,395 cf
Discarded=0.01 cfs 2,108 cf Primary=1.72 cfs 4,146 cf Outflow=1.74 cfs 6,254 cf

Pond 10P: Bio-02 Peak Elev=147.82' Storage=1,705 cf Inflow=1.47 cfs 4,761 cf
Discarded=0.02 cfs 2,482 cf Primary=1.27 cfs 2,279 cf Outflow=1.28 cfs 4,761 cf

Pond 12P: Infiltration Basin-02 Peak Elev=146.88' Storage=3,793 cf Inflow=2.84 cfs 9,057 cf
Discarded=0.04 cfs 3,549 cf Primary=1.03 cfs 5,508 cf Secondary=0.00 cfs 0 cf Outflow=1.07 cfs 9,057 cf

Pond 13P: Bio-03 Peak Elev=146.51' Storage=3,370 cf Inflow=2.46 cfs 8,002 cf
Discarded=0.03 cfs 4,240 cf Primary=1.06 cfs 3,763 cf Outflow=1.10 cfs 8,002 cf

Pond 14P: DB-01 Peak Elev=144.97' Storage=373 cf Inflow=2.30 cfs 6,757 cf
Discarded=0.01 cfs 132 cf Primary=1.95 cfs 6,625 cf Secondary=0.00 cfs 0 cf Outflow=1.96 cfs 6,757 cf

Pond 15P: Bio -04 Peak Elev=149.27' Storage=288 cf Inflow=0.29 cfs 946 cf
Discarded=0.00 cfs 458 cf Primary=0.31 cfs 488 cf Outflow=0.31 cfs 946 cf

Pond 16P: Bio -05 Peak Elev=149.28' Storage=288 cf Inflow=0.28 cfs 944 cf
Discarded=0.00 cfs 458 cf Primary=0.31 cfs 486 cf Outflow=0.32 cfs 944 cf

Pond 17P: Bio-06 Peak Elev=149.28' Storage=289 cf Inflow=0.27 cfs 904 cf
Discarded=0.00 cfs 457 cf Primary=0.38 cfs 447 cf Outflow=0.38 cfs 904 cf

Pond 19P: Bio -08 Peak Elev=149.80' Storage=963 cf Inflow=0.79 cfs 2,577 cf
Discarded=0.01 cfs 1,483 cf Primary=0.87 cfs 1,095 cf Outflow=0.88 cfs 2,577 cf

Pond 20P: Bio -07 Peak Elev=149.27' Storage=284 cf Inflow=0.28 cfs 930 cf
Discarded=0.00 cfs 451 cf Primary=0.31 cfs 479 cf Outflow=0.31 cfs 930 cf

Pond 21P: UGIS-02 Peak Elev=145.08' Storage=2,563 cf Inflow=1.72 cfs 4,146 cf
Discarded=0.05 cfs 2,879 cf Primary=0.04 cfs 1,267 cf Outflow=0.09 cfs 4,146 cf

Pond 22P: DIV-01 Peak Elev=144.62' Inflow=0.04 cfs 1,267 cf
Primary=0.04 cfs 1,267 cf Secondary=0.00 cfs 0 cf Outflow=0.04 cfs 1,267 cf

Pond 23P: Bio -01 Peak Elev=148.07' Storage=2,682 cf Inflow=1.94 cfs 6,486 cf
Discarded=0.02 cfs 3,845 cf Primary=1.35 cfs 2,640 cf Outflow=1.37 cfs 6,485 cf

Pond 25P: Bio-10 Peak Elev=149.27' Storage=288 cf Inflow=0.29 cfs 963 cf
Discarded=0.00 cfs 459 cf Primary=0.28 cfs 505 cf Outflow=0.28 cfs 963 cf

Pond 27P: Bio-09 Peak Elev=147.78' Storage=755 cf Inflow=0.62 cfs 1,991 cf
Discarded=0.01 cfs 1,166 cf Primary=0.50 cfs 825 cf Outflow=0.51 cfs 1,991 cf

Pond 29P: Bio 11 Peak Elev=148.87' Storage=3,058 cf Inflow=2.60 cfs 8,372 cf
Discarded=0.03 cfs 4,281 cf Primary=2.00 cfs 4,091 cf Outflow=2.03 cfs 8,372 cf

Pond 31P: Bio 15 Peak Elev=149.77' Storage=288 cf Inflow=0.30 cfs 998 cf
Discarded=0.00 cfs 457 cf Primary=0.29 cfs 542 cf Outflow=0.30 cfs 998 cf

Pond 33P: Bio -16 Peak Elev=147.80' Storage=773 cf Inflow=0.87 cfs 2,814 cf
Discarded=0.01 cfs 1,316 cf Primary=0.84 cfs 1,498 cf Outflow=0.85 cfs 2,814 cf

Pond 34P: Bio -17 Peak Elev=149.27' Storage=288 cf Inflow=0.29 cfs 967 cf
Discarded=0.00 cfs 459 cf Primary=0.31 cfs 508 cf Outflow=0.32 cfs 967 cf

Pond 35P: Bio -12 Peak Elev=149.77' Storage=288 cf Inflow=0.29 cfs 969 cf
Discarded=0.00 cfs 459 cf Primary=0.32 cfs 510 cf Outflow=0.32 cfs 969 cf

Pond 37P: Bio 13 Peak Elev=148.67' Storage=868 cf Inflow=0.77 cfs 2,459 cf
Discarded=0.01 cfs 1,302 cf Primary=0.76 cfs 1,157 cf Outflow=0.77 cfs 2,459 cf

Pond 39P: Bio -14 Peak Elev=146.82' Storage=359 cf Inflow=0.44 cfs 1,402 cf
Discarded=0.00 cfs 533 cf Primary=0.54 cfs 869 cf Outflow=0.55 cfs 1,402 cf

Pond 40P: DB-02 Peak Elev=145.60' Storage=425 cf Inflow=0.54 cfs 869 cf
Discarded=0.01 cfs 330 cf Primary=0.02 cfs 539 cf Outflow=0.03 cfs 869 cf

Pond 41P: UGDS-1 Peak Elev=145.84' Storage=1,747 cf Inflow=1.35 cfs 2,640 cf
Outflow=0.05 cfs 2,629 cf

Pond 42P: UGDS-03 Peak Elev=146.82' Storage=3,886 cf Inflow=3.20 cfs 6,266 cf
Outflow=0.18 cfs 6,267 cf

Link 3L: DP 1 -Road (MOHB) Inflow=0.47 cfs 5,108 cf
Primary=0.47 cfs 5,108 cf

Link 5L: DP2 - Wetland NORTH (MOHB) Inflow=3.30 cfs 12,237 cf
Primary=3.30 cfs 12,237 cf

Link 6L: DP 3 - Wetland SouthWest (BB) Inflow=4.55 cfs 18,912 cf
Primary=4.55 cfs 18,912 cf

Link 7L: DP 4 - Wetland Southeast (BB) Inflow=3.06 cfs 16,467 cf
Primary=3.06 cfs 16,467 cf

Total Runoff Area = 541,332 sf Runoff Volume = 90,403 cf Average Runoff Depth = 2.00"
54.35% Pervious = 294,206 sf 45.65% Impervious = 247,126 sf

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PDA 1A: Subcat PDA 1A Runoff Area=26,484 sf 64.57% Impervious Runoff Depth=3.68"
Tc=6.0 min CN=89 Runoff=2.49 cfs 8,114 cf

Subcatchment PDA 1B: Subcat PDA 1B Runoff Area=7,838 sf 100.00% Impervious Runoff Depth=4.66"
Tc=6.0 min CN=98 Runoff=0.84 cfs 3,046 cf

Subcatchment PDA 2A: Subcat PDA 2A Runoff Area=52,452 sf 4.60% Impervious Runoff Depth=2.54"
Flow Length=375' Slope=0.0200 '/' Tc=11.0 min CN=77 Runoff=3.01 cfs 11,100 cf

Subcatchment PDA 2B: Subcat PDA 2B Runoff Area=39,263 sf 66.48% Impervious Runoff Depth=3.99"
Tc=6.0 min CN=92 Runoff=3.92 cfs 13,061 cf

Subcatchment PDA 2C: Subcat PDA 2C Runoff Area=4,298 sf 75.91% Impervious Runoff Depth=4.21"
Tc=6.0 min CN=94 Runoff=0.44 cfs 1,508 cf

Subcatchment PDA 2D: Subcat PDA 2D Runoff Area=4,291 sf 75.81% Impervious Runoff Depth=4.21"
Tc=6.0 min CN=94 Runoff=0.44 cfs 1,505 cf

Subcatchment PDA 2E: Subcat PDA 2E Runoff Area=27,979 sf 87.90% Impervious Runoff Depth=4.32"
Tc=6.0 min CN=95 Runoff=2.92 cfs 10,073 cf

Subcatchment PDA 2F: Subcat PDA 2F Runoff Area=4,106 sf 75.92% Impervious Runoff Depth=4.21"
Tc=6.0 min CN=94 Runoff=0.42 cfs 1,440 cf

Subcatchment PDA 2G: Subcat PDA 2G Runoff Area=12,646 sf 66.31% Impervious Runoff Depth=3.99"
Tc=6.0 min CN=92 Runoff=1.26 cfs 4,207 cf

Subcatchment PDA 2H: Subcat PDA 2H Runoff Area=4,227 sf 75.29% Impervious Runoff Depth=4.21"
Tc=6.0 min CN=94 Runoff=0.44 cfs 1,483 cf

Subcatchment PDA 3A: Subcat PDA 3A Runoff Area=50,013 sf 61.10% Impervious Runoff Depth=3.68"
Tc=6.0 min CN=89 Runoff=4.70 cfs 15,322 cf

Subcatchment PDA 3B: Subcat PDA 3B Runoff Area=12,000 sf 100.00% Impervious Runoff Depth=4.66"
Tc=6.0 min CN=98 Runoff=1.29 cfs 4,663 cf

Subcatchment PDA 3C: Subcat PDA 3C Runoff Area=20,479 sf 55.45% Impervious Runoff Depth=3.47"
Tc=6.0 min CN=87 Runoff=1.84 cfs 5,927 cf

Subcatchment PDA 3D: Subcat PDA 3D Runoff Area=4,377 sf 77.58% Impervious Runoff Depth=4.21"
Tc=6.0 min CN=94 Runoff=0.45 cfs 1,535 cf

Subcatchment PDA 3E: Subcat PDA 3E Runoff Area=10,567 sf 60.72% Impervious Runoff Depth=3.78"
Tc=6.0 min CN=90 Runoff=1.02 cfs 3,329 cf

Subcatchment PDA 3F: Subcat PDA 3F Runoff Area=46,282 sf 0.64% Impervious Runoff Depth=2.28"
Flow Length=86' Tc=7.7 min CN=74 Runoff=2.63 cfs 8,812 cf

Subcatchment PDA 3G: Subcat PDA 3G Runoff Area=6,443 sf 28.81% Impervious Runoff Depth=2.99"
Tc=6.0 min CN=82 Runoff=0.51 cfs 1,605 cf

Subcatchment PDA 3H: Subcat PDA 3H Runoff Area=20,855 sf 58.48% Impervious Runoff Depth=3.57"
Tc=6.0 min CN=88 Runoff=1.92 cfs 6,211 cf

Subcatchment PDA 3I: Subcat PDA 3I Runoff Area=4,778 sf 93.12% Impervious Runoff Depth=4.43"
Tc=6.0 min CN=96 Runoff=0.50 cfs 1,765 cf

Subcatchment PDA 3J: Subcat PDA 3J Runoff Area=4,712 sf 73.27% Impervious Runoff Depth=4.10"
Tc=6.0 min CN=93 Runoff=0.48 cfs 1,610 cf

Subcatchment PDA 3K: Subcat PDA 3K Runoff Area=13,806 sf 70.90% Impervious Runoff Depth=3.99"
Tc=6.0 min CN=92 Runoff=1.38 cfs 4,592 cf

Subcatchment PDA 4A: Subcat PDA 4A Runoff Area=42,711 sf 66.87% Impervious Runoff Depth=3.89"
Tc=6.0 min CN=91 Runoff=4.18 cfs 13,828 cf

Subcatchment PDA 4B: Subcat PDA 4B Runoff Area=4,401 sf 77.40% Impervious Runoff Depth=4.21"
Tc=6.0 min CN=94 Runoff=0.45 cfs 1,544 cf

Subcatchment PDA 4C: Subcat PDA 4C Runoff Area=13,049 sf 56.91% Impervious Runoff Depth=3.78"
Tc=6.0 min CN=90 Runoff=1.25 cfs 4,110 cf

Subcatchment PDA 4D: Subcat PDA 4D Runoff Area=8,397 sf 40.23% Impervious Runoff Depth=3.47"
Tc=6.0 min CN=87 Runoff=0.75 cfs 2,430 cf

Subcatchment PDA 4E: Subcat PDA 4E Runoff Area=36,641 sf 10.20% Impervious Runoff Depth=2.99"
Tc=6.0 min CN=82 Runoff=2.88 cfs 9,129 cf

Subcatchment PDA 4F: Subcat PDA 4F Runoff Area=4,393 sf 77.66% Impervious Runoff Depth=4.21"
Tc=6.0 min CN=94 Runoff=0.45 cfs 1,541 cf

Subcatchment PDA 4G: Subcat PDA 4G Runoff Area=34,103 sf 0.01% Impervious Runoff Depth=2.72"
Tc=6.0 min CN=79 Runoff=2.44 cfs 7,718 cf

Subcatchment PDA 4H: Subcat PDA 4H Runoff Area=5,987 sf 28.21% Impervious Runoff Depth=2.72"
Tc=6.0 min UI Adjusted CN=79 Runoff=0.43 cfs 1,355 cf

Subcatchment PDA1C: Subcat PDA1C Runoff Area=13,755 sf 3.60% Impervious Runoff Depth=2.28"
Tc=0.0 min CN=74 Runoff=0.97 cfs 2,619 cf

Pond 4P: Infiltration Basin-01 Peak Elev=148.35' Storage=4,754 cf Inflow=3.33 cfs 11,159 cf
Discarded=0.04 cfs 4,849 cf Primary=1.63 cfs 6,310 cf Secondary=0.00 cfs 0 cf Outflow=1.67 cfs 11,159 cf

Pond 7P: Tree Box Filter -01 Peak Elev=149.02' Storage=1,810 cf Inflow=2.92 cfs 10,073 cf
Discarded=0.02 cfs 2,177 cf Primary=2.51 cfs 7,754 cf Outflow=2.52 cfs 9,932 cf

Pond 10P: Bio-02 Peak Elev=147.94' Storage=1,879 cf Inflow=2.42 cfs 7,976 cf
Discarded=0.02 cfs 2,556 cf Primary=2.09 cfs 5,420 cf Outflow=2.11 cfs 7,976 cf

Pond 12P: Infiltration Basin-02 Peak Elev=147.21' Storage=4,949 cf Inflow=4.70 cfs 15,322 cf
Discarded=0.04 cfs 3,914 cf Primary=3.02 cfs 11,408 cf Secondary=0.00 cfs 0 cf Outflow=3.06 cfs 15,322 cf

Pond 13P: Bio-03 Peak Elev=146.77' Storage=4,137 cf Inflow=3.92 cfs 13,061 cf
Discarded=0.04 cfs 4,425 cf Primary=2.88 cfs 8,635 cf Outflow=2.91 cfs 13,061 cf

Pond 14P: DB-01 Peak Elev=146.46' Storage=1,560 cf Inflow=5.59 cfs 15,332 cf
Discarded=0.01 cfs 177 cf Primary=4.16 cfs 15,156 cf Secondary=0.00 cfs 0 cf Outflow=4.17 cfs 15,332 cf

Pond 15P: Bio -04 Peak Elev=149.28' Storage=290 cf Inflow=0.44 cfs 1,508 cf
Discarded=0.00 cfs 474 cf Primary=0.44 cfs 1,034 cf Outflow=0.44 cfs 1,508 cf

Pond 16P: Bio -05 Peak Elev=149.28' Storage=290 cf Inflow=0.44 cfs 1,505 cf
Discarded=0.00 cfs 474 cf Primary=0.44 cfs 1,032 cf Outflow=0.44 cfs 1,505 cf

Pond 17P: Bio-06 Peak Elev=149.28' Storage=290 cf Inflow=0.42 cfs 1,440 cf
Discarded=0.00 cfs 473 cf Primary=0.42 cfs 967 cf Outflow=0.42 cfs 1,440 cf

Pond 19P: Bio -08 Peak Elev=149.82' Storage=978 cf Inflow=1.26 cfs 4,207 cf
Discarded=0.01 cfs 1,559 cf Primary=1.23 cfs 2,648 cf Outflow=1.24 cfs 4,207 cf

Pond 20P: Bio -07 Peak Elev=149.28' Storage=286 cf Inflow=0.44 cfs 1,483 cf
Discarded=0.00 cfs 466 cf Primary=0.43 cfs 1,016 cf Outflow=0.44 cfs 1,483 cf

Pond 21P: UGIS-02 Peak Elev=145.80' Storage=5,162 cf Inflow=2.51 cfs 7,754 cf
Discarded=0.05 cfs 4,443 cf Primary=0.06 cfs 3,311 cf Outflow=0.11 cfs 7,754 cf

Pond 22P: DIV-01 Peak Elev=144.65' Inflow=0.06 cfs 3,311 cf
Primary=0.06 cfs 3,311 cf Secondary=0.00 cfs 0 cf Outflow=0.06 cfs 3,311 cf

Pond 23P: Bio -01 Peak Elev=148.26' Storage=3,079 cf Inflow=3.13 cfs 10,591 cf
Discarded=0.03 cfs 3,947 cf Primary=2.46 cfs 6,639 cf Outflow=2.48 cfs 10,586 cf

Pond 25P: Bio-10 Peak Elev=149.28' Storage=290 cf Inflow=0.45 cfs 1,535 cf
Discarded=0.00 cfs 474 cf Primary=0.45 cfs 1,061 cf Outflow=0.45 cfs 1,535 cf

Pond 27P: Bio-09 Peak Elev=147.80' Storage=772 cf Inflow=1.02 cfs 3,329 cf
Discarded=0.01 cfs 1,218 cf Primary=1.00 cfs 2,111 cf Outflow=1.01 cfs 3,329 cf

Pond 29P: Bio 11 Peak Elev=149.07' Storage=3,593 cf Inflow=4.18 cfs 13,828 cf
Discarded=0.03 cfs 4,424 cf Primary=3.17 cfs 9,404 cf Outflow=3.20 cfs 13,828 cf

Pond 31P: Bio 15 Peak Elev=149.78' Storage=291 cf Inflow=0.48 cfs 1,610 cf
Discarded=0.00 cfs 472 cf Primary=0.48 cfs 1,138 cf Outflow=0.48 cfs 1,610 cf

Pond 33P: Bio -16 Peak Elev=147.82' Storage=798 cf Inflow=1.38 cfs 4,592 cf
Discarded=0.01 cfs 1,385 cf Primary=1.30 cfs 3,207 cf Outflow=1.31 cfs 4,592 cf

Pond 34P: Bio -17 Peak Elev=149.28' Storage=290 cf Inflow=0.45 cfs 1,541 cf
Discarded=0.00 cfs 474 cf Primary=0.45 cfs 1,067 cf Outflow=0.45 cfs 1,541 cf

Pond 35P: Bio -12 Peak Elev=149.78' Storage=290 cf Inflow=0.45 cfs 1,544 cf
Discarded=0.00 cfs 474 cf Primary=0.45 cfs 1,070 cf Outflow=0.45 cfs 1,544 cf

Pond 37P: Bio 13 Peak Elev=148.75' Storage=941 cf Inflow=1.25 cfs 4,110 cf
Discarded=0.01 cfs 1,353 cf Primary=1.09 cfs 2,757 cf Outflow=1.10 cfs 4,110 cf

Pond 39P: Bio -14 Peak Elev=146.83' Storage=364 cf Inflow=0.75 cfs 2,430 cf
Discarded=0.00 cfs 551 cf Primary=0.75 cfs 1,880 cf Outflow=0.76 cfs 2,430 cf

Pond 40P: DB-02 Peak Elev=145.97' Storage=750 cf Inflow=0.75 cfs 1,880 cf
Discarded=0.01 cfs 436 cf Primary=0.23 cfs 1,444 cf Outflow=0.25 cfs 1,880 cf

Pond 41P: UGDS-1 Peak Elev=146.45' Storage=3,413 cf Inflow=2.46 cfs 6,639 cf
Outflow=0.45 cfs 6,626 cf

Pond 42P: UGDS-03 Peak Elev=147.37' Storage=6,198 cf Inflow=4.99 cfs 14,298 cf
Outflow=2.01 cfs 14,298 cf

Link 3L: DP 1 -Road (MOHB) Inflow=2.02 cfs 12,240 cf
Primary=2.02 cfs 12,240 cf

Link 5L: DP2 - Wetland NORTH (MOHB) Inflow=6.96 cfs 26,256 cf
Primary=6.96 cfs 26,256 cf

Link 6L: DP 3 - Wetland SouthWest (BB) Inflow=11.07 cfs 41,388 cf
Primary=11.07 cfs 41,388 cf

Link 7L: DP 4 - Wetland Southeast (BB) Inflow=5.85 cfs 33,944 cf
Primary=5.85 cfs 33,944 cf

Total Runoff Area = 541,332 sf Runoff Volume = 155,182 cf Average Runoff Depth = 3.44"
54.35% Pervious = 294,206 sf 45.65% Impervious = 247,126 sf

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PDA 1A: Subcat PDA 1A Runoff Area=26,484 sf 64.57% Impervious Runoff Depth=4.83"
Tc=6.0 min CN=89 Runoff=3.23 cfs 10,665 cf

Subcatchment PDA 1B: Subcat PDA 1B Runoff Area=7,838 sf 100.00% Impervious Runoff Depth=5.86"
Tc=6.0 min CN=98 Runoff=1.05 cfs 3,829 cf

Subcatchment PDA 2A: Subcat PDA 2A Runoff Area=52,452 sf 4.60% Impervious Runoff Depth=3.57"
Flow Length=375' Slope=0.0200 '/' Tc=11.0 min CN=77 Runoff=4.23 cfs 15,589 cf

Subcatchment PDA 2B: Subcat PDA 2B Runoff Area=39,263 sf 66.48% Impervious Runoff Depth=5.17"
Tc=6.0 min CN=92 Runoff=5.00 cfs 16,909 cf

Subcatchment PDA 2C: Subcat PDA 2C Runoff Area=4,298 sf 75.91% Impervious Runoff Depth=5.40"
Tc=6.0 min CN=94 Runoff=0.56 cfs 1,932 cf

Subcatchment PDA 2D: Subcat PDA 2D Runoff Area=4,291 sf 75.81% Impervious Runoff Depth=5.40"
Tc=6.0 min CN=94 Runoff=0.56 cfs 1,929 cf

Subcatchment PDA 2E: Subcat PDA 2E Runoff Area=27,979 sf 87.90% Impervious Runoff Depth=5.51"
Tc=6.0 min CN=95 Runoff=3.68 cfs 12,849 cf

Subcatchment PDA 2F: Subcat PDA 2F Runoff Area=4,106 sf 75.92% Impervious Runoff Depth=5.40"
Tc=6.0 min CN=94 Runoff=0.53 cfs 1,846 cf

Subcatchment PDA 2G: Subcat PDA 2G Runoff Area=12,646 sf 66.31% Impervious Runoff Depth=5.17"
Tc=6.0 min CN=92 Runoff=1.61 cfs 5,446 cf

Subcatchment PDA 2H: Subcat PDA 2H Runoff Area=4,227 sf 75.29% Impervious Runoff Depth=5.40"
Tc=6.0 min CN=94 Runoff=0.55 cfs 1,901 cf

Subcatchment PDA 3A: Subcat PDA 3A Runoff Area=50,013 sf 61.10% Impervious Runoff Depth=4.83"
Tc=6.0 min CN=89 Runoff=6.10 cfs 20,140 cf

Subcatchment PDA 3B: Subcat PDA 3B Runoff Area=12,000 sf 100.00% Impervious Runoff Depth=5.86"
Tc=6.0 min CN=98 Runoff=1.61 cfs 5,862 cf

Subcatchment PDA 3C: Subcat PDA 3C Runoff Area=20,479 sf 55.45% Impervious Runoff Depth=4.61"
Tc=6.0 min CN=87 Runoff=2.41 cfs 7,872 cf

Subcatchment PDA 3D: Subcat PDA 3D Runoff Area=4,377 sf 77.58% Impervious Runoff Depth=5.40"
Tc=6.0 min CN=94 Runoff=0.57 cfs 1,968 cf

Subcatchment PDA 3E: Subcat PDA 3E Runoff Area=10,567 sf 60.72% Impervious Runoff Depth=4.94"
Tc=6.0 min CN=90 Runoff=1.31 cfs 4,353 cf

Subcatchment PDA 3F: Subcat PDA 3F Runoff Area=46,282 sf 0.64% Impervious Runoff Depth=3.27"
Flow Length=86' Tc=7.7 min CN=74 Runoff=3.79 cfs 12,609 cf

Subcatchment PDA 3G: Subcat PDA 3G Runoff Area=6,443 sf 28.81% Impervious Runoff Depth=4.08"
Tc=6.0 min CN=82 Runoff=0.69 cfs 2,190 cf

Subcatchment PDA 3H: Subcat PDA 3H Runoff Area=20,855 sf 58.48% Impervious Runoff Depth=4.72"
Tc=6.0 min CN=88 Runoff=2.50 cfs 8,207 cf

Subcatchment PDA 3I: Subcat PDA 3I Runoff Area=4,778 sf 93.12% Impervious Runoff Depth=5.63"
Tc=6.0 min CN=96 Runoff=0.63 cfs 2,240 cf

Subcatchment PDA 3J: Subcat PDA 3J Runoff Area=4,712 sf 73.27% Impervious Runoff Depth=5.28"
Tc=6.0 min CN=93 Runoff=0.61 cfs 2,074 cf

Subcatchment PDA 3K: Subcat PDA 3K Runoff Area=13,806 sf 70.90% Impervious Runoff Depth=5.17"
Tc=6.0 min CN=92 Runoff=1.76 cfs 5,945 cf

Subcatchment PDA 4A: Subcat PDA 4A Runoff Area=42,711 sf 66.87% Impervious Runoff Depth=5.06"
Tc=6.0 min CN=91 Runoff=5.36 cfs 17,993 cf

Subcatchment PDA 4B: Subcat PDA 4B Runoff Area=4,401 sf 77.40% Impervious Runoff Depth=5.40"
Tc=6.0 min CN=94 Runoff=0.57 cfs 1,979 cf

Subcatchment PDA 4C: Subcat PDA 4C Runoff Area=13,049 sf 56.91% Impervious Runoff Depth=4.94"
Tc=6.0 min CN=90 Runoff=1.62 cfs 5,376 cf

Subcatchment PDA 4D: Subcat PDA 4D Runoff Area=8,397 sf 40.23% Impervious Runoff Depth=4.61"
Tc=6.0 min CN=87 Runoff=0.99 cfs 3,228 cf

Subcatchment PDA 4E: Subcat PDA 4E Runoff Area=36,641 sf 10.20% Impervious Runoff Depth=4.08"
Tc=6.0 min CN=82 Runoff=3.90 cfs 12,456 cf

Subcatchment PDA 4F: Subcat PDA 4F Runoff Area=4,393 sf 77.66% Impervious Runoff Depth=5.40"
Tc=6.0 min CN=94 Runoff=0.57 cfs 1,975 cf

Subcatchment PDA 4G: Subcat PDA 4G Runoff Area=34,103 sf 0.01% Impervious Runoff Depth=3.77"
Tc=6.0 min CN=79 Runoff=3.38 cfs 10,711 cf

Subcatchment PDA 4H: Subcat PDA 4H Runoff Area=5,987 sf 28.21% Impervious Runoff Depth=3.77"
Tc=6.0 min UI Adjusted CN=79 Runoff=0.59 cfs 1,880 cf

Subcatchment PDA1C: Subcat PDA1C Runoff Area=13,755 sf 3.60% Impervious Runoff Depth=3.27"
Tc=0.0 min CN=74 Runoff=1.39 cfs 3,747 cf

Pond 4P: Infiltration Basin-01 Peak Elev=148.42' Storage=5,032 cf Inflow=4.28 cfs 14,494 cf
Discarded=0.05 cfs 5,119 cf Primary=3.65 cfs 9,374 cf Secondary=0.00 cfs 0 cf Outflow=3.70 cfs 14,494 cf

Pond 7P: Tree Box Filter -01 Peak Elev=149.15' Storage=1,986 cf Inflow=3.68 cfs 12,849 cf
Discarded=0.02 cfs 2,217 cf Primary=3.04 cfs 10,490 cf Outflow=3.06 cfs 12,707 cf

Pond 10P: Bio-02 Peak Elev=148.04' Storage=2,038 cf Inflow=3.13 cfs 10,447 cf
Discarded=0.02 cfs 2,604 cf Primary=2.60 cfs 7,843 cf Outflow=2.62 cfs 10,447 cf

Pond 12P: Infiltration Basin-02 Peak Elev=147.37' Storage=5,593 cf Inflow=6.10 cfs 20,140 cf
Discarded=0.05 cfs 4,134 cf Primary=4.21 cfs 16,006 cf Secondary=0.00 cfs 0 cf Outflow=4.26 cfs 20,140 cf

Pond 13P: Bio-03 Peak Elev=146.95' Storage=4,707 cf Inflow=5.00 cfs 16,909 cf
Discarded=0.04 cfs 4,531 cf Primary=3.17 cfs 12,378 cf Outflow=3.20 cfs 16,909 cf

Pond 14P: DB-01 Peak Elev=146.79' Storage=1,945 cf Inflow=6.83 cfs 21,919 cf
Discarded=0.01 cfs 199 cf Primary=5.57 cfs 21,720 cf Secondary=0.00 cfs 0 cf Outflow=5.58 cfs 21,919 cf

Pond 15P: Bio -04 Peak Elev=149.29' Storage=292 cf Inflow=0.56 cfs 1,932 cf
Discarded=0.00 cfs 482 cf Primary=0.56 cfs 1,450 cf Outflow=0.56 cfs 1,932 cf

Pond 16P: Bio -05 Peak Elev=149.29' Storage=292 cf Inflow=0.56 cfs 1,929 cf
Discarded=0.00 cfs 482 cf Primary=0.56 cfs 1,447 cf Outflow=0.56 cfs 1,929 cf

Pond 17P: Bio-06 Peak Elev=149.29' Storage=292 cf Inflow=0.53 cfs 1,846 cf
Discarded=0.00 cfs 481 cf Primary=0.53 cfs 1,365 cf Outflow=0.54 cfs 1,846 cf

Pond 19P: Bio -08 Peak Elev=149.85' Storage=1,012 cf Inflow=1.61 cfs 5,446 cf
Discarded=0.01 cfs 1,592 cf Primary=1.50 cfs 3,854 cf Outflow=1.51 cfs 5,446 cf

Pond 20P: Bio -07 Peak Elev=149.29' Storage=287 cf Inflow=0.55 cfs 1,901 cf
Discarded=0.00 cfs 475 cf Primary=0.55 cfs 1,426 cf Outflow=0.55 cfs 1,901 cf

Pond 21P: UGIS-02 Peak Elev=146.36' Storage=7,175 cf Inflow=3.04 cfs 10,490 cf
Discarded=0.05 cfs 5,491 cf Primary=0.08 cfs 4,999 cf Outflow=0.12 cfs 10,490 cf

Pond 22P: DIV-01 Peak Elev=144.66' Inflow=0.08 cfs 4,999 cf
Primary=0.08 cfs 4,999 cf Secondary=0.00 cfs 0 cf Outflow=0.08 cfs 4,999 cf

Pond 23P: Bio -01 Peak Elev=148.39' Storage=3,366 cf Inflow=4.02 cfs 13,734 cf
Discarded=0.03 cfs 4,005 cf Primary=3.01 cfs 9,724 cf Outflow=3.03 cfs 13,729 cf

Pond 25P: Bio-10 Peak Elev=149.29' Storage=292 cf Inflow=0.57 cfs 1,968 cf
Discarded=0.00 cfs 483 cf Primary=0.57 cfs 1,485 cf Outflow=0.57 cfs 1,968 cf

Pond 27P: Bio-09 Peak Elev=147.82' Storage=783 cf Inflow=1.31 cfs 4,353 cf
Discarded=0.01 cfs 1,243 cf Primary=1.26 cfs 3,110 cf Outflow=1.27 cfs 4,353 cf

Pond 29P: Bio 11 Peak Elev=149.22' Storage=4,020 cf Inflow=5.36 cfs 17,993 cf
Discarded=0.03 cfs 4,511 cf Primary=3.84 cfs 13,481 cf Outflow=3.88 cfs 17,993 cf

Pond 31P: Bio 15 Peak Elev=149.79' Storage=292 cf Inflow=0.61 cfs 2,074 cf
Discarded=0.00 cfs 481 cf Primary=0.61 cfs 1,593 cf Outflow=0.61 cfs 2,074 cf

Pond 33P: Bio -16 Peak Elev=147.86' Storage=840 cf Inflow=1.76 cfs 5,945 cf
Discarded=0.01 cfs 1,419 cf Primary=1.63 cfs 4,526 cf Outflow=1.64 cfs 5,945 cf

Pond 34P: Bio -17 Peak Elev=149.29' Storage=292 cf Inflow=0.57 cfs 1,975 cf
Discarded=0.00 cfs 483 cf Primary=0.57 cfs 1,492 cf Outflow=0.57 cfs 1,975 cf

Pond 35P: Bio -12 Peak Elev=149.79' Storage=292 cf Inflow=0.57 cfs 1,979 cf
Discarded=0.00 cfs 483 cf Primary=0.57 cfs 1,496 cf Outflow=0.57 cfs 1,979 cf

Pond 37P: Bio 13 Peak Elev=148.83' Storage=1,019 cf Inflow=1.62 cfs 5,376 cf
Discarded=0.01 cfs 1,383 cf Primary=1.35 cfs 3,993 cf Outflow=1.36 cfs 5,376 cf

Pond 39P: Bio -14 Peak Elev=146.85' Storage=370 cf Inflow=0.99 cfs 3,228 cf
Discarded=0.00 cfs 563 cf Primary=0.99 cfs 2,665 cf Outflow=0.99 cfs 3,228 cf

Pond 40P: DB-02 Peak Elev=146.16' Storage=930 cf Inflow=0.99 cfs 2,665 cf
Discarded=0.01 cfs 491 cf Primary=0.45 cfs 2,174 cf Outflow=0.46 cfs 2,665 cf

Pond 41P: UGDS-1 Peak Elev=146.79' Storage=4,349 cf Inflow=3.01 cfs 9,724 cf
Outflow=1.38 cfs 9,711 cf

Pond 42P: UGDS-03 Peak Elev=147.72' Storage=7,660 cf Inflow=6.10 cfs 20,463 cf
Outflow=3.59 cfs 20,463 cf

Link 3L: DP 1 -Road (MOHB) Inflow=4.30 cfs 18,120 cf
Primary=4.30 cfs 18,120 cf

Link 5L: DP2 - Wetland NORTH (MOHB) Inflow=9.78 cfs 37,309 cf
Primary=9.78 cfs 37,309 cf

Link 6L: DP 3 - Wetland SouthWest (BB) Inflow=14.94 cfs 59,073 cf
Primary=14.94 cfs 59,073 cf

Link 7L: DP 4 - Wetland Southeast (BB) Inflow=9.26 cfs 47,684 cf
Primary=9.26 cfs 47,684 cf

Total Runoff Area = 541,332 sf Runoff Volume = 205,700 cf Average Runoff Depth = 4.56"
54.35% Pervious = 294,206 sf 45.65% Impervious = 247,126 sf

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points x 3
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Dyn-Stor-Ind method - Pond routing by Dyn-Stor-Ind method

Subcatchment PDA 1A: Subcat PDA 1A Runoff Area=26,484 sf 64.57% Impervious Runoff Depth=7.28"
Tc=6.0 min CN=89 Runoff=4.75 cfs 16,058 cf

Subcatchment PDA 1B: Subcat PDA 1B Runoff Area=7,838 sf 100.00% Impervious Runoff Depth=8.36"
Tc=6.0 min CN=98 Runoff=1.48 cfs 5,460 cf

Subcatchment PDA 2A: Subcat PDA 2A Runoff Area=52,452 sf 4.60% Impervious Runoff Depth=5.83"
Flow Length=375' Slope=0.0200 '/' Tc=11.0 min CN=77 Runoff=6.85 cfs 25,472 cf

Subcatchment PDA 2B: Subcat PDA 2B Runoff Area=39,263 sf 66.48% Impervious Runoff Depth=7.64"
Tc=6.0 min CN=92 Runoff=7.22 cfs 24,991 cf

Subcatchment PDA 2C: Subcat PDA 2C Runoff Area=4,298 sf 75.91% Impervious Runoff Depth=7.88"
Tc=6.0 min CN=94 Runoff=0.80 cfs 2,822 cf

Subcatchment PDA 2D: Subcat PDA 2D Runoff Area=4,291 sf 75.81% Impervious Runoff Depth=7.88"
Tc=6.0 min CN=94 Runoff=0.80 cfs 2,817 cf

Subcatchment PDA 2E: Subcat PDA 2E Runoff Area=27,979 sf 87.90% Impervious Runoff Depth=8.00"
Tc=6.0 min CN=95 Runoff=5.24 cfs 18,650 cf

Subcatchment PDA 2F: Subcat PDA 2F Runoff Area=4,106 sf 75.92% Impervious Runoff Depth=7.88"
Tc=6.0 min CN=94 Runoff=0.77 cfs 2,696 cf

Subcatchment PDA 2G: Subcat PDA 2G Runoff Area=12,646 sf 66.31% Impervious Runoff Depth=7.64"
Tc=6.0 min CN=92 Runoff=2.33 cfs 8,049 cf

Subcatchment PDA 2H: Subcat PDA 2H Runoff Area=4,227 sf 75.29% Impervious Runoff Depth=7.88"
Tc=6.0 min CN=94 Runoff=0.79 cfs 2,775 cf

Subcatchment PDA 3A: Subcat PDA 3A Runoff Area=50,013 sf 61.10% Impervious Runoff Depth=7.28"
Tc=6.0 min CN=89 Runoff=8.97 cfs 30,326 cf

Subcatchment PDA 3B: Subcat PDA 3B Runoff Area=12,000 sf 100.00% Impervious Runoff Depth=8.36"
Tc=6.0 min CN=98 Runoff=2.27 cfs 8,360 cf

Subcatchment PDA 3C: Subcat PDA 3C Runoff Area=20,479 sf 55.45% Impervious Runoff Depth=7.03"
Tc=6.0 min CN=87 Runoff=3.60 cfs 12,006 cf

Subcatchment PDA 3D: Subcat PDA 3D Runoff Area=4,377 sf 77.58% Impervious Runoff Depth=7.88"
Tc=6.0 min CN=94 Runoff=0.82 cfs 2,874 cf

Subcatchment PDA 3E: Subcat PDA 3E Runoff Area=10,567 sf 60.72% Impervious Runoff Depth=7.40"
Tc=6.0 min CN=90 Runoff=1.91 cfs 6,514 cf

Subcatchment PDA 3F: Subcat PDA 3F Runoff Area=46,282 sf 0.64% Impervious Runoff Depth=5.47"
Flow Length=86' Tc=7.7 min CN=74 Runoff=6.31 cfs 21,080 cf

Subcatchment PDA 3G: Subcat PDA 3G Runoff Area=6,443 sf 28.81% Impervious Runoff Depth=6.43"
Tc=6.0 min CN=82 Runoff=1.06 cfs 3,453 cf

Subcatchment PDA 3H: Subcat PDA 3H Runoff Area=20,855 sf 58.48% Impervious Runoff Depth=7.16"
Tc=6.0 min CN=88 Runoff=3.70 cfs 12,436 cf

Subcatchment PDA 3I: Subcat PDA 3I Runoff Area=4,778 sf 93.12% Impervious Runoff Depth=8.12"
Tc=6.0 min CN=96 Runoff=0.90 cfs 3,233 cf

Subcatchment PDA 3J: Subcat PDA 3J Runoff Area=4,712 sf 73.27% Impervious Runoff Depth=7.76"
Tc=6.0 min CN=93 Runoff=0.87 cfs 3,047 cf

Subcatchment PDA 3K: Subcat PDA 3K Runoff Area=13,806 sf 70.90% Impervious Runoff Depth=7.64"
Tc=6.0 min CN=92 Runoff=2.54 cfs 8,787 cf

Subcatchment PDA 4A: Subcat PDA 4A Runoff Area=42,711 sf 66.87% Impervious Runoff Depth=7.52"
Tc=6.0 min CN=91 Runoff=7.79 cfs 26,756 cf

Subcatchment PDA 4B: Subcat PDA 4B Runoff Area=4,401 sf 77.40% Impervious Runoff Depth=7.88"
Tc=6.0 min CN=94 Runoff=0.82 cfs 2,889 cf

Subcatchment PDA 4C: Subcat PDA 4C Runoff Area=13,049 sf 56.91% Impervious Runoff Depth=7.40"
Tc=6.0 min CN=90 Runoff=2.36 cfs 8,044 cf

Subcatchment PDA 4D: Subcat PDA 4D Runoff Area=8,397 sf 40.23% Impervious Runoff Depth=7.03"
Tc=6.0 min CN=87 Runoff=1.47 cfs 4,922 cf

Subcatchment PDA 4E: Subcat PDA 4E Runoff Area=36,641 sf 10.20% Impervious Runoff Depth=6.43"
Tc=6.0 min CN=82 Runoff=6.03 cfs 19,637 cf

Subcatchment PDA 4F: Subcat PDA 4F Runoff Area=4,393 sf 77.66% Impervious Runoff Depth=7.88"
Tc=6.0 min CN=94 Runoff=0.82 cfs 2,884 cf

Subcatchment PDA 4G: Subcat PDA 4G Runoff Area=34,103 sf 0.01% Impervious Runoff Depth=6.07"
Tc=6.0 min CN=79 Runoff=5.36 cfs 17,247 cf

Subcatchment PDA 4H: Subcat PDA 4H Runoff Area=5,987 sf 28.21% Impervious Runoff Depth=6.07"
Tc=6.0 min UI Adjusted CN=79 Runoff=0.94 cfs 3,028 cf

Subcatchment PDA1C: Subcat PDA1C Runoff Area=13,755 sf 3.60% Impervious Runoff Depth=5.47"
Tc=0.0 min CN=74 Runoff=2.31 cfs 6,265 cf

Pond 4P: Infiltration Basin-01 Peak Elev=148.48' Storage=5,291 cf Inflow=6.23 cfs 21,519 cf
Discarded=0.05 cfs 5,543 cf Primary=5.81 cfs 15,976 cf Secondary=0.00 cfs 0 cf Outflow=5.86 cfs 21,519 cf

Pond 7P: Tree Box Filter -01 Peak Elev=149.46' Storage=2,439 cf Inflow=5.24 cfs 18,650 cf
Discarded=0.02 cfs 2,281 cf Primary=4.05 cfs 16,227 cf Outflow=4.07 cfs 18,508 cf

Pond 10P: Bio-02 Peak Elev=148.29' Storage=2,456 cf Inflow=4.60 cfs 15,669 cf
Discarded=0.02 cfs 2,680 cf Primary=3.55 cfs 12,989 cf Outflow=3.57 cfs 15,669 cf

Pond 12P: Infiltration Basin-02 Peak Elev=147.53' Storage=6,239 cf Inflow=8.97 cfs 30,326 cf
Discarded=0.05 cfs 4,443 cf Primary=7.79 cfs 25,850 cf Secondary=0.14 cfs 32 cf Outflow=7.98 cfs 30,326 cf

Pond 13P: Bio-03 Peak Elev=147.28' Storage=5,836 cf Inflow=7.22 cfs 24,991 cf
Discarded=0.04 cfs 4,700 cf Primary=4.63 cfs 20,290 cf Outflow=4.67 cfs 24,991 cf

Pond 14P: DB-01 Peak Elev=147.11' Storage=2,360 cf Inflow=8.83 cfs 35,828 cf
Discarded=0.02 cfs 238 cf Primary=8.78 cfs 35,589 cf Secondary=0.00 cfs 0 cf Outflow=8.80 cfs 35,828 cf

Pond 15P: Bio -04 Peak Elev=149.30' Storage=295 cf Inflow=0.80 cfs 2,822 cf
Discarded=0.00 cfs 496 cf Primary=0.80 cfs 2,326 cf Outflow=0.80 cfs 2,822 cf

Pond 16P: Bio -05 Peak Elev=149.30' Storage=295 cf Inflow=0.80 cfs 2,817 cf
Discarded=0.00 cfs 496 cf Primary=0.80 cfs 2,321 cf Outflow=0.80 cfs 2,817 cf

Pond 17P: Bio-06 Peak Elev=149.30' Storage=294 cf Inflow=0.77 cfs 2,696 cf
Discarded=0.00 cfs 495 cf Primary=0.76 cfs 2,201 cf Outflow=0.77 cfs 2,696 cf

Pond 19P: Bio -08 Peak Elev=149.94' Storage=1,112 cf Inflow=2.33 cfs 8,049 cf
Discarded=0.01 cfs 1,647 cf Primary=2.09 cfs 6,402 cf Outflow=2.10 cfs 8,049 cf

Pond 20P: Bio -07 Peak Elev=149.30' Storage=290 cf Inflow=0.79 cfs 2,775 cf
Discarded=0.00 cfs 488 cf Primary=0.79 cfs 2,287 cf Outflow=0.79 cfs 2,775 cf

Pond 21P: UGIS-02 Peak Elev=146.87' Storage=9,004 cf Inflow=4.05 cfs 16,227 cf
Discarded=0.05 cfs 6,078 cf Primary=1.05 cfs 10,149 cf Outflow=1.09 cfs 16,227 cf

Pond 22P: DIV-01 Peak Elev=145.10' Inflow=1.05 cfs 10,149 cf
Primary=0.56 cfs 9,281 cf Secondary=0.49 cfs 868 cf Outflow=1.05 cfs 10,149 cf

Pond 23P: Bio -01 Peak Elev=148.69' Storage=4,090 cf Inflow=5.87 cfs 20,366 cf
Discarded=0.03 cfs 4,097 cf Primary=4.01 cfs 16,262 cf Outflow=4.04 cfs 20,359 cf

Pond 25P: Bio-10 Peak Elev=149.30' Storage=295 cf Inflow=0.82 cfs 2,874 cf
Discarded=0.00 cfs 496 cf Primary=0.81 cfs 2,377 cf Outflow=0.82 cfs 2,874 cf

Pond 27P: Bio-09 Peak Elev=147.89' Storage=841 cf Inflow=1.91 cfs 6,514 cf
Discarded=0.01 cfs 1,285 cf Primary=1.79 cfs 5,229 cf Outflow=1.80 cfs 6,514 cf

Pond 29P: Bio 11 Peak Elev=149.56' Storage=5,063 cf Inflow=7.79 cfs 26,756 cf
Discarded=0.04 cfs 4,648 cf Primary=5.05 cfs 22,109 cf Outflow=5.09 cfs 26,756 cf

Pond 31P: Bio 15 Peak Elev=149.80' Storage=296 cf Inflow=0.87 cfs 3,047 cf
Discarded=0.00 cfs 494 cf Primary=0.87 cfs 2,552 cf Outflow=0.87 cfs 3,047 cf

Pond 33P: Bio -16 Peak Elev=147.97' Storage=954 cf Inflow=2.54 cfs 8,787 cf
Discarded=0.01 cfs 1,473 cf Primary=2.27 cfs 7,315 cf Outflow=2.28 cfs 8,787 cf

Pond 34P: Bio -17 Peak Elev=149.30' Storage=295 cf Inflow=0.82 cfs 2,884 cf
Discarded=0.00 cfs 496 cf Primary=0.82 cfs 2,388 cf Outflow=0.82 cfs 2,884 cf

Pond 35P: Bio -12 Peak Elev=149.80' Storage=295 cf Inflow=0.82 cfs 2,889 cf
Discarded=0.00 cfs 496 cf Primary=0.82 cfs 2,393 cf Outflow=0.82 cfs 2,889 cf

Pond 37P: Bio 13 Peak Elev=149.03' Storage=1,223 cf Inflow=2.36 cfs 8,044 cf
Discarded=0.01 cfs 1,431 cf Primary=1.84 cfs 6,612 cf Outflow=1.86 cfs 8,044 cf

Pond 39P: Bio -14 Peak Elev=146.88' Storage=381 cf Inflow=1.47 cfs 4,922 cf
Discarded=0.00 cfs 582 cf Primary=1.47 cfs 4,341 cf Outflow=1.48 cfs 4,922 cf

Pond 40P: DB-02 Peak Elev=146.49' Storage=1,278 cf Inflow=1.47 cfs 4,341 cf
Discarded=0.01 cfs 593 cf Primary=0.82 cfs 3,748 cf Outflow=0.83 cfs 4,341 cf

Pond 41P: UGDS-1 Peak Elev=147.25' Storage=5,609 cf Inflow=4.01 cfs 16,262 cf
Outflow=3.02 cfs 16,248 cf

Pond 42P: UGDS-03 Peak Elev=148.22' Storage=9,371 cf Inflow=8.16 cfs 33,502 cf
Outflow=7.22 cfs 33,503 cf

Link 3L: DP 1 -Road (MOHB) Inflow=6.91 cfs 31,521 cf
Primary=6.91 cfs 31,521 cf

Link 5L: DP2 - Wetland NORTH (MOHB) Inflow=15.60 cfs 61,929 cf
Primary=15.60 cfs 61,929 cf

Link 6L: DP 3 - Wetland SouthWest (BB) Inflow=25.52 cfs 97,125 cf
Primary=25.52 cfs 97,125 cf

Link 7L: DP 4 - Wetland Southeast (BB) Inflow=16.87 cfs 77,163 cf
Primary=16.87 cfs 77,163 cf

Total Runoff Area = 541,332 sf Runoff Volume = 313,577 cf Average Runoff Depth = 6.95"
54.35% Pervious = 294,206 sf 45.65% Impervious = 247,126 sf

Hydraulic Design Table (25-year Design Storm)

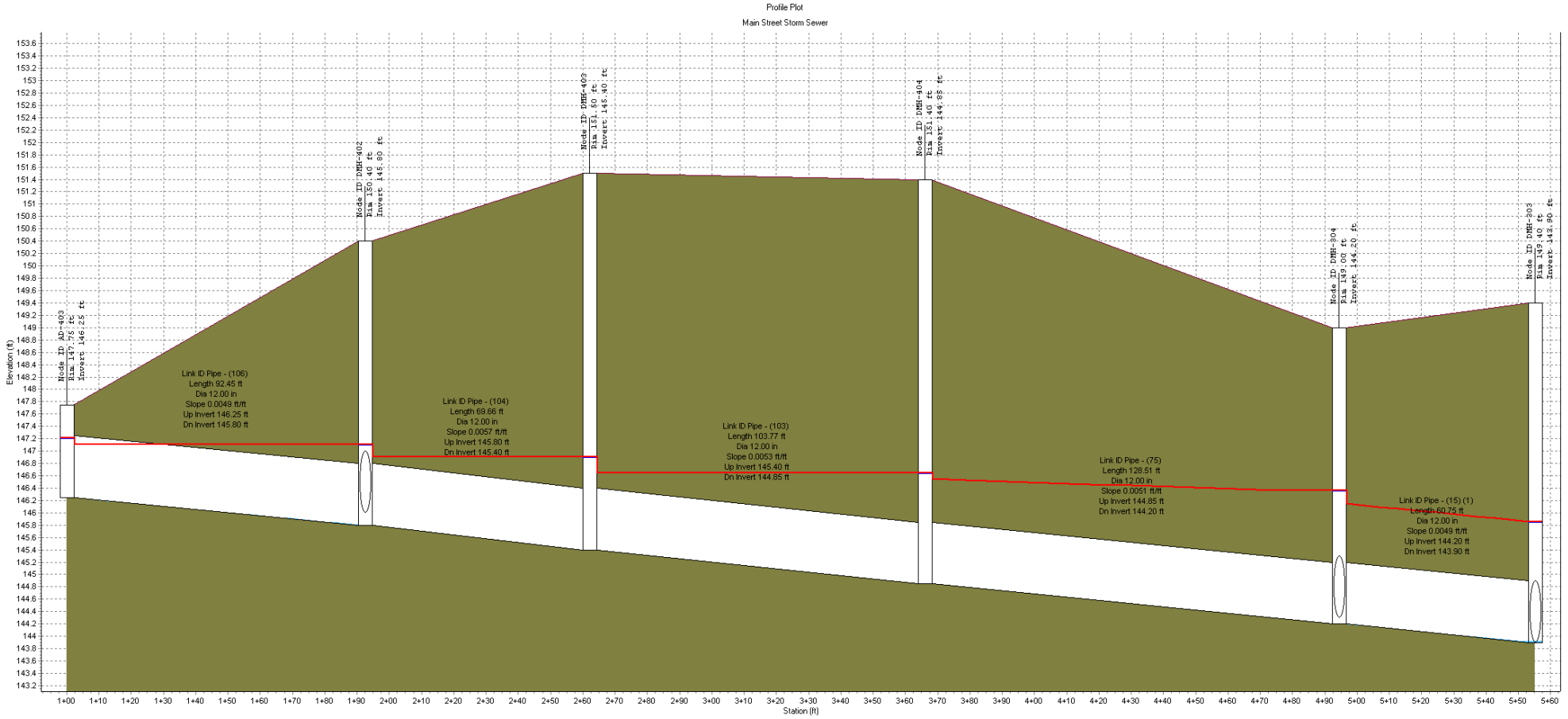
Date 4/4/2022 REVISED: 08/22/2022
Initials ACB

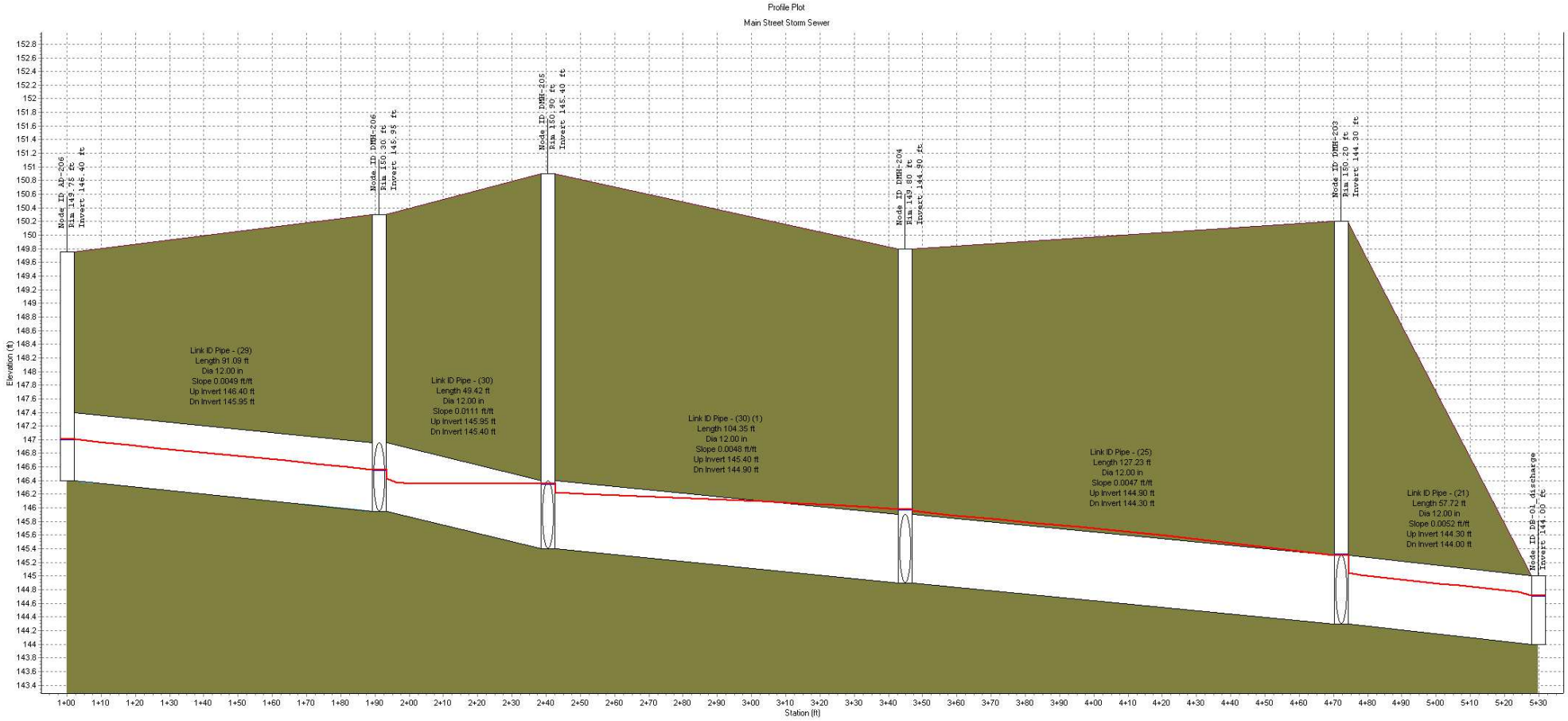
From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Total Drop (ft)	Average Slope (%)	Pipe Diameter or Height (inches)	Manning's Roughness	Peak Flow (cfs)	Max Flow Velocity (ft/sec)	Design Flow Capacity (cfs)	Max Flow / Design Flow Ratio
A-2roofdrain	2Roof_discharge	27.31	148.00	147.00	1.00	3.6600	8.00	0.0120	1.49	6.37	2.51	0.60
A-1RoofDrain_2	alroof_discharge	56.58	147.30	147.00	0.30	0.5300	10.00	0.0120	1.12	3.16	1.73	0.65
AD-202	DMH-303	73.00	144.60	143.90	0.70	0.9600	12.00	0.0150	2.64	4.72	3.02	0.87
A-1RoofDrain_1	IB-01_discharge	18.00	147.00	146.75	0.25	1.3900	10.00	0.0150	1.04	3.57	2.24	0.46
DMH-102	DMH-103	115.57	143.20	140.50	2.70	2.3400	12.00	0.0120	0.00	0.00	5.90	0.00
OCS-07	IB-02_outlet	76.33	144.35	144.00	0.35	0.4600	18.00	0.0130	5.15	4.16	7.11	0.72
OCS-02	DIV-01	11.15	144.50	144.40	0.10	0.9000	12.00	0.0120	0.77	3.67	3.66	0.21
DIV-01	UGDS-02_outlet	88.96	144.40	143.75	0.65	0.7300	12.00	0.0120	0.85	3.34	3.30	0.26
DMH-403	DMH-404	103.77	145.40	144.85	0.55	0.5300	12.00	0.0120	1.54	3.35	2.81	0.55
DMH-402	DMH-403	69.66	145.80	145.40	0.40	0.5700	12.00	0.0120	1.77	3.25	2.92	0.60
AD-401	DMH-402	29.51	146.25	146.00	0.25	0.8500	12.00	0.0120	0.44	2.18	3.55	0.12
AD-403	DMH-402	92.45	146.25	145.80	0.45	0.4900	12.00	0.0120	1.37	2.71	2.69	0.51
AD-301	D-301_discharge	126.47	146.65	146.00	0.65	0.5100	12.00	0.0120	2.16	3.75	2.77	0.78
OCS-03	UGDS-01_outlet	72.06	144.10	143.75	0.35	0.4900	15.00	0.0130	0.75	2.60	4.50	0.17
AD-303	DMH-304	23.40	145.25	144.30	0.95	4.0600	12.00	0.0120	0.43	2.60	7.78	0.05
DMH-304	DMH-303	60.75	144.20	143.90	0.30	0.4900	12.00	0.0120	2.40	3.06	2.71	0.89
AD-304	DMH-304	23.00	144.60	144.30	0.30	1.3000	12.00	0.0120	0.98	2.18	4.41	0.22
DMH-103	DMH_RIDOT	32.90	140.50	139.85	0.65	1.9800	12.00	0.0130	3.77	5.90	5.01	0.75
AD-203	DMH-203	34.19	144.50	144.30	0.20	0.5800	12.00	0.0120	0.38	2.29	2.95	0.13
DMH-203	DB-01_discharge	57.72	144.30	144.00	0.30	0.5200	12.00	0.0120	2.46	3.75	2.78	0.88
OCS-04	DB-01_outlet	39.82	144.00	143.75	0.25	0.6300	18.00	0.0120	5.98	4.69	9.02	0.66
AD-204	DMH-204	83.11	145.40	144.90	0.50	0.6000	12.00	0.0120	0.43	2.30	2.99	0.14
DMH-204	DMH-203	127.23	144.90	144.30	0.60	0.4700	12.00	0.0120	2.16	3.05	2.65	0.82
AD-205	DMH-206	21.66	146.20	145.95	0.25	1.1500	12.00	0.0130	0.43	2.00	3.83	0.11
AD-206	DMH-206	91.09	146.40	145.95	0.45	0.4900	12.00	0.0120	1.21	2.88	2.71	0.44
DMH-206	DMH-205	49.42	145.95	145.40	0.55	1.1100	12.00	0.0120	1.60	3.07	4.07	0.39
DMH-205	DMH-204	104.35	145.40	144.90	0.50	0.4800	12.00	0.0120	1.94	2.96	2.67	0.72
AD-402	DMH-401	56.00	147.50	147.15	0.35	0.6200	12.00	0.0120	0.44	2.41	3.05	0.14
DMH-401	DS-03_discharge	65.00	147.15	146.80	0.35	0.5400	12.00	0.0120	0.43	2.48	2.83	0.15
OCS-05	UGDS-03_outlet	53.00	145.85	145.40	0.45	0.8500	18.00	0.0120	4.41	4.62	9.25	0.48
AD-207	DMH-205	23.59	145.55	145.40	0.15	0.6400	12.00	0.0120	0.41	2.11	3.08	0.13
AD-404	DS-03_discharge2	75.14	147.20	146.80	0.40	0.5300	12.00	0.0120	0.44	2.50	2.82	0.16
HW-02	OCS-06	10.42	145.00	144.95	0.05	0.4800	12.00	0.0130	0.65	2.37	2.47	0.26
OCS-06	DB-02_outlet	63.77	144.95	144.50	0.45	0.7100	12.00	0.0130	0.65	2.88	2.99	0.22
AD-302	DMH-302	45.00	146.25	146.05	0.20	0.4400	15.00	0.0120	3.25	3.54	4.67	0.70
DMH-303	EX_outlet	40.00	143.90	143.72	0.18	0.4500	12.00	0.0120	4.46	5.82	2.59	1.72
DMH-404	DMH-304	128.51	144.85	144.20	0.65	0.5100	12.00	0.0120	1.45	1.84	2.74	0.53
DMH-302	DS-01_discharge	4.38	146.05	146.00	0.05	1.1400	15.00	0.0120	3.16	4.42	12.96	0.24
OCS-01	DMH-102	14.00	146.75	146.65	0.10	0.7100	12.00	0.0120	3.66	4.88	3.26	1.12
AD-201	DS-02_discharge	21.71	146.35	146.20	0.15	0.6900	12.00	0.0120	3.09	4.17	3.21	0.96

Hydraulic Design Table (100-year Design Storm)

Date 4/4/2022 REVISED: 08/18/2022
Initials ACB

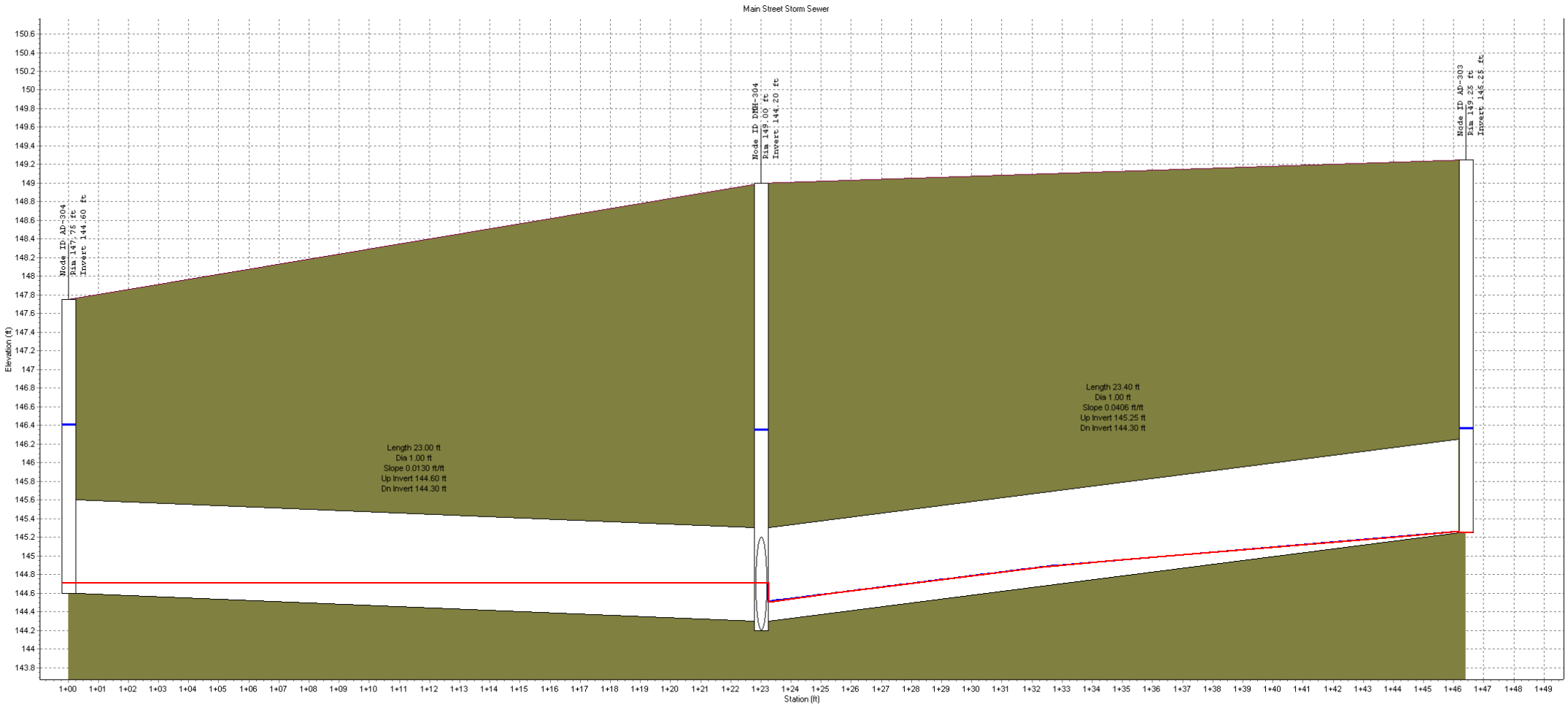
From (Inlet) Node	To (Outlet) Node	Length (ft)	Inlet Invert Elevation (ft)	Outlet Invert Elevation (ft)	Total Drop (ft)	Average Slope (%)	Pipe Diameter or Height (inches)	Manning's Roughness	Peak Flow (cfs)	Max Flow Velocity (ft/sec)	Design Flow Capacity (cfs)	Max Flow / Design Flow Ratio
A-1RoofDrain_1	IB-01_discharge	18.00	147.00	146.75	0.25	1.3900	10.00	0.0150	1.26	3.72	2.24	0.56
A-1RoofDrain_2	A-1_partialroof_discharge	56.58	147.30	147.00	0.30	0.5300	10.00	0.0120	1.36	3.31	1.73	0.79
A-2roofdrain	A-2Roof_discharge	27.31	148.00	147.00	1.00	3.6600	8.00	0.0120	1.80	6.52	2.51	0.72
AD-201	UGDS-02_discharge	21.71	146.35	146.20	0.15	0.6900	12.00	0.0120	3.74	4.77	3.21	1.17
AD-202	DMH-303	73.00	144.60	143.90	0.70	0.9600	12.00	0.0150	2.63	4.72	3.02	0.87
AD-203	DMH-203	34.19	144.50	144.30	0.20	0.5800	12.00	0.0120	0.47	2.38	2.95	0.16
AD-204	DMH-204	83.11	145.40	144.90	0.50	0.6000	12.00	0.0120	0.46	2.39	2.99	0.16
AD-205	DMH-206	21.66	146.20	145.95	0.25	1.1500	12.00	0.0130	0.51	2.09	3.83	0.13
AD-206	DMH-206	91.09	146.40	145.95	0.45	0.4900	12.00	0.0120	1.46	2.95	2.71	0.54
AD-207	DMH-205	23.59	145.55	145.40	0.15	0.6400	12.00	0.0120	0.49	2.20	3.08	0.16
AD-301	AD-301_discharge	126.47	146.65	146.00	0.65	0.5100	12.00	0.0120	2.59	3.88	2.77	0.94
AD-302	DMH-302	45.00	146.25	146.05	0.20	0.4400	15.00	0.0120	3.25	3.54	4.67	0.70
AD-303	DMH-304	23.40	145.25	144.30	0.95	4.0600	12.00	0.0120	0.59	2.75	7.78	0.08
AD-304	DMH-304	23.00	144.60	144.30	0.30	1.3000	12.00	0.0120	1.21	2.31	4.41	0.27
AD-401	DMH-402	29.51	146.25	146.00	0.25	0.8500	12.00	0.0120	0.65	2.20	3.55	0.18
AD-402	DMH-401	56.00	147.50	147.15	0.35	0.6200	12.00	0.0120	0.53	2.52	3.05	0.17
AD-403	DMH-402	92.45	146.25	145.80	0.45	0.4900	12.00	0.0120	1.70	2.79	2.69	0.63
AD-404	UGDS-03_discharge2	75.14	147.20	146.80	0.40	0.5300	12.00	0.0120	0.53	2.62	2.82	0.19
DIV-01	UGDS-02_outlet	88.96	144.40	143.75	0.65	0.7300	12.00	0.0120	0.85	3.34	3.30	0.26
DMH-102	DMH-103	115.57	143.20	140.50	2.70	2.3400	12.00	0.0120	4.23	7.50	5.90	0.72
DMH-103	DMH_RIDOT	32.90	140.50	139.85	0.65	1.9800	12.00	0.0130	3.77	5.90	5.01	0.75
DMH-203	DB-01_discharge	57.72	144.30	144.00	0.30	0.5200	12.00	0.0120	2.74	3.84	2.78	0.99
DMH-204	DMH-203	127.23	144.90	144.30	0.60	0.4700	12.00	0.0120	2.39	3.07	2.65	0.90
DMH-205	DMH-204	104.35	145.40	144.90	0.50	0.4800	12.00	0.0120	2.25	3.03	2.67	0.84
DMH-206	DMH-205	49.42	145.95	145.40	0.55	1.1100	12.00	0.0120	1.91	3.10	4.07	0.47
DMH-302	UGDS-01_discharge	4.38	146.05	146.00	0.05	1.1400	15.00	0.0120	3.15	4.41	12.96	0.24
DMH-303	EX_outlet	40.00	143.90	143.72	0.18	0.4500	12.00	0.0120	4.88	6.32	2.59	1.89
DMH-304	DMH-303	60.75	144.20	143.90	0.30	0.4900	12.00	0.0120	2.81	3.58	2.71	1.04
DMH-401	UGDS-03_discharge	65.00	147.15	146.80	0.35	0.5400	12.00	0.0120	0.52	2.61	2.83	0.18
DMH-402	DMH-403	69.66	145.80	145.40	0.40	0.5700	12.00	0.0120	1.94	3.26	2.92	0.66
DMH-403	DMH-404	103.77	145.40	144.85	0.55	0.5300	12.00	0.0120	1.65	3.46	2.81	0.59
DMH-404	DMH-304	128.51	144.85	144.20	0.65	0.5100	12.00	0.0120	1.61	2.05	2.74	0.59
HW-02	OCS-06	10.42	145.00	144.95	0.05	0.4800	12.00	0.0130	0.79	2.48	2.47	0.32
OCS-01	DMH-102	14.00	146.75	146.65	0.10	0.7100	12.00	0.0120	3.66	4.88	3.26	1.12
OCS-02	DIV-01	11.15	144.50	144.40	0.10	0.9000	12.00	0.0120	0.77	3.67	3.66	0.21
OCS-03	UGDS-01_outlet	72.06	144.10	143.75	0.35	0.4900	15.00	0.0130	0.75	2.60	4.50	0.17
OCS-04	DB-01_outlet	39.82	144.00	143.75	0.25	0.6300	18.00	0.0120	5.92	4.67	9.02	0.66
OCS-05	UGDS-03_outlet	53.00	145.85	145.40	0.45	0.8500	18.00	0.0120	4.41	4.62	9.25	0.48
OCS-06	DB-02_outlet	63.77	144.95	144.50	0.45	0.7100	12.00	0.0130	0.78	3.03	2.99	0.26
OCS-07	IB-02_outlet	76.33	144.35	144.00	0.35	0.4600	18.00	0.0130	5.11	4.15	7.11	0.72


Profile Plot
Main Street Storm Sewer
Elevation (ft)
Station (ft)
Node ID DMH-403
Rim 147.75 ft
Invert 146.25 ft
Node ID DMH-402
Rim 150.40 ft
Invert 145.80 ft
Node ID DMH-403
Rim 151.50 ft
Invert 145.40 ft
Node ID DMH-404
Rim 151.40 ft
Invert 144.85 ft
Node ID DMH-404
Rim 149.00 ft
Invert 144.20 ft
Node ID DMH-803
Rim 149.40 ft
Invert 143.90 ft
Link ID Pipe - (106)
Length 92.45 ft
Dia 12.00 in
Slope 0.0049 ft/ft
Up Invert 146.25 ft
Dn Invert 145.80 ft
Link ID Pipe - (104)
Length 69.66 ft
Dia 12.00 in
Slope 0.0057 ft/ft
Up Invert 145.80 ft
Dn Invert 145.40 ft
Link ID Pipe - (103)
Length 103.77 ft
Dia 12.00 in
Slope 0.0053 ft/ft
Up Invert 145.40 ft
Dn Invert 144.85 ft
Link ID Pipe - (75)
Length 129.51 ft
Dia 12.00 in
Slope 0.0051 ft/ft
Up Invert 144.85 ft
Dn Invert 144.20 ft
Link ID Pipe - (15) (1)
Length 60.75 ft
Dia 12.00 in
Slope 0.0049 ft/ft
Up Invert 144.20 ft
Dn Invert 143.90 ft


Profile Plot
Main Street Storm Sewer
Elevation (ft)
Station (ft)
Node ID AD-206
Rim 149.75 ft
Invert 146.40 ft
Node ID DMH-206
Rim 150.30 ft
Invert 145.95 ft
Node ID DMH-205
Rim 150.90 ft
Invert 145.40 ft
Node ID DMH-204
Rim 149.80 ft
Invert 144.90 ft
Node ID DMH-203
Rim 150.20 ft
Invert 144.30 ft
Node ID DS-01 discharge
Invert 144.00 ft
Link ID Pipe - (28)
Length 91.09 ft
Dia 12.00 in
Slope 0.0049 ft/ft
Up Invert 146.40 ft
Dn Invert 145.95 ft
Link ID Pipe - (30)
Length 49.42 ft
Dia 12.00 in
Slope 0.0111 ft/ft
Up Invert 145.95 ft
Dn Invert 145.40 ft
Link ID Pipe - (30) (1)
Length 104.35 ft
Dia 12.00 in
Slope 0.0048 ft/ft
Up Invert 145.40 ft
Dn Invert 144.90 ft
Link ID Pipe - (25)
Length 127.23 ft
Dia 12.00 in
Slope 0.0047 ft/ft
Up Invert 144.90 ft
Dn Invert 144.30 ft
Link ID Pipe - (21)
Length 57.72 ft
Dia 12.00 in
Slope 0.0052 ft/ft
Up Invert 144.30 ft
Dn Invert 144.00 ft

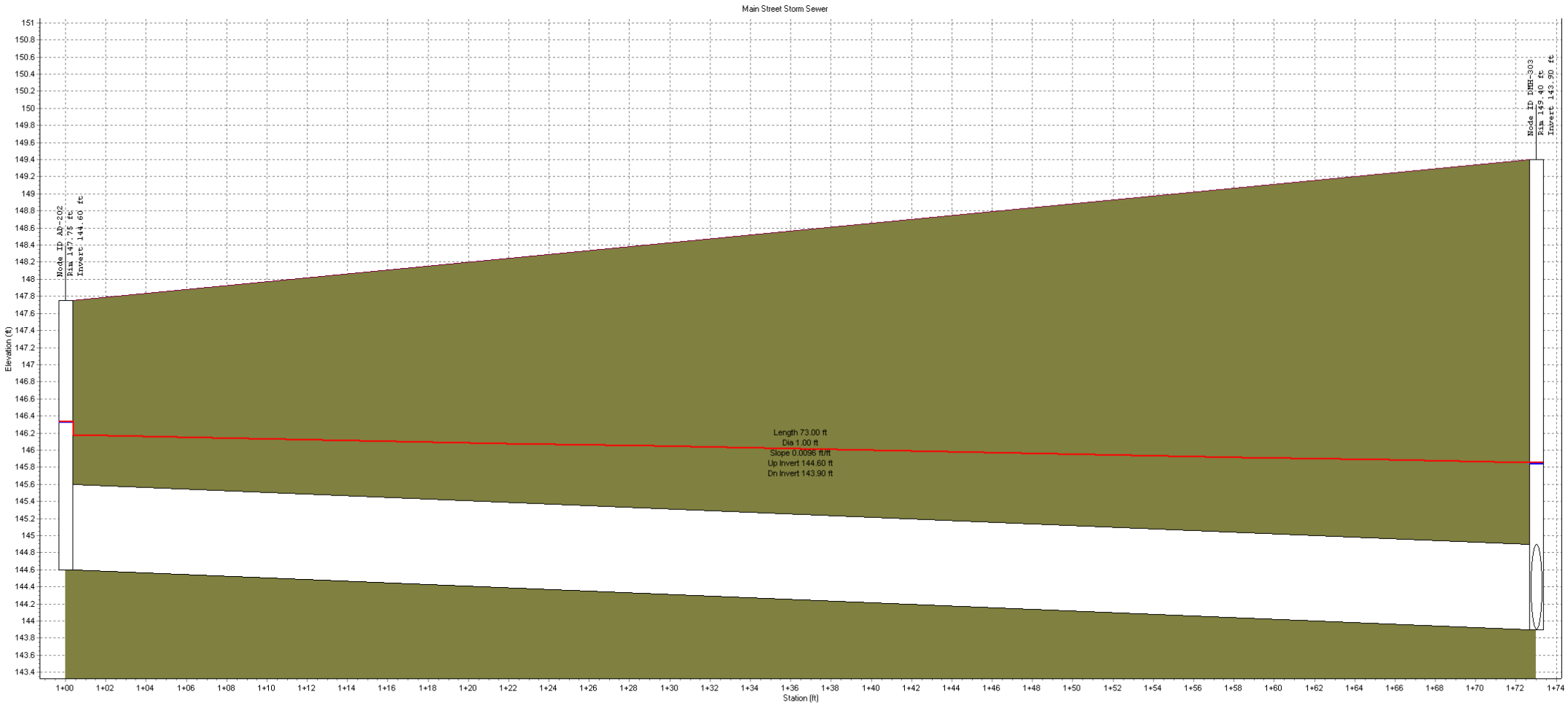
Profile Plot

Main Street Storm Sewer



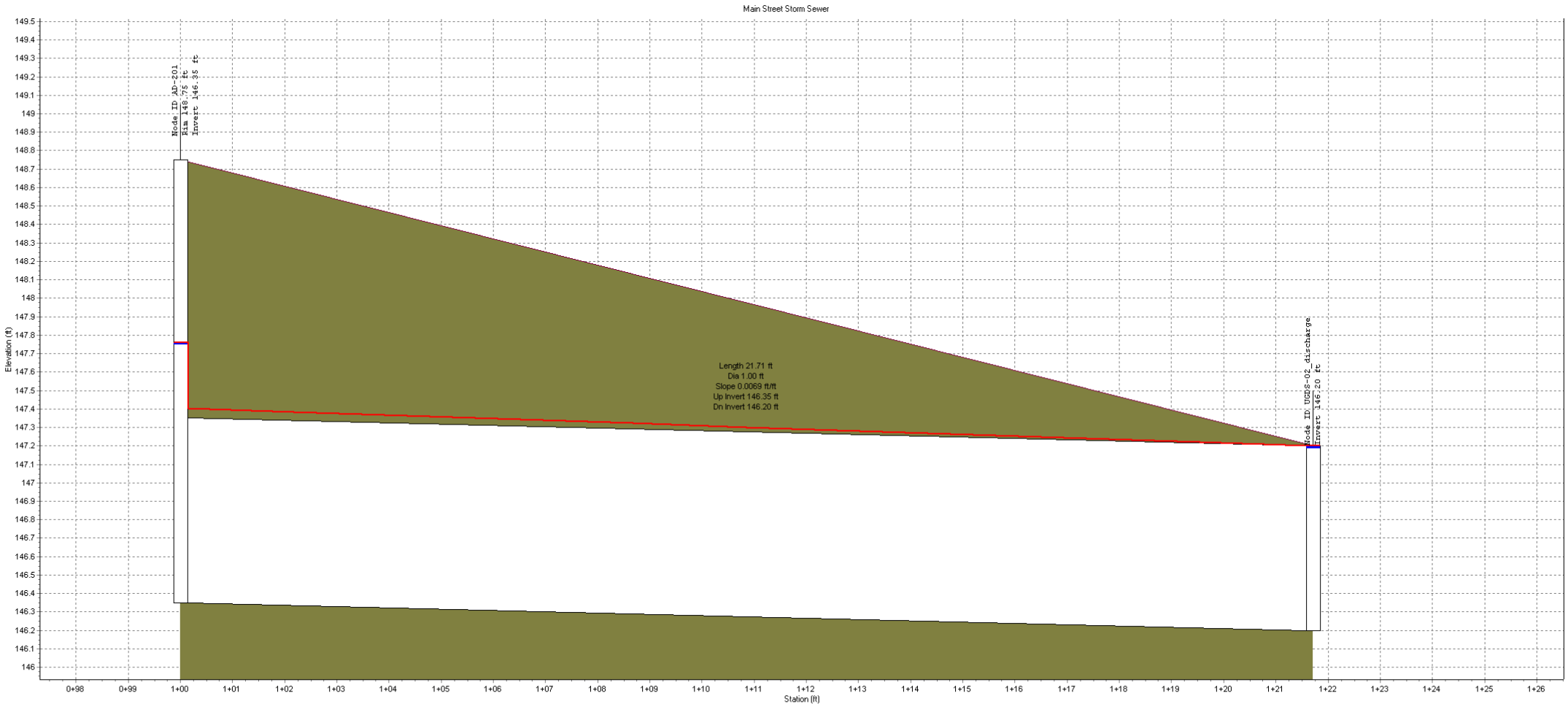
Profile Plot

Main Street Storm Sewer



Profile Plot

Main Street Storm Sewer



APPENDIX C

Channel Protection Volume Calculation(REVISED)
Mounding Analysis Calculations
Level Spreader Calculation

PARE CORPORATION

PROJECT	Rosebrook Commons	PROJECT NUMBER	13018.01
SUBJECT	Channel Protection Volume		
COMPUTATIONS BY	ACB	DATE	4/4/2022 REVISED:08/22/2022
CHECK BY	VH	DATE	4/4/2022

CHANNEL PROTECTION VOLUME (CPv)

Runoff Volume for the 1-year storm proposed condition Bailey's Brook (Vr)= 33,000 CF From HydroCAD

Method 1
CPv = 0.65 x Runoff Volume from 1-year storm(Vr)

CPv Required MIN = 21,450 CF

CPv Provided

Bio-01	3,782	CF (recharge for the 1-year Storm)
Bio-02	2,444	CF (recharge for the 1-year Storm)
Bio-09	1,135	CF (recharge for the 1-year Storm)
Bio-10	450	CF (recharge for the 1-year Storm)
Bio-11	4,212	CF (recharge for the 1-year Storm)
Bio-12	450	CF (recharge for the 1-year Storm)
Bio-13	1,272	CF (recharge for the 1-year Storm)
Bio-14	528	CF (recharge for the 1-year Storm)
Bio-15	449	CF (recharge for the 1-year Storm)
Bio-16	1,267	CF (recharge for the 1-year Storm)
Bio-17	450	CF (recharge for the 1-year Storm)
Infiltration Basin-02	-	CF (recharge for the 1-year Storm)
Detention Basin -02	247	CF (recharge for the 1-year Storm)
Total CPv Provided =	**16,686**	CF
Total CPv Remaining =	**4,764**	**CF**

Detention Basin-02

Average Release Flow Rate over 24 hours
Vr Detention Basin 1= 329 CF (1 yr volume entering detention basin-02 minus recharge)
Qcpv = 0.004 CFS

Area of Orifice
A = Qcpv / [Cx(2xgxh)^(1/2)]; A = pi() x r^2

C = 0.60
g = 32.2 ft/s^2
h = average height above orifice = 0.24 ft

A = 0.0016 sf

Therefore Diameter is:

D = 0.05 ft
D = 0.54 inches
D provided = 1.00 inches

Underground Detention System -01

Average Release Flow Rate over 24 hours
Vr UGDS-02= 1459 CF (1 yr volume entering UGDS-01)
Qcpv = 0.017 CFS

Area of Orifice
A = Qcpv / [Cx(2xgxh)^(1/2)]; A = pi() x r^2

C = 0.60
g = 32.2 ft/s^2
h = average height above orifice = 0.265 ft

A = 0.007 sf

Therefore Diameter is:

D = 0.09 ft
D = 1.12 inches
D provided = 1.5 inches

Underground Detention System -03

Average Release Flow Rate over 24 hours
Vr UGDS-02= 3866 CF (1 yr volume entering UGDS-03)
Qcpv = 0.045 CFS

Area of Orifice
A = Qcpv / [Cx(2xgxh)^(1/2)]; A = pi() x r^2

C = 0.60
g = 32.2 ft/s^2
h = average height above orifice = 0.535 ft

A = 0.013 sf

Therefore Diameter is:

D = 0.13 ft
D = 1.53 inches
D provided = 2 inches

Total CPv Provided = 22,340 CF

MOUNDING ANALYSIS FOR DB-01
DATE: 08/22/2022

This spreadsheet will calculate the height of a groundwater mound beneath a stormwater infiltration basin. More information can be found in the U.S. Geological Survey Scientific Investigations Report 2010-5102 "Simulation of groundwater mounding beneath hypothetical stormwater infiltration basins".

The user must specify infiltration rate (R), specific yield (Sy), horizontal hydraulic conductivity (Kh), basin dimensions (x, y), duration of infiltration period (t), and the initial thickness of the saturated zone (hi(0), height of the water table if the bottom of the aquifer is the datum). For a square basin the half width equals the half length (x = y). For a rectangular basin, if the user wants the water-table changes perpendicular to the long side, specify x as the short dimension and y as the long dimension. Conversely, if the user wants the values perpendicular to the short side, specify y as the short dimension, x as the long dimension. All distances are from the center of the basin. Users can change the distances from the center of the basin at which water-table aquifer thickness are calculated.
Cells highlighted in yellow are values that can be changed by the user. Cells highlighted in red are output values based on user-specified inputs. The user MUST click the blue "Re-Calculate Now" button each time ANY of the user-specified inputs are changed otherwise necessary iterations to converge on the correct solution will not be done and values shown will be incorrect. Use consistent units for all input values (for example, feet and days)

use consistent units (e.g. feet & days **or** inches & hours)

Input Values		
0.3688	*R*	**Recharge (infiltration) rate (feet/day)**
0.060	Sy	**Specific yield, Sy (dimensionless, between 0 and 1)**
10.40	K	**Horizontal hydraulic conductivity, Kh (feet/day)***
20.000	x	**1/2 length of basin (x direction, in feet)**
3.000	y	**1/2 width of basin (y direction, in feet)**
2.000	t	**duration of infiltration period (days)**
11.000	hi(0)	**initial thickness of saturated zone (feet)**

Conversion Table

inch/hour	feet/day
0.67	1.33
2.00	4.00

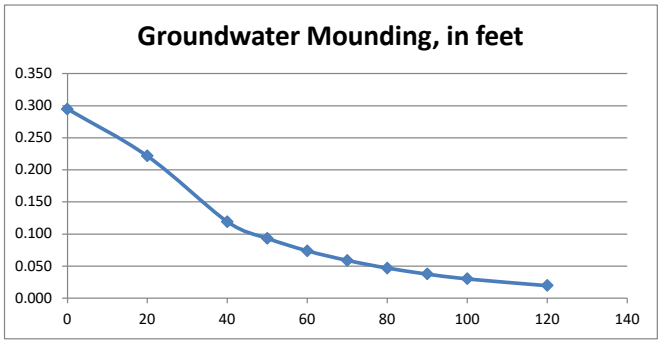
hours	days
36	1.50

In the report accompanying this spreadsheet (USGS SIR 2010-5102), vertical soil permeability (ft/d) is assumed to be one-tenth horizontal hydraulic conductivity (ft/d).

11.295	h(max)	**maximum thickness of saturated zone (beneath center of basin at end of infiltration period)**
0.295	Δh(max)	**maximum groundwater mounding (beneath center of basin at end of infiltration period)**

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
0.295	0
0.222	20
0.119	40
0.093	50
0.074	60
0.059	70
0.047	80
0.038	90
0.030	100
0.020	120

Re-Calculate Now



Disclaimer

This spreadsheet solving the Hantush (1967) equation for ground-water mounding beneath an infiltration basin is made available to the general public as a convenience for those wishing to replicate values documented in the USGS Scientific Investigations Report 2010-5102 "Groundwater mounding beneath hypothetical stormwater infiltration basins" or to calculate values based on user-specified site conditions. Any changes made to the spreadsheet (other than values identified as user-specified) after transmission from the USGS could have unintended, undesirable consequences. These consequences could include, but may not be limited to: erroneous output, numerical instabilities, and violations of underlying assumptions that are inherent in results presented in the accompanying USGS published report. The USGS assumes no responsibility for the consequences of any changes made to the spreadsheet. If changes are made to the spreadsheet, the user is responsible for documenting the changes and justifying the results and conclusions.

R (10yr) = Recharge (infiltration) rate feet/day **Analysis for DB-01 08/22/2022**

Infiltration rate was determined to be the quantity of water discarded in a 10-yr storm over the drain down time of the system

System: Volume Discarded (CF)/ System Footprint (SF) / Drawdown Time (Day) = Infiltration Rate (FT/DAY)

R = 0.37 FT/DAY

Footprint Area=	240.00	SF
Drawdown Time =	2.00	DAY
Volume Discarded =	177	CF

Sy = Specific yield

Values are obtained from table below for Specific yield for various geologic materials (from Morris and Johnson 1967)

Material	Specific Yield (%)
Gravel, coarse	21
Gravel, medium	24
Gravel, fine	28
Sand, coarse	30
Sand, medium	32
Sand, fine	33
Silt	20
Clay	6
Sandstone, fine grained	21
Sandstone, medium grained	27
Limestone	14
Dune sand	38
Loess	18
Peat	44
Schist	26
Siltstone	12
Till, predominantly silt	6
Till, predominantly sand	16
Till, predominantly gravel	16
Tuff	21

K = horizontal hydraulic conductivity

The USGS report accompanying the spreadsheet, vertical soil permeability is assumed to be one-tenth of the horizontal hydraulic conductivity.
vertical soil permeability was determined be 0.52 in/hr = 1.04ft/day
therefore K =10.4feet/day

x and y = horizontal dimensions of the infiltration system

t = duration of the infiltration period, days

hi = initial saturated thickness
Initial saturated aquifer thickness of 20' is assumed.

MOUNDING ANALYSIS FOR DB-02
DATE: 08/22/2022

This spreadsheet will calculate the height of a groundwater mound beneath a stormwater infiltration basin. More information can be found in the U.S. Geological Survey Scientific Investigations Report 2010-5102 "Simulation of groundwater mounding beneath hypothetical stormwater infiltration basins".

The user must specify infiltration rate (R), specific yield (Sy), horizontal hydraulic conductivity (Kh), basin dimensions (x, y), duration of infiltration period (t), and the initial thickness of the saturated zone (hi(0), height of the water table if the bottom of the aquifer is the datum). For a square basin the half width equals the half length (x = y). For a rectangular basin, if the user wants the water-table changes perpendicular to the long side, specify x as the short dimension and y as the long dimension. Conversely, if the user wants the values perpendicular to the short side, specify y as the short dimension, x as the long dimension. All distances are from the center of the basin. Users can change the distances from the center of the basin at which water-table aquifer thickness are calculated.
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use consistent units (e.g. feet & days **or** inches & hours)

Input Values		
0.3522	***R***	**Recharge (infiltration) rate (feet/day)**
0.060	**Sy**	**Specific yield, Sy (dimensionless, between 0 and 1)**
10.40	**K**	**Horizontal hydraulic conductivity, Kh (feet/day)***
13.500	**x**	**1/2 length of basin (x direction, in feet)**
12.125	**y**	**1/2 width of basin (y direction, in feet)**
2.000	**t**	**duration of infiltration period (days)**
5.000	**hi(0)**	**initial thickness of saturated zone (feet)**

Conversion Table

inch/hour	feet/day
0.67	1.33
2.00	4.00

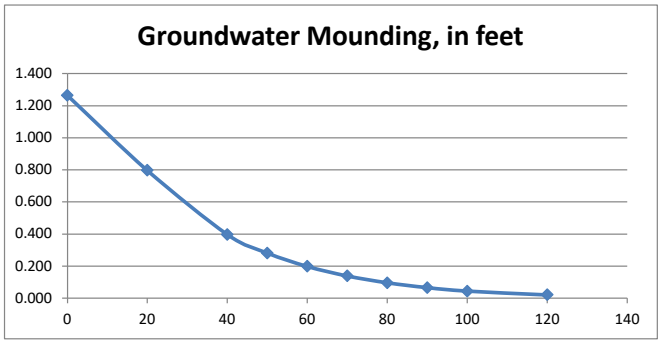
hours	days
36	1.50

In the report accompanying this spreadsheet (USGS SIR 2010-5102), vertical soil permeability (ft/d) is assumed to be one-tenth horizontal hydraulic conductivity (ft/d).

6.264	**h(max)**	**maximum thickness of saturated zone (beneath center of basin at end of infiltration period)**
1.264	**Δh(max)**	**maximum groundwater mounding (beneath center of basin at end of infiltration period)**

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
1.264	**0**
0.797	**20**
0.396	**40**
0.281	**50**
0.198	**60**
0.138	**70**
0.095	**80**
0.065	**90**
0.044	**100**
0.020	**120**

Re-Calculate Now



Disclaimer

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R (10yr) = Recharge (infiltration) rate feet/day **Analysis for DB-02 08/22/2022**

Infiltration rate was determined to be the quantity of water discarded in a 10-yr storm over the drain down time of the system

System: Volume Discarded (CF)/ System Footprint (SF) / Drawdown Time (Day) = Infiltration Rate (FT/DAY)

R = 0.35 FT/DAY

Footprint Area=	619.00	SF
Drawdown Time =	2.00	DAY
Volume Discarded =	436	CF

Sy = Specific yield

Values are obtained from table below for Specific yield for various geologic materials (from Morris and Johnson 1967)

Material	Specific Yield (%)
Gravel, coarse	21
Gravel, medium	24
Gravel, fine	28
Sand, coarse	30
Sand, medium	32
Sand, fine	33
Silt	20
Clay	6
Sandstone, fine grained	21
Sandstone, medium grained	27
Limestone	14
Dune sand	38
Loess	18
Peat	44
Schist	26
Siltstone	12
Till, predominantly silt	6
Till, predominantly sand	16
Till, predominantly gravel	16
Tuff	21

K = horizontal hydraulic conductivity

The USGS report accompanying the spreadsheet, vertical soil permeability is assumed to be one-tenth of the horizontal hydraulic conductivity.
vertical soil permeability was determined be 0.52 in/hr = 1.04ft/day
therefore K =10.4feet/day

x and y = horizontal dimensions of the infiltration system

t = duration of the infiltration period, days

hi = initial saturated thickness
Initial saturated aquifer thickness of 20' is assumed.

MOUNDING ANALYSIS FOR UGIS-02
DATE: 08/22/2022

This spreadsheet will calculate the height of a groundwater mound beneath a stormwater infiltration basin. More information can be found in the U.S. Geological Survey Scientific Investigations Report 2010-5102 "Simulation of groundwater mounding beneath hypothetical stormwater infiltration basins".

The user must specify infiltration rate (R), specific yield (Sy), horizontal hydraulic conductivity (Kh), basin dimensions (x, y), duration of infiltration period (t), and the initial thickness of the saturated zone (hi(0), height of the water table if the bottom of the aquifer is the datum). For a square basin the half width equals the half length (x = y). For a rectangular basin, if the user wants the water-table changes perpendicular to the long side, specify x as the short dimension and y as the long dimension. Conversely, if the user wants the values perpendicular to the short side, specify y as the short dimension, x as the long dimension. All distances are from the center of the basin. Users can change the distances from the center of the basin at which water-table aquifer thickness are calculated.
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use consistent units (e.g. feet & days **or** inches & hours)

Input Values		
0.5372	***R***	**Recharge (infiltration) rate (feet/day)**
0.200	**Sy**	**Specific yield, Sy (dimensionless, between 0 and 1)**
10.40	**K**	**Horizontal hydraulic conductivity, Kh (feet/day)***
52.400	**x**	**1/2 length of basin (x direction, in feet)**
19.700	**y**	**1/2 width of basin (y direction, in feet)**
2.000	**t**	**duration of infiltration period (days)**
7.280	**hi(0)**	**initial thickness of saturated zone (feet)**

Conversion Table

inch/hour	feet/day
0.67	1.33
2.00	4.00

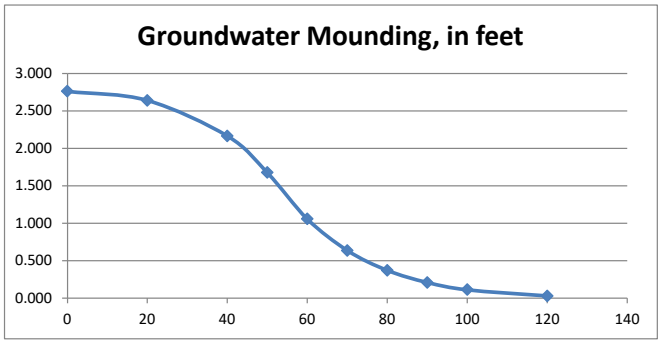
hours	days
36	1.50

In the report accompanying this spreadsheet (USGS SIR 2010-5102), vertical soil permeability (ft/d) is assumed to be one-tenth horizontal hydraulic conductivity (ft/d).

10.043	**h(max)**	**maximum thickness of saturated zone (beneath center of basin at end of infiltration period)**
2.763	**Δh(max)**	**maximum groundwater mounding (beneath center of basin at end of infiltration period)**

Ground-water Mounding, in feet	Distance from center of basin in x direction, in feet
2.763	0
2.641	20
2.167	40
1.677	50
1.058	60
0.638	70
0.371	80
0.209	90
0.114	100
0.030	120

Re-Calculate Now



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R (10yr) = Recharge (infiltration) rate feet/day **Analysis for UGIS-02 08/22/2022**

Infiltration rate was determined to be the quantity of water discarded in a 10-yr storm over the drain down time of the system

System: Volume Discarded (CF)/ System Footprint (SF) / Drawdown Time (Day) = Infiltration Rate (FT/DAY)

R = 0.54 FT/DAY

Footprint Area=	4,135.00	SF
Drawdown Time =	2.00	DAY
Volume Discarded =	4,443	CF

Sy = Specific yield

Values are obtained from table below for Specific yield for various geologic materials (from Morris and Johnson 1967)

Material	Specific Yield (%)
Gravel, coarse	21
Gravel, medium	24
Gravel, fine	28
Sand, coarse	30
Sand, medium	32
Sand, fine	33
Silt	20
Clay	6
Sandstone, fine grained	21
Sandstone, medium grained	27
Limestone	14
Dune sand	38
Loess	18
Peat	44
Schist	26
Siltstone	12
Till, predominantly silt	6
Till, predominantly sand	16
Till, predominantly gravel	16
Tuff	21

K = horizontal hydraulic conductivity

The USGS report accompanying the spreadsheet, vertical soil permeability is assumed to be one-tenth of the horizontal hydraulic conductivity.
vertical soil permeability was determined be 0.52 in/hr = 1.04ft/day
therefore K =10.4feet/day

x and y = horizontal dimensions of the infiltration system

t = duration of the infiltration period, days

hi = initial saturated thickness
Initial saturated aquifer thickness of 20' is assumed.

PAGE OF

PROJECT Rosebrook Commons PROJECT NUMBER 13018.01

SUBJECT

COMPUTATIONS BY ACB DATE 8/19/2022

CHECK BY DATE

LEVEL SPREADER CALCULATION

A. Resources:

Based on Section Five: Runoff Control Measures- Outlet Protection of the Rhode Island Soil Erosion and Sediment Control Handbook.

B. Equations:

IF, Tailwater (TW) $\geq 0.5D_o$ THEN, $W = 3\ (D_o) + 0.4\ (L_a)$ eq. 1

IF, Tailwater (TW) $< 0.5D_o$ THEN, $W = 3\ (D_o) + (L_a)$ eq. 2

$$L_a = \frac{1.7Q}{D_o^{3/2}} + 8D_o \quad \text{eq. 3}$$

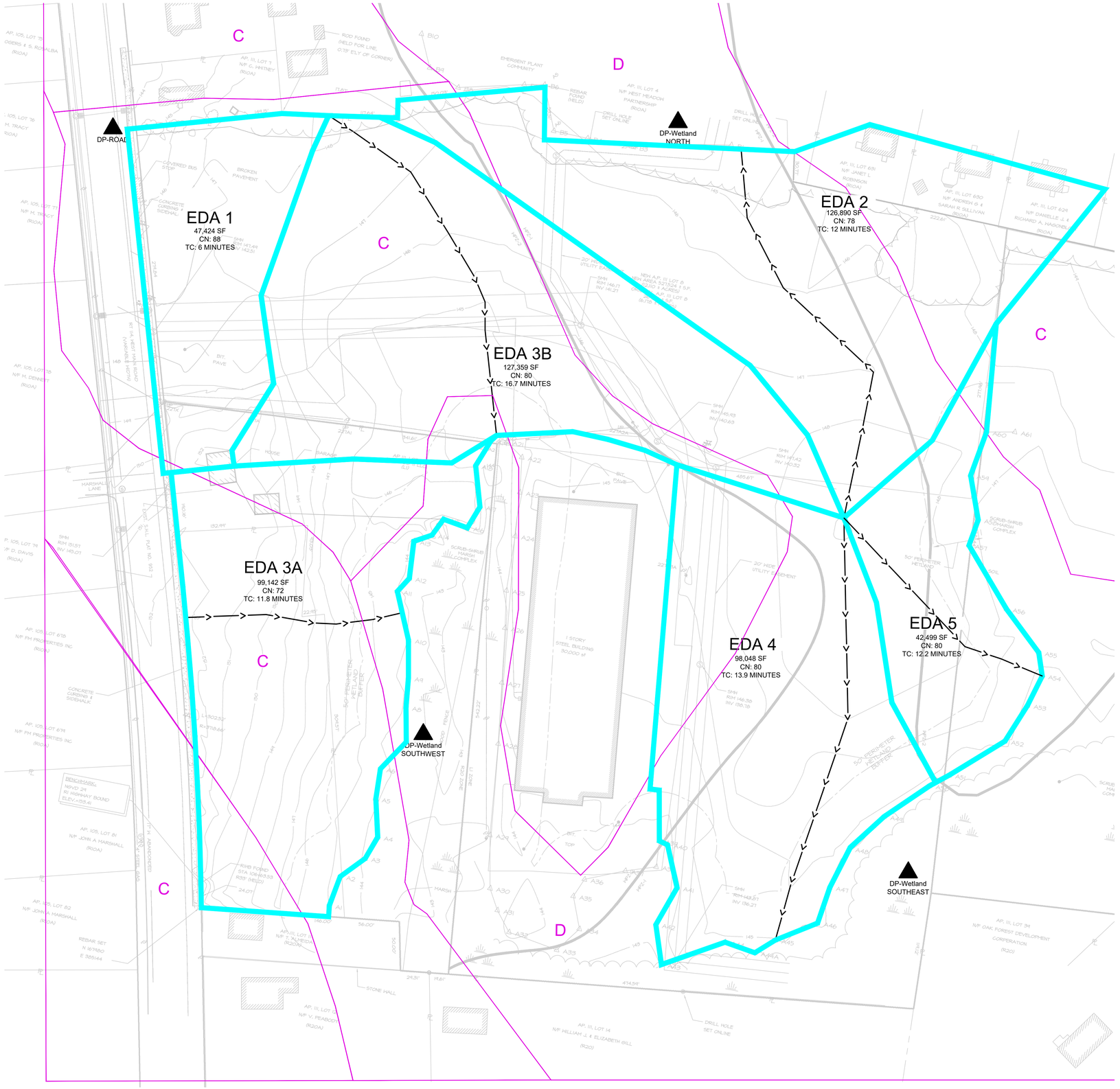
$$d_{50} = \left(\frac{0.02}{TW}\right)\left(\frac{Q}{D_o}\right)^{4/3} \quad \text{eq. 4}$$

C. Calculations:

Level Spreader Calc to Outlet:

Pipe	D_o (Feet)	Q_{25} (CFS)	TW (Feet)	L_a (Feet)	W (Feet)	d_{50} (Feet)	d_{50} (Inches)	d_{50} Select (In.)
DIV-01 to FES	1.00	0.05	0.50	8.09	11.09	0.00	0.01	4
OCS-05 to FES	1.50	5.57	0.5	17.15	21.65	0.23	2.76	4

APPENDIX D
XBT-1 Existing Hydrology(REVISED)
XBT-2 Proposed Hydrology(REVISED)



PARE
PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
8 BLACKSTONE VALLEY PLACE
LINCOLN, RI 02865
401-334-4100
10 LINCOLN ROAD, SUITE 210
FOXBORO, MA 02035
508-543-1755

APPLICANT:
MESOLELLA
DEVELOPMENT CORP.
4 FOX PLACE
PROVIDENCE, RI 02903

OWNER:
CVDD II LLC, CENZ CORP.
4 FOX PLACE
PROVIDENCE, RI 02903

SCALE ADJUSTMENT GUIDE
0" 1"
BAR IS ONE INCH ON ORIGINAL DRAWING

Rosebrook Commons
Mixed Use Development
AP 111, Lots 8 & 9
1747 West Main Road
Middletown, Rhode Island

REVISIONS:

1	08-19-2022	RESPONSE TO COMMENTS

PROJECT NO.:	13018.01
DATE:	APRIL 8, 2022
SCALE:	1"=50'
DESIGNED BY:	ACB
CHECKED BY:	JW
DRAWN BY:	AKL
APPROVED BY:	VAH

DRAWING TITLE:

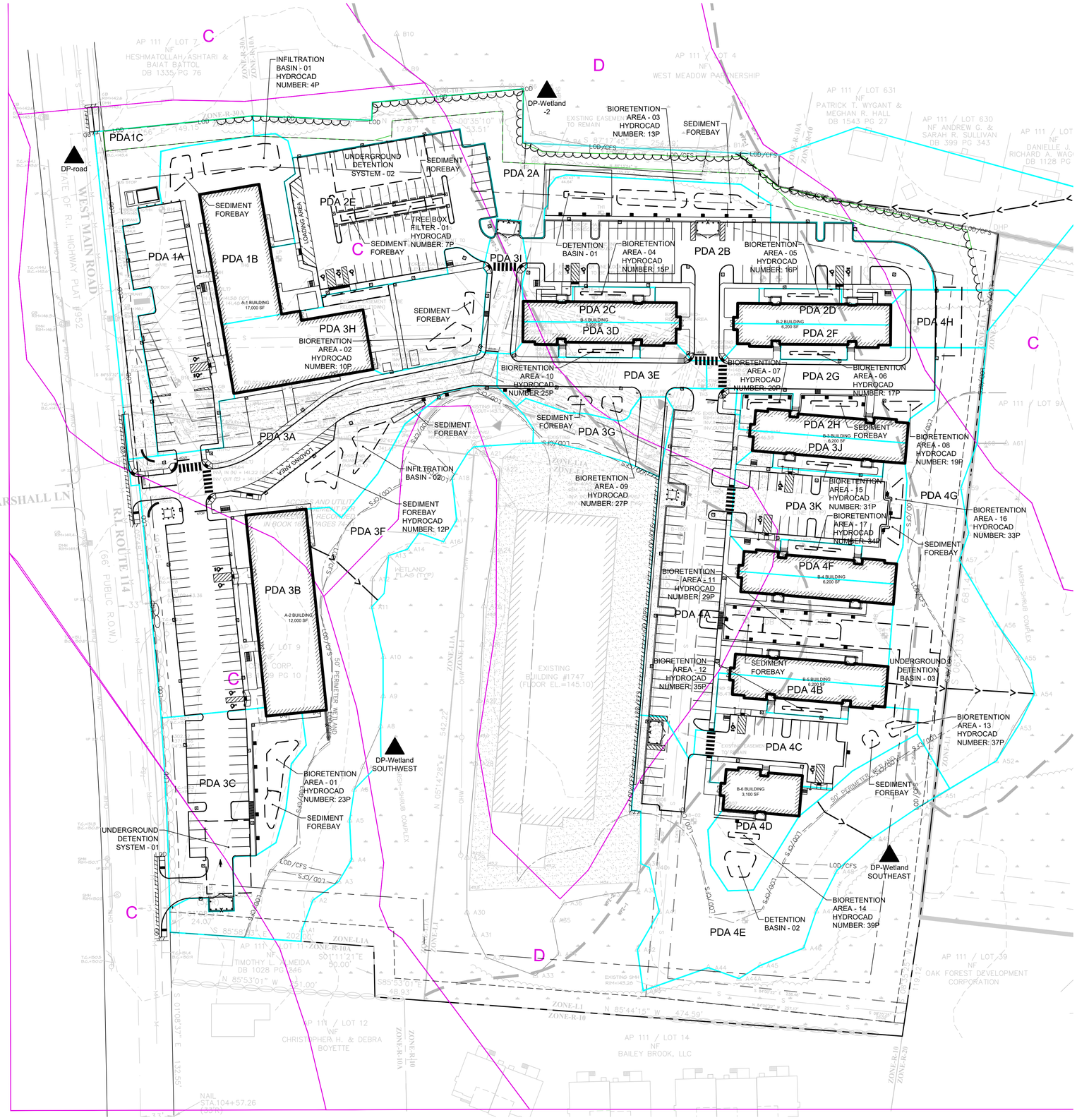
EXISTING HYDROLOGY PLAN

DRAWING NO.:
XBT-1

SHEET NO. ___ OF 40

DRAINAGE AREA SUMMARY TABLE

DRAINAGE AREA	AREA (SF)	CN	TC (MINUTES)
PDA-1A	26,484	89	6
PDA-1B	7,838	98	6
PDA-1C	13,755	75	6
PDA-2A	52,452	77	11
PDA-2B	39,263	92	6
PDA-2C	4,298	94	6
PDA-2D	4,291	94	6
PDA-2E	27,979	95	6
PDA-2F	4,106	94	6
PDA-2G	12,646	92	6
PDA-2H	4,227	94	6
PDA-3A	50,013	89	6
PDA-3B	12,000	98	6
PDA-3C	20,479	87	6
PDA-3D	4,377	94	6
PDA-3E	10,567	90	6
PDA-3F	46,282	76	7.70
PDA-3G	6,443	82	6
PDA-3H	20,855	88	6
PDA-3I	4,778	96	6
PDA-3J	4,712	93	6
PDA-3K	13,806	92	6
PDA-4A	42,711	91	6
PDA-4B	4,401	94	6
PDA-4C	13,049	90	6
PDA-4D	8,397	87	6
PDA-4E	36,641	82	6
PDA-4F	4,393	94	6
PDA-4G	34,103	79	6
PDA-4H	5,987	81	6



PARE
PARE CORPORATION
ENGINEERS - SCIENTISTS - PLANNERS
8 BLACKSTONE VALLEY PLACE, LINCOLN, RI 02865, 401-334-4100
10 LINCOLN ROAD, SUITE 210, FOXBORO, MA 02035, 508-543-1795

APPLICANT:
MESOLELLA DEVELOPMENT CORP.
4 FOX PLACE
PROVIDENCE, RI 02903

OWNER:
CVDD II LLC, CENZ CORP.
4 FOX PLACE
PROVIDENCE, RI 02903

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CHECKED BY:	JW
DRAWN BY:	AKL
APPROVED BY:	VAH

DRAWING TITLE:
PROPOSED HYDROLOGY PLAN

DRAWING NO.:
XBT-2
SHEET NO. ___ OF -