STORMWATER NARRATIVE

PROPOSED STORM DRAINAGE

Proposed stormwater design will mimic existing flow patterns to the extent practical. The proposed site configuration is expected to result in an increase in impervious area. The project will require stormwater detention systems and proprietary treatment units to mitigate the increased peak rate of runoff resulting from the increase in impervious area to meet MassDEP Stormwater Standards. The Standards include removing pollutants from the stormwater in vehicular areas using Best Management Practices (BMPs) such as deep sump catch basins, proprietary water quality structures, and bioretention basins.

A below grade stormwater retention system will be required to mimic infiltration patterns currently on site. This system will mitigate some of the roof runoff from the proposed building, and stormwater from the vehicular areas that will be collected by deep-sump and hooded catch basins and directed through water quality structures before discharging into the subsurface infiltration system.

Other BMPs proposed on site consist of rain garden and perforated pipe embedded in crushed stone, which will also help to mitigate the increased peak rate of runoff.

PRECIPITATION DATA

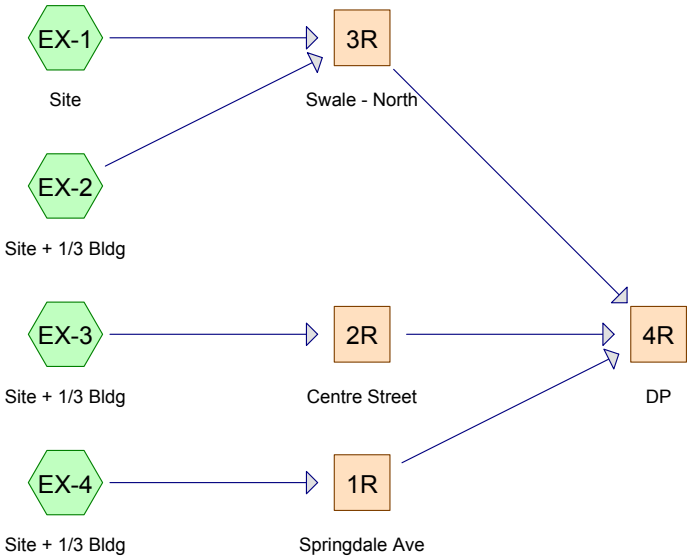
Nitsch Engineering, Inc. used National Oceanic and Atmospheric Administration (NOAA) Atlas 14 Volume 10 Precipitation Data to estimate the rainfall for the 2-year, 10-year, 25-year and 100-year 24-hour storms. The rainfall values for Dover that will be used are as follows:

Storm Event	24-Hour Rainfall
2-year	3.37 in
10-year	5.26 in
25-year	6.44 in
100-year	8.26 in

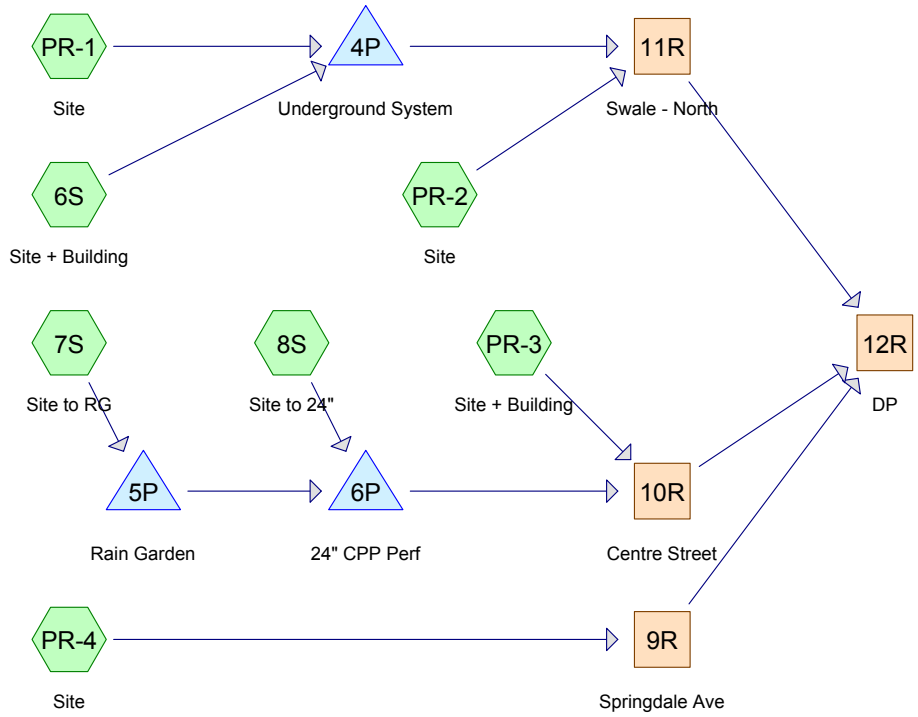
A summary of the pre- and post-peak runoff rates for the 2-, 10-, 25-, and 100-yr storms is shown in the table below.

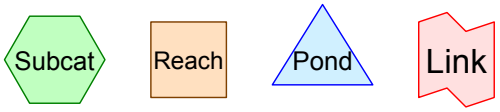
	2-Year	10-year	25-year	100-year
Existing	4.95	10.25	13.72	19.14
Proposed	1.62	7.75	10.89	15.39

Existing



Proposed





Routing Diagram for 14238 - HydroCAD
Prepared by Nitsch Engineering, Printed 12/13/2021

Rainfall Events Listing (selected events)

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-yr	NOAA 24-hr	D	Default	24.00	1	3.37	2
2	10-yr	NOAA 24-hr	D	Default	24.00	1	5.26	2
3	25-yr	NOAA 24-hr	D	Default	24.00	1	6.44	2
4	100-yr	NOAA 24-hr	D	Default	24.00	1	8.26	2

Area Listing (selected nodes)

Area (acres)	CN	Description (subcatchment-numbers)
3.304	61	>75% Grass cover, Good, HSG B (6S, 7S, 8S, EX-1, EX-2, EX-3, EX-4, PR-1, PR-2, PR-3)
2.033	98	Paved parking, HSG B (6S, 7S, 8S, EX-1, EX-2, EX-3, EX-4, PR-1, PR-2, PR-3, PR-4)
0.780	98	Roofs, HSG B (6S, EX-2, EX-3, EX-4, PR-3, PR-4)
6.116	**78**	**TOTAL AREA**

Soil Listing (selected nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.000	HSG A	
6.116	HSG B	6S, 7S, 8S, EX-1, EX-2, EX-3, EX-4, PR-1, PR-2, PR-3, PR-4
0.000	HSG C	
0.000	HSG D	
0.000	Other	
6.116		**TOTAL AREA**

Ground Covers (selected nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.000	3.304	0.000	0.000	0.000	3.304	>75% Grass cover, Good	6S, 7S, 8S, EX-1, EX-2, EX-3, EX-4, PR-1, PR-2, PR-3
0.000	2.033	0.000	0.000	0.000	2.033	Paved parking	6S, 7S, 8S, EX-1, EX-2, EX-3, EX-4, PR-1, PR-2, PR-3, PR-4
0.000	0.780	0.000	0.000	0.000	0.780	Roofs	6S, EX-2, EX-3, EX-4, PR-3, PR-4
0.000	**6.116**	**0.000**	**0.000**	**0.000**	**6.116**	**TOTAL AREA**	

Pipe Listing (selected nodes)

Line#	Node Number	In-Invert (feet)	Out-Invert (feet)	Length (feet)	Slope (ft/ft)	n	Width (inches)	Diam/Height (inches)	Inside-Fill (inches)
1	4P	154.25	154.25	12.0	0.0000	0.011	0.0	18.0	0.0

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

Subcatchment 6S: Site + Building Runoff Area=35,212 sf 69.46% Impervious Runoff Depth=2.07"
Tc=6.0 min CN=87 Runoff=1.88 cfs 0.139 af

Subcatchment 7S: Site to RG Runoff Area=8,746 sf 6.63% Impervious Runoff Depth=0.60"
Tc=6.0 min CN=63 Runoff=0.11 cfs 0.010 af

Subcatchment 8S: Site to 24" Runoff Area=9,242 sf 12.98% Impervious Runoff Depth=0.73"
Tc=6.0 min CN=66 Runoff=0.16 cfs 0.013 af

Subcatchment EX-1: Site Runoff Area=22,451 sf 52.79% Impervious Runoff Depth=1.60"
Tc=6.0 min CN=81 Runoff=0.94 cfs 0.069 af

Subcatchment EX-2: Site + 1/3 Bldg Runoff Area=49,472 sf 55.91% Impervious Runoff Depth=1.68"
Tc=6.0 min CN=82 Runoff=2.17 cfs 0.159 af

Subcatchment EX-3: Site + 1/3 Bldg Runoff Area=36,183 sf 33.63% Impervious Runoff Depth=1.09"
Tc=6.0 min CN=73 Runoff=1.01 cfs 0.076 af

Subcatchment EX-4: Site + 1/3 Bldg Runoff Area=25,119 sf 39.64% Impervious Runoff Depth=1.27"
Tc=6.0 min CN=76 Runoff=0.83 cfs 0.061 af

Subcatchment PR-1: Site Runoff Area=39,645 sf 55.93% Impervious Runoff Depth=1.68"
Tc=6.0 min CN=82 Runoff=1.74 cfs 0.127 af

Subcatchment PR-2: Site Runoff Area=20,842 sf 7.13% Impervious Runoff Depth=0.64"
Tc=6.0 min CN=64 Runoff=0.30 cfs 0.026 af

Subcatchment PR-3: Site + Building Runoff Area=15,901 sf 46.32% Impervious Runoff Depth=1.40"
Tc=6.0 min CN=78 Runoff=0.58 cfs 0.043 af

Subcatchment PR-4: Site Runoff Area=3,619 sf 100.00% Impervious Runoff Depth=3.14"
Tc=6.0 min CN=98 Runoff=0.26 cfs 0.022 af

Reach 1R: Springdale Ave Inflow=0.83 cfs 0.061 af
Outflow=0.83 cfs 0.061 af

Reach 2R: Centre Street Inflow=1.01 cfs 0.076 af
Outflow=1.01 cfs 0.076 af

Reach 3R: Swale - North Inflow=3.11 cfs 0.227 af
Outflow=3.11 cfs 0.227 af

Reach 4R: DP Inflow=4.95 cfs 0.364 af
Outflow=4.95 cfs 0.364 af

Reach 9R: Springdale Ave Inflow=0.26 cfs 0.022 af
Outflow=0.26 cfs 0.022 af

Reach 10R: Centre Street Inflow=0.84 cfs 0.065 af
Outflow=0.84 cfs 0.065 af

Reach 11R: Swale - North Inflow=1.18 cfs 0.139 af
Outflow=1.18 cfs 0.139 af

Reach 12R: DP Inflow=1.62 cfs 0.225 af
Outflow=1.62 cfs 0.225 af

Pond 4P: Underground System Peak Elev=154.85' Storage=0.092 af Inflow=3.62 cfs 0.266 af
Discarded=0.08 cfs 0.153 af Primary=1.06 cfs 0.113 af Outflow=1.13 cfs 0.266 af

Pond 5P: Rain Garden Peak Elev=157.00' Storage=0 cf Inflow=0.11 cfs 0.010 af
Outflow=0.11 cfs 0.010 af

Pond 6P: 24" CPP Perf Peak Elev=154.15' Storage=0.001 af Inflow=0.27 cfs 0.023 af
Outflow=0.26 cfs 0.022 af

Total Runoff Area = 6.116 ac Runoff Volume = 0.743 af Average Runoff Depth = 1.46"
54.01% Pervious = 3.304 ac 45.99% Impervious = 2.813 ac

Summary for Subcatchment 6S: Site + Building

Runoff = 1.88 cfs @ 12.13 hrs, Volume= 0.139 af, Depth= 2.07"
Routed to Pond 4P : Underground System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-yr Rainfall=3.37"

Area (sf)	CN	Description
10,752	61	>75% Grass cover, Good, HSG B
16,560	98	Paved parking, HSG B
7,900	98	Roofs, HSG B
35,212	87	Weighted Average
10,752		30.54% Pervious Area
24,460		69.46% Impervious Area

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

Summary for Subcatchment 7S: Site to RG

Runoff = 0.11 cfs @ 12.15 hrs, Volume= 0.010 af, Depth= 0.60"
Routed to Pond 5P : Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-yr Rainfall=3.37"

Area (sf)	CN	Description
8,166	61	>75% Grass cover, Good, HSG B
580	98	Paved parking, HSG B
8,746	63	Weighted Average
8,166		93.37% Pervious Area
580		6.63% Impervious Area

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

Summary for Subcatchment 8S: Site to 24"

Runoff = 0.16 cfs @ 12.14 hrs, Volume= 0.013 af, Depth= 0.73"
Routed to Pond 6P : 24" CPP Perf

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-yr Rainfall=3.37"

Area (sf)	CN	Description
8,042	61	>75% Grass cover, Good, HSG B
1,200	98	Paved parking, HSG B
9,242	66	Weighted Average
8,042		87.02% Pervious Area
1,200		12.98% Impervious Area

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

Summary for Subcatchment EX-1: Site

Runoff = 0.94 cfs @ 12.13 hrs, Volume= 0.069 af, Depth= 1.60"
Routed to Reach 3R : Swale - North

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-yr Rainfall=3.37"

Area (sf)	CN	Description
10,599	61	>75% Grass cover, Good, HSG B
11,852	98	Paved parking, HSG B
22,451	81	Weighted Average
10,599		47.21% Pervious Area
11,852		52.79% Impervious Area

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

Summary for Subcatchment EX-2: Site + 1/3 Bldg

Runoff = 2.17 cfs @ 12.13 hrs, Volume= 0.159 af, Depth= 1.68"
Routed to Reach 3R : Swale - North

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-yr Rainfall=3.37"

Area (sf)	CN	Description
21,811	61	>75% Grass cover, Good, HSG B
21,224	98	Paved parking, HSG B
6,437	98	Roofs, HSG B
49,472	82	Weighted Average
21,811		44.09% Pervious Area
27,661		55.91% Impervious Area

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

Summary for Subcatchment EX-3: Site + 1/3 Bldg

Runoff = 1.01 cfs @ 12.14 hrs, Volume= 0.076 af, Depth= 1.09"
Routed to Reach 2R : Centre Street

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-yr Rainfall=3.37"

Area (sf)	CN	Description
24,014	61	>75% Grass cover, Good, HSG B
5,732	98	Paved parking, HSG B
6,437	98	Roofs, HSG B
36,183	73	Weighted Average
24,014		66.37% Pervious Area
12,169		33.63% Impervious Area

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

Summary for Subcatchment EX-4: Site + 1/3 Bldg

Runoff = 0.83 cfs @ 12.14 hrs, Volume= 0.061 af, Depth= 1.27"
Routed to Reach 1R : Springdale Ave

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-yr Rainfall=3.37"

Area (sf)	CN	Description
15,162	61	>75% Grass cover, Good, HSG B
3,520	98	Paved parking, HSG B
6,437	98	Roofs, HSG B
25,119	76	Weighted Average
15,162		60.36% Pervious Area
9,957		39.64% Impervious Area

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

Summary for Subcatchment PR-1: Site

Runoff = 1.74 cfs @ 12.13 hrs, Volume= 0.127 af, Depth= 1.68"
Routed to Pond 4P : Underground System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-yr Rainfall=3.37"

Area (sf)	CN	Description
17,472	61	>75% Grass cover, Good, HSG B
22,173	98	Paved parking, HSG B
39,645	82	Weighted Average
17,472		44.07% Pervious Area
22,173		55.93% Impervious Area

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

Summary for Subcatchment PR-2: Site

Runoff = 0.30 cfs @ 12.14 hrs, Volume= 0.026 af, Depth= 0.64"
Routed to Reach 11R : Swale - North

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-yr Rainfall=3.37"

Area (sf)	CN	Description
19,355	61	>75% Grass cover, Good, HSG B
1,487	98	Paved parking, HSG B
20,842	64	Weighted Average
19,355		92.87% Pervious Area
1,487		7.13% Impervious Area

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

Summary for Subcatchment PR-3: Site + Building

Runoff = 0.58 cfs @ 12.13 hrs, Volume= 0.043 af, Depth= 1.40"
Routed to Reach 10R : Centre Street

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-yr Rainfall=3.37"

Area (sf)	CN	Description
8,535	61	>75% Grass cover, Good, HSG B
3,766	98	Paved parking, HSG B
3,600	98	Roofs, HSG B
15,901	78	Weighted Average
8,535		53.68% Pervious Area
7,366		46.32% Impervious Area

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

Summary for Subcatchment PR-4: Site

Runoff = 0.26 cfs @ 12.13 hrs, Volume= 0.022 af, Depth= 3.14"
Routed to Reach 9R : Springdale Ave

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 2-yr Rainfall=3.37"

Area (sf)	CN	Description
447	98	Paved parking, HSG B
3,172	98	Roofs, HSG B
3,619	98	Weighted Average
3,619		100.00% Impervious Area

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

Summary for Reach 1R: Springdale Ave

Inflow Area = 0.577 ac, 39.64% Impervious, Inflow Depth = 1.27" for 2-yr event
Inflow = 0.83 cfs @ 12.14 hrs, Volume= 0.061 af
Outflow = 0.83 cfs @ 12.14 hrs, Volume= 0.061 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 2R: Centre Street

Inflow Area = 0.831 ac, 33.63% Impervious, Inflow Depth = 1.09" for 2-yr event
Inflow = 1.01 cfs @ 12.14 hrs, Volume= 0.076 af
Outflow = 1.01 cfs @ 12.14 hrs, Volume= 0.076 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 3R: Swale - North

Inflow Area = 1.651 ac, 54.94% Impervious, Inflow Depth = 1.65" for 2-yr event
Inflow = 3.11 cfs @ 12.13 hrs, Volume= 0.227 af
Outflow = 3.11 cfs @ 12.13 hrs, Volume= 0.227 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 4R: DP

Inflow Area = 3.058 ac, 46.27% Impervious, Inflow Depth = 1.43" for 2-yr event
Inflow = 4.95 cfs @ 12.13 hrs, Volume= 0.364 af
Outflow = 4.95 cfs @ 12.13 hrs, Volume= 0.364 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 9R: Springdale Ave

Inflow Area = 0.083 ac,100.00% Impervious, Inflow Depth = 3.14" for 2-yr event
Inflow = 0.26 cfs @ 12.13 hrs, Volume= 0.022 af
Outflow = 0.26 cfs @ 12.13 hrs, Volume= 0.022 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 12R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 10R: Centre Street

Inflow Area = 0.778 ac, 26.99% Impervious, Inflow Depth = 1.00" for 2-yr event
Inflow = 0.84 cfs @ 12.14 hrs, Volume= 0.065 af
Outflow = 0.84 cfs @ 12.14 hrs, Volume= 0.065 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 12R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 11R: Swale - North

Inflow Area = 2.197 ac, 50.28% Impervious, Inflow Depth = 0.76" for 2-yr event
Inflow = 1.18 cfs @ 12.34 hrs, Volume= 0.139 af
Outflow = 1.18 cfs @ 12.34 hrs, Volume= 0.139 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 12R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 12R: DP

Inflow Area = 3.058 ac, 45.71% Impervious, Inflow Depth = 0.88" for 2-yr event
Inflow = 1.62 cfs @ 12.26 hrs, Volume= 0.225 af
Outflow = 1.62 cfs @ 12.26 hrs, Volume= 0.225 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Pond 4P: Underground System

Inflow Area = 1.718 ac, 62.30% Impervious, Inflow Depth = 1.86" for 2-yr event
Inflow = 3.62 cfs @ 12.13 hrs, Volume= 0.266 af
Outflow = 1.13 cfs @ 12.36 hrs, Volume= 0.266 af, Atten= 69%, Lag= 13.6 min
Discarded = 0.08 cfs @ 10.40 hrs, Volume= 0.153 af
Primary = 1.06 cfs @ 12.36 hrs, Volume= 0.113 af
Routed to Reach 11R : Swale - North

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 154.85' @ 12.36 hrs Surf.Area= 0.073 ac Storage= 0.092 af

Plug-Flow detention time= 257.7 min calculated for 0.266 af (100% of inflow)
Center-of-Mass det. time= 257.6 min (1,091.8 - 834.2)

Volume	Invert	Avail.Storage	Storage Description
#1A	152.50'	0.094 af	**31.00'W x 103.00'L x 5.00'H Field A** 0.366 af Overall - 0.133 af Embedded = 0.234 af x 40.0% Voids
#2A	153.00'	0.106 af	**ADS N-12 42"** x 25 Inside #1 Inside= 41.1"W x 41.1"H => 9.20 sf x 20.00'L = 184.0 cf Outside= 48.0"W x 48.0"H => 11.56 sf x 20.00'L = 231.1 cf 25 Chambers in 5 Rows
		0.199 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	152.50'	**1.020 in/hr Exfiltration over Surface area**
#2	Primary	154.25'	**18.0" Round Culvert** L= 12.0' Ke= 0.500 Inlet / Outlet Invert= 154.25' / 154.25' S= 0.0000 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf

Discarded OutFlow Max=0.08 cfs @ 10.40 hrs HW=152.55' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=1.05 cfs @ 12.36 hrs HW=154.85' (Free Discharge)
↑**2=Culvert** (Barrel Controls 1.05 cfs @ 2.35 fps)

Pond 4P: Underground System - Chamber Wizard Field A

Chamber Model = ADS N-12 42" (ADS N-12® Pipe)
Inside= 41.1"W x 41.1"H => 9.20 sf x 20.00'L = 184.0 cf
Outside= 48.0"W x 48.0"H => 11.56 sf x 20.00'L = 231.1 cf

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

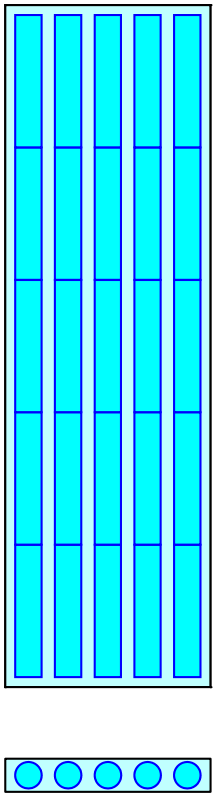
5 Chambers/Row x 20.00' Long = 100.00' Row Length +18.0" End Stone x 2 = 103.00' Base Length
5 Rows x 48.0" Wide + 24.0" Spacing x 4 + 18.0" Side Stone x 2 = 31.00' Base Width
6.0" Stone Base + 48.0" Chamber Height + 6.0" Stone Cover = 5.00' Field Height

25 Chambers x 184.0 cf = 4,600.0 cf Chamber Storage
25 Chambers x 231.1 cf = 5,778.2 cf Displacement

15,960.4 cf Field - 5,778.2 cf Chambers = 10,182.2 cf Stone x 40.0% Voids = 4,072.9 cf Stone Storage

Chamber Storage + Stone Storage = 8,672.9 cf = 0.199 af
Overall Storage Efficiency = 54.3%
Overall System Size = 103.00' x 31.00' x 5.00'

25 Chambers
591.1 cy Field
377.1 cy Stone



Stage-Area-Storage for Pond 4P: Underground System

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
152.50	**0.073**	0.000	153.02	0.073	0.015
152.51	0.073	0.000	153.03	0.073	0.016
152.52	0.073	0.001	153.04	0.073	0.016
152.53	0.073	0.001	153.05	0.073	0.016
152.54	0.073	0.001	153.06	0.073	0.016
152.55	0.073	0.001	153.07	0.073	0.017
152.56	0.073	0.002	153.08	0.073	0.017
152.57	0.073	0.002	153.09	0.073	0.017
152.58	0.073	0.002	153.10	0.073	0.017
152.59	0.073	0.003	153.11	0.073	0.017
152.60	0.073	0.003	153.12	0.073	0.018
152.61	0.073	0.003	153.13	0.073	0.018
152.62	0.073	0.004	153.14	0.073	0.018
152.63	0.073	0.004	153.15	0.073	0.018
152.64	0.073	0.004	153.16	0.073	0.019
152.65	0.073	0.004	153.17	0.073	0.019
152.66	0.073	0.005	153.18	0.073	0.019
152.67	0.073	0.005	153.19	0.073	0.019
152.68	0.073	0.005	153.20	0.073	0.020
152.69	0.073	0.006	153.21	0.073	0.020
152.70	0.073	0.006	153.22	0.073	0.020
152.71	0.073	0.006	153.23	0.073	0.020
152.72	0.073	0.006	153.24	0.073	0.020
152.73	0.073	0.007	153.25	0.073	0.021
152.74	0.073	0.007	153.26	0.073	0.021
152.75	0.073	0.007	153.27	0.073	0.021
152.76	0.073	0.008	153.28	0.073	0.021
152.77	0.073	0.008	153.29	0.073	0.021
152.78	0.073	0.008	153.30	0.073	0.022
152.79	0.073	0.009	153.31	0.073	0.022
152.80	0.073	0.009	153.32	0.073	0.022
152.81	0.073	0.009	153.33	0.073	0.022
152.82	0.073	0.009	153.34	0.073	0.023
152.83	0.073	0.010	153.35	0.073	0.023
152.84	0.073	0.010	153.36	0.073	0.023
152.85	0.073	0.010	153.37	0.073	0.024
152.86	0.073	0.011	153.38	0.073	0.024
152.87	0.073	0.011	153.39	0.073	0.024
152.88	0.073	0.011	153.40	0.073	0.025
152.89	0.073	0.011	153.41	0.073	0.025
152.90	0.073	0.012	153.42	0.073	0.025
152.91	0.073	0.012	153.43	0.073	0.026
152.92	0.073	0.012	153.44	0.073	0.026
152.93	0.073	0.013	153.45	0.073	0.026
152.94	0.073	0.013	153.46	0.073	0.027
152.95	0.073	0.013	153.47	0.073	0.027
152.96	0.073	0.013	153.48	0.073	0.027
152.97	0.073	0.014	153.49	0.073	0.028
152.98	0.073	0.014	153.50	0.073	0.028
152.99	0.073	0.014	153.51	0.073	0.029
153.00	0.073	0.015	153.52	0.073	0.029
153.01	0.073	0.015	153.53	0.073	0.029

Stage-Area-Storage for Pond 4P: Underground System (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
153.54	0.073	0.030	154.06	0.073	0.052
153.55	0.073	0.030	154.07	0.073	0.053
153.56	0.073	0.030	154.08	0.073	0.053
153.57	0.073	0.031	154.09	0.073	0.054
153.58	0.073	0.031	154.10	0.073	0.054
153.59	0.073	0.032	154.11	0.073	0.055
153.60	0.073	0.032	154.12	0.073	0.055
153.61	0.073	0.032	154.13	0.073	0.056
153.62	0.073	0.033	154.14	0.073	0.056
153.63	0.073	0.033	154.15	0.073	0.057
153.64	0.073	0.034	154.16	0.073	0.057
153.65	0.073	0.034	154.17	0.073	0.058
153.66	0.073	0.034	154.18	0.073	0.058
153.67	0.073	0.035	154.19	0.073	0.059
153.68	0.073	0.035	154.20	0.073	0.059
153.69	0.073	0.036	154.21	0.073	0.060
153.70	0.073	0.036	154.22	0.073	0.060
153.71	0.073	0.037	154.23	0.073	0.060
153.72	0.073	0.037	154.24	0.073	0.061
153.73	0.073	0.037	154.25	0.073	0.061
153.74	0.073	0.038	154.26	0.073	0.062
153.75	0.073	0.038	154.27	0.073	0.062
153.76	0.073	0.039	154.28	0.073	0.063
153.77	0.073	0.039	154.29	0.073	0.063
153.78	0.073	0.040	154.30	0.073	0.064
153.79	0.073	0.040	154.31	0.073	0.064
153.80	0.073	0.040	154.32	0.073	0.065
153.81	0.073	0.041	154.33	0.073	0.065
153.82	0.073	0.041	154.34	0.073	0.066
153.83	0.073	0.042	154.35	0.073	0.066
153.84	0.073	0.042	154.36	0.073	0.067
153.85	0.073	0.043	154.37	0.073	0.067
153.86	0.073	0.043	154.38	0.073	0.068
153.87	0.073	0.044	154.39	0.073	0.068
153.88	0.073	0.044	154.40	0.073	0.069
153.89	0.073	0.044	154.41	0.073	0.069
153.90	0.073	0.045	154.42	0.073	0.070
153.91	0.073	0.045	154.43	0.073	0.070
153.92	0.073	0.046	154.44	0.073	0.071
153.93	0.073	0.046	154.45	0.073	0.071
153.94	0.073	0.047	154.46	0.073	0.072
153.95	0.073	0.047	154.47	0.073	0.072
153.96	0.073	0.048	154.48	0.073	0.073
153.97	0.073	0.048	154.49	0.073	0.073
153.98	0.073	0.049	154.50	0.073	0.074
153.99	0.073	0.049	154.51	0.073	0.074
154.00	0.073	0.049	154.52	0.073	0.075
154.01	0.073	0.050	154.53	0.073	0.075
154.02	0.073	0.050	154.54	0.073	0.076
154.03	0.073	0.051	154.55	0.073	0.076
154.04	0.073	0.051	154.56	0.073	0.077
154.05	0.073	0.052	154.57	0.073	0.077

Stage-Area-Storage for Pond 4P: Underground System (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
154.58	0.073	0.078	155.10	0.073	0.105
154.59	0.073	0.078	155.11	0.073	0.105
154.60	0.073	0.079	155.12	0.073	0.106
154.61	0.073	0.079	155.13	0.073	0.106
154.62	0.073	0.080	155.14	0.073	0.107
154.63	0.073	0.081	155.15	0.073	0.107
154.64	0.073	0.081	155.16	0.073	0.108
154.65	0.073	0.082	155.17	0.073	0.108
154.66	0.073	0.082	155.18	0.073	0.109
154.67	0.073	0.083	155.19	0.073	0.109
154.68	0.073	0.083	155.20	0.073	0.110
154.69	0.073	0.084	155.21	0.073	0.110
154.70	0.073	0.084	155.22	0.073	0.111
154.71	0.073	0.085	155.23	0.073	0.111
154.72	0.073	0.085	155.24	0.073	0.112
154.73	0.073	0.086	155.25	0.073	0.112
154.74	0.073	0.086	155.26	0.073	0.113
154.75	0.073	0.087	155.27	0.073	0.114
154.76	0.073	0.087	155.28	0.073	0.114
154.77	0.073	0.088	155.29	0.073	0.115
154.78	0.073	0.088	155.30	0.073	0.115
154.79	0.073	0.089	155.31	0.073	0.116
154.80	0.073	0.089	155.32	0.073	0.116
154.81	0.073	0.090	155.33	0.073	0.117
154.82	0.073	0.090	155.34	0.073	0.117
154.83	0.073	0.091	155.35	0.073	0.118
154.84	0.073	0.091	155.36	0.073	0.118
154.85	0.073	0.092	155.37	0.073	0.119
154.86	0.073	0.092	155.38	0.073	0.119
154.87	0.073	0.093	155.39	0.073	0.120
154.88	0.073	0.093	155.40	0.073	0.120
154.89	0.073	0.094	155.41	0.073	0.121
154.90	0.073	0.094	155.42	0.073	0.121
154.91	0.073	0.095	155.43	0.073	0.122
154.92	0.073	0.095	155.44	0.073	0.122
154.93	0.073	0.096	155.45	0.073	0.123
154.94	0.073	0.096	155.46	0.073	0.123
154.95	0.073	0.097	155.47	0.073	0.124
154.96	0.073	0.098	155.48	0.073	0.124
154.97	0.073	0.098	155.49	0.073	0.125
154.98	0.073	0.099	155.50	0.073	0.125
154.99	0.073	0.099	155.51	0.073	0.126
155.00	0.073	0.100	155.52	0.073	0.126
155.01	0.073	0.100	155.53	0.073	0.127
155.02	0.073	0.101	155.54	0.073	0.127
155.03	0.073	0.101	155.55	0.073	0.128
155.04	0.073	0.102	155.56	0.073	0.128
155.05	0.073	0.102	155.57	0.073	0.129
155.06	0.073	0.103	155.58	0.073	0.129
155.07	0.073	0.103	155.59	0.073	0.130
155.08	0.073	0.104	155.60	0.073	0.130
155.09	0.073	0.104	155.61	0.073	0.131

Stage-Area-Storage for Pond 4P: Underground System (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
155.62	0.073	0.131	156.14	0.073	0.156
155.63	0.073	0.132	156.15	0.073	0.156
155.64	0.073	0.132	156.16	0.073	0.157
155.65	0.073	0.133	156.17	0.073	0.157
155.66	0.073	0.133	156.18	0.073	0.158
155.67	0.073	0.134	156.19	0.073	0.158
155.68	0.073	0.134	156.20	0.073	0.159
155.69	0.073	0.135	156.21	0.073	0.159
155.70	0.073	0.135	156.22	0.073	0.160
155.71	0.073	0.136	156.23	0.073	0.160
155.72	0.073	0.136	156.24	0.073	0.160
155.73	0.073	0.137	156.25	0.073	0.161
155.74	0.073	0.137	156.26	0.073	0.161
155.75	0.073	0.138	156.27	0.073	0.162
155.76	0.073	0.138	156.28	0.073	0.162
155.77	0.073	0.139	156.29	0.073	0.163
155.78	0.073	0.139	156.30	0.073	0.163
155.79	0.073	0.140	156.31	0.073	0.163
155.80	0.073	0.140	156.32	0.073	0.164
155.81	0.073	0.141	156.33	0.073	0.164
155.82	0.073	0.141	156.34	0.073	0.165
155.83	0.073	0.142	156.35	0.073	0.165
155.84	0.073	0.142	156.36	0.073	0.165
155.85	0.073	0.143	156.37	0.073	0.166
155.86	0.073	0.143	156.38	0.073	0.166
155.87	0.073	0.143	156.39	0.073	0.167
155.88	0.073	0.144	156.40	0.073	0.167
155.89	0.073	0.144	156.41	0.073	0.167
155.90	0.073	0.145	156.42	0.073	0.168
155.91	0.073	0.145	156.43	0.073	0.168
155.92	0.073	0.146	156.44	0.073	0.169
155.93	0.073	0.146	156.45	0.073	0.169
155.94	0.073	0.147	156.46	0.073	0.169
155.95	0.073	0.147	156.47	0.073	0.170
155.96	0.073	0.148	156.48	0.073	0.170
155.97	0.073	0.148	156.49	0.073	0.171
155.98	0.073	0.149	156.50	0.073	0.171
155.99	0.073	0.149	156.51	0.073	0.171
156.00	0.073	0.150	156.52	0.073	0.172
156.01	0.073	0.150	156.53	0.073	0.172
156.02	0.073	0.151	156.54	0.073	0.172
156.03	0.073	0.151	156.55	0.073	0.173
156.04	0.073	0.151	156.56	0.073	0.173
156.05	0.073	0.152	156.57	0.073	0.173
156.06	0.073	0.152	156.58	0.073	0.174
156.07	0.073	0.153	156.59	0.073	0.174
156.08	0.073	0.153	156.60	0.073	0.174
156.09	0.073	0.154	156.61	0.073	0.175
156.10	0.073	0.154	156.62	0.073	0.175
156.11	0.073	0.155	156.63	0.073	0.175
156.12	0.073	0.155	156.64	0.073	0.176
156.13	0.073	0.156	156.65	0.073	0.176

Stage-Area-Storage for Pond 4P: Underground System (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)
156.66	0.073	0.176
156.67	0.073	0.177
156.68	0.073	0.177
156.69	0.073	0.177
156.70	0.073	0.177
156.71	0.073	0.178
156.72	0.073	0.178
156.73	0.073	0.178
156.74	0.073	0.178
156.75	0.073	0.179
156.76	0.073	0.179
156.77	0.073	0.179
156.78	0.073	0.179
156.79	0.073	0.179
156.80	0.073	0.180
156.81	0.073	0.180
156.82	0.073	0.180
156.83	0.073	0.180
156.84	0.073	0.180
156.85	0.073	0.181
156.86	0.073	0.181
156.87	0.073	0.181
156.88	0.073	0.181
156.89	0.073	0.182
156.90	0.073	0.182
156.91	0.073	0.182
156.92	0.073	0.182
156.93	0.073	0.183
156.94	0.073	0.183
156.95	0.073	0.183
156.96	0.073	0.183
156.97	0.073	0.184
156.98	0.073	0.184
156.99	0.073	0.184
157.00	0.073	0.184
157.01	0.073	0.185
157.02	0.073	0.185
157.03	0.073	0.185
157.04	0.073	0.186
157.05	0.073	0.186
157.06	0.073	0.186
157.07	0.073	0.187
157.08	0.073	0.187
157.09	0.073	0.187
157.10	0.073	0.187
157.11	0.073	0.188
157.12	0.073	0.188
157.13	0.073	0.188
157.14	0.073	0.189
157.15	0.073	0.189
157.16	0.073	0.189
157.17	0.073	0.189
157.18	0.073	0.190
157.19	0.073	0.190
157.20	0.073	0.190
157.21	0.073	0.191
157.22	0.073	0.191
157.23	0.073	0.191
157.24	0.073	0.192
157.25	0.073	0.192
157.26	0.073	0.192
157.27	0.073	0.192
157.28	0.073	0.193
157.29	0.073	0.193
157.30	0.073	0.193
157.31	0.073	0.194
157.32	0.073	0.194
157.33	0.073	0.194
157.34	0.073	0.194
157.35	0.073	0.195
157.36	0.073	0.195
157.37	0.073	0.195
157.38	0.073	0.196
157.39	0.073	0.196
157.40	0.073	0.196
157.41	0.073	0.196
157.42	0.073	0.197
157.43	0.073	0.197
157.44	0.073	0.197
157.45	0.073	0.198
157.46	0.073	0.198
157.47	0.073	0.198
157.48	0.073	0.199
157.49	0.073	0.199
157.50	0.073	**0.199**

Summary for Pond 5P: Rain Garden

Inflow Area = 0.201 ac, 6.63% Impervious, Inflow Depth = 0.60" for 2-yr event
Inflow = 0.11 cfs @ 12.15 hrs, Volume= 0.010 af
Outflow = 0.11 cfs @ 12.15 hrs, Volume= 0.010 af, Atten= 0%, Lag= 0.1 min
Primary = 0.11 cfs @ 12.15 hrs, Volume= 0.010 af
Routed to Pond 6P : 24" CPP Perf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 157.00' @ 12.15 hrs Surf.Area= 445 sf Storage= 0 cf

Plug-Flow detention time= 0.1 min calculated for 0.010 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (915.5 - 915.4)

Volume	Invert	Avail.Storage	Storage Description
#1	157.00'	563 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
157.00	445	0	0
158.00	681	563	563

Device	Routing	Invert	Outlet Devices
#1	Primary	154.80'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.32 cfs @ 12.15 hrs HW=157.00' (Free Discharge)
↑**1=Orifice/Grate** (Orifice Controls 1.32 cfs @ 6.73 fps)

Stage-Area-Storage for Pond 5P: Rain Garden

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
157.00	445	0
157.01	447	4
157.02	450	9
157.03	452	13
157.04	454	18
157.05	457	23
157.06	459	27
157.07	462	32
157.08	464	36
157.09	466	41
157.10	469	46
157.11	471	50
157.12	473	55
157.13	476	60
157.14	478	65
157.15	480	69
157.16	483	74
157.17	485	79
157.18	487	84
157.19	490	89
157.20	492	94
157.21	495	99
157.22	497	104
157.23	499	109
157.24	502	114
157.25	504	119
157.26	506	124
157.27	509	129
157.28	511	134
157.29	513	139
157.30	516	144
157.31	518	149
157.32	521	154
157.33	523	160
157.34	525	165
157.35	528	170
157.36	530	175
157.37	532	181
157.38	535	186
157.39	537	191
157.40	539	197
157.41	542	202
157.42	544	208
157.43	546	213
157.44	549	219
157.45	551	224
157.46	554	230
157.47	556	235
157.48	558	241
157.49	561	246
157.50	563	252
157.51	565	258
157.52	568	263
157.53	570	269
157.54	572	275
157.55	575	280
157.56	577	286
157.57	580	292
157.58	582	298
157.59	584	304
157.60	587	309
157.61	589	315
157.62	591	321
157.63	594	327
157.64	596	333
157.65	598	339
157.66	601	345
157.67	603	351
157.68	605	357
157.69	608	363
157.70	610	369
157.71	613	375
157.72	615	382
157.73	617	388
157.74	620	394
157.75	622	400
157.76	624	406
157.77	627	413
157.78	629	419
157.79	631	425
157.80	634	432
157.81	636	438
157.82	639	444
157.83	641	451
157.84	643	457
157.85	646	464
157.86	648	470
157.87	650	476
157.88	653	483
157.89	655	490
157.90	657	496
157.91	660	503
157.92	662	509
157.93	664	516
157.94	667	523
157.95	669	529
157.96	672	536
157.97	674	543
157.98	676	549
157.99	679	556
158.00	**681**	**563**

Summary for Pond 6P: 24" CPP Perf

Inflow Area = 0.413 ac, 9.90% Impervious, Inflow Depth = 0.67" for 2-yr event
Inflow = 0.27 cfs @ 12.14 hrs, Volume= 0.023 af
Outflow = 0.26 cfs @ 12.16 hrs, Volume= 0.022 af, Atten= 2%, Lag= 0.8 min
Primary = 0.26 cfs @ 12.16 hrs, Volume= 0.022 af
Routed to Reach 10R : Centre Street

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 154.15' @ 12.16 hrs Surf.Area= 0.007 ac Storage= 0.001 af

Plug-Flow detention time= 26.9 min calculated for 0.022 af (97% of inflow)
Center-of-Mass det. time= 11.6 min (919.4 - 907.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	153.67'	0.006 af	**4.00'W x 77.67'L x 3.00'H Field A** 0.021 af Overall - 0.007 af Embedded = 0.015 af x 40.0% Voids
#2A	154.00'	0.005 af	**ADS N-12 24"** x 4 Inside #1 Inside= 23.8"W x 23.8"H => 3.10 sf x 20.00'L = 62.0 cf Outside= 28.0"W x 28.0"H => 3.92 sf x 20.00'L = 78.4 cf Row Length Adjustment= -4.00' x 3.10 sf x 1 rows
		0.011 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	153.90'	**12.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.26 cfs @ 12.16 hrs HW=154.15' (Free Discharge)
1=Orifice/Grate (Orifice Controls 0.26 cfs @ 1.69 fps)

Pond 6P: 24" CPP Perf - Chamber Wizard Field A

Chamber Model = ADS N-12 24" (ADS N-12® Pipe)
Inside= 23.8"W x 23.8"H => 3.10 sf x 20.00'L = 62.0 cf
Outside= 28.0"W x 28.0"H => 3.92 sf x 20.00'L = 78.4 cf
Row Length Adjustment= -4.00' x 3.10 sf x 1 rows

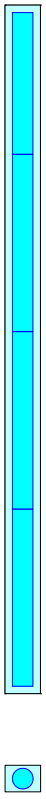
4 Chambers/Row x 20.00' Long -4.00' Row Adjustment = 76.00' Row Length +10.0" End Stone x 2 = 77.67' Base Length
1 Rows x 28.0" Wide + 10.0" Side Stone x 2 = 4.00' Base Width
4.0" Stone Base + 28.0" Chamber Height + 4.0" Stone Cover = 3.00' Field Height

4 Chambers x 62.0 cf -4.00' Row Adjustment x 3.10 sf x 1 Rows = 235.6 cf Chamber Storage
4 Chambers x 78.4 cf -4.00' Row Adjustment x 3.92 sf x 1 Rows = 297.9 cf Displacement

932.0 cf Field - 297.9 cf Chambers = 634.1 cf Stone x 40.0% Voids = 253.7 cf Stone Storage

Chamber Storage + Stone Storage = 489.3 cf = 0.011 af
Overall Storage Efficiency = 52.5%
Overall System Size = 77.67' x 4.00' x 3.00'

4 Chambers
34.5 cy Field
23.5 cy Stone



Stage-Area-Storage for Pond 6P: 24" CPP Perf

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
153.67	0.000	154.19	0.001	154.71	0.003
153.68	0.000	154.20	0.001	154.72	0.003
153.69	0.000	154.21	0.001	154.73	0.004
153.70	0.000	154.22	0.001	154.74	0.004
153.71	0.000	154.23	0.002	154.75	0.004
153.72	0.000	154.24	0.002	154.76	0.004
153.73	0.000	154.25	0.002	154.77	0.004
153.74	0.000	154.26	0.002	154.78	0.004
153.75	0.000	154.27	0.002	154.79	0.004
153.76	0.000	154.28	0.002	154.80	0.004
153.77	0.000	154.29	0.002	154.81	0.004
153.78	0.000	154.30	0.002	154.82	0.004
153.79	0.000	154.31	0.002	154.83	0.004
153.80	0.000	154.32	0.002	154.84	0.004
153.81	0.000	154.33	0.002	154.85	0.004
153.82	0.000	154.34	0.002	154.86	0.004
153.83	0.000	154.35	0.002	154.87	0.004
153.84	0.000	154.36	0.002	154.88	0.004
153.85	0.001	154.37	0.002	154.89	0.004
153.86	0.001	154.38	0.002	154.90	0.004
153.87	0.001	154.39	0.002	154.91	0.004
153.88	0.001	154.40	0.002	154.92	0.004
153.89	0.001	154.41	0.002	154.93	0.004
153.90	0.001	154.42	0.002	154.94	0.005
153.91	0.001	154.43	0.002	154.95	0.005
153.92	0.001	154.44	0.002	154.96	0.005
153.93	0.001	154.45	0.002	154.97	0.005
153.94	0.001	154.46	0.002	154.98	0.005
153.95	0.001	154.47	0.002	154.99	0.005
153.96	0.001	154.48	0.002	155.00	0.005
153.97	0.001	154.49	0.002	155.01	0.005
153.98	0.001	154.50	0.003	155.02	0.005
153.99	0.001	154.51	0.003	155.03	0.005
154.00	0.001	154.52	0.003	155.04	0.005
154.01	0.001	154.53	0.003	155.05	0.005
154.02	0.001	154.54	0.003	155.06	0.005
154.03	0.001	154.55	0.003	155.07	0.005
154.04	0.001	154.56	0.003	155.08	0.005
154.05	0.001	154.57	0.003	155.09	0.005
154.06	0.001	154.58	0.003	155.10	0.005
154.07	0.001	154.59	0.003	155.11	0.005
154.08	0.001	154.60	0.003	155.12	0.005
154.09	0.001	154.61	0.003	155.13	0.005
154.10	0.001	154.62	0.003	155.14	0.005
154.11	0.001	154.63	0.003	155.15	0.006
154.12	0.001	154.64	0.003	155.16	0.006
154.13	0.001	154.65	0.003	155.17	0.006
154.14	0.001	154.66	0.003	155.18	0.006
154.15	0.001	154.67	0.003	155.19	0.006
154.16	0.001	154.68	0.003	155.20	0.006
154.17	0.001	154.69	0.003	155.21	0.006
154.18	0.001	154.70	0.003	155.22	0.006

Stage-Area-Storage for Pond 6P: 24" CPP Perf (continued)

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
155.23	0.006	155.75	0.008	156.27	0.010
155.24	0.006	155.76	0.008	156.28	0.010
155.25	0.006	155.77	0.008	156.29	0.010
155.26	0.006	155.78	0.008	156.30	0.010
155.27	0.006	155.79	0.009	156.31	0.010
155.28	0.006	155.80	0.009	156.32	0.010
155.29	0.006	155.81	0.009	156.33	0.010
155.30	0.006	155.82	0.009	156.34	0.010
155.31	0.006	155.83	0.009	156.35	0.010
155.32	0.006	155.84	0.009	156.36	0.010
155.33	0.006	155.85	0.009	156.37	0.010
155.34	0.006	155.86	0.009	156.38	0.010
155.35	0.006	155.87	0.009	156.39	0.010
155.36	0.007	155.88	0.009	156.40	0.010
155.37	0.007	155.89	0.009	156.41	0.010
155.38	0.007	155.90	0.009	156.42	0.011
155.39	0.007	155.91	0.009	156.43	0.011
155.40	0.007	155.92	0.009	156.44	0.011
155.41	0.007	155.93	0.009	156.45	0.011
155.42	0.007	155.94	0.009	156.46	0.011
155.43	0.007	155.95	0.009	156.47	0.011
155.44	0.007	155.96	0.009	156.48	0.011
155.45	0.007	155.97	0.009	156.49	0.011
155.46	0.007	155.98	0.009	156.50	0.011
155.47	0.007	155.99	0.009	156.51	0.011
155.48	0.007	156.00	0.009	156.52	0.011
155.49	0.007	156.01	0.009	156.53	0.011
155.50	0.007	156.02	0.009	156.54	0.011
155.51	0.007	156.03	0.009	156.55	0.011
155.52	0.007	156.04	0.009	156.56	0.011
155.53	0.007	156.05	0.010	156.57	0.011
155.54	0.007	156.06	0.010	156.58	0.011
155.55	0.007	156.07	0.010	156.59	0.011
155.56	0.007	156.08	0.010	156.60	0.011
155.57	0.008	156.09	0.010	156.61	0.011
155.58	0.008	156.10	0.010	156.62	0.011
155.59	0.008	156.11	0.010	156.63	0.011
155.60	0.008	156.12	0.010	156.64	0.011
155.61	0.008	156.13	0.010	156.65	0.011
155.62	0.008	156.14	0.010	156.66	0.011
155.63	0.008	156.15	0.010	156.67	**0.011**
155.64	0.008	156.16	0.010		
155.65	0.008	156.17	0.010		
155.66	0.008	156.18	0.010		
155.67	0.008	156.19	0.010		
155.68	0.008	156.20	0.010		
155.69	0.008	156.21	0.010		
155.70	0.008	156.22	0.010		
155.71	0.008	156.23	0.010		
155.72	0.008	156.24	0.010		
155.73	0.008	156.25	0.010		
155.74	0.008	156.26	0.010		

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

Subcatchment 6S: Site + Building Runoff Area=35,212 sf 69.46% Impervious Runoff Depth=3.81"
Tc=6.0 min CN=87 Runoff=3.38 cfs 0.257 af

Subcatchment 7S: Site to RG Runoff Area=8,746 sf 6.63% Impervious Runoff Depth=1.68"
Tc=6.0 min CN=63 Runoff=0.37 cfs 0.028 af

Subcatchment 8S: Site to 24" Runoff Area=9,242 sf 12.98% Impervious Runoff Depth=1.91"
Tc=6.0 min CN=66 Runoff=0.45 cfs 0.034 af

Subcatchment EX-1: Site Runoff Area=22,451 sf 52.79% Impervious Runoff Depth=3.22"
Tc=6.0 min CN=81 Runoff=1.87 cfs 0.138 af

Subcatchment EX-2: Site + 1/3 Bldg Runoff Area=49,472 sf 55.91% Impervious Runoff Depth=3.31"
Tc=6.0 min CN=82 Runoff=4.23 cfs 0.314 af

Subcatchment EX-3: Site + 1/3 Bldg Runoff Area=36,183 sf 33.63% Impervious Runoff Depth=2.49"
Tc=6.0 min CN=73 Runoff=2.35 cfs 0.172 af

Subcatchment EX-4: Site + 1/3 Bldg Runoff Area=25,119 sf 39.64% Impervious Runoff Depth=2.75"
Tc=6.0 min CN=76 Runoff=1.81 cfs 0.132 af

Subcatchment PR-1: Site Runoff Area=39,645 sf 55.93% Impervious Runoff Depth=3.31"
Tc=6.0 min CN=82 Runoff=3.39 cfs 0.251 af

Subcatchment PR-2: Site Runoff Area=20,842 sf 7.13% Impervious Runoff Depth=1.75"
Tc=6.0 min CN=64 Runoff=0.93 cfs 0.070 af

Subcatchment PR-3: Site + Building Runoff Area=15,901 sf 46.32% Impervious Runoff Depth=2.93"
Tc=6.0 min CN=78 Runoff=1.22 cfs 0.089 af

Subcatchment PR-4: Site Runoff Area=3,619 sf 100.00% Impervious Runoff Depth=5.02"
Tc=6.0 min CN=98 Runoff=0.40 cfs 0.035 af

Reach 1R: Springdale Ave Inflow=1.81 cfs 0.132 af
Outflow=1.81 cfs 0.132 af

Reach 2R: Centre Street Inflow=2.35 cfs 0.172 af
Outflow=2.35 cfs 0.172 af

Reach 3R: Swale - North Inflow=6.09 cfs 0.452 af
Outflow=6.09 cfs 0.452 af

Reach 4R: DP Inflow=10.25 cfs 0.756 af
Outflow=10.25 cfs 0.756 af

Reach 9R: Springdale Ave Inflow=0.40 cfs 0.035 af
Outflow=0.40 cfs 0.035 af

Reach 10R: Centre Street Inflow=2.02 cfs 0.150 af
Outflow=2.02 cfs 0.150 af

Reach 11R: Swale - North Inflow=5.48 cfs 0.406 af
Outflow=5.48 cfs 0.406 af

Reach 12R: DP Inflow=7.75 cfs 0.591 af
Outflow=7.75 cfs 0.591 af

Pond 4P: Underground System Peak Elev=155.63' Storage=0.132 af Inflow=6.76 cfs 0.508 af
Discarded=0.08 cfs 0.172 af Primary=4.79 cfs 0.336 af Outflow=4.87 cfs 0.508 af

Pond 5P: Rain Garden Peak Elev=157.00' Storage=1 cf Inflow=0.37 cfs 0.028 af
Outflow=0.37 cfs 0.028 af

Pond 6P: 24" CPP Perf Peak Elev=154.36' Storage=0.002 af Inflow=0.83 cfs 0.062 af
Outflow=0.81 cfs 0.061 af

Total Runoff Area = 6.116 ac Runoff Volume = 1.520 af Average Runoff Depth = 2.98"
54.01% Pervious = 3.304 ac 45.99% Impervious = 2.813 ac

Summary for Subcatchment 6S: Site + Building

Runoff = 3.38 cfs @ 12.13 hrs, Volume= 0.257 af, Depth= 3.81"
Routed to Pond 4P : Underground System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-yr Rainfall=5.26"

Area (sf)	CN	Description
10,752	61	>75% Grass cover, Good, HSG B
16,560	98	Paved parking, HSG B
7,900	98	Roofs, HSG B
35,212	87	Weighted Average
10,752		30.54% Pervious Area
24,460		69.46% Impervious Area

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

Summary for Subcatchment 7S: Site to RG

Runoff = 0.37 cfs @ 12.14 hrs, Volume= 0.028 af, Depth= 1.68"
Routed to Pond 5P : Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-yr Rainfall=5.26"

Area (sf)	CN	Description
8,166	61	>75% Grass cover, Good, HSG B
580	98	Paved parking, HSG B
8,746	63	Weighted Average
8,166		93.37% Pervious Area
580		6.63% Impervious Area

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

Summary for Subcatchment 8S: Site to 24"

Runoff = 0.45 cfs @ 12.14 hrs, Volume= 0.034 af, Depth= 1.91"
Routed to Pond 6P : 24" CPP Perf

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-yr Rainfall=5.26"

Area (sf)	CN	Description
8,042	61	>75% Grass cover, Good, HSG B
1,200	98	Paved parking, HSG B
9,242	66	Weighted Average
8,042		87.02% Pervious Area
1,200		12.98% Impervious Area

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

Summary for Subcatchment EX-1: Site

Runoff = 1.87 cfs @ 12.13 hrs, Volume= 0.138 af, Depth= 3.22"
Routed to Reach 3R : Swale - North

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-yr Rainfall=5.26"

Area (sf)	CN	Description
10,599	61	>75% Grass cover, Good, HSG B
11,852	98	Paved parking, HSG B
22,451	81	Weighted Average
10,599		47.21% Pervious Area
11,852		52.79% Impervious Area

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

Summary for Subcatchment EX-2: Site + 1/3 Bldg

Runoff = 4.23 cfs @ 12.13 hrs, Volume= 0.314 af, Depth= 3.31"
Routed to Reach 3R : Swale - North

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-yr Rainfall=5.26"

Area (sf)	CN	Description
21,811	61	>75% Grass cover, Good, HSG B
21,224	98	Paved parking, HSG B
6,437	98	Roofs, HSG B
49,472	82	Weighted Average
21,811		44.09% Pervious Area
27,661		55.91% Impervious Area

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

Summary for Subcatchment EX-3: Site + 1/3 Bldg

Runoff = 2.35 cfs @ 12.13 hrs, Volume= 0.172 af, Depth= 2.49"
Routed to Reach 2R : Centre Street

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-yr Rainfall=5.26"

Area (sf)	CN	Description
24,014	61	>75% Grass cover, Good, HSG B
5,732	98	Paved parking, HSG B
6,437	98	Roofs, HSG B
36,183	73	Weighted Average
24,014		66.37% Pervious Area
12,169		33.63% Impervious Area

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

Summary for Subcatchment EX-4: Site + 1/3 Bldg

Runoff = 1.81 cfs @ 12.13 hrs, Volume= 0.132 af, Depth= 2.75"
Routed to Reach 1R : Springdale Ave

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-yr Rainfall=5.26"

Area (sf)	CN	Description
15,162	61	>75% Grass cover, Good, HSG B
3,520	98	Paved parking, HSG B
6,437	98	Roofs, HSG B
25,119	76	Weighted Average
15,162		60.36% Pervious Area
9,957		39.64% Impervious Area

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

Summary for Subcatchment PR-1: Site

Runoff = 3.39 cfs @ 12.13 hrs, Volume= 0.251 af, Depth= 3.31"
Routed to Pond 4P : Underground System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-yr Rainfall=5.26"

Area (sf)	CN	Description
17,472	61	>75% Grass cover, Good, HSG B
22,173	98	Paved parking, HSG B
39,645	82	Weighted Average
17,472		44.07% Pervious Area
22,173		55.93% Impervious Area

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

Summary for Subcatchment PR-2: Site

Runoff = 0.93 cfs @ 12.14 hrs, Volume= 0.070 af, Depth= 1.75"
Routed to Reach 11R : Swale - North

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-yr Rainfall=5.26"

Area (sf)	CN	Description
19,355	61	>75% Grass cover, Good, HSG B
1,487	98	Paved parking, HSG B
20,842	64	Weighted Average
19,355		92.87% Pervious Area
1,487		7.13% Impervious Area

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

Summary for Subcatchment PR-3: Site + Building

Runoff = 1.22 cfs @ 12.13 hrs, Volume= 0.089 af, Depth= 2.93"
Routed to Reach 10R : Centre Street

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-yr Rainfall=5.26"

Area (sf)	CN	Description
8,535	61	>75% Grass cover, Good, HSG B
3,766	98	Paved parking, HSG B
3,600	98	Roofs, HSG B
15,901	78	Weighted Average
8,535		53.68% Pervious Area
7,366		46.32% Impervious Area

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

Summary for Subcatchment PR-4: Site

Runoff = 0.40 cfs @ 12.13 hrs, Volume= 0.035 af, Depth= 5.02"
Routed to Reach 9R : Springdale Ave

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 10-yr Rainfall=5.26"

Area (sf)	CN	Description
447	98	Paved parking, HSG B
3,172	98	Roofs, HSG B
3,619	98	Weighted Average
3,619		100.00% Impervious Area

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

Summary for Reach 1R: Springdale Ave

Inflow Area = 0.577 ac, 39.64% Impervious, Inflow Depth = 2.75" for 10-yr event
Inflow = 1.81 cfs @ 12.13 hrs, Volume= 0.132 af
Outflow = 1.81 cfs @ 12.13 hrs, Volume= 0.132 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 2R: Centre Street

Inflow Area = 0.831 ac, 33.63% Impervious, Inflow Depth = 2.49" for 10-yr event
Inflow = 2.35 cfs @ 12.13 hrs, Volume= 0.172 af
Outflow = 2.35 cfs @ 12.13 hrs, Volume= 0.172 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 3R: Swale - North

Inflow Area = 1.651 ac, 54.94% Impervious, Inflow Depth = 3.28" for 10-yr event
Inflow = 6.09 cfs @ 12.13 hrs, Volume= 0.452 af
Outflow = 6.09 cfs @ 12.13 hrs, Volume= 0.452 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 4R: DP

Inflow Area = 3.058 ac, 46.27% Impervious, Inflow Depth = 2.97" for 10-yr event
Inflow = 10.25 cfs @ 12.13 hrs, Volume= 0.756 af
Outflow = 10.25 cfs @ 12.13 hrs, Volume= 0.756 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 9R: Springdale Ave

Inflow Area = 0.083 ac,100.00% Impervious, Inflow Depth = 5.02" for 10-yr event
Inflow = 0.40 cfs @ 12.13 hrs, Volume= 0.035 af
Outflow = 0.40 cfs @ 12.13 hrs, Volume= 0.035 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 12R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 10R: Centre Street

Inflow Area = 0.778 ac, 26.99% Impervious, Inflow Depth = 2.32" for 10-yr event
Inflow = 2.02 cfs @ 12.14 hrs, Volume= 0.150 af
Outflow = 2.02 cfs @ 12.14 hrs, Volume= 0.150 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 12R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 11R: Swale - North

Inflow Area = 2.197 ac, 50.28% Impervious, Inflow Depth = 2.22" for 10-yr event
Inflow = 5.48 cfs @ 12.19 hrs, Volume= 0.406 af
Outflow = 5.48 cfs @ 12.19 hrs, Volume= 0.406 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 12R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 12R: DP

Inflow Area = 3.058 ac, 45.71% Impervious, Inflow Depth = 2.32" for 10-yr event
Inflow = 7.75 cfs @ 12.16 hrs, Volume= 0.591 af
Outflow = 7.75 cfs @ 12.16 hrs, Volume= 0.591 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Pond 4P: Underground System

Inflow Area = 1.718 ac, 62.30% Impervious, Inflow Depth = 3.55" for 10-yr event
Inflow = 6.76 cfs @ 12.13 hrs, Volume= 0.508 af
Outflow = 4.87 cfs @ 12.20 hrs, Volume= 0.508 af, Atten= 28%, Lag= 4.3 min
Discarded = 0.08 cfs @ 8.60 hrs, Volume= 0.172 af
Primary = 4.79 cfs @ 12.20 hrs, Volume= 0.336 af
Routed to Reach 11R : Swale - North

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 155.63' @ 12.20 hrs Surf.Area= 0.073 ac Storage= 0.132 af

Plug-Flow detention time= 156.5 min calculated for 0.508 af (100% of inflow)
Center-of-Mass det. time= 156.9 min (970.9 - 814.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	152.50'	0.094 af	**31.00'W x 103.00'L x 5.00'H Field A** 0.366 af Overall - 0.133 af Embedded = 0.234 af x 40.0% Voids
#2A	153.00'	0.106 af	**ADS N-12 42"** x 25 Inside #1 Inside= 41.1"W x 41.1"H => 9.20 sf x 20.00'L = 184.0 cf Outside= 48.0"W x 48.0"H => 11.56 sf x 20.00'L = 231.1 cf 25 Chambers in 5 Rows
		0.199 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	152.50'	**1.020 in/hr Exfiltration over Surface area**
#2	Primary	154.25'	**18.0" Round Culvert** L= 12.0' Ke= 0.500 Inlet / Outlet Invert= 154.25' / 154.25' S= 0.0000 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf

Discarded OutFlow Max=0.08 cfs @ 8.60 hrs HW=152.55' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=4.79 cfs @ 12.20 hrs HW=155.63' (Free Discharge)
↑**2=Culvert** (Barrel Controls 4.79 cfs @ 3.69 fps)

Pond 4P: Underground System - Chamber Wizard Field A

Chamber Model = ADS N-12 42" (ADS N-12® Pipe)
Inside= 41.1"W x 41.1"H => 9.20 sf x 20.00'L = 184.0 cf
Outside= 48.0"W x 48.0"H => 11.56 sf x 20.00'L = 231.1 cf

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

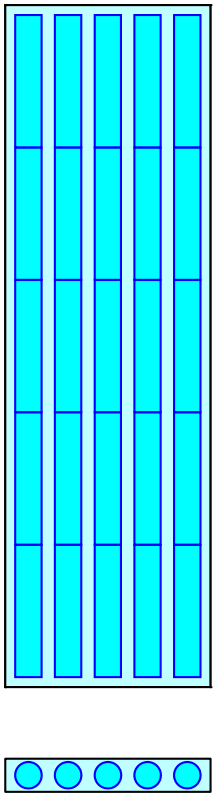
5 Chambers/Row x 20.00' Long = 100.00' Row Length +18.0" End Stone x 2 = 103.00' Base Length
5 Rows x 48.0" Wide + 24.0" Spacing x 4 + 18.0" Side Stone x 2 = 31.00' Base Width
6.0" Stone Base + 48.0" Chamber Height + 6.0" Stone Cover = 5.00' Field Height

25 Chambers x 184.0 cf = 4,600.0 cf Chamber Storage
25 Chambers x 231.1 cf = 5,778.2 cf Displacement

15,960.4 cf Field - 5,778.2 cf Chambers = 10,182.2 cf Stone x 40.0% Voids = 4,072.9 cf Stone Storage

Chamber Storage + Stone Storage = 8,672.9 cf = 0.199 af
Overall Storage Efficiency = 54.3%
Overall System Size = 103.00' x 31.00' x 5.00'

25 Chambers
591.1 cy Field
377.1 cy Stone



Stage-Area-Storage for Pond 4P: Underground System

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
152.50	**0.073**	0.000	153.02	0.073	0.015
152.51	0.073	0.000	153.03	0.073	0.016
152.52	0.073	0.001	153.04	0.073	0.016
152.53	0.073	0.001	153.05	0.073	0.016
152.54	0.073	0.001	153.06	0.073	0.016
152.55	0.073	0.001	153.07	0.073	0.017
152.56	0.073	0.002	153.08	0.073	0.017
152.57	0.073	0.002	153.09	0.073	0.017
152.58	0.073	0.002	153.10	0.073	0.017
152.59	0.073	0.003	153.11	0.073	0.017
152.60	0.073	0.003	153.12	0.073	0.018
152.61	0.073	0.003	153.13	0.073	0.018
152.62	0.073	0.004	153.14	0.073	0.018
152.63	0.073	0.004	153.15	0.073	0.018
152.64	0.073	0.004	153.16	0.073	0.019
152.65	0.073	0.004	153.17	0.073	0.019
152.66	0.073	0.005	153.18	0.073	0.019
152.67	0.073	0.005	153.19	0.073	0.019
152.68	0.073	0.005	153.20	0.073	0.020
152.69	0.073	0.006	153.21	0.073	0.020
152.70	0.073	0.006	153.22	0.073	0.020
152.71	0.073	0.006	153.23	0.073	0.020
152.72	0.073	0.006	153.24	0.073	0.020
152.73	0.073	0.007	153.25	0.073	0.021
152.74	0.073	0.007	153.26	0.073	0.021
152.75	0.073	0.007	153.27	0.073	0.021
152.76	0.073	0.008	153.28	0.073	0.021
152.77	0.073	0.008	153.29	0.073	0.021
152.78	0.073	0.008	153.30	0.073	0.022
152.79	0.073	0.009	153.31	0.073	0.022
152.80	0.073	0.009	153.32	0.073	0.022
152.81	0.073	0.009	153.33	0.073	0.022
152.82	0.073	0.009	153.34	0.073	0.023
152.83	0.073	0.010	153.35	0.073	0.023
152.84	0.073	0.010	153.36	0.073	0.023
152.85	0.073	0.010	153.37	0.073	0.024
152.86	0.073	0.011	153.38	0.073	0.024
152.87	0.073	0.011	153.39	0.073	0.024
152.88	0.073	0.011	153.40	0.073	0.025
152.89	0.073	0.011	153.41	0.073	0.025
152.90	0.073	0.012	153.42	0.073	0.025
152.91	0.073	0.012	153.43	0.073	0.026
152.92	0.073	0.012	153.44	0.073	0.026
152.93	0.073	0.013	153.45	0.073	0.026
152.94	0.073	0.013	153.46	0.073	0.027
152.95	0.073	0.013	153.47	0.073	0.027
152.96	0.073	0.013	153.48	0.073	0.027
152.97	0.073	0.014	153.49	0.073	0.028
152.98	0.073	0.014	153.50	0.073	0.028
152.99	0.073	0.014	153.51	0.073	0.029
153.00	0.073	0.015	153.52	0.073	0.029
153.01	0.073	0.015	153.53	0.073	0.029

Stage-Area-Storage for Pond 4P: Underground System (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
153.54	0.073	0.030	154.06	0.073	0.052
153.55	0.073	0.030	154.07	0.073	0.053
153.56	0.073	0.030	154.08	0.073	0.053
153.57	0.073	0.031	154.09	0.073	0.054
153.58	0.073	0.031	154.10	0.073	0.054
153.59	0.073	0.032	154.11	0.073	0.055
153.60	0.073	0.032	154.12	0.073	0.055
153.61	0.073	0.032	154.13	0.073	0.056
153.62	0.073	0.033	154.14	0.073	0.056
153.63	0.073	0.033	154.15	0.073	0.057
153.64	0.073	0.034	154.16	0.073	0.057
153.65	0.073	0.034	154.17	0.073	0.058
153.66	0.073	0.034	154.18	0.073	0.058
153.67	0.073	0.035	154.19	0.073	0.059
153.68	0.073	0.035	154.20	0.073	0.059
153.69	0.073	0.036	154.21	0.073	0.060
153.70	0.073	0.036	154.22	0.073	0.060
153.71	0.073	0.037	154.23	0.073	0.060
153.72	0.073	0.037	154.24	0.073	0.061
153.73	0.073	0.037	154.25	0.073	0.061
153.74	0.073	0.038	154.26	0.073	0.062
153.75	0.073	0.038	154.27	0.073	0.062
153.76	0.073	0.039	154.28	0.073	0.063
153.77	0.073	0.039	154.29	0.073	0.063
153.78	0.073	0.040	154.30	0.073	0.064
153.79	0.073	0.040	154.31	0.073	0.064
153.80	0.073	0.040	154.32	0.073	0.065
153.81	0.073	0.041	154.33	0.073	0.065
153.82	0.073	0.041	154.34	0.073	0.066
153.83	0.073	0.042	154.35	0.073	0.066
153.84	0.073	0.042	154.36	0.073	0.067
153.85	0.073	0.043	154.37	0.073	0.067
153.86	0.073	0.043	154.38	0.073	0.068
153.87	0.073	0.044	154.39	0.073	0.068
153.88	0.073	0.044	154.40	0.073	0.069
153.89	0.073	0.044	154.41	0.073	0.069
153.90	0.073	0.045	154.42	0.073	0.070
153.91	0.073	0.045	154.43	0.073	0.070
153.92	0.073	0.046	154.44	0.073	0.071
153.93	0.073	0.046	154.45	0.073	0.071
153.94	0.073	0.047	154.46	0.073	0.072
153.95	0.073	0.047	154.47	0.073	0.072
153.96	0.073	0.048	154.48	0.073	0.073
153.97	0.073	0.048	154.49	0.073	0.073
153.98	0.073	0.049	154.50	0.073	0.074
153.99	0.073	0.049	154.51	0.073	0.074
154.00	0.073	0.049	154.52	0.073	0.075
154.01	0.073	0.050	154.53	0.073	0.075
154.02	0.073	0.050	154.54	0.073	0.076
154.03	0.073	0.051	154.55	0.073	0.076
154.04	0.073	0.051	154.56	0.073	0.077
154.05	0.073	0.052	154.57	0.073	0.077

Stage-Area-Storage for Pond 4P: Underground System (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
154.58	0.073	0.078	155.10	0.073	0.105
154.59	0.073	0.078	155.11	0.073	0.105
154.60	0.073	0.079	155.12	0.073	0.106
154.61	0.073	0.079	155.13	0.073	0.106
154.62	0.073	0.080	155.14	0.073	0.107
154.63	0.073	0.081	155.15	0.073	0.107
154.64	0.073	0.081	155.16	0.073	0.108
154.65	0.073	0.082	155.17	0.073	0.108
154.66	0.073	0.082	155.18	0.073	0.109
154.67	0.073	0.083	155.19	0.073	0.109
154.68	0.073	0.083	155.20	0.073	0.110
154.69	0.073	0.084	155.21	0.073	0.110
154.70	0.073	0.084	155.22	0.073	0.111
154.71	0.073	0.085	155.23	0.073	0.111
154.72	0.073	0.085	155.24	0.073	0.112
154.73	0.073	0.086	155.25	0.073	0.112
154.74	0.073	0.086	155.26	0.073	0.113
154.75	0.073	0.087	155.27	0.073	0.114
154.76	0.073	0.087	155.28	0.073	0.114
154.77	0.073	0.088	155.29	0.073	0.115
154.78	0.073	0.088	155.30	0.073	0.115
154.79	0.073	0.089	155.31	0.073	0.116
154.80	0.073	0.089	155.32	0.073	0.116
154.81	0.073	0.090	155.33	0.073	0.117
154.82	0.073	0.090	155.34	0.073	0.117
154.83	0.073	0.091	155.35	0.073	0.118
154.84	0.073	0.091	155.36	0.073	0.118
154.85	0.073	0.092	155.37	0.073	0.119
154.86	0.073	0.092	155.38	0.073	0.119
154.87	0.073	0.093	155.39	0.073	0.120
154.88	0.073	0.093	155.40	0.073	0.120
154.89	0.073	0.094	155.41	0.073	0.121
154.90	0.073	0.094	155.42	0.073	0.121
154.91	0.073	0.095	155.43	0.073	0.122
154.92	0.073	0.095	155.44	0.073	0.122
154.93	0.073	0.096	155.45	0.073	0.123
154.94	0.073	0.096	155.46	0.073	0.123
154.95	0.073	0.097	155.47	0.073	0.124
154.96	0.073	0.098	155.48	0.073	0.124
154.97	0.073	0.098	155.49	0.073	0.125
154.98	0.073	0.099	155.50	0.073	0.125
154.99	0.073	0.099	155.51	0.073	0.126
155.00	0.073	0.100	155.52	0.073	0.126
155.01	0.073	0.100	155.53	0.073	0.127
155.02	0.073	0.101	155.54	0.073	0.127
155.03	0.073	0.101	155.55	0.073	0.128
155.04	0.073	0.102	155.56	0.073	0.128
155.05	0.073	0.102	155.57	0.073	0.129
155.06	0.073	0.103	155.58	0.073	0.129
155.07	0.073	0.103	155.59	0.073	0.130
155.08	0.073	0.104	155.60	0.073	0.130
155.09	0.073	0.104	155.61	0.073	0.131

Stage-Area-Storage for Pond 4P: Underground System (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
155.62	0.073	0.131	156.14	0.073	0.156
155.63	0.073	0.132	156.15	0.073	0.156
155.64	0.073	0.132	156.16	0.073	0.157
155.65	0.073	0.133	156.17	0.073	0.157
155.66	0.073	0.133	156.18	0.073	0.158
155.67	0.073	0.134	156.19	0.073	0.158
155.68	0.073	0.134	156.20	0.073	0.159
155.69	0.073	0.135	156.21	0.073	0.159
155.70	0.073	0.135	156.22	0.073	0.160
155.71	0.073	0.136	156.23	0.073	0.160
155.72	0.073	0.136	156.24	0.073	0.160
155.73	0.073	0.137	156.25	0.073	0.161
155.74	0.073	0.137	156.26	0.073	0.161
155.75	0.073	0.138	156.27	0.073	0.162
155.76	0.073	0.138	156.28	0.073	0.162
155.77	0.073	0.139	156.29	0.073	0.163
155.78	0.073	0.139	156.30	0.073	0.163
155.79	0.073	0.140	156.31	0.073	0.163
155.80	0.073	0.140	156.32	0.073	0.164
155.81	0.073	0.141	156.33	0.073	0.164
155.82	0.073	0.141	156.34	0.073	0.165
155.83	0.073	0.142	156.35	0.073	0.165
155.84	0.073	0.142	156.36	0.073	0.165
155.85	0.073	0.143	156.37	0.073	0.166
155.86	0.073	0.143	156.38	0.073	0.166
155.87	0.073	0.143	156.39	0.073	0.167
155.88	0.073	0.144	156.40	0.073	0.167
155.89	0.073	0.144	156.41	0.073	0.167
155.90	0.073	0.145	156.42	0.073	0.168
155.91	0.073	0.145	156.43	0.073	0.168
155.92	0.073	0.146	156.44	0.073	0.169
155.93	0.073	0.146	156.45	0.073	0.169
155.94	0.073	0.147	156.46	0.073	0.169
155.95	0.073	0.147	156.47	0.073	0.170
155.96	0.073	0.148	156.48	0.073	0.170
155.97	0.073	0.148	156.49	0.073	0.171
155.98	0.073	0.149	156.50	0.073	0.171
155.99	0.073	0.149	156.51	0.073	0.171
156.00	0.073	0.150	156.52	0.073	0.172
156.01	0.073	0.150	156.53	0.073	0.172
156.02	0.073	0.151	156.54	0.073	0.172
156.03	0.073	0.151	156.55	0.073	0.173
156.04	0.073	0.151	156.56	0.073	0.173
156.05	0.073	0.152	156.57	0.073	0.173
156.06	0.073	0.152	156.58	0.073	0.174
156.07	0.073	0.153	156.59	0.073	0.174
156.08	0.073	0.153	156.60	0.073	0.174
156.09	0.073	0.154	156.61	0.073	0.175
156.10	0.073	0.154	156.62	0.073	0.175
156.11	0.073	0.155	156.63	0.073	0.175
156.12	0.073	0.155	156.64	0.073	0.176
156.13	0.073	0.156	156.65	0.073	0.176

Stage-Area-Storage for Pond 4P: Underground System (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)
156.66	0.073	0.176
156.67	0.073	0.177
156.68	0.073	0.177
156.69	0.073	0.177
156.70	0.073	0.177
156.71	0.073	0.178
156.72	0.073	0.178
156.73	0.073	0.178
156.74	0.073	0.178
156.75	0.073	0.179
156.76	0.073	0.179
156.77	0.073	0.179
156.78	0.073	0.179
156.79	0.073	0.179
156.80	0.073	0.180
156.81	0.073	0.180
156.82	0.073	0.180
156.83	0.073	0.180
156.84	0.073	0.180
156.85	0.073	0.181
156.86	0.073	0.181
156.87	0.073	0.181
156.88	0.073	0.181
156.89	0.073	0.182
156.90	0.073	0.182
156.91	0.073	0.182
156.92	0.073	0.182
156.93	0.073	0.183
156.94	0.073	0.183
156.95	0.073	0.183
156.96	0.073	0.183
156.97	0.073	0.184
156.98	0.073	0.184
156.99	0.073	0.184
157.00	0.073	0.184
157.01	0.073	0.185
157.02	0.073	0.185
157.03	0.073	0.185
157.04	0.073	0.186
157.05	0.073	0.186
157.06	0.073	0.186
157.07	0.073	0.187
157.08	0.073	0.187
157.09	0.073	0.187
157.10	0.073	0.187
157.11	0.073	0.188
157.12	0.073	0.188
157.13	0.073	0.188
157.14	0.073	0.189
157.15	0.073	0.189
157.16	0.073	0.189
157.17	0.073	0.189
157.18	0.073	0.190
157.19	0.073	0.190
157.20	0.073	0.190
157.21	0.073	0.191
157.22	0.073	0.191
157.23	0.073	0.191
157.24	0.073	0.192
157.25	0.073	0.192
157.26	0.073	0.192
157.27	0.073	0.192
157.28	0.073	0.193
157.29	0.073	0.193
157.30	0.073	0.193
157.31	0.073	0.194
157.32	0.073	0.194
157.33	0.073	0.194
157.34	0.073	0.194
157.35	0.073	0.195
157.36	0.073	0.195
157.37	0.073	0.195
157.38	0.073	0.196
157.39	0.073	0.196
157.40	0.073	0.196
157.41	0.073	0.196
157.42	0.073	0.197
157.43	0.073	0.197
157.44	0.073	0.197
157.45	0.073	0.198
157.46	0.073	0.198
157.47	0.073	0.198
157.48	0.073	0.199
157.49	0.073	0.199
157.50	0.073	**0.199**

Summary for Pond 5P: Rain Garden

Inflow Area = 0.201 ac, 6.63% Impervious, Inflow Depth = 1.68" for 10-yr event
Inflow = 0.37 cfs @ 12.14 hrs, Volume= 0.028 af
Outflow = 0.37 cfs @ 12.14 hrs, Volume= 0.028 af, Atten= 0%, Lag= 0.1 min
Primary = 0.37 cfs @ 12.14 hrs, Volume= 0.028 af
Routed to Pond 6P : 24" CPP Perf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 157.00' @ 12.14 hrs Surf.Area= 446 sf Storage= 1 cf

Plug-Flow detention time= 0.1 min calculated for 0.028 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (876.4 - 876.3)

Volume	Invert	Avail.Storage	Storage Description
#1	157.00'	563 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
157.00	445	0	0
158.00	681	563	563

Device	Routing	Invert	Outlet Devices
#1	Primary	154.80'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.32 cfs @ 12.14 hrs HW=157.00' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 1.32 cfs @ 6.73 fps)

Stage-Area-Storage for Pond 5P: Rain Garden

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
157.00	445	0
157.01	447	4
157.02	450	9
157.03	452	13
157.04	454	18
157.05	457	23
157.06	459	27
157.07	462	32
157.08	464	36
157.09	466	41
157.10	469	46
157.11	471	50
157.12	473	55
157.13	476	60
157.14	478	65
157.15	480	69
157.16	483	74
157.17	485	79
157.18	487	84
157.19	490	89
157.20	492	94
157.21	495	99
157.22	497	104
157.23	499	109
157.24	502	114
157.25	504	119
157.26	506	124
157.27	509	129
157.28	511	134
157.29	513	139
157.30	516	144
157.31	518	149
157.32	521	154
157.33	523	160
157.34	525	165
157.35	528	170
157.36	530	175
157.37	532	181
157.38	535	186
157.39	537	191
157.40	539	197
157.41	542	202
157.42	544	208
157.43	546	213
157.44	549	219
157.45	551	224
157.46	554	230
157.47	556	235
157.48	558	241
157.49	561	246
157.50	563	252
157.51	565	258
157.52	568	263
157.53	570	269
157.54	572	275
157.55	575	280
157.56	577	286
157.57	580	292
157.58	582	298
157.59	584	304
157.60	587	309
157.61	589	315
157.62	591	321
157.63	594	327
157.64	596	333
157.65	598	339
157.66	601	345
157.67	603	351
157.68	605	357
157.69	608	363
157.70	610	369
157.71	613	375
157.72	615	382
157.73	617	388
157.74	620	394
157.75	622	400
157.76	624	406
157.77	627	413
157.78	629	419
157.79	631	425
157.80	634	432
157.81	636	438
157.82	639	444
157.83	641	451
157.84	643	457
157.85	646	464
157.86	648	470
157.87	650	476
157.88	653	483
157.89	655	490
157.90	657	496
157.91	660	503
157.92	662	509
157.93	664	516
157.94	667	523
157.95	669	529
157.96	672	536
157.97	674	543
157.98	676	549
157.99	679	556
158.00	**681**	**563**

Summary for Pond 6P: 24" CPP Perf

Inflow Area = 0.413 ac, 9.90% Impervious, Inflow Depth = 1.79" for 10-yr event
Inflow = 0.83 cfs @ 12.14 hrs, Volume= 0.062 af
Outflow = 0.81 cfs @ 12.15 hrs, Volume= 0.061 af, Atten= 2%, Lag= 0.8 min
Primary = 0.81 cfs @ 12.15 hrs, Volume= 0.061 af
Routed to Reach 10R : Centre Street

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 154.36' @ 12.15 hrs Surf.Area= 0.007 ac Storage= 0.002 af

Plug-Flow detention time= 11.8 min calculated for 0.061 af (99% of inflow)
Center-of-Mass det. time= 5.9 min (877.4 - 871.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	153.67'	0.006 af	**4.00'W x 77.67'L x 3.00'H Field A** 0.021 af Overall - 0.007 af Embedded = 0.015 af x 40.0% Voids
#2A	154.00'	0.005 af	**ADS N-12 24"** x 4 Inside #1 Inside= 23.8"W x 23.8"H => 3.10 sf x 20.00'L = 62.0 cf Outside= 28.0"W x 28.0"H => 3.92 sf x 20.00'L = 78.4 cf Row Length Adjustment= -4.00' x 3.10 sf x 1 rows
		0.011 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	153.90'	**12.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=0.81 cfs @ 12.15 hrs HW=154.36' (Free Discharge)
1=Orifice/Grate (Orifice Controls 0.81 cfs @ 2.31 fps)

Pond 6P: 24" CPP Perf - Chamber Wizard Field A

Chamber Model = ADS N-12 24" (ADS N-12® Pipe)
Inside= 23.8"W x 23.8"H => 3.10 sf x 20.00'L = 62.0 cf
Outside= 28.0"W x 28.0"H => 3.92 sf x 20.00'L = 78.4 cf
Row Length Adjustment= -4.00' x 3.10 sf x 1 rows

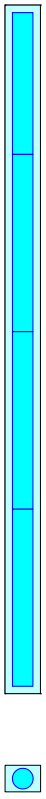
4 Chambers/Row x 20.00' Long -4.00' Row Adjustment = 76.00' Row Length +10.0" End Stone x 2 = 77.67' Base Length
1 Rows x 28.0" Wide + 10.0" Side Stone x 2 = 4.00' Base Width
4.0" Stone Base + 28.0" Chamber Height + 4.0" Stone Cover = 3.00' Field Height

4 Chambers x 62.0 cf -4.00' Row Adjustment x 3.10 sf x 1 Rows = 235.6 cf Chamber Storage
4 Chambers x 78.4 cf -4.00' Row Adjustment x 3.92 sf x 1 Rows = 297.9 cf Displacement

932.0 cf Field - 297.9 cf Chambers = 634.1 cf Stone x 40.0% Voids = 253.7 cf Stone Storage

Chamber Storage + Stone Storage = 489.3 cf = 0.011 af
Overall Storage Efficiency = 52.5%
Overall System Size = 77.67' x 4.00' x 3.00'

4 Chambers
34.5 cy Field
23.5 cy Stone



Stage-Area-Storage for Pond 6P: 24" CPP Perf

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
153.67	0.000	154.19	0.001	154.71	0.003
153.68	0.000	154.20	0.001	154.72	0.003
153.69	0.000	154.21	0.001	154.73	0.004
153.70	0.000	154.22	0.001	154.74	0.004
153.71	0.000	154.23	0.002	154.75	0.004
153.72	0.000	154.24	0.002	154.76	0.004
153.73	0.000	154.25	0.002	154.77	0.004
153.74	0.000	154.26	0.002	154.78	0.004
153.75	0.000	154.27	0.002	154.79	0.004
153.76	0.000	154.28	0.002	154.80	0.004
153.77	0.000	154.29	0.002	154.81	0.004
153.78	0.000	154.30	0.002	154.82	0.004
153.79	0.000	154.31	0.002	154.83	0.004
153.80	0.000	154.32	0.002	154.84	0.004
153.81	0.000	154.33	0.002	154.85	0.004
153.82	0.000	154.34	0.002	154.86	0.004
153.83	0.000	154.35	0.002	154.87	0.004
153.84	0.000	154.36	0.002	154.88	0.004
153.85	0.001	154.37	0.002	154.89	0.004
153.86	0.001	154.38	0.002	154.90	0.004
153.87	0.001	154.39	0.002	154.91	0.004
153.88	0.001	154.40	0.002	154.92	0.004
153.89	0.001	154.41	0.002	154.93	0.004
153.90	0.001	154.42	0.002	154.94	0.005
153.91	0.001	154.43	0.002	154.95	0.005
153.92	0.001	154.44	0.002	154.96	0.005
153.93	0.001	154.45	0.002	154.97	0.005
153.94	0.001	154.46	0.002	154.98	0.005
153.95	0.001	154.47	0.002	154.99	0.005
153.96	0.001	154.48	0.002	155.00	0.005
153.97	0.001	154.49	0.002	155.01	0.005
153.98	0.001	154.50	0.003	155.02	0.005
153.99	0.001	154.51	0.003	155.03	0.005
154.00	0.001	154.52	0.003	155.04	0.005
154.01	0.001	154.53	0.003	155.05	0.005
154.02	0.001	154.54	0.003	155.06	0.005
154.03	0.001	154.55	0.003	155.07	0.005
154.04	0.001	154.56	0.003	155.08	0.005
154.05	0.001	154.57	0.003	155.09	0.005
154.06	0.001	154.58	0.003	155.10	0.005
154.07	0.001	154.59	0.003	155.11	0.005
154.08	0.001	154.60	0.003	155.12	0.005
154.09	0.001	154.61	0.003	155.13	0.005
154.10	0.001	154.62	0.003	155.14	0.005
154.11	0.001	154.63	0.003	155.15	0.006
154.12	0.001	154.64	0.003	155.16	0.006
154.13	0.001	154.65	0.003	155.17	0.006
154.14	0.001	154.66	0.003	155.18	0.006
154.15	0.001	154.67	0.003	155.19	0.006
154.16	0.001	154.68	0.003	155.20	0.006
154.17	0.001	154.69	0.003	155.21	0.006
154.18	0.001	154.70	0.003	155.22	0.006

Stage-Area-Storage for Pond 6P: 24" CPP Perf (continued)

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
155.23	0.006	155.75	0.008	156.27	0.010
155.24	0.006	155.76	0.008	156.28	0.010
155.25	0.006	155.77	0.008	156.29	0.010
155.26	0.006	155.78	0.008	156.30	0.010
155.27	0.006	155.79	0.009	156.31	0.010
155.28	0.006	155.80	0.009	156.32	0.010
155.29	0.006	155.81	0.009	156.33	0.010
155.30	0.006	155.82	0.009	156.34	0.010
155.31	0.006	155.83	0.009	156.35	0.010
155.32	0.006	155.84	0.009	156.36	0.010
155.33	0.006	155.85	0.009	156.37	0.010
155.34	0.006	155.86	0.009	156.38	0.010
155.35	0.006	155.87	0.009	156.39	0.010
155.36	0.007	155.88	0.009	156.40	0.010
155.37	0.007	155.89	0.009	156.41	0.010
155.38	0.007	155.90	0.009	156.42	0.011
155.39	0.007	155.91	0.009	156.43	0.011
155.40	0.007	155.92	0.009	156.44	0.011
155.41	0.007	155.93	0.009	156.45	0.011
155.42	0.007	155.94	0.009	156.46	0.011
155.43	0.007	155.95	0.009	156.47	0.011
155.44	0.007	155.96	0.009	156.48	0.011
155.45	0.007	155.97	0.009	156.49	0.011
155.46	0.007	155.98	0.009	156.50	0.011
155.47	0.007	155.99	0.009	156.51	0.011
155.48	0.007	156.00	0.009	156.52	0.011
155.49	0.007	156.01	0.009	156.53	0.011
155.50	0.007	156.02	0.009	156.54	0.011
155.51	0.007	156.03	0.009	156.55	0.011
155.52	0.007	156.04	0.009	156.56	0.011
155.53	0.007	156.05	0.010	156.57	0.011
155.54	0.007	156.06	0.010	156.58	0.011
155.55	0.007	156.07	0.010	156.59	0.011
155.56	0.007	156.08	0.010	156.60	0.011
155.57	0.008	156.09	0.010	156.61	0.011
155.58	0.008	156.10	0.010	156.62	0.011
155.59	0.008	156.11	0.010	156.63	0.011
155.60	0.008	156.12	0.010	156.64	0.011
155.61	0.008	156.13	0.010	156.65	0.011
155.62	0.008	156.14	0.010	156.66	0.011
155.63	0.008	156.15	0.010	156.67	**0.011**
155.64	0.008	156.16	0.010		
155.65	0.008	156.17	0.010		
155.66	0.008	156.18	0.010		
155.67	0.008	156.19	0.010		
155.68	0.008	156.20	0.010		
155.69	0.008	156.21	0.010		
155.70	0.008	156.22	0.010		
155.71	0.008	156.23	0.010		
155.72	0.008	156.24	0.010		
155.73	0.008	156.25	0.010		
155.74	0.008	156.26	0.010		

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

Subcatchment 6S: Site + Building Runoff Area=35,212 sf 69.46% Impervious Runoff Depth=4.94"
Tc=6.0 min CN=87 Runoff=4.31 cfs 0.333 af

Subcatchment 7S: Site to RG Runoff Area=8,746 sf 6.63% Impervious Runoff Depth=2.49"
Tc=6.0 min CN=63 Runoff=0.57 cfs 0.042 af

Subcatchment 8S: Site to 24" Runoff Area=9,242 sf 12.98% Impervious Runoff Depth=2.77"
Tc=6.0 min CN=66 Runoff=0.67 cfs 0.049 af

Subcatchment EX-1: Site Runoff Area=22,451 sf 52.79% Impervious Runoff Depth=4.29"
Tc=6.0 min CN=81 Runoff=2.46 cfs 0.184 af

Subcatchment EX-2: Site + 1/3 Bldg Runoff Area=49,472 sf 55.91% Impervious Runoff Depth=4.39"
Tc=6.0 min CN=82 Runoff=5.54 cfs 0.416 af

Subcatchment EX-3: Site + 1/3 Bldg Runoff Area=36,183 sf 33.63% Impervious Runoff Depth=3.46"
Tc=6.0 min CN=73 Runoff=3.27 cfs 0.239 af

Subcatchment EX-4: Site + 1/3 Bldg Runoff Area=25,119 sf 39.64% Impervious Runoff Depth=3.76"
Tc=6.0 min CN=76 Runoff=2.46 cfs 0.181 af

Subcatchment PR-1: Site Runoff Area=39,645 sf 55.93% Impervious Runoff Depth=4.39"
Tc=6.0 min CN=82 Runoff=4.44 cfs 0.333 af

Subcatchment PR-2: Site Runoff Area=20,842 sf 7.13% Impervious Runoff Depth=2.58"
Tc=6.0 min CN=64 Runoff=1.40 cfs 0.103 af

Subcatchment PR-3: Site + Building Runoff Area=15,901 sf 46.32% Impervious Runoff Depth=3.97"
Tc=6.0 min CN=78 Runoff=1.63 cfs 0.121 af

Subcatchment PR-4: Site Runoff Area=3,619 sf 100.00% Impervious Runoff Depth=6.20"
Tc=6.0 min CN=98 Runoff=0.50 cfs 0.043 af

Reach 1R: Springdale Ave Inflow=2.46 cfs 0.181 af
Outflow=2.46 cfs 0.181 af

Reach 2R: Centre Street Inflow=3.27 cfs 0.239 af
Outflow=3.27 cfs 0.239 af

Reach 3R: Swale - North Inflow=8.00 cfs 0.600 af
Outflow=8.00 cfs 0.600 af

Reach 4R: DP Inflow=13.72 cfs 1.020 af
Outflow=13.72 cfs 1.020 af

Reach 9R: Springdale Ave Inflow=0.50 cfs 0.043 af
Outflow=0.50 cfs 0.043 af

Reach 10R: Centre Street Inflow=2.83 cfs 0.211 af
Outflow=2.83 cfs 0.211 af

Reach 11R: Swale - North Inflow=7.73 cfs 0.590 af
Outflow=7.73 cfs 0.590 af

Reach 12R: DP Inflow=10.89 cfs 0.844 af
Outflow=10.89 cfs 0.844 af

Pond 4P: Underground System Peak Elev=155.94' Storage=0.147 af Inflow=8.75 cfs 0.666 af
Discarded=0.08 cfs 0.179 af Primary=6.55 cfs 0.487 af Outflow=6.62 cfs 0.666 af

Pond 5P: Rain Garden Peak Elev=157.00' Storage=2 cf Inflow=0.57 cfs 0.042 af
Outflow=0.57 cfs 0.042 af

Pond 6P: 24" CPP Perf Peak Elev=154.48' Storage=0.002 af Inflow=1.23 cfs 0.091 af
Outflow=1.21 cfs 0.090 af

Total Runoff Area = 6.116 ac Runoff Volume = 2.043 af Average Runoff Depth = 4.01"
54.01% Pervious = 3.304 ac 45.99% Impervious = 2.813 ac

Summary for Subcatchment 6S: Site + Building

Runoff = 4.31 cfs @ 12.13 hrs, Volume= 0.333 af, Depth= 4.94"
Routed to Pond 4P : Underground System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 25-yr Rainfall=6.44"

Area (sf)	CN	Description
10,752	61	>75% Grass cover, Good, HSG B
16,560	98	Paved parking, HSG B
7,900	98	Roofs, HSG B
35,212	87	Weighted Average
10,752		30.54% Pervious Area
24,460		69.46% Impervious Area

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

Summary for Subcatchment 7S: Site to RG

Runoff = 0.57 cfs @ 12.13 hrs, Volume= 0.042 af, Depth= 2.49"
Routed to Pond 5P : Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 25-yr Rainfall=6.44"

Area (sf)	CN	Description
8,166	61	>75% Grass cover, Good, HSG B
580	98	Paved parking, HSG B
8,746	63	Weighted Average
8,166		93.37% Pervious Area
580		6.63% Impervious Area

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

Summary for Subcatchment 8S: Site to 24"

Runoff = 0.67 cfs @ 12.13 hrs, Volume= 0.049 af, Depth= 2.77"
Routed to Pond 6P : 24" CPP Perf

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 25-yr Rainfall=6.44"

Area (sf)	CN	Description
8,042	61	>75% Grass cover, Good, HSG B
1,200	98	Paved parking, HSG B
9,242	66	Weighted Average
8,042		87.02% Pervious Area
1,200		12.98% Impervious Area

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

Summary for Subcatchment EX-1: Site

Runoff = 2.46 cfs @ 12.13 hrs, Volume= 0.184 af, Depth= 4.29"
Routed to Reach 3R : Swale - North

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 25-yr Rainfall=6.44"

Area (sf)	CN	Description
10,599	61	>75% Grass cover, Good, HSG B
11,852	98	Paved parking, HSG B
22,451	81	Weighted Average
10,599		47.21% Pervious Area
11,852		52.79% Impervious Area

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

Summary for Subcatchment EX-2: Site + 1/3 Bldg

Runoff = 5.54 cfs @ 12.13 hrs, Volume= 0.416 af, Depth= 4.39"
Routed to Reach 3R : Swale - North

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 25-yr Rainfall=6.44"

Area (sf)	CN	Description
21,811	61	>75% Grass cover, Good, HSG B
21,224	98	Paved parking, HSG B
6,437	98	Roofs, HSG B
49,472	82	Weighted Average
21,811		44.09% Pervious Area
27,661		55.91% Impervious Area

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

Summary for Subcatchment EX-3: Site + 1/3 Bldg

Runoff = 3.27 cfs @ 12.13 hrs, Volume= 0.239 af, Depth= 3.46"
Routed to Reach 2R : Centre Street

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 25-yr Rainfall=6.44"

Area (sf)	CN	Description
24,014	61	>75% Grass cover, Good, HSG B
5,732	98	Paved parking, HSG B
6,437	98	Roofs, HSG B
36,183	73	Weighted Average
24,014		66.37% Pervious Area
12,169		33.63% Impervious Area

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

Summary for Subcatchment EX-4: Site + 1/3 Bldg

Runoff = 2.46 cfs @ 12.13 hrs, Volume= 0.181 af, Depth= 3.76"
Routed to Reach 1R : Springdale Ave

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 25-yr Rainfall=6.44"

Area (sf)	CN	Description
15,162	61	>75% Grass cover, Good, HSG B
3,520	98	Paved parking, HSG B
6,437	98	Roofs, HSG B
25,119	76	Weighted Average
15,162		60.36% Pervious Area
9,957		39.64% Impervious Area

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

Summary for Subcatchment PR-1: Site

Runoff = 4.44 cfs @ 12.13 hrs, Volume= 0.333 af, Depth= 4.39"
Routed to Pond 4P : Underground System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 25-yr Rainfall=6.44"

Area (sf)	CN	Description
17,472	61	>75% Grass cover, Good, HSG B
22,173	98	Paved parking, HSG B
39,645	82	Weighted Average
17,472		44.07% Pervious Area
22,173		55.93% Impervious Area

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

Summary for Subcatchment PR-2: Site

Runoff = 1.40 cfs @ 12.13 hrs, Volume= 0.103 af, Depth= 2.58"
Routed to Reach 11R : Swale - North

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 25-yr Rainfall=6.44"

Area (sf)	CN	Description
19,355	61	>75% Grass cover, Good, HSG B
1,487	98	Paved parking, HSG B
20,842	64	Weighted Average
19,355		92.87% Pervious Area
1,487		7.13% Impervious Area

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

Summary for Subcatchment PR-3: Site + Building

Runoff = 1.63 cfs @ 12.13 hrs, Volume= 0.121 af, Depth= 3.97"
Routed to Reach 10R : Centre Street

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 25-yr Rainfall=6.44"

Area (sf)	CN	Description
8,535	61	>75% Grass cover, Good, HSG B
3,766	98	Paved parking, HSG B
3,600	98	Roofs, HSG B
15,901	78	Weighted Average
8,535		53.68% Pervious Area
7,366		46.32% Impervious Area

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

Summary for Subcatchment PR-4: Site

Runoff = 0.50 cfs @ 12.13 hrs, Volume= 0.043 af, Depth= 6.20"
Routed to Reach 9R : Springdale Ave

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 25-yr Rainfall=6.44"

Area (sf)	CN	Description
447	98	Paved parking, HSG B
3,172	98	Roofs, HSG B
3,619	98	Weighted Average
3,619		100.00% Impervious Area

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

Summary for Reach 1R: Springdale Ave

Inflow Area = 0.577 ac, 39.64% Impervious, Inflow Depth = 3.76" for 25-yr event
Inflow = 2.46 cfs @ 12.13 hrs, Volume= 0.181 af
Outflow = 2.46 cfs @ 12.13 hrs, Volume= 0.181 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 2R: Centre Street

Inflow Area = 0.831 ac, 33.63% Impervious, Inflow Depth = 3.46" for 25-yr event
Inflow = 3.27 cfs @ 12.13 hrs, Volume= 0.239 af
Outflow = 3.27 cfs @ 12.13 hrs, Volume= 0.239 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 3R: Swale - North

Inflow Area = 1.651 ac, 54.94% Impervious, Inflow Depth = 4.36" for 25-yr event
Inflow = 8.00 cfs @ 12.13 hrs, Volume= 0.600 af
Outflow = 8.00 cfs @ 12.13 hrs, Volume= 0.600 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 4R: DP

Inflow Area = 3.058 ac, 46.27% Impervious, Inflow Depth = 4.00" for 25-yr event
Inflow = 13.72 cfs @ 12.13 hrs, Volume= 1.020 af
Outflow = 13.72 cfs @ 12.13 hrs, Volume= 1.020 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 9R: Springdale Ave

Inflow Area = 0.083 ac,100.00% Impervious, Inflow Depth = 6.20" for 25-yr event
Inflow = 0.50 cfs @ 12.13 hrs, Volume= 0.043 af
Outflow = 0.50 cfs @ 12.13 hrs, Volume= 0.043 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 12R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 10R: Centre Street

Inflow Area = 0.778 ac, 26.99% Impervious, Inflow Depth = 3.25" for 25-yr event
Inflow = 2.83 cfs @ 12.14 hrs, Volume= 0.211 af
Outflow = 2.83 cfs @ 12.14 hrs, Volume= 0.211 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 12R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 11R: Swale - North

Inflow Area = 2.197 ac, 50.28% Impervious, Inflow Depth = 3.22" for 25-yr event
Inflow = 7.73 cfs @ 12.17 hrs, Volume= 0.590 af
Outflow = 7.73 cfs @ 12.17 hrs, Volume= 0.590 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 12R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 12R: DP

Inflow Area = 3.058 ac, 45.71% Impervious, Inflow Depth = 3.31" for 25-yr event
Inflow = 10.89 cfs @ 12.16 hrs, Volume= 0.844 af
Outflow = 10.89 cfs @ 12.16 hrs, Volume= 0.844 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Pond 4P: Underground System

Inflow Area = 1.718 ac, 62.30% Impervious, Inflow Depth = 4.65" for 25-yr event
Inflow = 8.75 cfs @ 12.13 hrs, Volume= 0.666 af
Outflow = 6.62 cfs @ 12.19 hrs, Volume= 0.666 af, Atten= 24%, Lag= 3.8 min
Discarded = 0.08 cfs @ 7.55 hrs, Volume= 0.179 af
Primary = 6.55 cfs @ 12.19 hrs, Volume= 0.487 af
Routed to Reach 11R : Swale - North

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 155.94' @ 12.19 hrs Surf.Area= 0.073 ac Storage= 0.147 af

Plug-Flow detention time= 127.5 min calculated for 0.666 af (100% of inflow)
Center-of-Mass det. time= 127.9 min (933.6 - 805.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	152.50'	0.094 af	**31.00'W x 103.00'L x 5.00'H Field A** 0.366 af Overall - 0.133 af Embedded = 0.234 af x 40.0% Voids
#2A	153.00'	0.106 af	**ADS N-12 42"** x 25 Inside #1 Inside= 41.1"W x 41.1"H => 9.20 sf x 20.00'L = 184.0 cf Outside= 48.0"W x 48.0"H => 11.56 sf x 20.00'L = 231.1 cf 25 Chambers in 5 Rows
		0.199 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	152.50'	**1.020 in/hr Exfiltration over Surface area**
#2	Primary	154.25'	**18.0" Round Culvert** L= 12.0' Ke= 0.500 Inlet / Outlet Invert= 154.25' / 154.25' S= 0.0000 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf

Discarded OutFlow Max=0.08 cfs @ 7.55 hrs HW=152.55' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=6.48 cfs @ 12.19 hrs HW=155.93' (Free Discharge)
↑**2=Culvert** (Barrel Controls 6.48 cfs @ 4.09 fps)

Pond 4P: Underground System - Chamber Wizard Field A

Chamber Model = ADS N-12 42" (ADS N-12® Pipe)
Inside= 41.1"W x 41.1"H => 9.20 sf x 20.00'L = 184.0 cf
Outside= 48.0"W x 48.0"H => 11.56 sf x 20.00'L = 231.1 cf

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

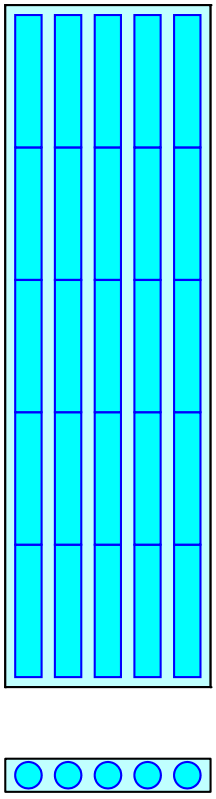
5 Chambers/Row x 20.00' Long = 100.00' Row Length +18.0" End Stone x 2 = 103.00' Base Length
5 Rows x 48.0" Wide + 24.0" Spacing x 4 + 18.0" Side Stone x 2 = 31.00' Base Width
6.0" Stone Base + 48.0" Chamber Height + 6.0" Stone Cover = 5.00' Field Height

25 Chambers x 184.0 cf = 4,600.0 cf Chamber Storage
25 Chambers x 231.1 cf = 5,778.2 cf Displacement

15,960.4 cf Field - 5,778.2 cf Chambers = 10,182.2 cf Stone x 40.0% Voids = 4,072.9 cf Stone Storage

Chamber Storage + Stone Storage = 8,672.9 cf = 0.199 af
Overall Storage Efficiency = 54.3%
Overall System Size = 103.00' x 31.00' x 5.00'

25 Chambers
591.1 cy Field
377.1 cy Stone



Stage-Area-Storage for Pond 4P: Underground System

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
152.50	**0.073**	0.000	153.02	0.073	0.015
152.51	0.073	0.000	153.03	0.073	0.016
152.52	0.073	0.001	153.04	0.073	0.016
152.53	0.073	0.001	153.05	0.073	0.016
152.54	0.073	0.001	153.06	0.073	0.016
152.55	0.073	0.001	153.07	0.073	0.017
152.56	0.073	0.002	153.08	0.073	0.017
152.57	0.073	0.002	153.09	0.073	0.017
152.58	0.073	0.002	153.10	0.073	0.017
152.59	0.073	0.003	153.11	0.073	0.017
152.60	0.073	0.003	153.12	0.073	0.018
152.61	0.073	0.003	153.13	0.073	0.018
152.62	0.073	0.004	153.14	0.073	0.018
152.63	0.073	0.004	153.15	0.073	0.018
152.64	0.073	0.004	153.16	0.073	0.019
152.65	0.073	0.004	153.17	0.073	0.019
152.66	0.073	0.005	153.18	0.073	0.019
152.67	0.073	0.005	153.19	0.073	0.019
152.68	0.073	0.005	153.20	0.073	0.020
152.69	0.073	0.006	153.21	0.073	0.020
152.70	0.073	0.006	153.22	0.073	0.020
152.71	0.073	0.006	153.23	0.073	0.020
152.72	0.073	0.006	153.24	0.073	0.020
152.73	0.073	0.007	153.25	0.073	0.021
152.74	0.073	0.007	153.26	0.073	0.021
152.75	0.073	0.007	153.27	0.073	0.021
152.76	0.073	0.008	153.28	0.073	0.021
152.77	0.073	0.008	153.29	0.073	0.021
152.78	0.073	0.008	153.30	0.073	0.022
152.79	0.073	0.009	153.31	0.073	0.022
152.80	0.073	0.009	153.32	0.073	0.022
152.81	0.073	0.009	153.33	0.073	0.022
152.82	0.073	0.009	153.34	0.073	0.023
152.83	0.073	0.010	153.35	0.073	0.023
152.84	0.073	0.010	153.36	0.073	0.023
152.85	0.073	0.010	153.37	0.073	0.024
152.86	0.073	0.011	153.38	0.073	0.024
152.87	0.073	0.011	153.39	0.073	0.024
152.88	0.073	0.011	153.40	0.073	0.025
152.89	0.073	0.011	153.41	0.073	0.025
152.90	0.073	0.012	153.42	0.073	0.025
152.91	0.073	0.012	153.43	0.073	0.026
152.92	0.073	0.012	153.44	0.073	0.026
152.93	0.073	0.013	153.45	0.073	0.026
152.94	0.073	0.013	153.46	0.073	0.027
152.95	0.073	0.013	153.47	0.073	0.027
152.96	0.073	0.013	153.48	0.073	0.027
152.97	0.073	0.014	153.49	0.073	0.028
152.98	0.073	0.014	153.50	0.073	0.028
152.99	0.073	0.014	153.51	0.073	0.029
153.00	0.073	0.015	153.52	0.073	0.029
153.01	0.073	0.015	153.53	0.073	0.029

Stage-Area-Storage for Pond 4P: Underground System (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
153.54	0.073	0.030	154.06	0.073	0.052
153.55	0.073	0.030	154.07	0.073	0.053
153.56	0.073	0.030	154.08	0.073	0.053
153.57	0.073	0.031	154.09	0.073	0.054
153.58	0.073	0.031	154.10	0.073	0.054
153.59	0.073	0.032	154.11	0.073	0.055
153.60	0.073	0.032	154.12	0.073	0.055
153.61	0.073	0.032	154.13	0.073	0.056
153.62	0.073	0.033	154.14	0.073	0.056
153.63	0.073	0.033	154.15	0.073	0.057
153.64	0.073	0.034	154.16	0.073	0.057
153.65	0.073	0.034	154.17	0.073	0.058
153.66	0.073	0.034	154.18	0.073	0.058
153.67	0.073	0.035	154.19	0.073	0.059
153.68	0.073	0.035	154.20	0.073	0.059
153.69	0.073	0.036	154.21	0.073	0.060
153.70	0.073	0.036	154.22	0.073	0.060
153.71	0.073	0.037	154.23	0.073	0.060
153.72	0.073	0.037	154.24	0.073	0.061
153.73	0.073	0.037	154.25	0.073	0.061
153.74	0.073	0.038	154.26	0.073	0.062
153.75	0.073	0.038	154.27	0.073	0.062
153.76	0.073	0.039	154.28	0.073	0.063
153.77	0.073	0.039	154.29	0.073	0.063
153.78	0.073	0.040	154.30	0.073	0.064
153.79	0.073	0.040	154.31	0.073	0.064
153.80	0.073	0.040	154.32	0.073	0.065
153.81	0.073	0.041	154.33	0.073	0.065
153.82	0.073	0.041	154.34	0.073	0.066
153.83	0.073	0.042	154.35	0.073	0.066
153.84	0.073	0.042	154.36	0.073	0.067
153.85	0.073	0.043	154.37	0.073	0.067
153.86	0.073	0.043	154.38	0.073	0.068
153.87	0.073	0.044	154.39	0.073	0.068
153.88	0.073	0.044	154.40	0.073	0.069
153.89	0.073	0.044	154.41	0.073	0.069
153.90	0.073	0.045	154.42	0.073	0.070
153.91	0.073	0.045	154.43	0.073	0.070
153.92	0.073	0.046	154.44	0.073	0.071
153.93	0.073	0.046	154.45	0.073	0.071
153.94	0.073	0.047	154.46	0.073	0.072
153.95	0.073	0.047	154.47	0.073	0.072
153.96	0.073	0.048	154.48	0.073	0.073
153.97	0.073	0.048	154.49	0.073	0.073
153.98	0.073	0.049	154.50	0.073	0.074
153.99	0.073	0.049	154.51	0.073	0.074
154.00	0.073	0.049	154.52	0.073	0.075
154.01	0.073	0.050	154.53	0.073	0.075
154.02	0.073	0.050	154.54	0.073	0.076
154.03	0.073	0.051	154.55	0.073	0.076
154.04	0.073	0.051	154.56	0.073	0.077
154.05	0.073	0.052	154.57	0.073	0.077

Stage-Area-Storage for Pond 4P: Underground System (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
154.58	0.073	0.078	155.10	0.073	0.105
154.59	0.073	0.078	155.11	0.073	0.105
154.60	0.073	0.079	155.12	0.073	0.106
154.61	0.073	0.079	155.13	0.073	0.106
154.62	0.073	0.080	155.14	0.073	0.107
154.63	0.073	0.081	155.15	0.073	0.107
154.64	0.073	0.081	155.16	0.073	0.108
154.65	0.073	0.082	155.17	0.073	0.108
154.66	0.073	0.082	155.18	0.073	0.109
154.67	0.073	0.083	155.19	0.073	0.109
154.68	0.073	0.083	155.20	0.073	0.110
154.69	0.073	0.084	155.21	0.073	0.110
154.70	0.073	0.084	155.22	0.073	0.111
154.71	0.073	0.085	155.23	0.073	0.111
154.72	0.073	0.085	155.24	0.073	0.112
154.73	0.073	0.086	155.25	0.073	0.112
154.74	0.073	0.086	155.26	0.073	0.113
154.75	0.073	0.087	155.27	0.073	0.114
154.76	0.073	0.087	155.28	0.073	0.114
154.77	0.073	0.088	155.29	0.073	0.115
154.78	0.073	0.088	155.30	0.073	0.115
154.79	0.073	0.089	155.31	0.073	0.116
154.80	0.073	0.089	155.32	0.073	0.116
154.81	0.073	0.090	155.33	0.073	0.117
154.82	0.073	0.090	155.34	0.073	0.117
154.83	0.073	0.091	155.35	0.073	0.118
154.84	0.073	0.091	155.36	0.073	0.118
154.85	0.073	0.092	155.37	0.073	0.119
154.86	0.073	0.092	155.38	0.073	0.119
154.87	0.073	0.093	155.39	0.073	0.120
154.88	0.073	0.093	155.40	0.073	0.120
154.89	0.073	0.094	155.41	0.073	0.121
154.90	0.073	0.094	155.42	0.073	0.121
154.91	0.073	0.095	155.43	0.073	0.122
154.92	0.073	0.095	155.44	0.073	0.122
154.93	0.073	0.096	155.45	0.073	0.123
154.94	0.073	0.096	155.46	0.073	0.123
154.95	0.073	0.097	155.47	0.073	0.124
154.96	0.073	0.098	155.48	0.073	0.124
154.97	0.073	0.098	155.49	0.073	0.125
154.98	0.073	0.099	155.50	0.073	0.125
154.99	0.073	0.099	155.51	0.073	0.126
155.00	0.073	0.100	155.52	0.073	0.126
155.01	0.073	0.100	155.53	0.073	0.127
155.02	0.073	0.101	155.54	0.073	0.127
155.03	0.073	0.101	155.55	0.073	0.128
155.04	0.073	0.102	155.56	0.073	0.128
155.05	0.073	0.102	155.57	0.073	0.129
155.06	0.073	0.103	155.58	0.073	0.129
155.07	0.073	0.103	155.59	0.073	0.130
155.08	0.073	0.104	155.60	0.073	0.130
155.09	0.073	0.104	155.61	0.073	0.131

Stage-Area-Storage for Pond 4P: Underground System (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
155.62	0.073	0.131	156.14	0.073	0.156
155.63	0.073	0.132	156.15	0.073	0.156
155.64	0.073	0.132	156.16	0.073	0.157
155.65	0.073	0.133	156.17	0.073	0.157
155.66	0.073	0.133	156.18	0.073	0.158
155.67	0.073	0.134	156.19	0.073	0.158
155.68	0.073	0.134	156.20	0.073	0.159
155.69	0.073	0.135	156.21	0.073	0.159
155.70	0.073	0.135	156.22	0.073	0.160
155.71	0.073	0.136	156.23	0.073	0.160
155.72	0.073	0.136	156.24	0.073	0.160
155.73	0.073	0.137	156.25	0.073	0.161
155.74	0.073	0.137	156.26	0.073	0.161
155.75	0.073	0.138	156.27	0.073	0.162
155.76	0.073	0.138	156.28	0.073	0.162
155.77	0.073	0.139	156.29	0.073	0.163
155.78	0.073	0.139	156.30	0.073	0.163
155.79	0.073	0.140	156.31	0.073	0.163
155.80	0.073	0.140	156.32	0.073	0.164
155.81	0.073	0.141	156.33	0.073	0.164
155.82	0.073	0.141	156.34	0.073	0.165
155.83	0.073	0.142	156.35	0.073	0.165
155.84	0.073	0.142	156.36	0.073	0.165
155.85	0.073	0.143	156.37	0.073	0.166
155.86	0.073	0.143	156.38	0.073	0.166
155.87	0.073	0.143	156.39	0.073	0.167
155.88	0.073	0.144	156.40	0.073	0.167
155.89	0.073	0.144	156.41	0.073	0.167
155.90	0.073	0.145	156.42	0.073	0.168
155.91	0.073	0.145	156.43	0.073	0.168
155.92	0.073	0.146	156.44	0.073	0.169
155.93	0.073	0.146	156.45	0.073	0.169
155.94	0.073	0.147	156.46	0.073	0.169
155.95	0.073	0.147	156.47	0.073	0.170
155.96	0.073	0.148	156.48	0.073	0.170
155.97	0.073	0.148	156.49	0.073	0.171
155.98	0.073	0.149	156.50	0.073	0.171
155.99	0.073	0.149	156.51	0.073	0.171
156.00	0.073	0.150	156.52	0.073	0.172
156.01	0.073	0.150	156.53	0.073	0.172
156.02	0.073	0.151	156.54	0.073	0.172
156.03	0.073	0.151	156.55	0.073	0.173
156.04	0.073	0.151	156.56	0.073	0.173
156.05	0.073	0.152	156.57	0.073	0.173
156.06	0.073	0.152	156.58	0.073	0.174
156.07	0.073	0.153	156.59	0.073	0.174
156.08	0.073	0.153	156.60	0.073	0.174
156.09	0.073	0.154	156.61	0.073	0.175
156.10	0.073	0.154	156.62	0.073	0.175
156.11	0.073	0.155	156.63	0.073	0.175
156.12	0.073	0.155	156.64	0.073	0.176
156.13	0.073	0.156	156.65	0.073	0.176

Stage-Area-Storage for Pond 4P: Underground System (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)
156.66	0.073	0.176
156.67	0.073	0.177
156.68	0.073	0.177
156.69	0.073	0.177
156.70	0.073	0.177
156.71	0.073	0.178
156.72	0.073	0.178
156.73	0.073	0.178
156.74	0.073	0.178
156.75	0.073	0.179
156.76	0.073	0.179
156.77	0.073	0.179
156.78	0.073	0.179
156.79	0.073	0.179
156.80	0.073	0.180
156.81	0.073	0.180
156.82	0.073	0.180
156.83	0.073	0.180
156.84	0.073	0.180
156.85	0.073	0.181
156.86	0.073	0.181
156.87	0.073	0.181
156.88	0.073	0.181
156.89	0.073	0.182
156.90	0.073	0.182
156.91	0.073	0.182
156.92	0.073	0.182
156.93	0.073	0.183
156.94	0.073	0.183
156.95	0.073	0.183
156.96	0.073	0.183
156.97	0.073	0.184
156.98	0.073	0.184
156.99	0.073	0.184
157.00	0.073	0.184
157.01	0.073	0.185
157.02	0.073	0.185
157.03	0.073	0.185
157.04	0.073	0.186
157.05	0.073	0.186
157.06	0.073	0.186
157.07	0.073	0.187
157.08	0.073	0.187
157.09	0.073	0.187
157.10	0.073	0.187
157.11	0.073	0.188
157.12	0.073	0.188
157.13	0.073	0.188
157.14	0.073	0.189
157.15	0.073	0.189
157.16	0.073	0.189
157.17	0.073	0.189
157.18	0.073	0.190
157.19	0.073	0.190
157.20	0.073	0.190
157.21	0.073	0.191
157.22	0.073	0.191
157.23	0.073	0.191
157.24	0.073	0.192
157.25	0.073	0.192
157.26	0.073	0.192
157.27	0.073	0.192
157.28	0.073	0.193
157.29	0.073	0.193
157.30	0.073	0.193
157.31	0.073	0.194
157.32	0.073	0.194
157.33	0.073	0.194
157.34	0.073	0.194
157.35	0.073	0.195
157.36	0.073	0.195
157.37	0.073	0.195
157.38	0.073	0.196
157.39	0.073	0.196
157.40	0.073	0.196
157.41	0.073	0.196
157.42	0.073	0.197
157.43	0.073	0.197
157.44	0.073	0.197
157.45	0.073	0.198
157.46	0.073	0.198
157.47	0.073	0.198
157.48	0.073	0.199
157.49	0.073	0.199
157.50	0.073	**0.199**

Summary for Pond 5P: Rain Garden

Inflow Area = 0.201 ac, 6.63% Impervious, Inflow Depth = 2.49" for 25-yr event
Inflow = 0.57 cfs @ 12.13 hrs, Volume= 0.042 af
Outflow = 0.57 cfs @ 12.14 hrs, Volume= 0.042 af, Atten= 0%, Lag= 0.1 min
Primary = 0.57 cfs @ 12.14 hrs, Volume= 0.042 af
Routed to Pond 6P : 24" CPP Perf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 157.00' @ 12.14 hrs Surf.Area= 446 sf Storage= 2 cf

Plug-Flow detention time= 0.1 min calculated for 0.042 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (863.1 - 863.1)

Volume	Invert	Avail.Storage	Storage Description
#1	157.00'	563 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
157.00	445	0	0
158.00	681	563	563

Device	Routing	Invert	Outlet Devices
#1	Primary	154.80'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.32 cfs @ 12.14 hrs HW=157.00' (Free Discharge)
↑—**1=Orifice/Grate** (Orifice Controls 1.32 cfs @ 6.73 fps)

Stage-Area-Storage for Pond 5P: Rain Garden

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
157.00	445	0
157.01	447	4
157.02	450	9
157.03	452	13
157.04	454	18
157.05	457	23
157.06	459	27
157.07	462	32
157.08	464	36
157.09	466	41
157.10	469	46
157.11	471	50
157.12	473	55
157.13	476	60
157.14	478	65
157.15	480	69
157.16	483	74
157.17	485	79
157.18	487	84
157.19	490	89
157.20	492	94
157.21	495	99
157.22	497	104
157.23	499	109
157.24	502	114
157.25	504	119
157.26	506	124
157.27	509	129
157.28	511	134
157.29	513	139
157.30	516	144
157.31	518	149
157.32	521	154
157.33	523	160
157.34	525	165
157.35	528	170
157.36	530	175
157.37	532	181
157.38	535	186
157.39	537	191
157.40	539	197
157.41	542	202
157.42	544	208
157.43	546	213
157.44	549	219
157.45	551	224
157.46	554	230
157.47	556	235
157.48	558	241
157.49	561	246
157.50	563	252
157.51	565	258
157.52	568	263
157.53	570	269
157.54	572	275
157.55	575	280
157.56	577	286
157.57	580	292
157.58	582	298
157.59	584	304
157.60	587	309
157.61	589	315
157.62	591	321
157.63	594	327
157.64	596	333
157.65	598	339
157.66	601	345
157.67	603	351
157.68	605	357
157.69	608	363
157.70	610	369
157.71	613	375
157.72	615	382
157.73	617	388
157.74	620	394
157.75	622	400
157.76	624	406
157.77	627	413
157.78	629	419
157.79	631	425
157.80	634	432
157.81	636	438
157.82	639	444
157.83	641	451
157.84	643	457
157.85	646	464
157.86	648	470
157.87	650	476
157.88	653	483
157.89	655	490
157.90	657	496
157.91	660	503
157.92	662	509
157.93	664	516
157.94	667	523
157.95	669	529
157.96	672	536
157.97	674	543
157.98	676	549
157.99	679	556
158.00	**681**	**563**

Summary for Pond 6P: 24" CPP Perf

Inflow Area = 0.413 ac, 9.90% Impervious, Inflow Depth = 2.63" for 25-yr event
Inflow = 1.23 cfs @ 12.13 hrs, Volume= 0.091 af
Outflow = 1.21 cfs @ 12.15 hrs, Volume= 0.090 af, Atten= 2%, Lag= 0.8 min
Primary = 1.21 cfs @ 12.15 hrs, Volume= 0.090 af
Routed to Reach 10R : Centre Street

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 154.48' @ 12.15 hrs Surf.Area= 0.007 ac Storage= 0.002 af

Plug-Flow detention time= 9.3 min calculated for 0.090 af (99% of inflow)
Center-of-Mass det. time= 4.8 min (863.7 - 858.9)

Volume	Invert	Avail.Storage	Storage Description
#1A	153.67'	0.006 af	**4.00'W x 77.67'L x 3.00'H Field A** 0.021 af Overall - 0.007 af Embedded = 0.015 af x 40.0% Voids
#2A	154.00'	0.005 af	**ADS N-12 24"** x 4 Inside #1 Inside= 23.8"W x 23.8"H => 3.10 sf x 20.00'L = 62.0 cf Outside= 28.0"W x 28.0"H => 3.92 sf x 20.00'L = 78.4 cf Row Length Adjustment= -4.00' x 3.10 sf x 1 rows
		0.011 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	153.90'	**12.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.21 cfs @ 12.15 hrs HW=154.47' (Free Discharge)
1=Orifice/Grate (Orifice Controls 1.21 cfs @ 2.58 fps)

Pond 6P: 24" CPP Perf - Chamber Wizard Field A

Chamber Model = ADS N-12 24" (ADS N-12® Pipe)
Inside= 23.8"W x 23.8"H => 3.10 sf x 20.00'L = 62.0 cf
Outside= 28.0"W x 28.0"H => 3.92 sf x 20.00'L = 78.4 cf
Row Length Adjustment= -4.00' x 3.10 sf x 1 rows

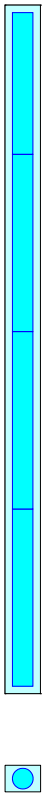
4 Chambers/Row x 20.00' Long -4.00' Row Adjustment = 76.00' Row Length +10.0" End Stone x 2 = 77.67' Base Length
1 Rows x 28.0" Wide + 10.0" Side Stone x 2 = 4.00' Base Width
4.0" Stone Base + 28.0" Chamber Height + 4.0" Stone Cover = 3.00' Field Height

4 Chambers x 62.0 cf -4.00' Row Adjustment x 3.10 sf x 1 Rows = 235.6 cf Chamber Storage
4 Chambers x 78.4 cf -4.00' Row Adjustment x 3.92 sf x 1 Rows = 297.9 cf Displacement

932.0 cf Field - 297.9 cf Chambers = 634.1 cf Stone x 40.0% Voids = 253.7 cf Stone Storage

Chamber Storage + Stone Storage = 489.3 cf = 0.011 af
Overall Storage Efficiency = 52.5%
Overall System Size = 77.67' x 4.00' x 3.00'

4 Chambers
34.5 cy Field
23.5 cy Stone



Stage-Area-Storage for Pond 6P: 24" CPP Perf

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
153.67	0.000	154.19	0.001	154.71	0.003
153.68	0.000	154.20	0.001	154.72	0.003
153.69	0.000	154.21	0.001	154.73	0.004
153.70	0.000	154.22	0.001	154.74	0.004
153.71	0.000	154.23	0.002	154.75	0.004
153.72	0.000	154.24	0.002	154.76	0.004
153.73	0.000	154.25	0.002	154.77	0.004
153.74	0.000	154.26	0.002	154.78	0.004
153.75	0.000	154.27	0.002	154.79	0.004
153.76	0.000	154.28	0.002	154.80	0.004
153.77	0.000	154.29	0.002	154.81	0.004
153.78	0.000	154.30	0.002	154.82	0.004
153.79	0.000	154.31	0.002	154.83	0.004
153.80	0.000	154.32	0.002	154.84	0.004
153.81	0.000	154.33	0.002	154.85	0.004
153.82	0.000	154.34	0.002	154.86	0.004
153.83	0.000	154.35	0.002	154.87	0.004
153.84	0.000	154.36	0.002	154.88	0.004
153.85	0.001	154.37	0.002	154.89	0.004
153.86	0.001	154.38	0.002	154.90	0.004
153.87	0.001	154.39	0.002	154.91	0.004
153.88	0.001	154.40	0.002	154.92	0.004
153.89	0.001	154.41	0.002	154.93	0.004
153.90	0.001	154.42	0.002	154.94	0.005
153.91	0.001	154.43	0.002	154.95	0.005
153.92	0.001	154.44	0.002	154.96	0.005
153.93	0.001	154.45	0.002	154.97	0.005
153.94	0.001	154.46	0.002	154.98	0.005
153.95	0.001	154.47	0.002	154.99	0.005
153.96	0.001	154.48	0.002	155.00	0.005
153.97	0.001	154.49	0.002	155.01	0.005
153.98	0.001	154.50	0.003	155.02	0.005
153.99	0.001	154.51	0.003	155.03	0.005
154.00	0.001	154.52	0.003	155.04	0.005
154.01	0.001	154.53	0.003	155.05	0.005
154.02	0.001	154.54	0.003	155.06	0.005
154.03	0.001	154.55	0.003	155.07	0.005
154.04	0.001	154.56	0.003	155.08	0.005
154.05	0.001	154.57	0.003	155.09	0.005
154.06	0.001	154.58	0.003	155.10	0.005
154.07	0.001	154.59	0.003	155.11	0.005
154.08	0.001	154.60	0.003	155.12	0.005
154.09	0.001	154.61	0.003	155.13	0.005
154.10	0.001	154.62	0.003	155.14	0.005
154.11	0.001	154.63	0.003	155.15	0.006
154.12	0.001	154.64	0.003	155.16	0.006
154.13	0.001	154.65	0.003	155.17	0.006
154.14	0.001	154.66	0.003	155.18	0.006
154.15	0.001	154.67	0.003	155.19	0.006
154.16	0.001	154.68	0.003	155.20	0.006
154.17	0.001	154.69	0.003	155.21	0.006
154.18	0.001	154.70	0.003	155.22	0.006

Stage-Area-Storage for Pond 6P: 24" CPP Perf (continued)

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
155.23	0.006	155.75	0.008	156.27	0.010
155.24	0.006	155.76	0.008	156.28	0.010
155.25	0.006	155.77	0.008	156.29	0.010
155.26	0.006	155.78	0.008	156.30	0.010
155.27	0.006	155.79	0.009	156.31	0.010
155.28	0.006	155.80	0.009	156.32	0.010
155.29	0.006	155.81	0.009	156.33	0.010
155.30	0.006	155.82	0.009	156.34	0.010
155.31	0.006	155.83	0.009	156.35	0.010
155.32	0.006	155.84	0.009	156.36	0.010
155.33	0.006	155.85	0.009	156.37	0.010
155.34	0.006	155.86	0.009	156.38	0.010
155.35	0.006	155.87	0.009	156.39	0.010
155.36	0.007	155.88	0.009	156.40	0.010
155.37	0.007	155.89	0.009	156.41	0.010
155.38	0.007	155.90	0.009	156.42	0.011
155.39	0.007	155.91	0.009	156.43	0.011
155.40	0.007	155.92	0.009	156.44	0.011
155.41	0.007	155.93	0.009	156.45	0.011
155.42	0.007	155.94	0.009	156.46	0.011
155.43	0.007	155.95	0.009	156.47	0.011
155.44	0.007	155.96	0.009	156.48	0.011
155.45	0.007	155.97	0.009	156.49	0.011
155.46	0.007	155.98	0.009	156.50	0.011
155.47	0.007	155.99	0.009	156.51	0.011
155.48	0.007	156.00	0.009	156.52	0.011
155.49	0.007	156.01	0.009	156.53	0.011
155.50	0.007	156.02	0.009	156.54	0.011
155.51	0.007	156.03	0.009	156.55	0.011
155.52	0.007	156.04	0.009	156.56	0.011
155.53	0.007	156.05	0.010	156.57	0.011
155.54	0.007	156.06	0.010	156.58	0.011
155.55	0.007	156.07	0.010	156.59	0.011
155.56	0.007	156.08	0.010	156.60	0.011
155.57	0.008	156.09	0.010	156.61	0.011
155.58	0.008	156.10	0.010	156.62	0.011
155.59	0.008	156.11	0.010	156.63	0.011
155.60	0.008	156.12	0.010	156.64	0.011
155.61	0.008	156.13	0.010	156.65	0.011
155.62	0.008	156.14	0.010	156.66	0.011
155.63	0.008	156.15	0.010	156.67	**0.011**
155.64	0.008	156.16	0.010		
155.65	0.008	156.17	0.010		
155.66	0.008	156.18	0.010		
155.67	0.008	156.19	0.010		
155.68	0.008	156.20	0.010		
155.69	0.008	156.21	0.010		
155.70	0.008	156.22	0.010		
155.71	0.008	156.23	0.010		
155.72	0.008	156.24	0.010		
155.73	0.008	156.25	0.010		
155.74	0.008	156.26	0.010		

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

Subcatchment 6S: Site + Building Runoff Area=35,212 sf 69.46% Impervious Runoff Depth=6.70"
Tc=6.0 min CN=87 Runoff=5.74 cfs 0.452 af

Subcatchment 7S: Site to RG Runoff Area=8,746 sf 6.63% Impervious Runoff Depth=3.87"
Tc=6.0 min CN=63 Runoff=0.89 cfs 0.065 af

Subcatchment 8S: Site to 24" Runoff Area=9,242 sf 12.98% Impervious Runoff Depth=4.22"
Tc=6.0 min CN=66 Runoff=1.02 cfs 0.075 af

Subcatchment EX-1: Site Runoff Area=22,451 sf 52.79% Impervious Runoff Depth=5.99"
Tc=6.0 min CN=81 Runoff=3.38 cfs 0.257 af

Subcatchment EX-2: Site + 1/3 Bldg Runoff Area=49,472 sf 55.91% Impervious Runoff Depth=6.11"
Tc=6.0 min CN=82 Runoff=7.56 cfs 0.578 af

Subcatchment EX-3: Site + 1/3 Bldg Runoff Area=36,183 sf 33.63% Impervious Runoff Depth=5.04"
Tc=6.0 min CN=73 Runoff=4.72 cfs 0.349 af

Subcatchment EX-4: Site + 1/3 Bldg Runoff Area=25,119 sf 39.64% Impervious Runoff Depth=5.40"
Tc=6.0 min CN=76 Runoff=3.48 cfs 0.259 af

Subcatchment PR-1: Site Runoff Area=39,645 sf 55.93% Impervious Runoff Depth=6.11"
Tc=6.0 min CN=82 Runoff=6.06 cfs 0.463 af

Subcatchment PR-2: Site Runoff Area=20,842 sf 7.13% Impervious Runoff Depth=3.99"
Tc=6.0 min CN=64 Runoff=2.18 cfs 0.159 af

Subcatchment PR-3: Site + Building Runoff Area=15,901 sf 46.32% Impervious Runoff Depth=5.63"
Tc=6.0 min CN=78 Runoff=2.28 cfs 0.171 af

Subcatchment PR-4: Site Runoff Area=3,619 sf 100.00% Impervious Runoff Depth=8.02"
Tc=6.0 min CN=98 Runoff=0.64 cfs 0.056 af

Reach 1R: Springdale Ave Inflow=3.48 cfs 0.259 af
Outflow=3.48 cfs 0.259 af

Reach 2R: Centre Street Inflow=4.72 cfs 0.349 af
Outflow=4.72 cfs 0.349 af

Reach 3R: Swale - North Inflow=10.95 cfs 0.835 af
Outflow=10.95 cfs 0.835 af

Reach 4R: DP Inflow=19.14 cfs 1.443 af
Outflow=19.14 cfs 1.443 af

Reach 9R: Springdale Ave Inflow=0.64 cfs 0.056 af
Outflow=0.64 cfs 0.056 af

Reach 10R: Centre Street Inflow=4.14 cfs 0.310 af
Outflow=4.14 cfs 0.310 af

Reach 11R: Swale - North Inflow=10.84 cfs 0.886 af
Outflow=10.84 cfs 0.886 af

Reach 12R: DP Inflow=15.39 cfs 1.252 af
Outflow=15.39 cfs 1.252 af

Pond 4P: Underground System Peak Elev=156.43' Storage=0.168 af Inflow=11.80 cfs 0.915 af
Discarded=0.08 cfs 0.187 af Primary=9.10 cfs 0.727 af Outflow=9.17 cfs 0.915 af

Pond 5P: Rain Garden Peak Elev=157.01' Storage=3 cf Inflow=0.89 cfs 0.065 af
Outflow=0.89 cfs 0.065 af

Pond 6P: 24" CPP Perf Peak Elev=154.65' Storage=0.003 af Inflow=1.91 cfs 0.139 af
Outflow=1.88 cfs 0.139 af

Total Runoff Area = 6.116 ac Runoff Volume = 2.883 af Average Runoff Depth = 5.66"
54.01% Pervious = 3.304 ac 45.99% Impervious = 2.813 ac

Summary for Subcatchment 6S: Site + Building

Runoff = 5.74 cfs @ 12.13 hrs, Volume= 0.452 af, Depth= 6.70"
Routed to Pond 4P : Underground System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-yr Rainfall=8.26"

Area (sf)	CN	Description
10,752	61	>75% Grass cover, Good, HSG B
16,560	98	Paved parking, HSG B
7,900	98	Roofs, HSG B
35,212	87	Weighted Average
10,752		30.54% Pervious Area
24,460		69.46% Impervious Area

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

Summary for Subcatchment 7S: Site to RG

Runoff = 0.89 cfs @ 12.13 hrs, Volume= 0.065 af, Depth= 3.87"
Routed to Pond 5P : Rain Garden

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-yr Rainfall=8.26"

Area (sf)	CN	Description
8,166	61	>75% Grass cover, Good, HSG B
580	98	Paved parking, HSG B
8,746	63	Weighted Average
8,166		93.37% Pervious Area
580		6.63% Impervious Area

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

Summary for Subcatchment 8S: Site to 24"

Runoff = 1.02 cfs @ 12.13 hrs, Volume= 0.075 af, Depth= 4.22"
Routed to Pond 6P : 24" CPP Perf

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-yr Rainfall=8.26"

Area (sf)	CN	Description
8,042	61	>75% Grass cover, Good, HSG B
1,200	98	Paved parking, HSG B
9,242	66	Weighted Average
8,042		87.02% Pervious Area
1,200		12.98% Impervious Area

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

Summary for Subcatchment EX-1: Site

Runoff = 3.38 cfs @ 12.13 hrs, Volume= 0.257 af, Depth= 5.99"
Routed to Reach 3R : Swale - North

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-yr Rainfall=8.26"

Area (sf)	CN	Description
10,599	61	>75% Grass cover, Good, HSG B
11,852	98	Paved parking, HSG B
22,451	81	Weighted Average
10,599		47.21% Pervious Area
11,852		52.79% Impervious Area

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

Summary for Subcatchment EX-2: Site + 1/3 Bldg

Runoff = 7.56 cfs @ 12.13 hrs, Volume= 0.578 af, Depth= 6.11"
Routed to Reach 3R : Swale - North

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-yr Rainfall=8.26"

Area (sf)	CN	Description
21,811	61	>75% Grass cover, Good, HSG B
21,224	98	Paved parking, HSG B
6,437	98	Roofs, HSG B
49,472	82	Weighted Average
21,811		44.09% Pervious Area
27,661		55.91% Impervious Area

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

Summary for Subcatchment EX-3: Site + 1/3 Bldg

Runoff = 4.72 cfs @ 12.13 hrs, Volume= 0.349 af, Depth= 5.04"
Routed to Reach 2R : Centre Street

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-yr Rainfall=8.26"

Area (sf)	CN	Description
24,014	61	>75% Grass cover, Good, HSG B
5,732	98	Paved parking, HSG B
6,437	98	Roofs, HSG B
36,183	73	Weighted Average
24,014		66.37% Pervious Area
12,169		33.63% Impervious Area

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

Summary for Subcatchment EX-4: Site + 1/3 Bldg

Runoff = 3.48 cfs @ 12.13 hrs, Volume= 0.259 af, Depth= 5.40"
Routed to Reach 1R : Springdale Ave

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-yr Rainfall=8.26"

Area (sf)	CN	Description
15,162	61	>75% Grass cover, Good, HSG B
3,520	98	Paved parking, HSG B
6,437	98	Roofs, HSG B
25,119	76	Weighted Average
15,162		60.36% Pervious Area
9,957		39.64% Impervious Area

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

Summary for Subcatchment PR-1: Site

Runoff = 6.06 cfs @ 12.13 hrs, Volume= 0.463 af, Depth= 6.11"
Routed to Pond 4P : Underground System

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-yr Rainfall=8.26"

Area (sf)	CN	Description
17,472	61	>75% Grass cover, Good, HSG B
22,173	98	Paved parking, HSG B
39,645	82	Weighted Average
17,472		44.07% Pervious Area
22,173		55.93% Impervious Area

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

Summary for Subcatchment PR-2: Site

Runoff = 2.18 cfs @ 12.13 hrs, Volume= 0.159 af, Depth= 3.99"
Routed to Reach 11R : Swale - North

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-yr Rainfall=8.26"

Area (sf)	CN	Description
19,355	61	>75% Grass cover, Good, HSG B
1,487	98	Paved parking, HSG B
20,842	64	Weighted Average
19,355		92.87% Pervious Area
1,487		7.13% Impervious Area

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

Summary for Subcatchment PR-3: Site + Building

Runoff = 2.28 cfs @ 12.13 hrs, Volume= 0.171 af, Depth= 5.63"
Routed to Reach 10R : Centre Street

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-yr Rainfall=8.26"

Area (sf)	CN	Description
8,535	61	>75% Grass cover, Good, HSG B
3,766	98	Paved parking, HSG B
3,600	98	Roofs, HSG B
15,901	78	Weighted Average
8,535		53.68% Pervious Area
7,366		46.32% Impervious Area

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

Summary for Subcatchment PR-4: Site

Runoff = 0.64 cfs @ 12.13 hrs, Volume= 0.056 af, Depth= 8.02"
Routed to Reach 9R : Springdale Ave

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
NOAA 24-hr D 100-yr Rainfall=8.26"

Area (sf)	CN	Description
447	98	Paved parking, HSG B
3,172	98	Roofs, HSG B
3,619	98	Weighted Average
3,619		100.00% Impervious Area

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

Summary for Reach 1R: Springdale Ave

Inflow Area = 0.577 ac, 39.64% Impervious, Inflow Depth = 5.40" for 100-yr event
Inflow = 3.48 cfs @ 12.13 hrs, Volume= 0.259 af
Outflow = 3.48 cfs @ 12.13 hrs, Volume= 0.259 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 2R: Centre Street

Inflow Area = 0.831 ac, 33.63% Impervious, Inflow Depth = 5.04" for 100-yr event
Inflow = 4.72 cfs @ 12.13 hrs, Volume= 0.349 af
Outflow = 4.72 cfs @ 12.13 hrs, Volume= 0.349 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 3R: Swale - North

Inflow Area = 1.651 ac, 54.94% Impervious, Inflow Depth = 6.07" for 100-yr event
Inflow = 10.95 cfs @ 12.13 hrs, Volume= 0.835 af
Outflow = 10.95 cfs @ 12.13 hrs, Volume= 0.835 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 4R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 4R: DP

Inflow Area = 3.058 ac, 46.27% Impervious, Inflow Depth = 5.66" for 100-yr event
Inflow = 19.14 cfs @ 12.13 hrs, Volume= 1.443 af
Outflow = 19.14 cfs @ 12.13 hrs, Volume= 1.443 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 9R: Springdale Ave

Inflow Area = 0.083 ac,100.00% Impervious, Inflow Depth = 8.02" for 100-yr event
Inflow = 0.64 cfs @ 12.13 hrs, Volume= 0.056 af
Outflow = 0.64 cfs @ 12.13 hrs, Volume= 0.056 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 12R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 10R: Centre Street

Inflow Area = 0.778 ac, 26.99% Impervious, Inflow Depth = 4.78" for 100-yr event
Inflow = 4.14 cfs @ 12.14 hrs, Volume= 0.310 af
Outflow = 4.14 cfs @ 12.14 hrs, Volume= 0.310 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 12R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 11R: Swale - North

Inflow Area = 2.197 ac, 50.28% Impervious, Inflow Depth = 4.84" for 100-yr event
Inflow = 10.84 cfs @ 12.17 hrs, Volume= 0.886 af
Outflow = 10.84 cfs @ 12.17 hrs, Volume= 0.886 af, Atten= 0%, Lag= 0.0 min
Routed to Reach 12R : DP

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Reach 12R: DP

Inflow Area = 3.058 ac, 45.71% Impervious, Inflow Depth = 4.91" for 100-yr event
Inflow = 15.39 cfs @ 12.15 hrs, Volume= 1.252 af
Outflow = 15.39 cfs @ 12.15 hrs, Volume= 1.252 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs

Summary for Pond 4P: Underground System

Inflow Area = 1.718 ac, 62.30% Impervious, Inflow Depth = 6.39" for 100-yr event
Inflow = 11.80 cfs @ 12.13 hrs, Volume= 0.915 af
Outflow = 9.17 cfs @ 12.19 hrs, Volume= 0.915 af, Atten= 22%, Lag= 3.7 min
Discarded = 0.08 cfs @ 6.40 hrs, Volume= 0.187 af
Primary = 9.10 cfs @ 12.19 hrs, Volume= 0.727 af
Routed to Reach 11R : Swale - North

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 156.43' @ 12.19 hrs Surf.Area= 0.073 ac Storage= 0.168 af

Plug-Flow detention time= 101.4 min calculated for 0.914 af (100% of inflow)
Center-of-Mass det. time= 101.8 min (897.9 - 796.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	152.50'	0.094 af	**31.00'W x 103.00'L x 5.00'H Field A** 0.366 af Overall - 0.133 af Embedded = 0.234 af x 40.0% Voids
#2A	153.00'	0.106 af	**ADS N-12 42"** x 25 Inside #1 Inside= 41.1"W x 41.1"H => 9.20 sf x 20.00'L = 184.0 cf Outside= 48.0"W x 48.0"H => 11.56 sf x 20.00'L = 231.1 cf 25 Chambers in 5 Rows
		0.199 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	152.50'	**1.020 in/hr Exfiltration over Surface area**
#2	Primary	154.25'	**18.0" Round Culvert** L= 12.0' Ke= 0.500 Inlet / Outlet Invert= 154.25' / 154.25' S= 0.0000 '/' Cc= 0.900 n= 0.011, Flow Area= 1.77 sf

Discarded OutFlow Max=0.08 cfs @ 6.40 hrs HW=152.55' (Free Discharge)
↑**1=Exfiltration** (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=8.95 cfs @ 12.19 hrs HW=156.41' (Free Discharge)
↑**2=Culvert** (Barrel Controls 8.95 cfs @ 5.07 fps)

Pond 4P: Underground System - Chamber Wizard Field A

Chamber Model = ADS N-12 42" (ADS N-12® Pipe)
Inside= 41.1"W x 41.1"H => 9.20 sf x 20.00'L = 184.0 cf
Outside= 48.0"W x 48.0"H => 11.56 sf x 20.00'L = 231.1 cf

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

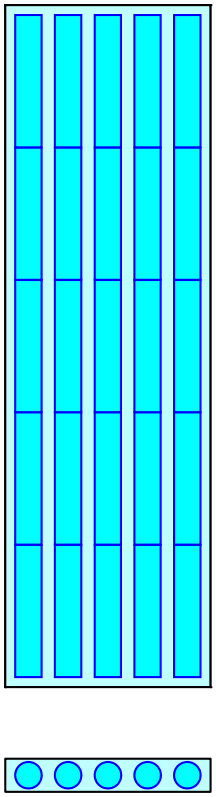
5 Chambers/Row x 20.00' Long = 100.00' Row Length +18.0" End Stone x 2 = 103.00' Base Length
5 Rows x 48.0" Wide + 24.0" Spacing x 4 + 18.0" Side Stone x 2 = 31.00' Base Width
6.0" Stone Base + 48.0" Chamber Height + 6.0" Stone Cover = 5.00' Field Height

25 Chambers x 184.0 cf = 4,600.0 cf Chamber Storage
25 Chambers x 231.1 cf = 5,778.2 cf Displacement

15,960.4 cf Field - 5,778.2 cf Chambers = 10,182.2 cf Stone x 40.0% Voids = 4,072.9 cf Stone Storage

Chamber Storage + Stone Storage = 8,672.9 cf = 0.199 af
Overall Storage Efficiency = 54.3%
Overall System Size = 103.00' x 31.00' x 5.00'

25 Chambers
591.1 cy Field
377.1 cy Stone



Stage-Area-Storage for Pond 4P: Underground System

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
152.50	**0.073**	0.000	153.02	0.073	0.015
152.51	0.073	0.000	153.03	0.073	0.016
152.52	0.073	0.001	153.04	0.073	0.016
152.53	0.073	0.001	153.05	0.073	0.016
152.54	0.073	0.001	153.06	0.073	0.016
152.55	0.073	0.001	153.07	0.073	0.017
152.56	0.073	0.002	153.08	0.073	0.017
152.57	0.073	0.002	153.09	0.073	0.017
152.58	0.073	0.002	153.10	0.073	0.017
152.59	0.073	0.003	153.11	0.073	0.017
152.60	0.073	0.003	153.12	0.073	0.018
152.61	0.073	0.003	153.13	0.073	0.018
152.62	0.073	0.004	153.14	0.073	0.018
152.63	0.073	0.004	153.15	0.073	0.018
152.64	0.073	0.004	153.16	0.073	0.019
152.65	0.073	0.004	153.17	0.073	0.019
152.66	0.073	0.005	153.18	0.073	0.019
152.67	0.073	0.005	153.19	0.073	0.019
152.68	0.073	0.005	153.20	0.073	0.020
152.69	0.073	0.006	153.21	0.073	0.020
152.70	0.073	0.006	153.22	0.073	0.020
152.71	0.073	0.006	153.23	0.073	0.020
152.72	0.073	0.006	153.24	0.073	0.020
152.73	0.073	0.007	153.25	0.073	0.021
152.74	0.073	0.007	153.26	0.073	0.021
152.75	0.073	0.007	153.27	0.073	0.021
152.76	0.073	0.008	153.28	0.073	0.021
152.77	0.073	0.008	153.29	0.073	0.021
152.78	0.073	0.008	153.30	0.073	0.022
152.79	0.073	0.009	153.31	0.073	0.022
152.80	0.073	0.009	153.32	0.073	0.022
152.81	0.073	0.009	153.33	0.073	0.022
152.82	0.073	0.009	153.34	0.073	0.023
152.83	0.073	0.010	153.35	0.073	0.023
152.84	0.073	0.010	153.36	0.073	0.023
152.85	0.073	0.010	153.37	0.073	0.024
152.86	0.073	0.011	153.38	0.073	0.024
152.87	0.073	0.011	153.39	0.073	0.024
152.88	0.073	0.011	153.40	0.073	0.025
152.89	0.073	0.011	153.41	0.073	0.025
152.90	0.073	0.012	153.42	0.073	0.025
152.91	0.073	0.012	153.43	0.073	0.026
152.92	0.073	0.012	153.44	0.073	0.026
152.93	0.073	0.013	153.45	0.073	0.026
152.94	0.073	0.013	153.46	0.073	0.027
152.95	0.073	0.013	153.47	0.073	0.027
152.96	0.073	0.013	153.48	0.073	0.027
152.97	0.073	0.014	153.49	0.073	0.028
152.98	0.073	0.014	153.50	0.073	0.028
152.99	0.073	0.014	153.51	0.073	0.029
153.00	0.073	0.015	153.52	0.073	0.029
153.01	0.073	0.015	153.53	0.073	0.029

Stage-Area-Storage for Pond 4P: Underground System (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
153.54	0.073	0.030	154.06	0.073	0.052
153.55	0.073	0.030	154.07	0.073	0.053
153.56	0.073	0.030	154.08	0.073	0.053
153.57	0.073	0.031	154.09	0.073	0.054
153.58	0.073	0.031	154.10	0.073	0.054
153.59	0.073	0.032	154.11	0.073	0.055
153.60	0.073	0.032	154.12	0.073	0.055
153.61	0.073	0.032	154.13	0.073	0.056
153.62	0.073	0.033	154.14	0.073	0.056
153.63	0.073	0.033	154.15	0.073	0.057
153.64	0.073	0.034	154.16	0.073	0.057
153.65	0.073	0.034	154.17	0.073	0.058
153.66	0.073	0.034	154.18	0.073	0.058
153.67	0.073	0.035	154.19	0.073	0.059
153.68	0.073	0.035	154.20	0.073	0.059
153.69	0.073	0.036	154.21	0.073	0.060
153.70	0.073	0.036	154.22	0.073	0.060
153.71	0.073	0.037	154.23	0.073	0.060
153.72	0.073	0.037	154.24	0.073	0.061
153.73	0.073	0.037	154.25	0.073	0.061
153.74	0.073	0.038	154.26	0.073	0.062
153.75	0.073	0.038	154.27	0.073	0.062
153.76	0.073	0.039	154.28	0.073	0.063
153.77	0.073	0.039	154.29	0.073	0.063
153.78	0.073	0.040	154.30	0.073	0.064
153.79	0.073	0.040	154.31	0.073	0.064
153.80	0.073	0.040	154.32	0.073	0.065
153.81	0.073	0.041	154.33	0.073	0.065
153.82	0.073	0.041	154.34	0.073	0.066
153.83	0.073	0.042	154.35	0.073	0.066
153.84	0.073	0.042	154.36	0.073	0.067
153.85	0.073	0.043	154.37	0.073	0.067
153.86	0.073	0.043	154.38	0.073	0.068
153.87	0.073	0.044	154.39	0.073	0.068
153.88	0.073	0.044	154.40	0.073	0.069
153.89	0.073	0.044	154.41	0.073	0.069
153.90	0.073	0.045	154.42	0.073	0.070
153.91	0.073	0.045	154.43	0.073	0.070
153.92	0.073	0.046	154.44	0.073	0.071
153.93	0.073	0.046	154.45	0.073	0.071
153.94	0.073	0.047	154.46	0.073	0.072
153.95	0.073	0.047	154.47	0.073	0.072
153.96	0.073	0.048	154.48	0.073	0.073
153.97	0.073	0.048	154.49	0.073	0.073
153.98	0.073	0.049	154.50	0.073	0.074
153.99	0.073	0.049	154.51	0.073	0.074
154.00	0.073	0.049	154.52	0.073	0.075
154.01	0.073	0.050	154.53	0.073	0.075
154.02	0.073	0.050	154.54	0.073	0.076
154.03	0.073	0.051	154.55	0.073	0.076
154.04	0.073	0.051	154.56	0.073	0.077
154.05	0.073	0.052	154.57	0.073	0.077

Stage-Area-Storage for Pond 4P: Underground System (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
154.58	0.073	0.078	155.10	0.073	0.105
154.59	0.073	0.078	155.11	0.073	0.105
154.60	0.073	0.079	155.12	0.073	0.106
154.61	0.073	0.079	155.13	0.073	0.106
154.62	0.073	0.080	155.14	0.073	0.107
154.63	0.073	0.081	155.15	0.073	0.107
154.64	0.073	0.081	155.16	0.073	0.108
154.65	0.073	0.082	155.17	0.073	0.108
154.66	0.073	0.082	155.18	0.073	0.109
154.67	0.073	0.083	155.19	0.073	0.109
154.68	0.073	0.083	155.20	0.073	0.110
154.69	0.073	0.084	155.21	0.073	0.110
154.70	0.073	0.084	155.22	0.073	0.111
154.71	0.073	0.085	155.23	0.073	0.111
154.72	0.073	0.085	155.24	0.073	0.112
154.73	0.073	0.086	155.25	0.073	0.112
154.74	0.073	0.086	155.26	0.073	0.113
154.75	0.073	0.087	155.27	0.073	0.114
154.76	0.073	0.087	155.28	0.073	0.114
154.77	0.073	0.088	155.29	0.073	0.115
154.78	0.073	0.088	155.30	0.073	0.115
154.79	0.073	0.089	155.31	0.073	0.116
154.80	0.073	0.089	155.32	0.073	0.116
154.81	0.073	0.090	155.33	0.073	0.117
154.82	0.073	0.090	155.34	0.073	0.117
154.83	0.073	0.091	155.35	0.073	0.118
154.84	0.073	0.091	155.36	0.073	0.118
154.85	0.073	0.092	155.37	0.073	0.119
154.86	0.073	0.092	155.38	0.073	0.119
154.87	0.073	0.093	155.39	0.073	0.120
154.88	0.073	0.093	155.40	0.073	0.120
154.89	0.073	0.094	155.41	0.073	0.121
154.90	0.073	0.094	155.42	0.073	0.121
154.91	0.073	0.095	155.43	0.073	0.122
154.92	0.073	0.095	155.44	0.073	0.122
154.93	0.073	0.096	155.45	0.073	0.123
154.94	0.073	0.096	155.46	0.073	0.123
154.95	0.073	0.097	155.47	0.073	0.124
154.96	0.073	0.098	155.48	0.073	0.124
154.97	0.073	0.098	155.49	0.073	0.125
154.98	0.073	0.099	155.50	0.073	0.125
154.99	0.073	0.099	155.51	0.073	0.126
155.00	0.073	0.100	155.52	0.073	0.126
155.01	0.073	0.100	155.53	0.073	0.127
155.02	0.073	0.101	155.54	0.073	0.127
155.03	0.073	0.101	155.55	0.073	0.128
155.04	0.073	0.102	155.56	0.073	0.128
155.05	0.073	0.102	155.57	0.073	0.129
155.06	0.073	0.103	155.58	0.073	0.129
155.07	0.073	0.103	155.59	0.073	0.130
155.08	0.073	0.104	155.60	0.073	0.130
155.09	0.073	0.104	155.61	0.073	0.131

Stage-Area-Storage for Pond 4P: Underground System (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)	Elevation (feet)	Surface (acres)	Storage (acre-feet)
155.62	0.073	0.131	156.14	0.073	0.156
155.63	0.073	0.132	156.15	0.073	0.156
155.64	0.073	0.132	156.16	0.073	0.157
155.65	0.073	0.133	156.17	0.073	0.157
155.66	0.073	0.133	156.18	0.073	0.158
155.67	0.073	0.134	156.19	0.073	0.158
155.68	0.073	0.134	156.20	0.073	0.159
155.69	0.073	0.135	156.21	0.073	0.159
155.70	0.073	0.135	156.22	0.073	0.160
155.71	0.073	0.136	156.23	0.073	0.160
155.72	0.073	0.136	156.24	0.073	0.160
155.73	0.073	0.137	156.25	0.073	0.161
155.74	0.073	0.137	156.26	0.073	0.161
155.75	0.073	0.138	156.27	0.073	0.162
155.76	0.073	0.138	156.28	0.073	0.162
155.77	0.073	0.139	156.29	0.073	0.163
155.78	0.073	0.139	156.30	0.073	0.163
155.79	0.073	0.140	156.31	0.073	0.163
155.80	0.073	0.140	156.32	0.073	0.164
155.81	0.073	0.141	156.33	0.073	0.164
155.82	0.073	0.141	156.34	0.073	0.165
155.83	0.073	0.142	156.35	0.073	0.165
155.84	0.073	0.142	156.36	0.073	0.165
155.85	0.073	0.143	156.37	0.073	0.166
155.86	0.073	0.143	156.38	0.073	0.166
155.87	0.073	0.143	156.39	0.073	0.167
155.88	0.073	0.144	156.40	0.073	0.167
155.89	0.073	0.144	156.41	0.073	0.167
155.90	0.073	0.145	156.42	0.073	0.168
155.91	0.073	0.145	156.43	0.073	0.168
155.92	0.073	0.146	156.44	0.073	0.169
155.93	0.073	0.146	156.45	0.073	0.169
155.94	0.073	0.147	156.46	0.073	0.169
155.95	0.073	0.147	156.47	0.073	0.170
155.96	0.073	0.148	156.48	0.073	0.170
155.97	0.073	0.148	156.49	0.073	0.171
155.98	0.073	0.149	156.50	0.073	0.171
155.99	0.073	0.149	156.51	0.073	0.171
156.00	0.073	0.150	156.52	0.073	0.172
156.01	0.073	0.150	156.53	0.073	0.172
156.02	0.073	0.151	156.54	0.073	0.172
156.03	0.073	0.151	156.55	0.073	0.173
156.04	0.073	0.151	156.56	0.073	0.173
156.05	0.073	0.152	156.57	0.073	0.173
156.06	0.073	0.152	156.58	0.073	0.174
156.07	0.073	0.153	156.59	0.073	0.174
156.08	0.073	0.153	156.60	0.073	0.174
156.09	0.073	0.154	156.61	0.073	0.175
156.10	0.073	0.154	156.62	0.073	0.175
156.11	0.073	0.155	156.63	0.073	0.175
156.12	0.073	0.155	156.64	0.073	0.176
156.13	0.073	0.156	156.65	0.073	0.176

Stage-Area-Storage for Pond 4P: Underground System (continued)

Elevation (feet)	Surface (acres)	Storage (acre-feet)
156.66	0.073	0.176
156.67	0.073	0.177
156.68	0.073	0.177
156.69	0.073	0.177
156.70	0.073	0.177
156.71	0.073	0.178
156.72	0.073	0.178
156.73	0.073	0.178
156.74	0.073	0.178
156.75	0.073	0.179
156.76	0.073	0.179
156.77	0.073	0.179
156.78	0.073	0.179
156.79	0.073	0.179
156.80	0.073	0.180
156.81	0.073	0.180
156.82	0.073	0.180
156.83	0.073	0.180
156.84	0.073	0.180
156.85	0.073	0.181
156.86	0.073	0.181
156.87	0.073	0.181
156.88	0.073	0.181
156.89	0.073	0.182
156.90	0.073	0.182
156.91	0.073	0.182
156.92	0.073	0.182
156.93	0.073	0.183
156.94	0.073	0.183
156.95	0.073	0.183
156.96	0.073	0.183
156.97	0.073	0.184
156.98	0.073	0.184
156.99	0.073	0.184
157.00	0.073	0.184
157.01	0.073	0.185
157.02	0.073	0.185
157.03	0.073	0.185
157.04	0.073	0.186
157.05	0.073	0.186
157.06	0.073	0.186
157.07	0.073	0.187
157.08	0.073	0.187
157.09	0.073	0.187
157.10	0.073	0.187
157.11	0.073	0.188
157.12	0.073	0.188
157.13	0.073	0.188
157.14	0.073	0.189
157.15	0.073	0.189
157.16	0.073	0.189
157.17	0.073	0.189
157.18	0.073	0.190
157.19	0.073	0.190
157.20	0.073	0.190
157.21	0.073	0.191
157.22	0.073	0.191
157.23	0.073	0.191
157.24	0.073	0.192
157.25	0.073	0.192
157.26	0.073	0.192
157.27	0.073	0.192
157.28	0.073	0.193
157.29	0.073	0.193
157.30	0.073	0.193
157.31	0.073	0.194
157.32	0.073	0.194
157.33	0.073	0.194
157.34	0.073	0.194
157.35	0.073	0.195
157.36	0.073	0.195
157.37	0.073	0.195
157.38	0.073	0.196
157.39	0.073	0.196
157.40	0.073	0.196
157.41	0.073	0.196
157.42	0.073	0.197
157.43	0.073	0.197
157.44	0.073	0.197
157.45	0.073	0.198
157.46	0.073	0.198
157.47	0.073	0.198
157.48	0.073	0.199
157.49	0.073	0.199
157.50	0.073	**0.199**

Summary for Pond 5P: Rain Garden

Inflow Area = 0.201 ac, 6.63% Impervious, Inflow Depth = 3.87" for 100-yr event
Inflow = 0.89 cfs @ 12.13 hrs, Volume= 0.065 af
Outflow = 0.89 cfs @ 12.13 hrs, Volume= 0.065 af, Atten= 0%, Lag= 0.1 min
Primary = 0.89 cfs @ 12.13 hrs, Volume= 0.065 af
Routed to Pond 6P : 24" CPP Perf

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 157.01' @ 12.13 hrs Surf.Area= 447 sf Storage= 3 cf

Plug-Flow detention time= 0.1 min calculated for 0.065 af (100% of inflow)
Center-of-Mass det. time= 0.1 min (848.8 - 848.7)

Volume	Invert	Avail.Storage	Storage Description
#1	157.00'	563 cf	**Custom Stage Data (Prismatic)**Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
157.00	445	0	0
158.00	681	563	563

Device	Routing	Invert	Outlet Devices
#1	Primary	154.80'	**6.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.32 cfs @ 12.13 hrs HW=157.01' (Free Discharge)
↳**1=Orifice/Grate** (Orifice Controls 1.32 cfs @ 6.73 fps)

Stage-Area-Storage for Pond 5P: Rain Garden

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)	Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
157.00	445	0	157.52	568	263
157.01	447	4	157.53	570	269
157.02	450	9	157.54	572	275
157.03	452	13	157.55	575	280
157.04	454	18	157.56	577	286
157.05	457	23	157.57	580	292
157.06	459	27	157.58	582	298
157.07	462	32	157.59	584	304
157.08	464	36	157.60	587	309
157.09	466	41	157.61	589	315
157.10	469	46	157.62	591	321
157.11	471	50	157.63	594	327
157.12	473	55	157.64	596	333
157.13	476	60	157.65	598	339
157.14	478	65	157.66	601	345
157.15	480	69	157.67	603	351
157.16	483	74	157.68	605	357
157.17	485	79	157.69	608	363
157.18	487	84	157.70	610	369
157.19	490	89	157.71	613	375
157.20	492	94	157.72	615	382
157.21	495	99	157.73	617	388
157.22	497	104	157.74	620	394
157.23	499	109	157.75	622	400
157.24	502	114	157.76	624	406
157.25	504	119	157.77	627	413
157.26	506	124	157.78	629	419
157.27	509	129	157.79	631	425
157.28	511	134	157.80	634	432
157.29	513	139	157.81	636	438
157.30	516	144	157.82	639	444
157.31	518	149	157.83	641	451
157.32	521	154	157.84	643	457
157.33	523	160	157.85	646	464
157.34	525	165	157.86	648	470
157.35	528	170	157.87	650	476
157.36	530	175	157.88	653	483
157.37	532	181	157.89	655	490
157.38	535	186	157.90	657	496
157.39	537	191	157.91	660	503
157.40	539	197	157.92	662	509
157.41	542	202	157.93	664	516
157.42	544	208	157.94	667	523
157.43	546	213	157.95	669	529
157.44	549	219	157.96	672	536
157.45	551	224	157.97	674	543
157.46	554	230	157.98	676	549
157.47	556	235	157.99	679	556
157.48	558	241	158.00	**681**	**563**
157.49	561	246			
157.50	563	252			
157.51	565	258			

Summary for Pond 6P: 24" CPP Perf

Inflow Area = 0.413 ac, 9.90% Impervious, Inflow Depth = 4.05" for 100-yr event
Inflow = 1.91 cfs @ 12.13 hrs, Volume= 0.139 af
Outflow = 1.88 cfs @ 12.15 hrs, Volume= 0.139 af, Atten= 2%, Lag= 0.8 min
Primary = 1.88 cfs @ 12.15 hrs, Volume= 0.139 af
Routed to Reach 10R : Centre Street

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
Peak Elev= 154.65' @ 12.15 hrs Surf.Area= 0.007 ac Storage= 0.003 af

Plug-Flow detention time= 6.7 min calculated for 0.139 af (99% of inflow)
Center-of-Mass det. time= 3.9 min (849.0 - 845.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	153.67'	0.006 af	**4.00'W x 77.67'L x 3.00'H Field A** 0.021 af Overall - 0.007 af Embedded = 0.015 af x 40.0% Voids
#2A	154.00'	0.005 af	**ADS N-12 24"** x 4 Inside #1 Inside= 23.8"W x 23.8"H => 3.10 sf x 20.00'L = 62.0 cf Outside= 28.0"W x 28.0"H => 3.92 sf x 20.00'L = 78.4 cf Row Length Adjustment= -4.00' x 3.10 sf x 1 rows
		0.011 af	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Primary	153.90'	**12.0" Vert. Orifice/Grate** C= 0.600 Limited to weir flow at low heads

Primary OutFlow Max=1.86 cfs @ 12.15 hrs HW=154.65' (Free Discharge)
1=Orifice/Grate (Orifice Controls 1.86 cfs @ 2.94 fps)

Pond 6P: 24" CPP Perf - Chamber Wizard Field A

Chamber Model = ADS N-12 24" (ADS N-12® Pipe)
Inside= 23.8"W x 23.8"H => 3.10 sf x 20.00'L = 62.0 cf
Outside= 28.0"W x 28.0"H => 3.92 sf x 20.00'L = 78.4 cf
Row Length Adjustment= -4.00' x 3.10 sf x 1 rows

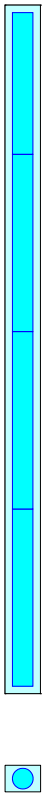
4 Chambers/Row x 20.00' Long -4.00' Row Adjustment = 76.00' Row Length +10.0" End Stone x 2 = 77.67' Base Length
1 Rows x 28.0" Wide + 10.0" Side Stone x 2 = 4.00' Base Width
4.0" Stone Base + 28.0" Chamber Height + 4.0" Stone Cover = 3.00' Field Height

4 Chambers x 62.0 cf -4.00' Row Adjustment x 3.10 sf x 1 Rows = 235.6 cf Chamber Storage
4 Chambers x 78.4 cf -4.00' Row Adjustment x 3.92 sf x 1 Rows = 297.9 cf Displacement

932.0 cf Field - 297.9 cf Chambers = 634.1 cf Stone x 40.0% Voids = 253.7 cf Stone Storage

Chamber Storage + Stone Storage = 489.3 cf = 0.011 af
Overall Storage Efficiency = 52.5%
Overall System Size = 77.67' x 4.00' x 3.00'

4 Chambers
34.5 cy Field
23.5 cy Stone



Stage-Area-Storage for Pond 6P: 24" CPP Perf

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
153.67	0.000	154.19	0.001	154.71	0.003
153.68	0.000	154.20	0.001	154.72	0.003
153.69	0.000	154.21	0.001	154.73	0.004
153.70	0.000	154.22	0.001	154.74	0.004
153.71	0.000	154.23	0.002	154.75	0.004
153.72	0.000	154.24	0.002	154.76	0.004
153.73	0.000	154.25	0.002	154.77	0.004
153.74	0.000	154.26	0.002	154.78	0.004
153.75	0.000	154.27	0.002	154.79	0.004
153.76	0.000	154.28	0.002	154.80	0.004
153.77	0.000	154.29	0.002	154.81	0.004
153.78	0.000	154.30	0.002	154.82	0.004
153.79	0.000	154.31	0.002	154.83	0.004
153.80	0.000	154.32	0.002	154.84	0.004
153.81	0.000	154.33	0.002	154.85	0.004
153.82	0.000	154.34	0.002	154.86	0.004
153.83	0.000	154.35	0.002	154.87	0.004
153.84	0.000	154.36	0.002	154.88	0.004
153.85	0.001	154.37	0.002	154.89	0.004
153.86	0.001	154.38	0.002	154.90	0.004
153.87	0.001	154.39	0.002	154.91	0.004
153.88	0.001	154.40	0.002	154.92	0.004
153.89	0.001	154.41	0.002	154.93	0.004
153.90	0.001	154.42	0.002	154.94	0.005
153.91	0.001	154.43	0.002	154.95	0.005
153.92	0.001	154.44	0.002	154.96	0.005
153.93	0.001	154.45	0.002	154.97	0.005
153.94	0.001	154.46	0.002	154.98	0.005
153.95	0.001	154.47	0.002	154.99	0.005
153.96	0.001	154.48	0.002	155.00	0.005
153.97	0.001	154.49	0.002	155.01	0.005
153.98	0.001	154.50	0.003	155.02	0.005
153.99	0.001	154.51	0.003	155.03	0.005
154.00	0.001	154.52	0.003	155.04	0.005
154.01	0.001	154.53	0.003	155.05	0.005
154.02	0.001	154.54	0.003	155.06	0.005
154.03	0.001	154.55	0.003	155.07	0.005
154.04	0.001	154.56	0.003	155.08	0.005
154.05	0.001	154.57	0.003	155.09	0.005
154.06	0.001	154.58	0.003	155.10	0.005
154.07	0.001	154.59	0.003	155.11	0.005
154.08	0.001	154.60	0.003	155.12	0.005
154.09	0.001	154.61	0.003	155.13	0.005
154.10	0.001	154.62	0.003	155.14	0.005
154.11	0.001	154.63	0.003	155.15	0.006
154.12	0.001	154.64	0.003	155.16	0.006
154.13	0.001	154.65	0.003	155.17	0.006
154.14	0.001	154.66	0.003	155.18	0.006
154.15	0.001	154.67	0.003	155.19	0.006
154.16	0.001	154.68	0.003	155.20	0.006
154.17	0.001	154.69	0.003	155.21	0.006
154.18	0.001	154.70	0.003	155.22	0.006

Stage-Area-Storage for Pond 6P: 24" CPP Perf (continued)

Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)	Elevation (feet)	Storage (acre-feet)
155.23	0.006	155.75	0.008	156.27	0.010
155.24	0.006	155.76	0.008	156.28	0.010
155.25	0.006	155.77	0.008	156.29	0.010
155.26	0.006	155.78	0.008	156.30	0.010
155.27	0.006	155.79	0.009	156.31	0.010
155.28	0.006	155.80	0.009	156.32	0.010
155.29	0.006	155.81	0.009	156.33	0.010
155.30	0.006	155.82	0.009	156.34	0.010
155.31	0.006	155.83	0.009	156.35	0.010
155.32	0.006	155.84	0.009	156.36	0.010
155.33	0.006	155.85	0.009	156.37	0.010
155.34	0.006	155.86	0.009	156.38	0.010
155.35	0.006	155.87	0.009	156.39	0.010
155.36	0.007	155.88	0.009	156.40	0.010
155.37	0.007	155.89	0.009	156.41	0.010
155.38	0.007	155.90	0.009	156.42	0.011
155.39	0.007	155.91	0.009	156.43	0.011
155.40	0.007	155.92	0.009	156.44	0.011
155.41	0.007	155.93	0.009	156.45	0.011
155.42	0.007	155.94	0.009	156.46	0.011
155.43	0.007	155.95	0.009	156.47	0.011
155.44	0.007	155.96	0.009	156.48	0.011
155.45	0.007	155.97	0.009	156.49	0.011
155.46	0.007	155.98	0.009	156.50	0.011
155.47	0.007	155.99	0.009	156.51	0.011
155.48	0.007	156.00	0.009	156.52	0.011
155.49	0.007	156.01	0.009	156.53	0.011
155.50	0.007	156.02	0.009	156.54	0.011
155.51	0.007	156.03	0.009	156.55	0.011
155.52	0.007	156.04	0.009	156.56	0.011
155.53	0.007	156.05	0.010	156.57	0.011
155.54	0.007	156.06	0.010	156.58	0.011
155.55	0.007	156.07	0.010	156.59	0.011
155.56	0.007	156.08	0.010	156.60	0.011
155.57	0.008	156.09	0.010	156.61	0.011
155.58	0.008	156.10	0.010	156.62	0.011
155.59	0.008	156.11	0.010	156.63	0.011
155.60	0.008	156.12	0.010	156.64	0.011
155.61	0.008	156.13	0.010	156.65	0.011
155.62	0.008	156.14	0.010	156.66	0.011
155.63	0.008	156.15	0.010	156.67	**0.011**
155.64	0.008	156.16	0.010		
155.65	0.008	156.17	0.010		
155.66	0.008	156.18	0.010		
155.67	0.008	156.19	0.010		
155.68	0.008	156.20	0.010		
155.69	0.008	156.21	0.010		
155.70	0.008	156.22	0.010		
155.71	0.008	156.23	0.010		
155.72	0.008	156.24	0.010		
155.73	0.008	156.25	0.010		
155.74	0.008	156.26	0.010		