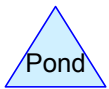
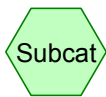
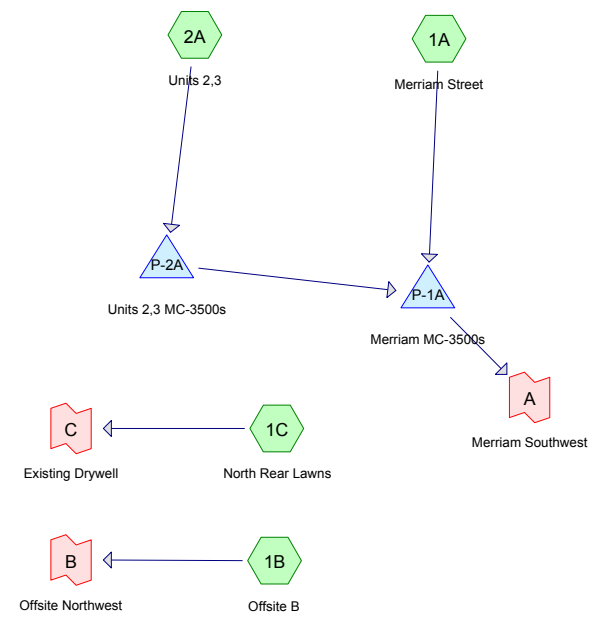
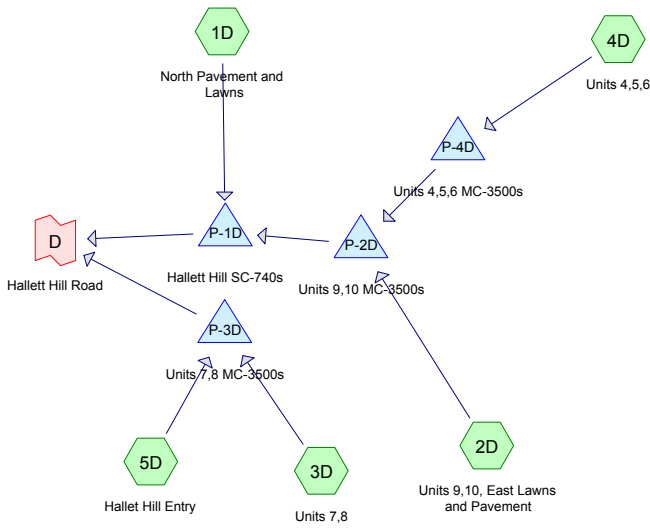




Legend

Symbol	Description	Symbol	Description	Symbol	Description	Symbol	Description	Symbol	Description
	DESIGN POINT		POND		NARRAGNSETT-HOLLIS-ROCK OUTCROP COMPLEX 15-25% SLOPES		DRAINAGE AREA BOUNDARY		TIME OF CONCENTRATION FLOW LINE
	DRAINAGE AREA		NRCS SOIL CLASS NARRAGNSETT SILT LOAM 3-8% SLOPES		NARRAGNSETT-HOLLIS-ROCK OUTCROP COMPLEX 3-15% SLOPES		SOIL TYPE AREA BOUNDARY		



Routing Diagram for Silver Hill - PR - Cornell Storms
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Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
1.829	39	>75% Grass cover, Good, HSG A (1A, 1B, 1C, 1D, 2D, 5D)
0.525	98	Paved parking, HSG A (1A, 1C, 1D, 2D, 5D)
0.553	98	Roofs, HSG A (1A, 2A, 2D, 3D, 4D)
0.030	98	Unconnected pavement, HSG A (1A, 2D)
2.938	61	TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
2.938	HSG A	1A, 1B, 1C, 1D, 2A, 2D, 3D, 4D, 5D
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.000	Other	
2.938		TOTAL AREA

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 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 1A: Merriam Street	Runoff Area=36,966 sf 35.72% Impervious Runoff Depth>0.41" Tc=5.8 min CN=60 Runoff=0.24 cfs 0.029 af
Subcatchment 1B: Offsite B	Runoff Area=15,768 sf 0.00% Impervious Runoff Depth>0.00" Tc=6.3 min CN=39 Runoff=0.00 cfs 0.000 af
Subcatchment 1C: North Rear Lawns	Runoff Area=9,307 sf 0.19% Impervious Runoff Depth>0.00" Tc=5.0 min CN=39 Runoff=0.00 cfs 0.000 af
Subcatchment 1D: North Pavement and	Runoff Area=5,352 sf 48.97% Impervious Runoff Depth>0.73" Tc=5.0 min CN=68 Runoff=0.09 cfs 0.007 af
Subcatchment 2A: Units 2,3	Runoff Area=4,362 sf 100.00% Impervious Runoff Depth>2.97" Tc=5.0 min CN=98 Runoff=0.32 cfs 0.025 af
Subcatchment 2D: Units 9,10, East Lawns	Runoff Area=37,581 sf 35.30% Impervious Runoff Depth>0.41" Tc=5.0 min CN=60 Runoff=0.25 cfs 0.029 af
Subcatchment 3D: Units 7,8	Runoff Area=4,277 sf 100.00% Impervious Runoff Depth>2.97" Tc=5.0 min CN=98 Runoff=0.32 cfs 0.024 af
Subcatchment 4D: Units 4,5,6	Runoff Area=8,092 sf 100.00% Impervious Runoff Depth>2.97" Tc=5.0 min CN=98 Runoff=0.60 cfs 0.046 af
Subcatchment 5D: Hallet Hill Entry	Runoff Area=6,267 sf 39.08% Impervious Runoff Depth>0.48" Tc=5.0 min CN=62 Runoff=0.06 cfs 0.006 af
Pond P-1A: Merriam MC-3500s	Peak Elev=157.40' Storage=203 cf Inflow=0.24 cfs 0.029 af Outflow=0.07 cfs 0.029 af
Pond P-1D: Hallett Hill SC-740s	Peak Elev=149.73' Storage=24 cf Inflow=0.09 cfs 0.007 af Discarded=0.05 cfs 0.007 af Primary=0.00 cfs 0.000 af Outflow=0.05 cfs 0.007 af
Pond P-2A: Units 2,3 MC-3500s	Peak Elev=159.50' Storage=402 cf Inflow=0.32 cfs 0.025 af Discarded=0.03 cfs 0.025 af Primary=0.00 cfs 0.000 af Outflow=0.03 cfs 0.025 af
Pond P-2D: Units 9,10 MC-3500s	Peak Elev=152.70' Storage=26 cf Inflow=0.25 cfs 0.029 af Discarded=0.23 cfs 0.029 af Primary=0.00 cfs 0.000 af Outflow=0.23 cfs 0.029 af
Pond P-3D: Units 7,8 MC-3500s	Peak Elev=147.72' Storage=180 cf Inflow=0.37 cfs 0.030 af Discarded=0.12 cfs 0.030 af Primary=0.00 cfs 0.000 af Outflow=0.12 cfs 0.030 af
Pond P-4D: Units 4,5,6 MC-3500s	Peak Elev=158.74' Storage=1,040 cf Inflow=0.60 cfs 0.046 af Discarded=0.02 cfs 0.031 af Primary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.031 af
Link A: Merriam Southwest	Primary=0.00 cfs 0.000 af

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Link B: Offsite Northwest

Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Link C: Existing Drywell

Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Link D: Hallett Hill Road

Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Total Runoff Area = 2.938 ac Runoff Volume = 0.166 af Average Runoff Depth = 0.68"
62.27% Pervious = 1.829 ac 37.73% Impervious = 1.109 ac

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Summary for Subcatchment 1A: Merriam Street

Runoff = 0.24 cfs @ 12.12 hrs, Volume= 0.029 af, Depth> 0.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Cornell Rainfall=3.20"

Area (sf)	CN	Description
23,763	39	>75% Grass cover, Good, HSG A
9,876	98	Paved parking, HSG A
2,602	98	Roofs, HSG A
725	98	Unconnected pavement, HSG A
0	32	Woods/grass comb., Good, HSG A
36,966	60	Weighted Average
23,763		64.28% Pervious Area
13,203		35.72% Impervious Area
725		5.49% Unconnected

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

Summary for Subcatchment 1B: Offsite B

Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.000 af, Depth> 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Cornell Rainfall=3.20"

Area (sf)	CN	Description
15,768	39	>75% Grass cover, Good, HSG A
15,768		100.00% Pervious Area

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

Summary for Subcatchment 1C: North Rear Lawns

Runoff = 0.00 cfs @ 24.00 hrs, Volume= 0.000 af, Depth> 0.00"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Cornell Rainfall=3.20"

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Area (sf)	CN	Description
9,289	39	>75% Grass cover, Good, HSG A
18	98	Paved parking, HSG A
0	32	Woods/grass comb., Good, HSG A
9,307	39	Weighted Average
9,289		99.81% Pervious Area
18		0.19% Impervious Area

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

Summary for Subcatchment 1D: North Pavement and Lawns

Runoff = 0.09 cfs @ 12.09 hrs, Volume= 0.007 af, Depth> 0.73"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Cornell Rainfall=3.20"

Area (sf)	CN	Description
2,731	39	>75% Grass cover, Good, HSG A
2,621	98	Paved parking, HSG A
0	32	Woods/grass comb., Good, HSG A
5,352	68	Weighted Average
2,731		51.03% Pervious Area
2,621		48.97% Impervious Area

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

Summary for Subcatchment 2A: Units 2,3

Runoff = 0.32 cfs @ 12.07 hrs, Volume= 0.025 af, Depth> 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Cornell Rainfall=3.20"

Area (sf)	CN	Description
4,362	98	Roofs, HSG A
4,362		100.00% Impervious Area

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

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Summary for Subcatchment 2D: Units 9,10, East Lawns and Pavement

Runoff = 0.25 cfs @ 12.11 hrs, Volume= 0.029 af, Depth> 0.41"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Cornell Rainfall=3.20"

Area (sf)	CN	Description
24,314	39	>75% Grass cover, Good, HSG A
7,925	98	Paved parking, HSG A
4,747	98	Roofs, HSG A
595	98	Unconnected pavement, HSG A
0	32	Woods/grass comb., Good, HSG A
37,581	60	Weighted Average
24,314		64.70% Pervious Area
13,267		35.30% Impervious Area
595		4.48% Unconnected

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

Summary for Subcatchment 3D: Units 7,8

Runoff = 0.32 cfs @ 12.07 hrs, Volume= 0.024 af, Depth> 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Cornell Rainfall=3.20"

Area (sf)	CN	Description
4,277	98	Roofs, HSG A
4,277		100.00% Impervious Area

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

Summary for Subcatchment 4D: Units 4,5,6

Runoff = 0.60 cfs @ 12.07 hrs, Volume= 0.046 af, Depth> 2.97"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Cornell Rainfall=3.20"

Area (sf)	CN	Description
8,092	98	Roofs, HSG A
8,092		100.00% Impervious Area

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

Summary for Subcatchment 5D: Hallet Hill Entry

Runoff = 0.06 cfs @ 12.10 hrs, Volume= 0.006 af, Depth> 0.48"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 2-Year Cornell Rainfall=3.20"

Area (sf)	CN	Description
3,818	39	>75% Grass cover, Good, HSG A
2,449	98	Paved parking, HSG A
0	32	Woods/grass comb., Good, HSG A
6,267	62	Weighted Average
3,818		60.92% Pervious Area
2,449		39.08% Impervious Area

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

Summary for Pond P-1A: Merriam MC-3500s

Inflow Area = 0.949 ac, 42.50% Impervious, Inflow Depth > 0.36" for 2-Year Cornell event
 Inflow = 0.24 cfs @ 12.12 hrs, Volume= 0.029 af
 Outflow = 0.07 cfs @ 12.10 hrs, Volume= 0.029 af, Atten= 70%, Lag= 0.0 min
 Discarded = 0.07 cfs @ 12.10 hrs, Volume= 0.029 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 157.40' @ 12.69 hrs Surf.Area= 1,273 sf Storage= 203 cf

Plug-Flow detention time= 20.9 min calculated for 0.029 af (100% of inflow)
 Center-of-Mass det. time= 19.0 min (938.0 - 919.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	157.00'	1,840 cf	22.75'W x 55.96'L x 5.50'H Field A 7,002 cf Overall - 2,403 cf Embedded = 4,599 cf x 40.0% Voids
#2A	157.75'	2,403 cf	ADS_StormTech MC-3500 c +Cap x 21 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap Cap Storage= +15.6 cf x 2 x 3 rows = 93.6 cf
#3	162.30'	2,291 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
		6,534 cf	Total Available Storage

Storage Group A created with Chamber Wizard

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
162.30	0	0	0
162.50	690	69	69
163.00	1,000	423	491
164.00	2,600	1,800	2,291

Device	Routing	Invert	Outlet Devices
#1	Discarded	157.00'	2.410 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.07 cfs @ 12.10 hrs HW=157.07' (Free Discharge)
 ↑**1=Exfiltration** (Exfiltration Controls 0.07 cfs)

Summary for Pond P-1D: Hallett Hill SC-740s

Inflow Area = 1.171 ac, 47.00% Impervious, Inflow Depth > 0.08" for 2-Year Cornell event
 Inflow = 0.09 cfs @ 12.09 hrs, Volume= 0.007 af
 Outflow = 0.05 cfs @ 12.03 hrs, Volume= 0.007 af, Atten= 47%, Lag= 0.0 min
 Discarded = 0.05 cfs @ 12.03 hrs, Volume= 0.007 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 149.73' @ 12.29 hrs Surf.Area= 262 sf Storage= 24 cf

Plug-Flow detention time= 2.9 min calculated for 0.007 af (100% of inflow)
 Center-of-Mass det. time= 2.6 min (884.0 - 881.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	149.50'	254 cf	11.00'W x 23.80'L x 3.50'H Field A 916 cf Overall - 281 cf Embedded = 635 cf x 40.0% Voids
#2A	150.00'	281 cf	ADS_StormTech SC-740 x 6 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 2 rows
		535 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	149.50'	8.270 in/hr Exfiltration over Surface area
#2	Primary	153.80'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 in 24.0" x 24.0" Grate Limited to weir flow at low heads

Discarded OutFlow Max=0.05 cfs @ 12.03 hrs HW=149.54' (Free Discharge)
 ↑**1=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=149.50' (Free Discharge)
 ↑**2=Orifice/Grate** (Controls 0.00 cfs)

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Summary for Pond P-2A: Units 2,3 MC-3500s

Inflow Area = 0.100 ac, 100.00% Impervious, Inflow Depth > 2.97" for 2-Year Cornell event
 Inflow = 0.32 cfs @ 12.07 hrs, Volume= 0.025 af
 Outflow = 0.03 cfs @ 11.31 hrs, Volume= 0.025 af, Atten= 92%, Lag= 0.0 min
 Discarded = 0.03 cfs @ 11.31 hrs, Volume= 0.025 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 159.50' @ 13.01 hrs Surf.Area= 457 sf Storage= 402 cf

Plug-Flow detention time= 117.4 min calculated for 0.025 af (100% of inflow)
 Center-of-Mass det. time= 116.4 min (871.4 - 755.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	158.00'	705 cf	22.75"W x 20.11"L x 5.50"H Field A 2,516 cf Overall - 753 cf Embedded = 1,763 cf x 40.0% Voids
#2A	158.75'	753 cf	ADS_StormTech MC-3500 c +Capx 6 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap Cap Storage= +15.6 cf x 2 x 3 rows = 93.6 cf
		1,458 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	158.00'	2.410 in/hr Exfiltration over Surface area
#2	Primary	165.80'	3.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.03 cfs @ 11.31 hrs HW=158.08' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=158.00' (Free Discharge)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond P-2D: Units 9,10 MC-3500s

Inflow Area = 1.049 ac, 46.77% Impervious, Inflow Depth > 0.34" for 2-Year Cornell event
 Inflow = 0.25 cfs @ 12.11 hrs, Volume= 0.029 af
 Outflow = 0.23 cfs @ 12.15 hrs, Volume= 0.029 af, Atten= 7%, Lag= 2.1 min
 Discarded = 0.23 cfs @ 12.15 hrs, Volume= 0.029 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 152.70' @ 12.15 hrs Surf.Area= 1,431 sf Storage= 26 cf

Plug-Flow detention time= 1.9 min calculated for 0.029 af (100% of inflow)
 Center-of-Mass det. time= 1.5 min (919.9 - 918.5)

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Volume	Invert	Avail.Storage	Storage Description
#1A	152.65'	2,067 cf	15.58'W x 91.81'L x 5.50'H Field A 7,869 cf Overall - 2,701 cf Embedded = 5,167 cf x 40.0% Voids
#2A	153.40'	2,701 cf	ADS_StormTech MC-3500 c +Cap x 24 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap Cap Storage= +15.6 cf x 2 x 2 rows = 62.4 cf
		4,768 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	152.65'	8.270 in/hr Exfiltration over Surface area
#2	Primary	157.20'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 in 24.0" x 24.0" Grate Limited to weir flow at low heads

Discarded OutFlow Max=0.27 cfs @ 12.15 hrs HW=152.70' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.27 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=152.65' (Free Discharge)

↑**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond P-3D: Units 7,8 MC-3500s

Inflow Area = 0.242 ac, 63.79% Impervious, Inflow Depth > 1.49" for 2-Year Cornell event
 Inflow = 0.37 cfs @ 12.08 hrs, Volume= 0.030 af
 Outflow = 0.12 cfs @ 11.91 hrs, Volume= 0.030 af, Atten= 68%, Lag= 0.0 min
 Discarded = 0.12 cfs @ 11.91 hrs, Volume= 0.030 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 147.72' @ 12.40 hrs Surf.Area= 621 sf Storage= 180 cf

Plug-Flow detention time= 7.3 min calculated for 0.030 af (100% of inflow)

Center-of-Mass det. time= 7.0 min (791.3 - 784.3)

Volume	Invert	Avail.Storage	Storage Description
#1A	147.00'	932 cf	22.75'W x 27.28'L x 5.50'H Field A 3,413 cf Overall - 1,083 cf Embedded = 2,330 cf x 40.0% Voids
#2A	147.75'	1,083 cf	ADS_StormTech MC-3500 c +Cap x 9 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap Cap Storage= +15.6 cf x 2 x 3 rows = 93.6 cf
		2,015 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	147.00'	8.270 in/hr Exfiltration over Surface area
#2	Primary	151.80'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 in 24.0" x 24.0" Grate

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Limited to weir flow at low heads

Discarded OutFlow Max=0.12 cfs @ 11.91 hrs HW=147.06' (Free Discharge)

↑1=Exfiltration (Exfiltration Controls 0.12 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=147.00' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond P-4D: Units 4,5,6 MC-3500s

Inflow Area = 0.186 ac, 100.00% Impervious, Inflow Depth > 2.97" for 2-Year Cornell event
Inflow = 0.60 cfs @ 12.07 hrs, Volume= 0.046 af
Outflow = 0.02 cfs @ 9.76 hrs, Volume= 0.031 af, Atten= 96%, Lag= 0.0 min
Discarded = 0.02 cfs @ 9.76 hrs, Volume= 0.031 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 158.74' @ 15.08 hrs Surf.Area= 947 sf Storage= 1,040 cf

Plug-Flow detention time= 262.5 min calculated for 0.031 af (68% of inflow)
Center-of-Mass det. time= 166.5 min (921.5 - 755.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	157.00'	1,386 cf	22.75'W x 41.62'L x 5.50'H Field A 5,207 cf Overall - 1,743 cf Embedded = 3,464 cf x 40.0% Voids
#2A	157.75'	1,743 cf	ADS_StormTech MC-3500 c +Cap x 15 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap Cap Storage= +15.6 cf x 2 x 3 rows = 93.6 cf
		3,129 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	157.00'	1.020 in/hr Exfiltration over Surface area
#2	Primary	164.90'	3.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.02 cfs @ 9.76 hrs HW=157.08' (Free Discharge)

↑1=Exfiltration (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=157.00' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Link A: Merriam Southwest

Inflow Area = 0.949 ac, 42.50% Impervious, Inflow Depth = 0.00" for 2-Year Cornell event
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

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Summary for Link B: Offsite Northwest

Inflow Area = 0.362 ac, 0.00% Impervious, Inflow Depth > 0.00" for 2-Year Cornell event
Inflow = 0.00 cfs @ 24.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 24.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link C: Existing Drywell

Inflow Area = 0.214 ac, 0.19% Impervious, Inflow Depth > 0.00" for 2-Year Cornell event
Inflow = 0.00 cfs @ 24.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 24.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link D: Hallett Hill Road

Inflow Area = 1.413 ac, 49.87% Impervious, Inflow Depth = 0.00" for 2-Year Cornell event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

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Type III 24-hr 10-Year Cornell Rainfall=4.70"

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 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 1A: Merriam Street	Runoff Area=36,966 sf 35.72% Impervious Runoff Depth>1.13" Tc=5.8 min CN=60 Runoff=0.99 cfs 0.080 af
Subcatchment 1B: Offsite B	Runoff Area=15,768 sf 0.00% Impervious Runoff Depth>0.14" Tc=6.3 min CN=39 Runoff=0.01 cfs 0.004 af
Subcatchment 1C: North Rear Lawns	Runoff Area=9,307 sf 0.19% Impervious Runoff Depth>0.14" Tc=5.0 min CN=39 Runoff=0.00 cfs 0.003 af
Subcatchment 1D: North Pavement and	Runoff Area=5,352 sf 48.97% Impervious Runoff Depth>1.67" Tc=5.0 min CN=68 Runoff=0.24 cfs 0.017 af
Subcatchment 2A: Units 2,3	Runoff Area=4,362 sf 100.00% Impervious Runoff Depth>4.46" Tc=5.0 min CN=98 Runoff=0.48 cfs 0.037 af
Subcatchment 2D: Units 9,10, East Lawns	Runoff Area=37,581 sf 35.30% Impervious Runoff Depth>1.13" Tc=5.0 min CN=60 Runoff=1.04 cfs 0.081 af
Subcatchment 3D: Units 7,8	Runoff Area=4,277 sf 100.00% Impervious Runoff Depth>4.46" Tc=5.0 min CN=98 Runoff=0.47 cfs 0.036 af
Subcatchment 4D: Units 4,5,6	Runoff Area=8,092 sf 100.00% Impervious Runoff Depth>4.46" Tc=5.0 min CN=98 Runoff=0.88 cfs 0.069 af
Subcatchment 5D: Hallet Hill Entry	Runoff Area=6,267 sf 39.08% Impervious Runoff Depth>1.26" Tc=5.0 min CN=62 Runoff=0.20 cfs 0.015 af
Pond P-1A: Merriam MC-3500s	Peak Elev=158.84' Storage=1,518 cf Inflow=0.99 cfs 0.080 af Outflow=0.07 cfs 0.072 af
Pond P-1D: Hallett Hill SC-740s	Peak Elev=150.62' Storage=176 cf Inflow=0.24 cfs 0.017 af Discarded=0.05 cfs 0.017 af Primary=0.00 cfs 0.000 af Outflow=0.05 cfs 0.017 af
Pond P-2A: Units 2,3 MC-3500s	Peak Elev=160.39' Storage=701 cf Inflow=0.48 cfs 0.037 af Discarded=0.03 cfs 0.035 af Primary=0.00 cfs 0.000 af Outflow=0.03 cfs 0.035 af
Pond P-2D: Units 9,10 MC-3500s	Peak Elev=153.61' Storage=676 cf Inflow=1.04 cfs 0.081 af Discarded=0.27 cfs 0.081 af Primary=0.00 cfs 0.000 af Outflow=0.27 cfs 0.081 af
Pond P-3D: Units 7,8 MC-3500s	Peak Elev=148.47' Storage=541 cf Inflow=0.66 cfs 0.052 af Discarded=0.12 cfs 0.052 af Primary=0.00 cfs 0.000 af Outflow=0.12 cfs 0.052 af
Pond P-4D: Units 4,5,6 MC-3500s	Peak Elev=159.80' Storage=1,798 cf Inflow=0.88 cfs 0.069 af Discarded=0.02 cfs 0.034 af Primary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.034 af
Link A: Merriam Southwest	Primary=0.00 cfs 0.000 af

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Link B: Offsite Northwest

Inflow=0.01 cfs 0.004 af
Primary=0.01 cfs 0.004 af

Link C: Existing Drywell

Inflow=0.00 cfs 0.003 af
Primary=0.00 cfs 0.003 af

Link D: Hallett Hill Road

Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Total Runoff Area = 2.938 ac Runoff Volume = 0.343 af Average Runoff Depth = 1.40"
62.27% Pervious = 1.829 ac 37.73% Impervious = 1.109 ac

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Summary for Subcatchment 1A: Merriam Street

Runoff = 0.99 cfs @ 12.10 hrs, Volume= 0.080 af, Depth> 1.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Cornell Rainfall=4.70"

Area (sf)	CN	Description
23,763	39	>75% Grass cover, Good, HSG A
9,876	98	Paved parking, HSG A
2,602	98	Roofs, HSG A
725	98	Unconnected pavement, HSG A
0	32	Woods/grass comb., Good, HSG A
36,966	60	Weighted Average
23,763		64.28% Pervious Area
13,203		35.72% Impervious Area
725		5.49% Unconnected

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

Summary for Subcatchment 1B: Offsite B

Runoff = 0.01 cfs @ 13.77 hrs, Volume= 0.004 af, Depth> 0.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Cornell Rainfall=4.70"

Area (sf)	CN	Description
15,768	39	>75% Grass cover, Good, HSG A
15,768		100.00% Pervious Area

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

Summary for Subcatchment 1C: North Rear Lawns

Runoff = 0.00 cfs @ 13.75 hrs, Volume= 0.003 af, Depth> 0.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Cornell Rainfall=4.70"

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Area (sf)	CN	Description
9,289	39	>75% Grass cover, Good, HSG A
18	98	Paved parking, HSG A
0	32	Woods/grass comb., Good, HSG A
9,307	39	Weighted Average
9,289		99.81% Pervious Area
18		0.19% Impervious Area

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

Summary for Subcatchment 1D: North Pavement and Lawns

Runoff = 0.24 cfs @ 12.08 hrs, Volume= 0.017 af, Depth> 1.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type III 24-hr 10-Year Cornell Rainfall=4.70"

Area (sf)	CN	Description
2,731	39	>75% Grass cover, Good, HSG A
2,621	98	Paved parking, HSG A
0	32	Woods/grass comb., Good, HSG A
5,352	68	Weighted Average
2,731		51.03% Pervious Area
2,621		48.97% Impervious Area

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

Summary for Subcatchment 2A: Units 2,3

Runoff = 0.48 cfs @ 12.07 hrs, Volume= 0.037 af, Depth> 4.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type III 24-hr 10-Year Cornell Rainfall=4.70"

Area (sf)	CN	Description
4,362	98	Roofs, HSG A
4,362		100.00% Impervious Area

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

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Summary for Subcatchment 2D: Units 9,10, East Lawns and Pavement

Runoff = 1.04 cfs @ 12.09 hrs, Volume= 0.081 af, Depth> 1.13"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Cornell Rainfall=4.70"

Area (sf)	CN	Description
24,314	39	>75% Grass cover, Good, HSG A
7,925	98	Paved parking, HSG A
4,747	98	Roofs, HSG A
595	98	Unconnected pavement, HSG A
0	32	Woods/grass comb., Good, HSG A
37,581	60	Weighted Average
24,314		64.70% Pervious Area
13,267		35.30% Impervious Area
595		4.48% Unconnected

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

Summary for Subcatchment 3D: Units 7,8

Runoff = 0.47 cfs @ 12.07 hrs, Volume= 0.036 af, Depth> 4.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Cornell Rainfall=4.70"

Area (sf)	CN	Description
4,277	98	Roofs, HSG A
4,277		100.00% Impervious Area

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

Summary for Subcatchment 4D: Units 4,5,6

Runoff = 0.88 cfs @ 12.07 hrs, Volume= 0.069 af, Depth> 4.46"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Cornell Rainfall=4.70"

Area (sf)	CN	Description
8,092	98	Roofs, HSG A
8,092		100.00% Impervious Area

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

Summary for Subcatchment 5D: Hallet Hill Entry

Runoff = 0.20 cfs @ 12.08 hrs, Volume= 0.015 af, Depth> 1.26"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 10-Year Cornell Rainfall=4.70"

Area (sf)	CN	Description
3,818	39	>75% Grass cover, Good, HSG A
2,449	98	Paved parking, HSG A
0	32	Woods/grass comb., Good, HSG A
6,267	62	Weighted Average
3,818		60.92% Pervious Area
2,449		39.08% Impervious Area

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

Summary for Pond P-1A: Merriam MC-3500s

Inflow Area = 0.949 ac, 42.50% Impervious, Inflow Depth > 1.01" for 10-Year Cornell event
 Inflow = 0.99 cfs @ 12.10 hrs, Volume= 0.080 af
 Outflow = 0.07 cfs @ 11.86 hrs, Volume= 0.072 af, Atten= 93%, Lag= 0.0 min
 Discarded = 0.07 cfs @ 11.86 hrs, Volume= 0.072 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 158.84' @ 15.24 hrs Surf.Area= 1,273 sf Storage= 1,518 cf

Plug-Flow detention time= 241.3 min calculated for 0.072 af (90% of inflow)
 Center-of-Mass det. time= 193.8 min (1,072.8 - 879.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	157.00'	1,840 cf	22.75'W x 55.96'L x 5.50'H Field A 7,002 cf Overall - 2,403 cf Embedded = 4,599 cf x 40.0% Voids
#2A	157.75'	2,403 cf	ADS_StormTech MC-3500 c +Cap x 21 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap Cap Storage= +15.6 cf x 2 x 3 rows = 93.6 cf
#3	162.30'	2,291 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
		6,534 cf	Total Available Storage

Storage Group A created with Chamber Wizard

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
162.30	0	0	0
162.50	690	69	69
163.00	1,000	423	491
164.00	2,600	1,800	2,291

Device	Routing	Invert	Outlet Devices
#1	Discarded	157.00'	2.410 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.07 cfs @ 11.86 hrs HW=157.07' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.07 cfs)

Summary for Pond P-1D: Hallett Hill SC-740s

Inflow Area = 1.171 ac, 47.00% Impervious, Inflow Depth > 0.17" for 10-Year Cornell event
 Inflow = 0.24 cfs @ 12.08 hrs, Volume= 0.017 af
 Outflow = 0.05 cfs @ 11.86 hrs, Volume= 0.017 af, Atten= 79%, Lag= 0.0 min
 Discarded = 0.05 cfs @ 11.86 hrs, Volume= 0.017 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 150.62' @ 12.54 hrs Surf.Area= 262 sf Storage= 176 cf

Plug-Flow detention time= 21.4 min calculated for 0.017 af (100% of inflow)
 Center-of-Mass det. time= 21.1 min (875.9 - 854.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	149.50'	254 cf	11.00'W x 23.80'L x 3.50'H Field A 916 cf Overall - 281 cf Embedded = 635 cf x 40.0% Voids
#2A	150.00'	281 cf	ADS_StormTech SC-740 x 6 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 2 rows
		535 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	149.50'	8.270 in/hr Exfiltration over Surface area
#2	Primary	153.80'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 in 24.0" x 24.0" Grate Limited to weir flow at low heads

Discarded OutFlow Max=0.05 cfs @ 11.86 hrs HW=149.54' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=149.50' (Free Discharge)

↑**2=Orifice/Grate** (Controls 0.00 cfs)

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Summary for Pond P-2A: Units 2,3 MC-3500s

Inflow Area = 0.100 ac, 100.00% Impervious, Inflow Depth > 4.46" for 10-Year Cornell event
 Inflow = 0.48 cfs @ 12.07 hrs, Volume= 0.037 af
 Outflow = 0.03 cfs @ 10.51 hrs, Volume= 0.035 af, Atten= 95%, Lag= 0.0 min
 Discarded = 0.03 cfs @ 10.51 hrs, Volume= 0.035 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 160.39' @ 13.87 hrs Surf.Area= 457 sf Storage= 701 cf

Plug-Flow detention time= 222.6 min calculated for 0.035 af (93% of inflow)
 Center-of-Mass det. time= 185.5 min (933.2 - 747.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	158.00'	705 cf	22.75"W x 20.11"L x 5.50"H Field A 2,516 cf Overall - 753 cf Embedded = 1,763 cf x 40.0% Voids
#2A	158.75'	753 cf	ADS_StormTech MC-3500 c +Capx 6 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap Cap Storage= +15.6 cf x 2 x 3 rows = 93.6 cf
		1,458 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	158.00'	2.410 in/hr Exfiltration over Surface area
#2	Primary	165.80'	3.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.03 cfs @ 10.51 hrs HW=158.08' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=158.00' (Free Discharge)

↑**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond P-2D: Units 9,10 MC-3500s

Inflow Area = 1.049 ac, 46.77% Impervious, Inflow Depth > 0.93" for 10-Year Cornell event
 Inflow = 1.04 cfs @ 12.09 hrs, Volume= 0.081 af
 Outflow = 0.27 cfs @ 11.97 hrs, Volume= 0.081 af, Atten= 74%, Lag= 0.0 min
 Discarded = 0.27 cfs @ 11.97 hrs, Volume= 0.081 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 153.61' @ 12.52 hrs Surf.Area= 1,431 sf Storage= 676 cf

Plug-Flow detention time= 14.1 min calculated for 0.081 af (100% of inflow)
 Center-of-Mass det. time= 13.7 min (892.2 - 878.5)

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Volume	Invert	Avail.Storage	Storage Description
#1A	152.65'	2,067 cf	15.58'W x 91.81'L x 5.50'H Field A 7,869 cf Overall - 2,701 cf Embedded = 5,167 cf x 40.0% Voids
#2A	153.40'	2,701 cf	ADS_StormTech MC-3500 c +Cap x 24 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap Cap Storage= +15.6 cf x 2 x 2 rows = 62.4 cf
		4,768 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	152.65'	8.270 in/hr Exfiltration over Surface area
#2	Primary	157.20'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 in 24.0" x 24.0" Grate Limited to weir flow at low heads

Discarded OutFlow Max=0.27 cfs @ 11.97 hrs HW=152.71' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.27 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=152.65' (Free Discharge)

↑**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond P-3D: Units 7,8 MC-3500s

Inflow Area = 0.242 ac, 63.79% Impervious, Inflow Depth > 2.56" for 10-Year Cornell event
 Inflow = 0.66 cfs @ 12.07 hrs, Volume= 0.052 af
 Outflow = 0.12 cfs @ 11.74 hrs, Volume= 0.052 af, Atten= 82%, Lag= 0.0 min
 Discarded = 0.12 cfs @ 11.74 hrs, Volume= 0.052 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 148.47' @ 12.54 hrs Surf.Area= 621 sf Storage= 541 cf

Plug-Flow detention time= 25.5 min calculated for 0.052 af (100% of inflow)
 Center-of-Mass det. time= 25.2 min (809.2 - 784.0)

Volume	Invert	Avail.Storage	Storage Description
#1A	147.00'	932 cf	22.75'W x 27.28'L x 5.50'H Field A 3,413 cf Overall - 1,083 cf Embedded = 2,330 cf x 40.0% Voids
#2A	147.75'	1,083 cf	ADS_StormTech MC-3500 c +Cap x 9 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap Cap Storage= +15.6 cf x 2 x 3 rows = 93.6 cf
		2,015 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	147.00'	8.270 in/hr Exfiltration over Surface area
#2	Primary	151.80'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 in 24.0" x 24.0" Grate

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Limited to weir flow at low heads

Discarded OutFlow Max=0.12 cfs @ 11.74 hrs HW=147.06' (Free Discharge)

↑1=Exfiltration (Exfiltration Controls 0.12 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=147.00' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond P-4D: Units 4,5,6 MC-3500s

Inflow Area = 0.186 ac, 100.00% Impervious, Inflow Depth > 4.46" for 10-Year Cornell event
Inflow = 0.88 cfs @ 12.07 hrs, Volume= 0.069 af
Outflow = 0.02 cfs @ 8.54 hrs, Volume= 0.034 af, Atten= 97%, Lag= 0.0 min
Discarded = 0.02 cfs @ 8.54 hrs, Volume= 0.034 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 159.80' @ 16.19 hrs Surf.Area= 947 sf Storage= 1,798 cf

Plug-Flow detention time= 258.3 min calculated for 0.034 af (50% of inflow)
Center-of-Mass det. time= 128.7 min (876.4 - 747.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	157.00'	1,386 cf	22.75'W x 41.62'L x 5.50'H Field A 5,207 cf Overall - 1,743 cf Embedded = 3,464 cf x 40.0% Voids
#2A	157.75'	1,743 cf	ADS_StormTech MC-3500 c +Cap x 15 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap Cap Storage= +15.6 cf x 2 x 3 rows = 93.6 cf
		3,129 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	157.00'	1.020 in/hr Exfiltration over Surface area
#2	Primary	164.90'	3.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.02 cfs @ 8.54 hrs HW=157.08' (Free Discharge)

↑1=Exfiltration (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=157.00' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Link A: Merriam Southwest

Inflow Area = 0.949 ac, 42.50% Impervious, Inflow Depth = 0.00" for 10-Year Cornell event
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

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Summary for Link B: Offsite Northwest

Inflow Area = 0.362 ac, 0.00% Impervious, Inflow Depth > 0.14" for 10-Year Cornell event
Inflow = 0.01 cfs @ 13.77 hrs, Volume= 0.004 af
Primary = 0.01 cfs @ 13.77 hrs, Volume= 0.004 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link C: Existing Drywell

Inflow Area = 0.214 ac, 0.19% Impervious, Inflow Depth > 0.14" for 10-Year Cornell event
Inflow = 0.00 cfs @ 13.75 hrs, Volume= 0.003 af
Primary = 0.00 cfs @ 13.75 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link D: Hallett Hill Road

Inflow Area = 1.413 ac, 49.87% Impervious, Inflow Depth = 0.00" for 10-Year Cornell event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 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 1A: Merriam Street	Runoff Area=36,966 sf 35.72% Impervious Runoff Depth>1.92" Tc=5.8 min CN=60 Runoff=1.82 cfs 0.136 af
Subcatchment 1B: Offsite B	Runoff Area=15,768 sf 0.00% Impervious Runoff Depth>0.44" Tc=6.3 min CN=39 Runoff=0.06 cfs 0.013 af
Subcatchment 1C: North Rear Lawns	Runoff Area=9,307 sf 0.19% Impervious Runoff Depth>0.44" Tc=5.0 min CN=39 Runoff=0.04 cfs 0.008 af
Subcatchment 1D: North Pavement and	Runoff Area=5,352 sf 48.97% Impervious Runoff Depth>2.62" Tc=5.0 min CN=68 Runoff=0.39 cfs 0.027 af
Subcatchment 2A: Units 2,3	Runoff Area=4,362 sf 100.00% Impervious Runoff Depth>5.76" Tc=5.0 min CN=98 Runoff=0.61 cfs 0.048 af
Subcatchment 2D: Units 9,10, East Lawns	Runoff Area=37,581 sf 35.30% Impervious Runoff Depth>1.92" Tc=5.0 min CN=60 Runoff=1.91 cfs 0.138 af
Subcatchment 3D: Units 7,8	Runoff Area=4,277 sf 100.00% Impervious Runoff Depth>5.76" Tc=5.0 min CN=98 Runoff=0.60 cfs 0.047 af
Subcatchment 4D: Units 4,5,6	Runoff Area=8,092 sf 100.00% Impervious Runoff Depth>5.76" Tc=5.0 min CN=98 Runoff=1.13 cfs 0.089 af
Subcatchment 5D: Hallet Hill Entry	Runoff Area=6,267 sf 39.08% Impervious Runoff Depth>2.09" Tc=5.0 min CN=62 Runoff=0.35 cfs 0.025 af
Pond P-1A: Merriam MC-3500s	Peak Elev=160.92' Storage=3,390 cf Inflow=1.82 cfs 0.136 af Outflow=0.07 cfs 0.074 af
Pond P-1D: Hallett Hill SC-740s	Peak Elev=151.69' Storage=372 cf Inflow=0.39 cfs 0.027 af Discarded=0.05 cfs 0.027 af Primary=0.00 cfs 0.000 af Outflow=0.05 cfs 0.027 af
Pond P-2A: Units 2,3 MC-3500s	Peak Elev=161.36' Storage=1,002 cf Inflow=0.61 cfs 0.048 af Discarded=0.03 cfs 0.037 af Primary=0.00 cfs 0.000 af Outflow=0.03 cfs 0.037 af
Pond P-2D: Units 9,10 MC-3500s	Peak Elev=154.54' Storage=1,762 cf Inflow=1.91 cfs 0.138 af Discarded=0.27 cfs 0.138 af Primary=0.00 cfs 0.000 af Outflow=0.27 cfs 0.138 af
Pond P-3D: Units 7,8 MC-3500s	Peak Elev=149.31' Storage=933 cf Inflow=0.95 cfs 0.072 af Discarded=0.12 cfs 0.072 af Primary=0.00 cfs 0.000 af Outflow=0.12 cfs 0.072 af
Pond P-4D: Units 4,5,6 MC-3500s	Peak Elev=160.94' Storage=2,503 cf Inflow=1.13 cfs 0.089 af Discarded=0.02 cfs 0.036 af Primary=0.00 cfs 0.000 af Outflow=0.02 cfs 0.036 af
Link A: Merriam Southwest	Primary=0.00 cfs 0.000 af

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Link B: Offsite Northwest

Inflow=0.06 cfs 0.013 af
Primary=0.06 cfs 0.013 af

Link C: Existing Drywell

Inflow=0.04 cfs 0.008 af
Primary=0.04 cfs 0.008 af

Link D: Hallett Hill Road

Inflow=0.00 cfs 0.000 af
Primary=0.00 cfs 0.000 af

Total Runoff Area = 2.938 ac Runoff Volume = 0.531 af Average Runoff Depth = 2.17"
62.27% Pervious = 1.829 ac 37.73% Impervious = 1.109 ac

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Summary for Subcatchment 1A: Merriam Street

Runoff = 1.82 cfs @ 12.09 hrs, Volume= 0.136 af, Depth> 1.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Cornell Rainfall=6.00"

Area (sf)	CN	Description
23,763	39	>75% Grass cover, Good, HSG A
9,876	98	Paved parking, HSG A
2,602	98	Roofs, HSG A
725	98	Unconnected pavement, HSG A
0	32	Woods/grass comb., Good, HSG A
36,966	60	Weighted Average
23,763		64.28% Pervious Area
13,203		35.72% Impervious Area
725		5.49% Unconnected

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

Summary for Subcatchment 1B: Offsite B

Runoff = 0.06 cfs @ 12.35 hrs, Volume= 0.013 af, Depth> 0.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Cornell Rainfall=6.00"

Area (sf)	CN	Description
15,768	39	>75% Grass cover, Good, HSG A
15,768		100.00% Pervious Area

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

Summary for Subcatchment 1C: North Rear Lawns

Runoff = 0.04 cfs @ 12.33 hrs, Volume= 0.008 af, Depth> 0.44"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Cornell Rainfall=6.00"

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Area (sf)	CN	Description
9,289	39	>75% Grass cover, Good, HSG A
18	98	Paved parking, HSG A
0	32	Woods/grass comb., Good, HSG A
9,307	39	Weighted Average
9,289		99.81% Pervious Area
18		0.19% Impervious Area

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

Summary for Subcatchment 1D: North Pavement and Lawns

Runoff = 0.39 cfs @ 12.08 hrs, Volume= 0.027 af, Depth> 2.62"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Cornell Rainfall=6.00"

Area (sf)	CN	Description
2,731	39	>75% Grass cover, Good, HSG A
2,621	98	Paved parking, HSG A
0	32	Woods/grass comb., Good, HSG A
5,352	68	Weighted Average
2,731		51.03% Pervious Area
2,621		48.97% Impervious Area

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

Summary for Subcatchment 2A: Units 2,3

Runoff = 0.61 cfs @ 12.07 hrs, Volume= 0.048 af, Depth> 5.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Cornell Rainfall=6.00"

Area (sf)	CN	Description
4,362	98	Roofs, HSG A
4,362		100.00% Impervious Area

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

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Summary for Subcatchment 2D: Units 9,10, East Lawns and Pavement

Runoff = 1.91 cfs @ 12.08 hrs, Volume= 0.138 af, Depth> 1.92"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Cornell Rainfall=6.00"

Area (sf)	CN	Description
24,314	39	>75% Grass cover, Good, HSG A
7,925	98	Paved parking, HSG A
4,747	98	Roofs, HSG A
595	98	Unconnected pavement, HSG A
0	32	Woods/grass comb., Good, HSG A
37,581	60	Weighted Average
24,314		64.70% Pervious Area
13,267		35.30% Impervious Area
595		4.48% Unconnected

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

Summary for Subcatchment 3D: Units 7,8

Runoff = 0.60 cfs @ 12.07 hrs, Volume= 0.047 af, Depth> 5.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Cornell Rainfall=6.00"

Area (sf)	CN	Description
4,277	98	Roofs, HSG A
4,277		100.00% Impervious Area

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

Summary for Subcatchment 4D: Units 4,5,6

Runoff = 1.13 cfs @ 12.07 hrs, Volume= 0.089 af, Depth> 5.76"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type III 24-hr 25-Year Cornell Rainfall=6.00"

Area (sf)	CN	Description
8,092	98	Roofs, HSG A
8,092		100.00% Impervious Area

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

Summary for Subcatchment 5D: Hallet Hill Entry

Runoff = 0.35 cfs @ 12.08 hrs, Volume= 0.025 af, Depth> 2.09"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 25-Year Cornell Rainfall=6.00"

Area (sf)	CN	Description
3,818	39	>75% Grass cover, Good, HSG A
2,449	98	Paved parking, HSG A
0	32	Woods/grass comb., Good, HSG A
6,267	62	Weighted Average
3,818		60.92% Pervious Area
2,449		39.08% Impervious Area

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

Summary for Pond P-1A: Merriam MC-3500s

Inflow Area = 0.949 ac, 42.50% Impervious, Inflow Depth > 1.72" for 25-Year Cornell event
 Inflow = 1.82 cfs @ 12.09 hrs, Volume= 0.136 af
 Outflow = 0.07 cfs @ 11.65 hrs, Volume= 0.074 af, Atten= 96%, Lag= 0.0 min
 Discarded = 0.07 cfs @ 11.65 hrs, Volume= 0.074 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 160.92' @ 16.80 hrs Surf.Area= 1,273 sf Storage= 3,390 cf

Plug-Flow detention time= 325.1 min calculated for 0.074 af (55% of inflow)
 Center-of-Mass det. time= 198.8 min (1,060.6 - 861.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	157.00'	1,840 cf	22.75'W x 55.96'L x 5.50'H Field A 7,002 cf Overall - 2,403 cf Embedded = 4,599 cf x 40.0% Voids
#2A	157.75'	2,403 cf	ADS_StormTech MC-3500 c +Cap x 21 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap Cap Storage= +15.6 cf x 2 x 3 rows = 93.6 cf
#3	162.30'	2,291 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
		6,534 cf	Total Available Storage

Storage Group A created with Chamber Wizard

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
162.30	0	0	0
162.50	690	69	69
163.00	1,000	423	491
164.00	2,600	1,800	2,291

Device	Routing	Invert	Outlet Devices
#1	Discarded	157.00'	2.410 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.07 cfs @ 11.65 hrs HW=157.07' (Free Discharge)
 ↑**1=Exfiltration** (Exfiltration Controls 0.07 cfs)

Summary for Pond P-1D: Hallett Hill SC-740s

Inflow Area = 1.171 ac, 47.00% Impervious, Inflow Depth > 0.27" for 25-Year Cornell event
 Inflow = 0.39 cfs @ 12.08 hrs, Volume= 0.027 af
 Outflow = 0.05 cfs @ 11.72 hrs, Volume= 0.027 af, Atten= 87%, Lag= 0.0 min
 Discarded = 0.05 cfs @ 11.72 hrs, Volume= 0.027 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 151.69' @ 12.76 hrs Surf.Area= 262 sf Storage= 372 cf

Plug-Flow detention time= 56.7 min calculated for 0.027 af (100% of inflow)
 Center-of-Mass det. time= 56.5 min (897.8 - 841.4)

Volume	Invert	Avail.Storage	Storage Description
#1A	149.50'	254 cf	11.00'W x 23.80'L x 3.50'H Field A 916 cf Overall - 281 cf Embedded = 635 cf x 40.0% Voids
#2A	150.00'	281 cf	ADS_StormTech SC-740 x 6 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 2 rows
		535 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	149.50'	8.270 in/hr Exfiltration over Surface area
#2	Primary	153.80'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 in 24.0" x 24.0" Grate Limited to weir flow at low heads

Discarded OutFlow Max=0.05 cfs @ 11.72 hrs HW=149.55' (Free Discharge)
 ↑**1=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=149.50' (Free Discharge)
 ↑**2=Orifice/Grate** (Controls 0.00 cfs)

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Summary for Pond P-2A: Units 2,3 MC-3500s

Inflow Area = 0.100 ac, 100.00% Impervious, Inflow Depth > 5.76" for 25-Year Cornell event
 Inflow = 0.61 cfs @ 12.07 hrs, Volume= 0.048 af
 Outflow = 0.03 cfs @ 9.76 hrs, Volume= 0.037 af, Atten= 96%, Lag= 0.0 min
 Discarded = 0.03 cfs @ 9.76 hrs, Volume= 0.037 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 161.36' @ 14.67 hrs Surf.Area= 457 sf Storage= 1,002 cf

Plug-Flow detention time= 246.6 min calculated for 0.037 af (76% of inflow)
 Center-of-Mass det. time= 162.1 min (905.9 - 743.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	158.00'	705 cf	22.75"W x 20.11"L x 5.50"H Field A 2,516 cf Overall - 753 cf Embedded = 1,763 cf x 40.0% Voids
#2A	158.75'	753 cf	ADS_StormTech MC-3500 c +Capx 6 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap Cap Storage= +15.6 cf x 2 x 3 rows = 93.6 cf
		1,458 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	158.00'	2.410 in/hr Exfiltration over Surface area
#2	Primary	165.80'	3.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.03 cfs @ 9.76 hrs HW=158.08' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=158.00' (Free Discharge)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond P-2D: Units 9,10 MC-3500s

Inflow Area = 1.049 ac, 46.77% Impervious, Inflow Depth > 1.58" for 25-Year Cornell event
 Inflow = 1.91 cfs @ 12.08 hrs, Volume= 0.138 af
 Outflow = 0.27 cfs @ 11.81 hrs, Volume= 0.138 af, Atten= 86%, Lag= 0.0 min
 Discarded = 0.27 cfs @ 11.81 hrs, Volume= 0.138 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 154.54' @ 12.79 hrs Surf.Area= 1,431 sf Storage= 1,762 cf

Plug-Flow detention time= 49.6 min calculated for 0.138 af (100% of inflow)
 Center-of-Mass det. time= 49.3 min (910.5 - 861.2)

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Volume	Invert	Avail.Storage	Storage Description
#1A	152.65'	2,067 cf	15.58'W x 91.81'L x 5.50'H Field A 7,869 cf Overall - 2,701 cf Embedded = 5,167 cf x 40.0% Voids
#2A	153.40'	2,701 cf	ADS_StormTech MC-3500 c +Cap x 24 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap Cap Storage= +15.6 cf x 2 x 2 rows = 62.4 cf
		4,768 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	152.65'	8.270 in/hr Exfiltration over Surface area
#2	Primary	157.20'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 in 24.0" x 24.0" Grate Limited to weir flow at low heads

Discarded OutFlow Max=0.27 cfs @ 11.81 hrs HW=152.71' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.27 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=152.65' (Free Discharge)

↑**2=Orifice/Grate** (Controls 0.00 cfs)

Summary for Pond P-3D: Units 7,8 MC-3500s

Inflow Area = 0.242 ac, 63.79% Impervious, Inflow Depth > 3.58" for 25-Year Cornell event
 Inflow = 0.95 cfs @ 12.07 hrs, Volume= 0.072 af
 Outflow = 0.12 cfs @ 11.66 hrs, Volume= 0.072 af, Atten= 87%, Lag= 0.0 min
 Discarded = 0.12 cfs @ 11.66 hrs, Volume= 0.072 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 149.31' @ 12.68 hrs Surf.Area= 621 sf Storage= 933 cf

Plug-Flow detention time= 52.1 min calculated for 0.072 af (100% of inflow)
 Center-of-Mass det. time= 51.9 min (834.6 - 782.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	147.00'	932 cf	22.75'W x 27.28'L x 5.50'H Field A 3,413 cf Overall - 1,083 cf Embedded = 2,330 cf x 40.0% Voids
#2A	147.75'	1,083 cf	ADS_StormTech MC-3500 c +Cap x 9 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap Cap Storage= +15.6 cf x 2 x 3 rows = 93.6 cf
		2,015 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	147.00'	8.270 in/hr Exfiltration over Surface area
#2	Primary	151.80'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 in 24.0" x 24.0" Grate

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Limited to weir flow at low heads

Discarded OutFlow Max=0.12 cfs @ 11.66 hrs HW=147.06' (Free Discharge)

↑1=Exfiltration (Exfiltration Controls 0.12 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=147.00' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond P-4D: Units 4,5,6 MC-3500s

Inflow Area = 0.186 ac, 100.00% Impervious, Inflow Depth > 5.76" for 25-Year Cornell event
 Inflow = 1.13 cfs @ 12.07 hrs, Volume= 0.089 af
 Outflow = 0.02 cfs @ 7.57 hrs, Volume= 0.036 af, Atten= 98%, Lag= 0.0 min
 Discarded = 0.02 cfs @ 7.57 hrs, Volume= 0.036 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 160.94' @ 17.29 hrs Surf.Area= 947 sf Storage= 2,503 cf

Plug-Flow detention time= 259.4 min calculated for 0.036 af (41% of inflow)
Center-of-Mass det. time= 102.7 min (846.5 - 743.8)

Volume	Invert	Avail.Storage	Storage Description
#1A	157.00'	1,386 cf	22.75'W x 41.62'L x 5.50'H Field A 5,207 cf Overall - 1,743 cf Embedded = 3,464 cf x 40.0% Voids
#2A	157.75'	1,743 cf	ADS_StormTech MC-3500 c +Cap x 15 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap Cap Storage= +15.6 cf x 2 x 3 rows = 93.6 cf
		3,129 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	157.00'	1.020 in/hr Exfiltration over Surface area
#2	Primary	164.90'	3.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.02 cfs @ 7.57 hrs HW=157.08' (Free Discharge)

↑1=Exfiltration (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=157.00' (Free Discharge)

↑2=Orifice/Grate (Controls 0.00 cfs)

Summary for Link A: Merriam Southwest

Inflow Area = 0.949 ac, 42.50% Impervious, Inflow Depth = 0.00" for 25-Year Cornell event
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

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Summary for Link B: Offsite Northwest

Inflow Area = 0.362 ac, 0.00% Impervious, Inflow Depth > 0.44" for 25-Year Cornell event
Inflow = 0.06 cfs @ 12.35 hrs, Volume= 0.013 af
Primary = 0.06 cfs @ 12.35 hrs, Volume= 0.013 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link C: Existing Drywell

Inflow Area = 0.214 ac, 0.19% Impervious, Inflow Depth > 0.44" for 25-Year Cornell event
Inflow = 0.04 cfs @ 12.33 hrs, Volume= 0.008 af
Primary = 0.04 cfs @ 12.33 hrs, Volume= 0.008 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link D: Hallett Hill Road

Inflow Area = 1.413 ac, 49.87% Impervious, Inflow Depth = 0.00" for 25-Year Cornell event
Inflow = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af
Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

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Time span=0.00-24.00 hrs, dt=0.01 hrs, 2401 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 1A: Merriam Street	Runoff Area=36,966 sf 35.72% Impervious Runoff Depth>3.71" Tc=5.8 min CN=60 Runoff=3.68 cfs 0.262 af
Subcatchment 1B: Offsite B	Runoff Area=15,768 sf 0.00% Impervious Runoff Depth>1.37" Tc=6.3 min CN=39 Runoff=0.41 cfs 0.041 af
Subcatchment 1C: North Rear Lawns	Runoff Area=9,307 sf 0.19% Impervious Runoff Depth>1.37" Tc=5.0 min CN=39 Runoff=0.25 cfs 0.024 af
Subcatchment 1D: North Pavement and	Runoff Area=5,352 sf 48.97% Impervious Runoff Depth>4.65" Tc=5.0 min CN=68 Runoff=0.70 cfs 0.048 af
Subcatchment 2A: Units 2,3	Runoff Area=4,362 sf 100.00% Impervious Runoff Depth>8.25" Tc=5.0 min CN=98 Runoff=0.87 cfs 0.069 af
Subcatchment 2D: Units 9,10, East Lawns	Runoff Area=37,581 sf 35.30% Impervious Runoff Depth>3.71" Tc=5.0 min CN=60 Runoff=3.85 cfs 0.267 af
Subcatchment 3D: Units 7,8	Runoff Area=4,277 sf 100.00% Impervious Runoff Depth>8.25" Tc=5.0 min CN=98 Runoff=0.85 cfs 0.068 af
Subcatchment 4D: Units 4,5,6	Runoff Area=8,092 sf 100.00% Impervious Runoff Depth>8.25" Tc=5.0 min CN=98 Runoff=1.61 cfs 0.128 af
Subcatchment 5D: Hallet Hill Entry	Runoff Area=6,267 sf 39.08% Impervious Runoff Depth>3.94" Tc=5.0 min CN=62 Runoff=0.69 cfs 0.047 af
Pond P-1A: Merriam MC-3500s	Peak Elev=163.93' Storage=6,355 cf Inflow=3.68 cfs 0.267 af Outflow=0.21 cfs 0.171 af
Pond P-1D: Hallett Hill SC-740s	Peak Elev=153.89' Storage=535 cf Inflow=0.70 cfs 0.075 af Discarded=0.05 cfs 0.041 af Primary=0.73 cfs 0.034 af Outflow=0.78 cfs 0.075 af
Pond P-2A: Units 2,3 MC-3500s	Peak Elev=165.94' Storage=1,458 cf Inflow=0.87 cfs 0.069 af Discarded=0.03 cfs 0.040 af Primary=0.09 cfs 0.005 af Outflow=0.11 cfs 0.044 af
Pond P-2D: Units 9,10 MC-3500s	Peak Elev=157.27' Storage=4,267 cf Inflow=3.85 cfs 0.285 af Discarded=0.27 cfs 0.258 af Primary=0.53 cfs 0.027 af Outflow=0.81 cfs 0.285 af
Pond P-3D: Units 7,8 MC-3500s	Peak Elev=151.81' Storage=1,843 cf Inflow=1.53 cfs 0.115 af Discarded=0.12 cfs 0.114 af Primary=0.03 cfs 0.000 af Outflow=0.15 cfs 0.115 af
Pond P-4D: Units 4,5,6 MC-3500s	Peak Elev=166.51' Storage=3,129 cf Inflow=1.61 cfs 0.128 af Discarded=0.02 cfs 0.039 af Primary=0.30 cfs 0.019 af Outflow=0.32 cfs 0.058 af
Link A: Merriam Southwest	Primary=0.00 cfs 0.000 af

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Link B: Offsite Northwest

Inflow=0.41 cfs 0.041 af
Primary=0.41 cfs 0.041 af

Link C: Existing Drywell

Inflow=0.25 cfs 0.024 af
Primary=0.25 cfs 0.024 af

Link D: Hallett Hill Road

Inflow=0.73 cfs 0.034 af
Primary=0.73 cfs 0.034 af

Total Runoff Area = 2.938 ac Runoff Volume = 0.954 af Average Runoff Depth = 3.90"
62.27% Pervious = 1.829 ac 37.73% Impervious = 1.109 ac

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Summary for Subcatchment 1A: Merriam Street

Runoff = 3.68 cfs @ 12.09 hrs, Volume= 0.262 af, Depth> 3.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Cornell Rainfall=8.50"

Area (sf)	CN	Description
23,763	39	>75% Grass cover, Good, HSG A
9,876	98	Paved parking, HSG A
2,602	98	Roofs, HSG A
725	98	Unconnected pavement, HSG A
0	32	Woods/grass comb., Good, HSG A
36,966	60	Weighted Average
23,763		64.28% Pervious Area
13,203		35.72% Impervious Area
725		5.49% Unconnected

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

Summary for Subcatchment 1B: Offsite B

Runoff = 0.41 cfs @ 12.12 hrs, Volume= 0.041 af, Depth> 1.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Cornell Rainfall=8.50"

Area (sf)	CN	Description
15,768	39	>75% Grass cover, Good, HSG A
15,768		100.00% Pervious Area

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

Summary for Subcatchment 1C: North Rear Lawns

Runoff = 0.25 cfs @ 12.10 hrs, Volume= 0.024 af, Depth> 1.37"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Type III 24-hr 100-Year Cornell Rainfall=8.50"

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Area (sf)	CN	Description
9,289	39	>75% Grass cover, Good, HSG A
18	98	Paved parking, HSG A
0	32	Woods/grass comb., Good, HSG A
9,307	39	Weighted Average
9,289		99.81% Pervious Area
18		0.19% Impervious Area

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

Summary for Subcatchment 1D: North Pavement and Lawns

Runoff = 0.70 cfs @ 12.08 hrs, Volume= 0.048 af, Depth> 4.65"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100-Year Cornell Rainfall=8.50"

Area (sf)	CN	Description
2,731	39	>75% Grass cover, Good, HSG A
2,621	98	Paved parking, HSG A
0	32	Woods/grass comb., Good, HSG A
5,352	68	Weighted Average
2,731		51.03% Pervious Area
2,621		48.97% Impervious Area

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

Summary for Subcatchment 2A: Units 2,3

Runoff = 0.87 cfs @ 12.07 hrs, Volume= 0.069 af, Depth> 8.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100-Year Cornell Rainfall=8.50"

Area (sf)	CN	Description
4,362	98	Roofs, HSG A
4,362		100.00% Impervious Area

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

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Summary for Subcatchment 2D: Units 9,10, East Lawns and Pavement

Runoff = 3.85 cfs @ 12.08 hrs, Volume= 0.267 af, Depth> 3.71"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100-Year Cornell Rainfall=8.50"

Area (sf)	CN	Description
24,314	39	>75% Grass cover, Good, HSG A
7,925	98	Paved parking, HSG A
4,747	98	Roofs, HSG A
595	98	Unconnected pavement, HSG A
0	32	Woods/grass comb., Good, HSG A
37,581	60	Weighted Average
24,314		64.70% Pervious Area
13,267		35.30% Impervious Area
595		4.48% Unconnected

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

Summary for Subcatchment 3D: Units 7,8

Runoff = 0.85 cfs @ 12.07 hrs, Volume= 0.068 af, Depth> 8.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100-Year Cornell Rainfall=8.50"

Area (sf)	CN	Description
4,277	98	Roofs, HSG A
4,277		100.00% Impervious Area

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

Summary for Subcatchment 4D: Units 4,5,6

Runoff = 1.61 cfs @ 12.07 hrs, Volume= 0.128 af, Depth> 8.25"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100-Year Cornell Rainfall=8.50"

Area (sf)	CN	Description
8,092	98	Roofs, HSG A
8,092		100.00% Impervious Area

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

Summary for Subcatchment 5D: Hallet Hill Entry

Runoff = 0.69 cfs @ 12.08 hrs, Volume= 0.047 af, Depth> 3.94"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Type III 24-hr 100-Year Cornell Rainfall=8.50"

Area (sf)	CN	Description
3,818	39	>75% Grass cover, Good, HSG A
2,449	98	Paved parking, HSG A
0	32	Woods/grass comb., Good, HSG A
6,267	62	Weighted Average
3,818		60.92% Pervious Area
2,449		39.08% Impervious Area

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

Summary for Pond P-1A: Merriam MC-3500s

Inflow Area = 0.949 ac, 42.50% Impervious, Inflow Depth > 3.37" for 100-Year Cornell event
 Inflow = 3.68 cfs @ 12.09 hrs, Volume= 0.267 af
 Outflow = 0.21 cfs @ 14.98 hrs, Volume= 0.171 af, Atten= 94%, Lag= 173.7 min
 Discarded = 0.21 cfs @ 14.98 hrs, Volume= 0.171 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 163.93' @ 14.98 hrs Surf.Area= 3,761 sf Storage= 6,355 cf

Plug-Flow detention time= 290.1 min calculated for 0.171 af (64% of inflow)
 Center-of-Mass det. time= 183.2 min (1,024.9 - 841.6)

Volume	Invert	Avail.Storage	Storage Description
#1A	157.00'	1,840 cf	22.75'W x 55.96'L x 5.50'H Field A 7,002 cf Overall - 2,403 cf Embedded = 4,599 cf x 40.0% Voids
#2A	157.75'	2,403 cf	ADS_StormTech MC-3500 c +Cap x 21 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap Cap Storage= +15.6 cf x 2 x 3 rows = 93.6 cf
#3	162.30'	2,291 cf	Custom Stage Data (Prismatic) Listed below (Recalc)
		6,534 cf	Total Available Storage

Storage Group A created with Chamber Wizard

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Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
162.30	0	0	0
162.50	690	69	69
163.00	1,000	423	491
164.00	2,600	1,800	2,291

Device	Routing	Invert	Outlet Devices
#1	Discarded	157.00'	2.410 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.21 cfs @ 14.98 hrs HW=163.93' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.21 cfs)

Summary for Pond P-1D: Hallett Hill SC-740s

Inflow Area = 1.171 ac, 47.00% Impervious, Inflow Depth > 0.77" for 100-Year Cornell event
 Inflow = 0.70 cfs @ 12.08 hrs, Volume= 0.075 af
 Outflow = 0.78 cfs @ 12.53 hrs, Volume= 0.075 af, Atten= 0%, Lag= 27.3 min
 Discarded = 0.05 cfs @ 11.52 hrs, Volume= 0.041 af
 Primary = 0.73 cfs @ 12.53 hrs, Volume= 0.034 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 153.89' @ 12.53 hrs Surf.Area= 262 sf Storage= 535 cf

Plug-Flow detention time= 53.3 min calculated for 0.075 af (100% of inflow)
 Center-of-Mass det. time= 53.2 min (862.9 - 809.7)

Volume	Invert	Avail.Storage	Storage Description
#1A	149.50'	254 cf	11.00'W x 23.80'L x 3.50'H Field A 916 cf Overall - 281 cf Embedded = 635 cf x 40.0% Voids
#2A	150.00'	281 cf	ADS_StormTech SC-740 x 6 Inside #1 Effective Size= 44.6"W x 30.0"H => 6.45 sf x 7.12'L = 45.9 cf Overall Size= 51.0"W x 30.0"H x 7.56'L with 0.44' Overlap Row Length Adjustment= +0.44' x 6.45 sf x 2 rows
		535 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	149.50'	8.270 in/hr Exfiltration over Surface area
#2	Primary	153.80'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 in 24.0" x 24.0" Grate Limited to weir flow at low heads

Discarded OutFlow Max=0.05 cfs @ 11.52 hrs HW=149.54' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.05 cfs)

Primary OutFlow Max=0.71 cfs @ 12.53 hrs HW=153.89' (Free Discharge)

↑**2=Orifice/Grate** (Weir Controls 0.71 cfs @ 0.98 fps)

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Summary for Pond P-2A: Units 2,3 MC-3500s

Inflow Area = 0.100 ac, 100.00% Impervious, Inflow Depth > 8.25" for 100-Year Cornell event
 Inflow = 0.87 cfs @ 12.07 hrs, Volume= 0.069 af
 Outflow = 0.11 cfs @ 12.79 hrs, Volume= 0.044 af, Atten= 87%, Lag= 43.2 min
 Discarded = 0.03 cfs @ 8.63 hrs, Volume= 0.040 af
 Primary = 0.09 cfs @ 12.79 hrs, Volume= 0.005 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 165.94' @ 12.79 hrs Surf.Area= 457 sf Storage= 1,458 cf

Plug-Flow detention time= 228.1 min calculated for 0.044 af (64% of inflow)
 Center-of-Mass det. time= 122.1 min (861.2 - 739.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	158.00'	705 cf	22.75"W x 20.11"L x 5.50"H Field A 2,516 cf Overall - 753 cf Embedded = 1,763 cf x 40.0% Voids
#2A	158.75'	753 cf	ADS_StormTech MC-3500 c +Capx 6 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap Cap Storage= +15.6 cf x 2 x 3 rows = 93.6 cf
		1,458 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	158.00'	2.410 in/hr Exfiltration over Surface area
#2	Primary	165.80'	3.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.03 cfs @ 8.63 hrs HW=158.08' (Free Discharge)
 ↑**1=Exfiltration** (Exfiltration Controls 0.03 cfs)

Primary OutFlow Max=0.09 cfs @ 12.79 hrs HW=165.94' (Free Discharge)
 ↑**2=Orifice/Grate** (Orifice Controls 0.09 cfs @ 1.82 fps)

Summary for Pond P-2D: Units 9,10 MC-3500s

Inflow Area = 1.049 ac, 46.77% Impervious, Inflow Depth > 3.27" for 100-Year Cornell event
 Inflow = 3.85 cfs @ 12.08 hrs, Volume= 0.285 af
 Outflow = 0.81 cfs @ 12.52 hrs, Volume= 0.285 af, Atten= 79%, Lag= 26.7 min
 Discarded = 0.27 cfs @ 11.61 hrs, Volume= 0.258 af
 Primary = 0.53 cfs @ 12.52 hrs, Volume= 0.027 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 157.27' @ 12.52 hrs Surf.Area= 1,431 sf Storage= 4,267 cf

Plug-Flow detention time= 141.7 min calculated for 0.285 af (100% of inflow)
 Center-of-Mass det. time= 141.4 min (983.4 - 842.1)

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Volume	Invert	Avail.Storage	Storage Description
#1A	152.65'	2,067 cf	15.58'W x 91.81'L x 5.50'H Field A 7,869 cf Overall - 2,701 cf Embedded = 5,167 cf x 40.0% Voids
#2A	153.40'	2,701 cf	ADS_StormTech MC-3500 c +Cap x 24 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap Cap Storage= +15.6 cf x 2 x 2 rows = 62.4 cf
		4,768 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	152.65'	8.270 in/hr Exfiltration over Surface area
#2	Primary	157.20'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 in 24.0" x 24.0" Grate Limited to weir flow at low heads

Discarded OutFlow Max=0.27 cfs @ 11.61 hrs HW=152.71' (Free Discharge)

↑**1=Exfiltration** (Exfiltration Controls 0.27 cfs)

Primary OutFlow Max=0.52 cfs @ 12.52 hrs HW=157.27' (Free Discharge)

↑**2=Orifice/Grate** (Weir Controls 0.52 cfs @ 0.89 fps)

Summary for Pond P-3D: Units 7,8 MC-3500s

Inflow Area = 0.242 ac, 63.79% Impervious, Inflow Depth > 5.69" for 100-Year Cornell event
 Inflow = 1.53 cfs @ 12.07 hrs, Volume= 0.115 af
 Outflow = 0.15 cfs @ 12.93 hrs, Volume= 0.115 af, Atten= 90%, Lag= 51.2 min
 Discarded = 0.12 cfs @ 11.41 hrs, Volume= 0.114 af
 Primary = 0.03 cfs @ 12.93 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
 Peak Elev= 151.81' @ 12.93 hrs Surf.Area= 621 sf Storage= 1,843 cf

Plug-Flow detention time= 122.0 min calculated for 0.115 af (100% of inflow)

Center-of-Mass det. time= 121.8 min (901.2 - 779.5)

Volume	Invert	Avail.Storage	Storage Description
#1A	147.00'	932 cf	22.75'W x 27.28'L x 5.50'H Field A 3,413 cf Overall - 1,083 cf Embedded = 2,330 cf x 40.0% Voids
#2A	147.75'	1,083 cf	ADS_StormTech MC-3500 c +Cap x 9 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap Cap Storage= +15.6 cf x 2 x 3 rows = 93.6 cf
		2,015 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	147.00'	8.270 in/hr Exfiltration over Surface area
#2	Primary	151.80'	24.0" x 24.0" Horiz. Orifice/Grate C= 0.600 in 24.0" x 24.0" Grate

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Limited to weir flow at low heads

Discarded OutFlow Max=0.12 cfs @ 11.41 hrs HW=147.06' (Free Discharge)

↑1=Exfiltration (Exfiltration Controls 0.12 cfs)

Primary OutFlow Max=0.01 cfs @ 12.93 hrs HW=151.81' (Free Discharge)

↑2=Orifice/Grate (Weir Controls 0.01 cfs @ 0.24 fps)

Summary for Pond P-4D: Units 4,5,6 MC-3500s

Inflow Area = 0.186 ac, 100.00% Impervious, Inflow Depth > 8.25" for 100-Year Cornell event
 Inflow = 1.61 cfs @ 12.07 hrs, Volume= 0.128 af
 Outflow = 0.32 cfs @ 12.66 hrs, Volume= 0.058 af, Atten= 80%, Lag= 35.4 min
 Discarded = 0.02 cfs @ 5.99 hrs, Volume= 0.039 af
 Primary = 0.30 cfs @ 12.66 hrs, Volume= 0.019 af

Routing by Stor-Ind method, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs
Peak Elev= 166.51' @ 12.66 hrs Surf.Area= 947 sf Storage= 3,129 cf

Plug-Flow detention time= 227.5 min calculated for 0.058 af (45% of inflow)
Center-of-Mass det. time= 80.8 min (819.9 - 739.1)

Volume	Invert	Avail.Storage	Storage Description
#1A	157.00'	1,386 cf	22.75'W x 41.62'L x 5.50'H Field A 5,207 cf Overall - 1,743 cf Embedded = 3,464 cf x 40.0% Voids
#2A	157.75'	1,743 cf	ADS_StormTech MC-3500 c +Cap x 15 Inside #1 Effective Size= 70.4"W x 45.0"H => 15.33 sf x 7.17'L = 110.0 cf Overall Size= 77.0"W x 45.0"H x 7.50'L with 0.33' Overlap Cap Storage= +15.6 cf x 2 x 3 rows = 93.6 cf
		3,129 cf	Total Available Storage

Storage Group A created with Chamber Wizard

Device	Routing	Invert	Outlet Devices
#1	Discarded	157.00'	1.020 in/hr Exfiltration over Surface area
#2	Primary	164.90'	3.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads

Discarded OutFlow Max=0.02 cfs @ 5.99 hrs HW=157.08' (Free Discharge)

↑1=Exfiltration (Exfiltration Controls 0.02 cfs)

Primary OutFlow Max=0.30 cfs @ 12.66 hrs HW=166.51' (Free Discharge)

↑2=Orifice/Grate (Orifice Controls 0.30 cfs @ 6.11 fps)

Summary for Link A: Merriam Southwest

Inflow Area = 0.949 ac, 42.50% Impervious, Inflow Depth = 0.00" for 100-Year Cornell event
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

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Summary for Link B: Offsite Northwest

Inflow Area = 0.362 ac, 0.00% Impervious, Inflow Depth > 1.37" for 100-Year Cornell event
Inflow = 0.41 cfs @ 12.12 hrs, Volume= 0.041 af
Primary = 0.41 cfs @ 12.12 hrs, Volume= 0.041 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link C: Existing Drywell

Inflow Area = 0.214 ac, 0.19% Impervious, Inflow Depth > 1.37" for 100-Year Cornell event
Inflow = 0.25 cfs @ 12.10 hrs, Volume= 0.024 af
Primary = 0.25 cfs @ 12.10 hrs, Volume= 0.024 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs

Summary for Link D: Hallett Hill Road

Inflow Area = 1.413 ac, 49.87% Impervious, Inflow Depth = 0.29" for 100-Year Cornell event
Inflow = 0.73 cfs @ 12.53 hrs, Volume= 0.034 af
Primary = 0.73 cfs @ 12.53 hrs, Volume= 0.034 af, Atten= 0%, Lag= 0.0 min

Primary outflow = Inflow, Time Span= 0.00-24.00 hrs, dt= 0.01 hrs