



8842PostRevBasin

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.556	39	>75% Grass cover, Good, HSG A (1S, 2S, 3S, 4S, 5S)
0.340	74	>75% Grass cover, Good, HSG C (7S)
0.009	98	Basin Bottom (4S)
0.066	98	Elevation 39 in yard (5S)
0.583	98	Parking lots, access drives (4S)
0.163	98	Paved Parking and sidewalk (3S)
0.382	98	Roof (6S)
0.011	98	Sidewalks (5S)
0.093	30	Woods, Good, HSG A (1S)
2.204	77	TOTAL AREA

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Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
0.649	HSG A	1S, 2S, 3S, 4S, 5S
0.000	HSG B	
0.340	HSG C	7S
0.000	HSG D	
1.215	Other	3S, 4S, 5S, 6S
2.204		TOTAL AREA

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Ground Covers (all nodes)

HSG-A (acres)	HSG-B (acres)	HSG-C (acres)	HSG-D (acres)	Other (acres)	Total (acres)	Ground Cover	Subcatchment Numbers
0.556	0.000	0.340	0.000	0.000	0.896	>75% Grass cover, Good	1S, 2S, 3S, 4S, 5S, 7S
0.000	0.000	0.000	0.000	0.009	0.009	Basin Bottom	4S
0.000	0.000	0.000	0.000	0.066	0.066	Elevation 39 in yard	5S
0.000	0.000	0.000	0.000	0.583	0.583	Parking lots, access drives	4S
0.000	0.000	0.000	0.000	0.163	0.163	Paved Parking and sidewalk	3S
0.000	0.000	0.000	0.000	0.382	0.382	Roof	6S
0.000	0.000	0.000	0.000	0.011	0.011	Sidewalks	5S
0.093	0.000	0.000	0.000	0.000	0.093	Woods, Good	1S
0.649	0.000	0.340	0.000	1.215	2.204	TOTAL AREA	

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Type III 24-hr 100 Year Storm Rainfall=7.59"

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Time span=0.00-36.00 hrs, dt=0.05 hrs, 721 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 1S: North	Runoff Area=10,336 sf 0.00% Impervious Runoff Depth=0.67" Tc=6.0 min CN=35 Runoff=0.07 cfs 0.013 af
Subcatchment 2S: Minot Ave	Runoff Area=1,850 sf 0.00% Impervious Runoff Depth=0.99" Tc=6.0 min CN=39 Runoff=0.03 cfs 0.004 af
Subcatchment 3S: West Parking Lot	Runoff Area=9,752 sf 72.72% Impervious Runoff Depth=5.47" Tc=6.0 min CN=82 Runoff=1.38 cfs 0.102 af
Subcatchment 4S: North and East Parking	Runoff Area=33,628 sf 76.75% Impervious Runoff Depth=5.70" Tc=6.0 min CN=84 Runoff=4.91 cfs 0.367 af
Subcatchment 5S: South	Runoff Area=8,972 sf 37.41% Impervious Runoff Depth=3.14" Tc=6.0 min CN=61 Runoff=0.73 cfs 0.054 af
Subcatchment 6S: Building Roof	Runoff Area=16,650 sf 100.00% Impervious Runoff Depth=7.35" Tc=6.0 min CN=98 Runoff=2.78 cfs 0.234 af
Subcatchment 7S: To Stone Trench	Runoff Area=14,812 sf 0.00% Impervious Runoff Depth=4.56" Tc=6.0 min CN=74 Runoff=1.78 cfs 0.129 af
Pond 1P: Cultecs	Peak Elev=34.79' Storage=1,532 cf Inflow=1.38 cfs 0.102 af Outflow=0.21 cfs 0.102 af
Pond 2P: Basin	Peak Elev=28.29' Storage=11,060 cf Inflow=7.69 cfs 0.601 af Discarded=0.84 cfs 0.601 af Primary=0.00 cfs 0.000 af Outflow=0.84 cfs 0.601 af
Pond 3P: Front Yard	Peak Elev=39.03' Storage=78 cf Inflow=0.73 cfs 0.054 af Outflow=0.55 cfs 0.054 af
Pond 4P: Crushed Stone Trench	Peak Elev=15.54' Storage=1,047 cf Inflow=1.78 cfs 0.129 af Outflow=0.66 cfs 0.129 af

Total Runoff Area = 2.204 ac Runoff Volume = 0.903 af Average Runoff Depth = 4.92"
44.89% Pervious = 0.989 ac 55.11% Impervious = 1.215 ac

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Summary for Subcatchment 1S: North

Runoff = 0.07 cfs @ 12.31 hrs, Volume= 0.013 af, Depth= 0.67"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 Year Storm Rainfall=7.59"

Area (sf)	CN	Description
6,283	39	>75% Grass cover, Good, HSG A
4,053	30	Woods, Good, HSG A
10,336	35	Weighted Average
10,336		100.00% Pervious Area

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

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Summary for Subcatchment 2S: Minot Ave

Runoff = 0.03 cfs @ 12.14 hrs, Volume= 0.004 af, Depth= 0.99"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
Type III 24-hr 100 Year Storm Rainfall=7.59"

Area (sf)	CN	Description
1,850	39	>75% Grass cover, Good, HSG A
1,850		100.00% Pervious Area

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

Summary for Subcatchment 3S: West Parking Lot

Runoff = 1.38 cfs @ 12.09 hrs, Volume= 0.102 af, Depth= 5.47"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100 Year Storm Rainfall=7.59"

	Area (sf)	CN	Description
*	7,092	98	Paved Parking and sidewalk
	2,660	39	>75% Grass cover, Good, HSG A
	9,752	82	Weighted Average
	2,660		27.28% Pervious Area
	7,092		72.72% Impervious Area

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

Summary for Subcatchment 4S: North and East Parking

Runoff = 4.91 cfs @ 12.09 hrs, Volume= 0.367 af, Depth= 5.70"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100 Year Storm Rainfall=7.59"

	Area (sf)	CN	Description
*	400	98	Basin Bottom
*	25,408	98	Parking lots, access drives
	7,820	39	>75% Grass cover, Good, HSG A
	33,628	84	Weighted Average
	7,820		23.25% Pervious Area
	25,808		76.75% Impervious Area

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

Summary for Subcatchment 5S: South

Runoff = 0.73 cfs @ 12.10 hrs, Volume= 0.054 af, Depth= 3.14"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100 Year Storm Rainfall=7.59"

	Area (sf)	CN	Description
*	500	98	Sidewalks
*	2,856	98	Elevation 39 in yard
	5,616	39	>75% Grass cover, Good, HSG A
	8,972	61	Weighted Average
	5,616		62.59% Pervious Area
	3,356		37.41% Impervious Area

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

Summary for Subcatchment 6S: Building Roof

Runoff = 2.78 cfs @ 12.09 hrs, Volume= 0.234 af, Depth= 7.35"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100 Year Storm Rainfall=7.59"

	Area (sf)	CN	Description
*	16,650	98	Roof
	16,650		100.00% Impervious Area

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

Summary for Subcatchment 7S: To Stone Trench

Runoff = 1.78 cfs @ 12.09 hrs, Volume= 0.129 af, Depth= 4.56"

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
 Type III 24-hr 100 Year Storm Rainfall=7.59"

Area (sf)	CN	Description
14,812	74	>75% Grass cover, Good, HSG C
14,812		100.00% Pervious Area

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

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Summary for Pond 1P: Cultecs

Inflow Area = 0.224 ac, 72.72% Impervious, Inflow Depth = 5.47" for 100 Year Storm event
 Inflow = 1.38 cfs @ 12.09 hrs, Volume= 0.102 af
 Outflow = 0.21 cfs @ 12.59 hrs, Volume= 0.102 af, Atten= 84%, Lag= 29.9 min
 Discarded = 0.21 cfs @ 12.59 hrs, Volume= 0.102 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 34.79' @ 12.59 hrs Surf.Area= 504 sf Storage= 1,532 cf

Plug-Flow detention time= 62.3 min calculated for 0.102 af (100% of inflow)
 Center-of-Mass det. time= 62.2 min (862.2 - 800.0)

Volume	Invert	Avail.Storage	Storage Description
#1	29.50'	899 cf	10.50'W x 48.00'L x 6.00'H Excavation/Crushed Stone 3,024 cf Overall - 777 cf Embedded = 2,247 cf x 40.0% Voids
#2	30.50'	777 cf	Cultec R-902HD x 12 Inside #1 Effective Size= 69.8"W x 48.0"H => 17.65 sf x 3.67'L = 64.7 cf Overall Size= 78.0"W x 48.0"H x 4.10'L with 0.44' Overlap
		1,676 cf	Total Available Storage

Device	Routing	Invert	Outlet Devices
#1	Discarded	29.50'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.21 cfs @ 12.59 hrs HW=34.78' (Free Discharge)

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

Summary for Pond 2P: Basin

Inflow Area = 1.154 ac, 84.45% Impervious, Inflow Depth = 6.25" for 100 Year Storm event
 Inflow = 7.69 cfs @ 12.09 hrs, Volume= 0.601 af
 Outflow = 0.84 cfs @ 12.80 hrs, Volume= 0.601 af, Atten= 89%, Lag= 42.9 min
 Discarded = 0.84 cfs @ 12.80 hrs, Volume= 0.601 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 28.29' @ 12.80 hrs Surf.Area= 4,372 sf Storage= 11,060 cf

Plug-Flow detention time= 138.2 min calculated for 0.601 af (100% of inflow)
 Center-of-Mass det. time= 138.0 min (912.3 - 774.3)

Volume	Invert	Avail.Storage	Storage Description
#1	21.00'	624 cf	20.00'W x 39.00'L x 2.00'H Crushed Stone Trench 1,560 cf Overall x 40.0% Voids
#2	23.00'	17,831 cf	Custom Stage Data (Conic) Listed below (Recalc)
		18,455 cf	Total Available Storage

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
23.00	780	0	0	780
24.00	1,132	951	951	1,149
26.00	2,040	3,128	4,078	2,099
28.00	3,360	5,345	9,424	3,468
30.00	5,108	8,407	17,831	5,275

Device	Routing	Invert	Outlet Devices
#1	Discarded	21.00'	8.270 in/hr Exfiltration over Surface area
#2	Primary	29.30'	10.0' long x 10.0' breadth Broad-Crested Rectangular Weir Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Discarded OutFlow Max=0.84 cfs @ 12.80 hrs HW=28.29' (Free Discharge)

↳ **1=Exfiltration** (Exfiltration Controls 0.84 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=21.00' (Free Discharge)

↳ **2=Broad-Crested Rectangular Weir** (Controls 0.00 cfs)

Summary for Pond 3P: Front Yard

Inflow Area = 0.206 ac, 37.41% Impervious, Inflow Depth = 3.14" for 100 Year Storm event
 Inflow = 0.73 cfs @ 12.10 hrs, Volume= 0.054 af
 Outflow = 0.55 cfs @ 12.17 hrs, Volume= 0.054 af, Atten= 24%, Lag= 4.3 min
 Discarded = 0.55 cfs @ 12.17 hrs, Volume= 0.054 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs
 Peak Elev= 39.03' @ 12.17 hrs Surf.Area= 2,896 sf Storage= 78 cf

Plug-Flow detention time= 1.0 min calculated for 0.054 af (100% of inflow)
 Center-of-Mass det. time= 1.0 min (847.8 - 846.7)

Volume	Invert	Avail.Storage	Storage Description
#1	39.00'	3,618 cf	12.00'W x 238.00'L x 1.00'H Prismatic Z=3.0

Device	Routing	Invert	Outlet Devices
#1	Discarded	39.00'	8.270 in/hr Exfiltration over Surface area

Discarded OutFlow Max=0.55 cfs @ 12.17 hrs HW=39.03' (Free Discharge)

↑1=Exfiltration (Exfiltration Controls 0.55 cfs)

Summary for Pond 4P: Crushed Stone Trench

Inflow Area = 0.340 ac, 0.00% Impervious, Inflow Depth = 4.56" for 100 Year Storm event
 Inflow = 1.78 cfs @ 12.09 hrs, Volume= 0.129 af
 Outflow = 0.66 cfs @ 12.37 hrs, Volume= 0.129 af, Atten= 63%, Lag= 16.5 min
 Discarded = 0.66 cfs @ 12.37 hrs, Volume= 0.129 af

Routing by Stor-Ind method, Time Span= 0.00-36.00 hrs, dt= 0.05 hrs / 2
 Peak Elev= 15.54' @ 12.37 hrs Surf.Area= 1,695 sf Storage= 1,047 cf

Plug-Flow detention time= 10.3 min calculated for 0.129 af (100% of inflow)
 Center-of-Mass det. time= 10.0 min (828.5 - 818.5)

Volume	Invert	Avail.Storage	Storage Description
#1	14.00'	1,356 cf	3.00'W x 565.00'L x 2.00'H Excavation/Crushed Stone 3,390 cf Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#1	Discarded	14.00'	8.270 in/hr Exfiltration over Wetted area

Discarded OutFlow Max=0.66 cfs @ 12.37 hrs HW=15.54' (Free Discharge)
 ↑1=Exfiltration (Exfiltration Controls 0.66 cfs)