## Stormwater Detention and Infiltration Design Data Sheet

SDI-Design Data v2.00, Released January 2020

Stormwater Facility Name: Pond 1

Facility Location & Jurisdiction: Lazy Y and Rocking J Subdivision

User Input: Watershed Characteristics

Extended Detention Basin (EDB)	EDB	
Watershed Area =	17.00	acres
Watershed Length =	2,220	ft
Watershed Length to Centroid =	1,610	ft
Watershed Slope =	0.030	ft/ft
Watershed Imperviousness =	19.5%	percent
Percentage Hydrologic Soil Group A =	0.0%	percent
Percentage Hydrologic Soil Group B =	100.0%	percent
Percentage Hydrologic Soil Groups C/D =	0.0%	percent
Target WQCV Drain Time =	40.0	hours
Location for 1-hr Rainfall Depths (u	se dropdown):	
User Input	•	

See comments on drainage report, this document will be reviewed further once construction drawings for the ponds are provided.

After providing required inputs above including 1-hour rainfall depths, click 'Run CUHP' to generate runoff hydrographs using the embedded Colorado Urban Hydrograph Procedure.

Once CUHP has been run and the Stage-Area-Discharge information has been provided, click 'Process Data' to interpolate the Stage-Area-Volume-Discharge data and generate summary results in the table below. Once this is complete, click 'Print to PDF'.

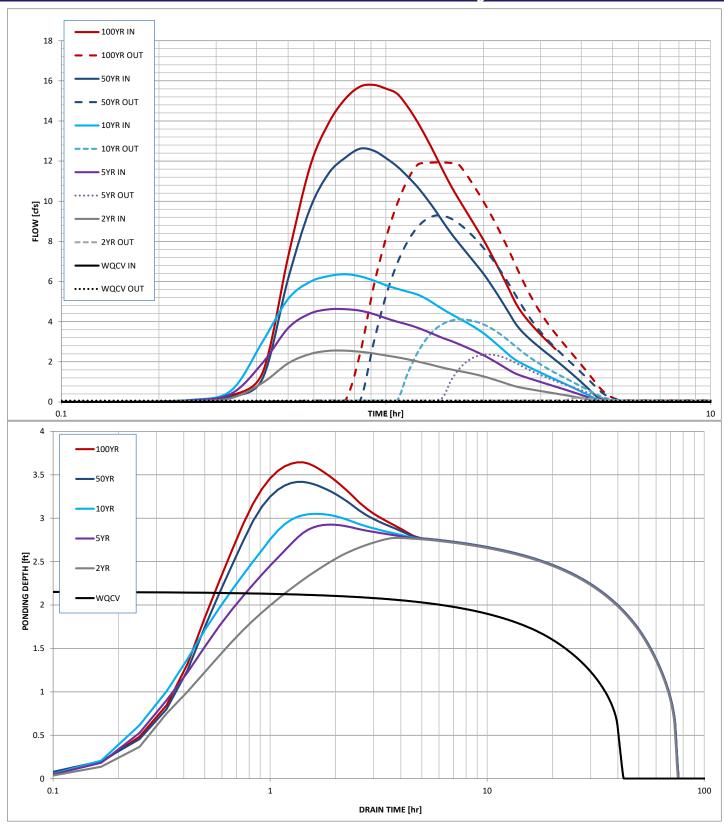
User Defined	User Defined	User Defined	User Defined	
Stage [ft]	Area [ft^2]	Stage [ft]	Discharge [cfs]	
0.00	10	0.00	0.00	
0.60	335	0.60	0.02	
1.60	5,216	1.60	0.05	
2.16	9,872	2.16	0.07	
2.60	13,531	2.60	0.08	
2.76	14,003	2.76	0.08	
3.60	16,478	3.60	11.86	
3.61	16,503	3.61	11.88	
4.60	18,961	4.60	13.56	
5.60	21,443	5.60	144.67	
6.10	23,000	6.10	262.68	

After completing and printing this worksheet to a pdf, go to: <a href="https://maperture.digitaldataservices.com/gvh/?viewer=cswdif">https://maperture.digitaldataservices.com/gvh/?viewer=cswdif</a> Create a new stormwater facility, and attach the PDF of this worksheet to that record.

## Routed Hydrograph Results

acea Tryarograph Resaits							_
Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
One-Hour Rainfall Depth =	N/A	1.19	1.50	1.75	2.25	2.52	in
CUHP Runoff Volume =	0.161	0.365	0.670	0.961	1.776	2.249	acre-ft
Inflow Hydrograph Volume =	N/A	0.365	0.670	0.961	1.776	2.249	acre-ft
Time to Drain 97% of Inflow Volume =	38.8	69.4	66.4	63.8	56.9	53.3	hours
Time to Drain 99% of Inflow Volume =	40.3	72.5	71.4	70.4	67.5	65.9	hours
Maximum Ponding Depth =	2.15	2.77	2.93	3.05	3.42	3.64	ft
Maximum Ponded Area =	0.22	0.32	0.33	0.34	0.37	0.38	acres
Maximum Volume Stored =	0.161	0.334	0.385	0.427	0.555	0.641	acre-ft





## Stormwater Detention and Infiltration Design Data Sheet

SDI-Design Data v2.00, Released January 2020

Stormwater Facility Name: Pond 2

Facility Location & Jurisdiction: <u>Lazy Y and Rocking J Subdivision</u>

User Input: Watershed Characteristics

Exte	ended Detention Basin (EDB)	•	EDB			
	Watershed Area	3 =	8.50		acres	
	Watershed Length	1 =	1,175		ft	
	Watershed Length to Centroic	= 1	750		ft	
	Watershed Slope	= =	0.030		ft/ft	
	Watershed Imperviousness	s =	26.5%		percent	
	Percentage Hydrologic Soil Group A	۱ =	0.0%		percent	
	Percentage Hydrologic Soil Group E	3 =	100.0%		percent	
Per	centage Hydrologic Soil Groups C/D	0.0%		percent		
	Target WQCV Drain Time	= =	40.0		hours	
	Location for 1-hr Rainfall Depths (use dropdown					
	User Input			•		

After providing required inputs above including 1-hour rainfall depths, click 'Run CUHP' to generate runoff hydrographs using the embedded Colorado Urban Hydrograph Procedure.

Once CUHP has been run and the Stage-Area-Discharge information has been provided, click 'Process Data' to interpolate the Stage-Area-Volume-Discharge data and generate summary results in the table below. Once this is complete, click 'Print to PDF'.

User Defined	User Defined	User Defined	User Defined	
Stage [ft]	Area [ft^2]	Stage [ft]	Discharge [cfs]	
0.00	10	0.00	0.00	
0.75	380	0.75	0.02	
1.75	7,331	1.75	0.04	
1.80	7,727	1.80	0.04	
2.37	12,246	2.36	0.42	
2.75	15,259	2.75	6.08	
2.92	15,757	2.91	7.78	
3.25	16,723	3.25	8.25	
3.75	17,785	3.75	44.96	
4.50	19,405	4.50	202.66	

After completing and printing this worksheet to a pdf, go to: <a href="https://maperture.digitaldataservices.com/gvh/?viewer=cswdif">https://maperture.digitaldataservices.com/gvh/?viewer=cswdif</a> Create a new stormwater facility, and attach the PDF of this worksheet to that record.

## Routed Hydrograph Results

Design Storm Return Period =   WQCV   2 Year   5 Year   10 Year   50 Year   100 Year	uteu nyurugrapii kesuits							_
CUHP Runoff Volume = 0.099 0.236 0.397 0.547 0.950 1.183 acre-ft Inflow Hydrograph Volume = N/A 0.236 0.397 0.547 0.950 1.183 acre-ft Time to Drain 97% of Inflow Volume = 36.5 44.5 43.2 41.1 35.8 33.1 hours Time to Drain 99% of Inflow Volume = 38.6 47.8 47.8 47.0 44.8 43.6 hours Maximum Ponding Depth = 1.80 2.22 2.44 2.53 2.77 2.93 ft Maximum Ponded Area = 0.18 0.25 0.29 0.31 0.35 0.36 acres	Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
Inflow Hydrograph Volume = N/A 0.236 0.397 0.547 0.950 1.183 acre-ft  Time to Drain 97% of Inflow Volume = 36.5 44.5 43.2 41.1 35.8 33.1 hours  Time to Drain 99% of Inflow Volume = 38.6 47.8 47.8 47.0 44.8 43.6 hours  Maximum Ponding Depth = 1.80 2.22 2.44 2.53 2.77 2.93 ft  Maximum Ponded Area = 0.18 0.25 0.29 0.31 0.35 0.36 acres	One-Hour Rainfall Depth =	N/A	1.19	1.50	1.75	2.25	2.52	in
Time to Drain 97% of Inflow Volume = 36.5 44.5 43.2 41.1 35.8 33.1 hours Time to Drain 99% of Inflow Volume = 38.6 47.8 47.8 47.0 44.8 43.6 hours  Maximum Ponding Depth = 1.80 2.22 2.44 2.53 2.77 2.93 ft  Maximum Ponded Area = 0.18 0.25 0.29 0.31 0.35 0.36 acres	CUHP Runoff Volume =	0.099	0.236	0.397	0.547	0.950	1.183	acre-ft
Time to Drain 99% of Inflow Volume = 38.6 47.8 47.8 47.0 44.8 43.6 hours  Maximum Ponding Depth = 1.80 2.22 2.44 2.53 2.77 2.93 ft  Maximum Ponded Area = 0.18 0.25 0.29 0.31 0.35 0.36 acres	Inflow Hydrograph Volume =	N/A	0.236	0.397	0.547	0.950	1.183	acre-ft
Maximum Ponding Depth =       1.80       2.22       2.44       2.53       2.77       2.93       ft         Maximum Ponded Area =       0.18       0.25       0.29       0.31       0.35       0.36       acres	Time to Drain 97% of Inflow Volume =	36.5	44.5	43.2	41.1	35.8	33.1	hours
Maximum Ponded Area = 0.18 0.25 0.29 0.31 0.35 0.36 acres	Time to Drain 99% of Inflow Volume =	38.6	47.8	47.8	47.0	44.8	43.6	hours
0110 0120 0127 0100 0100 0100	Maximum Ponding Depth =	1.80	2.22	2.44	2.53	2.77	2.93	ft
Maximum Volume Stored = 0.100 0.190 0.250 0.277 0.356 0.414 acre-ft	Maximum Ponded Area =	0.18	0.25	0.29	0.31	0.35	0.36	acres
	Maximum Volume Stored =	0.100	0.190	0.250	0.277	0.356	0.414	acre-ft



