## Stormwater Detention and Infiltration Design Data Sheet

SDI-Design Data v2.00, Released January 2020

Stormwater Facility Name: Widefield Water and Sanitation District - Rolling Hills Tank (SFB)

Facility Location & Jurisdiction: NW 1/4 of Section 1, T15S, R65W of 6th P.M., El Paso County, Colorado

User Input: Watershed Characteristics

			-					
Sand Filter (SF)	•	SF						
Watershed Area =	=[	1.76	acres					
Watershed Length =	=[	1,000	ft					
Watershed Length to Centroid =	=[	650	ft					
Watershed Slope =	=[	0.012	ft/ft					
Watershed Imperviousness =	=[	36.0%	percent					
Percentage Hydrologic Soil Group A =	=[	0.0%	percent					
Percentage Hydrologic Soil Group B =	=[	0.0%	percent					
Percentage Hydrologic Soil Groups C/D =	=[	100.0%	percent					
Target WQCV Drain Time =	=	12.0	hours					
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Note: L / W Ratio > 8 L / W Ratio = 13.04

user Defined	User Denned	User Denned	User Dellined
Stage [ft]	Area [ft^2]	Stage [ft]	Discharge [cfs]
0.00	1,612	0.00	0.00
0.29	1,815	0.29	0.03
0.51	1,976	0.51	0.32
0.80	2,198	0.80	1.55
0.93	2,301	0.93	2.30
1.24	2,555	1.24	5.87
1.55	2,822	1.55	12.47
1.86	3,101	1.86	22.65
2.00	3,231	2.00	28.55

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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'.

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

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Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
One-Hour Rainfall Depth =	N/A	0.69	0.98	1.23	1.86	2.14	in
CUHP Runoff Volume =	0.020	0.028	0.048	0.076	0.174	0.222	acre-ft
Inflow Hydrograph Volume =	0.004	0.006	0.010	0.015	0.035	0.044	acre-ft
Time to Drain 97% of Inflow Volume =	13.9	13.9	14.0	13.7	11.0	10.2	hours
Time to Drain 99% of Inflow Volume =	18.1	18.1	18.2	17.9	15.3	14.4	hours
Maximum Ponding Depth =	0.09	0.13	0.21	0.32	0.53	0.59	ft
Maximum Ponded Area =	0.04	0.04	0.04	0.04	0.05	0.05	acres
Maximum Volume Stored =	0.003	0.005	0.008	0.012	0.022	0.025	acre-ft



