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				
Location for 1-hr Rainfall Depths (use dropdown):						
User Input	•					

Note: L / W Ratio > 8 L / W Ratio = 13.04

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:
https://maperture.digitaldataservices.com/gvh/?viewer=cswdif
Create a new stormwater facility, and attach the PDE of this

Create a new stormwater facility, and attach the PDF of this worksheet to that record.

Routed Hydrograph Results

WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
N/A	0.69	0.98	1.23	1.86	2.14	in
0.020	0.028	0.048	0.076	0.174	0.222	acre-ft
0.004	0.006	0.010	0.015	0.035	0.044	acre-ft
13.9	13.9	14.0	13.7	11.0	10.2	hours
18.1	18.1	18.2	17.9	15.3	14.4	hours
0.09	0.13	0.21	0.32	0.53	0.59	ft
0.04	0.04	0.04	0.04	0.05	0.05	acres
0.003	0.005	0.008	0.012	0.022	0.025	acre-ft
	WQCV N/A 0.020 0.004 13.9 18.1 0.09 0.04 0.003	WQCV2 YearN/A0.690.0200.0280.0040.00613.913.918.118.10.090.130.040.040.0030.005	WQCV2 Year5 YearN/A0.690.980.0200.0280.0480.0040.0060.01013.913.914.018.118.118.20.090.130.210.040.040.040.030.0050.008	WQCV2 Year5 Year10 YearN/A0.690.981.230.0200.0280.0480.0760.0040.0060.0100.01513.913.914.013.718.118.118.217.90.090.130.210.320.040.040.040.040.0030.0050.0080.012	WQCV2 Year5 Year10 Year50 YearN/A0.690.981.231.860.0200.0280.0480.0760.1740.0040.0060.0100.0150.03513.913.914.013.711.018.118.118.217.915.30.090.130.210.320.530.040.040.040.040.050.0030.0050.0080.0120.022	WQCV2 Year5 Year10 Year50 Year100 YearN/A0.690.981.231.862.140.0200.0280.0480.0760.1740.2220.0040.0060.0100.0150.0350.04413.913.914.013.711.010.218.118.118.217.915.314.40.090.130.210.320.530.590.040.040.040.040.050.050.0030.0050.0080.0120.0220.025

	User Defined	User Defined	User Defined	User Defined
	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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