Stormwater Detention and Infiltration Design Data Sheet

SDI-Design Data v2.00, Released January 2020

Stormwater Facility Name: The Rock Commerce Center

Facility Location & Jurisdiction: El Paso County

User Input: Watershed Characteristics								
Extended Detention Basin (EDB)	▼	EDB						
Watershed Area	11.38	acres						
Watershed Length	1,550	ft						
Watershed Length to Centroid	775	ft						
Watershed Slope	0.030	ft/ft						
Watershed Imperviousnes	85.0%	percent						
Percentage Hydrologic Soil Group A	0.0%	percent						
Percentage Hydrologic Soil Group B	100.0%	percent						
Percentage Hydrologic Soil Groups C/E	0.0%	percent						
Target WQCV Drain Time	e =	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'.

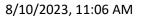
After completing and printing this worksheet to a pdf, go to:			
https://maperture.digitaldataservices.com/gvh/?viewer=cswdif			
Create a new stormwater facility, and attach the PDF of this			
worksheet to that record.			

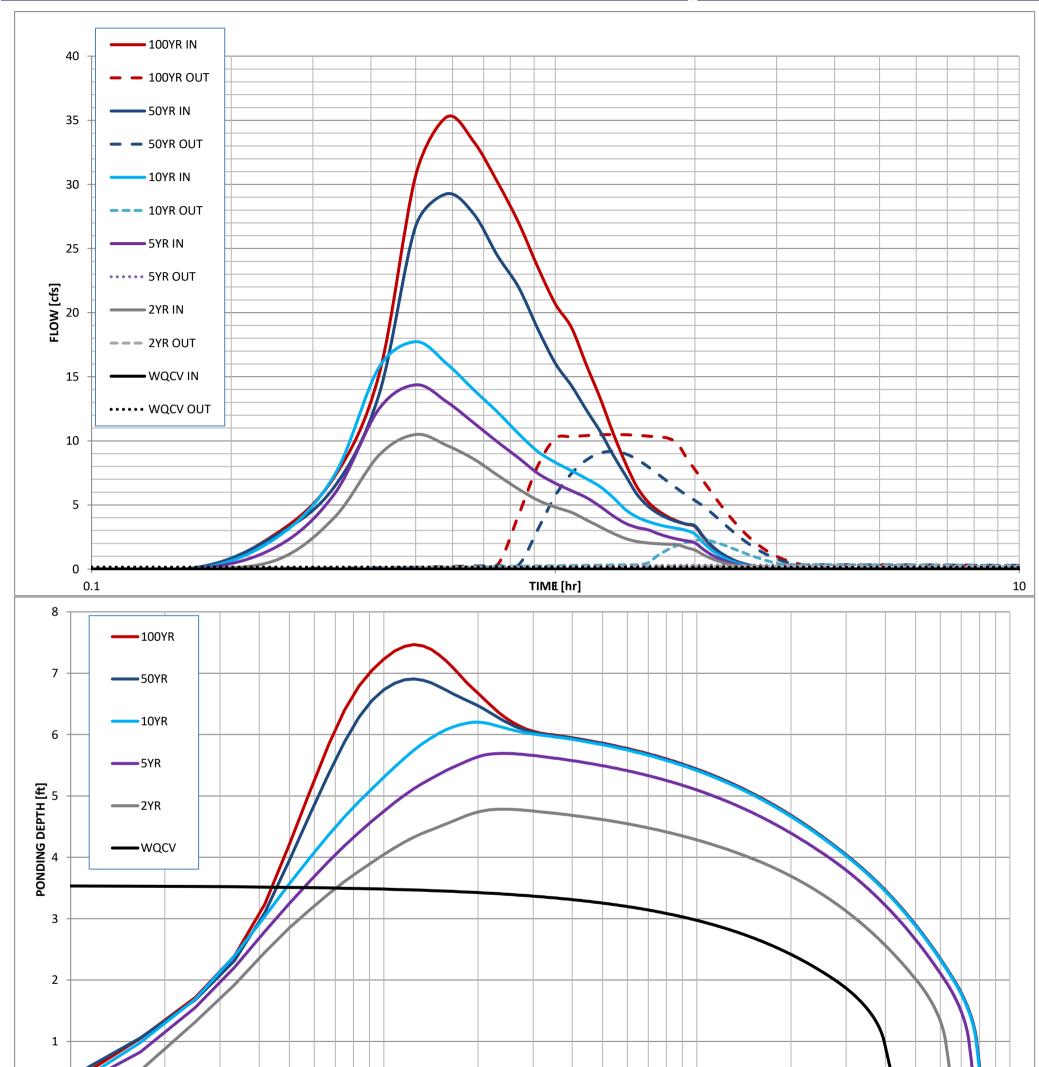
User Defined	User Defined	User Defined	User Defined
Stage [ft]	Area [ft^2]	Stage [ft]	Discharge [cfs]
0.00	0	0.00	0.00
1.00	747	1.00	0.05
2.00	4,659	2.00	0.07
3.00	9,002	3.00	0.14
4.00	10,517	4.00	0.17
5.00	12,089	5.00	0.25
6.00	13,719	6.00	0.34
7.00	15,407	7.00	10.15
8.00	17,156	8.00	10.89
9.00	18,969	9.00	101.53
10.00	20,803	10.00	300.74

Routed Hydrograph Results

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Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	I
One-Hour Rainfall Depth =	N/A	0.90	1.20	1.46	2.17	2.52	in
CUHP Runoff Volume =	0.343	0.688	0.960	1.208	1.927	2.289	acre-ft
Inflow Hydrograph Volume =	N/A	0.688	0.960	1.208	1.927	2.289	acre-ft
Time to Drain 97% of Inflow Volume =	39.3	59.7	69.7	72.3	68.4	66.6	hours
Time to Drain 99% of Inflow Volume =	41.3	62.8	73.8	77.3	75.8	75.2	hours
Maximum Ponding Depth =	3.55	4.78	5.69	6.20	6.91	7.47	ft
Maximum Ponded Area =	0.23	0.27	0.30	0.32	0.35	0.37	acres
Maximum Volume Stored =	0.345	0.649	0.911	1.071	1.306	1.509	acre-ft

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