Stormwater Detention and Infiltration Design Data Sheet

SDI-Design Data v2.00, Released January 2020

Stormwater Facility Name: **Rex Road WQ-DP3**

Facility Location & Jurisdiction: Rex Road, MSMD, El Paso County

User Input: Watershed Characteristics

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Extend	ded Detention Basin (EDB)	•	EDB					
Watershed Area =			117.70		acres			
	Watershed Length	4,350		ft				
	Watershed Length to Centroic	1,615		ft				
	Watershed Slope	0.027		ft/ft				
	Watershed Imperviousness	5 =	26.2%		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	= =	12.0		hours			
Location for 1-hr Rainfall Depths (use dropdown):								
	User Input			\blacksquare				

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	0	0.00	0.00
1.25	1,794	1.25	0.08
2.25	2,674	2.25	0.12
2.50	2,967	2.50	2.38
2.75	3,261	2.75	6.50
3.25	3,847	3.25	18.15
4.25	4,770	4.25	51.09
5.25	5,819	5.25	93.73
6.25	7,105	6.25	143.85
7.25	8,460	7.25	164.46
8.25	10,687	8.25	182.77
8.75	11,709	8.75	191.26
9.25	12,730	9.25	337.29

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.

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	0.83	1.09	1.33	1.99	2.31	in	
CUHP Runoff Volume =	1.091	1.541	2.421	3.981	10.697	14.380	acre-ft	
Inflow Hydrograph Volume =	N/A	1.541	2.421	3.981	10.697	14.380	acre-ft	
Time to Drain 97% of Inflow Volume =	5.7	7.3	4.3	2.2	1.3	1.3	hours	
Time to Drain 99% of Inflow Volume =	8.5	12.1	10.5	8.3	2.7	2.5	hours	
Maximum Ponding Depth =	8.92	3.14	3.43	3.96	5.75	6.71	ft	
Maximum Ponded Area =	0.28	0.09	0.09	0.10	0.15	0.18	acres	
Maximum Volume Stored =	1.093	0.142	0.167	0.219	0.442	0.598	acre-ft	

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