Stormwater Detention and Infiltration Design Data Sheet

SDI-Design Data v2.00, Released January 2020

Stormwater Facility Name: Fox Run Substation

Facility Location & Jurisdiction: Monument, El Paso County, Colorado

User Input: Watershed Characteristics

ser input: Watershea enaracteristics									
Е	xtended Detention Basin (EDB)	EDB							
	Watershed Area =	4.95	acres						
	Watershed Length =	500	ft						
	Watershed Length to Centroid =	50	ft						
	Watershed Slope =	0.010	ft/ft						
	Watershed Imperviousness =	71.0%	percent						
	Percentage Hydrologic Soil Group A =	0.0%	percent						
	Percentage Hydrologic Soil Group B =	100.0%	percent						
P	ercentage 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	0	0.00	0.02
0.50	7,253	0.50	0.05
1.00	16,055	1.00	0.10
1.50	17,299	1.50	0.16
2.00	18,389	2.00	0.23
2.50	19,509	2.50	0.30
3.00	20,656	3.00	0.37
3.50	21,833	3.50	0.44
4.00	23,038	4.00	0.51

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	1.19	1.50	1.75	2.25	2.52	in
CUHP Runoff Volume =	0.115	0.287	0.385	0.468	0.652	0.755	acre-ft
Inflow Hydrograph Volume =	N/A	0.287	0.385	0.468	0.652	0.755	acre-ft
Time to Drain 97% of Inflow Volume =	25.0	43.0	50.0	54.8	63.0	66.6	hours
Time to Drain 99% of Inflow Volume =	26.0	45.3	52.8	58.1	67.3	71.5	hours
Maximum Ponding Depth =	0.82	1.25	1.49	1.69	2.12	2.34	ft
Maximum Ponded Area =	0.30	0.38	0.40	0.41	0.43	0.44	acres
Maximum Volume Stored =	0.116	0.269	0.363	0.443	0.619	0.719	acre-ft



