

Stormwater Detention and Infi

SDI-Design Data v2.00, Rel

These two values do not match what is shown on the MHFD-Detention spreadsheet in the FDR. Options:

- 1) Revise to remove discrepancy.
- 2) If these values were modified on here to get the outputs to better align with MHFD-Detention, simply upload MHFD-Detention calcs into this EDARP slot. We do not specifically need this SDI sheet, just any pond calcs. We'd rather have the MHFD-Detention calcs then two spreadsheets that have differing inputs.

Stormwater Facility Name: **Pond 1**

Facility Location & Jurisdiction: **Hay Creek Valley, El Paso County**

User Input: Watershed Characteristics

Extended Detention Basin (EDB)	▼	EDB	
Watershed Area =		29.19	acres
Watershed Length =		3,000	ft
Watershed Length to Centroid =		1,500	ft
Watershed Slope =		0.048	ft/ft
Watershed Imperviousness =		17.1%	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 =		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 Stage [ft]	User Defined Area [ft^2]	User Defined Stage [ft]	User Defined Discharge [cfs]
0.00	60	0.00	0.00
0.40	60	0.25	0.01
0.90	237	0.50	0.02
1.40	1,096	0.75	0.02
1.90	4,884	1.00	0.03
2.40	12,158	1.25	0.05
2.90	22,987	1.50	0.05
3.40	33,167	1.75	0.06
3.90	43,762	2.00	0.07
4.40	49,829	2.25	0.07
4.90	56,410	2.50	0.08
5.40	59,443	2.75	0.18
5.90	62,026	3.00	0.28
6.40	64,682	3.25	0.34
6.90	67,380	3.50	2.08
7.40	70,161	3.75	8.29
7.90	72,971	4.00	14.49
		4.25	14.92
		4.50	15.35
		4.75	15.76
		5.00	16.16
		5.25	16.55
		5.50	16.93
		5.75	17.30
		6.00	37.17
		6.25	75.30
		6.50	127.50
		6.75	192.72
		7.00	270.62
		7.25	361.10
		7.50	464.21
		7.75	580.07
		7.90	655.78

After completing and printing this worksheet to a pdf, go to:

<https://maperture.digitaldataservices.com/qvh/?viewer=cswdif>

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

Routed Hydrograph Results

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 =	0.251	0.564	1.075	1.568	2.970	3.784	acre-ft
Inflow Hydrograph Volume =	N/A	0.564	1.075	1.568	2.970	3.784	acre-ft
Time to Drain 97% of Inflow Volume =	38.2	51.8	52.6	50.0	42.5	38.3	hours
Time to Drain 99% of Inflow Volume =	39.8	54.8	57.5	56.5	53.7	52.3	hours
Maximum Ponding Depth =	2.72	3.17	3.53	3.67	4.04	4.42	ft
Maximum Poned Area =	0.43	0.65	0.82	0.89	1.04	1.15	acres
Maximum Volume Stored =	0.254	0.499	0.762	0.883	1.237	1.658	acre-ft

Stormwater Detention and Infiltration Design Data Sheet

