

Stormwater Detention and Infiltration Design Data Sheet

SDI-Design Data v2.00, Released January 2020

Stormwater Facility Name: **Stormwater Detention Pond**

Facility Location & Jurisdiction: **Cherokee TDS Reduction Facility**

User Input: Watershed Characteristics

Extended Detention Basin (EDB) ▼		EDB
Watershed Area =	26.71	acres
Watershed Length =	2,482	ft
Watershed Length to Centroid =	1,241	ft
Watershed Slope =	0.015	ft/ft
Watershed Imperviousness =	12.40%	percent
Percentage Hydrologic Soil Group A =	31.9%	percent
Percentage Hydrologic Soil Group B =	68.1%	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	8,133	0.00	0.00
1.00	14,237	1.00	0.26
2.00	21,999	2.00	0.78
3.00	31,008	3.00	6.14
4.00	39,991	4.00	7.17
5.00	57,768	5.00	83.66

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

	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
Design Storm Return Period =							
One-Hour Rainfall Depth =	N/A	0.99	1.29	1.57	2.35	2.74	in
CUHP Runoff Volume =	0.178	0.160	0.280	0.646	2.370	3.397	acre-ft
Inflow Hydrograph Volume =	N/A	0.160	0.280	0.646	2.370	3.397	acre-ft
Time to Drain 97% of Inflow Volume =	32.6	33.8	35.3	36.8	29.8	27.6	hours
Time to Drain 99% of Inflow Volume =	42.1	43.3	44.8	46.3	39.9	38.0	hours
Maximum Ponding Depth =	0.75	0.56	0.90	1.67	3.11	3.93	ft
Maximum Poned Area =	0.29	0.26	0.31	0.45	0.73	0.90	acres
Maximum Volume Stored =	0.180	0.126	0.225	0.514	1.360	2.034	acre-ft

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