

# Stormwater Detention and Infiltration Design Data Sheet

SDI-Design Data v2.00, Released January 2020

Stormwater Facility Name: **8140 and 8150 Cessna Drive, Peyton, El Paso County, Colorado**

Facility Location & Jurisdiction: **8140 and 8150 Cessna Drive Peyton, El Paso County, Colorado O. E. Watts 7-13-21**

## User Input: Watershed Characteristics

Extended Detention Basin (EDB) ▼	EDB	
Watershed Area =	3.14	acres
Watershed Length =	610	ft
Watershed Length to Centroid =	620	ft
Watershed Slope =	0.016	ft/ft
Watershed Imperviousness =	48.0%	percent
Percentage Hydrologic Soil Group A =	100.0%	percent
Percentage Hydrologic Soil Group B =	0.0%	percent
Percentage Hydrologic Soil Groups C/D =	0.0%	percent
Target WQCV Drain Time =	40.0	hours

Note: Lc/L Ratio > 0.9  
Lc / L Ratio = 1.02

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	1,010	0.00	0.00
1.00	1,673	1.00	6.21
2.00	2,436	2.00	8.78
3.00	3,300	3.00	10.75
4.00	4,265	4.00	12.41
5.00	5,330	5.00	13.88

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

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 =	0.053	0.128	0.170	0.204	0.313	0.382	acre-ft
Inflow Hydrograph Volume =	N/A	0.128	0.170	0.204	0.313	0.382	acre-ft
Time to Drain 97% of Inflow Volume =	>120	0.9	1.0	0.9	1.2	1.3	hours
Time to Drain 99% of Inflow Volume =	0.3	2.1	2.1	2.1	2.1	2.0	hours
Maximum Ponding Depth =	1.51	0.20	0.27	0.32	0.56	0.69	ft
Maximum Poned Area =	0.05	0.03	0.03	0.03	0.03	0.03	acres
Maximum Volume Stored =	0.053	0.005	0.007	0.008	0.015	0.020	acre-ft

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