

# Stormwater Detention and Infiltration Design Data Sheet

*SDI-Design Data v2.00, Released January 2020*

Stormwater Facility Name: **WQ Pond**

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Facility Location & Jurisdiction: **Skye Vista Subdivision, El Paso County**

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### User Input: Watershed Characteristics

Extended Detention Basin (EDB)	▼	EDB	
Watershed Area =	24.60	acres	
Watershed Length =	1,500	ft	
Watershed Length to Centroid =	750	ft	
Watershed Slope =	0.050	ft/ft	
Watershed Imperviousness =	14.5%	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	130	0.00	0.00
0.83	318	0.83	0.03
1.33	1,363	1.33	0.04
1.83	3,221	1.83	0.05
2.33	5,218	2.33	0.05
2.83	7,202	2.83	0.06
3.33	9,005	3.33	0.07
3.83	10,216	3.83	0.24
4.33	11,272	4.33	12.51
4.83	12,295	4.83	29.74
5.33	13,354	5.33	30.86
5.83	14,462	5.83	31.94
6.33	15,482	6.33	63.31
6.83	16,529	6.83	124.59
7.33	18,011	7.33	210.23
7.43	19,993	7.43	230.18

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	1.19	1.50	1.75	2.25	2.52	in
CUHP Runoff Volume =	0.186	0.419	0.837	1.244	2.423	3.109	acre-ft
Inflow Hydrograph Volume =	N/A	0.419	0.837	1.244	2.423	3.109	acre-ft
Time to Drain 97% of Inflow Volume =	41.2	63.3	<b>60.0</b>	57.1	48.6	44.0	hours
Time to Drain 99% of Inflow Volume =	42.8	66.1	64.8	63.8	60.5	<b>58.7</b>	hours
Maximum Ponding Depth =	2.99	3.86	4.10	4.29	4.79	5.34	ft
Maximum Poned Area =	0.18	0.24	0.25	0.26	0.28	<b>0.31</b>	acres
Maximum Volume Stored =	0.186	0.370	0.426	0.474	0.607	0.771	acre-ft

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