

Stormwater Detention and Infiltration Design Data Sheet

SDI-Design Data v2.00, Released January 2020

Stormwater Facility Name: **Forest Lakes Filing 5 - Pond C**

Facility Location & Jurisdiction: **Forest Lakes Metropolitan District - Private Facility**

User Input: Watershed Characteristics

<input type="text" value="Extended Detention Basin (EDB)"/>		<input type="text" value="EDB"/>	
Watershed Area =	<input type="text" value="29.94"/>	acres	
Watershed Length =	<input type="text" value="1,200"/>	ft	
Watershed Length to Centroid =	<input type="text" value="300"/>	ft	
Watershed Slope =	<input type="text" value="0.080"/>	ft/ft	Steep Slope > 0.06 ft/ft
Watershed Imperviousness =	<input type="text" value="32.0%"/>	percent	
Percentage Hydrologic Soil Group A =	<input type="text" value="0.0%"/>	percent	
Percentage Hydrologic Soil Group B =	<input type="text" value="100.0%"/>	percent	
Percentage Hydrologic Soil Groups C/D =	<input type="text" value="0.0%"/>	percent	
Target WQCV Drain Time =	<input type="text" value="40.0"/>	hours	

Location for 1-hr Rainfall Depths (use dropdown):

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	250	0.00	0.00
0.60	854	0.60	0.30
2.60	21,152	2.60	0.33
4.60	34,109	4.60	1.12
6.60	43,501	6.60	36.43
8.60	52,857	8.60	42.78
10.60	69,456	10.60	181.98
12.60	85,859	12.60	701.97

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	3.10	in
CUHP Runoff Volume =	0.393	0.941	1.498	2.008	3.349	5.511	acre-ft
Inflow Hydrograph Volume =	N/A	0.941	1.498	2.008	3.349	5.511	acre-ft
Time to Drain 97% of Inflow Volume =	14.6	29.8	37.6	42.2	41.1	39.0	hours
Time to Drain 99% of Inflow Volume =	14.9	30.6	38.8	43.8	43.8	43.3	hours
Maximum Ponding Depth =	2.34	3.25	4.06	4.66	5.47	6.65	ft
Maximum Poned Area =	0.43	0.58	0.70	0.79	0.88	1.00	acres
Maximum Volume Stored =	0.395	0.857	1.374	1.823	2.494	3.606	acre-ft

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