Stormwater Detention and Infiltration Design Data Sheet

SDI-Design Data v2.00, Released January 2020

Stormwater Facility Name: **The Villas at Claremont Ranch**

Facility Location & Jurisdiction: **1250 Meadowbrook Parkway/El Paso County**

User Input: Watershed Characteristics

Extended Detention Basin (EDB)	EDB	
Watershed Area =	7.78	acres
Watershed Length =	1,130	ft
Watershed Length to Centroid =	585	ft
Watershed Slope =	0.015	ft/ft
Watershed Imperviousness =	49.0%	percent
Percentage Hydrologic Soil Group A =	25.8%	percent
Percentage Hydrologic Soil Group B =	74.2%	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

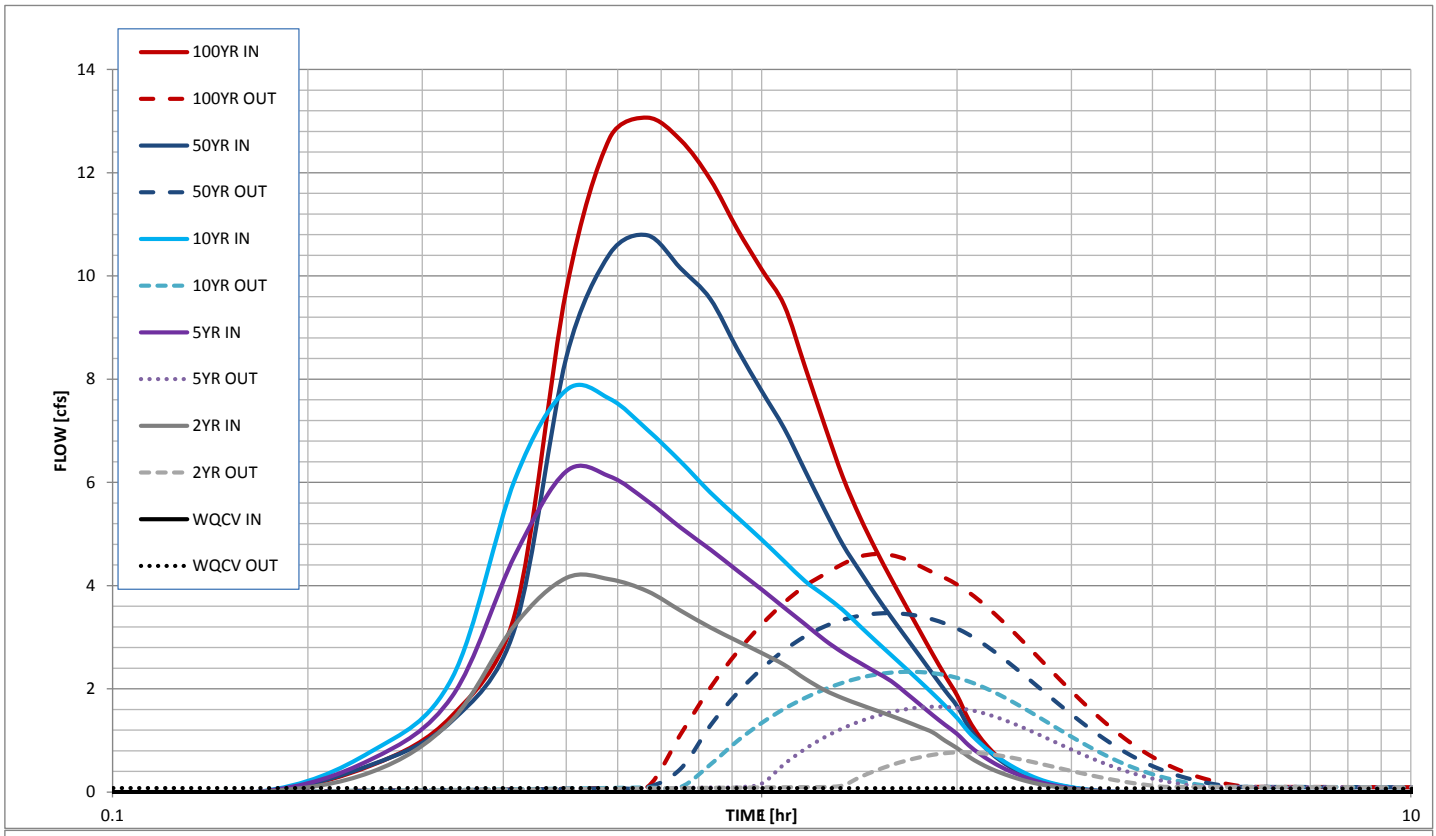
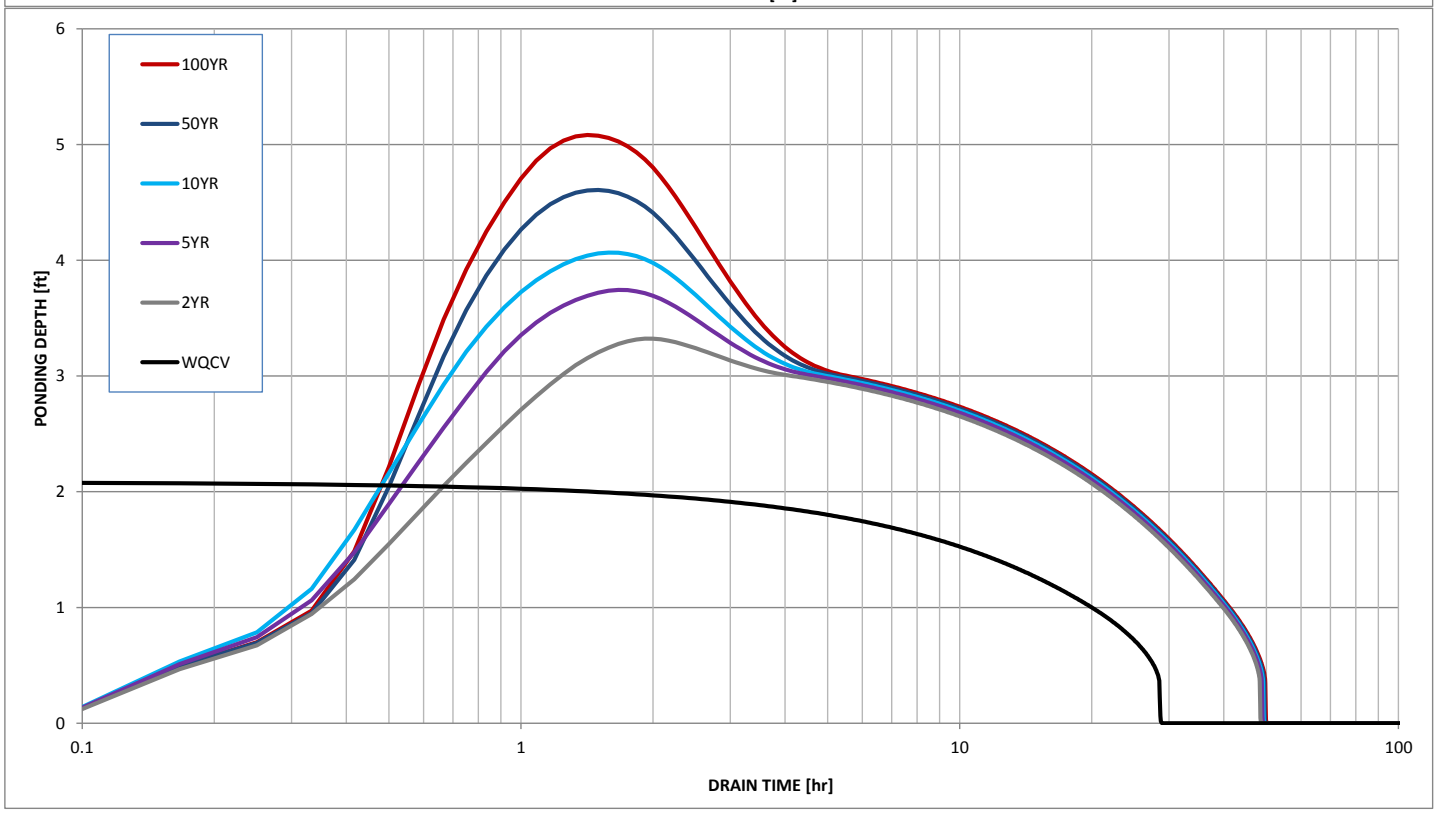
User Defined Stage [ft]	User Defined Area [ft^2]	User Defined Stage [ft]	User Defined Discharge [cfs]
0.00	16	0.00	0.00
0.33	16	0.33	0.02
1.00	3,547	1.00	0.05
3.00	5,992	3.00	0.10
5.00	10,178	5.00	4.30
7.00	14,422	7.00	12.30

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'.

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	2.00	2.25	in
CUHP Runoff Volume =	0.132	0.357	0.514	0.647	0.848	1.040	acre-ft
Inflow Hydrograph Volume =	N/A	0.357	0.514	0.647	0.848	1.040	acre-ft
Time to Drain 97% of Inflow Volume =	26.9	44.3	**43.5**	42.7	41.4	40.3	hours
Time to Drain 99% of Inflow Volume =	28.0	46.8	46.8	46.6	46.3	**45.8**	hours
Maximum Ponding Depth =	2.09	3.32	3.74	4.07	4.61	5.08	ft
Maximum Ponded Area =	0.11	0.15	0.17	0.19	0.21	**0.24**	acres
Maximum Volume Stored =	0.133	0.293	0.361	0.419	0.528	0.635	acre-ft

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