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El Paso County Department of Public Works

Stormwater Detention and Infiltration Design Data Sheet

Workbook Protected Worksheet Protected

Stormwater Facility Name: **WQ/Detention Pond at Circle K at Highway 24 & Meridian**

Facility Location & Jurisdiction: **South of Convience Store [Woodmen Hills Metropolitan District]**

User Input: Watershed Characteristics

Watershed Slope =	0.020	ft/ft
Watershed Length =	450	ft
Watershed Area =	3.73	acres
Watershed Imperviousness =	65.4%	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

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

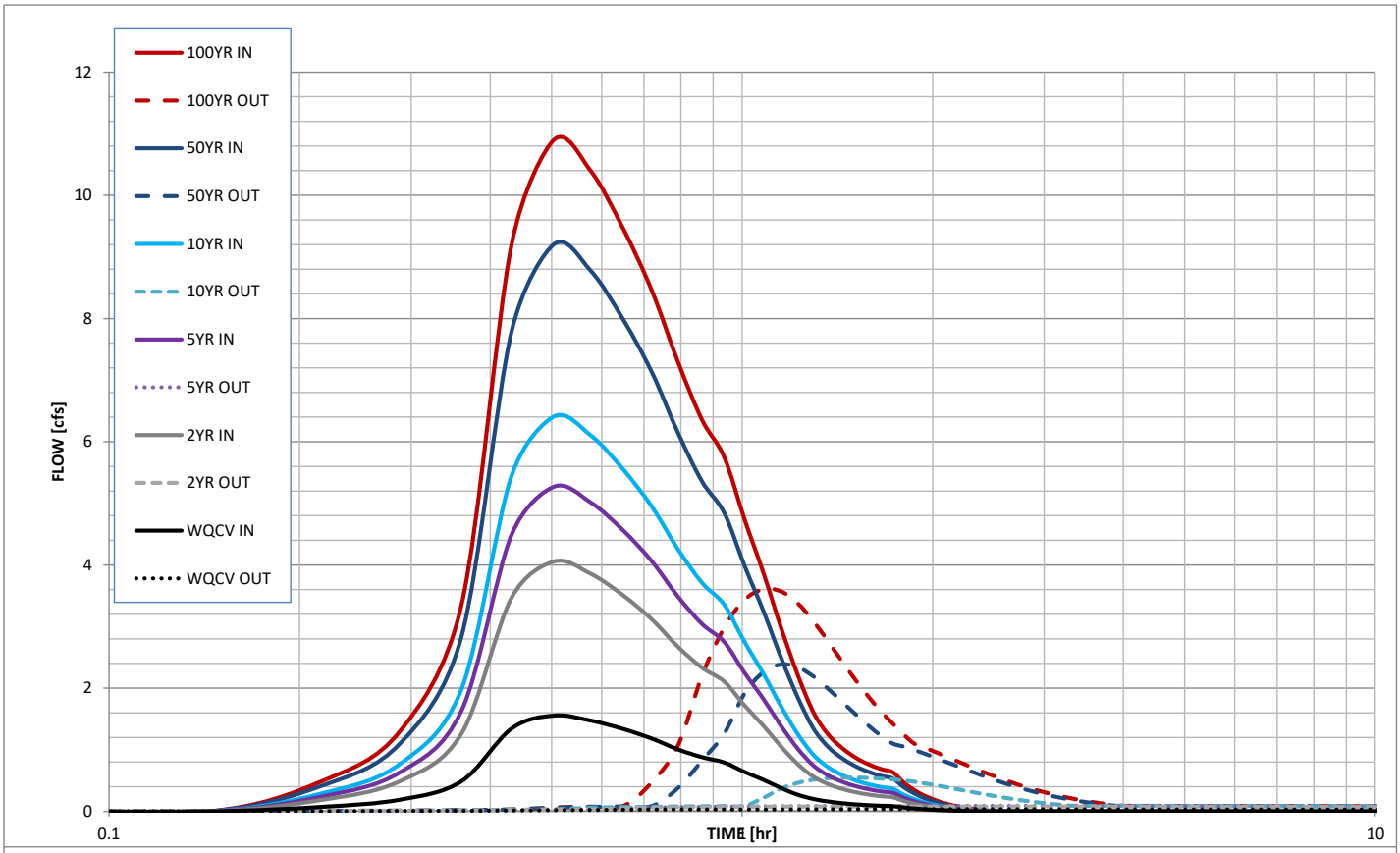
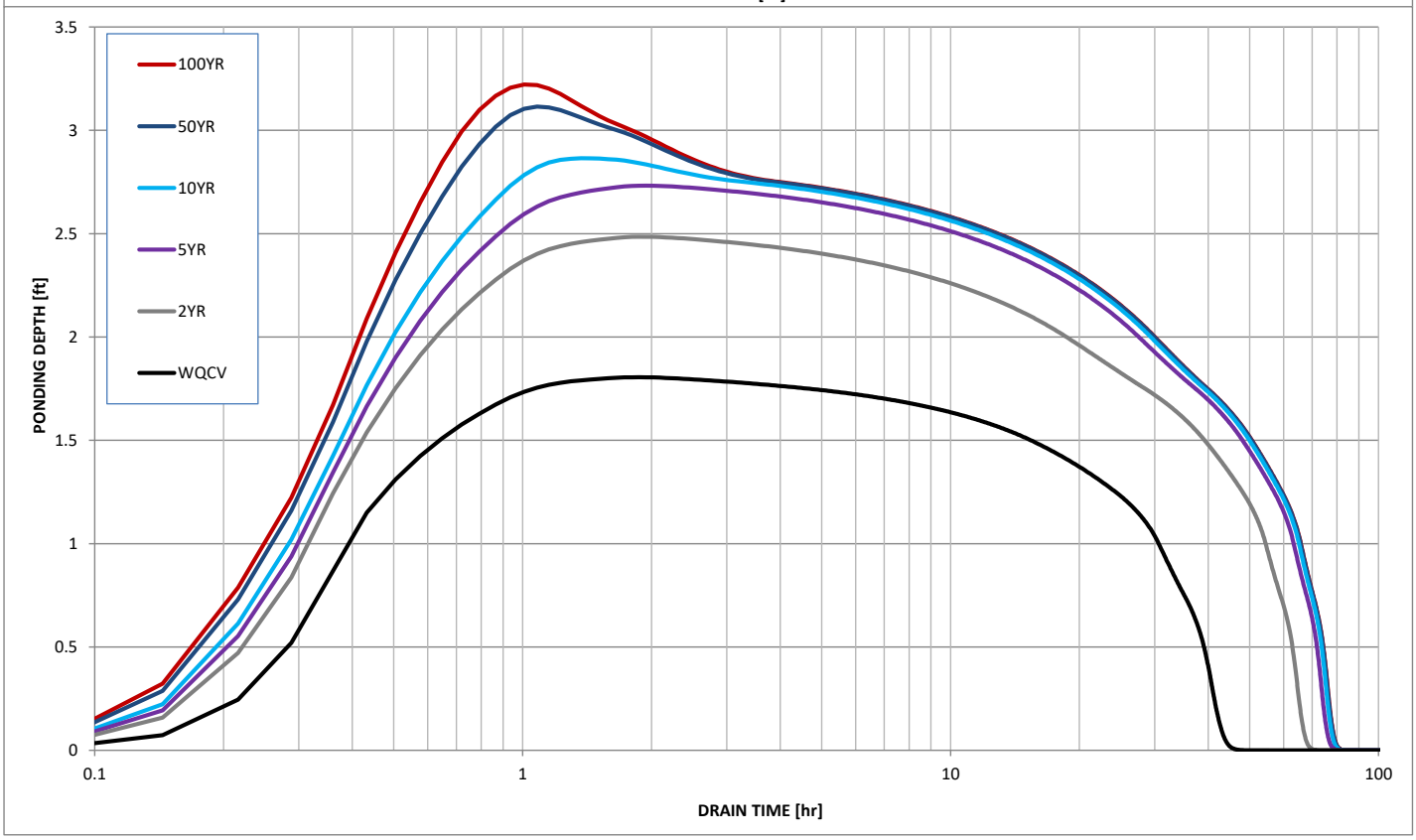
User Input

WQCV Treatment Method = Extended Detention

User Defined Stage [ft]	User Defined Area [ft^2]	User Defined Stage [ft]	User Defined Discharge [cfs]
0.00	104	0.00	0.00
0.50	376	0.33	0.01
1.00	1,157	0.50	0.01
1.50	3,897	0.75	0.01
2.00	6,935	1.00	0.02
2.50	10,344	1.25	0.02
3.00	12,769	1.50	0.03
3.50	14,478	1.75	0.03
4.00	15,956	2.00	0.06
4.50	17,548	2.25	0.07
5.00	20,596	2.50	0.08
		2.75	0.09
		3.00	1.11
		3.25	3.94
		3.50	7.25
		3.75	21.90
		4.00	43.88
		4.25	72.13
		4.50	106.26
		4.75	146.10
		5.00	191.57

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 =	0.53	1.19	1.50	1.75	2.25	2.52	in
Calculated Runoff Volume =	0.079	0.209	0.272	0.331	0.478	0.567	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	0.079	0.208	0.271	0.331	0.478	0.567	acre-ft
Time to Drain 97% of Inflow Volume =	39.6	58.7	**65.8**	66.2	64.1	62.5	hours
Time to Drain 99% of Inflow Volume =	41.7	63.8	71.9	73.0	71.8	**70.8**	hours
Maximum Ponding Depth =	1.81	2.48	2.73	2.87	3.11	3.22	ft
Maximum Ponded Area =	0.13	0.23	0.26	0.28	0.30	**0.31**	acres
Maximum Volume Stored =	0.074	0.198	0.259	0.295	0.368	0.401	acre-ft

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