Stormwater Detention and Infiltration Design Data Sheet

Workbook Protected Worksheet Protected

Stormwater Facility Name: **Latigo Trails Filing 9 - Pond G1**

Facility Location & Jurisdiction: **El Paso County, Colorado**

ACCEPTED for FILE
Engineering Review
03/29/2023 2:43:06 PM
Elizabeth Nijkamp, PE
EPC Department of Public Works

User Input: Watershed Characteristics

Watershed Slope =	0.030	ft/ft
Watershed Length =	1775	ft
Watershed Area =	15.22	acres
Watershed Imperviousness =	17.7%	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

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	10	0.00	0.00
0.87	897	0.87	0.02
1.87	6,282	1.87	0.05
2.87	11,930	2.87	0.08
3.87	14,157	3.87	11.50
4.87	16,502	4.87	12.96
5.87	18,983	5.87	143.86
6.37	23,460	6.37	261.78

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 =	0.134	0.193	0.286	0.515	1.423	1.885	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	0.134	0.192	0.286	0.514	1.423	1.884	acre-ft
Time to Drain 97% of Inflow Volume =	40.9	50.7	**64.5**	65.8	55.8	51.7	hours
Time to Drain 99% of Inflow Volume =	44.1	54.5	69.0	71.8	66.7	**64.6**	hours
Maximum Ponding Depth =	2.08	2.38	2.77	3.10	3.88	4.49	ft
Maximum Ponded Area =	0.17	0.21	0.26	0.28	0.33	**0.36**	acres
Maximum Volume Stored =	0.123	0.180	0.270	0.361	0.600	0.810	acre-ft

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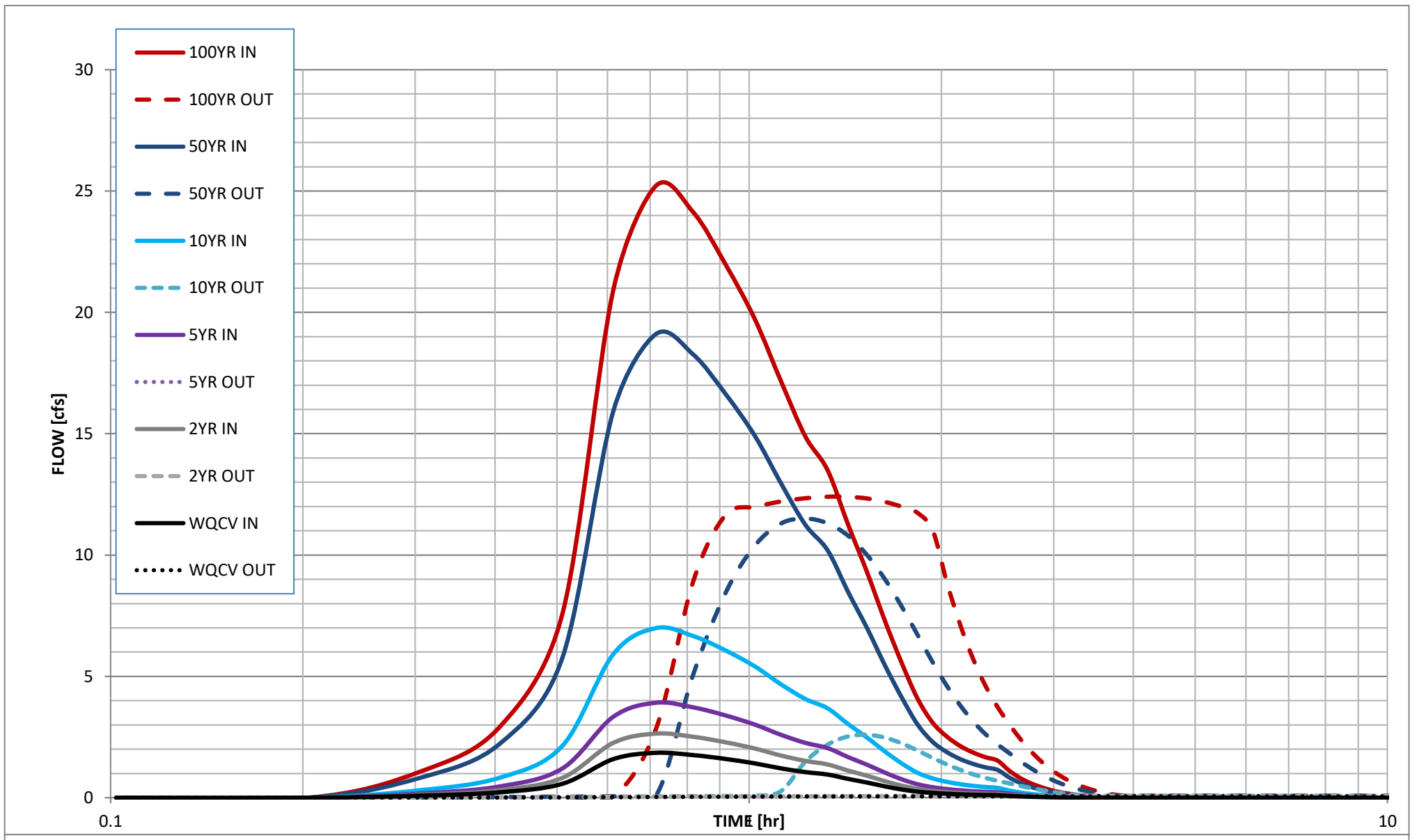

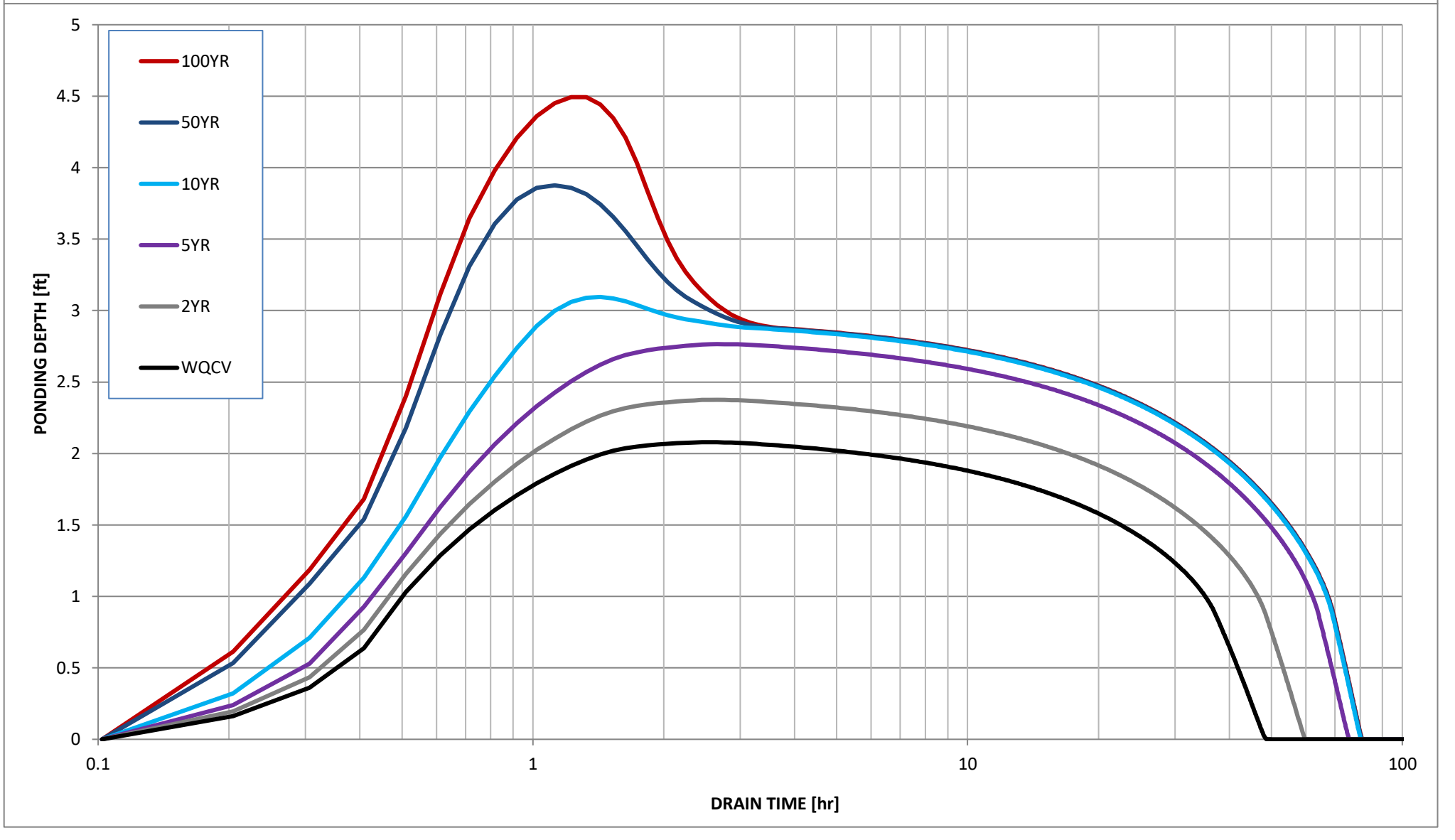

Stormwater Detention and Infiltration Design Data Sheet

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Stormwater Facility Name: **Latigo Trails Filing 9 - South Pond**

Facility Location & Jurisdiction: **El Paso County, Colorado**

User Input: Watershed Characteristics

Watershed Slope =	0.035	ft/ft
Watershed Length =	4610	ft
Watershed Area =	237.10	acres
Watershed Imperviousness =	13.8%	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

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	0	0.00	0.00
0.74	757	0.74	0.16
1.74	8,862	1.74	0.37
2.74	24,382	2.74	0.50
3.74	39,017	3.74	0.60
4.74	52,356	4.74	19.45
5.74	65,385	5.74	54.31
6.74	79,696	6.74	144.50
7.74	90,272	7.74	296.20
8.74	102,009	8.74	601.31
9.74	117,693	9.74	1280.91
9.90	128,850	9.90	1413.98

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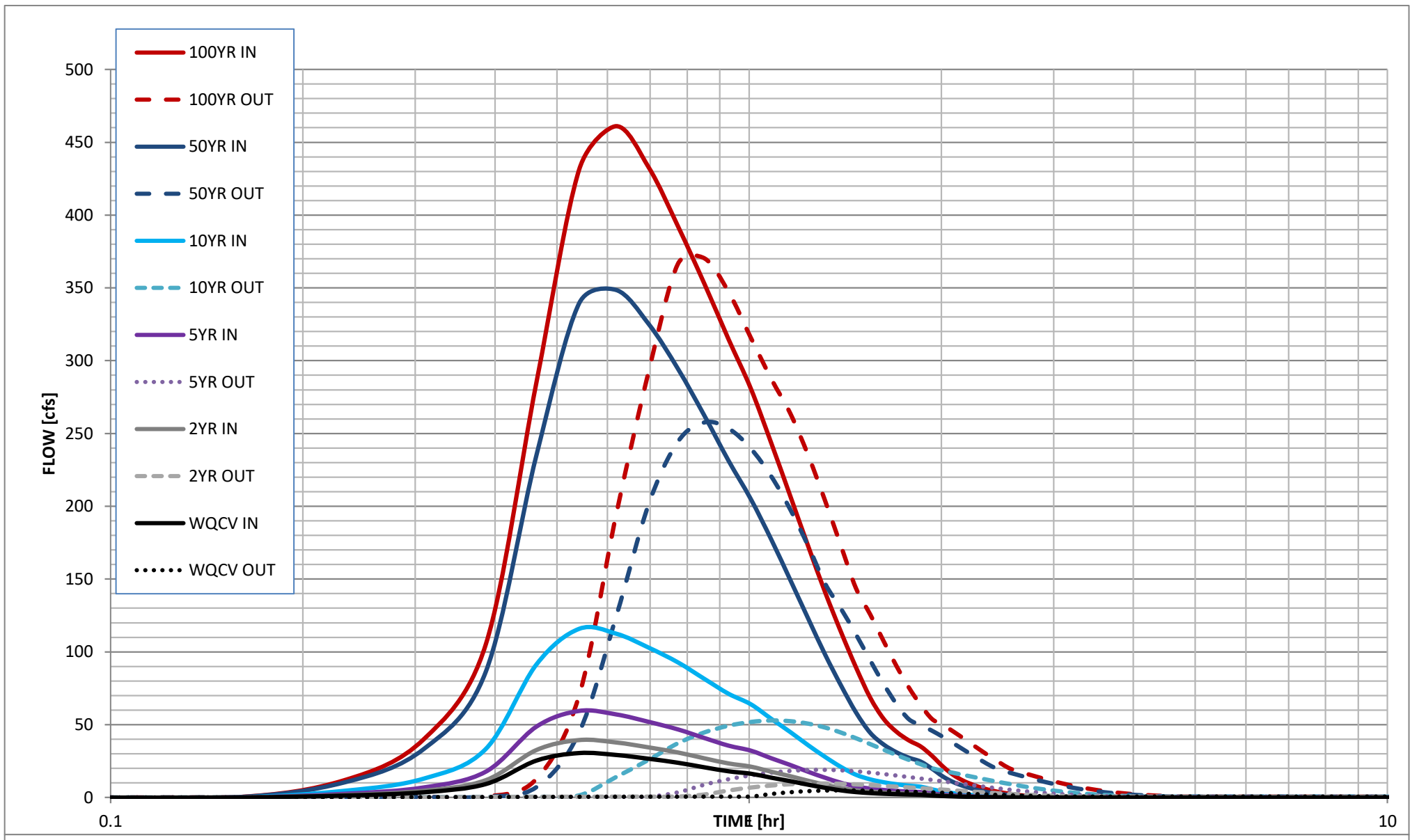
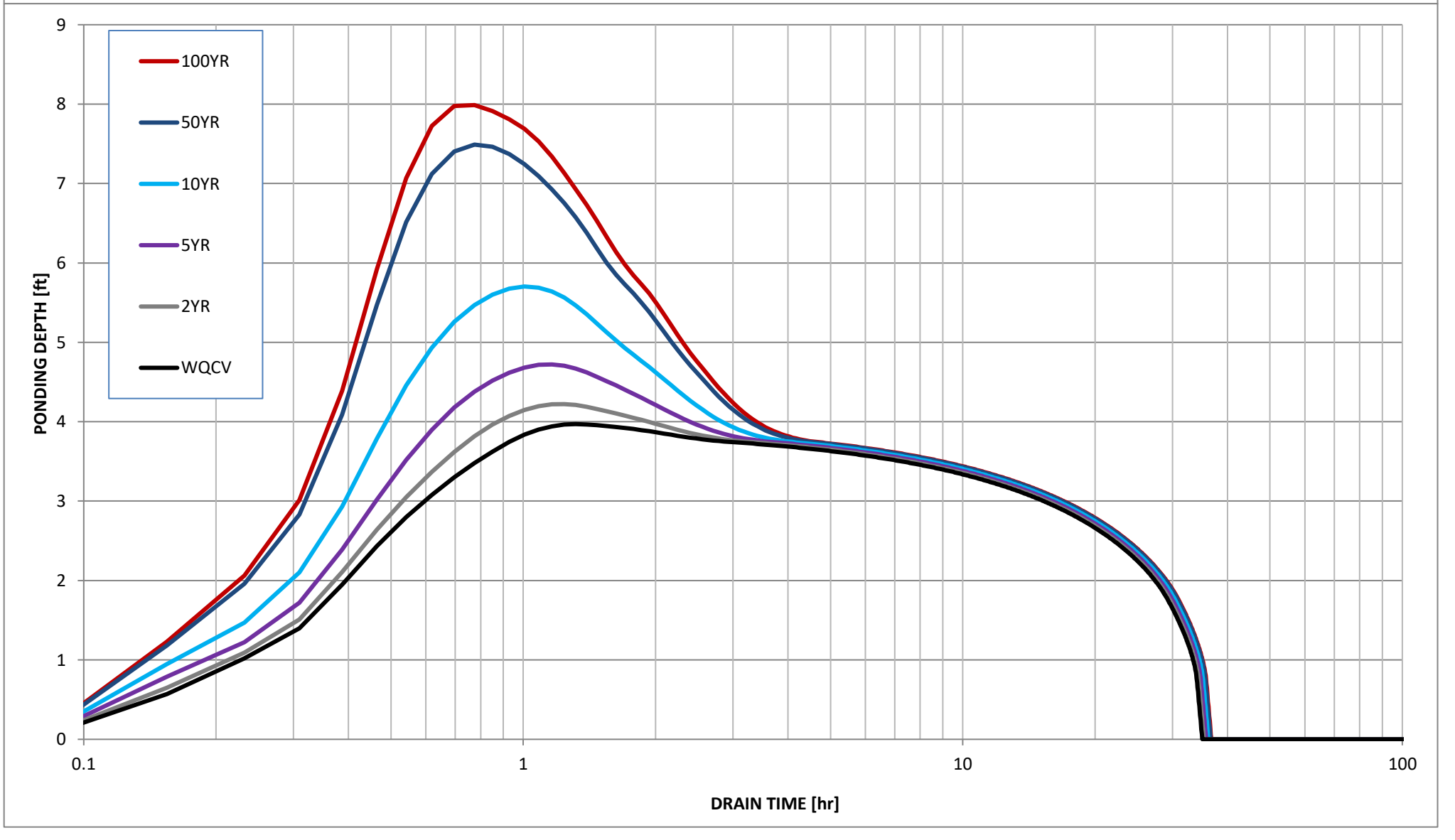
Routed Hydrograph Results

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 =	1.726	2.240	3.395	6.713	21.047	28.290	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	1.726	2.239	3.395	6.712	21.038	28.288	acre-ft
Time to Drain 97% of Inflow Volume =	31.8	31.5	**30.6**	27.9	17.4	12.6	hours
Time to Drain 99% of Inflow Volume =	33.4	33.4	33.3	32.4	28.1	**26.2**	hours
Maximum Ponding Depth =	3.97	4.22	4.72	5.70	7.49	7.99	ft
Maximum Ponded Area =	0.97	1.04	1.19	1.49	2.01	**2.14**	acres
Maximum Volume Stored =	1.438	1.683	2.239	3.564	6.713	7.746	acre-ft

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