Stormwater Detention and Infiltration Design Data Sheet

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Stormwater Facility Name: **WATER QUALITY POND B**

Facility Location & Jurisdiction: **WINSOME FILING NO 1, EL PASO COUNTY**

User Input: Watershed Characteristics

Watershed Slope =	0.053	ft/ft
Watershed Length =	1048	ft
Watershed Area =	0.34	acres
Watershed Imperviousness =	100.0%	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	1,132	0.00	0.00
4.00	6,079	0.37	0.10
		0.75	0.20
		0.86	0.20
		0.93	0.30
		1.07	0.30
		1.21	0.40
		1.31	0.40
		1.44	0.40
		4.00	0.40

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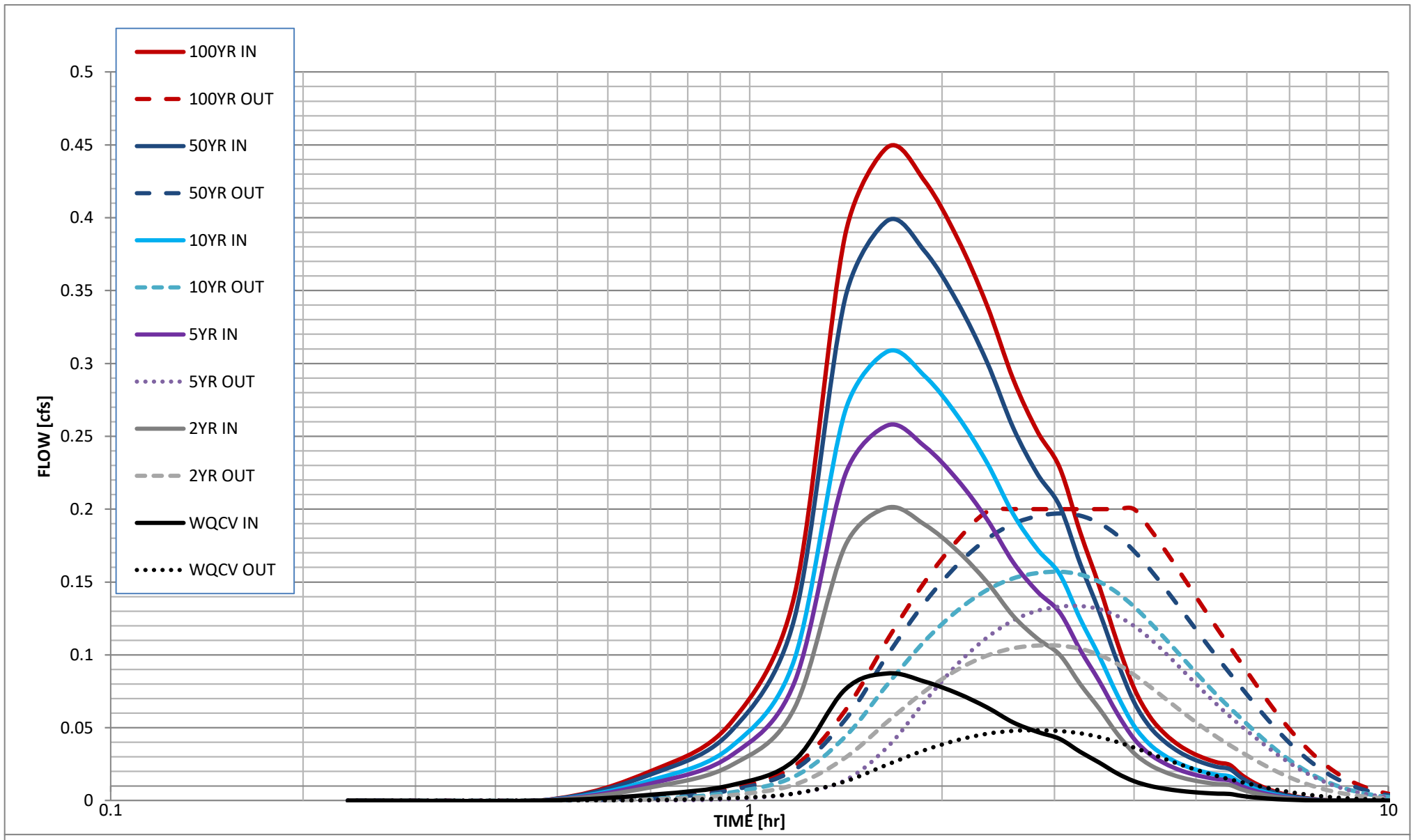
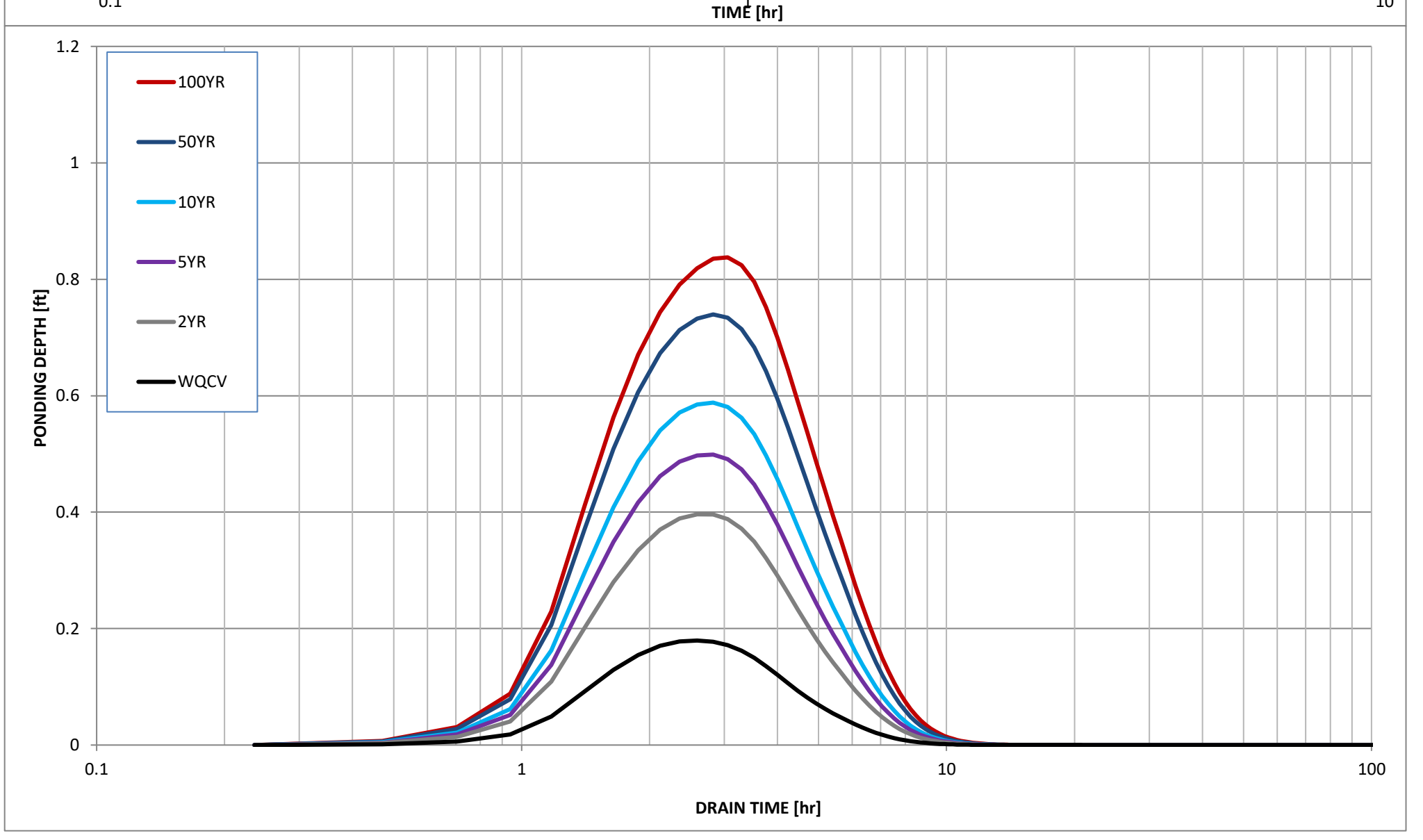
create a new stormwater facility, and
attach the pdf of this worksheet to that record.

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 =	0.014	0.033	0.043	0.051	0.066	0.075	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	0.014	0.033	0.042	0.050	0.065	0.074	acre-ft
Time to Drain 97% of Inflow Volume =	7.3	7.5	**7.5**	7.8	7.8	8.0	hours
Time to Drain 99% of Inflow Volume =	8.7	8.9	8.9	8.9	9.2	**9.4**	hours
Maximum Ponding Depth =	0.18	0.40	0.50	0.59	0.74	0.84	ft
Maximum Ponded Area =	0.03	0.04	0.04	0.04	0.05	**0.05**	acres
Maximum Volume Stored =	0.005	0.013	0.016	0.020	0.027	0.032	acre-ft

Stormwater Detention and Infiltration Design Data Sheet





Stormwater Detention and Infiltration Design Data Sheet

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Stormwater Facility Name: WATER QUALITY POND C

Facility Location & Jurisdiction: WINSOME FILING NO 1, EL PASO COUNTY

User Input: Watershed Characteristics

Watershed Slope =	0.037	ft/ft
Watershed Length =	6193	ft
Watershed Area =	201.20	acres
Watershed Imperviousness =	3.7%	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	3,100	0.00	0.00
4.00	8,700	3.00	0.30
5.00	10,454	3.29	0.30
		3.73	3.20
		3.74	3.70
		4.29	49.80
		4.65	155.40
		4.78	200.60
		5.00	289.90

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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 =	0.457	0.403	0.679	2.816	15.391	21.651	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	0.457	0.402	0.678	2.815	15.391	21.642	acre-ft
Time to Drain 97% of Inflow Volume =	39.7	38.7	**36.4**	23.0	3.1	1.5	hours
Time to Drain 99% of Inflow Volume =	49.4	48.4	46.2	33.9	16.8	**12.8**	hours
Maximum Ponding Depth =	3.30	3.00	3.73	4.24	4.81	5.03	WARNING!
Maximum Ponded Area =	0.18	0.17	0.19	0.21	0.23	**0.24**	acres
Maximum Volume Stored =	0.409	0.358	0.489	0.590	0.715	0.762	acre-ft

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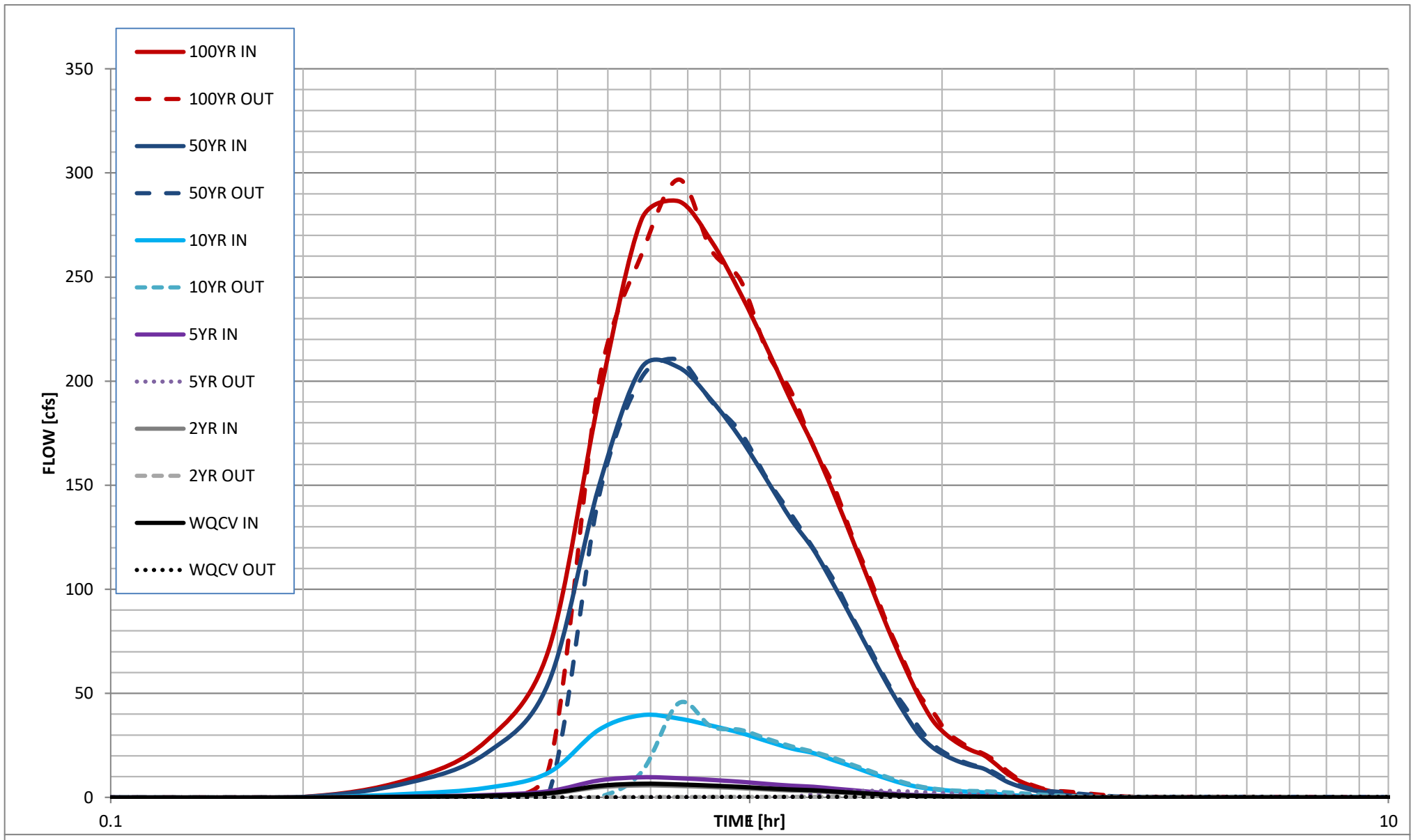

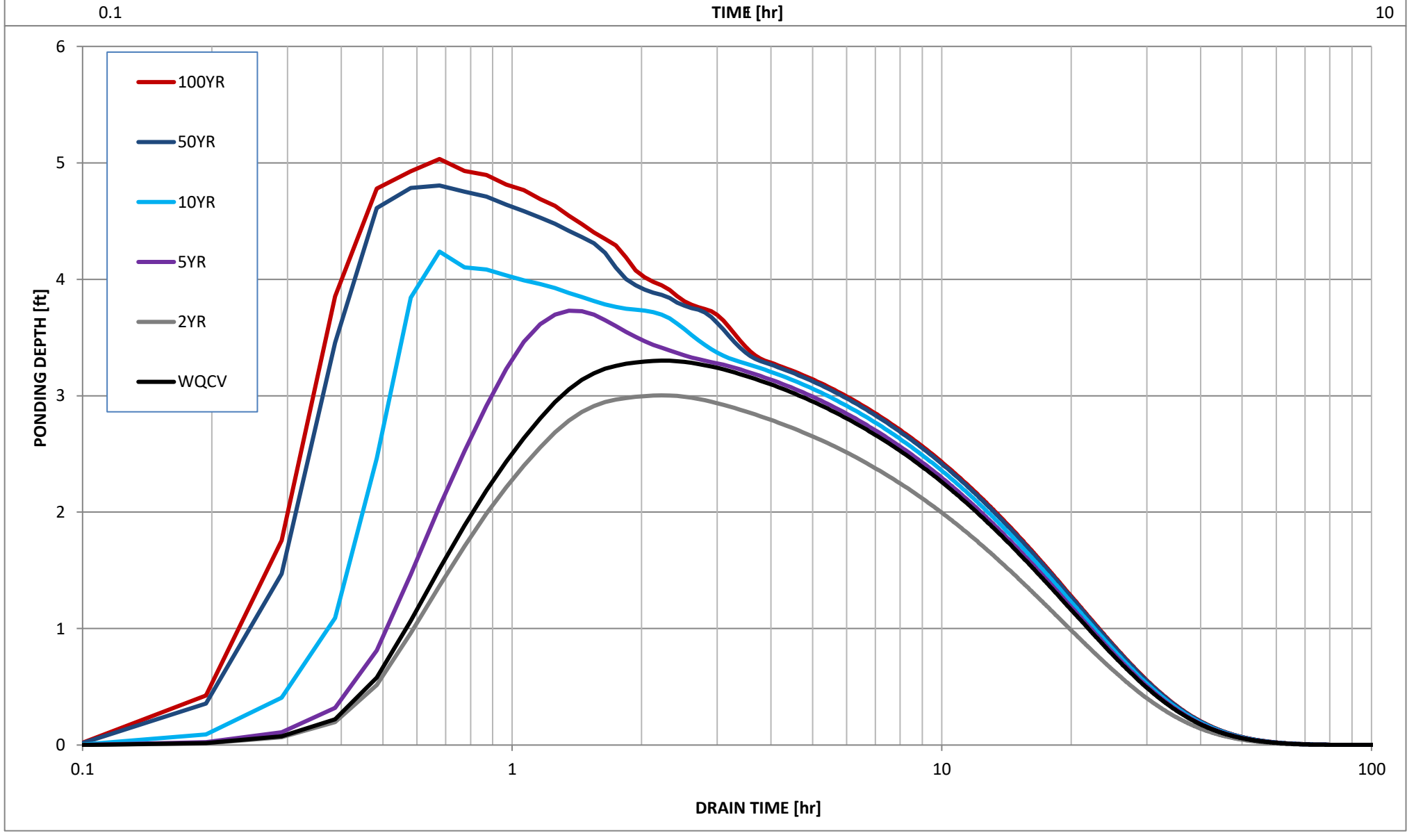

Stormwater Detention and Infiltration Design Data Sheet

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Stormwater Facility Name: WATER QUALITY POND D

Facility Location & Jurisdiction: WINSOME FILING NO 1, EL PASO COUNTY

User Input: Watershed Characteristics

Watershed Slope =	0.034	ft/ft
Watershed Length =	4370	ft
Watershed Area =	230.00	acres
Watershed Imperviousness =	3.7%	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	9,300	0.00	0.00
4.00	22,100	2.93	0.80
5.04	25,700	3.08	0.90
		3.63	6.70
		3.78	6.80
		4.27	69.90
		4.67	246.50
		4.88	373.40
		5.04	476.40

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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 =	0.523	0.460	0.776	3.219	17.594	24.750	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	0.522	0.460	0.775	3.218	17.591	24.741	acre-ft
Time to Drain 97% of Inflow Volume =	37.3	36.9	**38.6**	30.5	12.1	7.8	hours
Time to Drain 99% of Inflow Volume =	47.7	47.4	49.1	41.4	24.7	**21.1**	hours
Maximum Ponding Depth =	1.70	1.53	2.34	4.05	4.81	5.01	ft
Maximum Ponded Area =	0.34	0.33	0.39	0.51	0.57	**0.59**	acres
Maximum Volume Stored =	0.469	0.413	0.700	1.467	1.879	1.992	acre-ft

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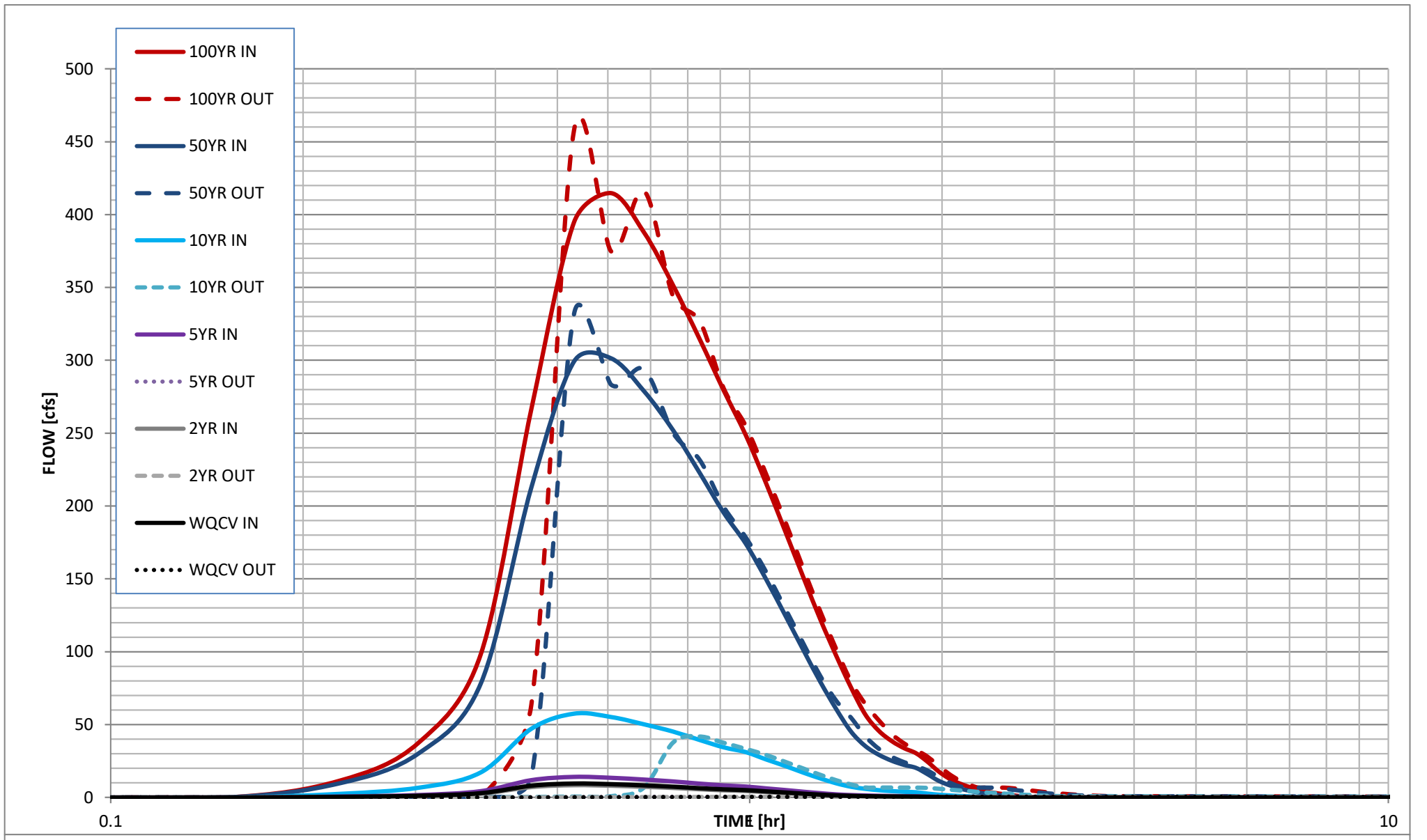

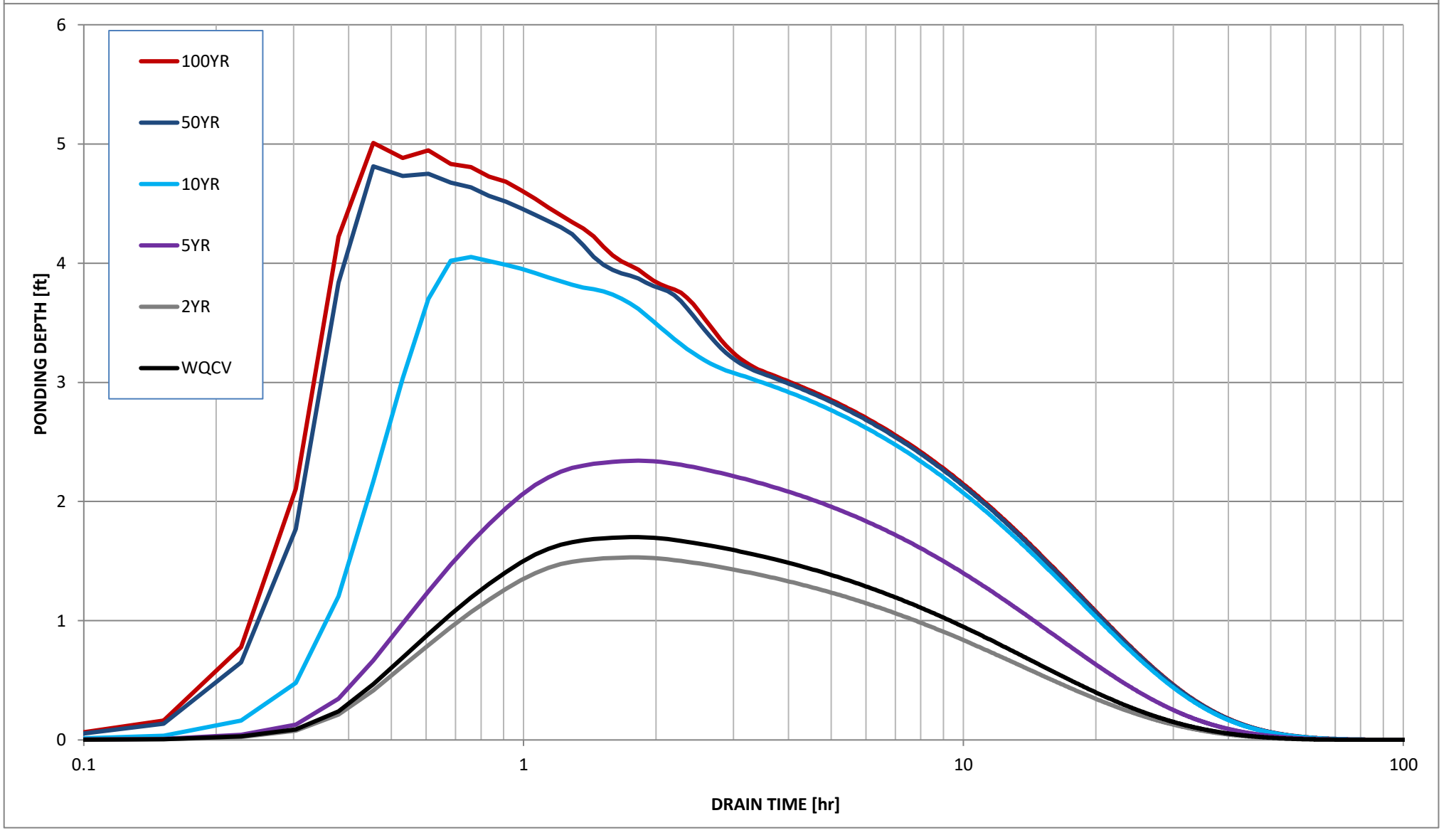

Stormwater Detention and Infiltration Design Data Sheet

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Stormwater Facility Name: DETENTION POND 3

Facility Location & Jurisdiction: WINSOME FILING NO 1, EL PASO COUNTY

User Input: Watershed Characteristics

Watershed Slope =	0.029	ft/ft
Watershed Length =	6480	ft
Watershed Area =	167.20	acres
Watershed Imperviousness =	6.6%	percent
Percentage Hydrologic Soil Group A =	0.0%	percent
Percentage Hydrologic Soil Group B =	97.5%	percent
Percentage Hydrologic Soil Groups C/D =	2.5%	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	40,000	0.00	0.00
2.00	48,000	0.60	0.60
4.00	58,000	0.61	0.60
5.97	67,954	0.89	1.10
		0.96	1.30
		2.07	11.40
		3.56	69.40
		4.52	96.10
		5.97	120.60

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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 =	0.649	0.664	1.091	3.075	13.432	18.613	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	0.648	0.664	1.091	3.075	13.426	18.605	acre-ft
Time to Drain 97% of Inflow Volume =	40.5	40.6	**39.7**	30.7	15.0	11.5	hours
Time to Drain 99% of Inflow Volume =	52.8	52.8	52.0	43.0	27.4	**23.9**	hours
Maximum Ponding Depth =	0.59	0.61	0.96	2.03	4.54	5.98	WARNING!
Maximum Ponded Area =	0.97	0.97	1.01	1.11	1.39	**1.56**	acres
Maximum Volume Stored =	0.559	0.569	0.921	2.056	5.187	7.301	acre-ft

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