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 =	0.019	ft/ft
Watershed Length =	1048	ft
Watershed Area =	11.00	acres
Watershed Imperviousness =	11.0%	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	1,064	0.00	0.00
1.00	2,091	1.08	0.90
2.00	3,221	1.13	1.70
3.00	4,547	1.14	1.90
4.00	5,974	1.25	4.50
		1.46	11.50
		1.55	15.00
		2.28	17.10
		4.00	20.00

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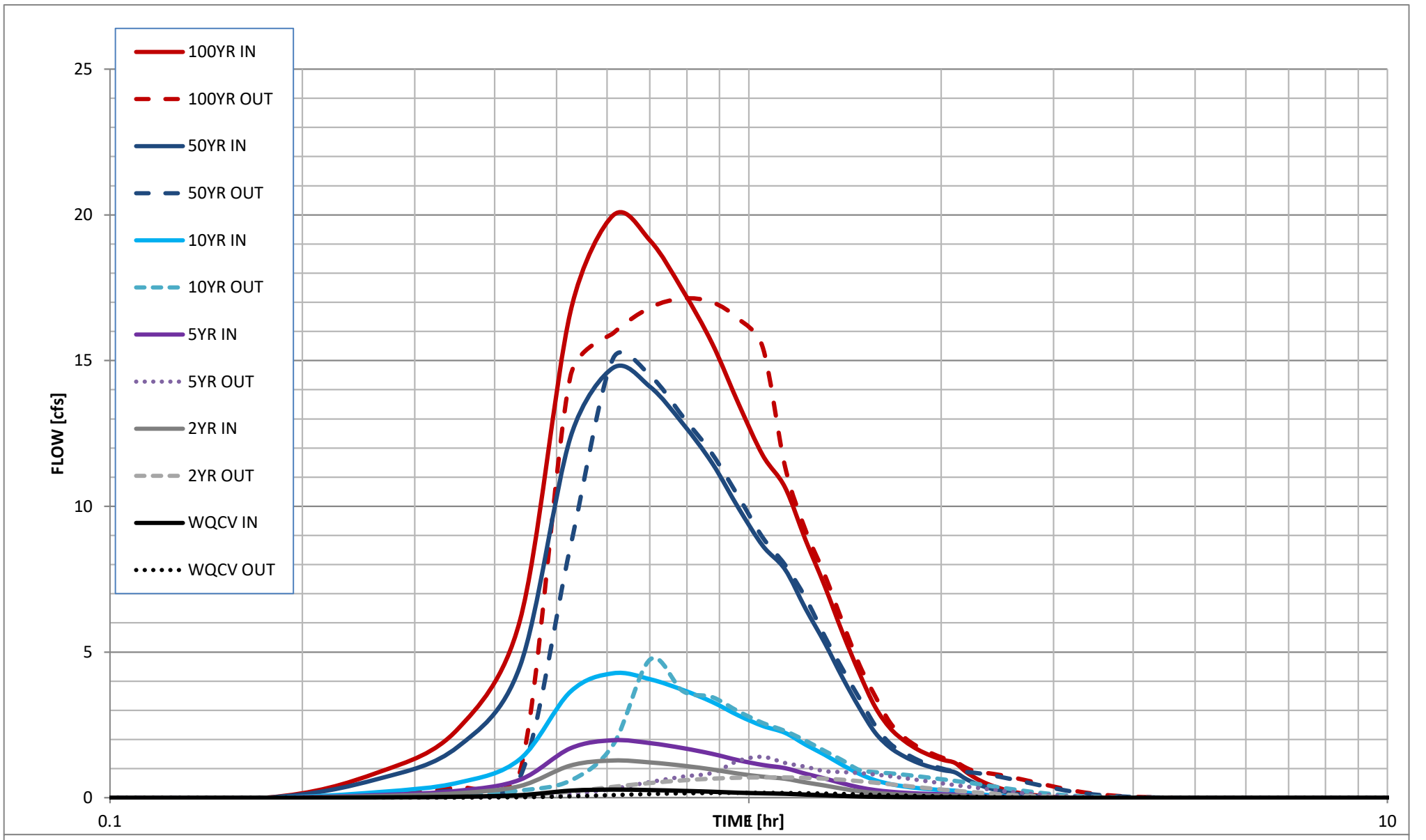
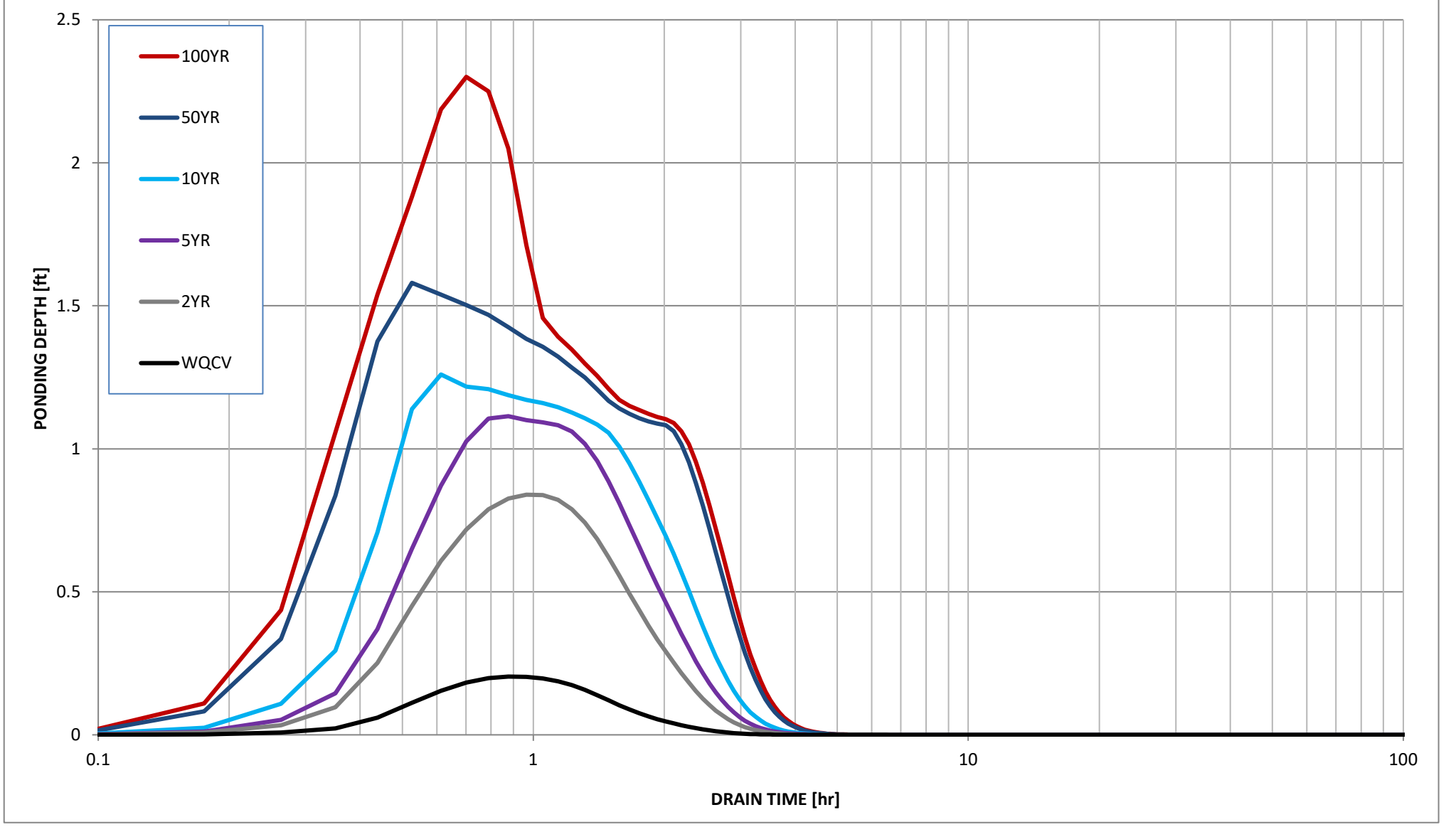
Routed Hydrograph Results

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 =	0.067	0.080	0.123	0.268	0.939	1.277	acre-ft
OPTIONAL Override Runoff Volume =	0.02						acre-ft
Inflow Hydrograph Volume =	0.017	0.079	0.122	0.268	0.938	1.276	acre-ft
Time to Drain 97% of Inflow Volume =	2.5	2.6	**2.7**	2.6	2.5	2.3	hours
Time to Drain 99% of Inflow Volume =	2.9	3.1	3.2	3.1	3.1	**3.0**	hours
Maximum Ponding Depth =	0.20	0.84	1.11	1.26	1.58	2.30	ft
Maximum Ponded Area =	0.03	0.04	0.05	0.05	0.06	**0.08**	acres
Maximum Volume Stored =	0.005	0.029	0.042	0.049	0.068	0.121	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 =	0.026	ft/ft
Watershed Length =	6193	ft
Watershed Area =	136.50	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	2,847	0.00	0.00
1.00	4,198	1.18	6.60
2.00	5,625	1.41	23.60
3.00	7,312	1.99	84.80
4.00	9,122	2.39	119.70
5.00	10,981	3.61	165.50
		5.00	166.90

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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 =	0.310	0.273	0.461	1.910	10.442	14.689	acre-ft
OPTIONAL Override Runoff Volume =	0.05						acre-ft
Inflow Hydrograph Volume =	0.048	0.272	0.460	1.910	10.437	14.686	acre-ft
Time to Drain 97% of Inflow Volume =	1.9	2.1	**2.1**	2.2	0.9	0.9	hours
Time to Drain 99% of Inflow Volume =	2.5	2.6	2.6	2.7	2.4	**1.8**	hours
Maximum Ponding Depth =	0.09	0.51	0.85	1.45	2.40	3.66	ft
Maximum Ponded Area =	0.07	0.08	0.09	0.11	0.14	**0.20**	acres
Maximum Volume Stored =	0.006	0.038	0.066	0.127	0.249	0.461	acre-ft

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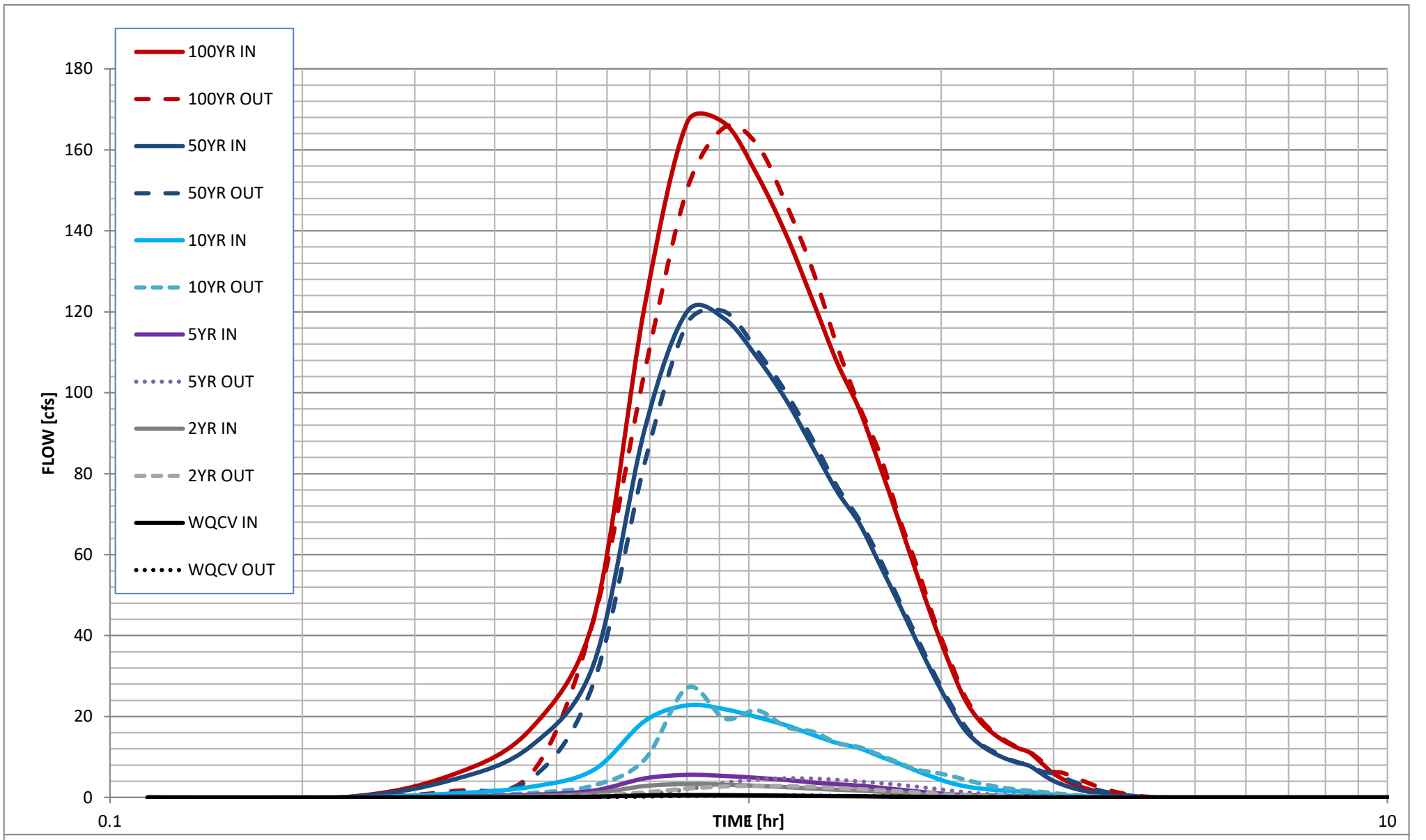

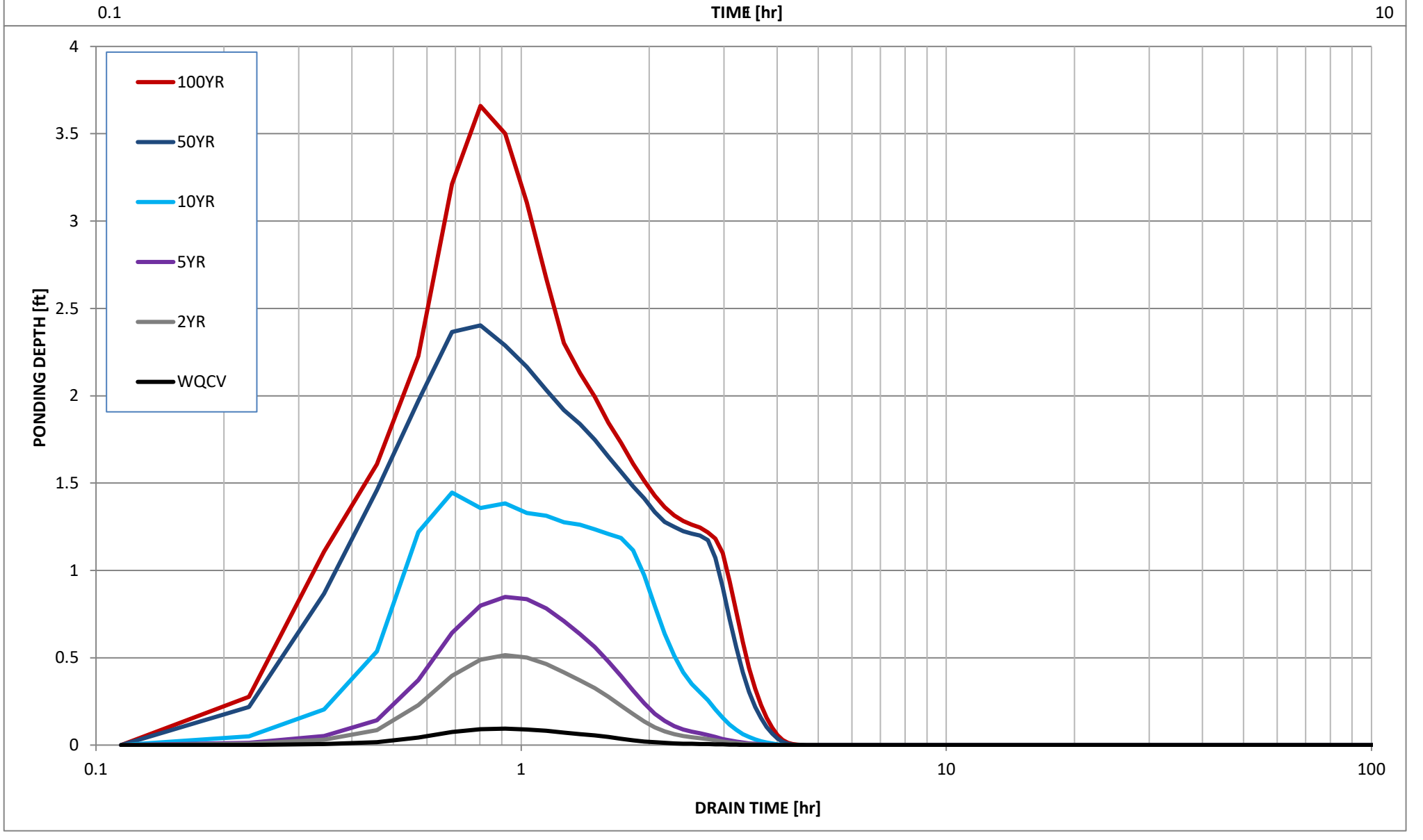

Stormwater Detention and Infiltration Design Data Sheet

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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 =	127.00	acres
Watershed Imperviousness =	7.6%	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	1,897	0.00	0.00
1.00	4,904	1.24	9.40
2.00	10,182	1.32	14.20
3.00	15,560	1.60	36.40
4.00	19,241	2.43	105.00
5.00	23,109	3.43	136.80
6.00	25,546	4.94	174.30
		6.00	203.90

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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 =	0.559	0.594	0.945	2.479	10.317	14.240	acre-ft
OPTIONAL Override Runoff Volume =	0.05						acre-ft
Inflow Hydrograph Volume =	0.050	0.594	0.944	2.479	10.307	14.240	acre-ft
Time to Drain 97% of Inflow Volume =	1.4	1.5	**1.6**	1.7	1.2	1.3	hours
Time to Drain 99% of Inflow Volume =	1.7	1.8	1.9	2.0	2.3	**1.7**	hours
Maximum Ponding Depth =	0.10	1.01	1.31	1.63	3.45	4.96	ft
Maximum Ponded Area =	0.05	0.11	0.15	0.19	0.39	**0.53**	acres
Maximum Volume Stored =	0.005	0.079	0.117	0.172	0.714	1.405	acre-ft

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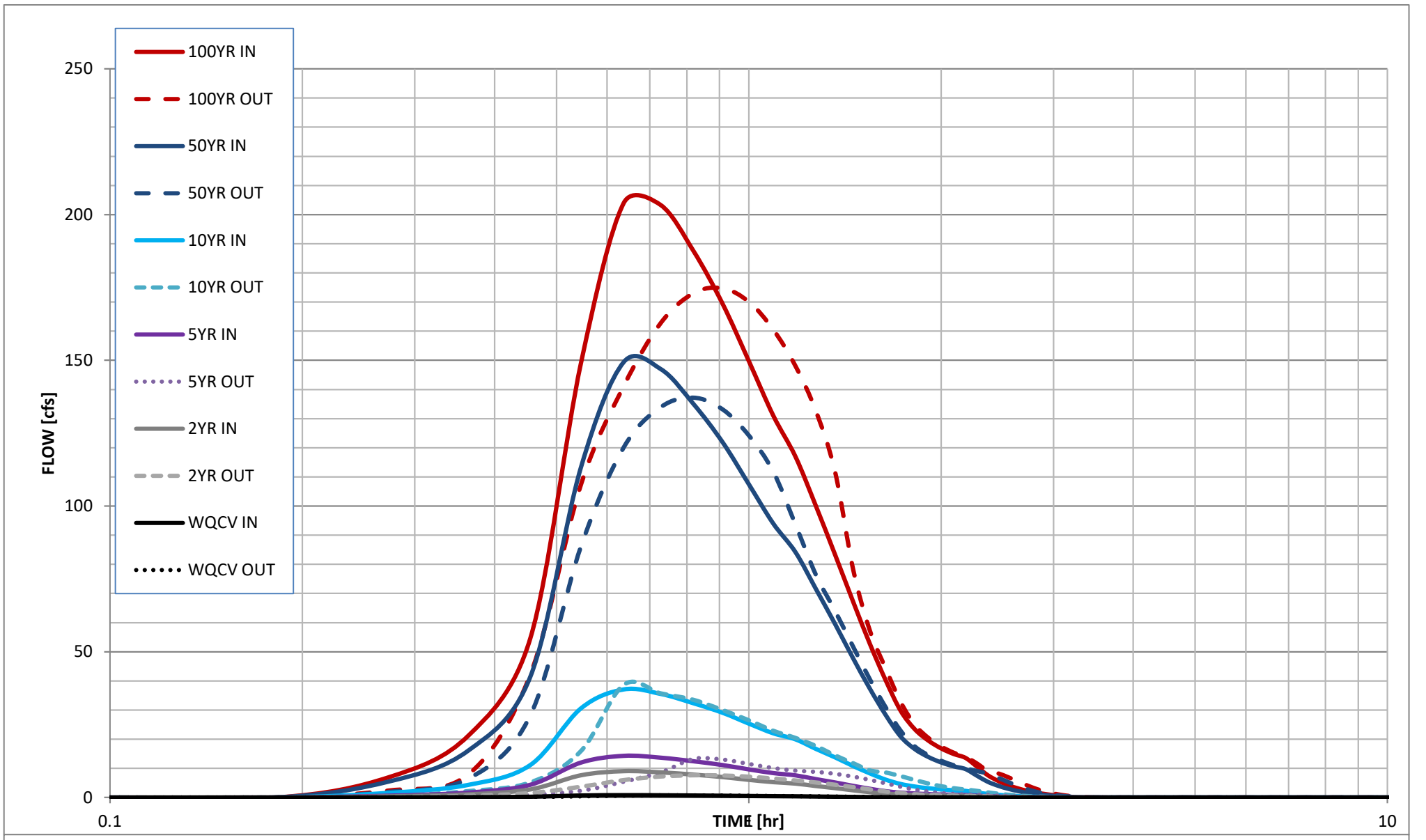

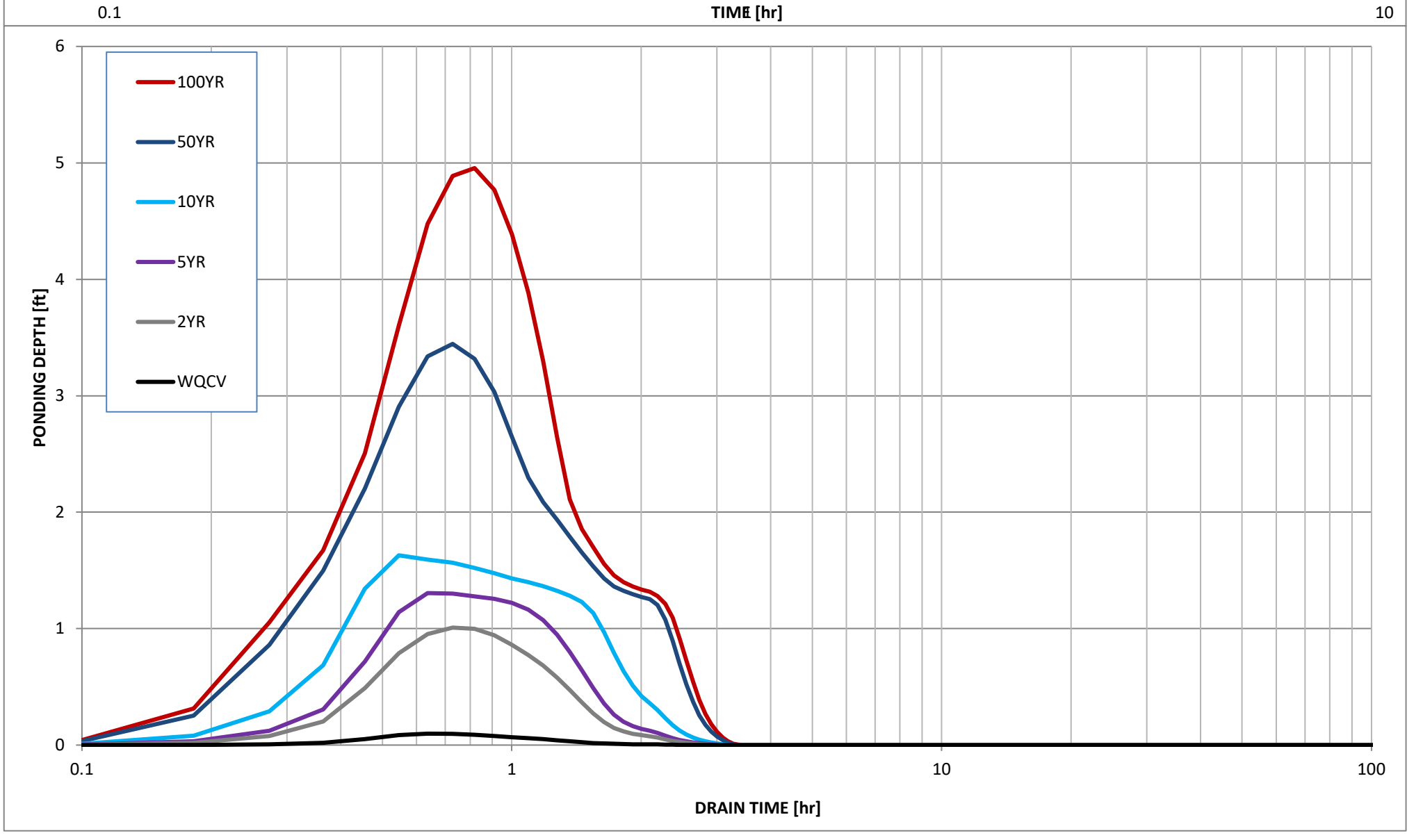

Stormwater Detention and Infiltration Design Data Sheet

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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 =	101.00	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	989	0.00	0.00
1.00	13,752	1.36	0.40
2.00	39,772	1.66	0.50
3.00	44,956	1.73	0.50
4.00	50,317	2.95	0.70
5.00	55,782	4.07	31.10
6.00	61,372	4.88	41.00
7.00	67,078	6.04	52.00
8.00	73,314	8.00	116.50

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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 =	0.392	0.401	0.659	1.857	8.114	11.244	acre-ft
OPTIONAL Override Runoff Volume =	0.01	0.26	0.42	1.20	5.22	7.24	acre-ft
Inflow Hydrograph Volume =	0.014	0.257	0.424	1.194	5.221	7.231	acre-ft
Time to Drain 97% of Inflow Volume =	6.3	16.1	**19.9**	34.0	39.7	37.6	hours
Time to Drain 99% of Inflow Volume =	7.5	17.9	22.1	37.1	45.6	**44.3**	hours
Maximum Ponding Depth =	0.17	1.10	1.41	2.31	3.94	4.57	ft
Maximum Ponded Area =	0.07	0.37	0.56	0.95	1.15	**1.23**	acres
Maximum Volume Stored =	0.008	0.203	0.345	1.059	2.774	3.527	acre-ft

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