

Stormwater Detention and Infiltration Design Data Sheet

Workbook Protected

Worksheet Protected

Stormwater Facility Name: Pond W-5

Facility Location & Jurisdiction: Sterling Ranch Suvdivision, Marksheffel Road, El Paso County / El Paso County

User Input: Watershed Characteristics

Watershed Slope = ft/ft

Watershed Length = ft

Watershed Area = acres

Watershed Imperviousness = percent

Percentage Hydrologic Soil Group A = percent

Percentage Hydrologic Soil Group B = percent

Percentage Hydrologic Soil Groups C/D = percent

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

WQCV Treatment Method =

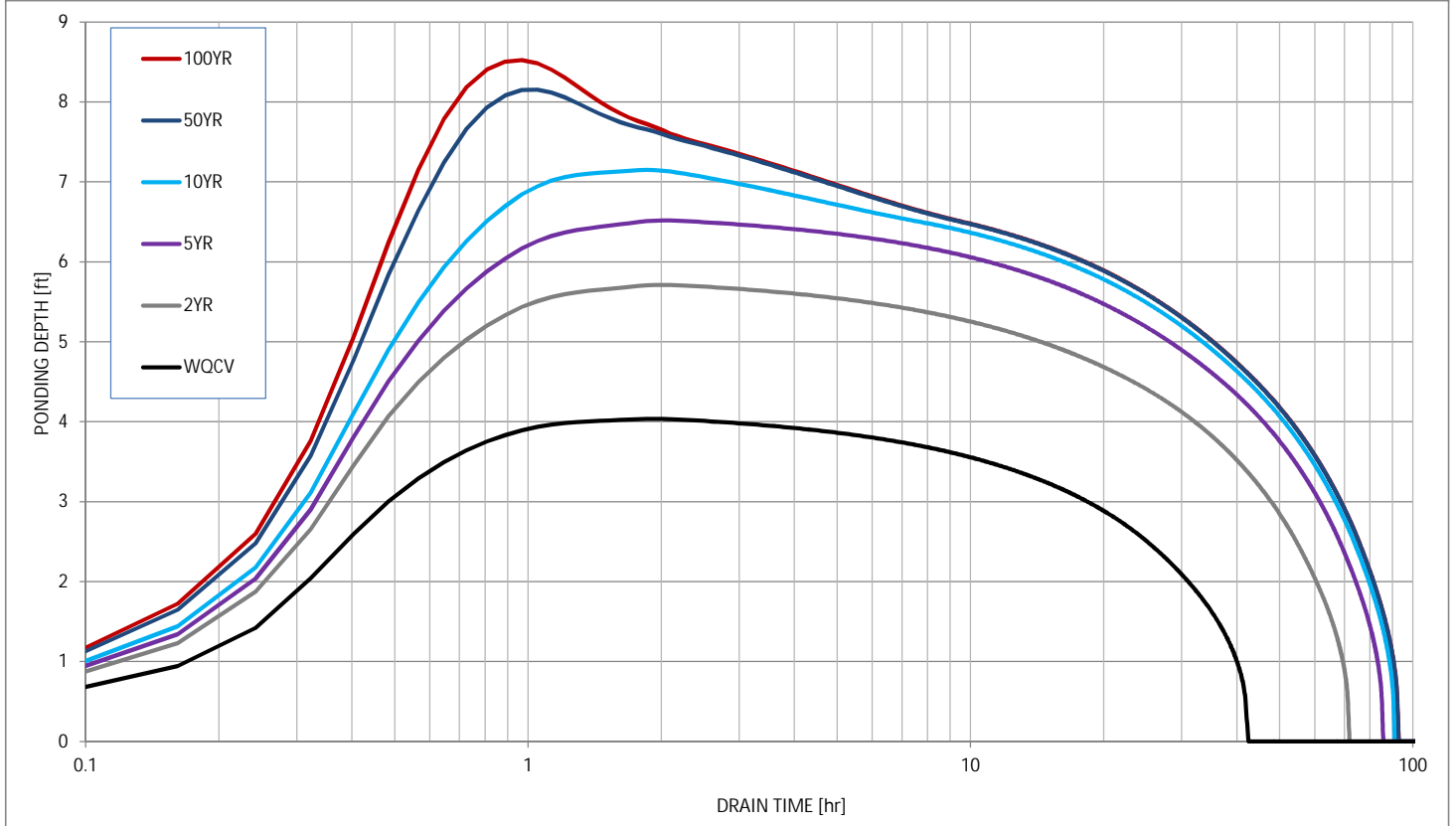
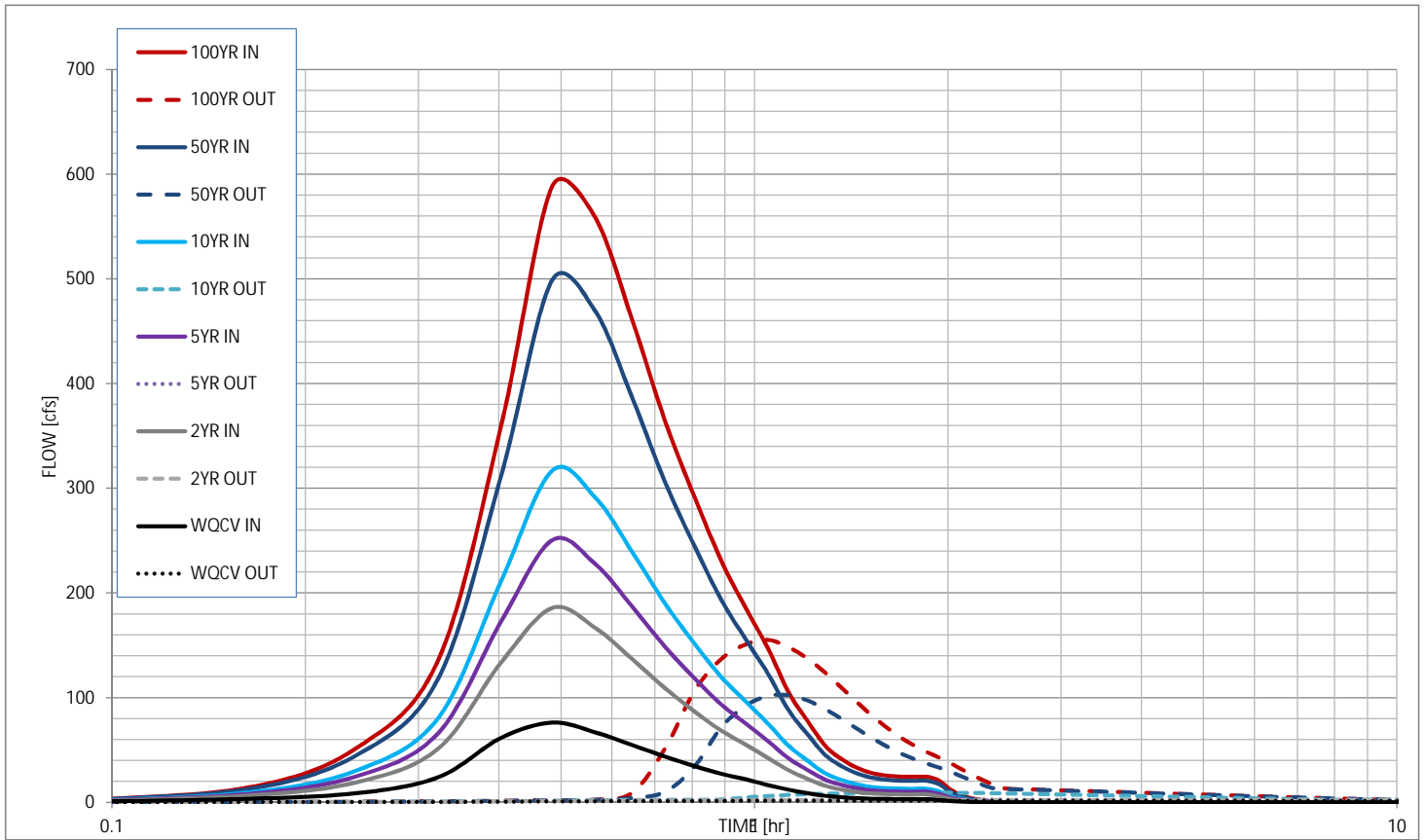
User Defined Stage [ft]	User Defined Area [ft^2]	User Defined Stage [ft]	User Defined Discharge [cfs]
0.00	20	0.00	0.00
0.50	1,328	0.50	0.30
1.50	13,823	1.50	0.42
2.50	40,724	2.50	0.91
3.50	71,720	3.50	1.27
4.50	112,095	4.50	1.72
5.50	136,106	5.50	2.21
6.50	158,377	6.50	2.57
7.50	174,976	7.50	12.90
8.50	188,903	8.50	150.53
9.50	199,637	9.50	363.96
10.50	210,510	10.50	748.70

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

	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
Design Storm Return Period =							
One-Hour Rainfall Depth =	0.53	1.19	1.50	1.75	2.25	2.52	in
Calculated Runoff Volume =	3.311	8.045	10.858	13.768	21.831	25.847	acre-ft
OPTIONAL Override Runoff Volume =							
Inflow Hydrograph Volume =	3.310	8.037	10.852	13.759	21.823	25.841	acre-ft
Time to Drain 97% of Inflow Volume =	38.7	64.2	76.0	79.7	77.6	76.0	hours
Time to Drain 99% of Inflow Volume =	40.9	68.8		86.0	85.6	84.8	hours
Maximum Ponding Depth =	4.04	5.71	6.52	7.15	8.15	8.52	ft
Maximum Poned Area =	2.13	3.23	3.64	3.88	4.22	4.34	acres
Maximum Volume Stored =	3.093	7.699	10.469	12.826	16.933	18.507	acre-ft

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Stormwater Facility Name: Pond W-4

Facility Location & Jurisdiction: Sterling Ranch Sudivision, Vollmer Road, El Paso County / El Paso County

User Input: Watershed Characteristics

Watershed Slope =	0.060	ft/ft
Watershed Length =	9241	ft
Watershed Area =	350.74	acres
Watershed Imperviousness =	12.0%	percent
Percentage Hydrologic Soil Group A =	40.0%	percent
Percentage Hydrologic Soil Group B =	60.0%	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	20	0.00	0.00
0.37	1,795	0.37	0.14
1.00	5,983	1.00	0.23
2.00	19,453	2.00	0.45
3.00	31,989	3.00	0.66
4.00	37,508	4.00	0.99
5.00	41,177	5.00	1.22
6.00	45,017	6.00	1.40
7.00	48,960	7.00	35.75
8.00	52,863	8.00	116.69
9.00	56,926	9.00	231.32
10.00	61,139	10.00	384.24
11.00	65,528	11.00	756.84

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Routed Hydrograph Results

	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
Design Storm Return Period =	0.53	1.19	1.50	1.75	2.25	2.52	in
One-Hour Rainfall Depth =	2.281	2.411	6.136	10.513	26.573	35.001	acre-ft
Calculated Runoff Volume =							acre-ft
OPTIONAL Override Runoff Volume =	2.281	2.410	6.128	10.504	26.566	34.997	acre-ft
Inflow Hydrograph Volume =	41.2	42.4	51.8	47.9	37.2	32.5	hours
Time to Drain 97% of Inflow Volume =	44.0	45.2	56.9	55.0	49.7	47.4	hours
Time to Drain 99% of Inflow Volume =	4.43	4.56	6.83	7.81	10.05	10.55	ft
Maximum Ponding Depth =	0.90	0.91	1.11	1.20	1.41	1.46	acres
Maximum Poned Area =	2.109	2.236	4.512	5.647	8.552	9.279	acre-ft
Maximum Volume Stored =							

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