Stormwater Detention and Infiltration Design Data Sheet

Workbook Protected Worksheet Protected

Stormwater Facility Name: Homestead North at Sterling Ranch

Facility Location & Jurisdiction: Pond A

User Input: Watershed Characteristics

Watershed Slope =	0.030	ft/ft
Watershed Length =	1963	ft
Watershed Area =	29.72	acres
Watershed Imperviousness =	47.6%	percent
Percentage Hydrologic Soil Group A =		percent
Percentage Hydrologic Soil Group B =	100.0%	percent
Percentage Hydrologic Soil Groups C/D =		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	129	0.00	
0.50	129	0.50	
1.00	129	1.00	
1.50	6,958	1.50	
2.00	23,987	2.00	
2.50	33,106	2.50	
3.00	34,657	3.00	
3.50	36,239	3.50	
4.00	37,854	4.00	
4.50	39,501	4.50	
5.00	41,180	5.00	
5.50	42,891	5.50	
6.00	44,634	6.00	
6.50	46,408	6.50	
7.00	48,215	7.00	
7.50	50,054	7.50	
8.00	51,925	8.00	
8.50	53,828	8.50	
9.00	55,762	9.00	

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create a new stormwater facility, and
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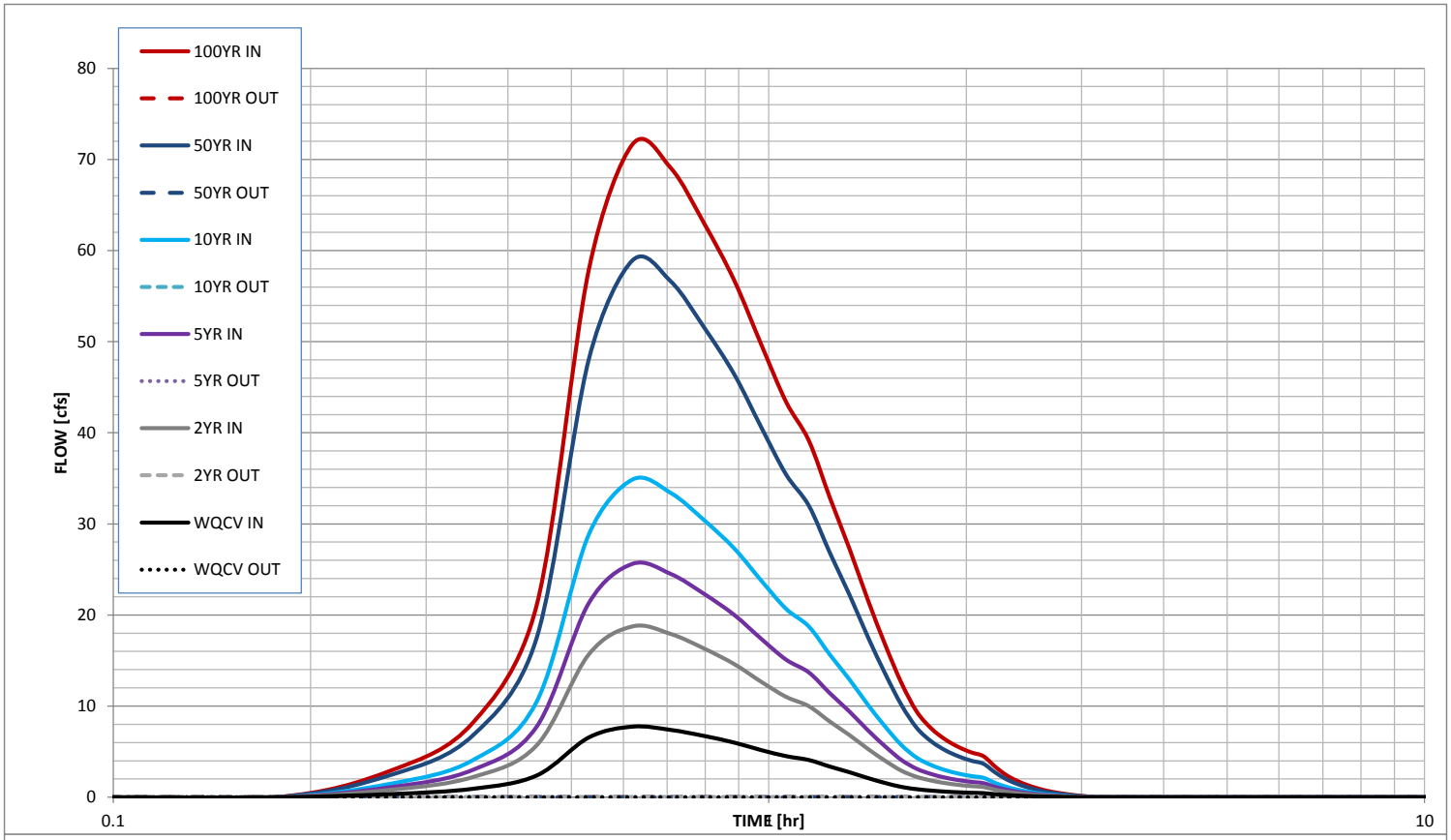
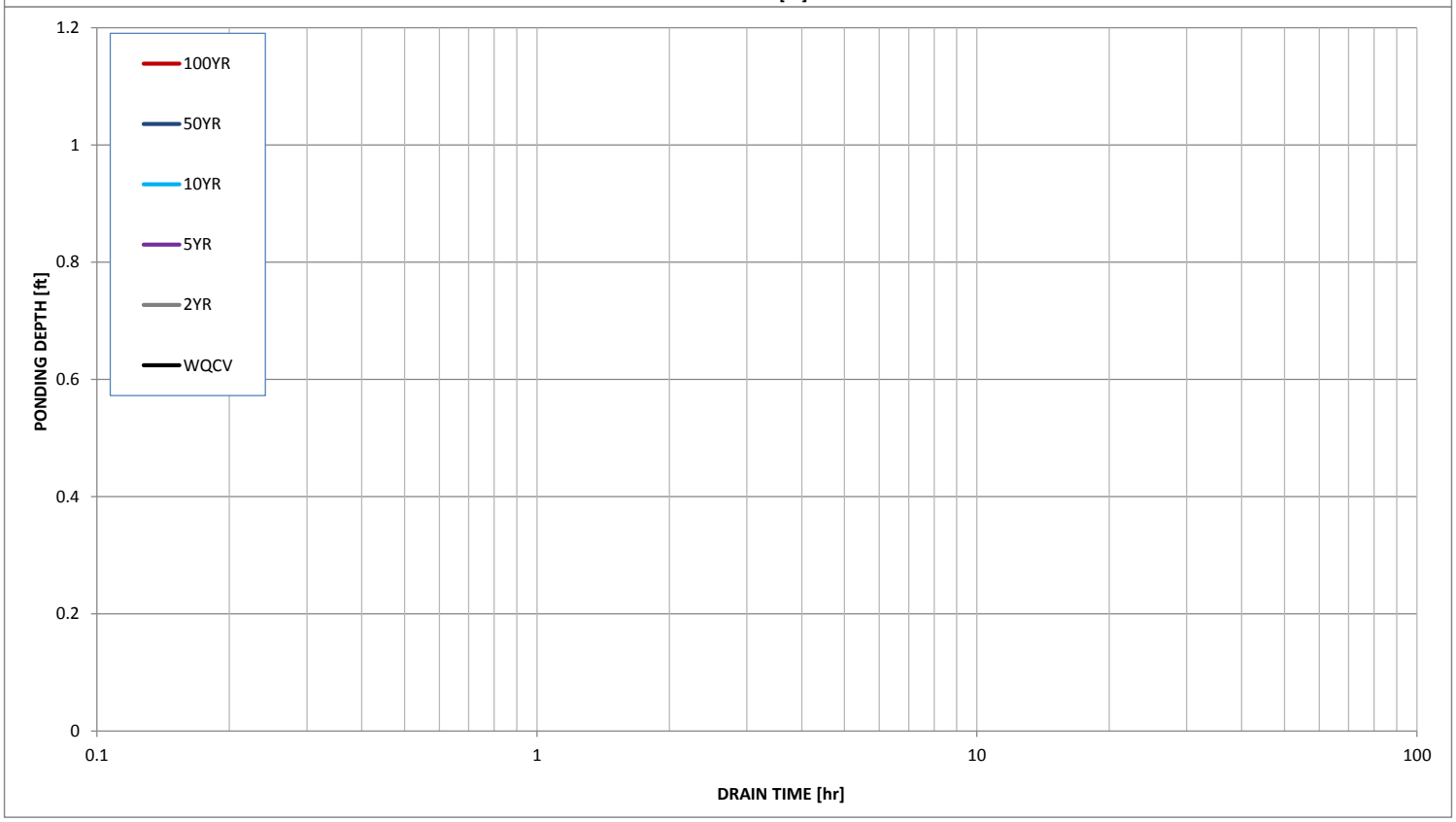
Routed Hydrograph Results

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 =	0.495	1.209	1.657	2.265	3.859	4.711	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =							acre-ft
Time to Drain 97% of Inflow Volume =							hours
Time to Drain 99% of Inflow Volume =							hours
Maximum Ponding Depth =							ft
Maximum Ponded Area =							acres
Maximum Volume Stored =							acre-ft

Stormwater Detention and Infiltration Design Data Sheet





Stormwater Detention and Infiltration Design Data Sheet

Workbook Protected Worksheet Protected

Stormwater Facility Name: Homestead North at Sterling Ranch

Facility Location & Jurisdiction: Pond B

User Input: Watershed Characteristics

Watershed Slope =	0.020	ft/ft
Watershed Length =	1290	ft
Watershed Area =	24.08	acres
Watershed Imperviousness =	52.2%	percent
Percentage Hydrologic Soil Group A =		percent
Percentage Hydrologic Soil Group B =	100.0%	percent
Percentage Hydrologic Soil Groups C/D =		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	111	0.00	
0.50	111	0.50	
1.00	111	1.00	
1.50	2,224	1.50	
2.00	6,937	2.00	
2.50	14,249	2.50	
3.00	24,162	3.00	
3.50	36,674	3.50	
4.00	37,854	4.00	
4.50	45,611	4.50	
5.00	47,438	5.00	
5.50	49,297	5.50	
6.00	53,111	6.00	
6.50	55,066	6.50	
7.00	57,053	7.00	
7.50	59,072	7.50	
8.00	61,123	8.00	
8.50	63,206	8.50	
9.00	65,321	9.00	

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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 =	0.426	1.092	1.486	1.992	3.261	3.945	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =							acre-ft
Time to Drain 97% of Inflow Volume =							hours
Time to Drain 99% of Inflow Volume =							hours
Maximum Ponding Depth =							ft
Maximum Ponded Area =							acres
Maximum Volume Stored =							acre-ft

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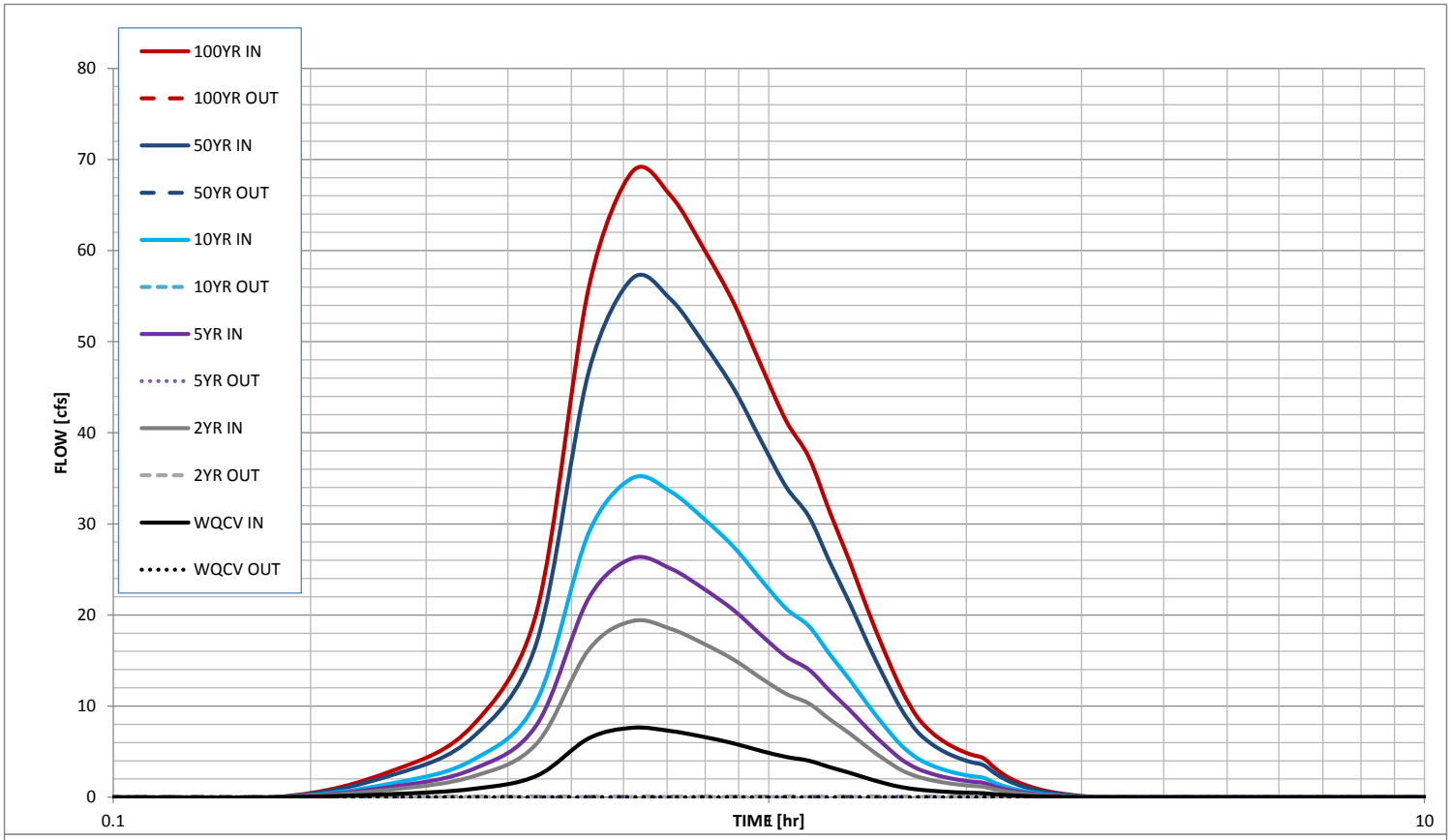

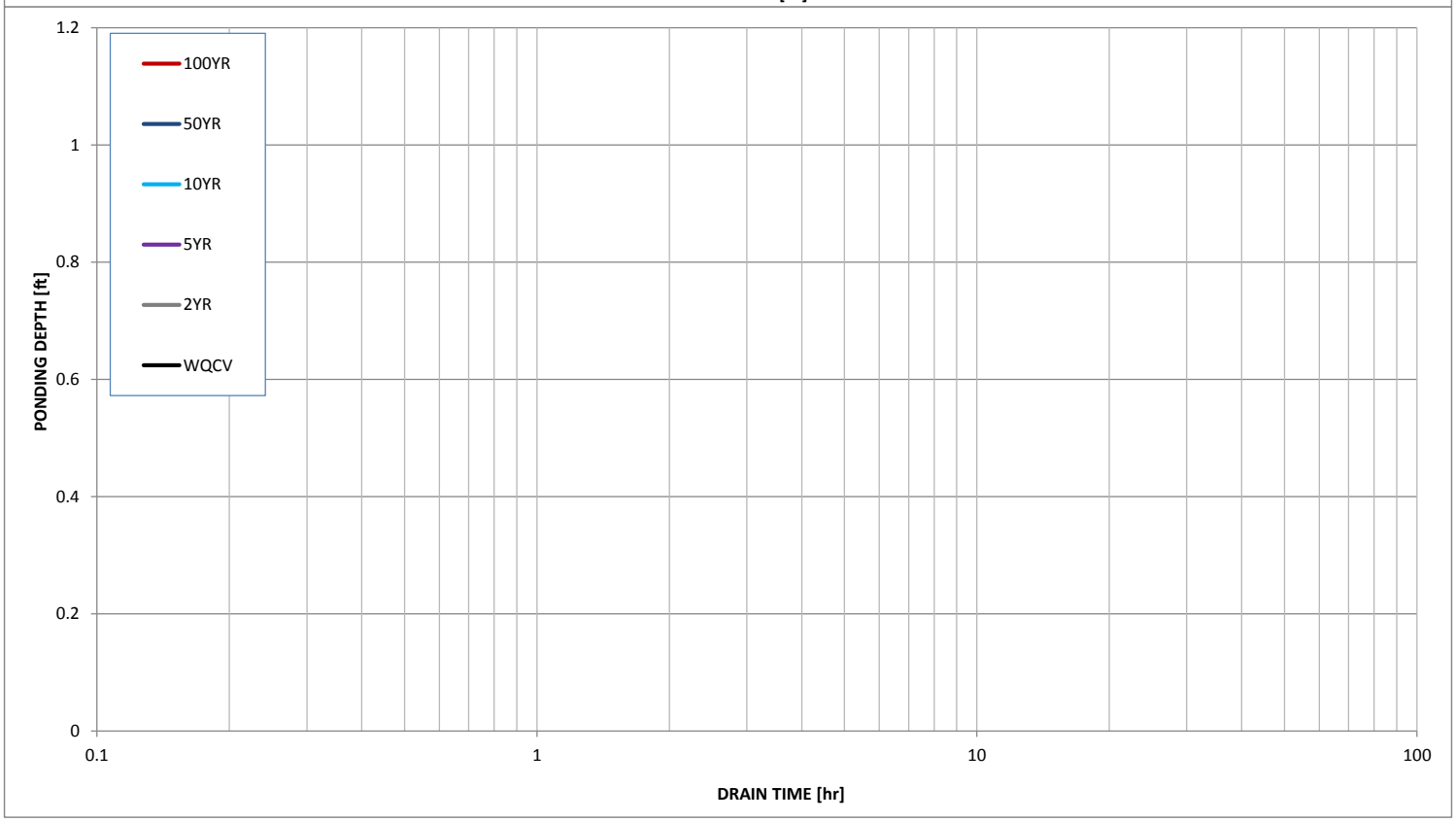

Stormwater Detention and Infiltration Design Data Sheet

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Stormwater Facility Name: Homestead North at Sterling Ranch

Facility Location & Jurisdiction: Pond C

User Input: Watershed Characteristics

Watershed Slope =	0.021	ft/ft
Watershed Length =	1580	ft
Watershed Area =	21.33	acres
Watershed Imperviousness =	64.5%	percent
Percentage Hydrologic Soil Group A =		percent
Percentage Hydrologic Soil Group B =	100.0%	percent
Percentage Hydrologic Soil Groups C/D =		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	117	0.00	
0.50	117	0.50	
1.00	117	1.00	
1.50	6,863	1.50	
2.00	23,808	2.00	
2.50	29,110	2.50	
3.00	30,564	3.00	
3.50	32,050	3.50	
4.00	33,569	4.00	
4.50	35,119	4.50	
5.00	36,701	5.00	
5.50	38,316	5.50	
6.00	39,962	6.00	
6.50	41,640	6.50	
7.00	43,350	7.00	
7.50	45,093	7.50	
8.00	46,867	8.00	
8.50	48,673	8.50	
9.00	50,511	9.00	

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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 =	0.448	1.241	1.661	2.137	3.207	3.799	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =							acre-ft
Time to Drain 97% of Inflow Volume =							hours
Time to Drain 99% of Inflow Volume =							hours
Maximum Ponding Depth =							ft
Maximum Ponded Area =							acres
Maximum Volume Stored =							acre-ft

Complete this table.

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