

Stormwater Detention and Infiltration Design Data Sheet

Workbook Protected

Worksheet Protected

Stormwater Facility Name: Trails at Aspen Ridge - East Pond

Facility Location & Jurisdiction: Trails at Aspen Ridge, El Paso County, Colorado

User Input: Watershed Characteristics

Watershed Slope =	0.030	ft/ft
Watershed Length =	3742	ft
Watershed Area =	157.90	acres
Watershed Imperviousness =	45.4%	percent
Percentage Hydrologic Soil Group A =	0.0%	percent
Percentage Hydrologic Soil Group B =	87.0%	percent
Percentage Hydrologic Soil Groups C/D =	13.0%	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	443	0.00	0.00
1.00	2,623	0.33	0.25
2.00	15,364	0.50	0.30
3.00	43,184	0.67	0.35
4.00	88,889	0.75	0.37
5.00	143,319	1.00	0.43
6.00	157,923	1.25	0.48
7.00	163,366	1.33	0.50
8.00	168,797	1.50	0.53
9.00	174,244	1.73	0.57
10.00	179,826	2.00	0.78
		2.33	0.92
		2.67	1.03
		3.00	1.13
		3.33	1.22
		3.66	1.30
		3.80	1.33
		3.90	1.44
		4.00	1.51
		4.33	1.68
		4.67	1.82
		5.00	1.94
		5.33	2.05
		5.63	2.14
		6.00	3.13
		6.33	5.01
		6.67	26.23
		7.00	62.58
		8.15	129.72
		8.25	143.52
		8.50	218.05
		8.75	327.76
		9.00	464.57
		10.00	1227.28

After completing and printing this worksheet to a pdf, go to:

<https://maperture.digitaldataservices.com/gvh/?viewer=cswdif>

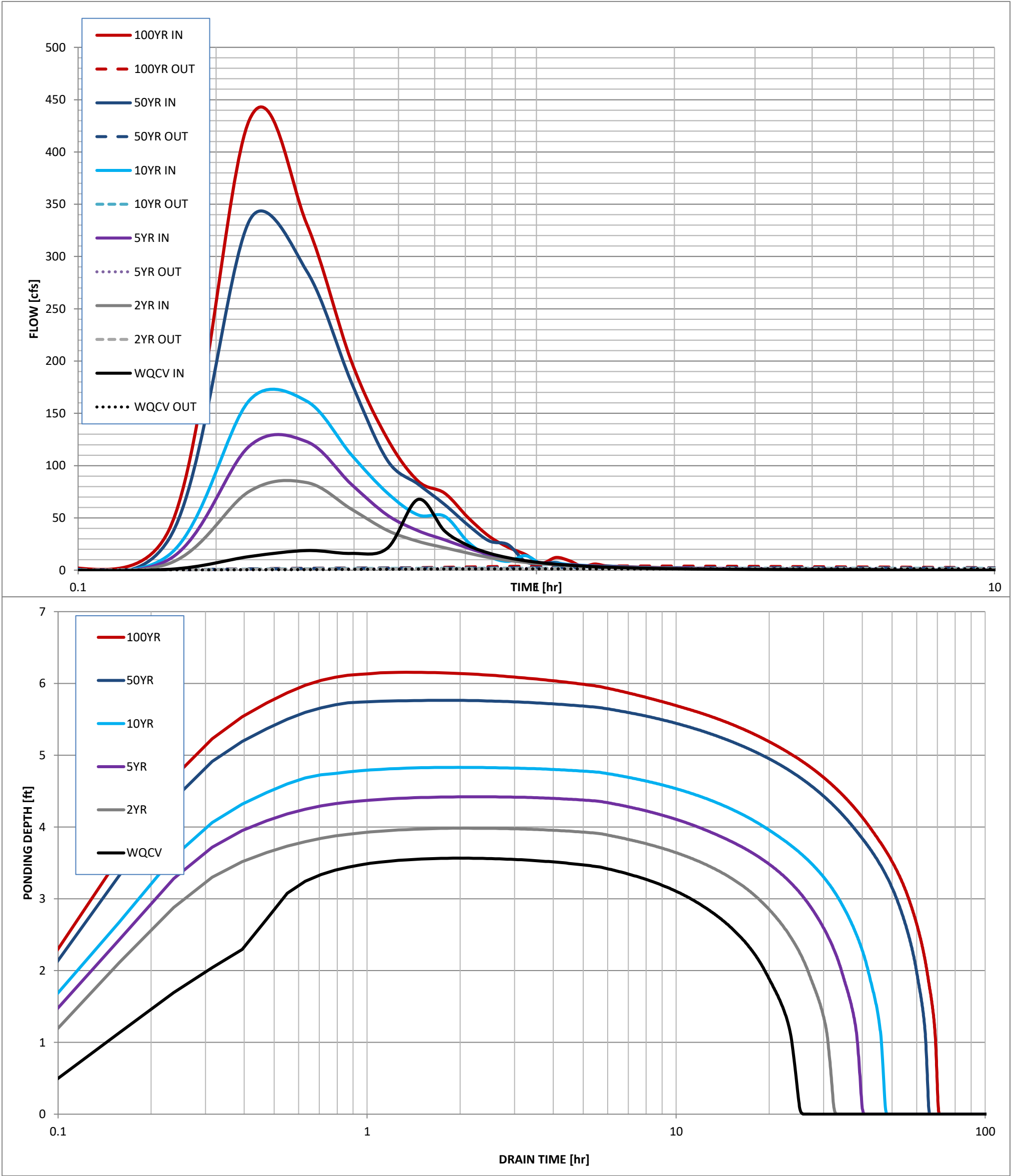
create a new stormwater facility, and

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 =	0.53	1.19	1.50	1.75	2.25	2.52	in
One-Hour Rainfall Depth =	2.553	6.103	8.512	11.664	20.230	24.794	acre-ft
Calculated Runoff Volume =							acre-ft
OPTIONAL Override Runoff Volume =	2.010	2.905	4.003	5.182	8.419	9.939	acre-ft
Inflow Hydrograph Volume =	23.1	29.7	36.6	43.4	59.8	63.9	hours
Time to Drain 97% of Inflow Volume =	24.2	31.2	38.5	45.7	63.1	67.6	hours
Time to Drain 99% of Inflow Volume =	3.57	3.98	4.42	4.83	5.76	6.16	ft
Maximum Ponding Depth =	1.57	2.01	2.56	3.08	3.54	3.64	acres
Maximum Poned Area =	1.624	2.374	3.388	4.543	7.681	9.095	acre-ft
Maximum Volume Stored =							

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Facility Location & Jurisdiction: Trails at Aspen Ridge, El Paso County, Colorado

User Input: Watershed Characteristics

Watershed Slope = 0.020 ft/ft

Watershed Length = 2691 ft

Watershed Area = 34.69 acres

Watershed Imperviousness =

55.1%

 percent

Percentage Hydrologic Soil Group A = 8.6% percent

Percentage Hydrologic Soil Group B = 81.2% percent

Percentage Hydrologic Soil Groups C/D = 10.2% percent

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

User Input

WQCV Treatment Method = Extended Detention ▼

[illegible]

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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 =	0.638	1.670	2.275	2.984	4.751	5.719	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	2.782	4.022	5.542	7.174	11.655	13.760	acre-ft
Time to Drain 97% of Inflow Volume =	79.7	83.3	79.6	76.0	67.7	64.3	hours
Time to Drain 99% of Inflow Volume =	87.0	92.3	90.5	88.5	83.9	82.1	hours
Maximum Ponding Depth =	3.65	4.25	4.81	5.58	6.83	7.23	ft
Maximum Poned Area =	1.13	1.23	1.32	1.46	1.74	1.83	acres
Maximum Volume Stored =	2.393	3.115	3.826	4.904	6.893	7.605	acre-ft

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