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By: Christina Prete, PE
Stormwater Manager
Date: 10/14/2024 12:40:53 PM
El Paso County Department of Public Works

Stormwater Detention and Infiltration Design Data Sheet

Workbook Protected Worksheet Protected

Stormwater Facility Name: **Settlers Ranch - Detention Pond #5**

Facility Location & Jurisdiction: **SW of Steppler Road & Settlers Ranch Road, Monument, CO 80132 (El Paso County)**

User Input: Watershed Characteristics

Watershed Slope =	0.049	ft/ft
Watershed Length =	1950	ft
Watershed Area =	18.90	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 =		percent

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

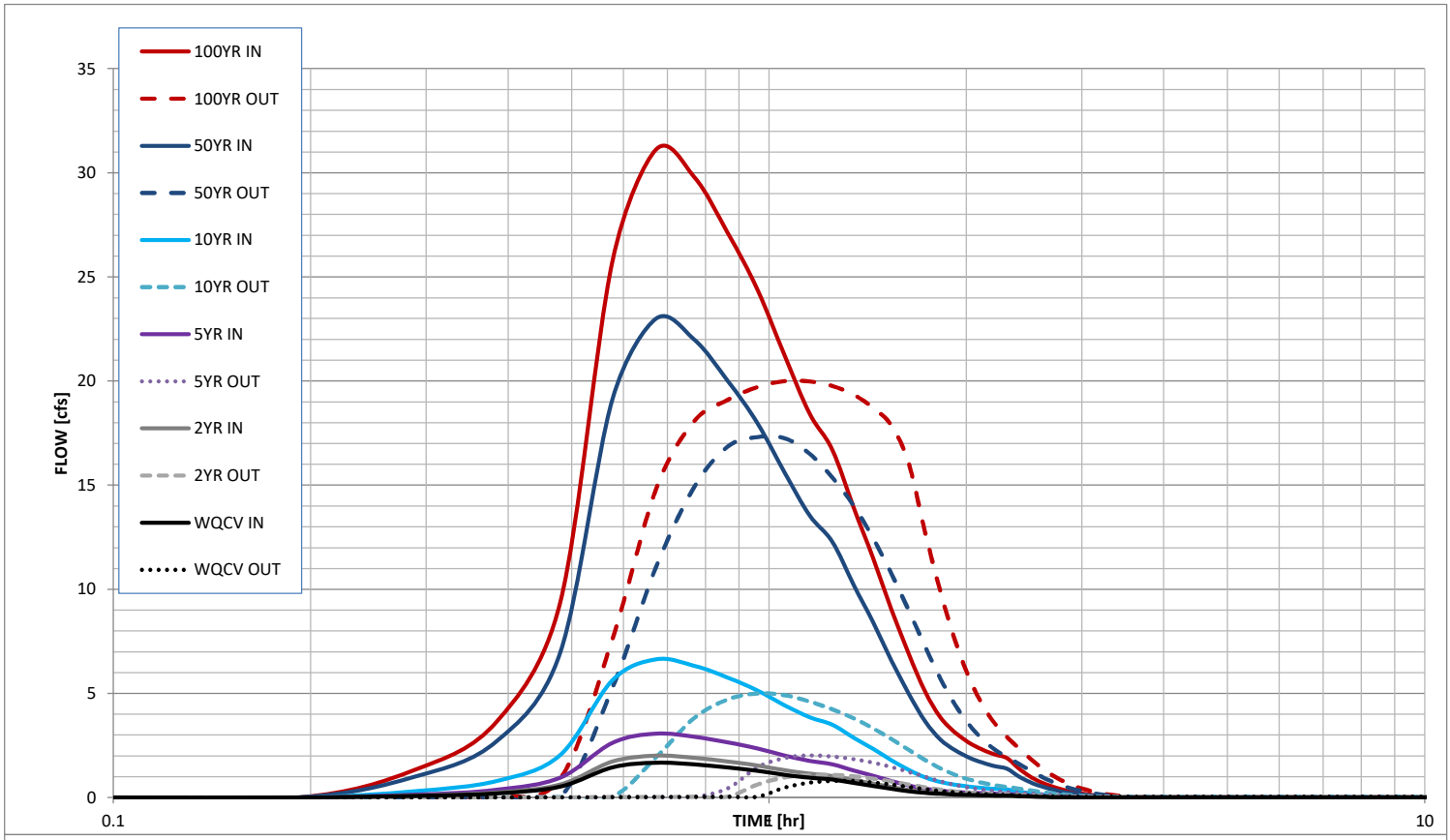
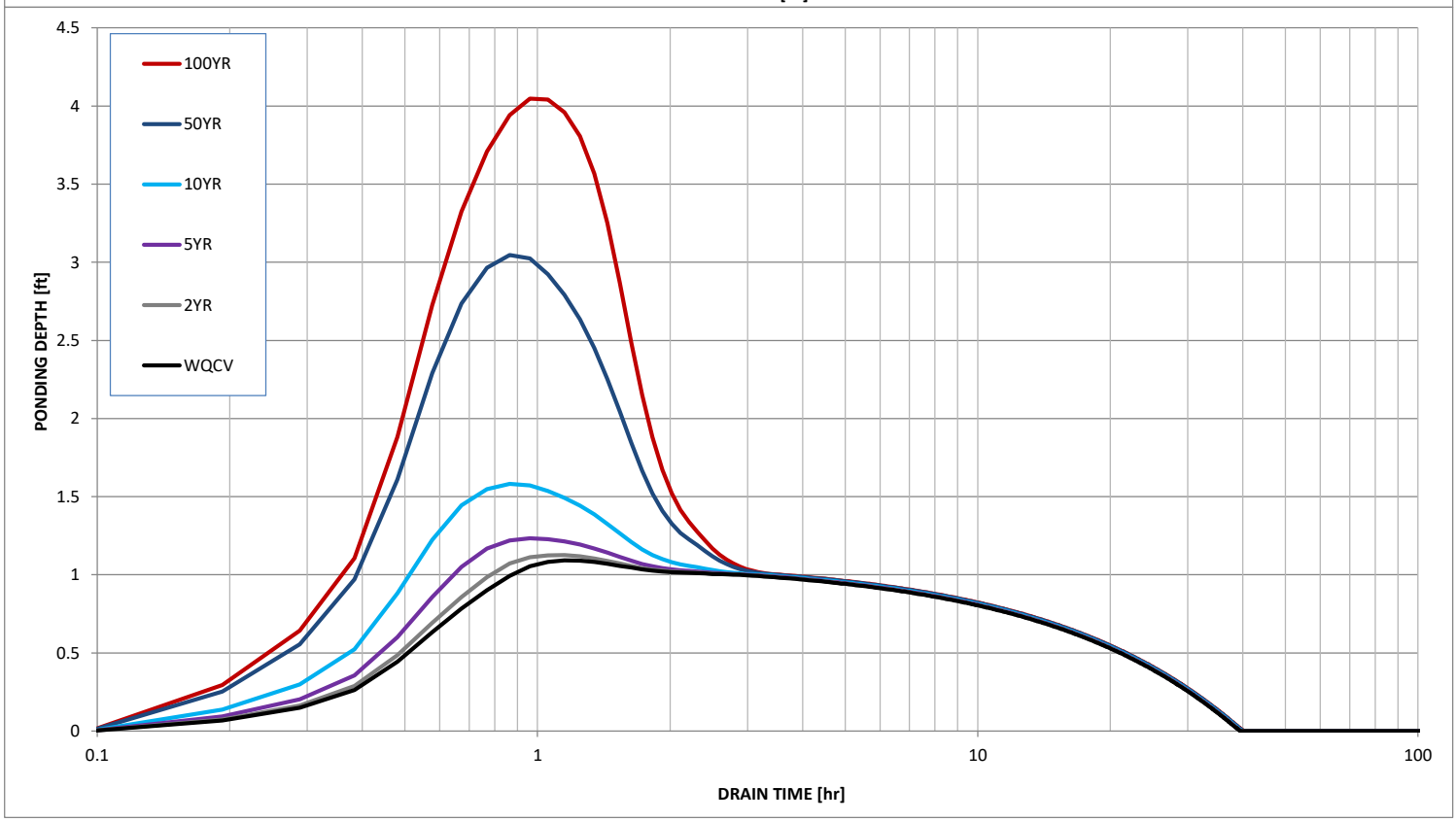
WQCV Treatment Method = Extended Detention

User Defined Stage [ft]	User Defined Area [ft^2]	User Defined Stage [ft]	User Defined Discharge [cfs]
0.00	10	0.00	0.00
1.00	5,230	1.00	0.04
3.00	8,045	3.00	17.20
5.00	11,447	5.00	22.57
7.00	15,165	7.00	149.07

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

Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
One-Hour Rainfall Depth =	0.60	1.19	1.50	1.75	2.25	2.52	in
Calculated Runoff Volume =	0.114	0.137	0.211	0.460	1.613	2.194	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	0.114	0.137	0.210	0.459	1.613	2.193	acre-ft
Time to Drain 97% of Inflow Volume =	30.7	29.9	**27.8**	22.3	7.2	3.0	hours
Time to Drain 99% of Inflow Volume =	34.4	34.0	32.8	29.7	21.0	**18.0**	hours
Maximum Ponding Depth =	1.09	1.13	1.23	1.58	3.05	4.05	ft
Maximum Ponded Area =	0.12	0.12	0.13	0.14	0.19	**0.23**	acres
Maximum Volume Stored =	0.071	0.075	0.088	0.135	0.372	0.578	acre-ft

NOTE: WATERSHED CHARACTERISTICS AND RAINFALL DATA MATCH INPUT ON "MHFD-DETENTION" CALCULATIONS

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