Stormwater Detention and Infiltration Design Data Sheet

Workbook Protected Worksheet Protected

Stormwater Facility Name: **Araco Enterprises - Detention Basin A1**

Facility Location & Jurisdiction: **7470 Southmoor Drive, Fountain, CO (El Paso County)**

User Input: Watershed Characteristics

Watershed Slope =	0.013	ft/ft
Watershed Length =	300	ft
Watershed Area =	1.46	acres
Watershed Imperviousness =	88.6%	percent
Percentage Hydrologic Soil Group A =	100.0%	percent
Percentage Hydrologic Soil Group B =		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

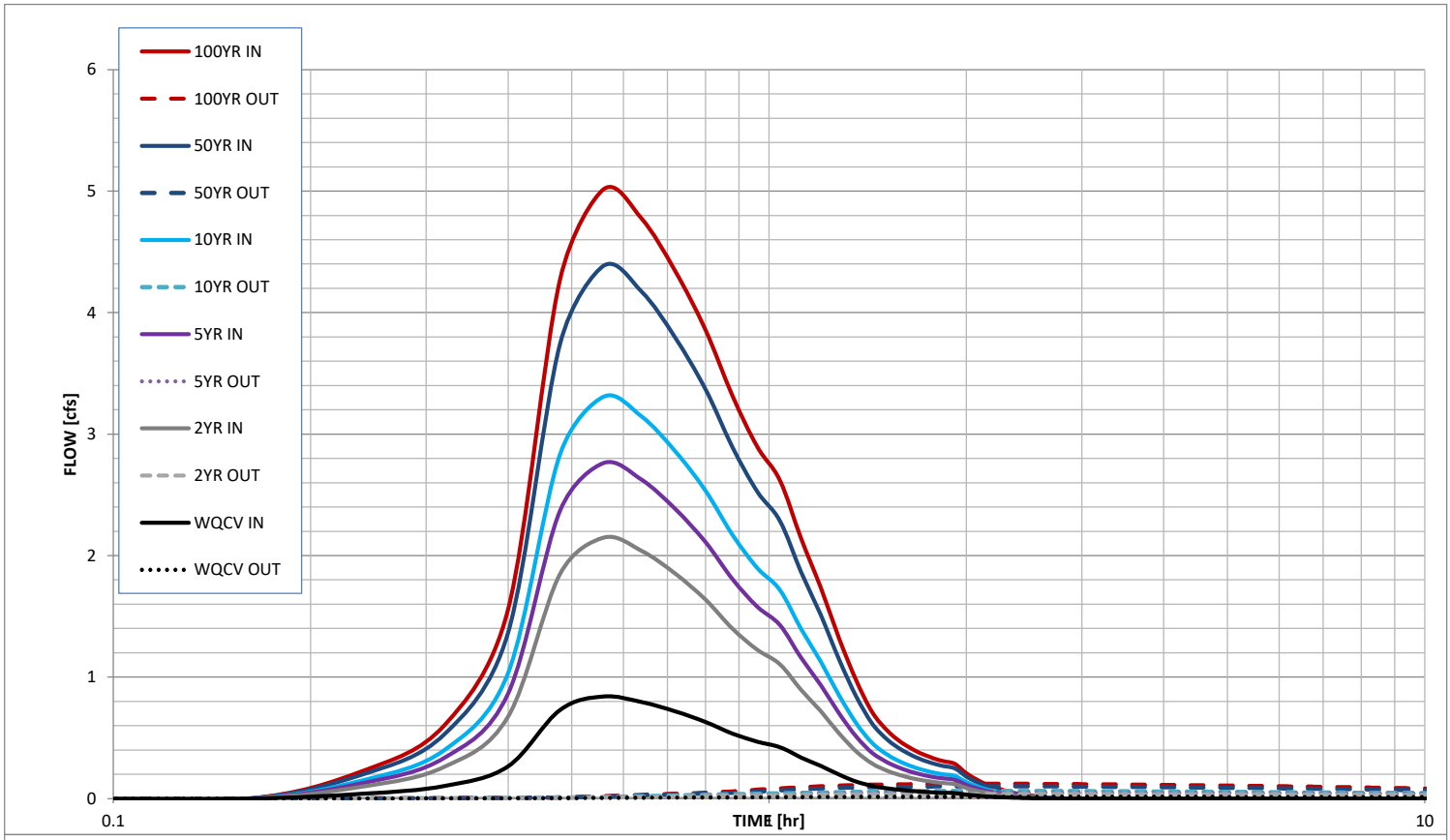
User Defined Stage [ft]	User Defined Area [ft^2]	User Defined Stage [ft]	User Defined Discharge [cfs]
0.00	10	0.00	0.00
1.00	2,610	1.00	0.01
3.00	2,958	3.00	0.05
5.00	3,308	5.00	0.14
7.00	3,660	7.00	17.13

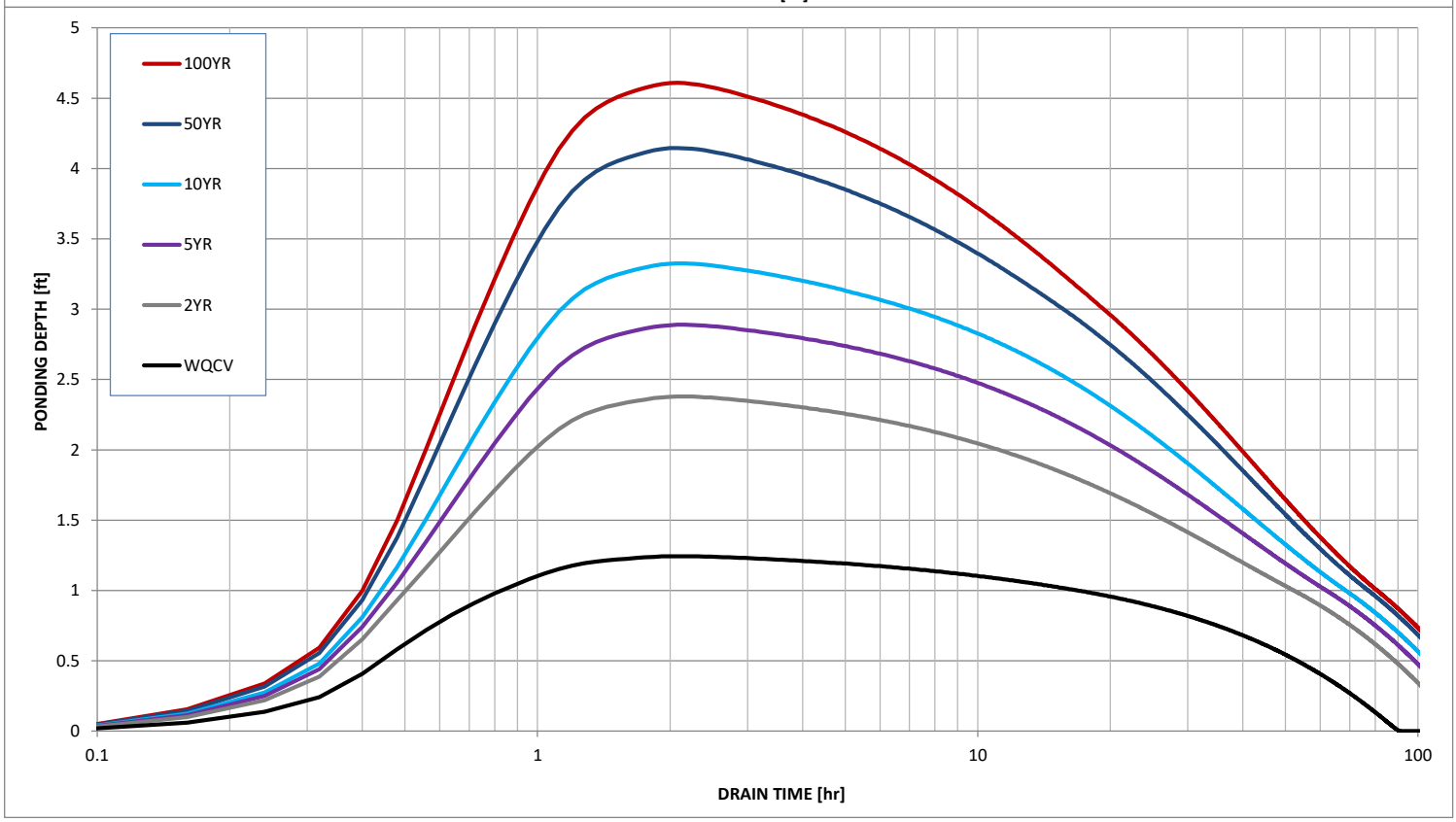
After completing and printing this worksheet to a pdf, go to:
https://maperture.digitaldataservices.com/gvh/?viewer=cswdif
create a new stormwater facility, and
attach the pdf of this worksheet to that record.

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 =	0.047	0.121	0.157	0.189	0.251	0.288	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	0.047	0.121	0.157	0.188	0.250	0.287	acre-ft
Time to Drain 97% of Inflow Volume =	74.2	99.8	**106.0**	109.8	113.5	114.6	hours
Time to Drain 99% of Inflow Volume =	81.0	110.6	0.0	0.0	0.0	**0.0**	hours
Maximum Ponding Depth =	1.24	2.38	2.89	3.33	4.15	4.61	ft
Maximum Ponded Area =	0.06	0.07	0.07	0.07	0.07	**0.07**	acres
Maximum Volume Stored =	0.045	0.116	0.150	0.180	0.238	0.272	acre-ft

Stormwater Detention and Infiltration Design Data Sheet





Stormwater Detention and Infiltration Design Data Sheet

Workbook Protected Worksheet Protected

Stormwater Facility Name: **Araco Concrete - Detention Basin A2**

Facility Location & Jurisdiction: **7470 Southmoor Drive, Fountain, CO (El Paso County)**

User Input: Watershed Characteristics

Watershed Slope =	0.013	ft/ft
Watershed Length =	600	ft
Watershed Area =	2.30	acres
Watershed Imperviousness =	51.9%	percent
Percentage Hydrologic Soil Group A =	80.0%	percent
Percentage Hydrologic Soil Group B =		percent
Percentage Hydrologic Soil Groups C/D =	20.0%	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	10	0.00	0.00
0.50	3,869	0.50	0.01
1.50	3,974	1.50	0.03
3.50	4,149	3.50	0.90
5.50	4,300	5.50	19.15

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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 =	0.60	1.19	1.50	1.75	2.25	2.52	in
Calculated Runoff Volume =	0.041	0.097	0.131	0.163	0.254	0.310	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	0.040	0.097	0.131	0.162	0.253	0.310	acre-ft
Time to Drain 97% of Inflow Volume =	60.6	88.5	**96.4**	95.7	91.8	89.2	hours
Time to Drain 99% of Inflow Volume =	65.9	96.9	106.0	106.4	105.1	**103.9**	hours
Maximum Ponding Depth =	0.67	1.28	1.61	1.84	2.52	2.93	ft
Maximum Ponded Area =	0.09	0.09	0.09	0.09	0.09	**0.09**	acres
Maximum Volume Stored =	0.037	0.092	0.122	0.143	0.206	0.245	acre-ft

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