Stormwater Detention and Infiltration Design Data Sheet

Workbook Protected Worksheet Protected

Stormwater Facility Name: 16140 Old Denver Road, All About Outdoor Storage, El Paso County

Facility Location & Jurisdiction: EXISTING DETENTION POND, HISTORIC 10-21-2019

User Input: Watershed Characteristics

Watershed Slope =	0.027	ft/ft
Watershed Length =	1130	ft
Watershed Area =	11.55	acres
Watershed Imperviousness =	64.0%	percent
Percentage Hydrologic Soil Group A =	0.0%	percent
Percentage Hydrologic Soil Group B =	100.0%	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	0	0.00	0.00
0.22	2,284	0.22	0.08
1.06		1.06	0.17
1.22	3,726	1.22	3.31
2.22	5,718	2.22	4.58
3.22	6,769	3.22	5.24
4.22	7,895	4.22	5.94

Update based on comments to the drainage report.

Remove the "Historic SDI worksheet"

Unresolved.

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 =	0.53	1.19	1.50	1.75	2.25	2.52	in
Calculated Runoff Volume =	0.238	0.684	0.975	1.216	1.802	2.111	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	0.238	0.683	0.974	1.216	1.802	2.110	acre-ft
Time to Drain 97% of Inflow Volume =	7.4	5.8	**5.1**	5.0	4.4	4.3	hours
Time to Drain 99% of Inflow Volume =	8.2	7.5	7.4	7.5	7.7	**7.8**	hours
Maximum Ponding Depth =	1.35	3.19	4.39	5.39	7.88	9.26	WARNING!
Maximum Ponded Area =	0.091	0.155	0.181	0.181	0.181	**0.181**	acres
Maximum Volume Stored =	0.086	0.321	0.495	0.495	0.495	0.495	acre-ft

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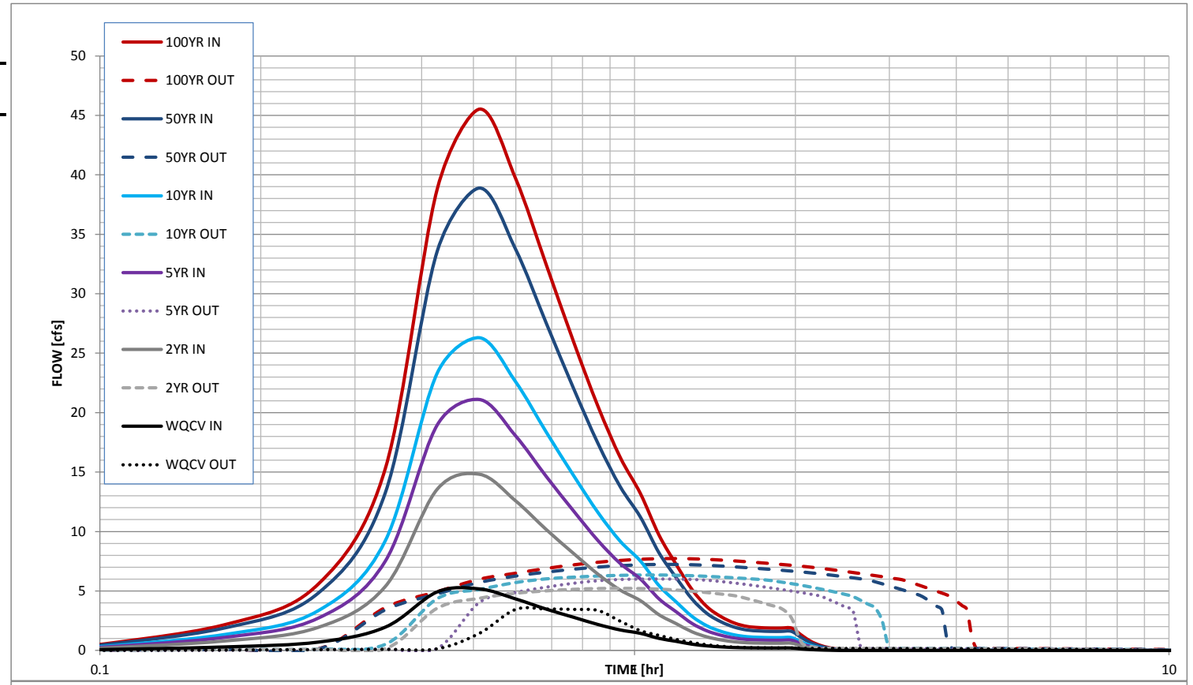

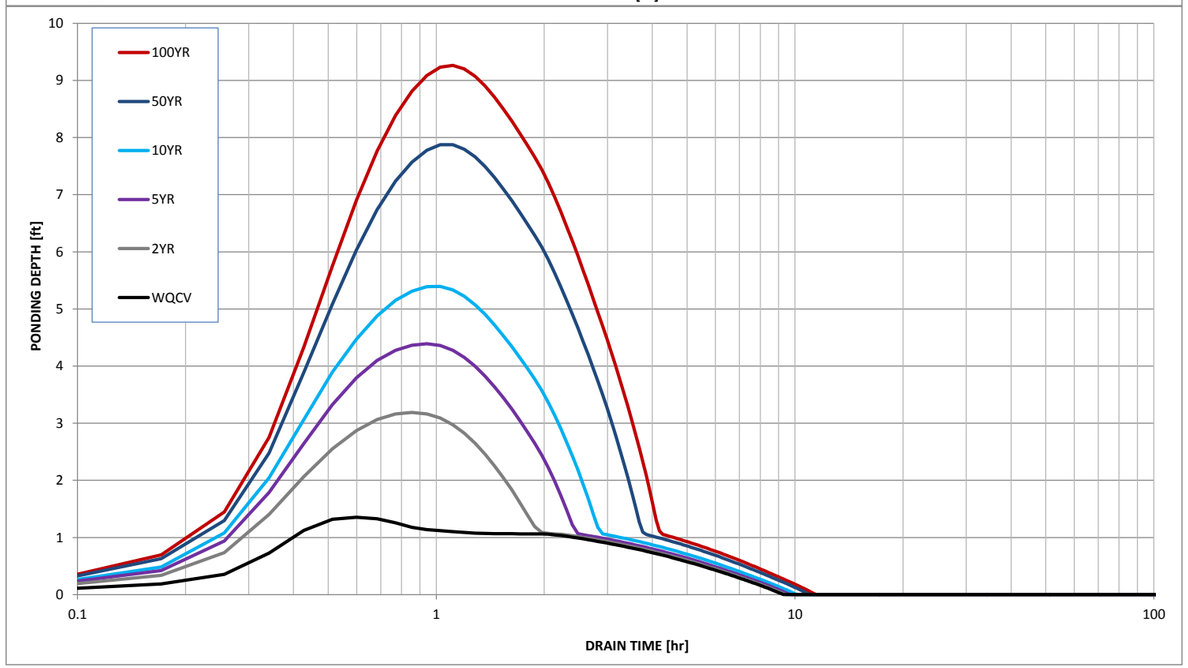

Stormwater Detention and Infiltration Design Data Sheet

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Stormwater Facility Name: 16140 Old Denver Road, All About Outdoor Storage, El Paso County

Facility Location & Jurisdiction: Full Spectrum Detention Pond O.E. Watts 10-23-19

User Input: Watershed Characteristics

Watershed Slope =	0.024	ft/ft
Watershed Length =	1130	ft
Watershed Area =	11.56	acres
Watershed Imperviousness =	70.0%	percent
Percentage Hydrologic Soil Group A =	0.0%	percent
Percentage Hydrologic Soil Group B =	100.0%	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	0	0.00	0.00
0.01	3,340	0.01	0.12
0.50	3,718	0.50	0.14
1.00	4,112	1.00	0.15
1.50	4,522	1.50	0.17
1.84	4,812	1.84	0.19
2.00	4,984	2.00	2.67
2.50	8,381	2.50	20.92
3.00	13,262	3.00	36.05
3.50	13,942	3.50	41.02
4.00	14,636	4.00	45.46
4.50	15,345	4.50	49.49
5.00	16,068	5.00	53.22

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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 =	0.262	0.760	1.056	1.301	1.881	2.188	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	0.262	0.760	1.055	1.301	1.880	2.187	acre-ft
Time to Drain 97% of Inflow Volume =	41.9	38.4	**36.2**	34.5	30.3	28.1	hours
Time to Drain 99% of Inflow Volume =	43.1	42.1	41.4	40.8	39.4	**38.7**	hours
Maximum Ponding Depth =	1.97	2.33	2.48	2.64	2.95	3.14	ft
Maximum Ponded Area =	0.114	0.165	0.190	0.223	0.293	**0.309**	acres
Maximum Volume Stored =	0.185	0.234	0.262	0.294	0.375	0.431	acre-ft

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