Stormwater Detention and Infiltration Design Data Sheet

Workhook Protected

Worksheet Protected

Stormwater Facility Name: Struthers Ranch Polaris - Water Quality Detention Pond A

Facility Location & Jurisdiction: Struthers Ranch Filing No. 4 (Struthers Ranch Road), El Paso County

User Input: Watershed Characteristics

Watershed Slope =	0.014	ft/ft
Watershed Length =	525	ft
Watershed Area =	4.16	acres
Watershed Imperviousness =	69.1%	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

Stage [ft] Area [ft^2] Stage [ft] Discharge [cfs] 0.00 10 0.00 0.00 1.00 1,437 1.00 0.02 3.00 2,201 3.00 1.45 5.00 3,180 5.00 1.79 7.00 4,160 7.00 94.66	User Defined	User Defined	User Defined	User Defined
1.00 1,437 1.00 0.02 3.00 2,201 3.00 1.45 5.00 3,180 5.00 1.79	Stage [ft]	Area [ft^2]	Stage [ft]	Discharge [cfs]
3.00 2,201 3.00 1.45 5.00 3,180 5.00 1.79	0.00	10	0.00	0.00
5.00 3,180 5.00 1.79	1.00	1,437	1.00	0.02
	3.00	2,201	3.00	1.45
7.00 4,160 7.00 94.66	5.00	3,180	5.00	1.79
	7.00	4,160	7.00	94.66

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

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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 =	0.094	0.263	0.349	0.444	0.649	0.763	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	0.094	0.262	0.349	0.444	0.648	0.763	acre-ft
Time to Drain 97% of Inflow Volume =	15.5	10.8	9.2	7.4	4.6	4.3	hours
Time to Drain 99% of Inflow Volume =	19.1	16.7	16.0	15.0	12.9	12.0	hours
Maximum Ponding Depth =	1.93	3.75	4.72	5.06	5.19	5.27	ft
Maximum Ponded Area =	0.04	0.06	0.07	0.07	0.08	0.08	acres
Maximum Volume Stored =	0.051	0.141	0.203	0.228	0.238	0.243	acre-ft

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