Solace of Colorado Springs (Lot 1)

- SDI Pond A
- SDI Pond B

Stormwater Detention and Infiltration Design Data Sheet

SDI-Design Data v2.00, Released January 2020

Stormwater Facility Name: Solace Apartments Pond A

Facility Location & Jurisdiction: El Paso County

User Input: Watershed Characteristics

or impact tracerement emanatement					
Extended Detention Basin (EDB)	EDB				
Watershed Area	1 =	7.89		acres	
Watershed Length	ı =	790		ft	
Watershed Length to Centroid	I =	340		ft	
Watershed Slope	=	0.020		ft/ft	
Watershed Imperviousness	; =	49.4%		percent	
Percentage Hydrologic Soil Group A	\ =	1.0%		percent	
Percentage Hydrologic Soil Group B	3 =	99.0%		percent	
Percentage Hydrologic Soil Groups C/D) =	0.0%		percent	
Target WQCV Drain Time	=	40.0		hours	
Location for 1-hr Rainfall Depths (use dropdown):					
User Input			•		

After providing required inputs above including 1-hour rainfall depths, click 'Run CUHP' to generate runoff hydrographs using the embedded Colorado Urban Hydrograph Procedure.

Once CUHP has been run and the Stage-Area-Discharge information has been provided, click 'Process Data' to interpolate the Stage-Area-Volume-Discharge data and generate summary results in the table below. Once this is complete, click 'Print to PDF'.

User Defined	User Defined	User Defined	User Defined
Stage [ft]	Area [ft^2]	Stage [ft]	Discharge [cfs]
0.00	10	0.00	0.00
1.00	909	1.00	0.02
2.00	4,500	2.00	0.05
3.00	8,857	3.00	0.09
4.00	13,976	4.00	2.75
5.00	17,609	5.00	3.09
6.00	20,879	6.00	22.72

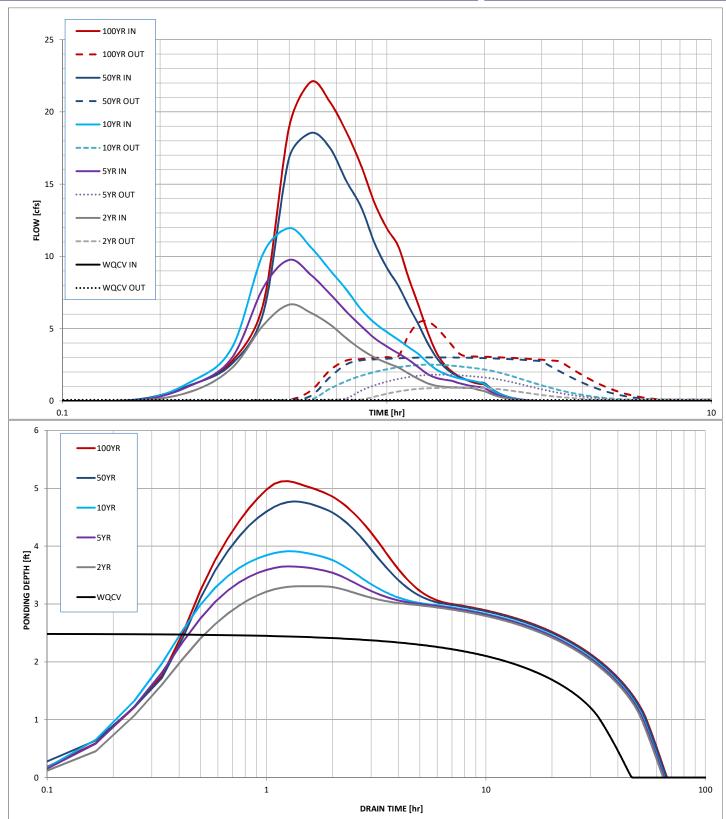
After completing and printing this worksheet to a pdf, go to: https://maperture.digitaldataservices.com/gvh/?viewer=cswdif Create a new stormwater facility, and attach the PDF of this worksheet to that record.

Routed Hydrograph Results

aleu riyurograpii Nesuits							_
Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
One-Hour Rainfall Depth =	N/A	1.19	1.50	1.75	2.26	2.52	in
CUHP Runoff Volume =	0.135	0.382	0.546	0.691	1.052	1.247	acre-ft
Inflow Hydrograph Volume =	N/A	0.382	0.546	0.691	1.052	1.247	acre-ft
Time to Drain 97% of Inflow Volume =	38.1	50.8	48.9	47.4	44.6	43.0	hours
Time to Drain 99% of Inflow Volume =	41.5	56.5	55.6	54.8	53.6	52.9	hours
Maximum Ponding Depth =	2.49	3.31	3.65	3.91	4.77	5.12	ft
Maximum Ponded Area =	0.15	0.24	0.28	0.31	0.38	0.41	acres
Maximum Volume Stored =	0.135	0.294	0.381	0.460	0.758	0.899	acre-ft

Pond A SDI Sheet.xlsm, Design Data 12/1/2020, 9:57 AM





Pond A SDI Sheet.xlsm, Design Data 12/1/2020, 9:57 AM

Stormwater Detention and Infiltration Design Data Sheet

SDI-Design Data v2.00, Released January 2020

Stormwater Facility Name: **Solace Apartments Pond B**

Facility Location & Jurisdiction: El Paso County

User Input: Watershed Characteristics

Extended Detention Basin (EDB)	•	EDB	
Watershed Area =		17.50	acres
Watershed Length =		1,631	ft
Watershed Length to Centroid	=[740	ft
Watershed Slope	=[0.014	ft/ft
Watershed Imperviousness	=[40.6%	percent
Percentage Hydrologic Soil Group A	=[1.0%	percent
Percentage Hydrologic Soil Group B	=[99.0%	percent
Percentage Hydrologic Soil Groups C/D	=[0.0%	percent
Target WQCV Drain Time	=[40.0	hours
Location for 1-hr Rainfall Depths ((us	e dropdown):
User Input		•	7

After providing required inputs above including 1-hour rainfall depths, click 'Run CUHP' to generate runoff hydrographs using the embedded Colorado Urban Hydrograph Procedure.

Once CUHP has been run and the Stage-Area-Discharge information has been provided, click 'Process Data' to interpolate the Stage-Area-Volume-Discharge data and generate summary results in the table below. Once this is complete, click 'Print to PDF'.

User Defined	User Defined	User Defined	User Defined
Stage [ft]	Area [ft^2]	Stage [ft]	Discharge [cfs]
0.00	10	0.00	0.00
0.83	332	1.00	0.03
1.83	6,042	2.00	0.08
2.83	18,264	3.00	0.23
3.83	26,278	4.00	2.75
4.83	30,833	5.00	3.09
5.83	32,872	6.00	3.39
6.33	37,812	6.33	12.37

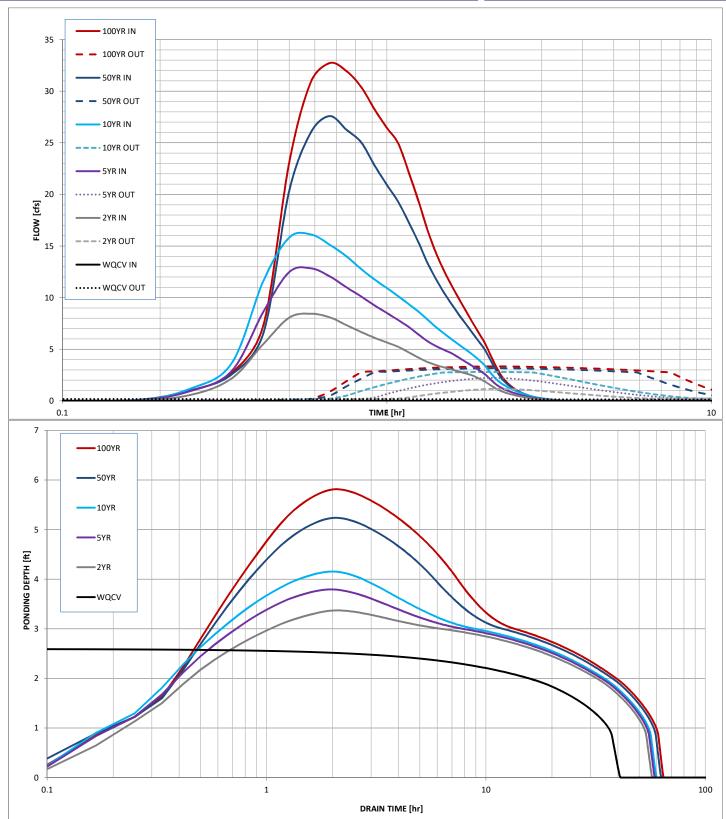
After completing and printing this worksheet to a pdf, go to: https://maperture.digitaldataservices.com/gvh/?viewer=cswdif Create a new stormwater facility, and attach the PDF of this worksheet to that record.

Routed Hydrograph Results

Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
One-Hour Rainfall Depth =	N/A	1.19	1.50	1.75	2.26	2.52	in
CUHP Runoff Volume =	0.264	0.729	1.088	1.408	2.246	2.702	acre-ft
Inflow Hydrograph Volume =	N/A	0.729	1.088	1.408	2.246	2.702	acre-ft
Time to Drain 97% of Inflow Volume =	35.7	47.7	46.6	45.5	43.7	42.9	hours
Time to Drain 99% of Inflow Volume =	38.0	52.3	52.6	52.6	53.2	53.6	hours
Maximum Ponding Depth =	2.60	3.37	3.79	4.15	5.24	5.81	ft
Maximum Ponded Area =	0.35	0.52	0.60	0.64	0.73	0.75	acres
Maximum Volume Stored =	0.265	0.608	0.843	1.066	1.810	2.238	acre-ft

Pond B SDI Sheet.xlsm, Design Data 12/1/2020, 9:52 AM





Pond B SDI Sheet.xlsm, Design Data 12/1/2020, 9:52 AM