SDI-Design Data v2.00, Released January 2020

#### Stormwater Facility Name: Permanent Sediment Basin H5B

Facility Location & Jurisdiction: El Paso County, CO

#### User Input: Watershed Characteristics

Extended Detention Basin (EDB)	EDB	
Watershed Area =	10.48	acres
Watershed Length =	792	ft
Watershed Length to Centroid =	396	ft
Watershed Slope =	0.060	ft/ft
Watershed Imperviousness =	5.7%	percent
Percentage Hydrologic Soil Group A =	0.0%	percent
Percentage Hydrologic Soil Group B =	0.0%	percent
Percentage Hydrologic Soil Groups C/D =	100.0%	percent
Target WQCV Drain Time =	40.0	hours
Location for 1-hr Rainfall Depths (us	se 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'.

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worksheet to that record.

Routed Hy	ydrogra	ph	Results
		_	

Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	I
One-Hour Rainfall Depth =	N/A	1.19	1.50	1.75	2.25	2.52	in
CUHP Runoff Volume =	0.036	0.178	0.381	0.573	1.050	1.344	acre-ft
Inflow Hydrograph Volume =	N/A	0.178	0.381	0.573	1.050	1.344	acre-ft
Time to Drain 97% of Inflow Volume =	52.5	40.6	29.6	23.3	12.8	8.1	hours
Time to Drain 99% of Inflow Volume =	67.0	55.8	45.5	40.0	31.2	27.3	hours
Maximum Ponding Depth =	1.52	2.63	3.46	4.01	4.29	4.41	ft
Maximum Ponded Area =	0.03	0.04	0.05	0.05	0.06	0.06	acres
Maximum Volume Stored =	0.036	0.076	0.114	0.142	0.158	0.165	acre-ft

User Defined	User Defined	User Defined	User Defined
Stage [ft]	Area [ft^2]	Stage [ft]	Discharge [cfs]
0.00	700	0.00	0.00
2.00	1,563	2.00	0.03
4.00	2,371	4.00	6.70
6.00	3,710	6.00	96.24
8.00	5,477	8.00	497.15
10.00	8,059	10.00	1250.42
11.00	9,549	11.00	1774.49

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SDI\_Design\_Data\_v2.00 (2).xlsm, Design Data

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SDI-Design Data v2.00, Released January 2020

#### Stormwater Facility Name: Winsome Filing No 3 Water Quality Pond A

Facility Location & Jurisdiction: **I Paso County, CO** 

User Input: Watershed Characteri	stics
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	<b>.</b>
Watershed Area = 94.50 acre	5
Watershed Length = 2,895 ft	
Watershed Length to Centroid = 1,447 ft	
Watershed Slope = 0.040 ft/ft	
Watershed Imperviousness = 2.0% perc	ent
Percentage Hydrologic Soil Group A = 0.0% perc	ent
Percentage Hydrologic Soil Group B = 0.0% perc	ent
Percentage Hydrologic Soil Groups C/D = 100.0% perc	ent
Target WQCV Drain Time = 40.0 hou	rs
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'.

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worksheet to that record.

Routed Hy	ydrogra	ph Results

Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	I
One-Hour Rainfall Depth =	N/A	1.19	1.50	1.75	2.25	2.52	in
CUHP Runoff Volume =	0.119	1.393	3.212	4.950	9.361	12.096	acre-ft
Inflow Hydrograph Volume =	N/A	1.393	3.212	4.950	9.361	12.096	acre-ft
Time to Drain 97% of Inflow Volume =	44.7	13.3	3.8	3.2	1.0	0.8	hours
Time to Drain 99% of Inflow Volume =	51.8	33.2	19.2	9.7	4.3	3.7	hours
Maximum Ponding Depth =	1.55	2.15	2.34	2.41	2.75	2.92	ft
Maximum Ponded Area =	0.13	0.17	0.17	0.18	0.19	0.20	acres
Maximum Volume Stored =	0.119	0.209	0.241	0.254	0.317	0.351	acre-ft

User Defined	User Defined	User Defined	User Defined
Stage [ft]	Area [ft^2]	Stage [ft]	Discharge [cfs]
0.00	270	0.00	0.00
1.00	4,457	1.00	0.03
2.00	6,962	2.00	1.28
3.00	8,928	3.00	166.63
4.00	13,970	4.00	471.26





SDI\_Design\_Data\_v2.00-WQ\_Pond-MOD.xlsm, Design Data

12/15/2021, 9:24 AM

SDI-Design Data v2.00, Released January 2020

Stormwater Facility Name: Winsome Filing No 3 Pond 1

EDB

Facility Location & Jurisdiction: El Paso County, CO

Us	er Input: Watershed Characteristics	5	
	Extended Detention Basin (EDB)	•	
	Watershed Area	a =	

Watershed Area =	60.00	acres
Watershed Length =	2,399	ft
Watershed Length to Centroid =	960	ft
Watershed Slope =	0.050	ft/ft
Watershed Imperviousness =	7.2%	percent
Percentage Hydrologic Soil Group A =	0.0%	percent
Percentage Hydrologic Soil Group B =	6.9%	percent
Percentage Hydrologic Soil Groups C/D =	93.1%	percent
Target WQCV Drain Time =	40.0	hours
Location for 1-hr Rainfall Depths (u	se 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'.

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Routed Hydrodraph Results
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Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	I
One-Hour Rainfall Depth =	N/A	1.19	1.50	1.75	2.25	2.52	in
CUHP Runoff Volume =	0.252	1.063	2.245	3.366	6.155	7.866	acre-ft
Inflow Hydrograph Volume =	N/A	1.063	2.245	3.366	6.155	7.866	acre-ft
Time to Drain 97% of Inflow Volume =	38.4	30.1	21.2	14.9	3.6	3.1	hours
Time to Drain 99% of Inflow Volume =	42.8	38.8	33.6	30.0	22.8	19.3	hours
Maximum Ponding Depth =	2.40	3.18	3.80	4.17	5.14	5.83	ft
Maximum Ponded Area =	0.23	0.30	0.35	0.38	0.47	0.53	acres
Maximum Volume Stored =	0.253	0.463	0.667	0.806	1.220	1.567	acre-ft

User Defined	User Defined	User Defined	User Defined
Stage [ft]	Area [ft^2]	Stage [ft]	Discharge [cfs]
0.00	49	0.00	0.00
1.00	3,129	1.00	0.04
2.00	8,445	2.00	0.09
3.00	12,704	3.00	5.65
4.00	16,119	4.00	29.52
5.00	19,963	5.00	68.80
6.00	23,990	6.00	88.52
7.00	28,209	7.00	309.27
8.00	35,153	8.00	704.71

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12/15/2021, 8:58 AM

SDI-Design Data v2.00, Released January 2020

Stormwater Facility Name: Winsome Filing No 3 Pond 2

Facility Location & Jurisdiction: El Paso County, CO

User Input: Watershed Characteristics		
Extended Detention Basin (EDB)	EDB	
Watershed Area =	67.90	acres
Watershed Length =	2,639	ft
Watershed Length to Centroid =	1,158	ft
Watershed Slope =	0.043	ft/ft
Watershed Imperviousness =	8.5%	percent
Percentage Hydrologic Soil Group A =	0.0%	percent
Percentage Hydrologic Soil Group B =	0.0%	percent
Percentage Hydrologic Soil Groups C/D =	100.0%	percent
Target WQCV Drain Time =	40.0	hours
Location for 1-hr Rainfall Depths (u	se 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'.

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Create a new stormwater facility, and attach the PDF of this
worksheet to that record.

Routed Hy	ydrogra	ph Results

Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	I
One-Hour Rainfall Depth =	N/A	1.19	1.50	1.75	2.25	2.52	in
CUHP Runoff Volume =	0.330	1.313	2.686	3.969	7.125	9.058	acre-ft
Inflow Hydrograph Volume =	N/A	1.313	2.686	3.969	7.125	9.058	acre-ft
Time to Drain 97% of Inflow Volume =	37.0	33.0	25.5	20.3	10.8	7.9	hours
Time to Drain 99% of Inflow Volume =	41.1	40.8	36.4	33.3	27.3	24.3	hours
Maximum Ponding Depth =	2.63	3.55	4.21	4.53	5.49	5.96	ft
Maximum Ponded Area =	0.27	0.37	0.43	0.46	0.55	0.59	acres
Maximum Volume Stored =	0.330	0.619	0.884	1.027	1.516	1.785	acre-ft

User Defined	User Defined	User Defined	User Defined
Stage [ft]	Area [ft^2]	Stage [ft]	Discharge [cfs]
0.00	135	0.00	0.00
1.00	3,459	1.00	0.05
2.00	8,756	2.00	0.12
3.00	13,524	3.00	0.58
4.00	17,991	4.00	18.49
5.00	22,136	5.00	55.53
6.00	26,053	6.00	97.37
7.00	29,968	7.00	293.09
8.00	34,723	8.00	672.69







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12/15/2021, 8:57 AM

SDI-Design Data v2.00, Released January 2020

Stormwater Facility Name: Winsome Filing No 3 Pond 4

Facility Location & Jurisdiction: El Paso County, CO

User Input: Watershed Characteristics		
Extended Detention Basin (EDB)	EDB	
Watershed Area =	59.25	acres
Watershed Length =	2,267	ft
Watershed Length to Centroid =	1,368	ft
Watershed Slope =	0.057	ft/ft
Watershed Imperviousness =	11.7%	percent
Percentage Hydrologic Soil Group A =	0.0%	percent
Percentage Hydrologic Soil Group B =	= 14.0%	percent
Percentage Hydrologic Soil Groups C/D =	86.0%	percent
Target WQCV Drain Time =	40.0	hours
Location for 1-hr Rainfall Depths (u	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'.

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Routed Hy	ydrogra	ph Results

Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	I
One-Hour Rainfall Depth =	N/A	1.19	1.50	1.75	2.25	2.52	in
CUHP Runoff Volume =	0.377	1.225	2.404	3.526	6.281	7.956	acre-ft
Inflow Hydrograph Volume =	N/A	1.225	2.404	3.526	6.281	7.956	acre-ft
Time to Drain 97% of Inflow Volume =	49.6	44.7	37.3	32.0	21.8	16.7	hours
Time to Drain 99% of Inflow Volume =	54.4	53.0	48.8	45.7	39.6	36.5	hours
Maximum Ponding Depth =	2.01	2.63	3.25	3.58	4.52	5.00	ft
Maximum Ponded Area =	0.44	0.53	0.60	0.63	0.70	0.74	acres
Maximum Volume Stored =	0.380	0.678	1.030	1.236	1.863	2.211	acre-ft

User Defined	User Defined	User Defined	User Defined
Stage [ft]	Area [ft^2]	Stage [ft]	Discharge [cfs]
0.00	199	0.00	0.00
1.00	6,673	1.00	0.07
2.00	19,170	2.00	0.15
3.00	25,505	3.00	11.11
4.00	28,834	4.00	40.13
5.00	32,149	5.00	75.43
6.00	35,437	6.00	218.27
7.00	38,668	7.00	583.92
8.00	41,628	8.00	1123.98

SDI\_Design\_Data\_v2.00-Pond4-MOD.xlsm, Design Data

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