

Stormwater Detention and Infiltration Design Data Sheet

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Worksheet Protected

Stormwater Facility Name: Waterbury Filing No. 1 EDB Pond 1 D8 8

Facility Location & Jurisdiction: Stapleton Dr. & Bandernero Dr Intersection

User Input: Watershed Characteristics

Watershed Slope =	0.019	ft/ft
Watershed Length =	1250	ft
Watershed Area =	22.34	acres
Watershed Imperviousness =	51.9%	percent
Percentage Hydrologic Soil Group A =	100.0%	percent
Percentage Hydrologic Soil Group B =	0.0%	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	100	0.00	0.00
0.25	3,201	0.25	0.05
0.50	6,302	0.50	0.07
0.75	8,582	0.75	0.09
1.00	10,862	1.00	0.10
1.25	13,142	1.25	0.14
1.50	15,422	1.50	0.18
1.75	17,702	1.75	0.21
2.00	19,982	2.00	0.24
2.25	22,262	2.25	0.26
2.50	24,542	2.50	0.31
2.75	26,599	2.75	0.36
3.00	28,656	3.00	0.40
3.25	30,713	3.25	0.43
3.50	32,770	3.50	0.46
3.75	34,826	3.75	1.98
4.00	36,883	4.00	7.03
4.25	38,940	4.25	14.04
4.50	40,997	4.50	22.56
4.75	43,397	4.75	41.35
5.00	45,797	5.00	64.52
5.25	48,198	5.25	95.04
5.50	50,598	5.50	132.39
5.75	52,998	5.75	176.20
6.00	55,398	6.00	226.29
6.25	57,798	6.25	282.56
6.50	60,198	6.50	344.98

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

	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
Design Storm Return Period =	0.53	1.19	1.50	1.75	2.25	2.52	in
One-Hour Rainfall Depth =	0.394	0.923	1.212	1.490	2.292	2.813	acre-ft
Calculated Runoff Volume =							acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	0.394	0.923	1.212	1.490	2.292	2.813	hours
Time to Drain 97% of Inflow Volume =	38.9	58.6	65.8	71.7	70.0	68.1	hours
Time to Drain 99% of Inflow Volume =	41.1	62.6	70.6	77.2	77.6	76.7	ft
Maximum Ponding Depth =	1.72	2.72	3.16	3.53	4.06	4.28	acres
Maximum Ponded Area =	0.40	0.61	0.69	0.76	0.86	0.90	acre-ft
Maximum Volume Stored =	0.365	0.873	1.153	1.417	1.846	2.046	

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Stormwater Facility Name: Waterbury Filing No. 1 EDB Pond 2 DP 18

Facility Location & Jurisdiction: Stapleton Dr. & Bandernero Dr Intersection

User Input: Watershed Characteristics

Watershed Slope = 0.019 ft/ft
Watershed Length = 1050 ft
Watershed Area = 21.05 acres
Watershed Imperviousness = 25.8% percent
Percentage Hydrologic Soil Group A = 100.0% percent
Percentage Hydrologic Soil Group B = 0.0% 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 ▼

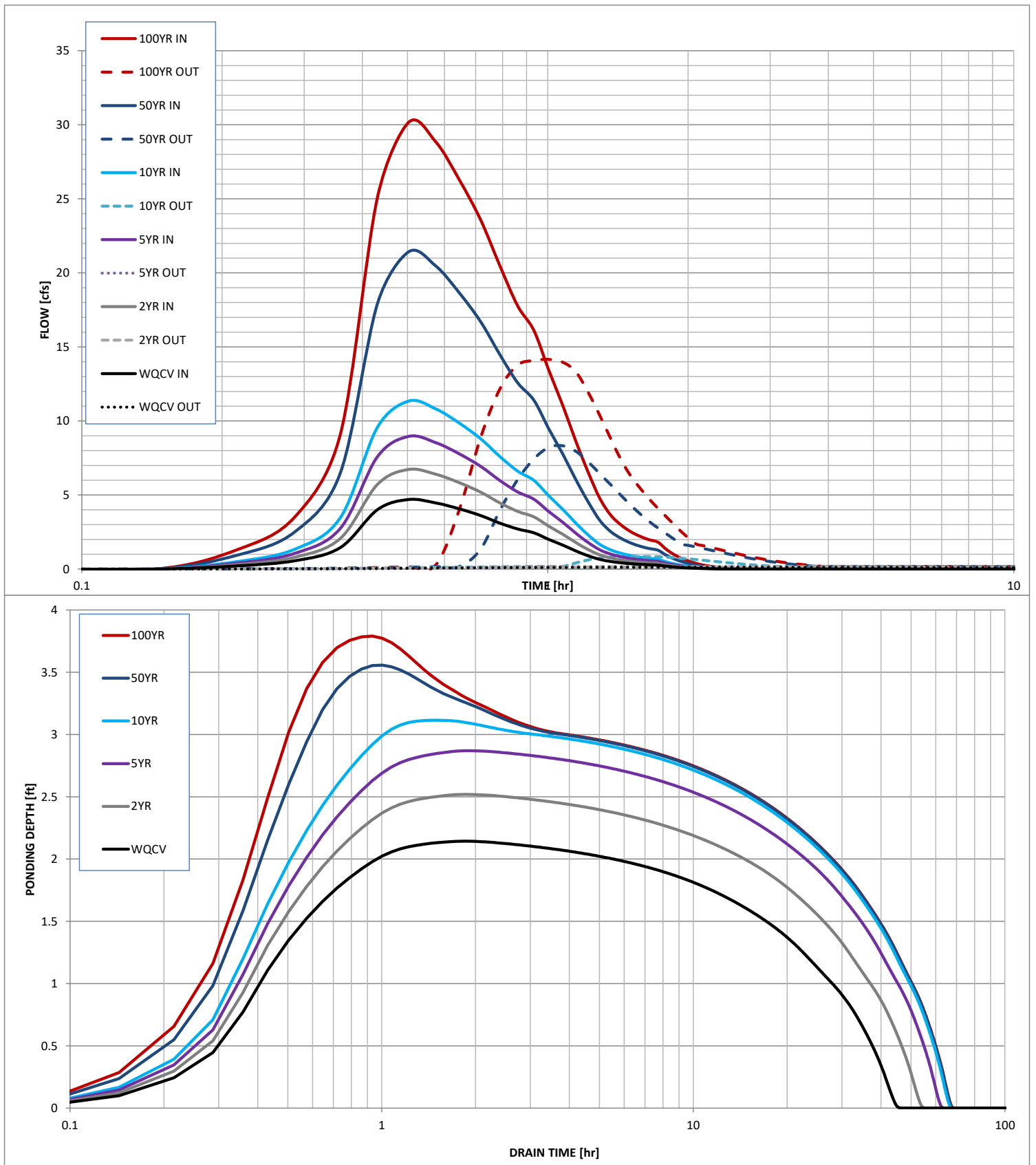
User Defined Stage [ft]	User Defined Area [ft^2]	User Defined Stage [ft]	User Defined Discharge [cfs]
0.00	100	0.00	0.00
0.25	942	0.25	0.02
0.50	1,784	0.50	0.03
0.75	2,626	0.75	0.04
1.00	3,468	1.00	0.04
1.25	5,034	1.25	0.07
1.50	6,600	1.50	0.08
1.75	8,166	1.75	0.10
2.00	9,732	2.00	0.11
2.25	11,297	2.25	0.13
2.50	12,863	2.50	0.15
2.75	14,429	2.75	0.17
3.00	15,995	3.00	0.18
3.25	19,602	3.25	1.69
3.50	23,209	3.50	6.73
3.75	26,815	3.75	13.72
4.00	30,422	4.00	16.48
4.25	34,029	4.25	17.02
4.50	37,636	4.50	17.54
4.75	41,243	4.75	18.05
5.00	44,850	5.00	18.54
5.25	48,650	5.25	26.83
5.50	52,450	5.50	42.41
5.75	56,251	5.75	63.60
6.00	60,051	6.00	90.00
6.25	63,851	6.25	121.47
6.50	67,652	6.50	157.95
6.75	71,452	6.75	199.49
7.00	75,252	7.00	246.12

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Routed Hydrograph Results

	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
Design Storm Return Period =	0.53	1.19	1.50	1.75	2.25	2.52	in
One-Hour Rainfall Depth =	0.241	0.347	0.464	0.588	1.119	1.582	acre-ft
Calculated Runoff Volume =							acre-ft
OPTIONAL Override Runoff Volume =	0.241	0.346	0.463	0.588	1.119	1.582	acre-ft
Inflow Hydrograph Volume =	39.1	46.8	53.8	56.7	52.5	48.6	hours
Time to Drain 97% of Inflow Volume =	41.7	50.1	57.9	61.4	59.7	58.2	hours
Time to Drain 99% of Inflow Volume =	2.14	2.52	2.87	3.11	3.56	3.79	ft
Maximum Ponding Depth =	0.24	0.30	0.35	0.40	0.55	0.63	acres
Maximum Pondered Area =	0.224	0.326	0.439	0.530	0.740	0.878	acre-ft
Maximum Volume Stored =							

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Stormwater Facility Name: Waterbury Filing No. 1 EDB Pond 3 DP 29

Facility Location & Jurisdiction: Stapleton Dr. & Bandernero Dr Intersection

User Input: Watershed Characteristics

Watershed Slope = 0.026 ft/ft
 Watershed Length = 1500 ft
 Watershed Area = 71.20 acres
 Watershed Imperviousness = 54.7% percent
 Percentage Hydrologic Soil Group A = 100.0% percent
 Percentage Hydrologic Soil Group B = 0.0% 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 ▼

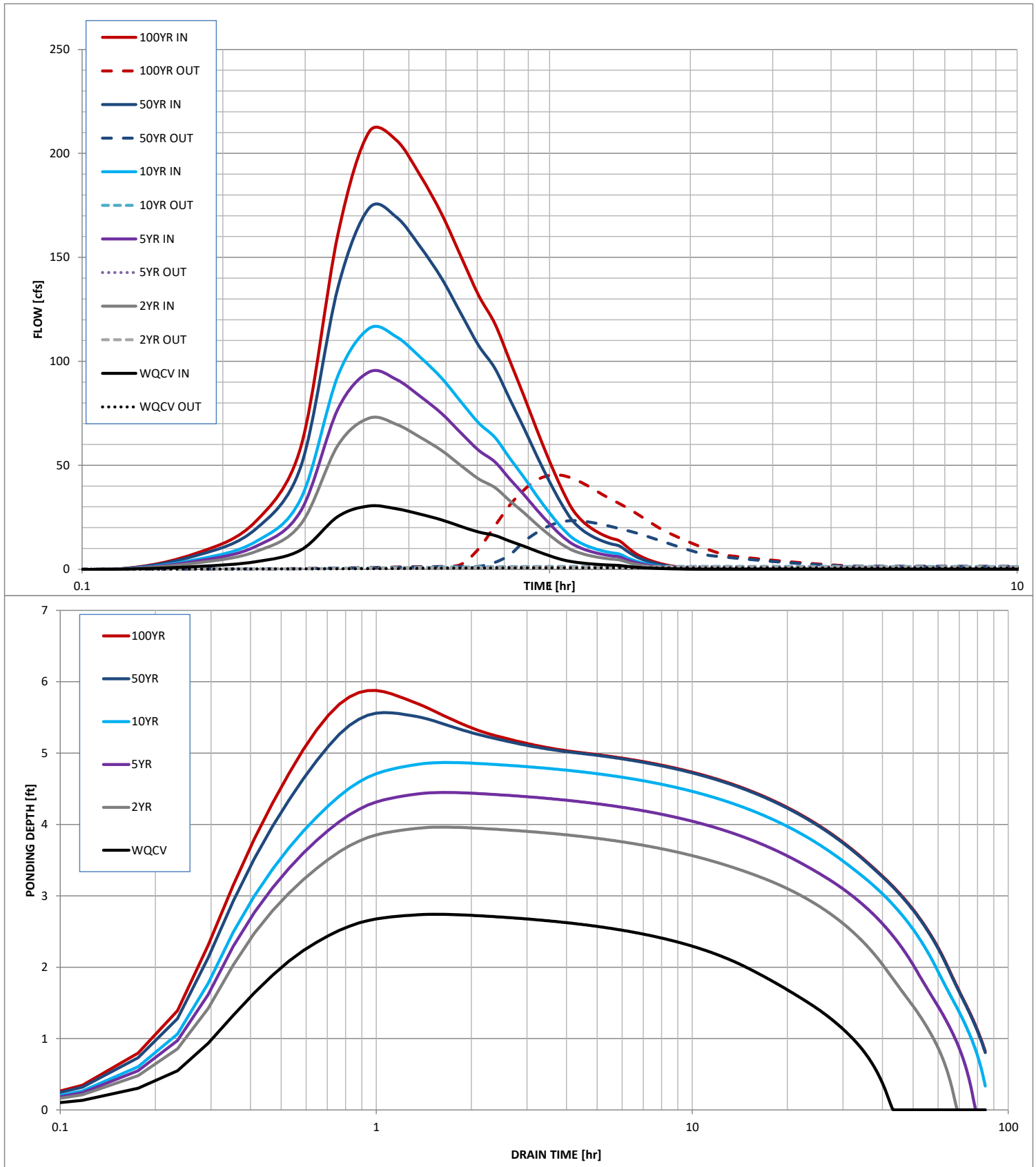
User Defined Stage [ft]	User Defined Area [ft^2]	User Defined Stage [ft]	User Defined Discharge [cfs]
0.00	100	0.00	0.00
0.25	3,412	0.25	0.12
0.50	6,282	0.50	0.17
0.75	9,372	0.75	0.20
1.00	13,347	1.00	0.23
1.25	16,659	1.25	0.26
1.50	19,971	1.50	0.29
1.75	23,283	1.75	0.38
2.00	26,595	2.00	0.48
2.25	33,544	2.25	0.55
2.50	40,493	2.50	0.61
2.75	47,442	2.75	0.66
3.00	54,392	3.00	0.71
3.25	61,341	3.25	0.76
3.50	68,290	3.50	0.91
3.75	75,240	3.75	1.02
4.00	82,189	4.00	1.11
4.25	87,136	4.25	1.19
4.50	92,083	4.50	1.27
4.75	97,030	4.75	1.33
5.00	101,977	5.00	1.39
5.25	106,924	5.25	6.64
5.50	111,871	5.50	19.02
5.75	116,819	5.75	35.53
6.00	121,766	6.00	55.32
6.25	124,516	6.25	107.90
6.50	127,266	6.50	169.47
6.75	130,017	6.75	249.76
7.00	132,767	7.00	345.86
7.25	135,518	7.25	456.16
7.50	138,268	7.50	579.67
7.75	141,019	7.75	715.66
8.00	143,769	8.00	863.65

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Routed Hydrograph Results

	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
Design Storm Return Period =	0.53	1.19	1.50	1.75	2.25	2.52	in
One-Hour Rainfall Depth =	1.302	3.147	4.128	5.064	7.676	9.346	acre-ft
Calculated Runoff Volume =							acre-ft
OPTIONAL Override Runoff Volume =	1.302	3.147	4.128	5.061	7.670	9.343	acre-ft
Inflow Hydrograph Volume =	38.7	61.0	69.2	76.2	77.6	75.5	hours
Time to Drain 97% of Inflow Volume =	40.8	65.0	74.3	82.1	0.0	0.0	hours
Maximum Ponding Depth =	2.74	3.96	4.45	4.87	5.57	5.88	ft
Maximum Ponded Area =	1.08	1.86	2.09	2.28	2.60	2.74	acres
Maximum Volume Stored =	1.226	3.020	3.978	4.902	6.599	7.436	acre-ft

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