

# Stormwater Detention and Infiltration Design Data Sheet

Worksheet Protected

### User Input: Watershed Characteristics

Watershed Slope = 0.040 ft/ft

Watershed Length = 4800 ft

Watershed Area =	76.00	acres
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Watershed Imperviousness = 55.0% 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):

Denver - Capitol Building

WQCV Treatment Method = Extended Detention

[illegible]

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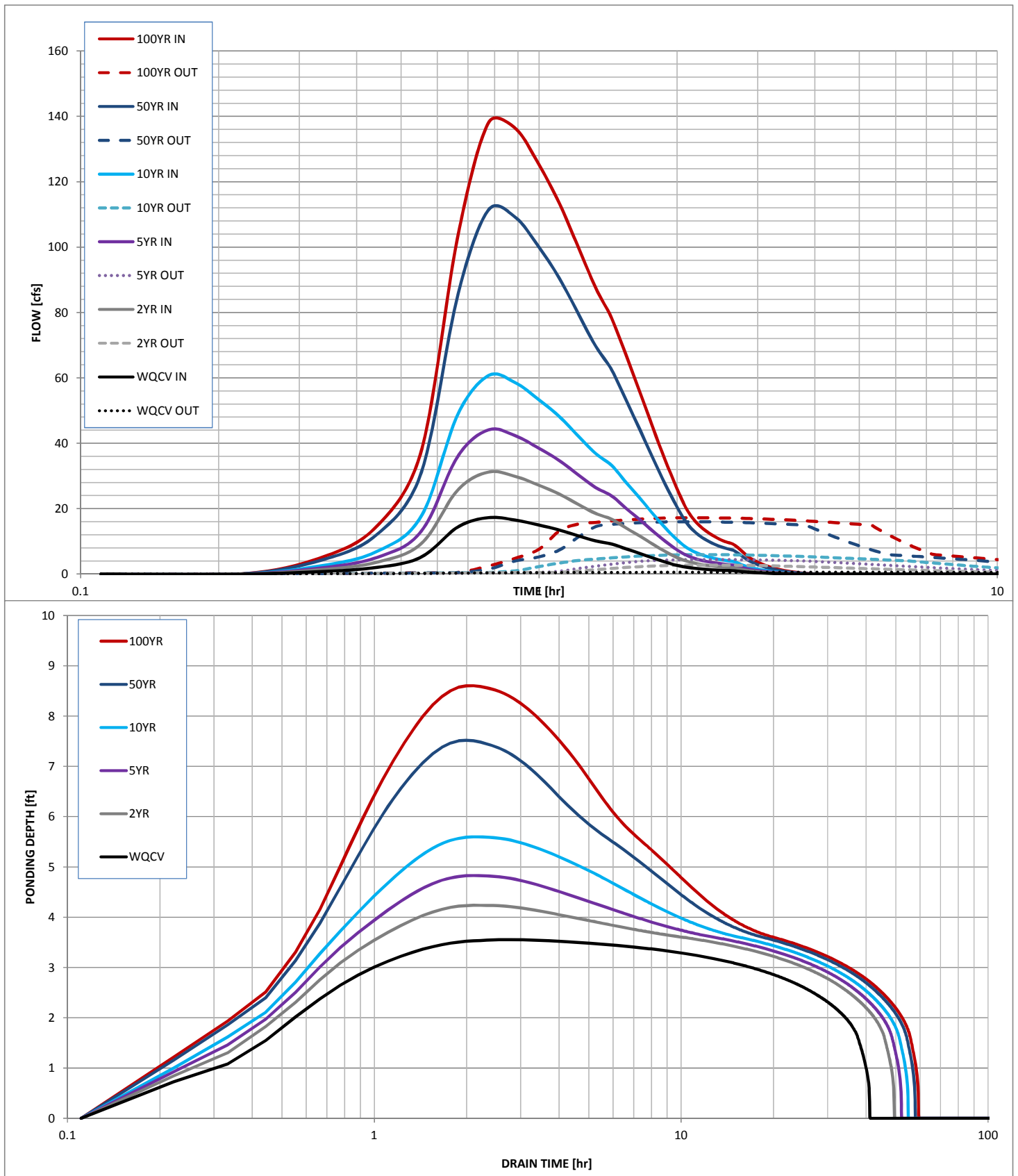
**create a new stormwater facility, and**

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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	0.83	1.09	1.33	1.99	2.31	in
Calculated Runoff Volume =	1.396	2.541	3.609	5.009	9.332	11.640	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	1.395	2.540	3.609	5.000	9.323	11.638	acre-ft
Time to Drain 97% of Inflow Volume =	38.2	44.9	46.2	47.2	45.5	44.9	hours
Time to Drain 99% of Inflow Volume =	39.9	47.4	49.5	51.5	52.5	52.9	hours
Maximum Ponding Depth =	3.55	4.24	4.83	5.60	7.52	8.60	ft
Maximum Poned Area =	1.25	1.38	1.45	1.53	1.72	1.84	acres
Maximum Volume Stored =	1.271	2.184	3.020	4.166	7.281	9.221	acre-ft

# Stormwater Detention and Infiltration Design Data Sheet



## Stormwater Detention and Infiltration Design Data Sheet

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### User Input: Watershed Characteristics

Watershed Slope = 0.038 ft/ft

Watershed Length = 2500 ft

Watershed Area =	74.50	acres
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Watershed Imperviousness = 55.0% 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):

Denver - Capitol Building

WQCV Treatment Method = Extended Detention

[illegible]

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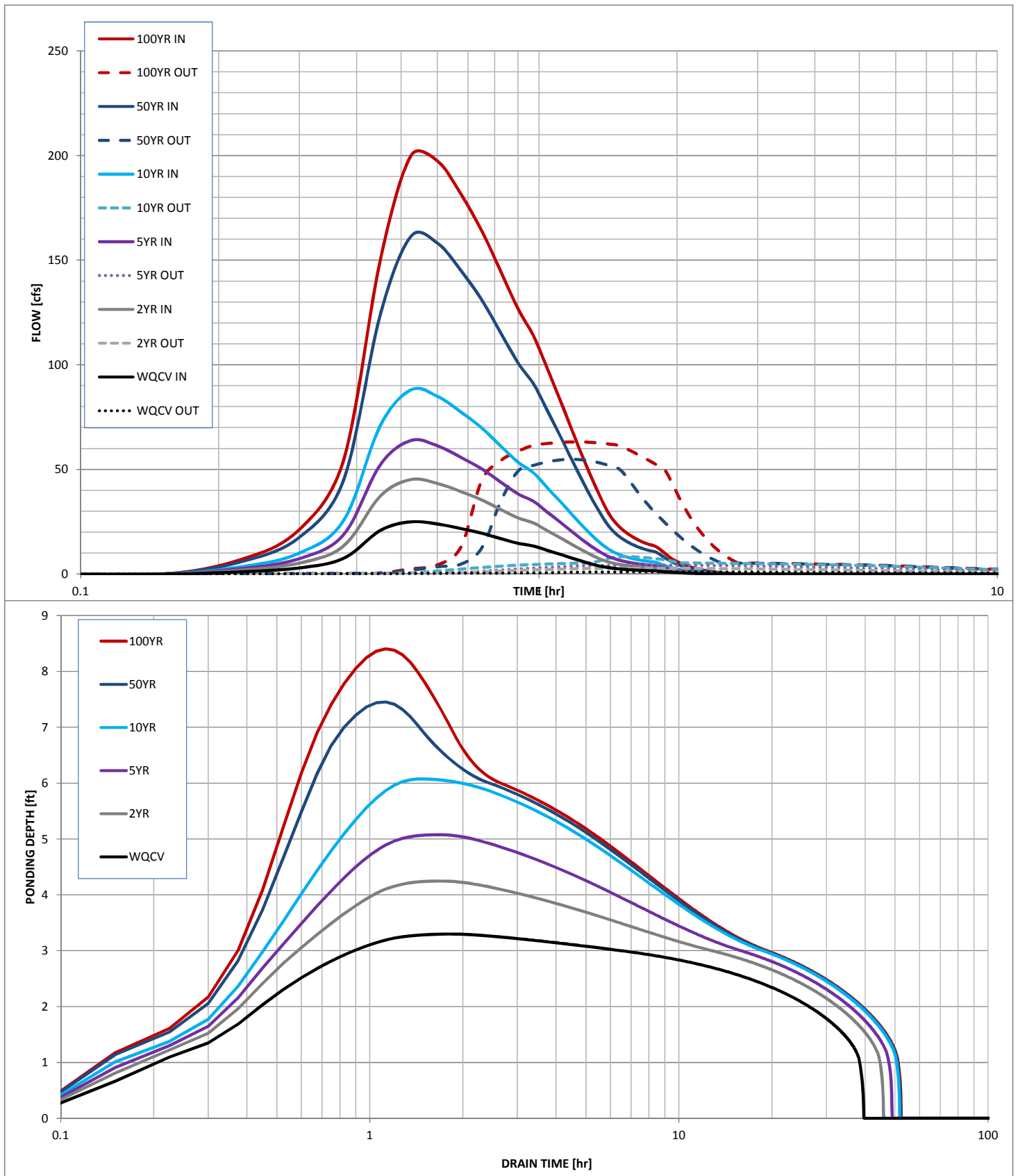
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### Routed Hydrograph Results

Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
One-Hour Rainfall Depth =	0.53	0.83	1.09	1.33	1.99	2.31	in
Calculated Runoff Volume =	1.368	2.491	3.538	4.910	9.147	11.410	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	1.368	2.490	3.537	4.909	9.144	11.409	acre-ft
Time to Drain 97% of Inflow Volume =	36.4	40.7	42.2	43.1	38.3	36.1	hours
Time to Drain 99% of Inflow Volume =	38.2	43.7	46.1	48.0	46.1	45.2	hours
Maximum Ponding Depth =	3.30	4.25	5.08	6.07	7.45	8.40	ft
Maximum Poned Area =	0.97	1.05	1.11	1.19	1.31	1.39	acres
Maximum Volume Stored =	1.248	2.205	3.099	4.250	5.978	7.266	acre-ft

## Stormwater Detention and Infiltration Design Data Sheet



# Stormwater Detention and Infiltration Design Data Sheet

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### User Input: Watershed Characteristics

Watershed Slope = 0.045 ft/ft

Watershed Length = 2500 ft

Watershed Area =	45.00	acres
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Watershed Imperviousness = 55.0% percent

Percentage Hydrologic Soil Group A =  percent

Percentage Hydrologic Soil Group B = 95.0% percent

Percentage Hydrologic Soil Groups C/D = 5.0% percent

Location for 1-hr Rainfall Depths (use dropdown):

Denver - Capitol Building

WQCV Treatment Method = Extended Detention ▼

[illegible]

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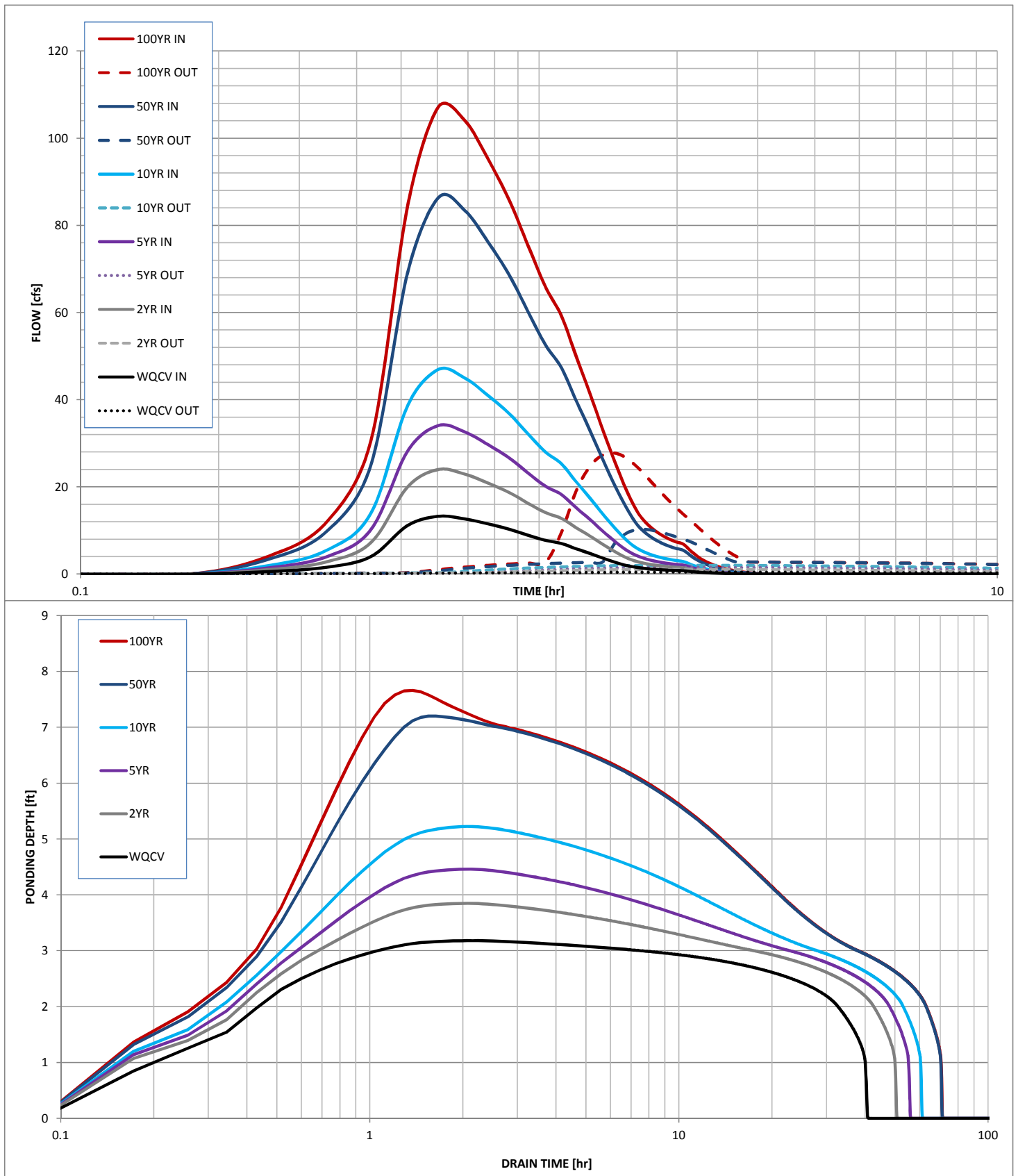
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### Routed Hydrograph Results

Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
One-Hour Rainfall Depth =	0.53	0.83	1.09	1.33	1.99	2.31	in
Calculated Runoff Volume =	0.827	1.507	2.148	2.973	5.537	6.906	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	0.826	1.506	2.148	2.973	5.532	6.902	acre-ft
Time to Drain 97% of Inflow Volume =	37.5	45.7	49.5	52.9	58.1	56.0	hours
Time to Drain 99% of Inflow Volume =	39.3	48.4	53.2	57.5	65.2	64.3	hours
Maximum Ponding Depth =	3.18	3.85	4.46	5.22	7.20	7.66	ft
Maximum Poned Area =	0.89	0.93	0.97	1.01	1.14	1.17	acres
Maximum Volume Stored =	0.757	1.363	1.946	2.706	4.823	5.354	acre-ft

# Stormwater Detention and Infiltration Design Data Sheet



# Stormwater Detention and Infiltration Design Data Sheet

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### User Input: Watershed Characteristics

0.030

1700 ft

16.00	acres
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55.0%	percent
-------	---------

percent

40.0% percent

60.0% percent

Location for 1-hr Rainfall Depths (use dropdown):

Denver - Capitol Building

WQCV Treatment Method = Extended Detention ▼

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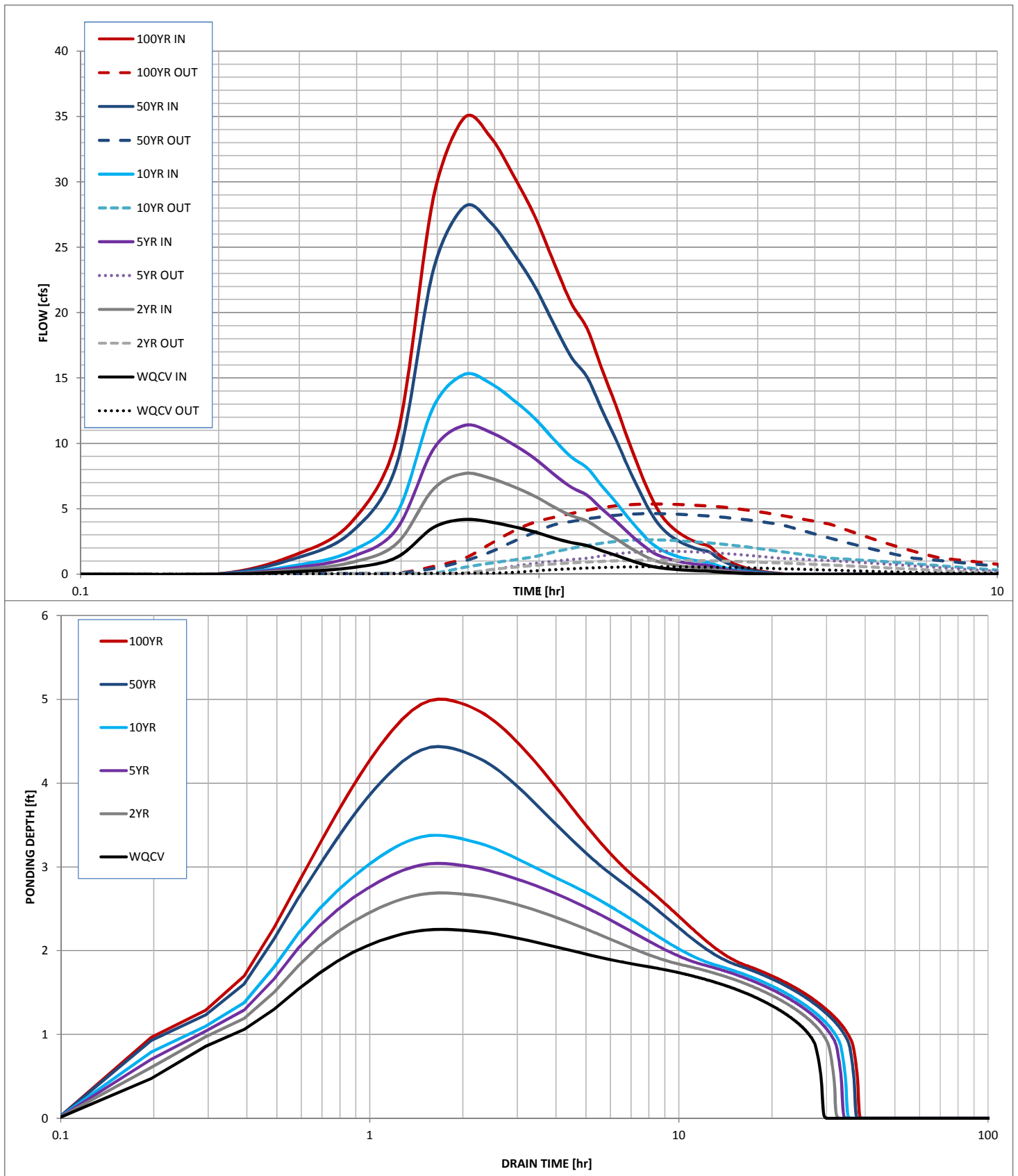
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### Routed Hydrograph Results

Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
One-Hour Rainfall Depth =	0.53	0.83	1.09	1.33	1.99	2.31	in
Calculated Runoff Volume =	0.294	0.544	0.807	1.088	2.016	2.510	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	0.294	0.543	0.807	1.087	2.015	2.510	acre-ft
Time to Drain 97% of Inflow Volume =	26.0	26.8	<b>26.7</b>	26.1	23.2	21.8	hours
Time to Drain 99% of Inflow Volume =	27.9	29.9	30.9	31.1	31.0	<b>30.9</b>	hours
Maximum Ponding Depth =	2.25	2.69	3.04	3.38	4.44	5.00	ft
Maximum Poned Area =	0.36	0.52	0.58	0.61	0.67	<b>0.71</b>	acres
Maximum Volume Stored =	0.234	0.423	0.622	0.824	1.504	1.894	acre-ft

## Stormwater Detention and Infiltration Design Data Sheet





# Stormwater Detention and Infiltration Design Data Sheet

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### User Input: Watershed Characteristics

0.040

1800 ft

26.00	acres
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52.0%	percent
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0.0% percent

20.0% percent

80.0% percent

Location for 1-hr Rainfall Depths (use dropdown):

Denver - Capitol Building

WQCV Treatment Method = Extended Detention ▼

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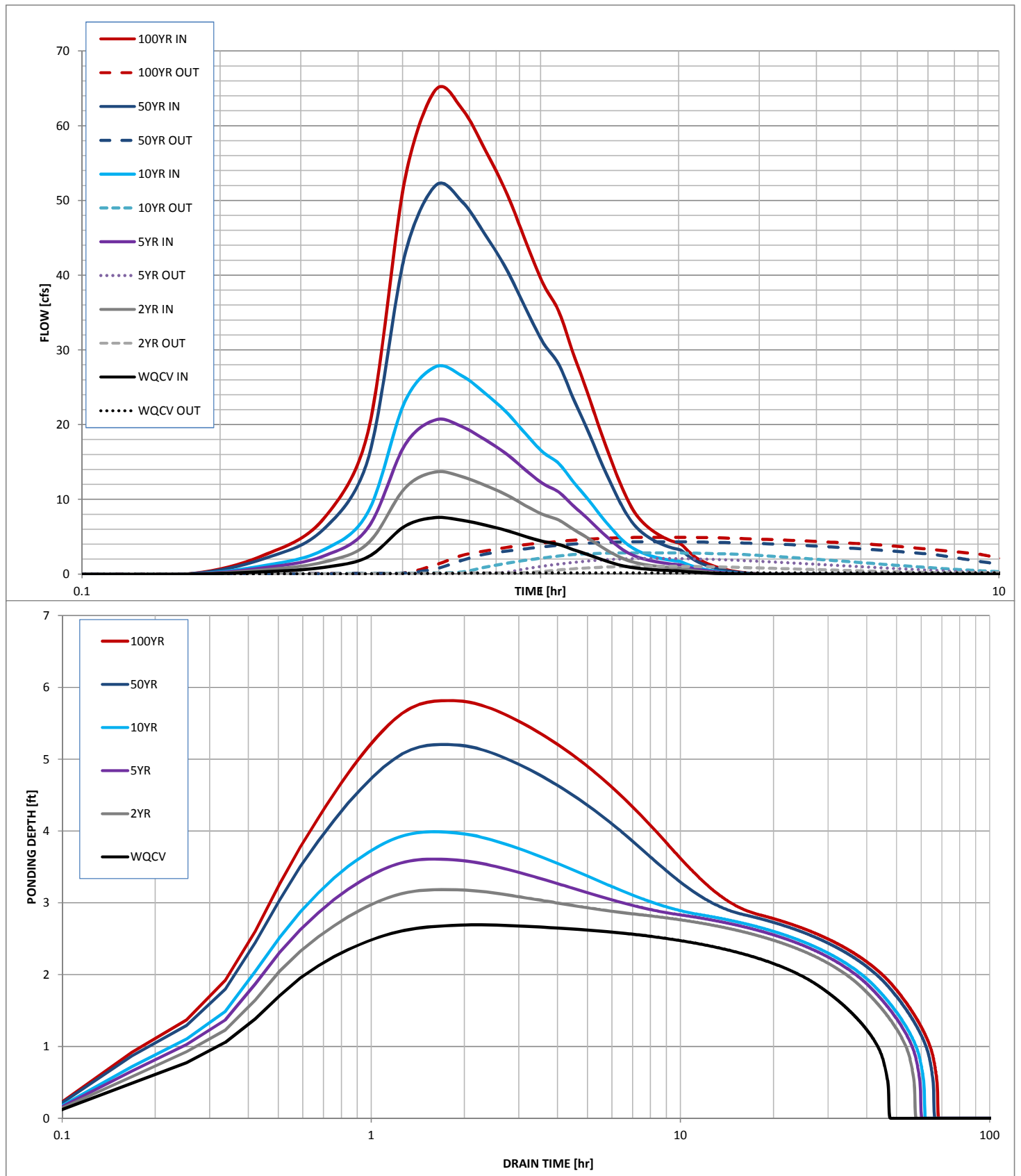
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### Routed Hydrograph Results

Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
One-Hour Rainfall Depth =	0.53	0.83	1.09	1.33	1.99	2.31	in
Calculated Runoff Volume =	0.459	0.834	1.267	1.708	3.228	4.037	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	0.458	0.834	1.266	1.707	3.227	4.037	acre-ft
Time to Drain 97% of Inflow Volume =	43.3	51.1	51.4	50.9	49.4	48.6	hours
Time to Drain 99% of Inflow Volume =	45.7	54.7	56.2	56.9	58.4	59.0	hours
Maximum Ponding Depth =	2.69	3.18	3.61	3.99	5.20	5.82	ft
Maximum Poned Area =	0.53	0.71	0.86	0.97	1.15	1.20	acres
Maximum Volume Stored =	0.430	0.731	1.067	1.416	2.717	3.435	acre-ft

# Stormwater Detention and Infiltration Design Data Sheet



## Stormwater Detention and Infiltration Design Data Sheet

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### User Input: Watershed Characteristics

Watershed Slope = 0.050 ft/ft

Watershed Length = 2300 ft

Watershed Area =	81.00	acres
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Watershed Imperviousness = 55.0% percent

Percentage Hydrologic Soil Group A =  percent

Percentage Hydrologic Soil Group B = 40.0% percent

Percentage Hydrologic Soil Groups C/D = 60.0% percent

Location for 1-hr Rainfall Depths (use dropdown):

Denver - Capitol Building

WQCV Treatment Method = Extended Detention ▼

[illegible]

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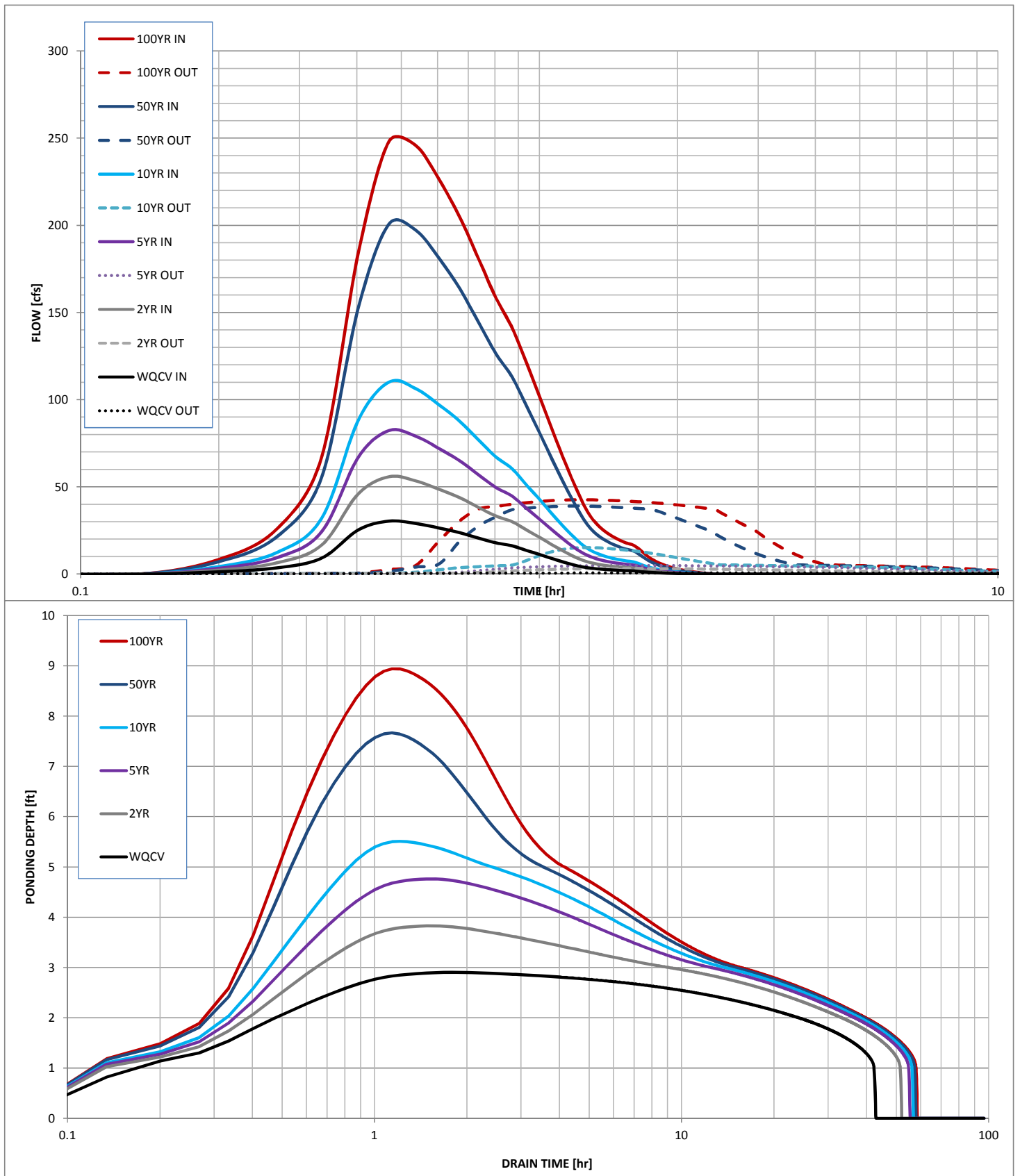
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### Routed Hydrograph Results

Design Storm Return Period =	WQCV	2 Year	5 Year	10 Year	50 Year	100 Year	
One-Hour Rainfall Depth =	0.53	0.83	1.09	1.33	1.99	2.31	in
Calculated Runoff Volume =	1.488	2.754	4.087	5.506	10.207	12.709	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	1.487	2.754	4.086	5.502	10.198	12.700	acre-ft
Time to Drain 97% of Inflow Volume =	40.1	47.4	49.0	48.6	44.6	42.7	hours
Time to Drain 99% of Inflow Volume =	41.8	50.2	52.8	53.5	52.4	52.0	hours
Maximum Ponding Depth =	2.90	3.83	4.76	5.51	7.67	8.94	ft
Maximum Poned Area =	1.12	1.20	1.26	1.31	1.46	1.56	acres
Maximum Volume Stored =	1.404	2.481	3.626	4.592	7.587	9.506	acre-ft

## Stormwater Detention and Infiltration Design Data Sheet



# Stormwater Detention and Infiltration Design Data Sheet

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### User Input: Watershed Characteristics

Watershed Slope = 0.009 ft/ft

Watershed Length = 900 ft

Watershed Area =	4.90	acres
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Watershed Imperviousness = 55.0% percent

Percentage Hydrologic Soil Group A =  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):

Denver - Capitol Building

WQCV Treatment Method = Extended Detention ▼

[illegible]

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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	0.83	1.09	1.33	1.99	2.31	in
Calculated Runoff Volume =	0.090	0.164	0.233	0.323	0.602	0.750	acre-ft
OPTIONAL Override Runoff Volume =							acre-ft
Inflow Hydrograph Volume =	0.089	0.163	0.232	0.322	0.602	0.750	acre-ft
Time to Drain 97% of Inflow Volume =	37.5	42.0	42.4	41.4	37.0	34.9	hours
Time to Drain 99% of Inflow Volume =	40.7	46.1	47.1	46.9	44.5	43.3	hours
Maximum Ponding Depth =	2.19	2.66	3.04	3.30	3.53	3.64	ft
Maximum Poned Area =	0.11	0.13	0.14	0.15	0.16	0.17	acres
Maximum Volume Stored =	0.081	0.137	0.188	0.227	0.263	0.282	acre-ft

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