# Stormwater Detention and Infiltration Design Data Sheet

Worksheet Protected

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**Stormwater Facility Name:** Rocky Top Resources Rezone

**Facility Location & Jurisdiction:** Extended Detention Basin, El Paso County, Colorado

**User Input: Watershed Characteristics**

| | | |
|---|---|---|
| Watershed Slope = | 0.015 | ft/ft |
| Watershed Length = | 1360 | ft |
| Watershed Area = | 30.45 | acres |
| Watershed Imperviousness = | 44.0% | percent |
| Percentage Hydrologic Soil Group A = | 15.0% | percent |
| Percentage Hydrologic Soil Group B = | 85.0% | percent |
| Percentage Hydrologic Soil Groups C/D = | | percent |

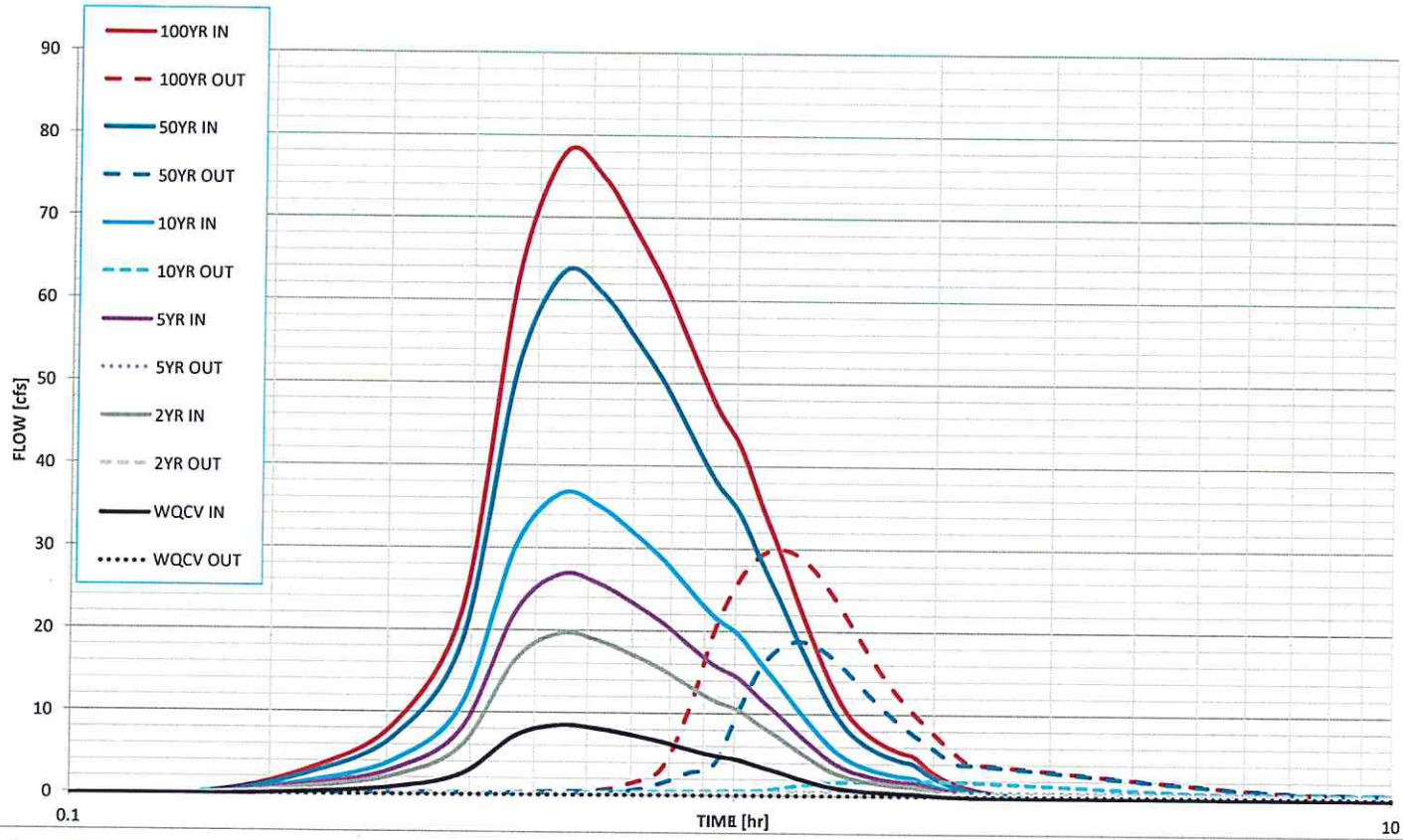
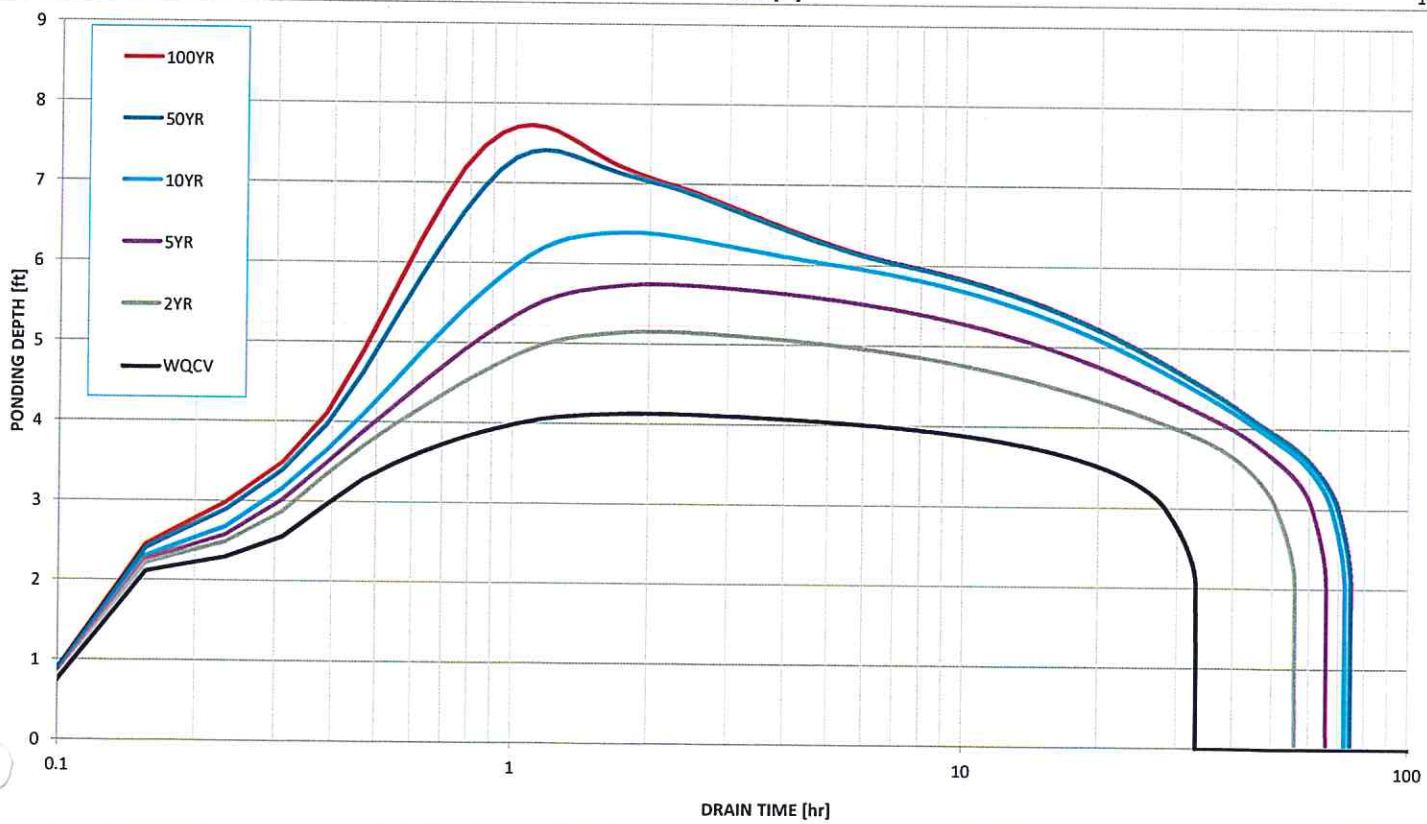
Location for 1-hr Rainfall Depths (use dropdown): User Input

WQCV Treatment Method = Extended Detention

| User Defined Stage [ft] | User Defined Area [ft^2] | User Defined Stage [ft] | User Defined Discharge [cfs] |
|---|---|---|---|
| 0.00 | 0 | 0.00 | 0.00 |
| 1.00 | 5 | 1.00 | 0.05 |
| 2.00 | 10 | 2.00 | 0.08 |
| 3.00 | 4,384 | 3.00 | 0.15 |
| 4.00 | 23,531 | 4.00 | 0.20 |
| 5.00 | 27,393 | 5.00 | 0.40 |
| 6.00 | 31,473 | 6.00 | 0.60 |
| 7.00 | 35,415 | 7.00 | 4.00 |
| 8.00 | 39,560 | 8.00 | 40.00 |
| 9.00 | 49,000 | 9.00 | 65.00 |

**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 = | 0.53 | 1.19 | 1.50 | 1.75 | 2.25 | 2.52 | in |
| Calculated Runoff Volume = | 0.483 | 1.111 | 1.524 | 2.089 | 3.648 | 4.499 | acre-ft |
| OPTIONAL Override Runoff Volume = | | | | | | | acre-ft |
| Inflow Hydrograph Volume = | 0.482 | 1.111 | 1.523 | 2.088 | 3.647 | 4.499 | acre-ft |
| Time to Drain 97% of Inflow Volume = | 31.5 | 52.5 | 61.3 | 66.7 | 65.3 | 63.5 | hours |
| Time to Drain 99% of Inflow Volume = | 32.6 | 54.6 | 64.0 | 70.2 | 70.9 | 70.2 | hours |
| Maximum Ponding Depth = | 4.14 | 5.15 | 5.74 | 6.39 | 7.41 | 7.72 | ft |
| Maximum Ponded Area = | 0.55 | 0.64 | 0.70 | 0.76 | 0.85 | 0.88 | acres |
| Maximum Volume Stored = | 0.446 | 1.051 | 1.448 | 1.917 | 2.738 | 3.004 | acre-ft |

# Stormwater Detention and Infiltration Design Data Sheet