# Stormwater Detention and Infiltration Design Data Sheet

Workbook Protected Worksheet Protected

**Stormwater Facility Name:** **Cathedral Rock Commons Commercial - Detention Pond F**

**Facility Location & Jurisdiction:** **NE corner of Spanish Bit Drive & Struthers Road, El Paso County, CO**

**User Input: Watershed Characteristics**

| | | |
|---|---|---|
| Watershed Slope = | 0.029 | ft/ft |
| Watershed Length = | 700 | ft |
| Watershed Area = | 8.23 | acres |
| Watershed Imperviousness = | 73.6% | 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):

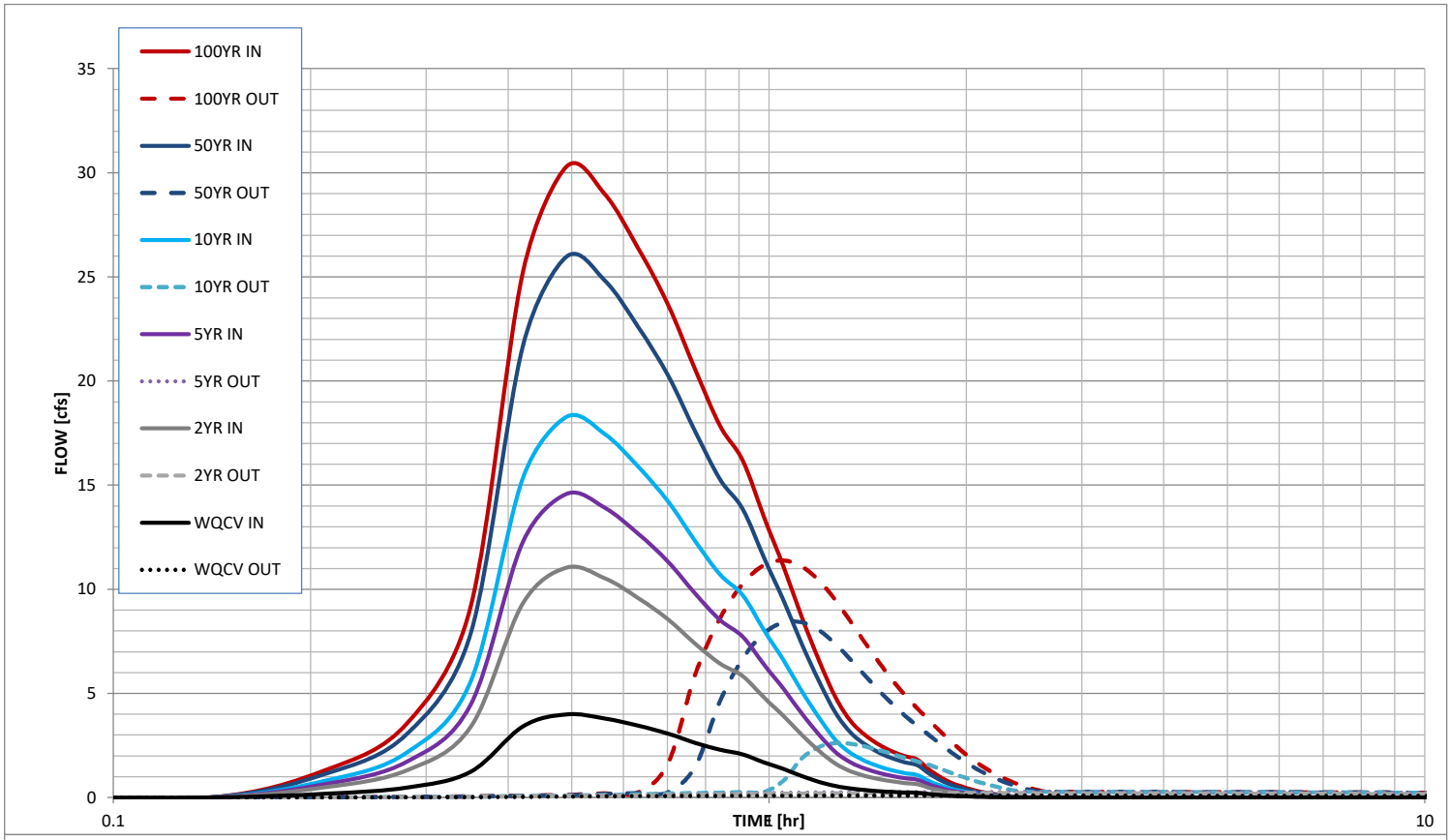
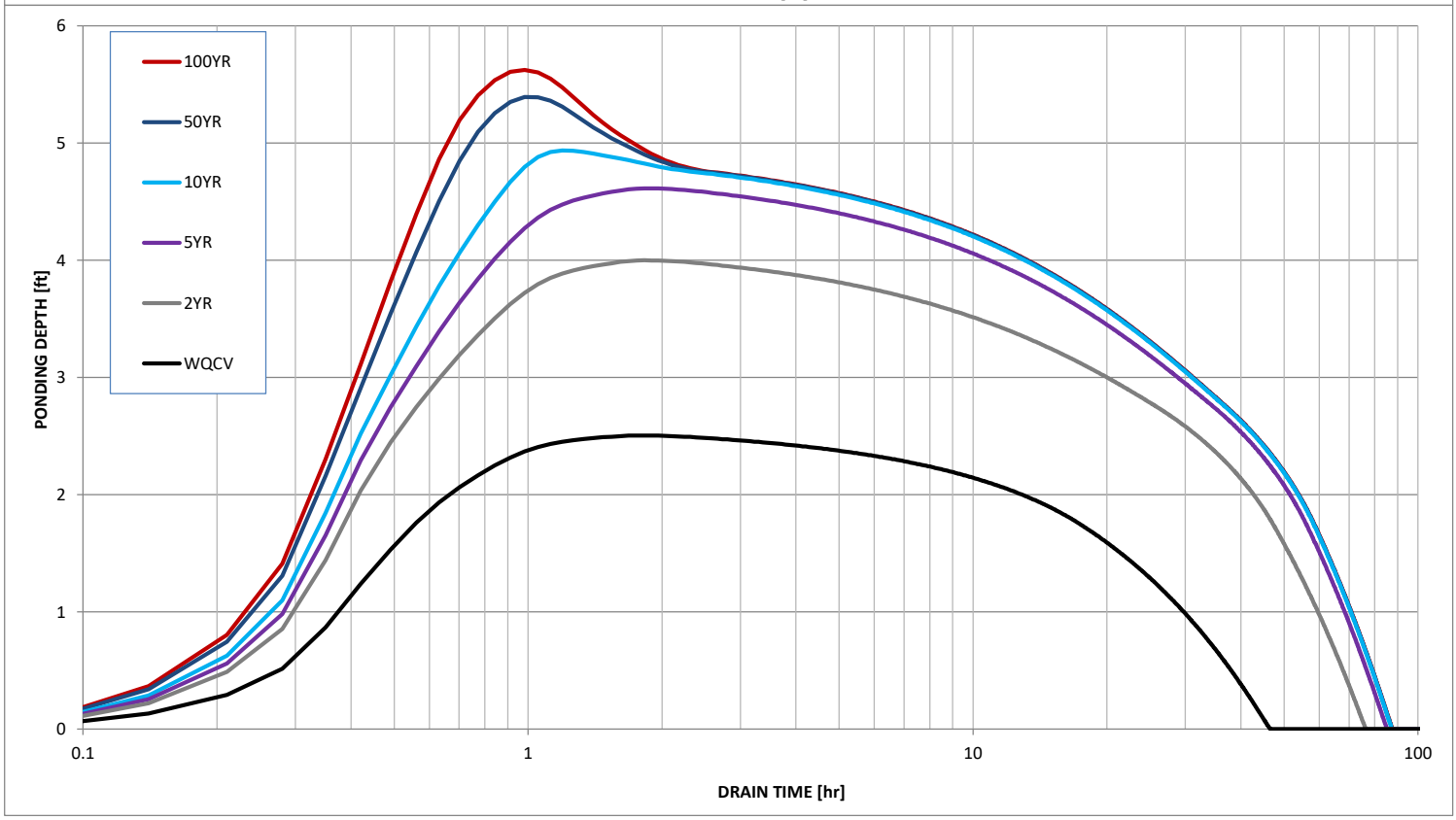
User Input

WQCV Treatment Method = Extended Detention

| User Defined Stage [ft] | User Defined Area [ft^2] | User Defined Stage [ft] | User Defined Discharge [cfs] |
|---|---|---|---|
| 0.00 | 10 | 0.00 | 0.00 |
| 1.75 | 4,159 | 1.75 | 0.07 |
| 2.75 | 9,070 | 2.75 | 0.10 |
| 4.75 | 13,330 | 4.75 | 0.28 |
| 5.75 | 15,166 | 5.75 | 13.02 |
| 7.75 | 17,000 | 7.75 | 268.07 |

**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 = | 0.60 | 1.19 | 1.50 | 1.75 | 2.25 | 2.52 | in |
| Calculated Runoff Volume = | 0.200 | 0.560 | 0.741 | 0.931 | 1.329 | 1.552 | acre-ft |
| OPTIONAL Override Runoff Volume = | | | | | | | acre-ft |
| Inflow Hydrograph Volume = | 0.200 | 0.559 | 0.740 | 0.930 | 1.328 | 1.552 | acre-ft |
| Time to Drain 97% of Inflow Volume = | 38.7 | 63.3 | **70.2** | 70.5 | 67.4 | 65.8 | hours |
| Time to Drain 99% of Inflow Volume = | 42.0 | 68.8 | 76.5 | 77.6 | 75.8 | **75.0** | hours |
| Maximum Ponding Depth = | 2.51 | 4.00 | 4.61 | 4.94 | 5.39 | 5.62 | ft |
| Maximum Ponded Area = | 0.18 | 0.27 | 0.30 | 0.31 | 0.33 | **0.34** | acres |
| Maximum Volume Stored = | 0.187 | 0.532 | 0.707 | 0.806 | 0.953 | 1.032 | acre-ft |

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