

# Stormwater Detention and Infiltration Design Data Sheet

Workbook Protected

Worksheet Protected

**Stormwater Facility Name:** Detention Pond CMN-1

**Facility Location & Jurisdiction:** Carriage Meadows North Filing No. 1, El Paso County, CO

**User Input: Watershed Characteristics**

Watershed Slope = 0.010 ft/ft  
 Watershed Length = 2000 ft  
 Watershed Area = 29.84 acres  
 Watershed Imperviousness = 52.0% percent  
 Percentage Hydrologic Soil Group A =     percent  
 Percentage Hydrologic Soil Group B =     percent  
 Percentage Hydrologic Soil Groups C/D = 100.0% percent  
 Location for 1-hr Rainfall Depths (use dropdown):  
 ▼

WQCV Treatment Method =  ▼

| User Defined Stage [ft] | User Defined Area [ft^2] | User Defined Stage [ft] | User Defined Discharge [cfs] |
|-------------------------|--------------------------|-------------------------|------------------------------|
| 0.00                    | 20                       | 0.00                    | 0.00                         |
| 0.33                    | 50                       | 0.33                    | 0.03                         |
| 1.00                    | 431                      | 1.00                    | 0.08                         |
| 2.00                    | 21,153                   | 2.00                    | 0.17                         |
| 3.00                    | 24,200                   | 3.00                    | 0.99                         |
| 4.00                    | 27,416                   | 4.00                    | 2.07                         |
| 5.00                    | 30,763                   | 5.00                    | 12.46                        |
| 6.00                    | 33,875                   | 6.00                    | 27.67                        |
| 7.00                    | 37,112                   | 7.00                    | 102.83                       |
| 8.00                    | 40,700                   | 8.00                    | 265.09                       |
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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  | 1.16   | 1.44   | 1.68    | 2.16    | 2.42     | in      |
| One-Hour Rainfall Depth =            | 0.527 | 1.354  | 1.961  | 2.505   | 4.058   | 4.896    | acre-ft |
| OPTIONAL Override Runoff Volume =    |       |        |        |         |         |          |         |
| Inflow Hydrograph Volume =           | 0.526 | 1.354  | 1.961  | 2.504   | 4.058   | 4.895    | acre-ft |
| Time to Drain 97% of Inflow Volume = | 31.8  | 37.5   | 37.5   | 36.1    | 32.3    | 30.4     | hours   |
| Time to Drain 99% of Inflow Volume = | 33.2  | 40.7   | 41.9   | 41.5    | 40.2    | 39.4     | hours   |
| Maximum Ponding Depth =              | 2.41  | 3.63   | 4.28   | 4.67    | 5.55    | 5.97     | ft      |
| Maximum Ponded Area =                | 0.51  | 0.60   | 0.65   | 0.68    | 0.75    | 0.77     | acres   |
| Maximum Volume Stored =              | 0.454 | 1.135  | 1.541  | 1.795   | 2.428   | 2.744    | acre-ft |

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