



El Paso County MS4 Post Construction Detention / Water Quality Facility Documentation Form

This document **must be completed and submitted** with required attachments to the County for projects requiring a detention and/or a water quality facility. A separate completed form must be submitted for each facility.

Project name:

Owner name:

Location Address:

Latitude and Longitude:

Assessor's Parcel #: Section: Township: Range:

Expected Completion date:

Project acreage: Design Ponding Acres: Design Storm:

Design Engineer Email Address:

To ensure compliance with C.R.S. 37-92-602(8), the completed Stormwater Detention and Infiltration Design Data Sheet **must be attached**. The form can be found here: <https://maperture.digitaldataservices.com/gvh/?viewer=cswdif#> (click on Download SDI Design Data Sheet)

List all permanent water quality control measure(s) (EDBs, rain gardens, etc):

For all projects for which the constrained redevelopment sites standard is applied, provide an explanation of why it is not practicable to meet the full design standards.

Attach Operations and Maintenance (O&M) Plan describing the operation and maintenance procedures that ensure the long-term observation, maintenance, and operation of control measure(s), including routine inspection frequencies and maintenance activities. If multiple, different water quality control measures are used at the same location, a separate O & M Plan must be provided for each facility.

Attach Private Detention Basin / Stormwater Quality Best Management Practice Maintenance Agreement and Easement addressing maintenance of BMPs that shall be binding on all subsequent owners of the permanent BMPs.

Attachments:

- Stormwater Detention and Infiltration Design Data Sheet
- O & M Plan
- Maintenance and Access Agreement

Review Engineer

EPC Project File No.

Stormwater Detention and Infiltration Design Data Sheet

SDI-Design Data v2.00, Released January 2020

Stormwater Facility Name: **Watermark at Akers-Extended Detention Facility**

Facility Location & Jurisdiction: **NWC of Constitution Avenue and Marksheffel Road- El Paso County, CO**

User Input: Watershed Characteristics

Extended Detention Basin (EDB) ▼	EDB	
Watershed Area =	18.76	acres
Watershed Length =	2,125	ft
Watershed Length to Centroid =	600	ft
Watershed Slope =	0.020	ft/ft
Watershed Imperviousness =	41.0%	percent
Percentage Hydrologic Soil Group A =	80.0%	percent
Percentage Hydrologic Soil Group B =	20.0%	percent
Percentage Hydrologic Soil Groups C/D =	0.0%	percent
Target WQCV Drain Time =	40.0	hours

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

After providing required inputs above including 1-hour rainfall depths, click 'Run CUHP' to generate runoff hydrographs using the embedded Colorado Urban Hydrograph Procedure.

Once CUHP has been run and the Stage-Area-Discharge information has been provided, click 'Process Data' to interpolate the Stage-Area-Volume-Discharge data and generate summary results in the table below. Once this is complete, click 'Print to PDF'.

User Defined Stage [ft]	User Defined Area [ft^2]	User Defined Stage [ft]	User Defined Discharge [cfs]
0.00	45	0.00	0.00
1.00	6,134	1.00	0.07
2.00	10,380	2.00	0.15
3.00	15,066	3.00	0.24
4.00	20,182	4.00	4.54
5.00	25,548	5.00	15.91
6.00	31,543	6.00	17.62

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 =							
One-Hour Rainfall Depth =	N/A	1.19	1.52	1.75	2.25	2.55	in
CUHP Runoff Volume =	0.285	0.658	0.894	1.086	1.843	2.346	acre-ft
Inflow Hydrograph Volume =	N/A	0.658	0.894	1.086	1.843	2.346	acre-ft
Time to Drain 97% of Inflow Volume =	39.2	54.8	53.4	52.3	47.8	45.1	hours
Time to Drain 99% of Inflow Volume =	42.9	60.3	59.8	59.3	56.9	55.4	hours
Maximum Ponding Depth =	2.10	3.11	3.43	3.65	4.36	4.75	ft
Maximum Ponded Area =	0.25	0.36	0.40	0.42	0.51	0.55	acres
Maximum Volume Stored =	0.285	0.590	0.710	0.799	1.132	1.336	acre-ft

Stormwater Detention and Infiltration Design Data Sheet

