

Stormwater Detention and Infiltration Design Data Sheet

SDI-Design Data v2.00, Released January 2020

Stormwater Facility Name: **Forest Lakes Filing 5 - Pond D**

Facility Location & Jurisdiction: **Forest Lakes Metropolitan District - Private Facility**

User Input: Watershed Characteristics

| | | | |
|---|--------|---------|--|
| <input type="text" value="Sand Filter (SF)"/> | ▼ | SF | |
| Watershed Area = | 1.35 | acres | |
| Watershed Length = | 400 | ft | |
| Watershed Length to Centroid = | 200 | ft | |
| Watershed Slope = | 0.030 | ft/ft | |
| Watershed Imperviousness = | 74.8% | percent | |
| Percentage Hydrologic Soil Group A = | 0.0% | percent | |
| Percentage Hydrologic Soil Group B = | 100.0% | percent | |
| Percentage Hydrologic Soil Groups C/D = | 0.0% | percent | |
| Target WQCV Drain Time = | 12.0 | 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 | 1,594 | 0.00 | 0.00 |
| 2.00 | 3,909 | 2.00 | 0.92 |
| 4.00 | 7,614 | 4.00 | 97.85 |
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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

| Design Storm Return Period = | WQCV | 2 Year | 5 Year | 10 Year | 50 Year | 100 Year | |
|--------------------------------------|-------|--------|------------|---------|---------|-------------|---------|
| One-Hour Rainfall Depth = | N/A | 1.19 | 1.50 | 1.75 | 2.25 | 3.10 | in |
| CUHP Runoff Volume = | 0.027 | 0.095 | 0.127 | 0.153 | 0.211 | 0.308 | acre-ft |
| Inflow Hydrograph Volume = | N/A | 0.095 | 0.127 | 0.153 | 0.211 | 0.308 | acre-ft |
| Time to Drain 97% of Inflow Volume = | 3.7 | 4.8 | 5.0 | 5.2 | 5.4 | 5.1 | hours |
| Time to Drain 99% of Inflow Volume = | 4.7 | 5.9 | 6.1 | 6.3 | 6.5 | 6.3 | hours |
| Maximum Ponding Depth = | 0.60 | 1.00 | 1.27 | 1.46 | 2.00 | 2.08 | ft |
| Maximum Poned Area = | 0.05 | 0.06 | 0.07 | 0.08 | 0.09 | 0.09 | acres |
| Maximum Volume Stored = | 0.027 | 0.050 | 0.068 | 0.081 | 0.127 | 0.133 | acre-ft |

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