# Stormwater Detention and Infiltration Design Data Sheet

*SDI-Design Data v2.00, Released January 2020*

Stormwater Facility Name: **Lincoln Professional Park EDB**

Facility Location & Jurisdiction: **Lincoln & Dransfeldt, Parker, CO**

User Input: Watershed Characteristics

| | | |
|---|---|---|
| Extended Detention Basin (EDB) | EDB | |
| Watershed Area = | 7.76 | acres |
| Watershed Length = | 710 | ft |
| Watershed Length to Centroid = | 330 | ft |
| Watershed Slope = | 0.007 | ft/ft |
| Watershed Imperviousness = | 95.0% | percent |
| Percentage Hydrologic Soil Group A = | 0.0% | percent |
| Percentage Hydrologic Soil Group B = | 0.0% | percent |
| Percentage Hydrologic Soil Groups C/D = | 100.0% | percent |
| Target WQCV Drain Time = | 40.0 | hours |

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

Parker - Town Hall

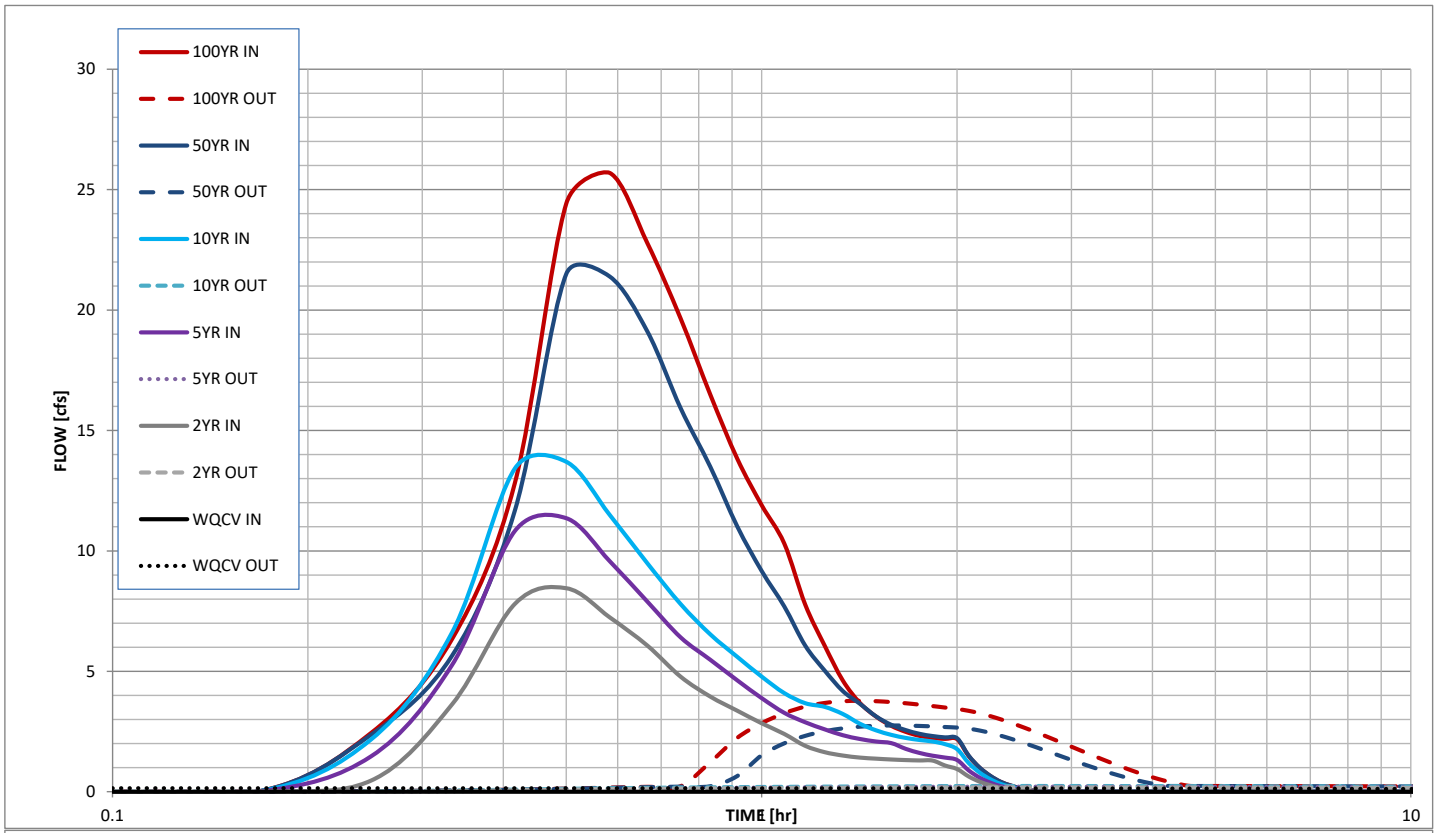
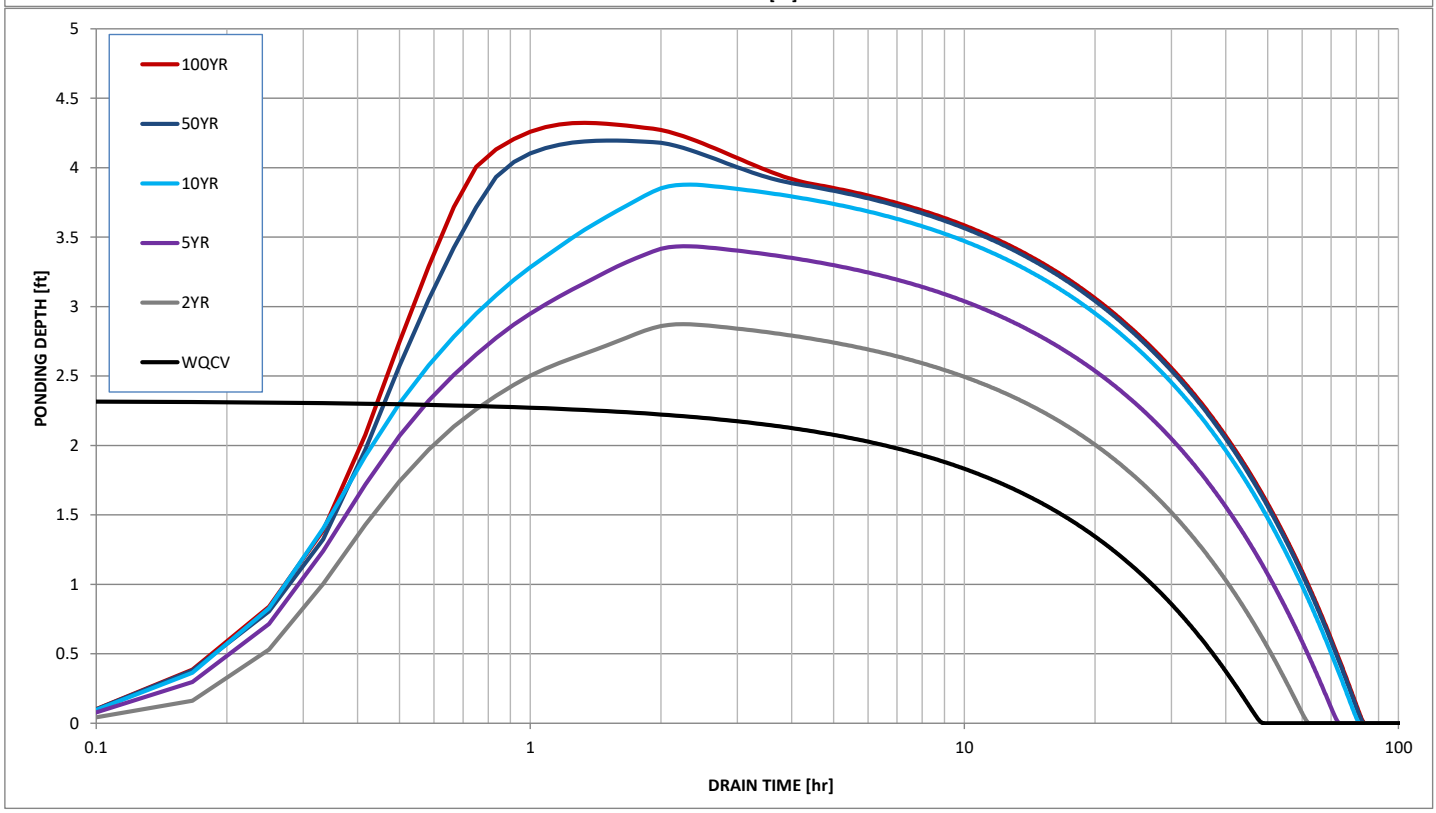
After providing required inputs above including 1-hour rainfall depths, click 'Run CUHP' to generate runoff hydrographs using the embedded Colorado Urban Hydrograph Procedure.

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 | 44 | 0.00 | 0.00 |
| 2.53 | 11,780 | 2.53 | 0.16 |
| 3.88 | 15,892 | 3.88 | 0.24 |
| 4.34 | 56,026 | 4.34 | 3.94 |
| 5.05 | 116,543 | 5.05 | 7.89 |

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 | 0.82 | 1.10 | 1.34 | 1.98 | 2.29 | in |
| CUHP Runoff Volume = | 0.289 | 0.467 | 0.649 | 0.808 | 1.238 | 1.447 | acre-ft |
| Inflow Hydrograph Volume = | N/A | 0.467 | 0.649 | 0.808 | 1.238 | 1.447 | acre-ft |
| Time to Drain 97% of Inflow Volume = | 39.7 | 50.9 | **59.9** | 66.8 | 65.2 | 64.1 | hours |
| Time to Drain 99% of Inflow Volume = | 43.3 | 55.4 | 65.2 | 72.7 | 72.5 | **72.0** | hours |
| Maximum Ponding Depth = | 2.33 | 2.87 | 3.43 | 3.88 | 4.20 | 4.32 | ft |
| Maximum Ponded Area = | 0.25 | 0.29 | 0.33 | 0.36 | 0.98 | **1.24** | acres |
| Maximum Volume Stored = | 0.290 | 0.439 | 0.616 | 0.771 | 0.982 | 1.126 | acre-ft |

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