



Storm Drainage Report

Hansell Self Storage
Parcel Number 123134
400 Swiftwater Boulevard
Cle Elum, WA 98922



11/6/2020

Prepared by:
Bryan Tappel
Encompass Job No. 20010

Reviewed and Approved by:
R. Bruce Noble, PE/PLS

Prepared for:
Garnet Ledge Investments LP
PO Box 946
Roslyn, WA 98941

Western Washington
165 NE Juniper St. #201
Issaquah, WA 98027
Phone: (425) 392-0250

Eastern Washington
407 Swiftwater Blvd.
Cle Elum, WA 98922
Phone: (509) 674-7433

www.EncompassES.net

Hansell Storm Drainage Report

Table of Contents

| | |
|----------------------------|----------|
| Cover Sheet | 1 |
| Project Overview | 2 |
| Existing Conditions | 3 |
| Proposed Conditions | 4 |
| Core Elements | 5 |

Appendices

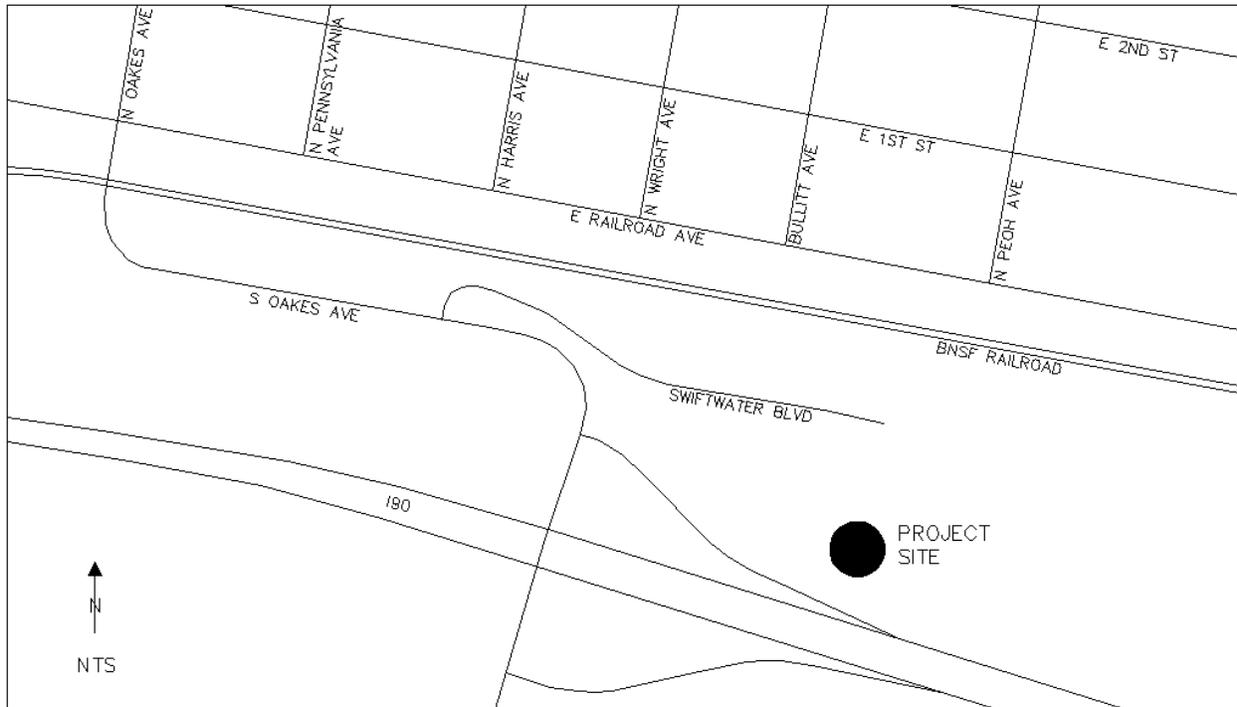
- Appendix A. HydroCAD Report Existing Conditions
- Appendix B. HydroCAD Report Proposed Conditions
- Appendix C. Hansell Self Storage Plans

Project Overview

The project is a 1.91-acre parcel in a portion of the southeast $\frac{1}{4}$ of the southwest $\frac{1}{4}$ of Section 26, Township 20 North, Range 15 East W.M. within the corporate limits of the City of Cle Elum. More specifically, it lies south of Swiftwater Boulevard, east of the intersection of South Oakes Avenue and Swiftwater Boulevard. The parcel number is 123134 and is currently zoned as General Commercial. See the vicinity map below.

A manufacturing/personal service (gym and tanning salon) building occupies and will remain part of the 1.91-acre parcel. An 8000 square feet pre-manufactured steel building to be operated as a wine storage facility is proposed for the portion of the parcel that is not occupied by the existing building. This report, along with the appendices, illustrates the proposed development is in conformance with City development standards and the Stormwater Management Manual for Eastern Washington.

Hansell Storm Drainage Report



Vicinity Map

Existing Conditions

A boundary and topographic survey of the site and existing drainage conditions was performed by Encompass Engineering & Surveying on February 2, 2020. The existing 1.91-acre parcel is partially developed with a manufacturing/personal service (gym and tanning salon) building and paved/gravel parking area. The site is surrounded by commercial businesses to the north, a pond to the east, interstate 90 to the south, and an open field to the west.

Runoff from the property generally flows south until it enters an existing ditch along the south side of the property. There are also two detention ponds in the southeast corner of the property. The ditch does not connect directly to the ponds, and the ponds are interconnected by a culvert.

An NRCS Web Soil Survey was performed to obtain soil characteristics to use for stormwater modeling. As seen in the figure below, the site is composed of xerofluvents, 0 to 5 percent slopes. Xerofluvents are common in valleys and flood plains, and have a hydrologic soil group of B.

Hansell Storm Drainage Report



NRCS Soil Types at Project Site

Runoff calculations for existing conditions were accomplished with HydroCAD, and can be found in Appendix A. In summary, the 2-year storm event results in a peak runoff of 0.05 cubic feet per second (cfs), and the 25-year storm event peaks at 0.14 cfs.

Proposed Conditions

Construction of an 8000 square feet pre-manufactured steel building is proposed. The building will be used for a combination of general heated storage and climate-controlled storage for the Swiftwater Winery. There will be two restrooms inside of the heated storage area. Development will include removal and replacement of existing fences, creation of a new detention pond, installation of a fire hydrant, and associated water and sewer systems. An existing paved parking lot will be expanded in conformance with City of Cle Elum standards including total number of stalls and landscaping.

The proposed development grades the parking area so that runoff flows south and collects in the proposed stormwater detention pond along the south side of the property. Infiltration into the ground is assumed to be 10 inches per hour as that rate was used for the neighboring property. The pond has a storage capacity of 676 cubic feet. The peak inflow will be 0.12 cfs for the 2-year storm and will result in a volume of 180 cubic feet.

Hansell Storm Drainage Report

The peak inflow for the 25-year storm is 0.21 cfs with a required storage volume of 426 cubic feet. All results are displayed in Appendix B.

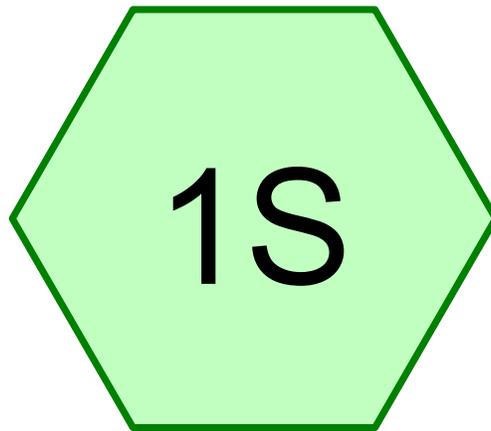
Core Elements

The following list describes the core elements for stormwater management at development and redevelopment sites in eastern Washington.

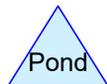
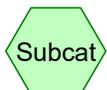
1. Preparation of a Stormwater Site Plan
This report, along with the Hansell Self Storage Plans, illustrate the Stormwater Site Plan. The plans can be found in Appendix C.
2. Construction Stormwater Pollution Prevention
The Construction Stormwater Pollution Prevention Plan will be prepared and submitted with final engineering.
3. Source Control of Pollution
The Temporary Erosion and Sediment Control Plan can be found in the Hansell Self Storage Plans in Appendix C. Erosion will be addressed with a silt fence.
4. Preservation of Natural Drainage Systems
The existing drainage system sends runoff into the ditch along the south side of the property. The proposed drainage system will send runoff to a detention pond in the same location.
5. Runoff Treatment
Runoff will be treated by the detention pond which provide storage for settling solids.
6. Flow Control
Storm drainage facilities are based on a 25-year storm event (4.57" of precipitation/36 hours). Flow control is accomplished by the detention pond shown in the Plans, and results can be found in Appendix B.
7. Operation and Maintenance
An Operation and Maintenance Plan will be submitted with final engineering.
8. Local Requirements
City requirements, along with the Stormwater Management Manual for Eastern Washington, are considered the local requirements. As discussed above, the proposed project is in compliance with these standards.

Appendix A

HydroCAD Report Existing Conditions



Existing Conditions



Routing Diagram for Existing Conditions

Prepared by {enter your company name here}, Printed 11/3/2020
HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Existing Conditions

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Printed 11/3/2020

Page 2

Area Listing (all nodes)

| Area (acres) | CN | Description (subcatchment-numbers) |
|-----------------|-----------|---------------------------------------|
| 0.459 | 82 | Dirt/loose gravel parking, HSG B (1S) |
| 0.459 | 82 | TOTAL AREA |

Existing Conditions

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Printed 11/3/2020

Page 3

Soil Listing (all nodes)

| Area (acres) | Soil Group | Subcatchment Numbers |
|-----------------|---------------|-------------------------|
| 0.000 | HSG A | |
| 0.459 | HSG B | 1S |
| 0.000 | HSG C | |
| 0.000 | HSG D | |
| 0.000 | Other | |
| 0.459 | | TOTAL AREA |

Existing Conditions

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 4

Ground Covers (all nodes)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|------------------|------------------|------------------|------------------|------------------|------------------|---------------------------|-------------------------|
| 0.000 | 0.459 | 0.000 | 0.000 | 0.000 | 0.459 | Dirt/loose gravel parking | 1S |
| 0.000 | 0.459 | 0.000 | 0.000 | 0.000 | 0.459 | TOTAL AREA | |

Existing Conditions

E-WA Long R1 36-hr 2 year, 36 hour (rain on snow) Rainfall=2.61"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 5

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Existing Conditions

Runoff Area=19,978 sf 0.00% Impervious Runoff Depth=1.08"

Flow Length=220' Slope=0.0200 '/' Tc=2.9 min CN=82 Runoff=0.05 cfs 0.041 af

Total Runoff Area = 0.459 ac Runoff Volume = 0.041 af Average Runoff Depth = 1.08"

100.00% Pervious = 0.459 ac 0.00% Impervious = 0.000 ac

Existing Conditions

E-WA Long R1 36-hr 2 year, 36 hour (rain on snow) Rainfall=2.61"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 6

Summary for Subcatchment 1S: Existing Conditions

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.05 cfs @ 15.06 hrs, Volume= 0.041 af, Depth= 1.08"

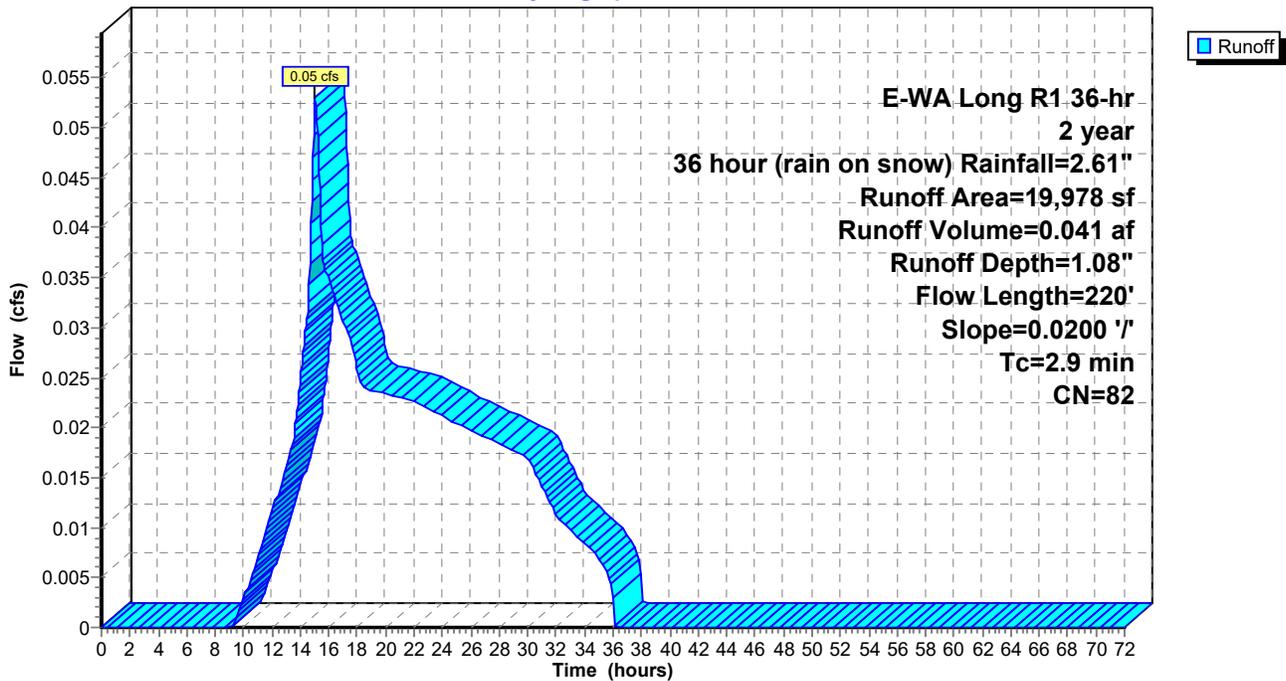
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
 E-WA Long R1 36-hr 2 year, 36 hour (rain on snow) Rainfall=2.61"

| Area (sf) | CN | Description |
|-----------|----|----------------------------------|
| * 19,978 | 82 | Dirt/loose gravel parking, HSG B |
| 19,978 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---|
| 2.9 | 220 | 0.0200 | 1.27 | | Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 2.00" |

Subcatchment 1S: Existing Conditions

Hydrograph



Existing Conditions*E-WA Long R1 36-hr 2 year, 36 hour (rain on snow) Rainfall=2.61"*

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 7

Hydrograph for Subcatchment 1S: Existing Conditions

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|-----------------|---------------------|--------------------|-----------------|-----------------|---------------------|--------------------|-----------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 2.61 | 1.08 | 0.00 |
| 1.00 | 0.01 | 0.00 | 0.00 | 53.00 | 2.61 | 1.08 | 0.00 |
| 2.00 | 0.03 | 0.00 | 0.00 | 54.00 | 2.61 | 1.08 | 0.00 |
| 3.00 | 0.06 | 0.00 | 0.00 | 55.00 | 2.61 | 1.08 | 0.00 |
| 4.00 | 0.09 | 0.00 | 0.00 | 56.00 | 2.61 | 1.08 | 0.00 |
| 5.00 | 0.12 | 0.00 | 0.00 | 57.00 | 2.61 | 1.08 | 0.00 |
| 6.00 | 0.18 | 0.00 | 0.00 | 58.00 | 2.61 | 1.08 | 0.00 |
| 7.00 | 0.25 | 0.00 | 0.00 | 59.00 | 2.61 | 1.08 | 0.00 |
| 8.00 | 0.33 | 0.00 | 0.00 | 60.00 | 2.61 | 1.08 | 0.00 |
| 9.00 | 0.42 | 0.00 | 0.00 | 61.00 | 2.61 | 1.08 | 0.00 |
| 10.00 | 0.52 | 0.00 | 0.00 | 62.00 | 2.61 | 1.08 | 0.00 |
| 11.00 | 0.62 | 0.01 | 0.01 | 63.00 | 2.61 | 1.08 | 0.00 |
| 12.00 | 0.73 | 0.03 | 0.01 | 64.00 | 2.61 | 1.08 | 0.00 |
| 13.00 | 0.85 | 0.06 | 0.02 | 65.00 | 2.61 | 1.08 | 0.00 |
| 14.00 | 0.98 | 0.11 | 0.02 | 66.00 | 2.61 | 1.08 | 0.00 |
| 15.00 | 1.17 | 0.18 | 0.05 | 67.00 | 2.61 | 1.08 | 0.00 |
| 16.00 | 1.36 | 0.27 | 0.03 | 68.00 | 2.61 | 1.08 | 0.00 |
| 17.00 | 1.49 | 0.34 | 0.03 | 69.00 | 2.61 | 1.08 | 0.00 |
| 18.00 | 1.60 | 0.40 | 0.03 | 70.00 | 2.61 | 1.08 | 0.00 |
| 19.00 | 1.69 | 0.46 | 0.02 | 71.00 | 2.61 | 1.08 | 0.00 |
| 20.00 | 1.78 | 0.51 | 0.02 | 72.00 | 2.61 | 1.08 | 0.00 |
| 21.00 | 1.86 | 0.56 | 0.02 | | | | |
| 22.00 | 1.94 | 0.61 | 0.02 | | | | |
| 23.00 | 2.01 | 0.65 | 0.02 | | | | |
| 24.00 | 2.08 | 0.70 | 0.02 | | | | |
| 25.00 | 2.15 | 0.75 | 0.02 | | | | |
| 26.00 | 2.21 | 0.79 | 0.02 | | | | |
| 27.00 | 2.27 | 0.83 | 0.02 | | | | |
| 28.00 | 2.33 | 0.87 | 0.02 | | | | |
| 29.00 | 2.38 | 0.91 | 0.02 | | | | |
| 30.00 | 2.43 | 0.95 | 0.02 | | | | |
| 31.00 | 2.48 | 0.98 | 0.01 | | | | |
| 32.00 | 2.52 | 1.01 | 0.01 | | | | |
| 33.00 | 2.55 | 1.03 | 0.01 | | | | |
| 34.00 | 2.57 | 1.05 | 0.01 | | | | |
| 35.00 | 2.59 | 1.07 | 0.01 | | | | |
| 36.00 | 2.61 | 1.08 | 0.00 | | | | |
| 37.00 | 2.61 | 1.08 | 0.00 | | | | |
| 38.00 | 2.61 | 1.08 | 0.00 | | | | |
| 39.00 | 2.61 | 1.08 | 0.00 | | | | |
| 40.00 | 2.61 | 1.08 | 0.00 | | | | |
| 41.00 | 2.61 | 1.08 | 0.00 | | | | |
| 42.00 | 2.61 | 1.08 | 0.00 | | | | |
| 43.00 | 2.61 | 1.08 | 0.00 | | | | |
| 44.00 | 2.61 | 1.08 | 0.00 | | | | |
| 45.00 | 2.61 | 1.08 | 0.00 | | | | |
| 46.00 | 2.61 | 1.08 | 0.00 | | | | |
| 47.00 | 2.61 | 1.08 | 0.00 | | | | |
| 48.00 | 2.61 | 1.08 | 0.00 | | | | |
| 49.00 | 2.61 | 1.08 | 0.00 | | | | |
| 50.00 | 2.61 | 1.08 | 0.00 | | | | |
| 51.00 | 2.61 | 1.08 | 0.00 | | | | |

Existing Conditions

E-WA Long R1 36-hr 2-year, 36 hour Rainfall=2.32"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 8

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN

Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Existing Conditions

Runoff Area=19,978 sf 0.00% Impervious Runoff Depth=0.87"

Flow Length=220' Slope=0.0200 '/' Tc=2.9 min CN=82 Runoff=0.04 cfs 0.033 af

Total Runoff Area = 0.459 ac Runoff Volume = 0.033 af Average Runoff Depth = 0.87"

100.00% Pervious = 0.459 ac 0.00% Impervious = 0.000 ac

Existing Conditions

E-WA Long R1 36-hr 2-year, 36 hour Rainfall=2.32"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 9

Summary for Subcatchment 1S: Existing Conditions

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.04 cfs @ 15.06 hrs, Volume= 0.033 af, Depth= 0.87"

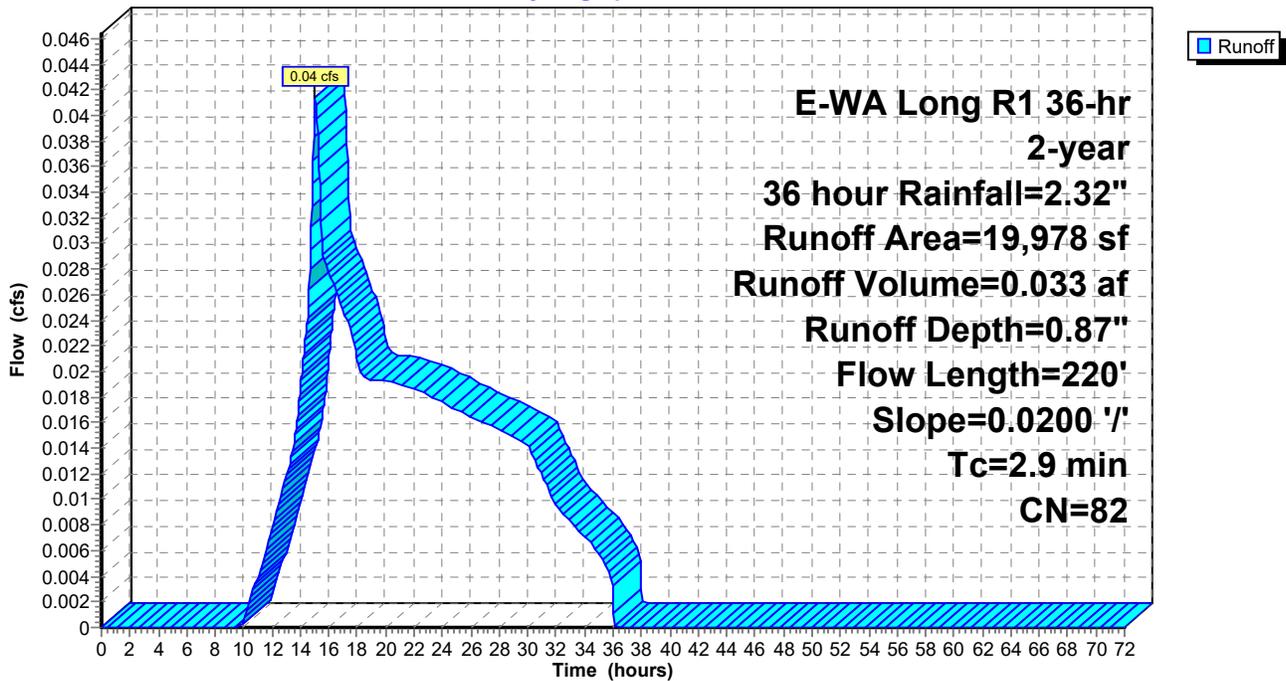
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
E-WA Long R1 36-hr 2-year, 36 hour Rainfall=2.32"

| Area (sf) | CN | Description |
|-----------|----|----------------------------------|
| * 19,978 | 82 | Dirt/loose gravel parking, HSG B |
| 19,978 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---|
| 2.9 | 220 | 0.0200 | 1.27 | | Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 2.00" |

Subcatchment 1S: Existing Conditions

Hydrograph



Existing Conditions

E-WA Long R1 36-hr 2-year, 36 hour Rainfall=2.32"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 10

Hydrograph for Subcatchment 1S: Existing Conditions

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 2.32 | 0.87 | 0.00 |
| 1.00 | 0.01 | 0.00 | 0.00 | 53.00 | 2.32 | 0.87 | 0.00 |
| 2.00 | 0.03 | 0.00 | 0.00 | 54.00 | 2.32 | 0.87 | 0.00 |
| 3.00 | 0.05 | 0.00 | 0.00 | 55.00 | 2.32 | 0.87 | 0.00 |
| 4.00 | 0.08 | 0.00 | 0.00 | 56.00 | 2.32 | 0.87 | 0.00 |
| 5.00 | 0.11 | 0.00 | 0.00 | 57.00 | 2.32 | 0.87 | 0.00 |
| 6.00 | 0.16 | 0.00 | 0.00 | 58.00 | 2.32 | 0.87 | 0.00 |
| 7.00 | 0.22 | 0.00 | 0.00 | 59.00 | 2.32 | 0.87 | 0.00 |
| 8.00 | 0.29 | 0.00 | 0.00 | 60.00 | 2.32 | 0.87 | 0.00 |
| 9.00 | 0.37 | 0.00 | 0.00 | 61.00 | 2.32 | 0.87 | 0.00 |
| 10.00 | 0.46 | 0.00 | 0.00 | 62.00 | 2.32 | 0.87 | 0.00 |
| 11.00 | 0.55 | 0.01 | 0.00 | 63.00 | 2.32 | 0.87 | 0.00 |
| 12.00 | 0.65 | 0.02 | 0.01 | 64.00 | 2.32 | 0.87 | 0.00 |
| 13.00 | 0.75 | 0.04 | 0.01 | 65.00 | 2.32 | 0.87 | 0.00 |
| 14.00 | 0.87 | 0.07 | 0.02 | 66.00 | 2.32 | 0.87 | 0.00 |
| 15.00 | 1.04 | 0.13 | 0.04 | 67.00 | 2.32 | 0.87 | 0.00 |
| 16.00 | 1.21 | 0.20 | 0.03 | 68.00 | 2.32 | 0.87 | 0.00 |
| 17.00 | 1.33 | 0.26 | 0.02 | 69.00 | 2.32 | 0.87 | 0.00 |
| 18.00 | 1.43 | 0.31 | 0.02 | 70.00 | 2.32 | 0.87 | 0.00 |
| 19.00 | 1.51 | 0.35 | 0.02 | 71.00 | 2.32 | 0.87 | 0.00 |
| 20.00 | 1.58 | 0.39 | 0.02 | 72.00 | 2.32 | 0.87 | 0.00 |
| 21.00 | 1.65 | 0.43 | 0.02 | | | | |
| 22.00 | 1.72 | 0.47 | 0.02 | | | | |
| 23.00 | 1.79 | 0.51 | 0.02 | | | | |
| 24.00 | 1.85 | 0.55 | 0.02 | | | | |
| 25.00 | 1.91 | 0.59 | 0.02 | | | | |
| 26.00 | 1.96 | 0.62 | 0.02 | | | | |
| 27.00 | 2.02 | 0.66 | 0.02 | | | | |
| 28.00 | 2.07 | 0.69 | 0.02 | | | | |
| 29.00 | 2.12 | 0.73 | 0.01 | | | | |
| 30.00 | 2.16 | 0.76 | 0.01 | | | | |
| 31.00 | 2.20 | 0.79 | 0.01 | | | | |
| 32.00 | 2.24 | 0.81 | 0.01 | | | | |
| 33.00 | 2.26 | 0.83 | 0.01 | | | | |
| 34.00 | 2.29 | 0.84 | 0.01 | | | | |
| 35.00 | 2.31 | 0.86 | 0.01 | | | | |
| 36.00 | 2.32 | 0.87 | 0.00 | | | | |
| 37.00 | 2.32 | 0.87 | 0.00 | | | | |
| 38.00 | 2.32 | 0.87 | 0.00 | | | | |
| 39.00 | 2.32 | 0.87 | 0.00 | | | | |
| 40.00 | 2.32 | 0.87 | 0.00 | | | | |
| 41.00 | 2.32 | 0.87 | 0.00 | | | | |
| 42.00 | 2.32 | 0.87 | 0.00 | | | | |
| 43.00 | 2.32 | 0.87 | 0.00 | | | | |
| 44.00 | 2.32 | 0.87 | 0.00 | | | | |
| 45.00 | 2.32 | 0.87 | 0.00 | | | | |
| 46.00 | 2.32 | 0.87 | 0.00 | | | | |
| 47.00 | 2.32 | 0.87 | 0.00 | | | | |
| 48.00 | 2.32 | 0.87 | 0.00 | | | | |
| 49.00 | 2.32 | 0.87 | 0.00 | | | | |
| 50.00 | 2.32 | 0.87 | 0.00 | | | | |
| 51.00 | 2.32 | 0.87 | 0.00 | | | | |

Existing Conditions

E-WA Long R1 36-hr 25 year, 36 hour Rainfall=4.06"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 11

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Existing Conditions

Runoff Area=19,978 sf 0.00% Impervious Runoff Depth=2.25"

Flow Length=220' Slope=0.0200 '/' Tc=2.9 min CN=82 Runoff=0.12 cfs 0.086 af

Total Runoff Area = 0.459 ac Runoff Volume = 0.086 af Average Runoff Depth = 2.25"
100.00% Pervious = 0.459 ac 0.00% Impervious = 0.000 ac

Existing Conditions

E-WA Long R1 36-hr 25 year, 36 hour Rainfall=4.06"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 12

Summary for Subcatchment 1S: Existing Conditions

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.12 cfs @ 15.05 hrs, Volume= 0.086 af, Depth= 2.25"

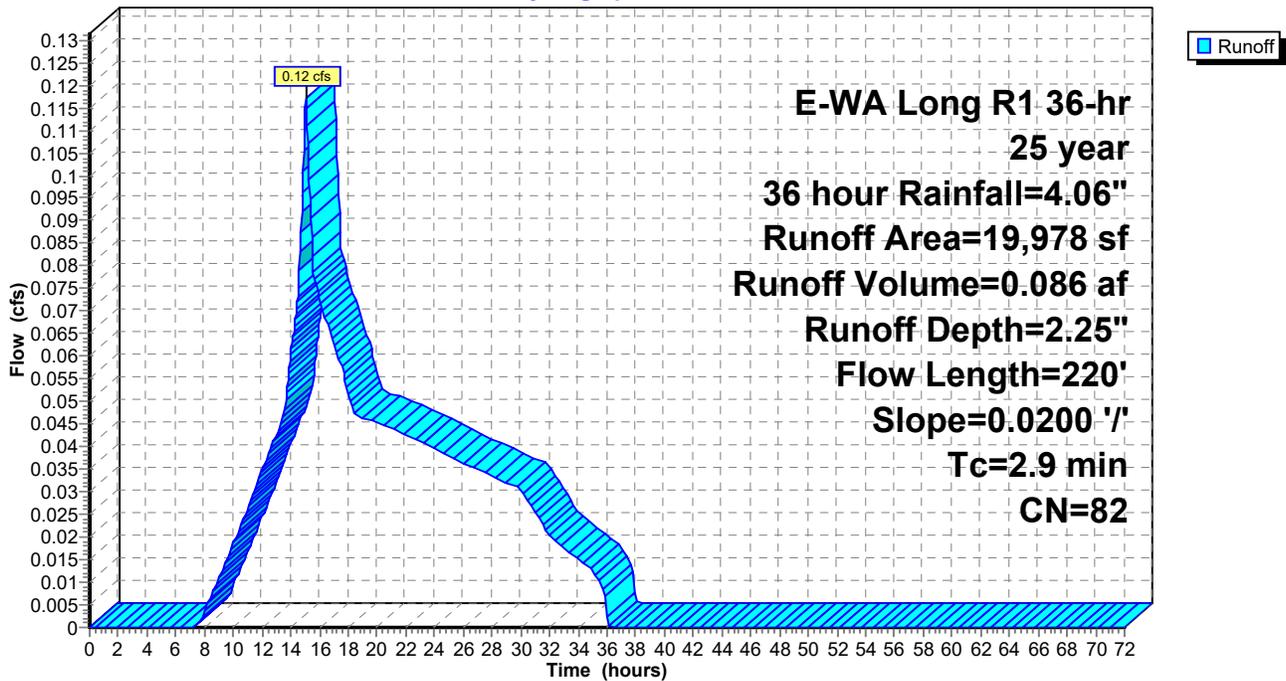
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
E-WA Long R1 36-hr 25 year, 36 hour Rainfall=4.06"

| Area (sf) | CN | Description |
|-----------|----|----------------------------------|
| * 19,978 | 82 | Dirt/loose gravel parking, HSG B |
| 19,978 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---|
| 2.9 | 220 | 0.0200 | 1.27 | | Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 2.00" |

Subcatchment 1S: Existing Conditions

Hydrograph



Existing Conditions

E-WA Long R1 36-hr 25 year, 36 hour Rainfall=4.06"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 13

Hydrograph for Subcatchment 1S: Existing Conditions

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 4.06 | 2.25 | 0.00 |
| 1.00 | 0.02 | 0.00 | 0.00 | 53.00 | 4.06 | 2.25 | 0.00 |
| 2.00 | 0.05 | 0.00 | 0.00 | 54.00 | 4.06 | 2.25 | 0.00 |
| 3.00 | 0.09 | 0.00 | 0.00 | 55.00 | 4.06 | 2.25 | 0.00 |
| 4.00 | 0.14 | 0.00 | 0.00 | 56.00 | 4.06 | 2.25 | 0.00 |
| 5.00 | 0.19 | 0.00 | 0.00 | 57.00 | 4.06 | 2.25 | 0.00 |
| 6.00 | 0.27 | 0.00 | 0.00 | 58.00 | 4.06 | 2.25 | 0.00 |
| 7.00 | 0.38 | 0.00 | 0.00 | 59.00 | 4.06 | 2.25 | 0.00 |
| 8.00 | 0.51 | 0.00 | 0.00 | 60.00 | 4.06 | 2.25 | 0.00 |
| 9.00 | 0.65 | 0.02 | 0.01 | 61.00 | 4.06 | 2.25 | 0.00 |
| 10.00 | 0.80 | 0.05 | 0.02 | 62.00 | 4.06 | 2.25 | 0.00 |
| 11.00 | 0.96 | 0.10 | 0.03 | 63.00 | 4.06 | 2.25 | 0.00 |
| 12.00 | 1.14 | 0.17 | 0.03 | 64.00 | 4.06 | 2.25 | 0.00 |
| 13.00 | 1.32 | 0.25 | 0.04 | 65.00 | 4.06 | 2.25 | 0.00 |
| 14.00 | 1.53 | 0.36 | 0.06 | 66.00 | 4.06 | 2.25 | 0.00 |
| 15.00 | 1.83 | 0.54 | 0.11 | 67.00 | 4.06 | 2.25 | 0.00 |
| 16.00 | 2.12 | 0.73 | 0.07 | 68.00 | 4.06 | 2.25 | 0.00 |
| 17.00 | 2.33 | 0.87 | 0.06 | 69.00 | 4.06 | 2.25 | 0.00 |
| 18.00 | 2.50 | 1.00 | 0.05 | 70.00 | 4.06 | 2.25 | 0.00 |
| 19.00 | 2.64 | 1.10 | 0.05 | 71.00 | 4.06 | 2.25 | 0.00 |
| 20.00 | 2.77 | 1.20 | 0.05 | 72.00 | 4.06 | 2.25 | 0.00 |
| 21.00 | 2.89 | 1.29 | 0.04 | | | | |
| 22.00 | 3.01 | 1.39 | 0.04 | | | | |
| 23.00 | 3.13 | 1.48 | 0.04 | | | | |
| 24.00 | 3.23 | 1.57 | 0.04 | | | | |
| 25.00 | 3.34 | 1.65 | 0.04 | | | | |
| 26.00 | 3.44 | 1.73 | 0.04 | | | | |
| 27.00 | 3.53 | 1.81 | 0.03 | | | | |
| 28.00 | 3.62 | 1.88 | 0.03 | | | | |
| 29.00 | 3.70 | 1.95 | 0.03 | | | | |
| 30.00 | 3.78 | 2.02 | 0.03 | | | | |
| 31.00 | 3.85 | 2.08 | 0.03 | | | | |
| 32.00 | 3.91 | 2.13 | 0.02 | | | | |
| 33.00 | 3.96 | 2.17 | 0.02 | | | | |
| 34.00 | 4.00 | 2.20 | 0.02 | | | | |
| 35.00 | 4.04 | 2.23 | 0.01 | | | | |
| 36.00 | 4.06 | 2.25 | 0.01 | | | | |
| 37.00 | 4.06 | 2.25 | 0.00 | | | | |
| 38.00 | 4.06 | 2.25 | 0.00 | | | | |
| 39.00 | 4.06 | 2.25 | 0.00 | | | | |
| 40.00 | 4.06 | 2.25 | 0.00 | | | | |
| 41.00 | 4.06 | 2.25 | 0.00 | | | | |
| 42.00 | 4.06 | 2.25 | 0.00 | | | | |
| 43.00 | 4.06 | 2.25 | 0.00 | | | | |
| 44.00 | 4.06 | 2.25 | 0.00 | | | | |
| 45.00 | 4.06 | 2.25 | 0.00 | | | | |
| 46.00 | 4.06 | 2.25 | 0.00 | | | | |
| 47.00 | 4.06 | 2.25 | 0.00 | | | | |
| 48.00 | 4.06 | 2.25 | 0.00 | | | | |
| 49.00 | 4.06 | 2.25 | 0.00 | | | | |
| 50.00 | 4.06 | 2.25 | 0.00 | | | | |
| 51.00 | 4.06 | 2.25 | 0.00 | | | | |

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment 1S: Existing Conditions Runoff Area=19,978 sf 0.00% Impervious Runoff Depth=2.70"
Flow Length=220' Slope=0.0200 '/' Tc=2.9 min CN=82 Runoff=0.14 cfs 0.103 af

Total Runoff Area = 0.459 ac Runoff Volume = 0.103 af Average Runoff Depth = 2.70"
100.00% Pervious = 0.459 ac 0.00% Impervious = 0.000 ac

Existing Conditions

E-WA Long R1 36-hr 25 year, 36 hour (rain on snow) Rainfall=4.57"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 15

Summary for Subcatchment 1S: Existing Conditions

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.14 cfs @ 15.05 hrs, Volume= 0.103 af, Depth= 2.70"

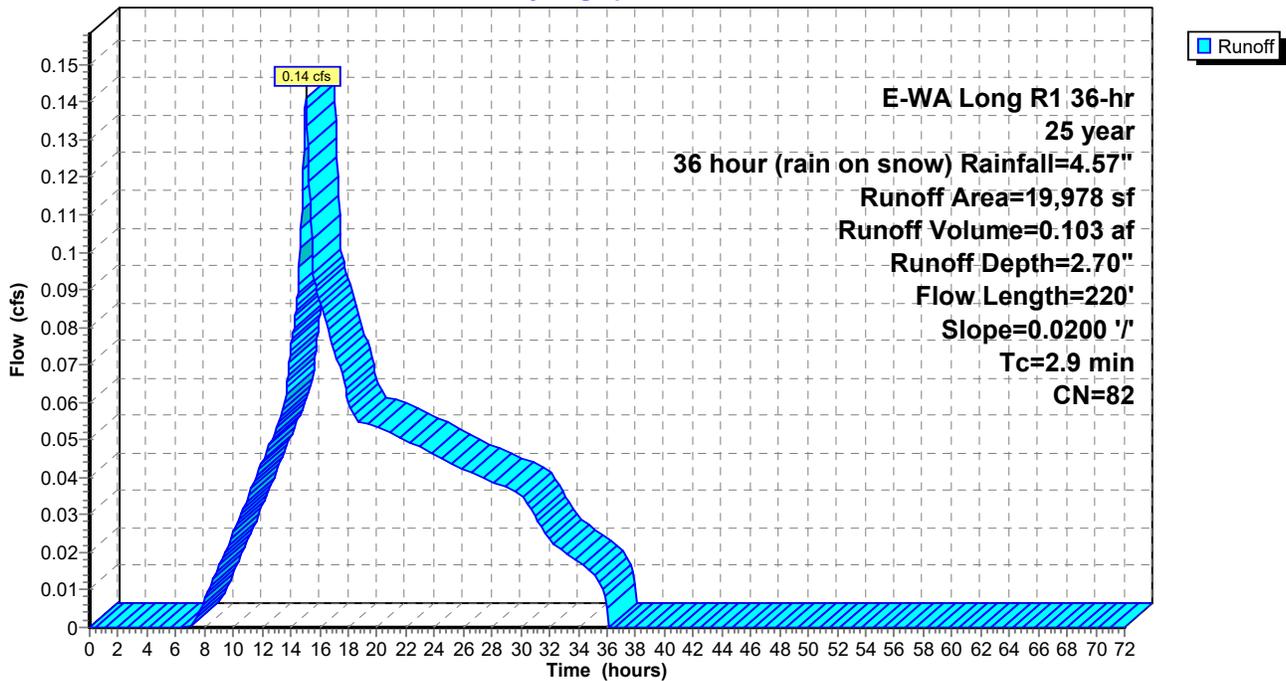
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
E-WA Long R1 36-hr 25 year, 36 hour (rain on snow) Rainfall=4.57"

| Area (sf) | CN | Description |
|-----------|----|----------------------------------|
| * 19,978 | 82 | Dirt/loose gravel parking, HSG B |
| 19,978 | | 100.00% Pervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---|
| 2.9 | 220 | 0.0200 | 1.27 | | Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 2.00" |

Subcatchment 1S: Existing Conditions

Hydrograph



Existing Conditions*E-WA Long R1 36-hr 25 year, 36 hour (rain on snow) Rainfall=4.57"*

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

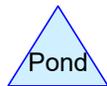
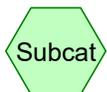
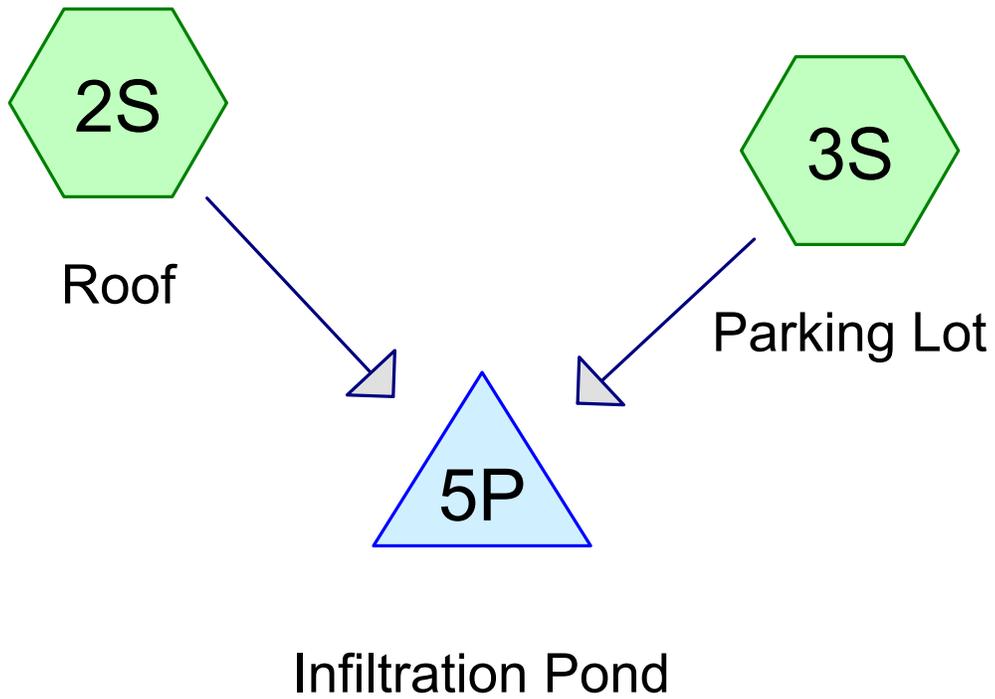
Page 16

Hydrograph for Subcatchment 1S: Existing Conditions

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|-----------------|---------------------|--------------------|-----------------|-----------------|---------------------|--------------------|-----------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 4.57 | 2.70 | 0.00 |
| 1.00 | 0.02 | 0.00 | 0.00 | 53.00 | 4.57 | 2.70 | 0.00 |
| 2.00 | 0.06 | 0.00 | 0.00 | 54.00 | 4.57 | 2.70 | 0.00 |
| 3.00 | 0.10 | 0.00 | 0.00 | 55.00 | 4.57 | 2.70 | 0.00 |
| 4.00 | 0.16 | 0.00 | 0.00 | 56.00 | 4.57 | 2.70 | 0.00 |
| 5.00 | 0.22 | 0.00 | 0.00 | 57.00 | 4.57 | 2.70 | 0.00 |
| 6.00 | 0.31 | 0.00 | 0.00 | 58.00 | 4.57 | 2.70 | 0.00 |
| 7.00 | 0.43 | 0.00 | 0.00 | 59.00 | 4.57 | 2.70 | 0.00 |
| 8.00 | 0.58 | 0.01 | 0.01 | 60.00 | 4.57 | 2.70 | 0.00 |
| 9.00 | 0.73 | 0.03 | 0.02 | 61.00 | 4.57 | 2.70 | 0.00 |
| 10.00 | 0.90 | 0.08 | 0.03 | 62.00 | 4.57 | 2.70 | 0.00 |
| 11.00 | 1.08 | 0.15 | 0.03 | 63.00 | 4.57 | 2.70 | 0.00 |
| 12.00 | 1.28 | 0.23 | 0.04 | 64.00 | 4.57 | 2.70 | 0.00 |
| 13.00 | 1.49 | 0.34 | 0.05 | 65.00 | 4.57 | 2.70 | 0.00 |
| 14.00 | 1.72 | 0.47 | 0.07 | 66.00 | 4.57 | 2.70 | 0.00 |
| 15.00 | 2.06 | 0.69 | 0.14 | 67.00 | 4.57 | 2.70 | 0.00 |
| 16.00 | 2.38 | 0.91 | 0.09 | 68.00 | 4.57 | 2.70 | 0.00 |
| 17.00 | 2.62 | 1.08 | 0.07 | 69.00 | 4.57 | 2.70 | 0.00 |
| 18.00 | 2.81 | 1.23 | 0.06 | 70.00 | 4.57 | 2.70 | 0.00 |
| 19.00 | 2.97 | 1.35 | 0.05 | 71.00 | 4.57 | 2.70 | 0.00 |
| 20.00 | 3.11 | 1.47 | 0.05 | 72.00 | 4.57 | 2.70 | 0.00 |
| 21.00 | 3.25 | 1.58 | 0.05 | | | | |
| 22.00 | 3.39 | 1.69 | 0.05 | | | | |
| 23.00 | 3.52 | 1.80 | 0.05 | | | | |
| 24.00 | 3.64 | 1.90 | 0.05 | | | | |
| 25.00 | 3.76 | 2.00 | 0.04 | | | | |
| 26.00 | 3.87 | 2.09 | 0.04 | | | | |
| 27.00 | 3.97 | 2.18 | 0.04 | | | | |
| 28.00 | 4.07 | 2.26 | 0.04 | | | | |
| 29.00 | 4.17 | 2.35 | 0.04 | | | | |
| 30.00 | 4.26 | 2.43 | 0.04 | | | | |
| 31.00 | 4.34 | 2.50 | 0.03 | | | | |
| 32.00 | 4.40 | 2.55 | 0.02 | | | | |
| 33.00 | 4.46 | 2.60 | 0.02 | | | | |
| 34.00 | 4.50 | 2.64 | 0.02 | | | | |
| 35.00 | 4.54 | 2.67 | 0.01 | | | | |
| 36.00 | 4.57 | 2.70 | 0.01 | | | | |
| 37.00 | 4.57 | 2.70 | 0.00 | | | | |
| 38.00 | 4.57 | 2.70 | 0.00 | | | | |
| 39.00 | 4.57 | 2.70 | 0.00 | | | | |
| 40.00 | 4.57 | 2.70 | 0.00 | | | | |
| 41.00 | 4.57 | 2.70 | 0.00 | | | | |
| 42.00 | 4.57 | 2.70 | 0.00 | | | | |
| 43.00 | 4.57 | 2.70 | 0.00 | | | | |
| 44.00 | 4.57 | 2.70 | 0.00 | | | | |
| 45.00 | 4.57 | 2.70 | 0.00 | | | | |
| 46.00 | 4.57 | 2.70 | 0.00 | | | | |
| 47.00 | 4.57 | 2.70 | 0.00 | | | | |
| 48.00 | 4.57 | 2.70 | 0.00 | | | | |
| 49.00 | 4.57 | 2.70 | 0.00 | | | | |
| 50.00 | 4.57 | 2.70 | 0.00 | | | | |
| 51.00 | 4.57 | 2.70 | 0.00 | | | | |

Appendix B

HydroCAD Report Proposed Conditions



Proposed Conditions

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Printed 11/3/2020

Page 2

Area Listing (all nodes)

| Area (acres) | CN | Description (subcatchment-numbers) |
|-----------------|-----------|---------------------------------------|
| 0.262 | 98 | Paved parking, HSG B (3S) |
| 0.196 | 98 | Roofs, HSG B (2S) |
| 0.459 | 98 | TOTAL AREA |

Proposed Conditions

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Printed 11/3/2020

Page 3

Soil Listing (all nodes)

| Area (acres) | Soil Group | Subcatchment Numbers |
|-----------------|---------------|-------------------------|
| 0.000 | HSG A | |
| 0.459 | HSG B | 2S, 3S |
| 0.000 | HSG C | |
| 0.000 | HSG D | |
| 0.000 | Other | |
| 0.459 | | TOTAL AREA |

Proposed Conditions

Prepared by {enter your company name here}

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Printed 11/3/2020

Page 4

Ground Covers (all nodes)

| HSG-A (acres) | HSG-B (acres) | HSG-C (acres) | HSG-D (acres) | Other (acres) | Total (acres) | Ground Cover | Subcatchment Numbers |
|------------------|------------------|------------------|------------------|------------------|------------------|-------------------|-------------------------|
| 0.000 | 0.262 | 0.000 | 0.000 | 0.000 | 0.262 | Paved parking | 3S |
| 0.000 | 0.196 | 0.000 | 0.000 | 0.000 | 0.196 | Roofs | 2S |
| 0.000 | 0.459 | 0.000 | 0.000 | 0.000 | 0.459 | TOTAL AREA | |

Proposed Conditions

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 5

Pipe Listing (all nodes)

| Line# | Node Number | In-Invert (feet) | Out-Invert (feet) | Length (feet) | Slope (ft/ft) | n | Diam/Width (inches) | Height (inches) | Inside-Fill (inches) |
|-------|----------------|---------------------|----------------------|------------------|------------------|-------|------------------------|--------------------|-------------------------|
| 1 | 5P | 0.00 | 0.00 | 10.0 | 0.0000 | 0.010 | 10.0 | 0.0 | 0.0 |

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment2S: Roof Runoff Area=8,559 sf 100.00% Impervious Runoff Depth=2.38"
Flow Length=165' Slope=0.0200 '/' Tc=2.3 min CN=98 Runoff=0.05 cfs 0.039 af

Subcatchment3S: Parking Lot Runoff Area=11,419 sf 100.00% Impervious Runoff Depth=2.38"
Flow Length=114' Slope=0.0200 '/' Tc=1.7 min CN=98 Runoff=0.07 cfs 0.052 af

Pond 5P: Infiltration Pond Peak Elev=0.55' Storage=180 cf Inflow=0.12 cfs 0.091 af
Discarded=0.09 cfs 0.091 af Primary=0.00 cfs 0.000 af Outflow=0.09 cfs 0.091 af

Total Runoff Area = 0.459 ac Runoff Volume = 0.091 af Average Runoff Depth = 2.38"
0.00% Pervious = 0.000 ac 100.00% Impervious = 0.459 ac

Proposed Conditions

E-WA Long R1 36-hr 2 year, 36 hour (rain on snow) Rainfall=2.61"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 7

Summary for Subcatchment 2S: Roof

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.05 cfs @ 15.04 hrs, Volume= 0.039 af, Depth= 2.38"

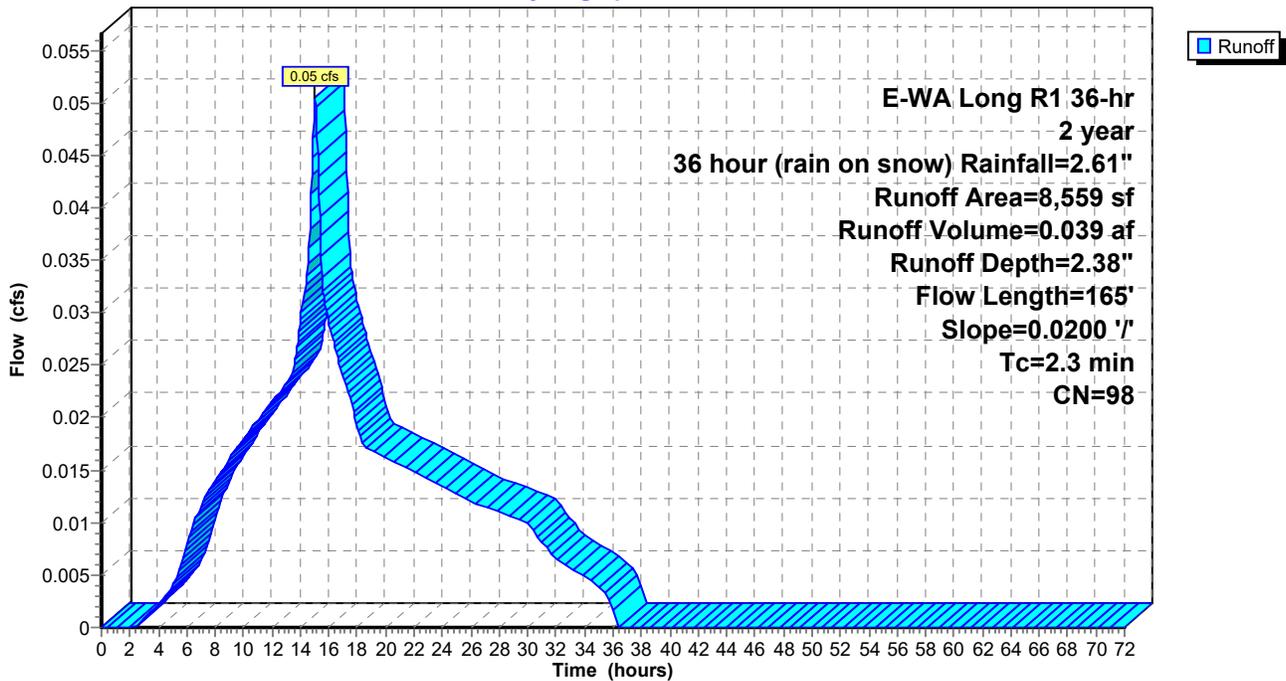
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
 E-WA Long R1 36-hr 2 year, 36 hour (rain on snow) Rainfall=2.61"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 8,559 | 98 | Roofs, HSG B |
| 8,559 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---|
| 2.3 | 165 | 0.0200 | 1.20 | | Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 2.00" |

Subcatchment 2S: Roof

Hydrograph



Proposed Conditions*E-WA Long R1 36-hr 2 year, 36 hour (rain on snow) Rainfall=2.61"*

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 8

Hydrograph for Subcatchment 2S: Roof

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|-----------------|---------------------|--------------------|-----------------|-----------------|---------------------|--------------------|-----------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 2.61 | 2.38 | 0.00 |
| 1.00 | 0.01 | 0.00 | 0.00 | 53.00 | 2.61 | 2.38 | 0.00 |
| 2.00 | 0.03 | 0.00 | 0.00 | 54.00 | 2.61 | 2.38 | 0.00 |
| 3.00 | 0.06 | 0.00 | 0.00 | 55.00 | 2.61 | 2.38 | 0.00 |
| 4.00 | 0.09 | 0.01 | 0.00 | 56.00 | 2.61 | 2.38 | 0.00 |
| 5.00 | 0.12 | 0.02 | 0.00 | 57.00 | 2.61 | 2.38 | 0.00 |
| 6.00 | 0.18 | 0.05 | 0.01 | 58.00 | 2.61 | 2.38 | 0.00 |
| 7.00 | 0.25 | 0.10 | 0.01 | 59.00 | 2.61 | 2.38 | 0.00 |
| 8.00 | 0.33 | 0.17 | 0.01 | 60.00 | 2.61 | 2.38 | 0.00 |
| 9.00 | 0.42 | 0.25 | 0.02 | 61.00 | 2.61 | 2.38 | 0.00 |
| 10.00 | 0.52 | 0.33 | 0.02 | 62.00 | 2.61 | 2.38 | 0.00 |
| 11.00 | 0.62 | 0.43 | 0.02 | 63.00 | 2.61 | 2.38 | 0.00 |
| 12.00 | 0.73 | 0.53 | 0.02 | 64.00 | 2.61 | 2.38 | 0.00 |
| 13.00 | 0.85 | 0.64 | 0.02 | 65.00 | 2.61 | 2.38 | 0.00 |
| 14.00 | 0.98 | 0.77 | 0.03 | 66.00 | 2.61 | 2.38 | 0.00 |
| 15.00 | 1.17 | 0.96 | 0.05 | 67.00 | 2.61 | 2.38 | 0.00 |
| 16.00 | 1.36 | 1.14 | 0.03 | 68.00 | 2.61 | 2.38 | 0.00 |
| 17.00 | 1.49 | 1.27 | 0.02 | 69.00 | 2.61 | 2.38 | 0.00 |
| 18.00 | 1.60 | 1.38 | 0.02 | 70.00 | 2.61 | 2.38 | 0.00 |
| 19.00 | 1.69 | 1.47 | 0.02 | 71.00 | 2.61 | 2.38 | 0.00 |
| 20.00 | 1.78 | 1.55 | 0.02 | 72.00 | 2.61 | 2.38 | 0.00 |
| 21.00 | 1.86 | 1.63 | 0.02 | | | | |
| 22.00 | 1.94 | 1.71 | 0.01 | | | | |
| 23.00 | 2.01 | 1.78 | 0.01 | | | | |
| 24.00 | 2.08 | 1.85 | 0.01 | | | | |
| 25.00 | 2.15 | 1.92 | 0.01 | | | | |
| 26.00 | 2.21 | 1.98 | 0.01 | | | | |
| 27.00 | 2.27 | 2.04 | 0.01 | | | | |
| 28.00 | 2.33 | 2.10 | 0.01 | | | | |
| 29.00 | 2.38 | 2.15 | 0.01 | | | | |
| 30.00 | 2.43 | 2.20 | 0.01 | | | | |
| 31.00 | 2.48 | 2.25 | 0.01 | | | | |
| 32.00 | 2.52 | 2.29 | 0.01 | | | | |
| 33.00 | 2.55 | 2.32 | 0.01 | | | | |
| 34.00 | 2.57 | 2.34 | 0.00 | | | | |
| 35.00 | 2.59 | 2.36 | 0.00 | | | | |
| 36.00 | 2.61 | 2.38 | 0.00 | | | | |
| 37.00 | 2.61 | 2.38 | 0.00 | | | | |
| 38.00 | 2.61 | 2.38 | 0.00 | | | | |
| 39.00 | 2.61 | 2.38 | 0.00 | | | | |
| 40.00 | 2.61 | 2.38 | 0.00 | | | | |
| 41.00 | 2.61 | 2.38 | 0.00 | | | | |
| 42.00 | 2.61 | 2.38 | 0.00 | | | | |
| 43.00 | 2.61 | 2.38 | 0.00 | | | | |
| 44.00 | 2.61 | 2.38 | 0.00 | | | | |
| 45.00 | 2.61 | 2.38 | 0.00 | | | | |
| 46.00 | 2.61 | 2.38 | 0.00 | | | | |
| 47.00 | 2.61 | 2.38 | 0.00 | | | | |
| 48.00 | 2.61 | 2.38 | 0.00 | | | | |
| 49.00 | 2.61 | 2.38 | 0.00 | | | | |
| 50.00 | 2.61 | 2.38 | 0.00 | | | | |
| 51.00 | 2.61 | 2.38 | 0.00 | | | | |

Summary for Subcatchment 3S: Parking Lot

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.07 cfs @ 15.02 hrs, Volume= 0.052 af, Depth= 2.38"

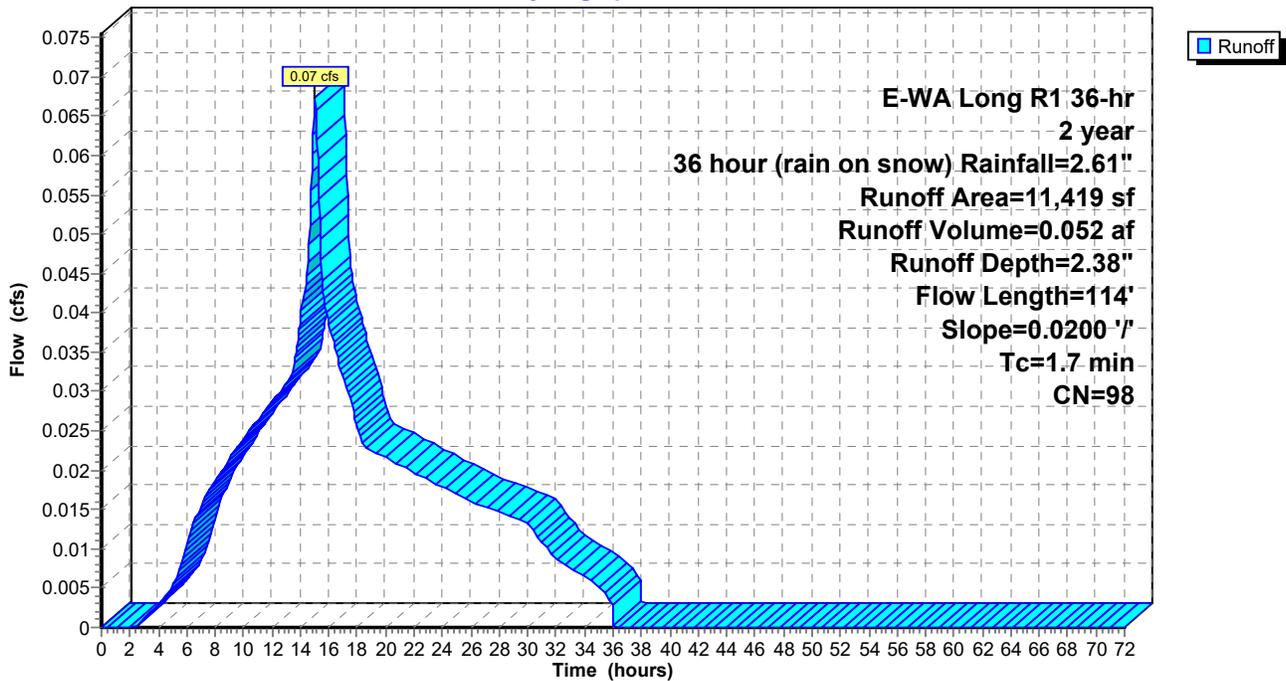
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
 E-WA Long R1 36-hr 2 year, 36 hour (rain on snow) Rainfall=2.61"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 11,419 | 98 | Paved parking, HSG B |
| 11,419 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---|
| 1.7 | 114 | 0.0200 | 1.12 | | Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 2.00" |

Subcatchment 3S: Parking Lot

Hydrograph



Proposed Conditions*E-WA Long R1 36-hr 2 year, 36 hour (rain on snow) Rainfall=2.61"*

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 10

Hydrograph for Subcatchment 3S: Parking Lot

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|-----------------|---------------------|--------------------|-----------------|-----------------|---------------------|--------------------|-----------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 2.61 | 2.38 | 0.00 |
| 1.00 | 0.01 | 0.00 | 0.00 | 53.00 | 2.61 | 2.38 | 0.00 |
| 2.00 | 0.03 | 0.00 | 0.00 | 54.00 | 2.61 | 2.38 | 0.00 |
| 3.00 | 0.06 | 0.00 | 0.00 | 55.00 | 2.61 | 2.38 | 0.00 |
| 4.00 | 0.09 | 0.01 | 0.00 | 56.00 | 2.61 | 2.38 | 0.00 |
| 5.00 | 0.12 | 0.02 | 0.01 | 57.00 | 2.61 | 2.38 | 0.00 |
| 6.00 | 0.18 | 0.05 | 0.01 | 58.00 | 2.61 | 2.38 | 0.00 |
| 7.00 | 0.25 | 0.10 | 0.02 | 59.00 | 2.61 | 2.38 | 0.00 |
| 8.00 | 0.33 | 0.17 | 0.02 | 60.00 | 2.61 | 2.38 | 0.00 |
| 9.00 | 0.42 | 0.25 | 0.02 | 61.00 | 2.61 | 2.38 | 0.00 |
| 10.00 | 0.52 | 0.33 | 0.02 | 62.00 | 2.61 | 2.38 | 0.00 |
| 11.00 | 0.62 | 0.43 | 0.03 | 63.00 | 2.61 | 2.38 | 0.00 |
| 12.00 | 0.73 | 0.53 | 0.03 | 64.00 | 2.61 | 2.38 | 0.00 |
| 13.00 | 0.85 | 0.64 | 0.03 | 65.00 | 2.61 | 2.38 | 0.00 |
| 14.00 | 0.98 | 0.77 | 0.04 | 66.00 | 2.61 | 2.38 | 0.00 |
| 15.00 | 1.17 | 0.96 | 0.07 | 67.00 | 2.61 | 2.38 | 0.00 |
| 16.00 | 1.36 | 1.14 | 0.04 | 68.00 | 2.61 | 2.38 | 0.00 |
| 17.00 | 1.49 | 1.27 | 0.03 | 69.00 | 2.61 | 2.38 | 0.00 |
| 18.00 | 1.60 | 1.38 | 0.03 | 70.00 | 2.61 | 2.38 | 0.00 |
| 19.00 | 1.69 | 1.47 | 0.02 | 71.00 | 2.61 | 2.38 | 0.00 |
| 20.00 | 1.78 | 1.55 | 0.02 | 72.00 | 2.61 | 2.38 | 0.00 |
| 21.00 | 1.86 | 1.63 | 0.02 | | | | |
| 22.00 | 1.94 | 1.71 | 0.02 | | | | |
| 23.00 | 2.01 | 1.78 | 0.02 | | | | |
| 24.00 | 2.08 | 1.85 | 0.02 | | | | |
| 25.00 | 2.15 | 1.92 | 0.02 | | | | |
| 26.00 | 2.21 | 1.98 | 0.02 | | | | |
| 27.00 | 2.27 | 2.04 | 0.02 | | | | |
| 28.00 | 2.33 | 2.10 | 0.01 | | | | |
| 29.00 | 2.38 | 2.15 | 0.01 | | | | |
| 30.00 | 2.43 | 2.20 | 0.01 | | | | |
| 31.00 | 2.48 | 2.25 | 0.01 | | | | |
| 32.00 | 2.52 | 2.29 | 0.01 | | | | |
| 33.00 | 2.55 | 2.32 | 0.01 | | | | |
| 34.00 | 2.57 | 2.34 | 0.01 | | | | |
| 35.00 | 2.59 | 2.36 | 0.01 | | | | |
| 36.00 | 2.61 | 2.38 | 0.00 | | | | |
| 37.00 | 2.61 | 2.38 | 0.00 | | | | |
| 38.00 | 2.61 | 2.38 | 0.00 | | | | |
| 39.00 | 2.61 | 2.38 | 0.00 | | | | |
| 40.00 | 2.61 | 2.38 | 0.00 | | | | |
| 41.00 | 2.61 | 2.38 | 0.00 | | | | |
| 42.00 | 2.61 | 2.38 | 0.00 | | | | |
| 43.00 | 2.61 | 2.38 | 0.00 | | | | |
| 44.00 | 2.61 | 2.38 | 0.00 | | | | |
| 45.00 | 2.61 | 2.38 | 0.00 | | | | |
| 46.00 | 2.61 | 2.38 | 0.00 | | | | |
| 47.00 | 2.61 | 2.38 | 0.00 | | | | |
| 48.00 | 2.61 | 2.38 | 0.00 | | | | |
| 49.00 | 2.61 | 2.38 | 0.00 | | | | |
| 50.00 | 2.61 | 2.38 | 0.00 | | | | |
| 51.00 | 2.61 | 2.38 | 0.00 | | | | |

Proposed Conditions

E-WA Long R1 36-hr 2 year, 36 hour (rain on snow) Rainfall=2.61"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 11

Summary for Pond 5P: Infiltration Pond

Inflow Area = 0.459 ac, 100.00% Impervious, Inflow Depth = 2.38" for 2 year, 36 hour (rain on snow) event
 Inflow = 0.12 cfs @ 15.03 hrs, Volume= 0.091 af
 Outflow = 0.09 cfs @ 15.40 hrs, Volume= 0.091 af, Atten= 27%, Lag= 22.4 min
 Discarded = 0.09 cfs @ 15.40 hrs, Volume= 0.091 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
 Peak Elev= 0.55' @ 15.40 hrs Surf.Area= 370 sf Storage= 180 cf

Plug-Flow detention time= 12.9 min calculated for 0.091 af (100% of inflow)
 Center-of-Mass det. time= 12.9 min (1,085.0 - 1,072.1)

| Volume | Invert | Avail.Storage | Storage Description | | |
|---------------------|----------------------|---------------------------|---|---------------------|--|
| #1 | 0.00' | 676 cf | Custom Stage Data (Conic) Listed below | | |
| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) | |
| 0.00 | 150 | 0 | 0 | 150 | |
| 1.00 | 554 | 331 | 331 | 559 | |
| 1.50 | 835 | 345 | 676 | 844 | |

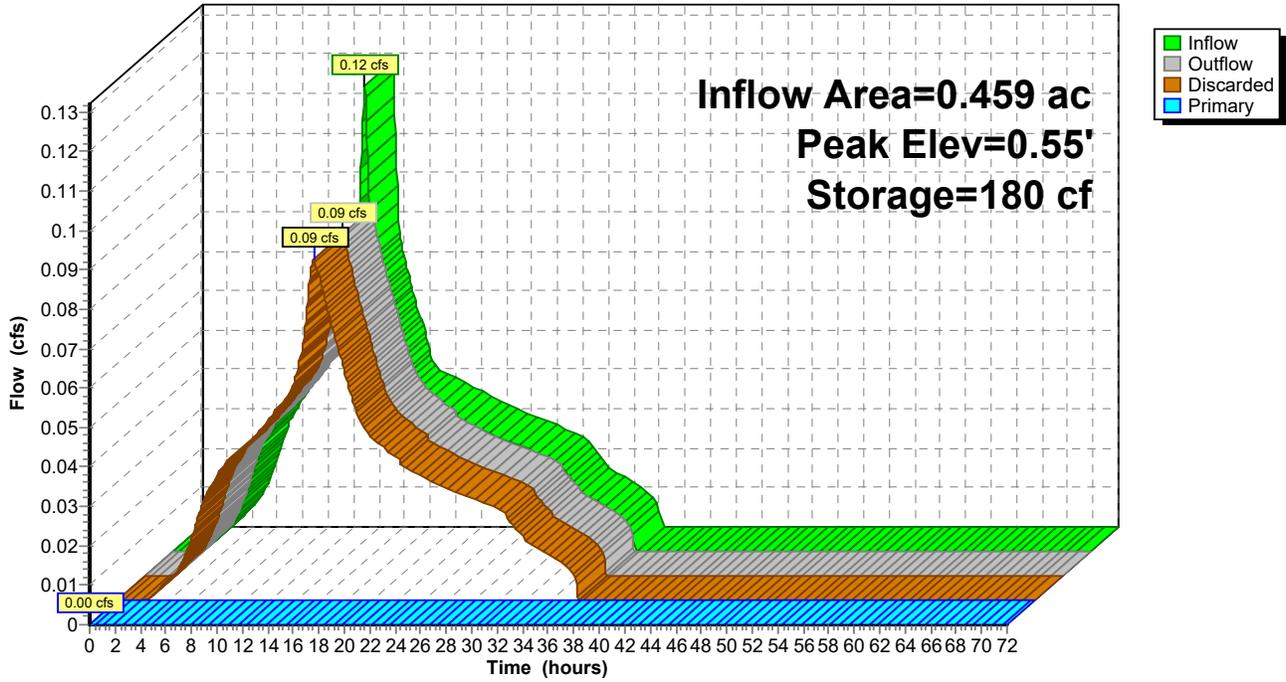
| Device | Routing | Invert | Outlet Devices |
|--------|-----------|--------|---|
| #1 | Primary | 0.00' | 10.0" Round Culvert L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 0.00' / 0.00' S= 0.0000 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf |
| #2 | Device 1 | 1.25' | 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads |
| #3 | Discarded | 0.00' | 10.000 in/hr Exfiltration over Wetted area below 1.25' Phase-In= 0.01' |

Discarded OutFlow Max=0.09 cfs @ 15.40 hrs HW=0.55' (Free Discharge)
 ↑3=Exfiltration (Exfiltration Controls 0.09 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
 ↑1=Culvert (Controls 0.00 cfs)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Pond 5P: Infiltration Pond

Hydrograph



Proposed Conditions*E-WA Long R1 36-hr 2 year, 36 hour (rain on snow) Rainfall=2.61"*

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 13

Hydrograph for Pond 5P: Infiltration Pond

| Time (hours) | Inflow (cfs) | Storage (cubic-feet) | Elevation (feet) | Outflow (cfs) | Discarded (cfs) | Primary (cfs) |
|-----------------|-----------------|-------------------------|---------------------|------------------|--------------------|------------------|
| 0.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.01 | 1 | 0.00 | 0.01 | 0.01 | 0.00 |
| 7.50 | 0.03 | 4 | 0.01 | 0.03 | 0.03 | 0.00 |
| 10.00 | 0.04 | 14 | 0.04 | 0.04 | 0.04 | 0.00 |
| 12.50 | 0.05 | 48 | 0.14 | 0.05 | 0.05 | 0.00 |
| 15.00 | 0.12 | 151 | 0.46 | 0.08 | 0.08 | 0.00 |
| 17.50 | 0.05 | 94 | 0.28 | 0.06 | 0.06 | 0.00 |
| 20.00 | 0.04 | 23 | 0.07 | 0.04 | 0.04 | 0.00 |
| 22.50 | 0.03 | 5 | 0.01 | 0.03 | 0.03 | 0.00 |
| 25.00 | 0.03 | 4 | 0.01 | 0.03 | 0.03 | 0.00 |
| 27.50 | 0.03 | 4 | 0.01 | 0.03 | 0.03 | 0.00 |
| 30.00 | 0.02 | 3 | 0.01 | 0.02 | 0.02 | 0.00 |
| 32.50 | 0.01 | 2 | 0.01 | 0.01 | 0.01 | 0.00 |
| 35.00 | 0.01 | 1 | 0.00 | 0.01 | 0.01 | 0.00 |
| 37.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |

Proposed Conditions

E-WA Long R1 36-hr 2-year, 36 hour Rainfall=2.32"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 14

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment2S: Roof

Runoff Area=8,559 sf 100.00% Impervious Runoff Depth=2.09"
Flow Length=165' Slope=0.0200 '/' Tc=2.3 min CN=98 Runoff=0.04 cfs 0.034 af

Subcatchment3S: Parking Lot

Runoff Area=11,419 sf 100.00% Impervious Runoff Depth=2.09"
Flow Length=114' Slope=0.0200 '/' Tc=1.7 min CN=98 Runoff=0.06 cfs 0.046 af

Pond 5P: Infiltration Pond

Peak Elev=0.44' Storage=145 cf Inflow=0.10 cfs 0.080 af
Discarded=0.08 cfs 0.080 af Primary=0.00 cfs 0.000 af Outflow=0.08 cfs 0.080 af

Total Runoff Area = 0.459 ac Runoff Volume = 0.080 af Average Runoff Depth = 2.09"
0.00% Pervious = 0.000 ac 100.00% Impervious = 0.459 ac

Proposed Conditions

E-WA Long R1 36-hr 2-year, 36 hour Rainfall=2.32"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 15

Summary for Subcatchment 2S: Roof

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.04 cfs @ 15.04 hrs, Volume= 0.034 af, Depth= 2.09"

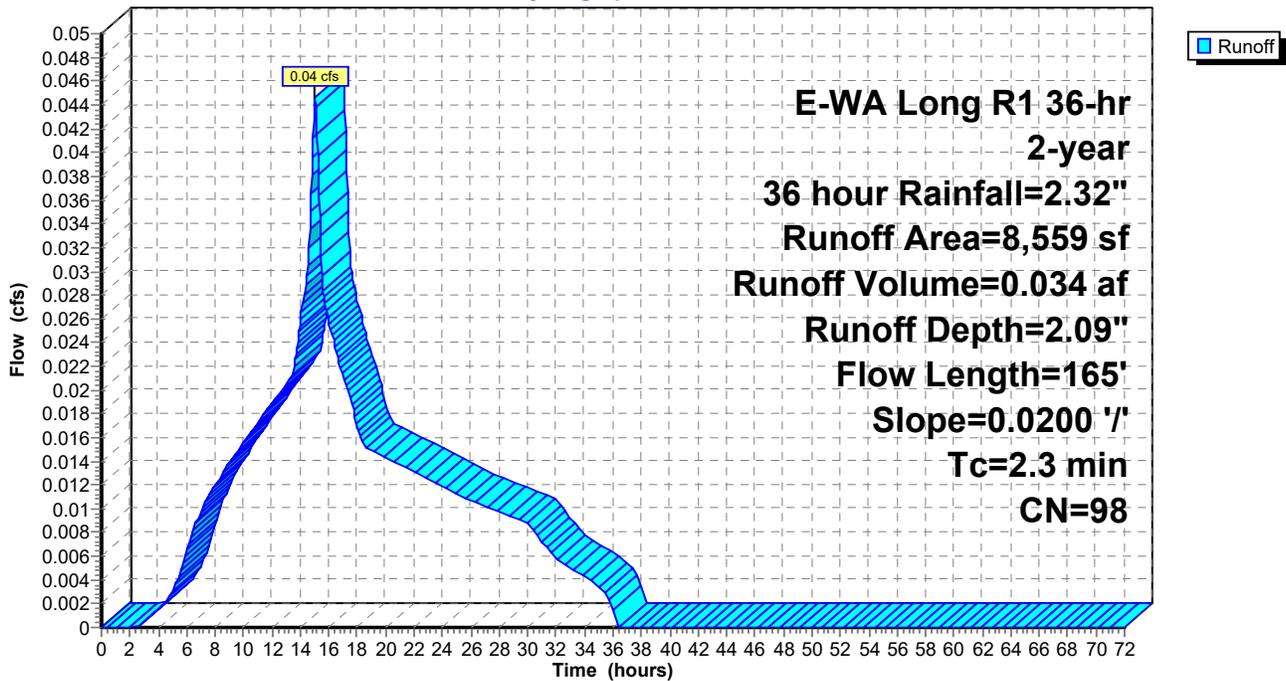
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
E-WA Long R1 36-hr 2-year, 36 hour Rainfall=2.32"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 8,559 | 98 | Roofs, HSG B |
| 8,559 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---|
| 2.3 | 165 | 0.0200 | 1.20 | | Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 2.00" |

Subcatchment 2S: Roof

Hydrograph



Proposed Conditions

E-WA Long R1 36-hr 2-year, 36 hour Rainfall=2.32"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 16

Hydrograph for Subcatchment 2S: Roof

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 2.32 | 2.09 | 0.00 |
| 1.00 | 0.01 | 0.00 | 0.00 | 53.00 | 2.32 | 2.09 | 0.00 |
| 2.00 | 0.03 | 0.00 | 0.00 | 54.00 | 2.32 | 2.09 | 0.00 |
| 3.00 | 0.05 | 0.00 | 0.00 | 55.00 | 2.32 | 2.09 | 0.00 |
| 4.00 | 0.08 | 0.01 | 0.00 | 56.00 | 2.32 | 2.09 | 0.00 |
| 5.00 | 0.11 | 0.02 | 0.00 | 57.00 | 2.32 | 2.09 | 0.00 |
| 6.00 | 0.16 | 0.04 | 0.01 | 58.00 | 2.32 | 2.09 | 0.00 |
| 7.00 | 0.22 | 0.08 | 0.01 | 59.00 | 2.32 | 2.09 | 0.00 |
| 8.00 | 0.29 | 0.14 | 0.01 | 60.00 | 2.32 | 2.09 | 0.00 |
| 9.00 | 0.37 | 0.20 | 0.01 | 61.00 | 2.32 | 2.09 | 0.00 |
| 10.00 | 0.46 | 0.28 | 0.02 | 62.00 | 2.32 | 2.09 | 0.00 |
| 11.00 | 0.55 | 0.36 | 0.02 | 63.00 | 2.32 | 2.09 | 0.00 |
| 12.00 | 0.65 | 0.46 | 0.02 | 64.00 | 2.32 | 2.09 | 0.00 |
| 13.00 | 0.75 | 0.55 | 0.02 | 65.00 | 2.32 | 2.09 | 0.00 |
| 14.00 | 0.87 | 0.67 | 0.03 | 66.00 | 2.32 | 2.09 | 0.00 |
| 15.00 | 1.04 | 0.83 | 0.04 | 67.00 | 2.32 | 2.09 | 0.00 |
| 16.00 | 1.21 | 0.99 | 0.03 | 68.00 | 2.32 | 2.09 | 0.00 |
| 17.00 | 1.33 | 1.11 | 0.02 | 69.00 | 2.32 | 2.09 | 0.00 |
| 18.00 | 1.43 | 1.21 | 0.02 | 70.00 | 2.32 | 2.09 | 0.00 |
| 19.00 | 1.51 | 1.29 | 0.01 | 71.00 | 2.32 | 2.09 | 0.00 |
| 20.00 | 1.58 | 1.36 | 0.01 | 72.00 | 2.32 | 2.09 | 0.00 |
| 21.00 | 1.65 | 1.43 | 0.01 | | | | |
| 22.00 | 1.72 | 1.50 | 0.01 | | | | |
| 23.00 | 1.79 | 1.56 | 0.01 | | | | |
| 24.00 | 1.85 | 1.62 | 0.01 | | | | |
| 25.00 | 1.91 | 1.68 | 0.01 | | | | |
| 26.00 | 1.96 | 1.74 | 0.01 | | | | |
| 27.00 | 2.02 | 1.79 | 0.01 | | | | |
| 28.00 | 2.07 | 1.84 | 0.01 | | | | |
| 29.00 | 2.12 | 1.89 | 0.01 | | | | |
| 30.00 | 2.16 | 1.93 | 0.01 | | | | |
| 31.00 | 2.20 | 1.98 | 0.01 | | | | |
| 32.00 | 2.24 | 2.01 | 0.01 | | | | |
| 33.00 | 2.26 | 2.04 | 0.01 | | | | |
| 34.00 | 2.29 | 2.06 | 0.00 | | | | |
| 35.00 | 2.31 | 2.08 | 0.00 | | | | |
| 36.00 | 2.32 | 2.09 | 0.00 | | | | |
| 37.00 | 2.32 | 2.09 | 0.00 | | | | |
| 38.00 | 2.32 | 2.09 | 0.00 | | | | |
| 39.00 | 2.32 | 2.09 | 0.00 | | | | |
| 40.00 | 2.32 | 2.09 | 0.00 | | | | |
| 41.00 | 2.32 | 2.09 | 0.00 | | | | |
| 42.00 | 2.32 | 2.09 | 0.00 | | | | |
| 43.00 | 2.32 | 2.09 | 0.00 | | | | |
| 44.00 | 2.32 | 2.09 | 0.00 | | | | |
| 45.00 | 2.32 | 2.09 | 0.00 | | | | |
| 46.00 | 2.32 | 2.09 | 0.00 | | | | |
| 47.00 | 2.32 | 2.09 | 0.00 | | | | |
| 48.00 | 2.32 | 2.09 | 0.00 | | | | |
| 49.00 | 2.32 | 2.09 | 0.00 | | | | |
| 50.00 | 2.32 | 2.09 | 0.00 | | | | |
| 51.00 | 2.32 | 2.09 | 0.00 | | | | |

Proposed Conditions

E-WA Long R1 36-hr 2-year, 36 hour Rainfall=2.32"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 17

Summary for Subcatchment 3S: Parking Lot

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.06 cfs @ 15.02 hrs, Volume= 0.046 af, Depth= 2.09"

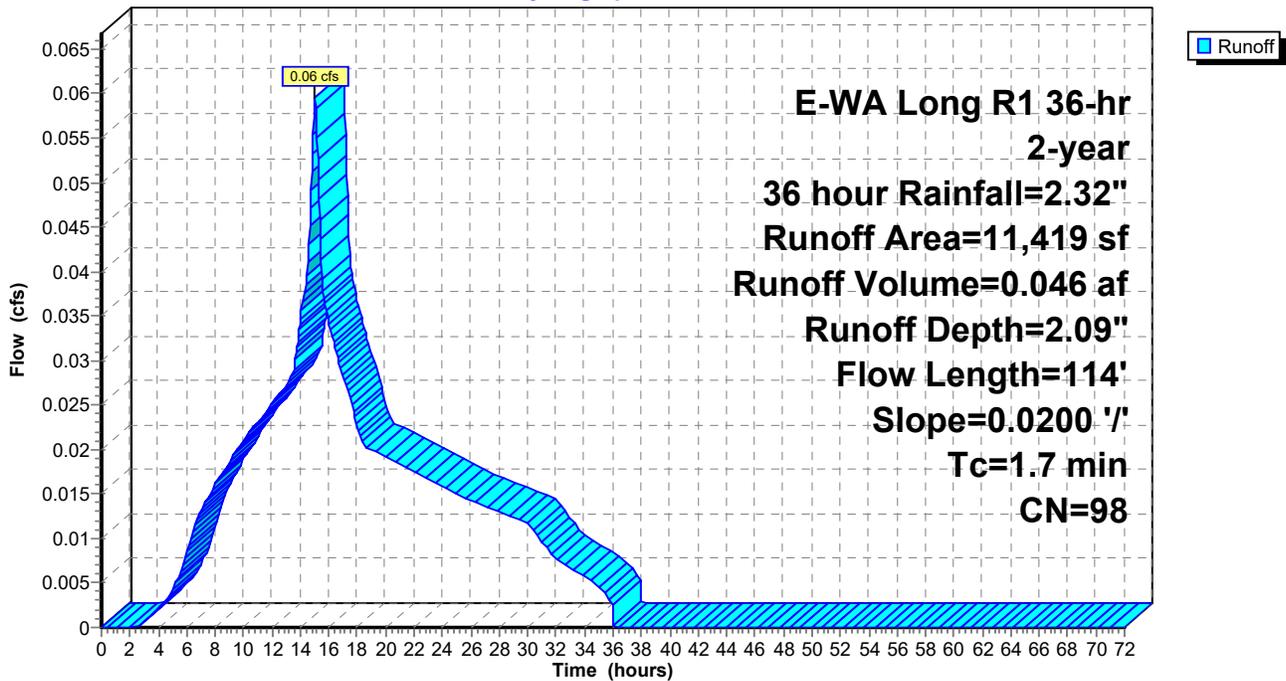
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
E-WA Long R1 36-hr 2-year, 36 hour Rainfall=2.32"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 11,419 | 98 | Paved parking, HSG B |
| 11,419 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---|
| 1.7 | 114 | 0.0200 | 1.12 | | Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 2.00" |

Subcatchment 3S: Parking Lot

Hydrograph



Proposed Conditions

E-WA Long R1 36-hr 2-year, 36 hour Rainfall=2.32"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 18

Hydrograph for Subcatchment 3S: Parking Lot

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 2.32 | 2.09 | 0.00 |
| 1.00 | 0.01 | 0.00 | 0.00 | 53.00 | 2.32 | 2.09 | 0.00 |
| 2.00 | 0.03 | 0.00 | 0.00 | 54.00 | 2.32 | 2.09 | 0.00 |
| 3.00 | 0.05 | 0.00 | 0.00 | 55.00 | 2.32 | 2.09 | 0.00 |
| 4.00 | 0.08 | 0.01 | 0.00 | 56.00 | 2.32 | 2.09 | 0.00 |
| 5.00 | 0.11 | 0.02 | 0.00 | 57.00 | 2.32 | 2.09 | 0.00 |
| 6.00 | 0.16 | 0.04 | 0.01 | 58.00 | 2.32 | 2.09 | 0.00 |
| 7.00 | 0.22 | 0.08 | 0.01 | 59.00 | 2.32 | 2.09 | 0.00 |
| 8.00 | 0.29 | 0.14 | 0.02 | 60.00 | 2.32 | 2.09 | 0.00 |
| 9.00 | 0.37 | 0.20 | 0.02 | 61.00 | 2.32 | 2.09 | 0.00 |
| 10.00 | 0.46 | 0.28 | 0.02 | 62.00 | 2.32 | 2.09 | 0.00 |
| 11.00 | 0.55 | 0.36 | 0.02 | 63.00 | 2.32 | 2.09 | 0.00 |
| 12.00 | 0.65 | 0.46 | 0.03 | 64.00 | 2.32 | 2.09 | 0.00 |
| 13.00 | 0.75 | 0.55 | 0.03 | 65.00 | 2.32 | 2.09 | 0.00 |
| 14.00 | 0.87 | 0.67 | 0.03 | 66.00 | 2.32 | 2.09 | 0.00 |
| 15.00 | 1.04 | 0.83 | 0.06 | 67.00 | 2.32 | 2.09 | 0.00 |
| 16.00 | 1.21 | 0.99 | 0.03 | 68.00 | 2.32 | 2.09 | 0.00 |
| 17.00 | 1.33 | 1.11 | 0.03 | 69.00 | 2.32 | 2.09 | 0.00 |
| 18.00 | 1.43 | 1.21 | 0.02 | 70.00 | 2.32 | 2.09 | 0.00 |
| 19.00 | 1.51 | 1.29 | 0.02 | 71.00 | 2.32 | 2.09 | 0.00 |
| 20.00 | 1.58 | 1.36 | 0.02 | 72.00 | 2.32 | 2.09 | 0.00 |
| 21.00 | 1.65 | 1.43 | 0.02 | | | | |
| 22.00 | 1.72 | 1.50 | 0.02 | | | | |
| 23.00 | 1.79 | 1.56 | 0.02 | | | | |
| 24.00 | 1.85 | 1.62 | 0.02 | | | | |
| 25.00 | 1.91 | 1.68 | 0.02 | | | | |
| 26.00 | 1.96 | 1.74 | 0.01 | | | | |
| 27.00 | 2.02 | 1.79 | 0.01 | | | | |
| 28.00 | 2.07 | 1.84 | 0.01 | | | | |
| 29.00 | 2.12 | 1.89 | 0.01 | | | | |
| 30.00 | 2.16 | 1.93 | 0.01 | | | | |
| 31.00 | 2.20 | 1.98 | 0.01 | | | | |
| 32.00 | 2.24 | 2.01 | 0.01 | | | | |
| 33.00 | 2.26 | 2.04 | 0.01 | | | | |
| 34.00 | 2.29 | 2.06 | 0.01 | | | | |
| 35.00 | 2.31 | 2.08 | 0.00 | | | | |
| 36.00 | 2.32 | 2.09 | 0.00 | | | | |
| 37.00 | 2.32 | 2.09 | 0.00 | | | | |
| 38.00 | 2.32 | 2.09 | 0.00 | | | | |
| 39.00 | 2.32 | 2.09 | 0.00 | | | | |
| 40.00 | 2.32 | 2.09 | 0.00 | | | | |
| 41.00 | 2.32 | 2.09 | 0.00 | | | | |
| 42.00 | 2.32 | 2.09 | 0.00 | | | | |
| 43.00 | 2.32 | 2.09 | 0.00 | | | | |
| 44.00 | 2.32 | 2.09 | 0.00 | | | | |
| 45.00 | 2.32 | 2.09 | 0.00 | | | | |
| 46.00 | 2.32 | 2.09 | 0.00 | | | | |
| 47.00 | 2.32 | 2.09 | 0.00 | | | | |
| 48.00 | 2.32 | 2.09 | 0.00 | | | | |
| 49.00 | 2.32 | 2.09 | 0.00 | | | | |
| 50.00 | 2.32 | 2.09 | 0.00 | | | | |
| 51.00 | 2.32 | 2.09 | 0.00 | | | | |

Proposed Conditions

E-WA Long R1 36-hr 2-year, 36 hour Rainfall=2.32"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 19

Summary for Pond 5P: Infiltration Pond

Inflow Area = 0.459 ac, 100.00% Impervious, Inflow Depth = 2.09" for 2-year, 36 hour event
 Inflow = 0.10 cfs @ 15.03 hrs, Volume= 0.080 af
 Outflow = 0.08 cfs @ 15.40 hrs, Volume= 0.080 af, Atten= 27%, Lag= 22.5 min
 Discarded = 0.08 cfs @ 15.40 hrs, Volume= 0.080 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
 Peak Elev= 0.44' @ 15.40 hrs Surf.Area= 327 sf Storage= 145 cf

Plug-Flow detention time= 10.3 min calculated for 0.080 af (100% of inflow)
 Center-of-Mass det. time= 10.3 min (1,087.9 - 1,077.6)

| Volume | Invert | Avail.Storage | Storage Description | | |
|---------------------|----------------------|---------------------------|---|---------------------|--|
| #1 | 0.00' | 676 cf | Custom Stage Data (Conic) Listed below | | |
| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) | |
| 0.00 | 150 | 0 | 0 | 150 | |
| 1.00 | 554 | 331 | 331 | 559 | |
| 1.50 | 835 | 345 | 676 | 844 | |

| Device | Routing | Invert | Outlet Devices |
|--------|-----------|--------|---|
| #1 | Primary | 0.00' | 10.0" Round Culvert L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 0.00' / 0.00' S= 0.0000 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf |
| #2 | Device 1 | 1.25' | 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads |
| #3 | Discarded | 0.00' | 10.000 in/hr Exfiltration over Wetted area below 1.25' Phase-In= 0.01' |

Discarded OutFlow Max=0.08 cfs @ 15.40 hrs HW=0.44' (Free Discharge)
 ↑3=Exfiltration (Exfiltration Controls 0.08 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
 ↑1=Culvert (Controls 0.00 cfs)
 ↑2=Orifice/Grate (Controls 0.00 cfs)

Proposed Conditions

E-WA Long R1 36-hr 2-year, 36 hour Rainfall=2.32"

Prepared by {enter your company name here}

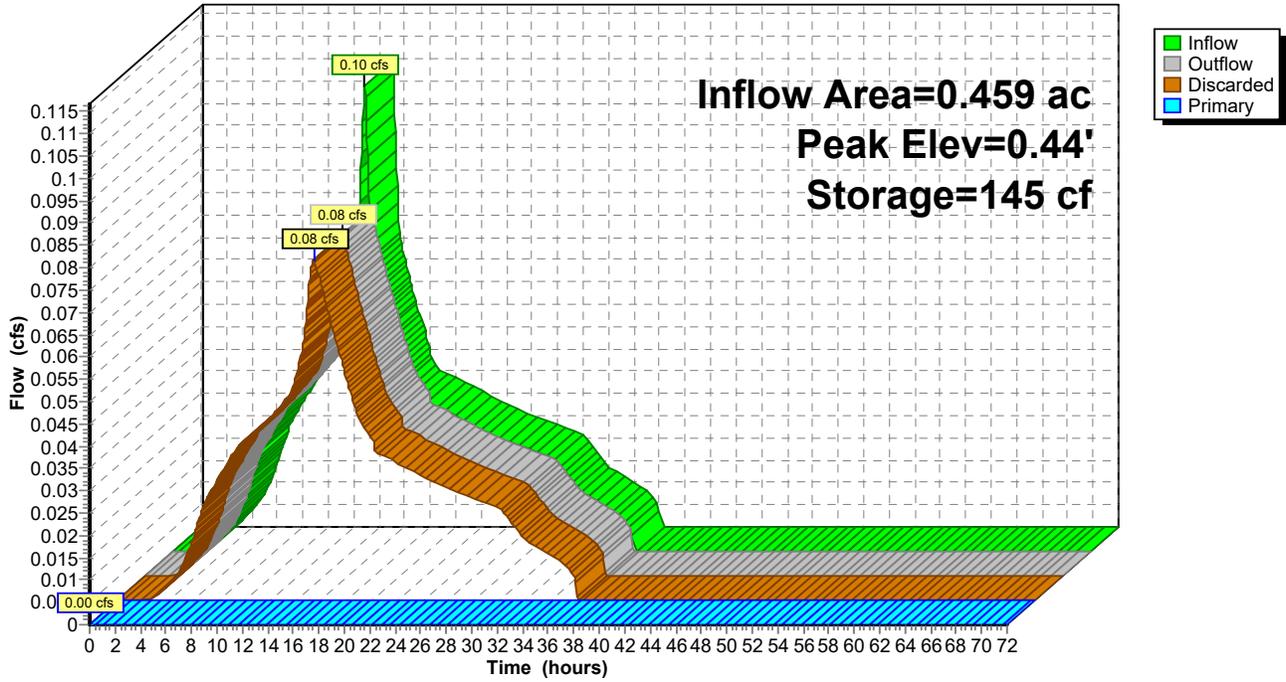
Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 20

Pond 5P: Infiltration Pond

Hydrograph



Proposed Conditions

E-WA Long R1 36-hr 2-year, 36 hour Rainfall=2.32"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 21

Hydrograph for Pond 5P: Infiltration Pond

| Time (hours) | Inflow (cfs) | Storage (cubic-feet) | Elevation (feet) | Outflow (cfs) | Discarded (cfs) | Primary (cfs) |
|--------------|--------------|----------------------|------------------|---------------|-----------------|---------------|
| 0.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.01 | 1 | 0.00 | 0.01 | 0.01 | 0.00 |
| 7.50 | 0.03 | 3 | 0.01 | 0.03 | 0.03 | 0.00 |
| 10.00 | 0.04 | 5 | 0.02 | 0.04 | 0.04 | 0.00 |
| 12.50 | 0.05 | 28 | 0.08 | 0.04 | 0.04 | 0.00 |
| 15.00 | 0.10 | 119 | 0.36 | 0.07 | 0.07 | 0.00 |
| 17.50 | 0.05 | 69 | 0.21 | 0.05 | 0.05 | 0.00 |
| 20.00 | 0.03 | 6 | 0.02 | 0.04 | 0.04 | 0.00 |
| 22.50 | 0.03 | 4 | 0.01 | 0.03 | 0.03 | 0.00 |
| 25.00 | 0.03 | 4 | 0.01 | 0.03 | 0.03 | 0.00 |
| 27.50 | 0.02 | 3 | 0.01 | 0.02 | 0.02 | 0.00 |
| 30.00 | 0.02 | 3 | 0.01 | 0.02 | 0.02 | 0.00 |
| 32.50 | 0.01 | 2 | 0.01 | 0.01 | 0.01 | 0.00 |
| 35.00 | 0.01 | 1 | 0.00 | 0.01 | 0.01 | 0.00 |
| 37.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |

Proposed Conditions

E-WA Long R1 36-hr 25 year, 36 hour Rainfall=4.06"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 22

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment2S: Roof

Runoff Area=8,559 sf 100.00% Impervious Runoff Depth=3.82"
Flow Length=165' Slope=0.0200 '/' Tc=2.3 min CN=98 Runoff=0.08 cfs 0.063 af

Subcatchment3S: Parking Lot

Runoff Area=11,419 sf 100.00% Impervious Runoff Depth=3.82"
Flow Length=114' Slope=0.0200 '/' Tc=1.7 min CN=98 Runoff=0.11 cfs 0.084 af

Pond 5P: Infiltration Pond

Peak Elev=1.04' Storage=357 cf Inflow=0.19 cfs 0.146 af
Discarded=0.13 cfs 0.146 af Primary=0.00 cfs 0.000 af Outflow=0.13 cfs 0.146 af

Total Runoff Area = 0.459 ac Runoff Volume = 0.146 af Average Runoff Depth = 3.82"
0.00% Pervious = 0.000 ac 100.00% Impervious = 0.459 ac

Proposed Conditions

E-WA Long R1 36-hr 25 year, 36 hour Rainfall=4.06"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 23

Summary for Subcatchment 2S: Roof

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.08 cfs @ 15.03 hrs, Volume= 0.063 af, Depth= 3.82"

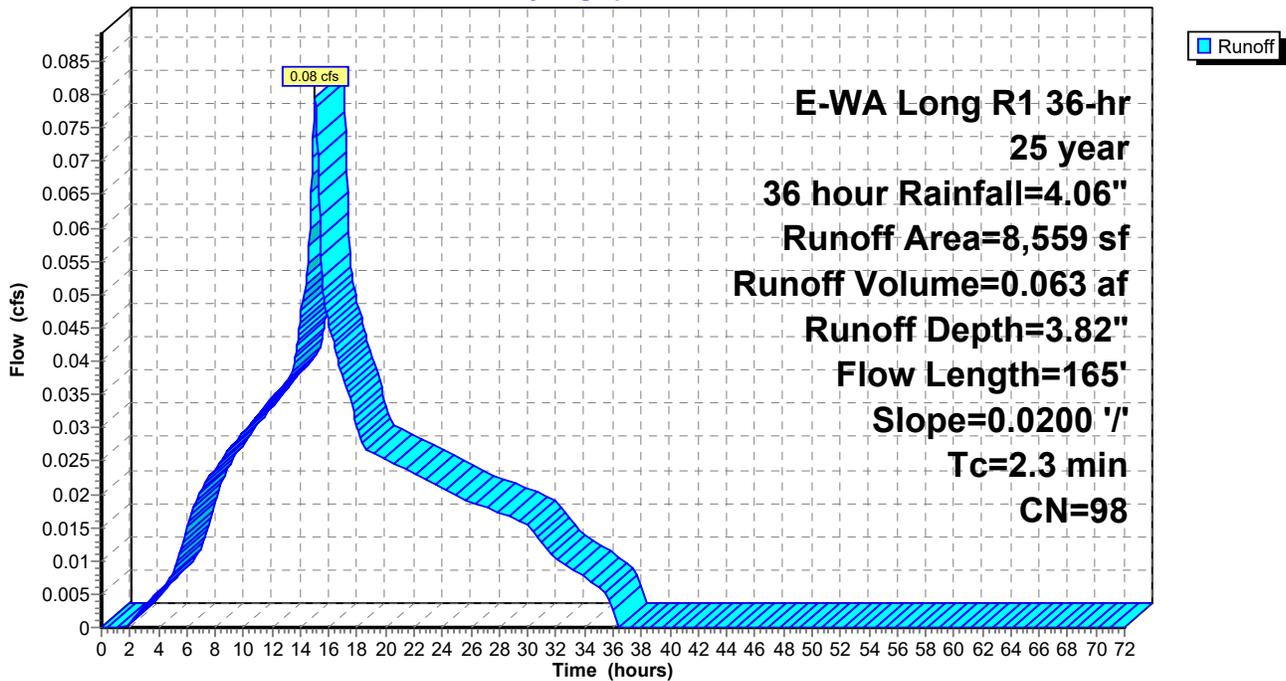
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
E-WA Long R1 36-hr 25 year, 36 hour Rainfall=4.06"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 8,559 | 98 | Roofs, HSG B |
| 8,559 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---|
| 2.3 | 165 | 0.0200 | 1.20 | | Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 2.00" |

Subcatchment 2S: Roof

Hydrograph



Proposed Conditions

E-WA Long R1 36-hr 25 year, 36 hour Rainfall=4.06"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 24

Hydrograph for Subcatchment 2S: Roof

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 4.06 | 3.82 | 0.00 |
| 1.00 | 0.02 | 0.00 | 0.00 | 53.00 | 4.06 | 3.82 | 0.00 |
| 2.00 | 0.05 | 0.00 | 0.00 | 54.00 | 4.06 | 3.82 | 0.00 |
| 3.00 | 0.09 | 0.01 | 0.00 | 55.00 | 4.06 | 3.82 | 0.00 |
| 4.00 | 0.14 | 0.03 | 0.01 | 56.00 | 4.06 | 3.82 | 0.00 |
| 5.00 | 0.19 | 0.07 | 0.01 | 57.00 | 4.06 | 3.82 | 0.00 |
| 6.00 | 0.27 | 0.12 | 0.01 | 58.00 | 4.06 | 3.82 | 0.00 |
| 7.00 | 0.38 | 0.22 | 0.02 | 59.00 | 4.06 | 3.82 | 0.00 |
| 8.00 | 0.51 | 0.33 | 0.02 | 60.00 | 4.06 | 3.82 | 0.00 |
| 9.00 | 0.65 | 0.46 | 0.03 | 61.00 | 4.06 | 3.82 | 0.00 |
| 10.00 | 0.80 | 0.60 | 0.03 | 62.00 | 4.06 | 3.82 | 0.00 |
| 11.00 | 0.96 | 0.75 | 0.03 | 63.00 | 4.06 | 3.82 | 0.00 |
| 12.00 | 1.14 | 0.92 | 0.03 | 64.00 | 4.06 | 3.82 | 0.00 |
| 13.00 | 1.32 | 1.10 | 0.04 | 65.00 | 4.06 | 3.82 | 0.00 |
| 14.00 | 1.53 | 1.31 | 0.05 | 66.00 | 4.06 | 3.82 | 0.00 |
| 15.00 | 1.83 | 1.60 | 0.08 | 67.00 | 4.06 | 3.82 | 0.00 |
| 16.00 | 2.12 | 1.89 | 0.05 | 68.00 | 4.06 | 3.82 | 0.00 |
| 17.00 | 2.33 | 2.10 | 0.04 | 69.00 | 4.06 | 3.82 | 0.00 |
| 18.00 | 2.50 | 2.27 | 0.03 | 70.00 | 4.06 | 3.82 | 0.00 |
| 19.00 | 2.64 | 2.40 | 0.03 | 71.00 | 4.06 | 3.82 | 0.00 |
| 20.00 | 2.77 | 2.54 | 0.03 | 72.00 | 4.06 | 3.82 | 0.00 |
| 21.00 | 2.89 | 2.66 | 0.02 | | | | |
| 22.00 | 3.01 | 2.78 | 0.02 | | | | |
| 23.00 | 3.13 | 2.89 | 0.02 | | | | |
| 24.00 | 3.23 | 3.00 | 0.02 | | | | |
| 25.00 | 3.34 | 3.10 | 0.02 | | | | |
| 26.00 | 3.44 | 3.20 | 0.02 | | | | |
| 27.00 | 3.53 | 3.30 | 0.02 | | | | |
| 28.00 | 3.62 | 3.38 | 0.02 | | | | |
| 29.00 | 3.70 | 3.47 | 0.02 | | | | |
| 30.00 | 3.78 | 3.55 | 0.02 | | | | |
| 31.00 | 3.85 | 3.62 | 0.01 | | | | |
| 32.00 | 3.91 | 3.68 | 0.01 | | | | |
| 33.00 | 3.96 | 3.73 | 0.01 | | | | |
| 34.00 | 4.00 | 3.77 | 0.01 | | | | |
| 35.00 | 4.04 | 3.80 | 0.01 | | | | |
| 36.00 | 4.06 | 3.82 | 0.00 | | | | |
| 37.00 | 4.06 | 3.82 | 0.00 | | | | |
| 38.00 | 4.06 | 3.82 | 0.00 | | | | |
| 39.00 | 4.06 | 3.82 | 0.00 | | | | |
| 40.00 | 4.06 | 3.82 | 0.00 | | | | |
| 41.00 | 4.06 | 3.82 | 0.00 | | | | |
| 42.00 | 4.06 | 3.82 | 0.00 | | | | |
| 43.00 | 4.06 | 3.82 | 0.00 | | | | |
| 44.00 | 4.06 | 3.82 | 0.00 | | | | |
| 45.00 | 4.06 | 3.82 | 0.00 | | | | |
| 46.00 | 4.06 | 3.82 | 0.00 | | | | |
| 47.00 | 4.06 | 3.82 | 0.00 | | | | |
| 48.00 | 4.06 | 3.82 | 0.00 | | | | |
| 49.00 | 4.06 | 3.82 | 0.00 | | | | |
| 50.00 | 4.06 | 3.82 | 0.00 | | | | |
| 51.00 | 4.06 | 3.82 | 0.00 | | | | |

Proposed Conditions

E-WA Long R1 36-hr 25 year, 36 hour Rainfall=4.06"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 25

Summary for Subcatchment 3S: Parking Lot

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.11 cfs @ 15.02 hrs, Volume= 0.084 af, Depth= 3.82"

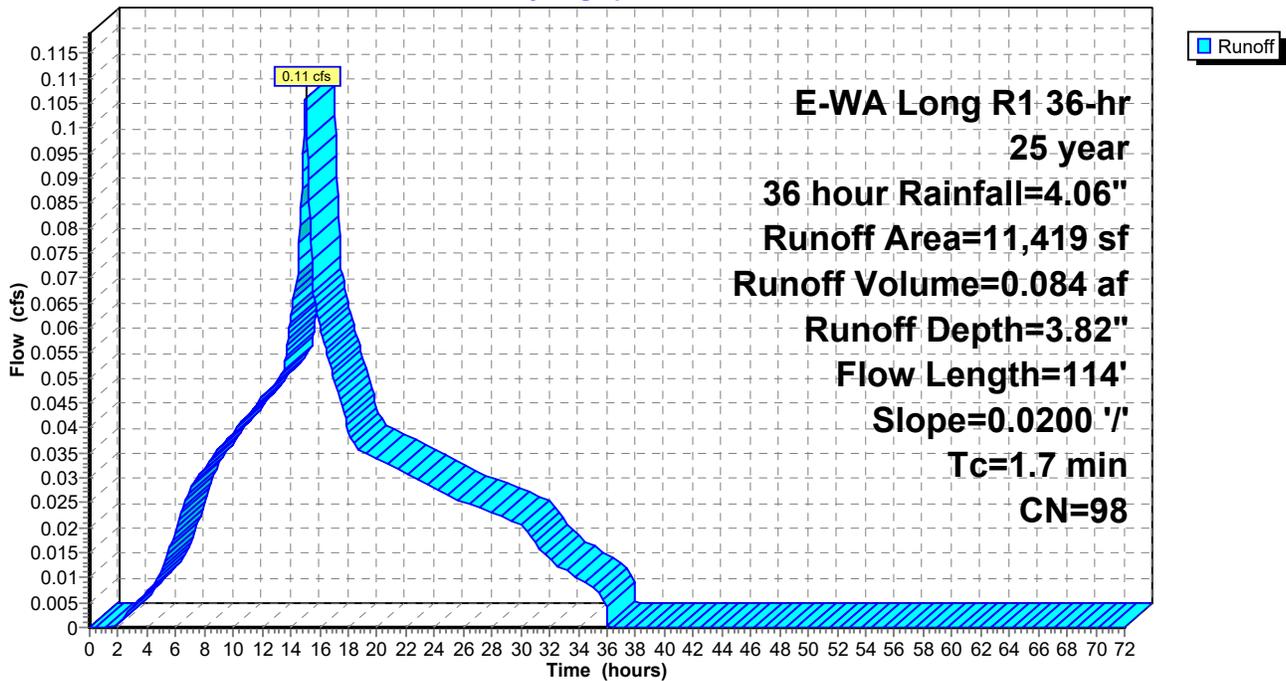
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
E-WA Long R1 36-hr 25 year, 36 hour Rainfall=4.06"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 11,419 | 98 | Paved parking, HSG B |
| 11,419 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---|
| 1.7 | 114 | 0.0200 | 1.12 | | Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 2.00" |

Subcatchment 3S: Parking Lot

Hydrograph



Proposed Conditions

E-WA Long R1 36-hr 25 year, 36 hour Rainfall=4.06"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 26

Hydrograph for Subcatchment 3S: Parking Lot

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 4.06 | 3.82 | 0.00 |
| 1.00 | 0.02 | 0.00 | 0.00 | 53.00 | 4.06 | 3.82 | 0.00 |
| 2.00 | 0.05 | 0.00 | 0.00 | 54.00 | 4.06 | 3.82 | 0.00 |
| 3.00 | 0.09 | 0.01 | 0.00 | 55.00 | 4.06 | 3.82 | 0.00 |
| 4.00 | 0.14 | 0.03 | 0.01 | 56.00 | 4.06 | 3.82 | 0.00 |
| 5.00 | 0.19 | 0.07 | 0.01 | 57.00 | 4.06 | 3.82 | 0.00 |
| 6.00 | 0.27 | 0.12 | 0.02 | 58.00 | 4.06 | 3.82 | 0.00 |
| 7.00 | 0.38 | 0.22 | 0.03 | 59.00 | 4.06 | 3.82 | 0.00 |
| 8.00 | 0.51 | 0.33 | 0.03 | 60.00 | 4.06 | 3.82 | 0.00 |
| 9.00 | 0.65 | 0.46 | 0.04 | 61.00 | 4.06 | 3.82 | 0.00 |
| 10.00 | 0.80 | 0.60 | 0.04 | 62.00 | 4.06 | 3.82 | 0.00 |
| 11.00 | 0.96 | 0.75 | 0.04 | 63.00 | 4.06 | 3.82 | 0.00 |
| 12.00 | 1.14 | 0.92 | 0.05 | 64.00 | 4.06 | 3.82 | 0.00 |
| 13.00 | 1.32 | 1.10 | 0.05 | 65.00 | 4.06 | 3.82 | 0.00 |
| 14.00 | 1.53 | 1.31 | 0.06 | 66.00 | 4.06 | 3.82 | 0.00 |
| 15.00 | 1.83 | 1.60 | 0.11 | 67.00 | 4.06 | 3.82 | 0.00 |
| 16.00 | 2.12 | 1.89 | 0.06 | 68.00 | 4.06 | 3.82 | 0.00 |
| 17.00 | 2.33 | 2.10 | 0.05 | 69.00 | 4.06 | 3.82 | 0.00 |
| 18.00 | 2.50 | 2.27 | 0.04 | 70.00 | 4.06 | 3.82 | 0.00 |
| 19.00 | 2.64 | 2.40 | 0.04 | 71.00 | 4.06 | 3.82 | 0.00 |
| 20.00 | 2.77 | 2.54 | 0.03 | 72.00 | 4.06 | 3.82 | 0.00 |
| 21.00 | 2.89 | 2.66 | 0.03 | | | | |
| 22.00 | 3.01 | 2.78 | 0.03 | | | | |
| 23.00 | 3.13 | 2.89 | 0.03 | | | | |
| 24.00 | 3.23 | 3.00 | 0.03 | | | | |
| 25.00 | 3.34 | 3.10 | 0.03 | | | | |
| 26.00 | 3.44 | 3.20 | 0.03 | | | | |
| 27.00 | 3.53 | 3.30 | 0.02 | | | | |
| 28.00 | 3.62 | 3.38 | 0.02 | | | | |
| 29.00 | 3.70 | 3.47 | 0.02 | | | | |
| 30.00 | 3.78 | 3.55 | 0.02 | | | | |
| 31.00 | 3.85 | 3.62 | 0.02 | | | | |
| 32.00 | 3.91 | 3.68 | 0.01 | | | | |
| 33.00 | 3.96 | 3.73 | 0.01 | | | | |
| 34.00 | 4.00 | 3.77 | 0.01 | | | | |
| 35.00 | 4.04 | 3.80 | 0.01 | | | | |
| 36.00 | 4.06 | 3.82 | 0.00 | | | | |
| 37.00 | 4.06 | 3.82 | 0.00 | | | | |
| 38.00 | 4.06 | 3.82 | 0.00 | | | | |
| 39.00 | 4.06 | 3.82 | 0.00 | | | | |
| 40.00 | 4.06 | 3.82 | 0.00 | | | | |
| 41.00 | 4.06 | 3.82 | 0.00 | | | | |
| 42.00 | 4.06 | 3.82 | 0.00 | | | | |
| 43.00 | 4.06 | 3.82 | 0.00 | | | | |
| 44.00 | 4.06 | 3.82 | 0.00 | | | | |
| 45.00 | 4.06 | 3.82 | 0.00 | | | | |
| 46.00 | 4.06 | 3.82 | 0.00 | | | | |
| 47.00 | 4.06 | 3.82 | 0.00 | | | | |
| 48.00 | 4.06 | 3.82 | 0.00 | | | | |
| 49.00 | 4.06 | 3.82 | 0.00 | | | | |
| 50.00 | 4.06 | 3.82 | 0.00 | | | | |
| 51.00 | 4.06 | 3.82 | 0.00 | | | | |

Proposed Conditions

E-WA Long R1 36-hr 25 year, 36 hour Rainfall=4.06"

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 27

Summary for Pond 5P: Infiltration Pond

Inflow Area = 0.459 ac, 100.00% Impervious, Inflow Depth = 3.82" for 25 year, 36 hour event
 Inflow = 0.19 cfs @ 15.03 hrs, Volume= 0.146 af
 Outflow = 0.13 cfs @ 15.41 hrs, Volume= 0.146 af, Atten= 28%, Lag= 23.1 min
 Discarded = 0.13 cfs @ 15.41 hrs, Volume= 0.146 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
 Peak Elev= 1.04' @ 15.41 hrs Surf.Area= 575 sf Storage= 357 cf

Plug-Flow detention time= 25.0 min calculated for 0.146 af (100% of inflow)
 Center-of-Mass det. time= 24.9 min (1,079.9 - 1,055.0)

| Volume | Invert | Avail.Storage | Storage Description | | |
|---------------------|----------------------|---------------------------|---|---------------------|--|
| #1 | 0.00' | 676 cf | Custom Stage Data (Conic) Listed below | | |
| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) | |
| 0.00 | 150 | 0 | 0 | 150 | |
| 1.00 | 554 | 331 | 331 | 559 | |
| 1.50 | 835 | 345 | 676 | 844 | |

| Device | Routing | Invert | Outlet Devices |
|--------|-----------|--------|---|
| #1 | Primary | 0.00' | 10.0" Round Culvert L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 0.00' / 0.00' S= 0.0000 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf |
| #2 | Device 1 | 1.25' | 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads |
| #3 | Discarded | 0.00' | 10.000 in/hr Exfiltration over Wetted area below 1.25' Phase-In= 0.01' |

Discarded OutFlow Max=0.13 cfs @ 15.41 hrs HW=1.04' (Free Discharge)
 ↑**3=Exfiltration** (Exfiltration Controls 0.13 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
 ↑**1=Culvert** (Controls 0.00 cfs)
 ↑**2=Orifice/Grate** (Controls 0.00 cfs)

Proposed Conditions

E-WA Long R1 36-hr 25 year, 36 hour Rainfall=4.06"

Prepared by {enter your company name here}

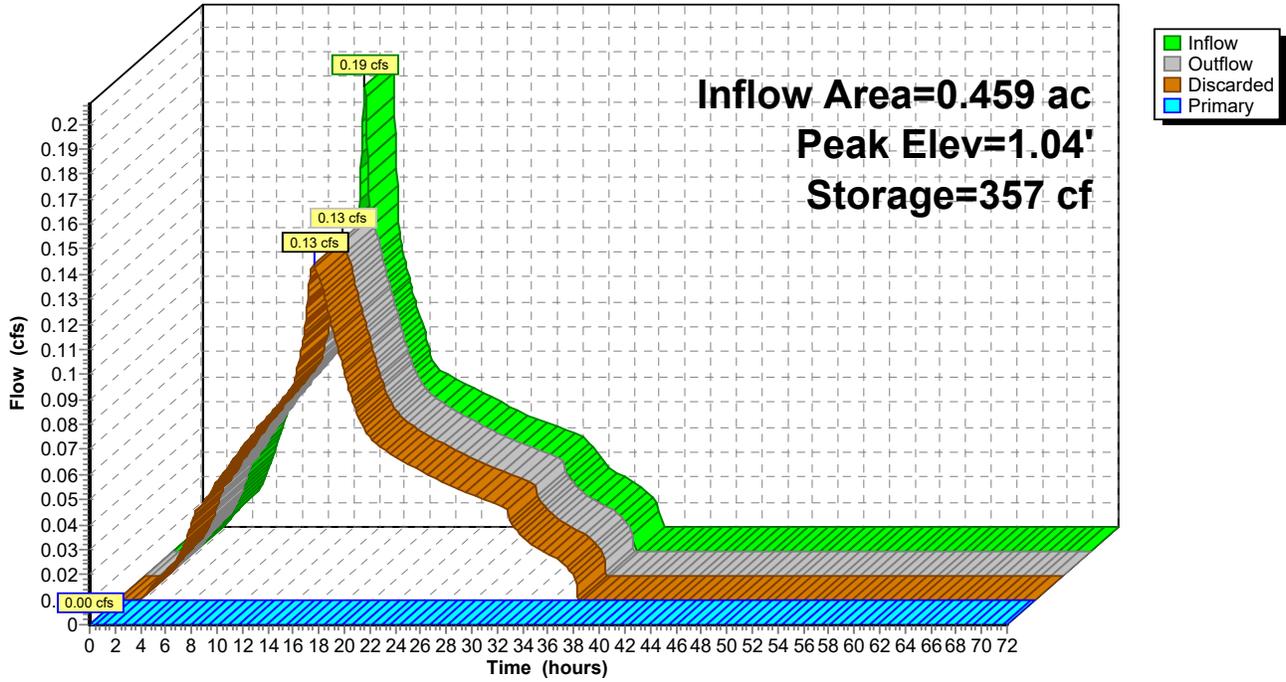
Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 28

Pond 5P: Infiltration Pond

Hydrograph



Proposed Conditions*E-WA Long R1 36-hr 25 year, 36 hour Rainfall=4.06"*

Prepared by {enter your company name here}

Printed 11/3/2020

HydroCAD® 10.00-26 s/n 09336 © 2020 HydroCAD Software Solutions LLC

Page 29

Hydrograph for Pond 5P: Infiltration Pond

| Time (hours) | Inflow (cfs) | Storage (cubic-feet) | Elevation (feet) | Outflow (cfs) | Discarded (cfs) | Primary (cfs) |
|-----------------|-----------------|-------------------------|---------------------|------------------|--------------------|------------------|
| 0.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 1 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.02 | 3 | 0.01 | 0.02 | 0.02 | 0.00 |
| 7.50 | 0.05 | 35 | 0.11 | 0.04 | 0.04 | 0.00 |
| 10.00 | 0.07 | 97 | 0.29 | 0.06 | 0.06 | 0.00 |
| 12.50 | 0.08 | 150 | 0.45 | 0.08 | 0.08 | 0.00 |
| 15.00 | 0.18 | 309 | 0.93 | 0.12 | 0.12 | 0.00 |
| 17.50 | 0.08 | 218 | 0.66 | 0.10 | 0.10 | 0.00 |
| 20.00 | 0.06 | 104 | 0.31 | 0.06 | 0.06 | 0.00 |
| 22.50 | 0.05 | 72 | 0.22 | 0.06 | 0.06 | 0.00 |
| 25.00 | 0.05 | 49 | 0.15 | 0.05 | 0.05 | 0.00 |
| 27.50 | 0.04 | 29 | 0.09 | 0.04 | 0.04 | 0.00 |
| 30.00 | 0.04 | 12 | 0.04 | 0.04 | 0.04 | 0.00 |
| 32.50 | 0.02 | 3 | 0.01 | 0.02 | 0.02 | 0.00 |
| 35.00 | 0.01 | 2 | 0.01 | 0.01 | 0.01 | 0.00 |
| 37.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |

Time span=0.00-72.00 hrs, dt=0.05 hrs, 1441 points
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN
Reach routing by Stor-Ind+Trans method - Pond routing by Stor-Ind method

Subcatchment2S: Roof Runoff Area=8,559 sf 100.00% Impervious Runoff Depth=4.33"
Flow Length=165' Slope=0.0200 '/' Tc=2.3 min CN=98 Runoff=0.09 cfs 0.071 af

Subcatchment3S: Parking Lot Runoff Area=11,419 sf 100.00% Impervious Runoff Depth=4.33"
Flow Length=114' Slope=0.0200 '/' Tc=1.7 min CN=98 Runoff=0.12 cfs 0.095 af

Pond 5P: Infiltration Pond Peak Elev=1.14' Storage=426 cf Inflow=0.21 cfs 0.166 af
Discarded=0.15 cfs 0.166 af Primary=0.00 cfs 0.000 af Outflow=0.15 cfs 0.166 af

Total Runoff Area = 0.459 ac Runoff Volume = 0.166 af Average Runoff Depth = 4.33"
0.00% Pervious = 0.000 ac 100.00% Impervious = 0.459 ac

Summary for Subcatchment 2S: Roof

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.09 cfs @ 15.03 hrs, Volume= 0.071 af, Depth= 4.33"

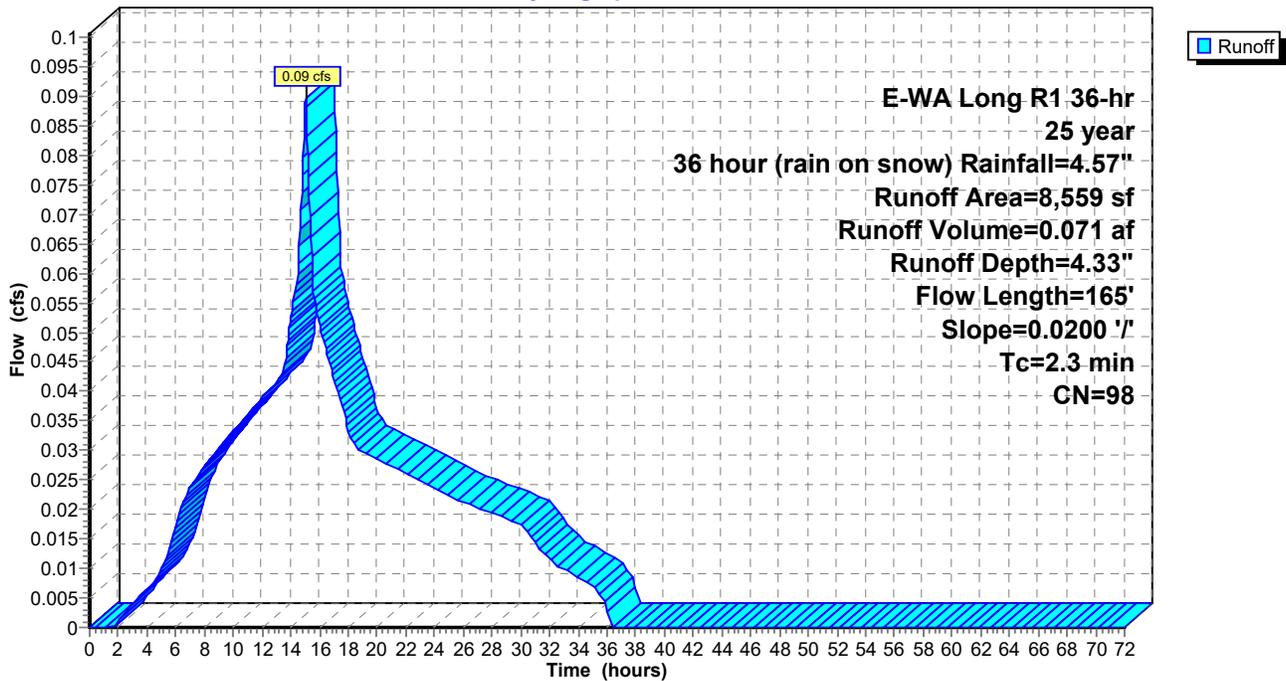
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
E-WA Long R1 36-hr 25 year, 36 hour (rain on snow) Rainfall=4.57"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 8,559 | 98 | Roofs, HSG B |
| 8,559 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---|
| 2.3 | 165 | 0.0200 | 1.20 | | Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 2.00" |

Subcatchment 2S: Roof

Hydrograph



Hydrograph for Subcatchment 2S: Roof

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|--------------|------------------|-----------------|--------------|--------------|------------------|-----------------|--------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 4.57 | 4.33 | 0.00 |
| 1.00 | 0.02 | 0.00 | 0.00 | 53.00 | 4.57 | 4.33 | 0.00 |
| 2.00 | 0.06 | 0.00 | 0.00 | 54.00 | 4.57 | 4.33 | 0.00 |
| 3.00 | 0.10 | 0.01 | 0.00 | 55.00 | 4.57 | 4.33 | 0.00 |
| 4.00 | 0.16 | 0.04 | 0.01 | 56.00 | 4.57 | 4.33 | 0.00 |
| 5.00 | 0.22 | 0.08 | 0.01 | 57.00 | 4.57 | 4.33 | 0.00 |
| 6.00 | 0.31 | 0.15 | 0.02 | 58.00 | 4.57 | 4.33 | 0.00 |
| 7.00 | 0.43 | 0.26 | 0.02 | 59.00 | 4.57 | 4.33 | 0.00 |
| 8.00 | 0.58 | 0.39 | 0.03 | 60.00 | 4.57 | 4.33 | 0.00 |
| 9.00 | 0.73 | 0.53 | 0.03 | 61.00 | 4.57 | 4.33 | 0.00 |
| 10.00 | 0.90 | 0.70 | 0.03 | 62.00 | 4.57 | 4.33 | 0.00 |
| 11.00 | 1.08 | 0.87 | 0.04 | 63.00 | 4.57 | 4.33 | 0.00 |
| 12.00 | 1.28 | 1.06 | 0.04 | 64.00 | 4.57 | 4.33 | 0.00 |
| 13.00 | 1.49 | 1.27 | 0.04 | 65.00 | 4.57 | 4.33 | 0.00 |
| 14.00 | 1.72 | 1.50 | 0.05 | 66.00 | 4.57 | 4.33 | 0.00 |
| 15.00 | 2.06 | 1.83 | 0.09 | 67.00 | 4.57 | 4.33 | 0.00 |
| 16.00 | 2.38 | 2.15 | 0.05 | 68.00 | 4.57 | 4.33 | 0.00 |
| 17.00 | 2.62 | 2.39 | 0.04 | 69.00 | 4.57 | 4.33 | 0.00 |
| 18.00 | 2.81 | 2.58 | 0.03 | 70.00 | 4.57 | 4.33 | 0.00 |
| 19.00 | 2.97 | 2.73 | 0.03 | 71.00 | 4.57 | 4.33 | 0.00 |
| 20.00 | 3.11 | 2.88 | 0.03 | 72.00 | 4.57 | 4.33 | 0.00 |
| 21.00 | 3.25 | 3.02 | 0.03 | | | | |
| 22.00 | 3.39 | 3.16 | 0.03 | | | | |
| 23.00 | 3.52 | 3.29 | 0.02 | | | | |
| 24.00 | 3.64 | 3.41 | 0.02 | | | | |
| 25.00 | 3.76 | 3.52 | 0.02 | | | | |
| 26.00 | 3.87 | 3.63 | 0.02 | | | | |
| 27.00 | 3.97 | 3.74 | 0.02 | | | | |
| 28.00 | 4.07 | 3.84 | 0.02 | | | | |
| 29.00 | 4.17 | 3.93 | 0.02 | | | | |
| 30.00 | 4.26 | 4.02 | 0.02 | | | | |
| 31.00 | 4.34 | 4.10 | 0.01 | | | | |
| 32.00 | 4.40 | 4.17 | 0.01 | | | | |
| 33.00 | 4.46 | 4.22 | 0.01 | | | | |
| 34.00 | 4.50 | 4.27 | 0.01 | | | | |
| 35.00 | 4.54 | 4.31 | 0.01 | | | | |
| 36.00 | 4.57 | 4.33 | 0.00 | | | | |
| 37.00 | 4.57 | 4.33 | 0.00 | | | | |
| 38.00 | 4.57 | 4.33 | 0.00 | | | | |
| 39.00 | 4.57 | 4.33 | 0.00 | | | | |
| 40.00 | 4.57 | 4.33 | 0.00 | | | | |
| 41.00 | 4.57 | 4.33 | 0.00 | | | | |
| 42.00 | 4.57 | 4.33 | 0.00 | | | | |
| 43.00 | 4.57 | 4.33 | 0.00 | | | | |
| 44.00 | 4.57 | 4.33 | 0.00 | | | | |
| 45.00 | 4.57 | 4.33 | 0.00 | | | | |
| 46.00 | 4.57 | 4.33 | 0.00 | | | | |
| 47.00 | 4.57 | 4.33 | 0.00 | | | | |
| 48.00 | 4.57 | 4.33 | 0.00 | | | | |
| 49.00 | 4.57 | 4.33 | 0.00 | | | | |
| 50.00 | 4.57 | 4.33 | 0.00 | | | | |
| 51.00 | 4.57 | 4.33 | 0.00 | | | | |

Summary for Subcatchment 3S: Parking Lot

[49] Hint: Tc<2dt may require smaller dt

Runoff = 0.12 cfs @ 15.02 hrs, Volume= 0.095 af, Depth= 4.33"

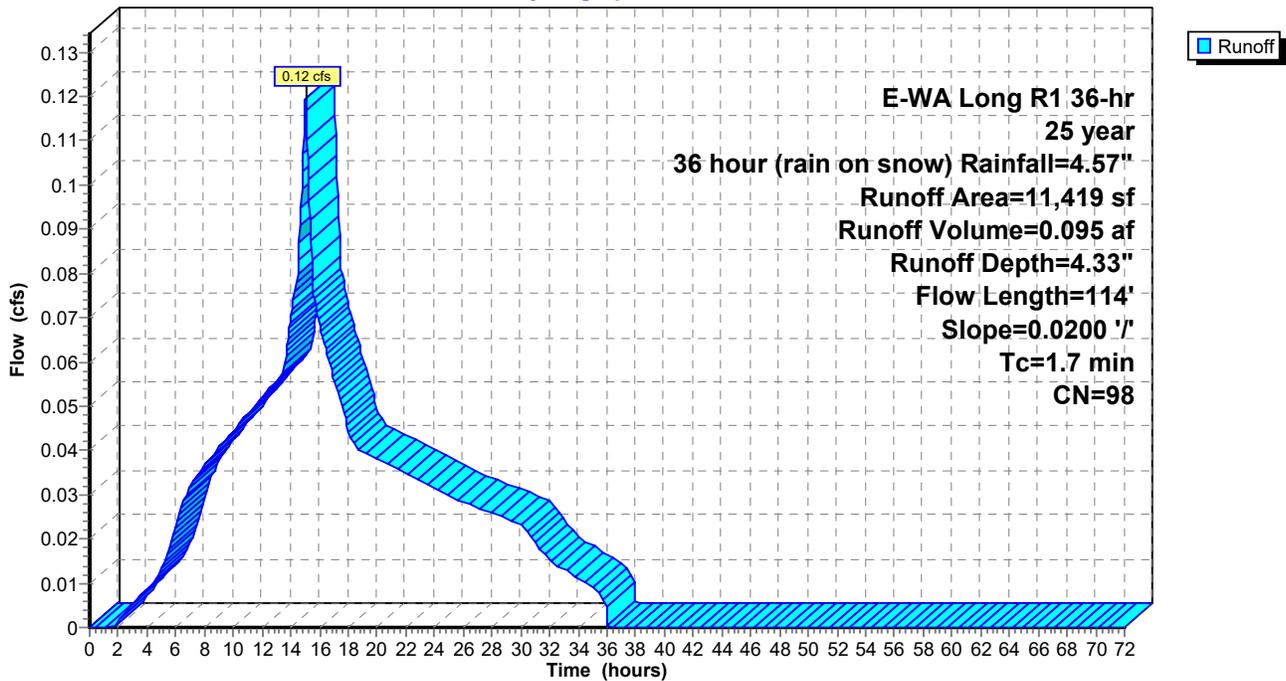
Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
E-WA Long R1 36-hr 25 year, 36 hour (rain on snow) Rainfall=4.57"

| Area (sf) | CN | Description |
|-----------|----|-------------------------|
| 11,419 | 98 | Paved parking, HSG B |
| 11,419 | | 100.00% Impervious Area |

| Tc (min) | Length (feet) | Slope (ft/ft) | Velocity (ft/sec) | Capacity (cfs) | Description |
|----------|---------------|---------------|-------------------|----------------|---|
| 1.7 | 114 | 0.0200 | 1.12 | | Sheet Flow, Sheet Flow Smooth surfaces n= 0.011 P2= 2.00" |

Subcatchment 3S: Parking Lot

Hydrograph



Hydrograph for Subcatchment 3S: Parking Lot

| Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) | Time (hours) | Precip. (inches) | Excess (inches) | Runoff (cfs) |
|-----------------|---------------------|--------------------|-----------------|-----------------|---------------------|--------------------|-----------------|
| 0.00 | 0.00 | 0.00 | 0.00 | 52.00 | 4.57 | 4.33 | 0.00 |
| 1.00 | 0.02 | 0.00 | 0.00 | 53.00 | 4.57 | 4.33 | 0.00 |
| 2.00 | 0.06 | 0.00 | 0.00 | 54.00 | 4.57 | 4.33 | 0.00 |
| 3.00 | 0.10 | 0.01 | 0.01 | 55.00 | 4.57 | 4.33 | 0.00 |
| 4.00 | 0.16 | 0.04 | 0.01 | 56.00 | 4.57 | 4.33 | 0.00 |
| 5.00 | 0.22 | 0.08 | 0.01 | 57.00 | 4.57 | 4.33 | 0.00 |
| 6.00 | 0.31 | 0.15 | 0.02 | 58.00 | 4.57 | 4.33 | 0.00 |
| 7.00 | 0.43 | 0.26 | 0.03 | 59.00 | 4.57 | 4.33 | 0.00 |
| 8.00 | 0.58 | 0.39 | 0.04 | 60.00 | 4.57 | 4.33 | 0.00 |
| 9.00 | 0.73 | 0.53 | 0.04 | 61.00 | 4.57 | 4.33 | 0.00 |
| 10.00 | 0.90 | 0.70 | 0.04 | 62.00 | 4.57 | 4.33 | 0.00 |
| 11.00 | 1.08 | 0.87 | 0.05 | 63.00 | 4.57 | 4.33 | 0.00 |
| 12.00 | 1.28 | 1.06 | 0.05 | 64.00 | 4.57 | 4.33 | 0.00 |
| 13.00 | 1.49 | 1.27 | 0.06 | 65.00 | 4.57 | 4.33 | 0.00 |
| 14.00 | 1.72 | 1.50 | 0.07 | 66.00 | 4.57 | 4.33 | 0.00 |
| 15.00 | 2.06 | 1.83 | 0.12 | 67.00 | 4.57 | 4.33 | 0.00 |
| 16.00 | 2.38 | 2.15 | 0.07 | 68.00 | 4.57 | 4.33 | 0.00 |
| 17.00 | 2.62 | 2.39 | 0.06 | 69.00 | 4.57 | 4.33 | 0.00 |
| 18.00 | 2.81 | 2.58 | 0.04 | 70.00 | 4.57 | 4.33 | 0.00 |
| 19.00 | 2.97 | 2.73 | 0.04 | 71.00 | 4.57 | 4.33 | 0.00 |
| 20.00 | 3.11 | 2.88 | 0.04 | 72.00 | 4.57 | 4.33 | 0.00 |
| 21.00 | 3.25 | 3.02 | 0.04 | | | | |
| 22.00 | 3.39 | 3.16 | 0.03 | | | | |
| 23.00 | 3.52 | 3.29 | 0.03 | | | | |
| 24.00 | 3.64 | 3.41 | 0.03 | | | | |
| 25.00 | 3.76 | 3.52 | 0.03 | | | | |
| 26.00 | 3.87 | 3.63 | 0.03 | | | | |
| 27.00 | 3.97 | 3.74 | 0.03 | | | | |
| 28.00 | 4.07 | 3.84 | 0.03 | | | | |
| 29.00 | 4.17 | 3.93 | 0.02 | | | | |
| 30.00 | 4.26 | 4.02 | 0.02 | | | | |
| 31.00 | 4.34 | 4.10 | 0.02 | | | | |
| 32.00 | 4.40 | 4.17 | 0.02 | | | | |
| 33.00 | 4.46 | 4.22 | 0.01 | | | | |
| 34.00 | 4.50 | 4.27 | 0.01 | | | | |
| 35.00 | 4.54 | 4.31 | 0.01 | | | | |
| 36.00 | 4.57 | 4.33 | 0.00 | | | | |
| 37.00 | 4.57 | 4.33 | 0.00 | | | | |
| 38.00 | 4.57 | 4.33 | 0.00 | | | | |
| 39.00 | 4.57 | 4.33 | 0.00 | | | | |
| 40.00 | 4.57 | 4.33 | 0.00 | | | | |
| 41.00 | 4.57 | 4.33 | 0.00 | | | | |
| 42.00 | 4.57 | 4.33 | 0.00 | | | | |
| 43.00 | 4.57 | 4.33 | 0.00 | | | | |
| 44.00 | 4.57 | 4.33 | 0.00 | | | | |
| 45.00 | 4.57 | 4.33 | 0.00 | | | | |
| 46.00 | 4.57 | 4.33 | 0.00 | | | | |
| 47.00 | 4.57 | 4.33 | 0.00 | | | | |
| 48.00 | 4.57 | 4.33 | 0.00 | | | | |
| 49.00 | 4.57 | 4.33 | 0.00 | | | | |
| 50.00 | 4.57 | 4.33 | 0.00 | | | | |
| 51.00 | 4.57 | 4.33 | 0.00 | | | | |

Summary for Pond 5P: Infiltration Pond

Inflow Area = 0.459 ac, 100.00% Impervious, Inflow Depth = 4.33" for 25 year, 36 hour (rain on snow) event
 Inflow = 0.21 cfs @ 15.03 hrs, Volume= 0.166 af
 Outflow = 0.15 cfs @ 15.44 hrs, Volume= 0.166 af, Atten= 30%, Lag= 24.6 min
 Discarded = 0.15 cfs @ 15.44 hrs, Volume= 0.166 af
 Primary = 0.00 cfs @ 0.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 0.00-72.00 hrs, dt= 0.05 hrs
 Peak Elev= 1.14' @ 15.44 hrs Surf.Area= 631 sf Storage= 426 cf

Plug-Flow detention time= 28.3 min calculated for 0.166 af (100% of inflow)
 Center-of-Mass det. time= 28.3 min (1,079.6 - 1,051.2)

| Volume | Invert | Avail.Storage | Storage Description | |
|---------------------|----------------------|---------------------------|---|---------------------|
| #1 | 0.00' | 676 cf | Custom Stage Data (Conic) Listed below | |
| | | | | |
| Elevation (feet) | Surf.Area (sq-ft) | Inc.Store (cubic-feet) | Cum.Store (cubic-feet) | Wet.Area (sq-ft) |
| 0.00 | 150 | 0 | 0 | 150 |
| 1.00 | 554 | 331 | 331 | 559 |
| 1.50 | 835 | 345 | 676 | 844 |

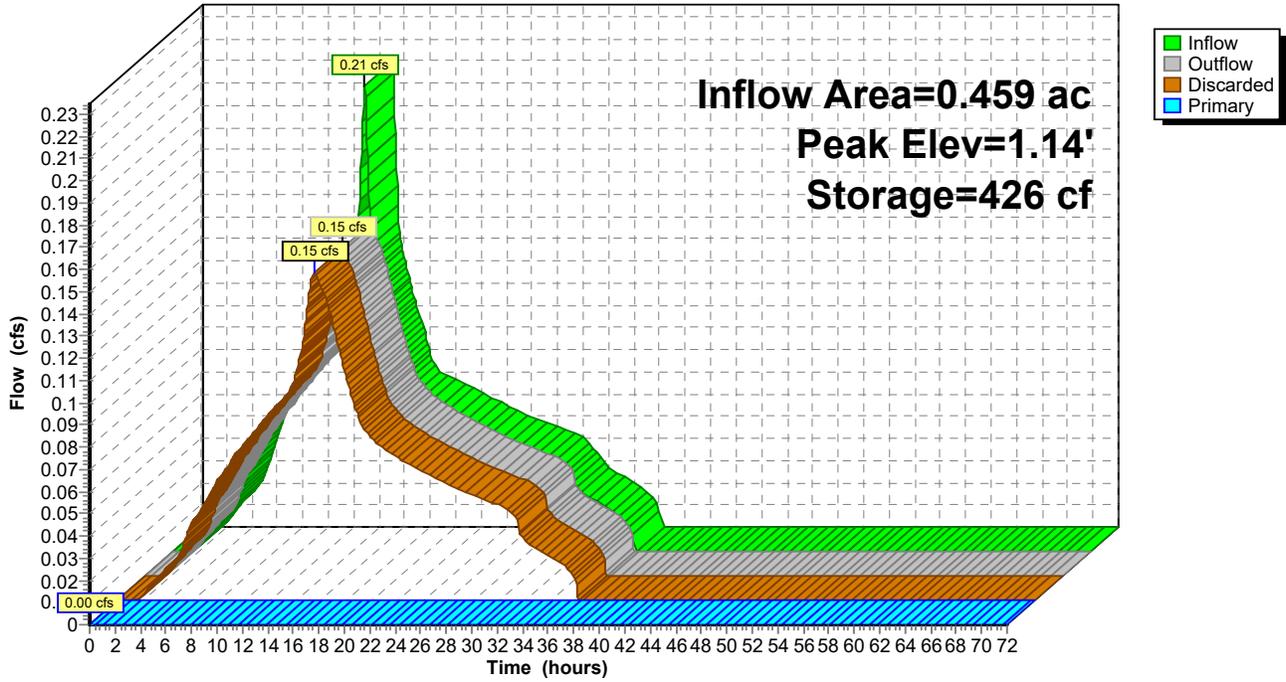
| Device | Routing | Invert | Outlet Devices |
|--------|-----------|--------|---|
| #1 | Primary | 0.00' | 10.0" Round Culvert L= 10.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 0.00' / 0.00' S= 0.0000 '/' Cc= 0.900 n= 0.010 PVC, smooth interior, Flow Area= 0.55 sf |
| #2 | Device 1 | 1.25' | 24.0" Horiz. Orifice/Grate C= 0.600 Limited to weir flow at low heads |
| #3 | Discarded | 0.00' | 10.000 in/hr Exfiltration over Wetted area below 1.25' Phase-In= 0.01' |

Discarded OutFlow Max=0.15 cfs @ 15.44 hrs HW=1.14' (Free Discharge)
 ↑**3=Exfiltration** (Exfiltration Controls 0.15 cfs)

Primary OutFlow Max=0.00 cfs @ 0.00 hrs HW=0.00' (Free Discharge)
 ↑**1=Culvert** (Controls 0.00 cfs)
 ↑**2=Orifice/Grate** (Controls 0.00 cfs)

Pond 5P: Infiltration Pond

Hydrograph



Hydrograph for Pond 5P: Infiltration Pond

| Time (hours) | Inflow (cfs) | Storage (cubic-feet) | Elevation (feet) | Outflow (cfs) | Discarded (cfs) | Primary (cfs) |
|--------------|--------------|----------------------|------------------|---------------|-----------------|---------------|
| 0.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.01 | 1 | 0.00 | 0.01 | 0.01 | 0.00 |
| 5.00 | 0.02 | 3 | 0.01 | 0.02 | 0.02 | 0.00 |
| 7.50 | 0.06 | 55 | 0.17 | 0.05 | 0.05 | 0.00 |
| 10.00 | 0.08 | 127 | 0.38 | 0.07 | 0.07 | 0.00 |
| 12.50 | 0.09 | 186 | 0.56 | 0.09 | 0.09 | 0.00 |
| 15.00 | 0.21 | 365 | 1.05 | 0.14 | 0.14 | 0.00 |
| 17.50 | 0.09 | 266 | 0.80 | 0.11 | 0.11 | 0.00 |
| 20.00 | 0.07 | 133 | 0.40 | 0.07 | 0.07 | 0.00 |
| 22.50 | 0.06 | 97 | 0.29 | 0.06 | 0.06 | 0.00 |
| 25.00 | 0.05 | 71 | 0.21 | 0.05 | 0.05 | 0.00 |
| 27.50 | 0.05 | 48 | 0.15 | 0.05 | 0.05 | 0.00 |
| 30.00 | 0.04 | 29 | 0.09 | 0.04 | 0.04 | 0.00 |
| 32.50 | 0.02 | 3 | 0.01 | 0.02 | 0.02 | 0.00 |
| 35.00 | 0.02 | 2 | 0.01 | 0.02 | 0.02 | 0.00 |
| 37.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0 | 0.00 | 0.00 | 0.00 | 0.00 |

Appendix C

Hansell Self Storage Plans