

# 6160 THUNDER ROAD & 5368 BOUNDARY ROAD: STORMWATER MANAGEMENT REPORT

---

NOVEMBER 2024



## Prepared For:

Thunder Road Limited Partnership  
250 City Centre Avenue, Suite 801,  
Ottawa, Ontario,  
K1R 6K7

## Prepared By:

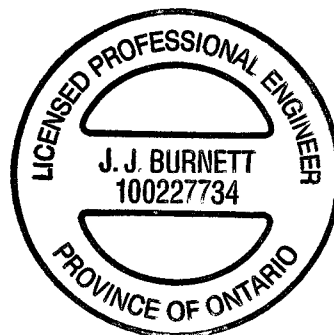
JFSA Canada Inc.  
52 Springbrook Drive,  
Ottawa, ON  
K2S 1B9  
Tel: 613-836-3884 Fax: 613-836-0332

# 6160 THUNDER ROAD & 5368 BOUNDARY ROAD: STORMWATER MANAGEMENT REPORT

In the City of Ottawa, Ontario

**NOVEMBER 2024**

Prepared for:  
Thunder Road Limited Partnership



Prepared by:

A handwritten signature in black ink, appearing to read "J. Burnett".

---

Jonathon Burnett, P.Eng  
(J.F. Sabourin and Associates Inc.)

## Rationale for Update

This report is an update of the August 2024 "6150 Thunder Road: Stormwater Management Report" by JFSA Canada Inc. The report was updated to address review comments received from South Nation Conservation on September 15, 2024, as well as review comments from the City of Ottawa received on November 1, 2024. As a part of these updates, the grading and storm sewer network for the east SWM pond located along Boundary Road has been raised to ensure that the SWM pond outlet is above the invert of the receiving roadside ditch, to prevent any issues with regards to the pond's operations due to backwater on the ditch. At the request of the City, additional tables and figures have been provided and minor refinements to the report text for clarity.

## TABLE OF CONTENTS:

|          |                                                                  |           |
|----------|------------------------------------------------------------------|-----------|
| <b>1</b> | <b>INTRODUCTION.....</b>                                         | <b>1</b>  |
| 1.1      | BACKGROUND DATA / INFORMATION.....                               | 2         |
| 1.1.1    | Topographic Survey .....                                         | 2         |
| 1.1.2    | LiDAR.....                                                       | 2         |
| 1.1.3    | Existing Reports .....                                           | 2         |
| <b>2</b> | <b>EXISTING CONDITIONS .....</b>                                 | <b>3</b>  |
| 2.1.1    | Drainage Areas .....                                             | 3         |
| 2.1.2    | Land Use.....                                                    | 3         |
| 2.1.3    | Soil/Infiltration Data .....                                     | 3         |
| 2.1.4    | Curve Number (CN).....                                           | 3         |
| 2.1.5    | Time to Peak ( $t_p$ ).....                                      | 3         |
| 2.2      | RESULTS.....                                                     | 4         |
| <b>3</b> | <b>PROPOSED CONDITIONS.....</b>                                  | <b>4</b>  |
| 3.1      | MODEL OVERVIEW .....                                             | 4         |
| 3.1.1    | Drainage Areas / Imperviousness.....                             | 4         |
| 3.1.2    | Storm Sewer Network.....                                         | 4         |
| 3.1.3    | Road Storage & ICDs .....                                        | 5         |
| 3.1.4    | Stormwater Management Facilities.....                            | 5         |
| 3.1.5    | Oil and Grit Separator (OGS) Units.....                          | 6         |
| 3.1.6    | Downstream Boundary Conditions .....                             | 6         |
| 3.1.7    | Snow Melt Event.....                                             | 7         |
| 3.1.8    | Erosion Analysis .....                                           | 7         |
| 3.2      | RESULTS.....                                                     | 8         |
| 3.2.1    | Post-Development Release Rates.....                              | 8         |
| 3.2.2    | SWM Pond Summary .....                                           | 9         |
| 3.2.3    | HGL & Major System Summary.....                                  | 9         |
| 3.2.4    | 100 Year 10 Day Rainfall + Snow Melt Results.....                | 11        |
| 3.3      | EROSION AND SEDIMENT CONTROL DURING AND AFTER CONSTRUCTION ..... | 11        |
| <b>4</b> | <b>CONCLUSION .....</b>                                          | <b>12</b> |

## FIGURES:

|                                      |   |
|--------------------------------------|---|
| Figure 1: Development Overview ..... | 1 |
|--------------------------------------|---|

## TABLES:

|                                                                         |    |
|-------------------------------------------------------------------------|----|
| Table 1: Pre-Development Peak Flows .....                               | 4  |
| Table 2: Bear Brook Tributary Water Levels.....                         | 6  |
| Table 3: Post-Development Peak Flows.....                               | 8  |
| Table 4: SWM Facility Peak Water Surface Elevation (WSE) and Depth..... | 9  |
| Table 5: HGL and Major System Ponding .....                             | 10 |
| Table 6: SWM Summary - 100-Year 10-Day Snowmelt Event.....              | 11 |

**APPENDICES:**

Appendix A – Pre-Development Conditions

Appendix B – Post-Development Conditions

Appendix C - Erosion Analysis

Appendix D – Oil and Grit Separator

Appendix E – HEC-RAS Model

# 1 Introduction

JFSA Canada Inc (JFSA) was commissioned by Thunder Road Limited Partnership to complete the stormwater management analysis for the proposed industrial development located at 6160 Thunder Road and 5368 Boundary Road. The total site is **15.16 ha**, however, approximately **3.93 ha** of the development site will either remain unchanged and drain uncontrolled or fall within the O1R zone. Therefore, the drainage area for the development site, for the purposes of this study, is approximately **11.23 ha**. This area will consist primarily of parking spaces, accompanied by an office and a supplementary building. Currently, the site is undeveloped and covered in vegetation, with several small drainage channels that ultimately flow into the Bear Brook tributary; under the proposed conditions, the site will still discharge into the Bear Brook tributary. However, the development will implement various stormwater management (SWM) solutions to ensure that there are no increases in peak flows compared to the existing conditions and that there will be no negative impacts on the existing watercourse with regard to flooding and erosion. **Figure 1** below provides an approximate outline of the proposed development's extent and location. This document will outline and evaluate the different stormwater management solutions proposed for this site.

**Figure 1: Development Overview**



## 1.1 Background Data / Information

The following section outlines the background data and information used to support and supplement this study:

### 1.1.1 Topographic Survey

A detailed topographic survey of the site was completed by Annis, O'Sullivan Vollebekk LTD (AOV) in March 2021. This topographic information has been merged with the City of Ottawa LiDAR to determine the pre-development conditions of the site.

### 1.1.2 LiDAR

LiDAR data was acquired from the City of Ottawa to supplement locations where there is insufficient topographic detail included in the survey by AOV. This LiDAR was merged with AOV's survey to provide a complete picture of the topography throughout the development area.

### 1.1.3 Existing Reports

The following background documents were reviewed in preparing this report:

- Bear Brook and Tributaries Flood Hazard Mapping Report, SNC, March 2022
- 6150 Thunder Road: Floodplain Mapping, JFSA, July 2021
- 5368 Boundary Road and 6150 Thunder Road Functional Serviceability Report, LRL, December 2020
- Environmental Impact Statement, 6150 Thunder Road, Ottawa, Kilgore & Associates LTD, December 2020
- The City of Ottawa Technical Bulletin ISTB-2018-04, City of Ottawa, June 2018.
- The City of Ottawa Technical Bulletin PIEDTB-2016-01, City of Ottawa, September 2016.
- Technical Bulletin ISDTB-2014-01, Revisions to Ottawa Design Guidelines – Sewer, City of Ottawa, February 2014.
- City of Ottawa Sewer Design Guidelines, City of Ottawa, October 2012.
- Erosion and Sediment Control Guidelines for Urban Construction, Conservation Halton et al., December 2006.
- Stormwater Management Planning and Design Manual, Ministry of the Environment, March 2003.

## 2 Existing Conditions

Given that the site under existing conditions is a large natural undeveloped area, it was determined that the SWMHYMO modelling software would be the most suitable hydrologic modelling program to use to determine the pre-development flows. The following outlines the derivation of key model parameters used to represent these existing lands, and in turn, determine the post-development target release rates.

### 2.1.1 Drainage Areas

As identified above, LiDAR data was merged with the detailed topographic survey of the site completed by AOV to derive a single Digital Terrain Model (DTM). This data was imported into GIS software where watershed delineation algorithms were applied. **Figure A1 in Appendix A** provides a visual overview of the existing drainage areas within the study area. Note that the majority of the site drains directly to the Bear Brook tributary, with a small portion of the site in the southeast corner draining to a roadside ditch along Boundary Road before discharging to the Bear Brook tributary.

### 2.1.2 Land Use

Land use data has been taken from Land Information Ontario's (LIO) Southern Ontario Land Resource Information System (SOLRIS) data package, which is a primary data layer that provides a comprehensive, standardized, landscape-level inventory of natural, rural and urban lands throughout southern Ontario. This data was discretized based on the respective subcatchments. **Figure A2 in Appendix A** provides a visual overview of the respective land use data for each of the subcatchments within the study area. Under existing conditions, the site primarily consists of plantation and treed swamplands.

### 2.1.3 Soil/Infiltration Data

Soil data within the study area has been taken from the Soil Survey Complex Data available on Land Information Ontario (LIO). **Figure A3 in Appendix A** provides a visual overview of the respective soil type data for each of the subcatchments within the study area. Under existing conditions, the site primarily consists of Allendale and Cheney Soils both of which are Loamy Fine Sand soils (Hydrologic Soil Type C).

### 2.1.4 Curve Number (CN)

Based on the underlying Land Use Type and Soil Classification at each location within a subcatchment, a Curve Number (CN) was calculated, based on applicable values outlined in **Tables A2 and A3** in the SWMHYMO Manual. Each Curve Number was then weighted based on the total area within a given subcatchment to determine the weighted CN for that subcatchment. **Table A1 in Appendix A** provides a full summary of the CN calculations for each of the pre-development subcatchments.

### 2.1.5 Time to Peak ( $t_p$ )

The time-to-peak value for each of the subcatchments has been calculated based on existing topography. Flow paths have been discretized based on the topographic data using GIS tools and the longest major flow path within each subcatchment identified; refer to **Figure A4 in Appendix A** for the flow paths discretized for each subcatchment. The upstream and downstream topographic elevations and flow lengths were identified for each subcatchment and used in the calculations. For these natural subcatchments, the Federal Aviation Administration (FFA) method was determined to be the most appropriate method to calculate the Time to Peak. Full details of these calculations have been provided in **Table A2 in Appendix A**, along with other time-to-peak values using alternative  $t_p$  calculation methods.

## 2.2 Results

**Table 1** below outlines the peak flow at key locations within the study area based on the SWMHYMO simulations. Note that both the 3-Hour Chicago and 24-Hour SCS design storms were assessed in this study. The peak flows determined by this model have been used to set the maximum allowable post-development release rates. Full input and summary files of the proposed SWMHYMO models have been provided in **Appendix A**.

**Table 1: Pre-Development Peak Flows**

| Event                 | Peak Flow<br>(m <sup>3</sup> /s) |                                       |
|-----------------------|----------------------------------|---------------------------------------|
|                       | Bear Brook<br>Trib<br>(10.62 ha) | Boundary<br>Road – Ditch<br>(0.61 ha) |
| 25mm CHI 4Hr          | 0.020                            | 0.001                                 |
| 2-Year CHI 3Hr        | 0.038                            | 0.003                                 |
| 5-Year CHI 3Hr        | 0.070                            | 0.005                                 |
| 100-Year CHI 3Hr      | 0.194                            | 0.015                                 |
| 100-Year SCS 24 Hr    | 0.265                            | 0.021                                 |
| 100-Year CHI 3Hr +20% | 0.271                            | 0.021                                 |

## 3 Proposed Conditions

### 3.1 Model Overview

#### 3.1.1 Drainage Areas / Imperviousness

Under the proposed conditions, the drainage areas have been delineated by LRL based on the site's proposed grading. The impervious values for each of these areas are based on the runoff coefficients determined by LRL and converted to impervious values using the following formula.

$$\% \text{ Impervious} = \left( \frac{C - 0.2}{0.7} \right) \times 100$$

For these lands, the following Horton's Infiltration parameters have been assumed:  $F_0=76.2$  mm/hr,  $F_c=13.2$  mm/hr,  $DCA Y=4.14$  /hr,  $F=0$  mm, and initial abstraction values of 1.57mm and 4.67 mm for impervious and pervious surfaces, all as per the City of Ottawa design guidelines. An overview of the proposed development drainage areas and imperviousness has been provided in **Figure B1 of Appendix B**.

#### 3.1.2 Storm Sewer Network

The storm sewer network was designed by LRL based on rational method calculations and general site grading constraints (see **Appendix B** for full rational method calculations). The storm sewer network plan has been incorporated into the model based on this design, with exit losses applied to the model to account for losses that occur at bends in the system.

Maintenance Hole Catch Basins (MHCBS) have been implemented throughout the majority of the site to allow for easy maintenance. Further to this, no ICDs have been proposed for this site, and the constriction that the CBMH grate provides has been the only consideration for attenuating and

retaining flows within the major system. The CB grates have been represented in the model as rectangular bottom orifices with a total opening area reflective of the proposed CB grate opening. A comparison of the depth-to-flow relationship per the City of Ottawa Storm Design Guidelines (empirically derived) and the model simulated depth flow relationship (based on the orifice equation) has been provided in **Attachment B**, which shows a coefficient of determination ( $r^2$ ) of **0.963**.

The majority of the site will capture flows via Maintenance Hole Catch Basin (MHCB) which will then convey flows to Dry SWM ponds located in the northwest (Pond 1) and southeast (Pond 2) extents of the site. The northwest SWM pond is connected to an additional storage area upstream via **2 x 600 mm CSPs** and will outlet to the Bear Brook tributary via a naturalized drainage swale. The southeastern extent of the development will have an independent stormer sewer network, that will outlet to the roadside ditch along Boundary Road. The full storm sewer network has been outlined in **Figure B2 of Appendix B**.

### 3.1.3 Road Storage & ICDs

The site grading has been optimized to make full use of any potential major system ponding locations throughout the site. This storage has been represented in the model through the use of storage nodes, which are depth/area curves based on LRL's detailed grading of the site. In the event of a blockage, there is enough storage within each of these low points to contain the full runoff volume for the 100-year event. Thus, Depth x Velocity summary tables have not been provided for this analysis. In an event greater than the 100-year event +20% and a coinciding blockage, flows will cascade from low point to low point until reaching the SWM Pond in the west and north of the site.

### 3.1.4 Stormwater Management Facilities

Two dry Stormwater Management (SWM) ponds are proposed for the site. They are numbered 1 and 2, with Pond 1 located in the northwest corner and Pond 2 in the southeast. For their exact locations and the full storm sewer network, refer to **Figure B2 in Appendix B**.

The majority of the site will gravity drain to a proposed ditch/swale along the southern extent of the property. Flows will be attenuated in the ditch before discharging to SWM Pond 1 in the western extent of the site. A storm sewer network will also be implemented in the north to capture runoff from roads along the northern edge of the property. These flows will be conveyed to SWM Pond 2 in the southeast of the site before discharging to the roadside ditch along Boundary Road. The majority of the subdivision ultimately outlets to the Bear Brook tributary through SWM Pond 1.

The SWM pond 1 outlet will consist of 2 components, a **130 mm** circular orifice at the invert elevation of the pond (**75.80 m**), the top of the pond outlet structure will be open at the top at an elevation of **77.00m** and will be equipped with a steel grate, and a **5 m** wide overflow weir will be provided at **77.1m** as an emergency overflow in the event of a blockage in the pond outlet structure or downstream pipe network.

For all summer events a fixed downstream boundary elevation of **75.87m** has been applied to the model which is reflective of the 100-year summer water level in the Bear Brook Tributary at the SWM pond outlet location. Note that the 100-year summer water level is 7cm higher than the pond bottom, but due to differences in the timing of peaks between the development and the larger watershed the fixed downstream elevation has not been considered to be able to backflow into the pond at the start of the simulation. See Section 3.1.6 for additional details regarding the downstream boundary conditions.

Pond 2 is located in the southeast corner of the development servicing a smaller portion of the development and will discharge to the existing roadside ditch along Boundary Road, before discharging to the Bear Brook tributary. Given the small release rates for this location, a conventional orifice outlet configuration is not a feasible option as the orifice opening sizes would be so small that it would be at risk of blockage. Alternatively, a hydrovex flow control device is proposed to be implemented at this location to limit the flows to the required rate while avoiding the risk of blockage. For this analysis, a **Veolia 75 VHV-1 hydrovex** unit has been assumed. A **70 m** wide overflow weir has been set at **77.45 m**, along the eastern edge of the pond, and will act as an emergency overflow weir during a blockage or extreme event.

### 3.1.5 Oil and Grit Separator (OGS) Units

Throughout this site, Oil and grit separator (OGS) units will be implemented to provide water treatment and in conjunction with the Dry SWM ponds will provide enhanced (80%) water quality treatment for the site. OGS units will be implemented downstream of Pond 1 before discharging to the Bear Brook Tributary, and downstream of Pond 2 before it discharges to the roadside ditch on Boundary Road. For Pond 1 an **EF06 Stormceptor** is proposed and an **EF04 Stormceptor** for SWM Pond 2. Full details of these OGS units have been provided in **Appendix D**.

### 3.1.6 Downstream Boundary Conditions

As requested by South Nation Conservation (SNC) the Bear Brook HEC-RAS model of record has been extended upstream to the proposed SWM pond outlet. An additional cross-section was added to the model at the location of the proposed SWM pond outlet based on the City of Ottawa LiDAR and a detailed survey completed by AOV. Other HEC-RAS model parameters (e.g. manning's, expansion-contraction coefficients) for this cross-section were updated to align with exiting downstream cross-sections and other associated model parameters (channel and overbank lengths) were updated accordingly. The model was re-run again using both summer and spring flows as outlined in SNC's HEC-HMS model of the Bear Brook, and the respective water levels obtained. The following table outlines the various water levels derived from the model.

**Table 2: Bear Brook Tributary Water Levels**

| Design Storm          | Flow<br>(m <sup>3</sup> /s) | Water Surface Elevation<br>(m) |
|-----------------------|-----------------------------|--------------------------------|
| 2-Year Summer         | 0.05                        | 75.72                          |
| 25-Year Summer        | 0.13                        | 75.82                          |
| 100-Year Summer Event | 0.20                        | 75.87                          |
| 100-Year Snow Melt    | 0.60                        | 76.07                          |

Based on this analysis the water level at the outlet of the SWM pond will reach **75.87m** during the 100-year summer event. Similarly, during the 100-year spring event, the water level is projected to be **76.07m**. The bottom of the SWM pond at this location will be set at **75.8m**, which means that during the 100-year event, the downstream water level will be **7cm** and **27cm** above the bottom of the pond during the summer and spring events respectively. The bottom of the SWM pond will be above the 2-year summer water level, and only **2 cm** lower than the 25-year summer event. As mentioned above all summer design storms assume a 100-year summer water level on the Bear Brook Trib, and the spring snowmelt analysis assumes a 100-year spring water level on

the Bear Brook Trib. A copy of the HEC-RAS model has been provided electronically. Refer to **Appendix E** for the location and extends of the HEC-RAS model updates along with model cross sections and results.

### 3.1.7 Snow Melt Event

As requested by SNC the site has also been assessed under a 100-year 10-day rainfall plus snowmelt event, to ensure that the stormwater management infrastructure is sufficiently sized to convey such an event. In this modelling scenario, the infiltration method was changed to CN, and all areas had a value of 95 applied to reflect frozen/saturated soils (in line with the Bear Brook floodplain mapping study). The complete findings of this analysis are presented in the Results section of this report. It's crucial to highlight that the assumption is made that the soils are either frozen or saturated. Consequently, the peak flows and total runoff volumes from the development under post-development conditions align closely with those under pre-development conditions. This means that the impacts on the receiving watercourse remain unchanged, if not reduced, due to the incorporation of the Stormwater Management (SWM) facilities. Thus this analysis intends to ensure that the site can continue to function as planned without any flooding issues under such a scenario.

### 3.1.8 Erosion Analysis

SNC has also requested the completion of a geomorphological and erosion assessment on the downstream watercourse. The purpose of this study is to quantify and understand any potential impacts that the development might have on the waterway.

In collaboration with Geomorphix Ltd (GMX), JFSA completed an erosion exceedance analysis. As part of this work, JFSA created a hydrologic model of the existing watershed up to its confluence with the main branch of Bear Brook, located approximately 1.4 km downstream of the proposed development. This model was run using 39 years of historical rainfall data (from 1967 to 2007, excluding 2001 & 2005).

The hydrologic model was then updated to simulate post-development conditions by closely aligning the total inflows and storage/outflows with the detailed PCSWMM model (refer to Appendix C for complete comparisons and details). The model was rerun over the same period, and hydrographs were extracted from a location in the model that best represented BBT-7, identified as the most erosion-sensitive location based on GMX's rapid stream assessment.

GMX compared the changes in pre and post-development hydrographs and derived various erosion indices. The analysis results indicate that the proposed stormwater management strategy for the development effectively mitigates potential downstream erosion impacts on the receiving watercourse. Comprehensive details of the hydrologic modelling conducted as part of this work can be found in Appendix C. The full details of the geomorphological assessment are available in GMX's August 2024 report titled "Geomorphological and Erosion Assessment, Tributary of Bear Brook - 6160 Thunder Road and 5368 Boundary Road".

## 3.2 Results

The following section outlines the various results of the proposed development

### 3.2.1 Post-Development Release Rates

Furthermore, for the 25mm rainfall event, the peak flows are also equal to or less than the pre-development levels, indicating that the proposed development will not worsen any existing erosion issues. It's important to note that, due to the identified erosion concerns downstream, the site's SWM release rates are designed to mitigate erosion exceedances rather than simply match pre-development peak flows. As a result, the post-development peak flows from the site are significantly lower than the pre-development flows for most of the design storms evaluated.

Table 3 presents the peak inflows and outflows for SWM Pond 1 and SWM Pond 2, alongside the pre-development targets from **Table 1**. The data shows that the peak flows to both the Bear Brook Tributary and the Boundary Road Roadside Ditch are equal to or lower than the pre-development conditions specified in **Table 1**. Therefore, the proposed development is expected to have no adverse effects on the existing floodplain.

Furthermore, for the 25mm rainfall event, the peak flows are also equal to or less than the pre-development levels, indicating that the proposed development will not worsen any existing erosion issues. It's important to note that, due to the identified erosion concerns downstream, the site's SWM release rates are designed to mitigate erosion exceedances rather than simply match pre-development peak flows. As a result, the post-development peak flows from the site are significantly lower than the pre-development flows for most of the design storms evaluated.

**Table 3: Post-Development Peak Flows**

| Event                 | Pond 1 Outlet / Bear Brook Trib     |                                           |                                            | Boundary Road Ditch                 |                                           |                                            |
|-----------------------|-------------------------------------|-------------------------------------------|--------------------------------------------|-------------------------------------|-------------------------------------------|--------------------------------------------|
|                       | Pre Dev Targets (m <sup>3</sup> /s) | Post Dev Peak Inflows (m <sup>3</sup> /s) | Post Dev Peak Outflows (m <sup>3</sup> /s) | Pre Dev Targets (m <sup>3</sup> /s) | Post Dev Peak Inflows (m <sup>3</sup> /s) | Post Dev Peak Outflows (m <sup>3</sup> /s) |
| 25mm CHI 4Hr          | 0.020                               | 0.429                                     | 0.020                                      | 0.001                               | 0.117                                     | 0.001                                      |
| 2-Year CHI 3Hr        | 0.038                               | 0.609                                     | 0.022                                      | 0.003                               | 0.165                                     | 0.003                                      |
| 5-Year CHI 3Hr        | 0.070                               | 0.912                                     | 0.026                                      | 0.005                               | 0.245                                     | 0.003                                      |
| 100-Year CHI 3Hr      | 0.194                               | 1.615                                     | 0.032                                      | 0.015                               | 0.421                                     | 0.003                                      |
| 100-Year SCS 24 Hr    | 0.265                               | 1.567                                     | 0.033                                      | 0.021                               | 0.369                                     | 0.004                                      |
| 100-Year CHI 3Hr +20% | 0.271                               | 1.880                                     | 0.035                                      | 0.021                               | 0.501                                     | 0.004                                      |

### 3.2.2 SWM Pond Summary

**Table 4** outlines the peak water levels and depths and storage volume used for SWM Ponds 1, and 2. Note that flows are contained within the ponds for all events, including the stress test.

**Table 4: SWM Facility Peak Water Surface Elevation (WSE) and Depth**

| Event                 | Pond 1  |           |                    | Pond 2  |           |                    |
|-----------------------|---------|-----------|--------------------|---------|-----------|--------------------|
|                       | Max WSE | Max Depth | Max Storage Volume | Max WSE | Max Depth | Max Storage Volume |
|                       | (m)     | (m)       | (m <sup>3</sup> )  | (m)     | (m)       | (m <sup>3</sup> )  |
| 25mm CHI 4Hr          | 76.22   | 0.42      | 827                | 76.91   | 0.12      | 177                |
| 2-Year CHI 3Hr        | 76.31   | 0.51      | 1,309              | 76.95   | 0.16      | 237                |
| 5-Year CHI 3Hr        | 76.46   | 0.66      | 2,199              | 77.03   | 0.24      | 346                |
| 100-Year CHI 3Hr      | 76.75   | 0.95      | 3,963              | 77.24   | 0.45      | 672                |
| 100-Year SCS 24 Hr    | 76.80   | 1.00      | 4,289              | 77.32   | 0.53      | 798                |
| 100-Year CHI 3Hr +20% | 76.87   | 1.07      | 4,728              | 77.34   | 0.55      | 835                |

### 3.2.3 HGL & Major System Summary

The storm sewer network has been designed by LRL based on 2-year rational method flows to ensure minimal pipe sizes throughout the site while also utilizing major system storage during larger events. The detailed PCSWMM model has been used to assess the minor system's ability to convey flows greater than the 2-year event, and to ensure the site is not subject to excess flooding during such events. During the 100-year event and stress test, the minor system will become surcharged and the storm sewer network will act as a constriction to flows from the parking area to the SWM pond (as the storm pipes have been designed for the 2-year level of service). This will result in major system ponding within the parking area, but it is important to note that there will be no backflow through the grates at any of these locations during these extreme events. Note that the surcharged storm sewer and ponding depths are not a concern as the building will be slab on grade, located in the highest parts of the site. The following table outlines the HGL at each CB along with the water surface elevation of the ponded water at each respective grate, and the max major system ponding depth.

**Table 5** outlines the maximum HGL within the storm sewer trunk system for both the 100-Year Chicago 3Hr and stress test events. Note that the 100-Year SCS 24-Hour event has not been included as it is not a critical event for this site. Refer to **Figure B2 in Appendix B** for the exact location of each MH.

Based on this analysis the HGL is lower than the major system ponding at all CBMH locations, there is no backflow through the CB grates, and the maximum ponding depth for the 100-year event on the site is **26 cm** and **30cm** for the stress test event, both located at CBMH23, which is within the maximum allowable depths as per the City guidelines. The maximum calculated pond elevations have been provided back to LRL and mapped on the site's proposed grading surface to indicate the extent of major system ponding during such events, refer to LRL's **C601** figure for full details of major system ponding.

**Table 5: HGL and Major System Ponding**

| Name       | Top of<br>Grate<br>Elevation<br>(m) | 100-Year CHI 3 Hr |                                |                          |                         | 100-Year CHI 3 Hr + 20% |                                |                          |                         |
|------------|-------------------------------------|-------------------|--------------------------------|--------------------------|-------------------------|-------------------------|--------------------------------|--------------------------|-------------------------|
|            |                                     | Max<br>HGL<br>(m) | Major<br>Ponding<br>WSE<br>(m) | Major<br>Ponding<br>>HGL | Ponding<br>Depth<br>(m) | Max<br>HGL<br>(m)       | Major<br>Ponding<br>WSE<br>(m) | Major<br>Ponding<br>>HGL | Ponding<br>Depth<br>(m) |
| STM_CBMH01 | 77.94                               | 78.02             | 78.12                          | TRUE                     | 0.17                    | 78.05                   | 78.15                          | TRUE                     | 0.21                    |
| STM_CBMH02 | 77.88                               | 77.93             | 78.04                          | TRUE                     | 0.16                    | 77.97                   | 78.08                          | TRUE                     | 0.21                    |
| STM_CBMH03 | 77.77                               | 77.54             | 77.91                          | TRUE                     | 0.13                    | 77.60                   | 77.94                          | TRUE                     | 0.16                    |
| STM_CBMH04 | 77.91                               | 77.99             | 78.10                          | TRUE                     | 0.19                    | 78.03                   | 78.14                          | TRUE                     | 0.23                    |
| STM_CBMH05 | 77.85                               | 77.87             | 77.99                          | TRUE                     | 0.14                    | 77.92                   | 78.04                          | TRUE                     | 0.19                    |
| STM_CBMH06 | 77.75                               | 77.65             | 77.88                          | TRUE                     | 0.13                    | 77.72                   | 77.90                          | TRUE                     | 0.15                    |
| STM_CBMH07 | 77.88                               | 77.95             | 78.07                          | TRUE                     | 0.18                    | 78.00                   | 78.11                          | TRUE                     | 0.22                    |
| STM_CBMH08 | 77.81                               | 77.84             | 77.96                          | TRUE                     | 0.15                    | 77.89                   | 78.01                          | TRUE                     | 0.20                    |
| STM_CBMH09 | 77.71                               | 77.62             | 77.84                          | TRUE                     | 0.13                    | 77.70                   | 77.86                          | TRUE                     | 0.15                    |
| STM_CBMH10 | 77.84                               | 77.91             | 78.02                          | TRUE                     | 0.19                    | 77.96                   | 78.07                          | TRUE                     | 0.24                    |
| STM_CBMH11 | 77.76                               | 77.79             | 77.91                          | TRUE                     | 0.15                    | 77.85                   | 77.97                          | TRUE                     | 0.21                    |
| STM_CBMH12 | 77.66                               | 77.58             | 77.79                          | TRUE                     | 0.13                    | 77.67                   | 77.82                          | TRUE                     | 0.15                    |
| STM_CBMH13 | 77.77                               | 77.77             | 77.87                          | TRUE                     | 0.11                    | 77.83                   | 77.93                          | TRUE                     | 0.16                    |
| STM_CBMH14 | 77.64                               | 77.68             | 77.80                          | TRUE                     | 0.15                    | 77.75                   | 77.86                          | TRUE                     | 0.21                    |
| STM_CBMH15 | 77.58                               | 77.50             | 77.71                          | TRUE                     | 0.13                    | 77.59                   | 77.74                          | TRUE                     | 0.15                    |
| STM_CBMH16 | 77.51                               | 77.29             | 77.72                          | TRUE                     | 0.21                    | 77.51                   | 77.77                          | TRUE                     | 0.27                    |
| STM_CBMH17 | 77.55                               | 77.48             | 77.74                          | TRUE                     | 0.19                    | 77.58                   | 77.78                          | TRUE                     | 0.22                    |
| STM_CBMH18 | 77.51                               | 77.16             | 77.64                          | TRUE                     | 0.14                    | 77.25                   | 77.67                          | TRUE                     | 0.17                    |
| STM_CBMH19 | 77.30                               | 76.83             | 77.52                          | TRUE                     | 0.22                    | 76.98                   | 77.56                          | TRUE                     | 0.26                    |
| STM_CBMH20 | 77.31                               | 77.25             | 77.47                          | TRUE                     | 0.16                    | 77.37                   | 77.54                          | TRUE                     | 0.23                    |
| STM_CBMH21 | 77.31                               | 76.93             | 77.44                          | TRUE                     | 0.13                    | 77.03                   | 77.48                          | TRUE                     | 0.17                    |
| STM_CBMH22 | 77.50                               | 77.60             | 77.71                          | TRUE                     | 0.20                    | 77.65                   | 77.75                          | TRUE                     | 0.25                    |
| STM_CBMH23 | 77.56                               | 77.68             | 77.81                          | TRUE                     | 0.26                    | 77.73                   | 77.86                          | TRUE                     | 0.30                    |
| STM_CBMH24 | 77.60                               | 77.53             | 77.68                          | TRUE                     | 0.08                    | 77.60                   | 77.69                          | TRUE                     | 0.09                    |
| STM_CBMH25 | 77.51                               | 77.28             | 77.60                          | TRUE                     | 0.09                    | 77.37                   | 77.61                          | TRUE                     | 0.10                    |
| STM_CBMH26 | 77.40                               | 77.03             | 77.53                          | TRUE                     | 0.13                    | 77.11                   | 77.56                          | TRUE                     | 0.15                    |
| STM_CBMH27 | 78.01                               | 77.64             | 78.12                          | TRUE                     | 0.11                    | 77.77                   | 78.13                          | TRUE                     | 0.13                    |
| STM_CBMH28 | 78.00                               | 77.66             | 78.12                          | TRUE                     | 0.12                    | 77.80                   | 78.14                          | TRUE                     | 0.13                    |
| STM_CBMH29 | 78.01                               | 77.59             | 78.22                          | TRUE                     | 0.21                    | 77.70                   | 78.25                          | TRUE                     | 0.25                    |
|            |                                     |                   |                                | Max                      | 0.26                    |                         |                                | Max                      | 0.30                    |

### 3.2.4 100 Year 10 Day Rainfall + Snow Melt Results

**Table 6** below outlines the results of the site during the 100-year 10-day snowmelt event. From this analysis, it is seen that the SWM ponds have sufficient capacity to capture and attenuate flows from the site, and the flow out of the pond during this event is less than that of the pre-development 100-year events. The maximum major system ponding depth on the site for this event was found to be **3 cm** at WS-29.

**Table 6: SWM Summary - 100-Year 10-Day Snowmelt Event**

| SWM    | Pond Max WSE (m) | Freeboard (m) | Max Storage Volume (m <sup>3</sup> ) | Max Outflow (m <sup>3</sup> /s) | Max Major system ponding Depth (cm) | Location |
|--------|------------------|---------------|--------------------------------------|---------------------------------|-------------------------------------|----------|
| Pond 1 | 77.02            | 0.18          | 8451                                 | 0.040                           | 0.03                                | WS-29    |
| Pond 2 | 77.45            | 0.10          | 1023                                 | 0.025                           |                                     |          |

### 3.3 Erosion and sediment control during and after construction

Silt and erosion control strategies shall be implemented during construction activities to minimize the transfer of silt off-site. The following measures should be implemented:

- i) Silt control fences shall be installed as required to prevent the movement of silt off-site during rainfall events.
- ii) Construction of a mud mat shall be installed at the site entrance to promote self-cleaning of truck tires when leaving the site.
- iii) All catch basins shall be equipped with a crushed stone filter to prevent the capture of silt in the storm sewer system.
- iv) Regular cleaning of the adjacent roads shall be undertaken during the construction activities.
- v) Regular inspection and maintenance of the silt control measures shall be undertaken until the site has been stabilized.
- vi) The erosion and sediment control devices shall be removed after the site has been stabilized.

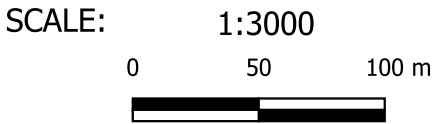
# Appendix A

Pre-Development Model  
(SWMHYMO)



Legend

- Subcatchments
- <Name>
- <Area>





J.F. Sabourin and Associates Inc.

WATER RESOURCES AND ENVIRONMENTAL CONSULTANTS

52 Springbrook Drive  
Ottawa, ON, K2S 1B9

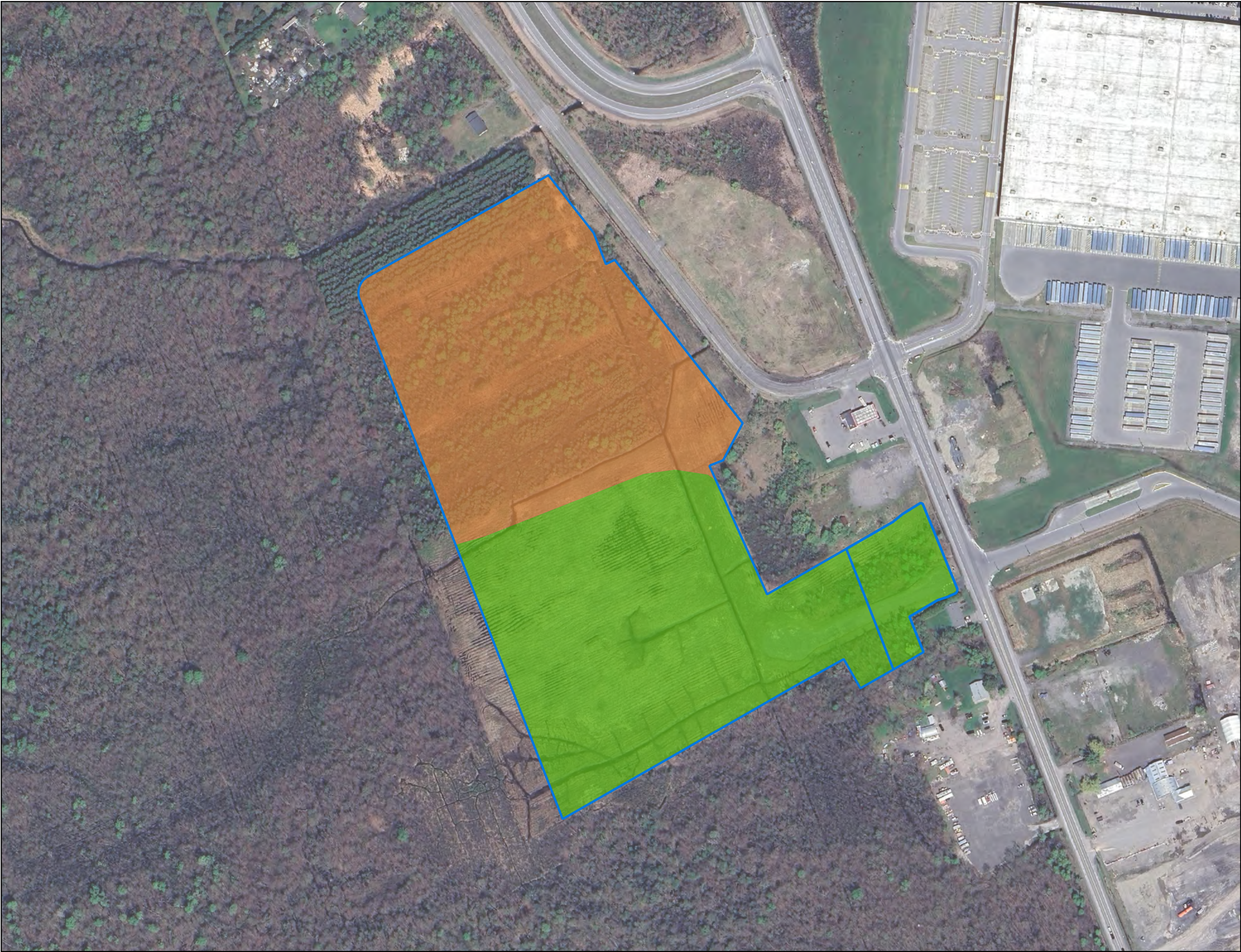
(613) 836-3884  
www.jfsa.com

Thunder Road Partnership

6150 Thunder Road SWM Report

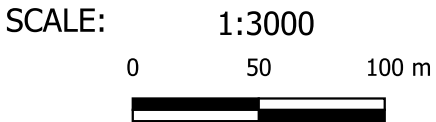
Figure A1: Subcatchments

|         |             |
|---------|-------------|
| PROJECT | 2120(01)-21 |
| DRAWN   | JZ          |
| DATE    | AUGUST 2024 |



Legend

- Subcatchments
- Land Use
  - Plantation
  - Treed Swamp





**J.F. Sabourin and Associates Inc.**  
WATER RESOURCES AND ENVIRONMENTAL CONSULTANTS  
52 Springbrook Drive  
Ottawa, ON, K2S 1B9

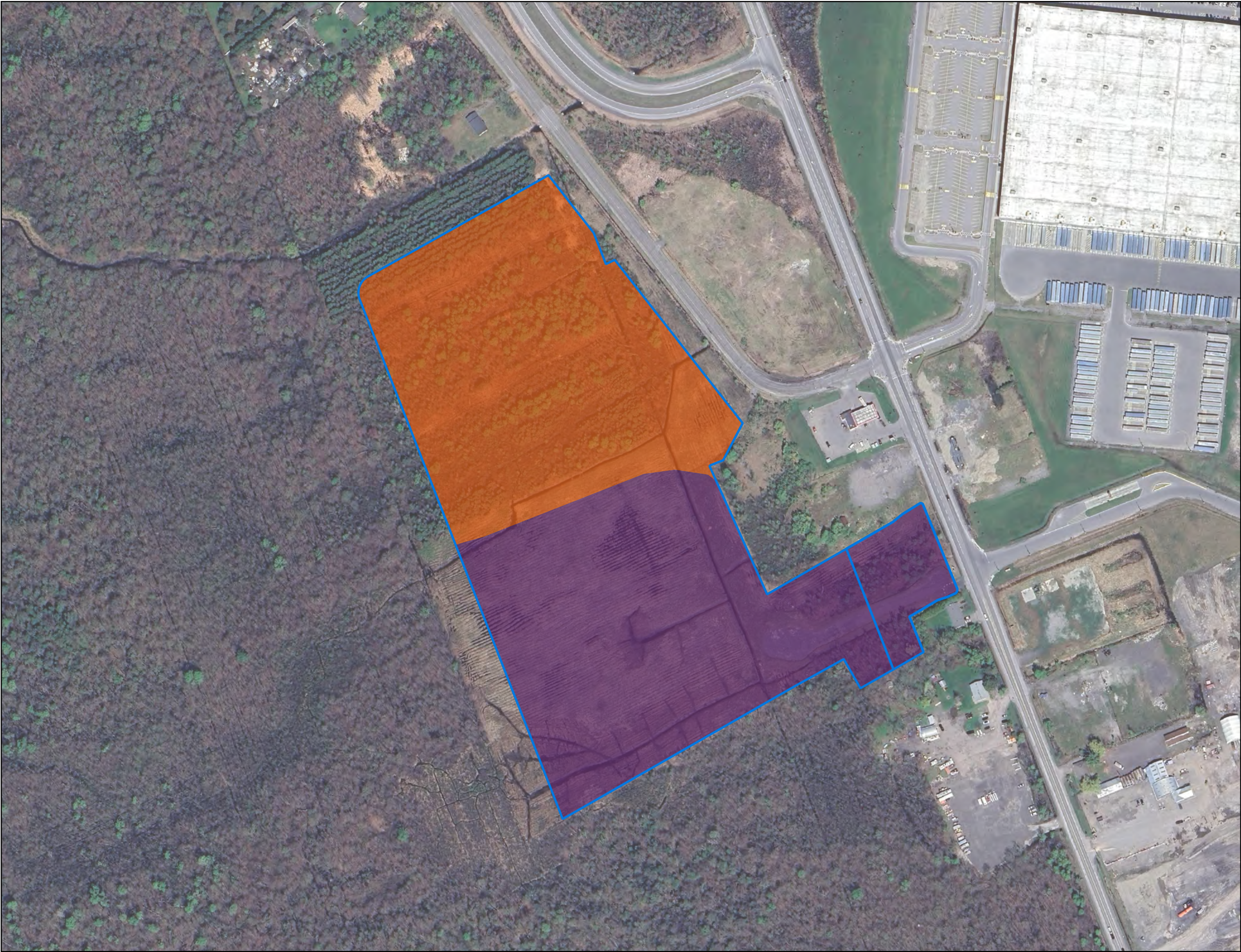
(613) 836-3884  
www.jfsa.com

Thunder Road Partnership

6150 Thunder Road SWM Report

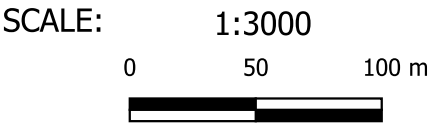
Figure A2: Land Use

|         |             |
|---------|-------------|
| PROJECT | 2120(01)-21 |
| DRAWN   | JZ          |
| DATE    | AUGUST 2024 |



Legend

- Subcatchments
- Soil Name (Type)
- ALLENDALE (C)
- CHENEY (C)



**J.F. Sabourin and Associates Inc.**  
WATER RESOURCES AND ENVIRONMENTAL CONSULTANTS  
52 Springbrook Drive  
Ottawa, ON, K2S 1B9

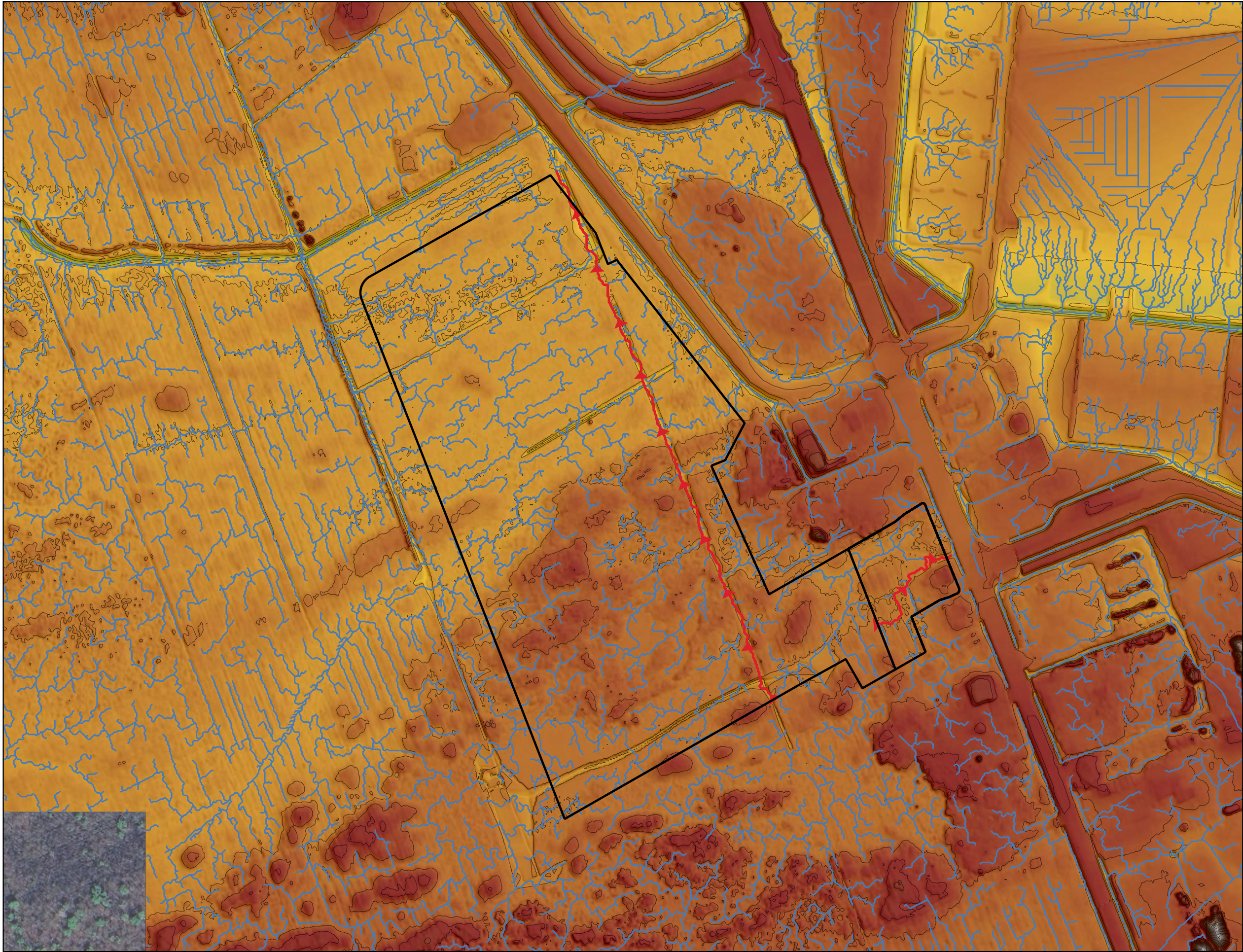
(613) 836-3884  
www.jfsa.com

Thunder Road Partnership

6150 Thunder Road SWM Report

Figure A3: Soil Types

|         |             |
|---------|-------------|
| PROJECT | 2120(01)-21 |
| DRAWN   | JZ          |
| DATE    | AUGUST 2024 |



**Legend**

- Development Area
- Streams
- Major Flow Path
- Terrain (m)
  - 70
  - 72
  - 74
  - 76
  - 78
  - 80
  - 82
  - 84
- Contours (0.5m)

SCALE: 1:3000

0 50 100 m

**J.F. Sabourin and Associates Inc.**  
WATER RESOURCES AND ENVIRONMENTAL CONSULTANTS  
52 Springbrook Drive  
Ottawa, ON, K2S 1B9  
(613) 836-3884  
www.jfsa.com

Thunder Road Partnership

6150 Thunder Road SWM Report

Figure A4: Terrain

|         |             |
|---------|-------------|
| PROJECT | 2120(01)-21 |
| DRAWN   | JZ          |
| DATE    | AUGUST 2024 |

**Table A1: Calculation of SCS Curve Number (CN) and Modified Curve Number (CN\*)**

| EWS-01 ( 10.616 ha) |             |           |                   |            |    |                   |                |
|---------------------|-------------|-----------|-------------------|------------|----|-------------------|----------------|
| Area<br>(ha)        | Land Type   | Soil Name | Soil<br>Condition | Soil Group | CN | % of<br>Catchment | Weighted<br>CN |
| 5.353               | Treed Swamp | CHENEY    | C                 | Good       | 50 | 50.4%             | 25.2           |
| 5.263               | Plantation  | ALLENDALE | C                 | Good       | 70 | 49.6%             | 34.7           |
|                     |             |           |                   |            |    | <b>CN</b>         | <b>60</b>      |

| EWS-02 ( 0.613 ha) |             |           |                   |            |    |                   |                |
|--------------------|-------------|-----------|-------------------|------------|----|-------------------|----------------|
| Area<br>(ha)       | Land Type   | Soil Name | Soil<br>Condition | Soil Group | CN | % of<br>Catchment | Weighted<br>CN |
| 0.613              | Treed Swamp | CHENEY    | C                 | Good       | 50 | 100.0%            | 50             |
|                    |             |           |                   |            |    | <b>CN*</b>        | <b>50</b>      |

**Table A2: Time to Peak Calculations**

| Parameter                       | Units  | EWS-01 | EWS-02 |
|---------------------------------|--------|--------|--------|
| Area                            | ha     | 10.62  | 0.61   |
| CN*                             | -      | 60     | 50     |
| Ptotal to calc C from CN, use 2 | P(mm)  | 43.2   | 43.2   |
| yr 12 hr SCS stom               | Ia(mm) | 4.67   | 4.67   |
|                                 | RV(mm) | 7.1    | 5.1    |
| C                               | -      | 0.16   | 0.12   |
| Length of Channel               | m      | 491    | 120    |
|                                 | ft     | 1611   | 395    |
| Elevation of Head Water         | m      | 76.98  | 76.97  |
|                                 | ft     | 253    | 253    |
| Elevation of Outlet             | m      | 76.00  | 76.58  |
|                                 | ft     | 249    | 251    |
| Average Slope                   | m/m    | 0.20%  | 0.32%  |
|                                 | ft/ft  | 0.20%  | 0.32%  |
| <b>Kirpich</b>                  |        |        |        |
| Time of Concentration           | mins   | 25     | 7      |
| Time to Peak                    | min    | 17     | 5      |
| Time to Peak                    | Hours  | 0.28   | 0.08   |
| <b>FAA</b>                      |        |        |        |
| Time of Concentration           | mins   | 116    | 51     |
| Time to Peak                    | mins   | 77     | 34     |
| Time to Peak                    | Hours  | 1.29   | 0.57   |
| <b>Barnsby Williams</b>         |        |        |        |
| Time of Concentration           | mins   | 31     | 9      |
| Time to Peak                    | mins   | 21     | 6      |
| Time to Peak                    | Hours  | 0.34   | 0.10   |
| <b>SCS</b>                      |        |        |        |
| Time of Concentration           | mins   | 181    | 59     |
| Time to Peak                    | mins   | 121    | 39     |
| Time to Peak                    | Hours  | 2.01   | 0.66   |
| <b>Selected Method</b>          |        |        |        |
| <b>FAA</b>                      |        |        |        |
| Time to Peak                    | min    | 77     | 34     |
| Time to Peak                    | Hours  | 1.29   | 0.57   |

Note:

All methods calculated as per Appendix A of the SWMHYMO manual

Time to Peak calculated as 2/3 Time of concentration

```

1 20 Metric units / ID numbers OFF
2 *#*****
3 *# SWMHYMO Ver:5.02/Jan 2001 <BETA> / INPUT DATA FILE
4 *#*****
5 *# Project Name : [6150 Thunder Road SWM - Existing Conditions]
6 *# Project Number: [2120]
7 *# Date : 2024/08/14
8 *# Modeller : JZ
9 *# Company : J.F. Sabourin and Associates
10 *# License # : 2582634
11 *#*****
12 *Model developed to set pre-development release rates for future industrial park
13 *#*****
14 *% 25 mm Storm based on 2-Year, 4-Hour Chicago Storm
15 START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[001]
16 ["25MM4H.stm"] <-- storm filename, one per line for NSTORM time
17 *%-----|-----
18 READ STORM STORM_FILENAME=["storm.001"]
19 *%-----|-----
20 *DEFAULT VALUES ICASEdef=[1], read and print values
21 * DEFVAL_FILENAME=["Ottawa.val"]
22 *%-----|-----
23 *#####
24 *# Pre-Development Drainage Area
25 *#####
26 CALIB NASHYD NHYD=["EWS-01"], DT=[1](min), AREA=[10.616](ha),
27 DWF=[0](cms), CN=[60], IA=[4.67](mm), N=[3], TP[1.29](hrs),
28 RAINFALL[, , -1]
29 *%-----|-----
30 CALIB NASHYD NHYD=["EWS-02"], DT=[1](min), AREA=[0.613](ha),
31 DWF=[0](cms), CN=[50], IA=[4.67](mm), N=[3], TP[0.57](hrs),
32 RAINFALL[, , -1]
33 *%-----|-----
34 *#####
35 *# STORMS
36 *#####
37 *% 25 mm Storm based on 2-Year, 3-Hour Chicago Storm
38 *%START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[001]
39 *% ["25MMC3H.stm"] <-- storm filename, one per line for NSTORM time
40 *%-----|-----
41 *% 2-Year, 3-Hour Chicago Storm
42 START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[002]
43 ["002YC3H.stm"] <-- storm filename, one per line for NSTORM time
44 *%-----|-----
45 *% 5-Year, 3-Hour Chicago Storm
46 START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[005]
47 ["005YC3H.stm"] <-- storm filename, one per line for NSTORM time
48 *%-----|-----
49 *% 10-Year, 3-Hour Chicago Storm
50 START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[010]
51 ["010YC3H.stm"] <-- storm filename, one per line for NSTORM time
52 *%-----|-----
53 *% 25-Year, 3-Hour Chicago Storm
54 START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[025]
55 ["025YC3H.stm"] <-- storm filename, one per line for NSTORM time
56 *%-----|-----
57 *% 50-Year, 3-Hour Chicago Storm
58 START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[050]
59 ["050YC3H.stm"] <-- storm filename, one per line for NSTORM time
60 *%-----|-----
61 *% 100-Year, 3-Hour Chicago Storm
62 START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[099]
63 ["100YC3H.stm"] <-- storm filename, one per line for NSTORM time
64 *%-----|-----
65 *% 2-Year, 24-Hour SCS Storm
66 START TZERO=[0.0], METOUT=[2], NSTORM=[1], NRUN=[102]
67 ["SC24002x.stm"] <-- storm filename, one per line for NSTORM time
68 *%-----|-----
69 *% 5-Year, 24-Hour SCS Storm

```

```

70 START.....TZERO=[0.0],..METOUT=[2],..NSTORM=[1],..NRUN=[105]
71 .....["SC24005x.stm"]<--storm filename, one per line for NSTORM time
72 *%-----|-----
73 *% 10-Year, 24-Hour SCS Storm
74 START.....TZERO=[0.0],..METOUT=[2],..NSTORM=[1],..NRUN=[110]
75 .....["SC24010x.stm"]<--storm filename, one per line for NSTORM time
76 *%-----|-----
77 *% 25-Year, 24-Hour SCS Storm
78 START.....TZERO=[0.0],..METOUT=[2],..NSTORM=[1],..NRUN=[125]
79 .....["SC24025x.stm"]<--storm filename, one per line for NSTORM time
80 *%-----|-----
81 *% 50-Year, 24-Hour SCS Storm
82 START.....TZERO=[0.0],..METOUT=[2],..NSTORM=[1],..NRUN=[150]
83 .....["SC24050x.stm"]<--storm filename, one per line for NSTORM time
84 *%-----|-----
85 *% 100-Year, 24-Hour SCS Storm
86 START.....TZERO=[0.0],..METOUT=[2],..NSTORM=[1],..NRUN=[199]
87 .....["SC24100x.stm"]<--storm filename, one per line for NSTORM time
88 *%-----|-----
89 *% 2-Year, 12-Hour SCS Storm
90 *START.....TZERO=[0.0],..METOUT=[2],..NSTORM=[1],..NRUN=[202]
91 *% .....["SC12002c.stm"]<--storm filename, one per line for NSTORM time
92 *%-----|-----
93 *% 5-Year, 12-Hour SCS Storm
94 *START.....TZERO=[0.0],..METOUT=[2],..NSTORM=[1],..NRUN=[205]
95 *% .....["SC12005c.stm"]<--storm filename, one per line for NSTORM time
96 *%-----|-----
97 *% 10-Year, 12-Hour SCS Storm
98 *START.....TZERO=[0.0],..METOUT=[2],..NSTORM=[1],..NRUN=[210]
99 *% .....["SC12010c.stm"]<--storm filename, one per line for NSTORM time
100 *%-----|-----
101 *% 25-Year, 12-Hour SCS Storm
102 *START.....TZERO=[0.0],..METOUT=[2],..NSTORM=[1],..NRUN=[225]
103 *% .....["SC12025c.stm"]<--storm filename, one per line for NSTORM time
104 *%-----|-----
105 *% 50-Year, 12-Hour SCS Storm
106 *START.....TZERO=[0.0],..METOUT=[2],..NSTORM=[1],..NRUN=[250]
107 *% .....["SC12050c.stm"]<--storm filename, one per line for NSTORM time
108 *%-----|-----
109 *% 100-Year, 12-Hour SCS Storm
110 *START.....TZERO=[0.0],..METOUT=[2],..NSTORM=[1],..NRUN=[299]
111 *% .....["SC12100c.stm"]<--storm filename, one per line for NSTORM time
112 *%-----|-----
113 *% July 1st, 1979 Storm - Ottawa International Airport
114 *START.....TZERO=[0.0],..METOUT=[2],..NSTORM=[1],..NRUN=[979]
115 *% .....["19790701.stm"]<--storm filename, one per line for NSTORM time
116 *%-----|-----
117 *% August 4th, 1988 Storm - Ottawa International Airport
118 *START.....TZERO=[0.0],..METOUT=[2],..NSTORM=[1],..NRUN=[988]
119 *% .....["19880804.stm"]<--storm filename, one per line for NSTORM time
120 *%-----|-----
121 *% August 8th, 1996 Storm - Ottawa International Airport
122 *START.....TZERO=[0.0],..METOUT=[2],..NSTORM=[1],..NRUN=[996]
123 *% .....["19960808.stm"]<--storm filename, one per line for NSTORM time
124 *%-----|-----
125 *% 100-Year, 24-Hour SCS Storm + 20%
126 *START.....TZERO=[0.0],..METOUT=[2],..NSTORM=[1],..NRUN=[998]
127 *% .....["SC24100x+.stm"]<--storm filename, one per line for NSTORM time
128 *%-----|-----
129 *% 100-Year, 3-Hour Chicago Storm + 20%
130 START.....TZERO=[0.0],..METOUT=[2],..NSTORM=[1],..NRUN=[999]
131 .....["100YC3H+.stm"]<--storm filename, one per line for NSTORM time
132 *%-----|-----
133 FINISH

```

Page 0

```
00361> # Project Name : [6150 Thunder Road SMM - Existing Conditions]
00362> # Project Number: [2120]
00363> # Date : 2024/08/14
00364> # Modeler : JZ
00365> # Company : J.F. Sabourin and Associates
00366> # License # : 2582634
00367> #*****
00368> #*****
00369> R0102:C00002-----
00370> READ STORM
00371> Filename = storm.001
00372> Comment = 5 years SCS Type 2 Storm 24 Hours step 10 min, City of Ottawa
00373> [SDT=10.00;SDUR= 24.00;PTOT= 48.46]
00374> #####
00375> # Pre-Development Drainage Area
00376> #####
00377> R0102:C00004-----DTIn-ID:NVHD-----AREAh-QPEAKcms-TpeakDate,h:mm-----Rvmm-R.C-----DwfCms
00378> CALIB NASHVD 1.0 01:EWS-01 10.62 .060 No_date 13:25 9.00 .186 .000
00379> [Cn= 60.0; N= 3.00; Tp= 1.29]
00380> R0102:C00004-----DTIn-ID:NVHD-----AREAh-QPEAKcms-TpeakDate,h:mm-----Rvmm-R.C-----DwfCms
00381> CALIB NASHVD 1.0 01:EWS-02 .61 .004 No_date 12:33 6.44 .133 .000
00382> [Cn= 50.0; N= 3.00; Tp= .57]
00383> #####
00384> # STORMS
00385> #####
00386> ** END OF RUN : 104
00387> #####
00388> #####
00389> #####
00390> #####
00391> #####
00392> #####
00393> #####
00394> RUN: COMMAND#
00395> R0105:C00001-----
00396> START
00397> [TZERO = .00 hrs on 0]
00398> [METOUT= 2 (1=Imperial, 2=metric output)]
00399> [NSTORM= 1]
00400> [NRUN = 010]
00401> #####
00402> # SMWYNO Ver:5.02/Jan 2001 <BETA> / INPUT DATA FILE
00403> #*****
00404> # Project Name : [6150 Thunder Road SMM - Existing Conditions]
00405> # Project Number: [2120]
00406> # Date : 2024/08/14
00407> # Modeler : JZ
00408> # Company : J.F. Sabourin and Associates
00409> # License # : 2582634
00410> #*****
00411> #*****
00412> R0105:C00002-----
00413> READ STORM
00414> Filename = storm.001
00415> Comment = 5 years SCS Type 2 Storm 24 Hours step 10 min, City of Ottawa
00416> [SDT=10.00;SDUR= 24.00;PTOT= 64.11]
00417> #####
00418> # Pre-Development Drainage Area
00419> #####
00420> R0105:C00003-----DTIn-ID:NVHD-----AREAh-QPEAKcms-TpeakDate,h:mm-----Rvmm-R.C-----DwfCms
00421> CALIB NASHVD 1.0 01:EWS-01 10.62 .184 No_date 13:23 15.44 .241 .000
00422> [Cn= 60.0; N= 3.00; Tp= 1.29]
00423> R0105:C00004-----DTIn-ID:NVHD-----AREAh-QPEAKcms-TpeakDate,h:mm-----Rvmm-R.C-----DwfCms
00424> CALIB NASHVD 1.0 01:EWS-02 .61 .008 No_date 12:32 11.27 .176 .000
00425> [Cn= 50.0; N= 3.00; Tp= .57]
00426> #####
00427> # STORMS
00428> #####
00429> ** END OF RUN : 109
00430> #####
00431> #####
00432> #####
00433> #####
00434> #####
00435> #####
00436> #####
00437> RUN: COMMAND#
00438> R0110:C00001-----
00439> START
00440> [TZERO = .00 hrs on 0]
00441> [METOUT= 2 (1=Imperial, 2=metric output)]
00442> [NSTORM= 1]
00443> [NRUN = 0110]
00444> #####
00445> # SMWYNO Ver:5.02/Jan 2001 <BETA> / INPUT DATA FILE
00446> #*****
00447> # Project Name : [6150 Thunder Road SMM - Existing Conditions]
00448> # Project Number: [2120]
00449> # Date : 2024/08/14
00450> # Modeler : JZ
00451> # Company : J.F. Sabourin and Associates
00452> # License # : 2582634
00453> #*****
00454> #*****
00455> R0110:C00002-----
00456> READ STORM
00457> Filename = storm.001
00458> Comment = 10 years SCS Type 2 Storm 24 Hours step 10 min, City of Ottawa
00459> [SDT=10.00;SDUR= 24.00;PTOT= 74.35]
00460> #####
00461> # Pre-Development Drainage Area
00462> #####
00463> R0110:C00003-----DTIn-ID:NVHD-----AREAh-QPEAKcms-TpeakDate,h:mm-----Rvmm-R.C-----DwfCms
00464> CALIB NASHVD 1.0 01:EWS-01 10.62 .138 No_date 13:22 20.32 .273 .000
00465> [Cn= 60.0; N= 3.00; Tp= 1.29]
00466> R0110:C00004-----DTIn-ID:NVHD-----AREAh-QPEAKcms-TpeakDate,h:mm-----Rvmm-R.C-----DwfCms
00467> CALIB NASHVD 1.0 01:EWS-02 .61 .010 No_date 12:32 15.00 .202 .000
00468> [Cn= 50.0; N= 3.00; Tp= .57]
00469> #####
00470> # STORMS
00471> #####
00472> ** END OF RUN : 124
00473> #####
00474> #####
00475> #####
00476> #####
00477> #####
00478> #####
00479> #####
00480> RUN: COMMAND#
00481> R0125:C00001-----
00482> START
00483> [TZERO = .00 hrs on 0]
00484> [METOUT= 2 (1=Imperial, 2=metric output)]
00485> [NSTORM= 1]
00486> [NRUN = 0125]
00487> #####
00488> # SMWYNO Ver:5.02/Jan 2001 <BETA> / INPUT DATA FILE
00489> #*****
00490> # Project Name : [6150 Thunder Road SMM - Existing Conditions]
00491> # Project Number: [2120]
00492> # Date : 2024/08/14
00493> # Modeler : JZ
00494> # Company : J.F. Sabourin and Associates
00495> # License # : 2582634
00496> #*****
00497> #*****
00498> R0125:C00002-----
00499> READ STORM
00500> Filename = storm.001
00501> Comment = 25 years SCS Type 2 Storm 24 Hours step 10 min, City of Ottawa
00502> [SDT=10.00;SDUR= 24.00;PTOT= 80.89]
00503> #####
00504> # Pre-Development Drainage Area
00505> #####
00506> R0125:C00003-----DTIn-ID:NVHD-----AREAh-QPEAKcms-TpeakDate,h:mm-----Rvmm-R.C-----DwfCms
00507> CALIB NASHVD 1.0 01:EWS-01 10.62 .184 No_date 13:22 26.87 .309 .000
00508> [Cn= 60.0; N= 3.00; Tp= 1.29]
00509> R0125:C00004-----DTIn-ID:NVHD-----AREAh-QPEAKcms-TpeakDate,h:mm-----Rvmm-R.C-----DwfCms
00510> CALIB NASHVD 1.0 01:EWS-02 .61 .014 No_date 12:32 20.10 .231 .000
00511> [Cn= 50.0; N= 3.00; Tp= .57]
00512> #####
00513> # STORMS
00514> #####
00515> ** END OF RUN : 149
00516> #####
00517> #####
00518> #####
00519> #####
00520> #####
00521> #####
00522> #####
00523> RUN: COMMAND#
00524> R0150:C00001-----
00525> START
00526> [TZERO = .00 hrs on 0]
00527> [METOUT= 2 (1=Imperial, 2=metric output)]
00528> [NSTORM= 1]
00529> [NRUN = 0150]
00530> #####
00531> # SMWYNO Ver:5.02/Jan 2001 <BETA> / INPUT DATA FILE
00532> #*****
00533> # Project Name : [6150 Thunder Road SMM - Existing Conditions]
00534> # Project Number: [2120]
00535> # Date : 2024/08/14
00536> # Modeler : JZ
00537> # Company : J.F. Sabourin and Associates
00538> # License # : 2582634
00539> #*****
00540> #*****
00541> R0150:C00002-----
00542> READ STORM
00543> Filename = storm.001
00544> Comment = 50 years SCS Type 2 Storm 24 Hours step 10 min, City of Ottawa
00545> [SDT=10.00;SDUR= 24.00;PTOT= 96.53]
00546> #####
00547> # Pre-Development Drainage Area
00548> #####
00549> R0150:C00003-----DTIn-ID:NVHD-----AREAh-QPEAKcms-TpeakDate,h:mm-----Rvmm-R.C-----DwfCms
00550> CALIB NASHVD 1.0 01:EWS-01 10.62 .222 No_date 13:21 32.30 .336 .000
00551> [Cn= 60.0; N= 3.00; Tp= 1.29]
00552> R0150:C00004-----DTIn-ID:NVHD-----AREAh-QPEAKcms-TpeakDate,h:mm-----Rvmm-R.C-----DwfCms
00553> CALIB NASHVD 1.0 01:EWS-02 .61 .017 No_date 12:31 24.39 .253 .000
00554> [Cn= 50.0; N= 3.00; Tp= .57]
00555> #####
00556> # STORMS
00557> #####
00558> ** END OF RUN : 198
00559> #####
00560> #####
00561> #####
00562> #####
00563> #####
00564> #####
00565> #####
00566> RUN: COMMAND#
00567> R0199:C00001-----
00568> START
00569> [TZERO = .00 hrs on 0]
00570> [METOUT= 2 (1=Imperial, 2=metric output)]
00571> [NSTORM= 1]
00572> [NRUN = 0199]
00573> #####
00574> # SMWYNO Ver:5.02/Jan 2001 <BETA> / INPUT DATA FILE
00575> #*****
00576> # Project Name : [6150 Thunder Road SMM - Existing Conditions]
00577> # Project Number: [2120]
00578> # Date : 2024/08/14
00579> # Modeler : JZ
00580> # Company : J.F. Sabourin and Associates
00581> # License # : 2582634
00582> #*****
00583> #*****
00584> R0199:C00002-----
00585> READ STORM
00586> Filename = storm.001
00587> Comment = 100 years SCS Type 2 Storm 24 Hours step 10 min, City of Ottawa
00588> [SDT=10.00;SDUR= 24.00;PTOT= 106.73]
00589> #####
00590> # Pre-Development Drainage Area
00591> #####
00592> R0199:C00003-----DTIn-ID:NVHD-----AREAh-QPEAKcms-TpeakDate,h:mm-----Rvmm-R.C-----DwfCms
00593> CALIB NASHVD 1.0 01:EWS-01 10.62 .265 No_date 13:21 38.38 .360 .000
00594> [Cn= 60.0; N= 3.00; Tp= 1.29]
00595> R0199:C00004-----DTIn-ID:NVHD-----AREAh-QPEAKcms-TpeakDate,h:mm-----Rvmm-R.C-----DwfCms
00596> CALIB NASHVD 1.0 01:EWS-02 .61 .021 No_date 12:31 29.25 .274 .000
00597> [Cn= 50.0; N= 3.00; Tp= .57]
00598> #####
00599> # STORMS
00600> #####
00601> ** END OF RUN : 998
00602> #####
00603> #####
00604> #####
00605> #####
00606> #####
00607> #####
00608> #####
00609> RUN: COMMAND#
00610> R0999:C00001-----
00611> START
00612> [TZERO = .00 hrs on 0]
00613> [METOUT= 2 (1=Imperial, 2=metric output)]
00614> [NSTORM= 1]
00615> [NRUN = 0999]
00616> #####
00617> # SMWYNO Ver:5.02/Jan 2001 <BETA> / INPUT DATA FILE
00618> #*****
00619> # Project Name : [6150 Thunder Road SMM - Existing Conditions]
00620> # Project Number: [2120]
00621> # Date : 2024/08/14
00622> # Modeler : JZ
00623> # Company : J.F. Sabourin and Associates
00624> # License # : 2582634
00625> #*****
00626> #*****
00627> R0999:C00002-----
00628> READ STORM
00629> Filename = storm.001
00630> Comment = CH2COG STORM 100 Year, 3 Hours +20% Stress Test
00631> [SDT=10.00;SDUR= 3.00;PTOT= 86.00]
00632> #####
00633> # Pre-Development Drainage Area
00634> #####
00635> R0999:C00003-----DTIn-ID:NVHD-----AREAh-QPEAKcms-TpeakDate,h:mm-----Rvmm-R.C-----DwfCms
00636> CALIB NASHVD 1.0 01:EWS-01 10.62 .271 No_date 2:30 26.39 .307 .000
00637> [Cn= 60.0; N= 3.00; Tp= .57]
00638> R0999:C00004-----DTIn-ID:NVHD-----AREAh-QPEAKcms-TpeakDate,h:mm-----Rvmm-R.C-----DwfCms
00639> CALIB NASHVD 1.0 01:EWS-02 .61 .021 No_date 1:43 19.72 .229 .000
00640> [Cn= 50.0; N= 3.00; Tp= .57]
00641> #####
00642> # STORMS
00643> #####
00644> R0999:C00002-----
00645> FINISH
00646> #####
00647> #####
00648> WARNINGS / ERRORS / NOTES
00649> #####
00650> Simulation ended on 2024-08-14 at 17:11:41
00651> #####
00652> #####
```

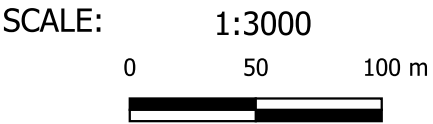
# Appendix B

Post Development Model  
(PCSWMM)



Legend

- Subcatchments
- <Name>
- <Area (ha)>
- <% Imp>
- Site Plan



J.F. Sabourin and Associates Inc.

WATER RESOURCES AND ENVIRONMENTAL CONSULTANTS

52 Springbrook Drive  
Ottawa, ON, K2S 1B9

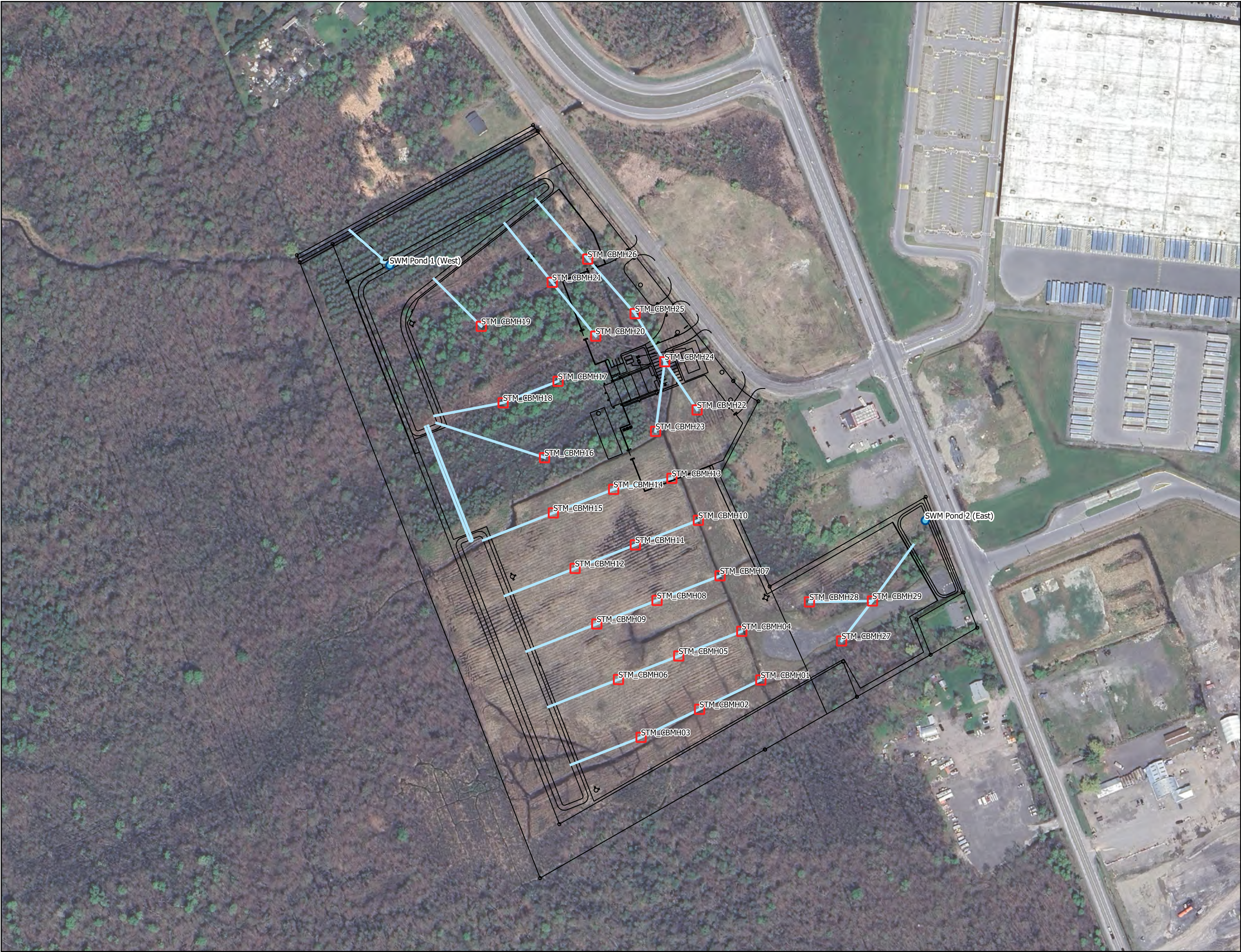
(613) 836-3884  
www.jfsa.com

Thunder Road Partnership

6150 Thunder Road SWM Report

Figure B1: Subcatchments

|         |             |
|---------|-------------|
| PROJECT | 2120(01)-21 |
| DRAWN   | JZ          |
| DATE    | AUGUST 2024 |



- Legend**
- CBMH
  - Outlet
  - Minor System Conduits
  - Site Plan

SCALE: 1:3000

0 50 100 m

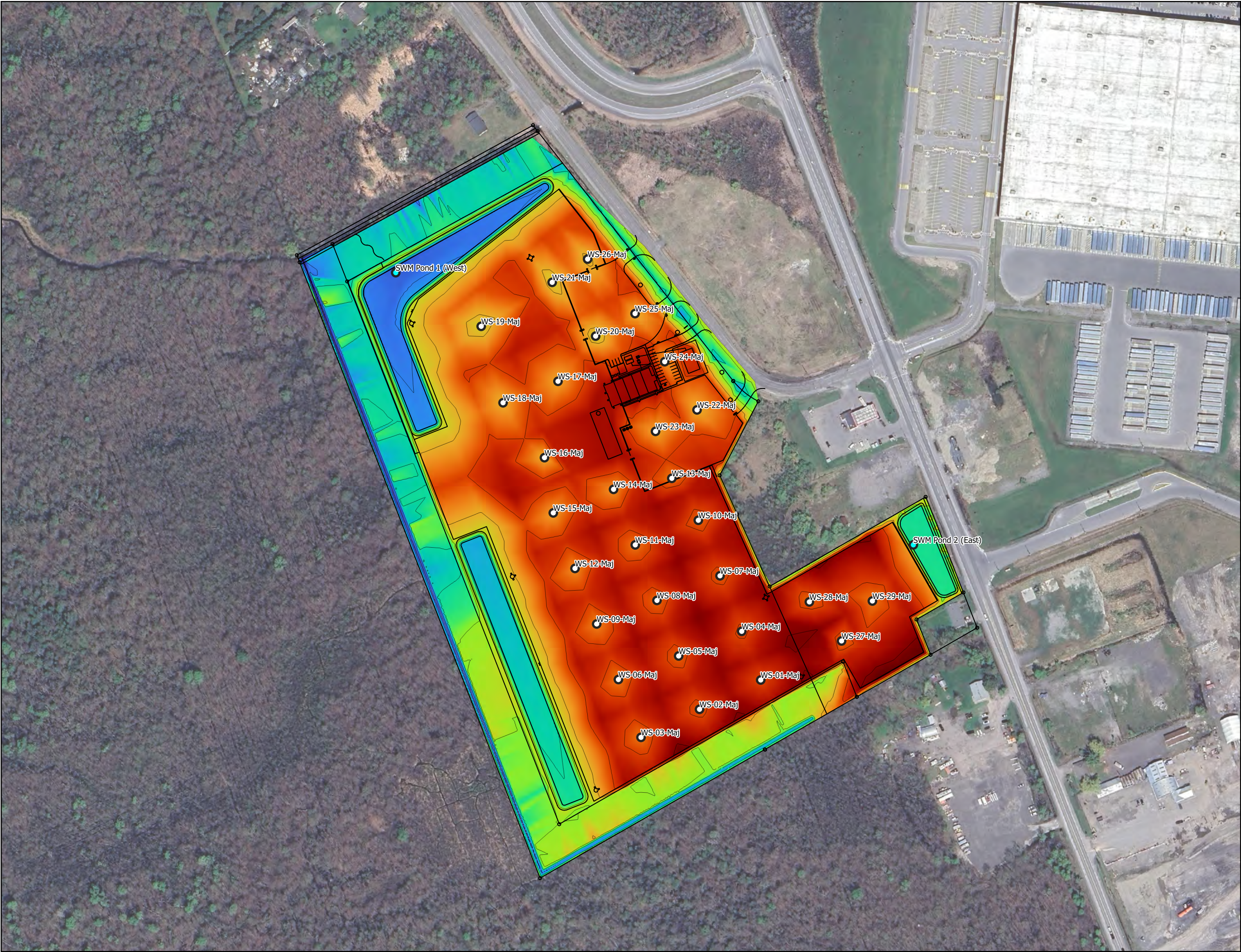
**J.F. Sabourin and Associates Inc.**  
WATER RESOURCES AND ENVIRONMENTAL CONSULTANTS  
52 Springbrook Drive  
Ottawa, ON, K2S 1B9  
(613) 836-3884  
www.jfsa.com

Thunder Road Partnership

6150 Thunder Road SWM Report

Figure B2: Minor System

|         |             |
|---------|-------------|
| PROJECT | 2120(01)-21 |
| DRAWN   | JZ          |
| DATE    | AUGUST 2024 |



**Legend**

- Major System
  - Ponds
- PROPOSED TERRAIN
- 78.6
  - 75.4
  - Contours (0.5m)
  - Site Plan

SCALE: 1:3000

0 50 100 m

**J.F. Sabourin and Associates Inc.**  
WATER RESOURCES AND ENVIRONMENTAL CONSULTANTS  
52 Springbrook Drive  
Ottawa, ON, K2S 1B9  
(613) 836-3884  
www.jfsa.com

Thunder Road Partnership

6150 Thunder Road SWM Report

Figure B3: Major System

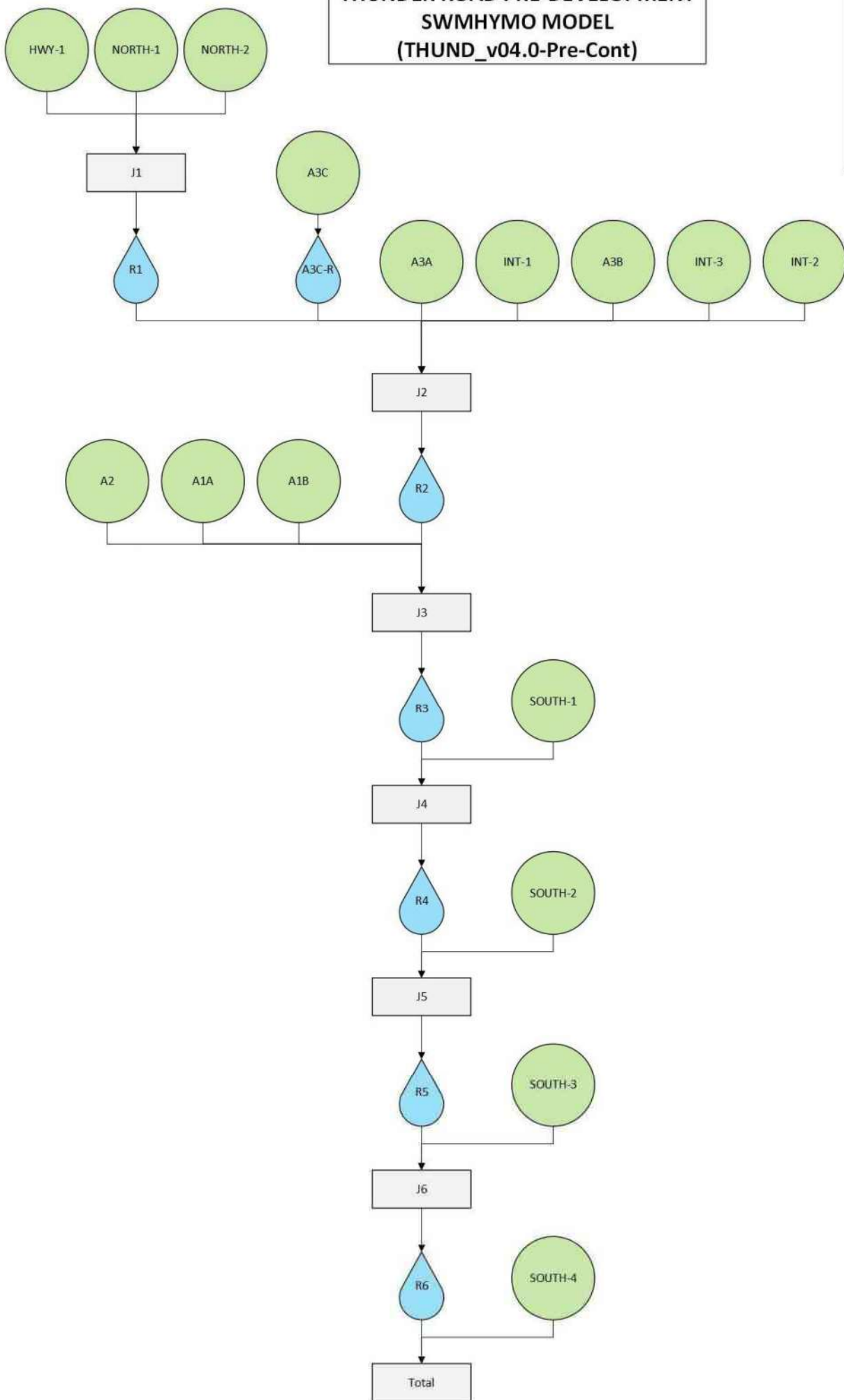
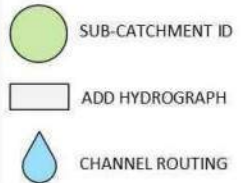
|         |             |
|---------|-------------|
| PROJECT | 2120(01)-21 |
| DRAWN   | JZ          |
| DATE    | AUGUST 2024 |

# Appendix C

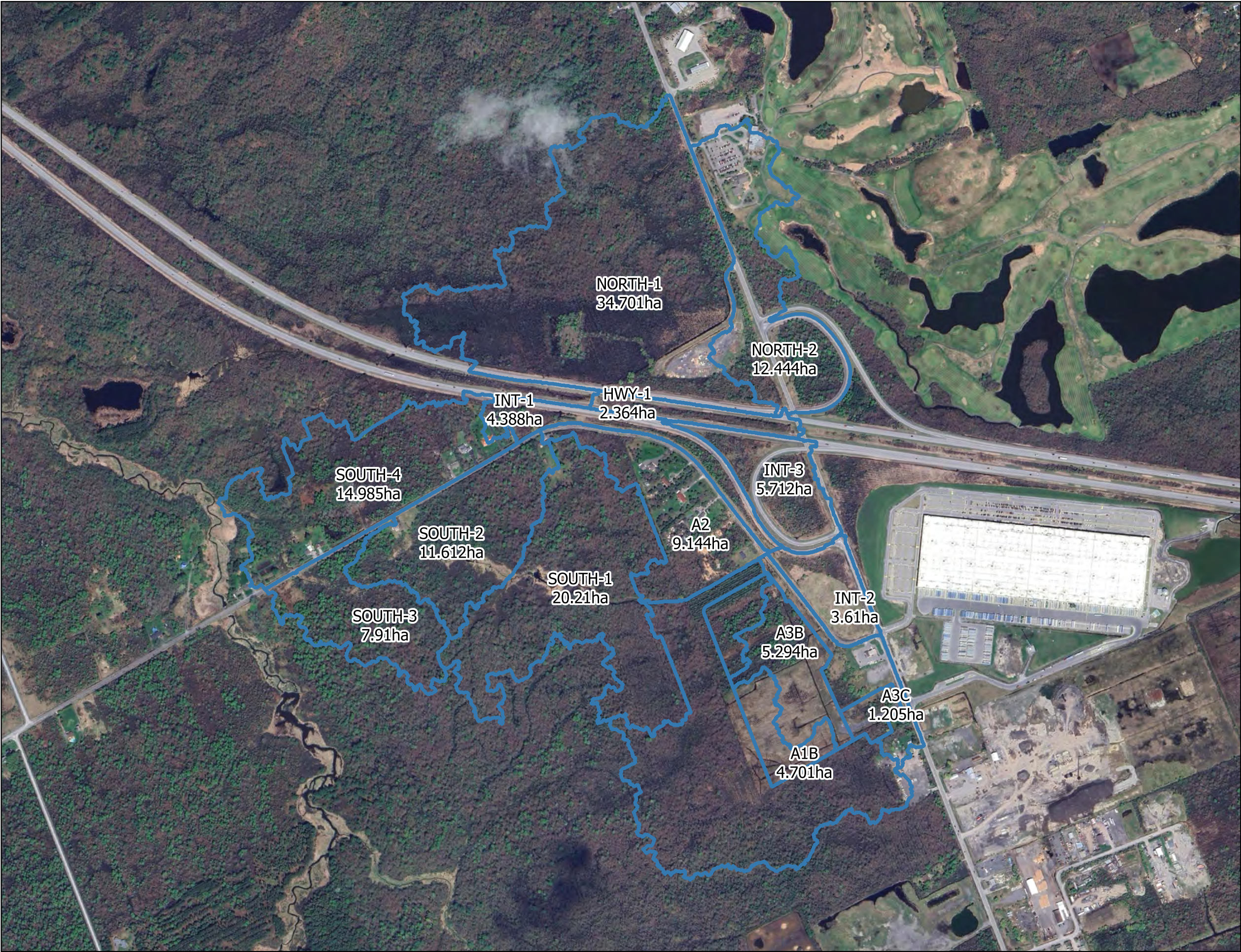
## Erosion Analysis

**THUNDER ROAD PRE-DEVELOPMENT  
SWMHYMO MODEL  
(THUND\_v04.0-Pre-Cont)**

**LEGEND**

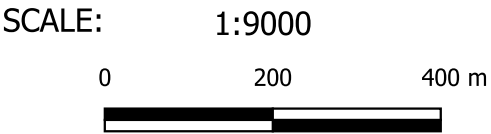






Legend

-  Drainage Areas  
[Name]  
[Areas]





J.F. Sabourin and Associates Inc.

WATER RESOURCES AND ENVIRONMENTAL CONSULTANTS

52 Springbrook Drive  
Ottawa, ON, K2S 1B9

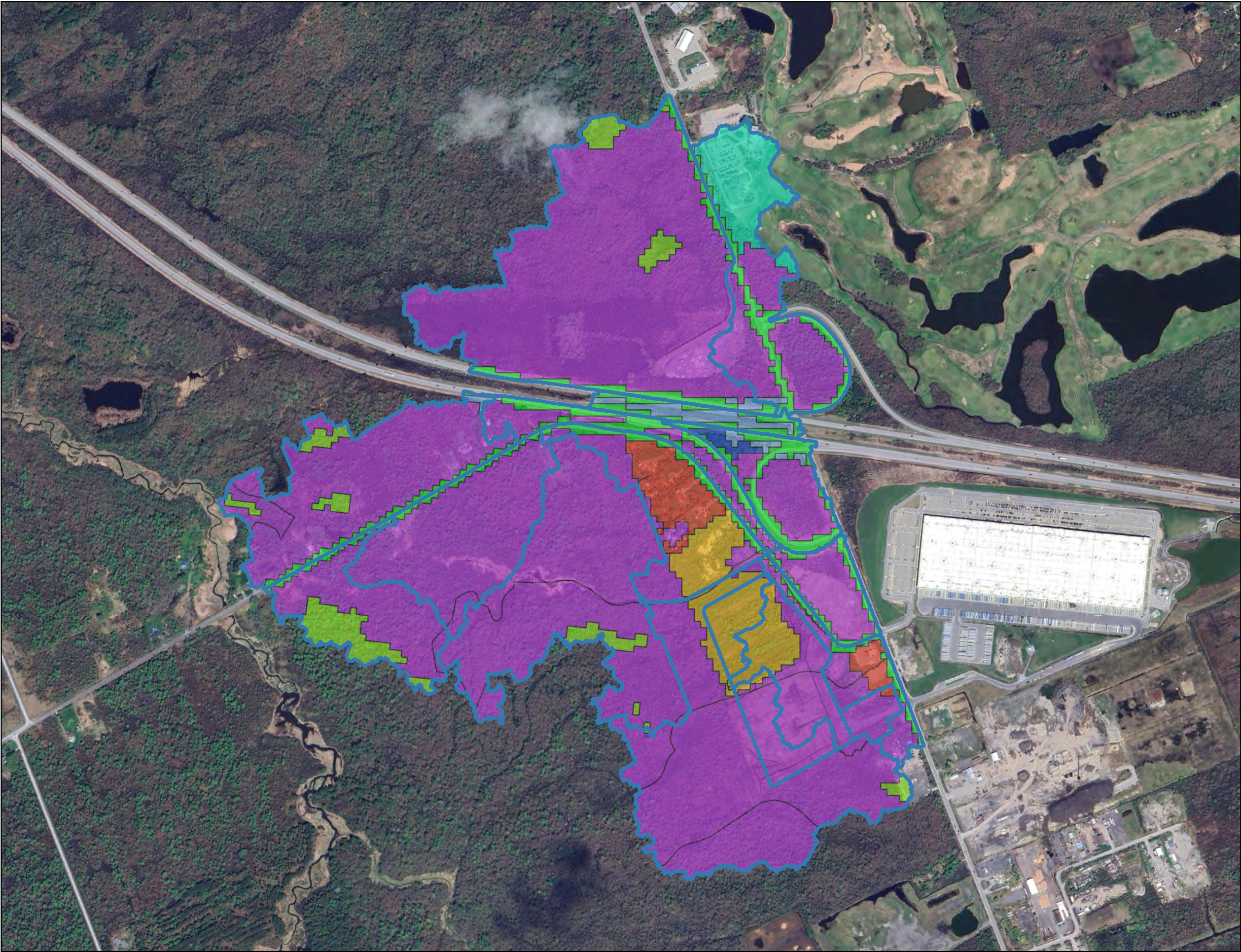
(613) 836-3884  
www.jfsa.com

Thunder Road Partnership

6150 Thunder Road

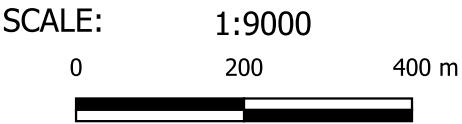
Figure C1 - Drainage Areas

|         |             |
|---------|-------------|
| PROJECT | 2120(01)-21 |
| DRAWN   | JZ          |
| DATE    | AUG 2024    |



**Legend**

- Drainage Areas
- Land Use
  - Treed Swamp
  - Plantation
  - Transportation
  - Built Up Area - Impervious
  - Deciduous Forest
  - Built Up Area - Pervious
  - Tilled
  - Forest





**J.F. Sabourin and Associates Inc.**  
WATER RESOURCES AND ENVIRONMENTAL CONSULTANTS  
52 Springbrook Drive  
Ottawa, ON, K2S 1B9

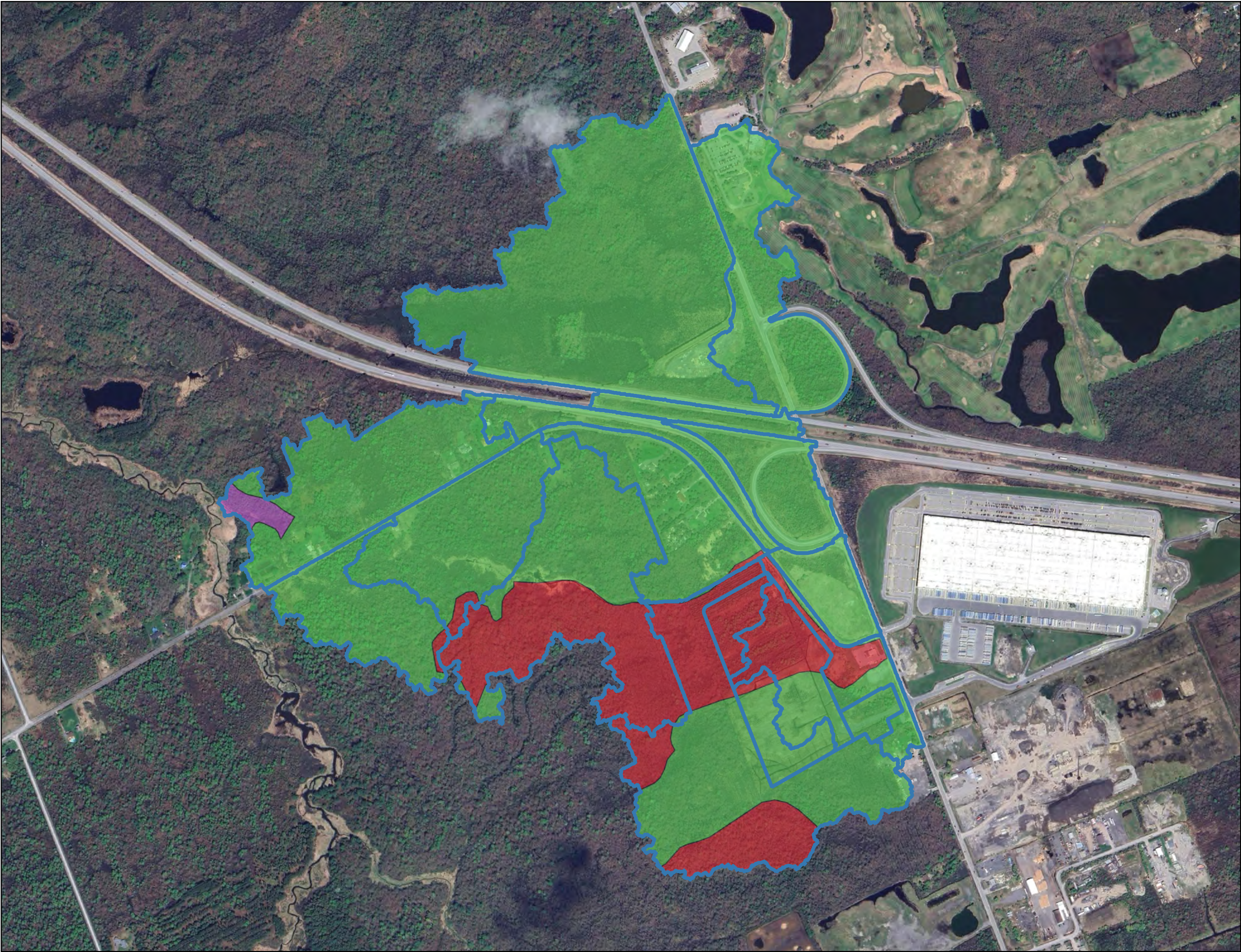
(613) 836-3884  
www.jfsa.com

Thunder Road Partnership

6150 Thunder Road

Figure C2 - Land Use

|         |             |
|---------|-------------|
| PROJECT | 2120(01)-21 |
| DRAWN   | JZ          |
| DATE    | AUG 2024    |



- Legend**
- Drainage Areas
  - Soil Type
    - ALLENDALE (C)
    - CHENEY (C)
    - ERODED CHANNEL (N)

SCALE: 1:9000

0 200 400 m

 **J.F. Sabourin and Associates Inc.**  
WATER RESOURCES AND ENVIRONMENTAL CONSULTANTS  
52 Springbrook Drive (613) 836-3884  
Ottawa, ON, K2S 1B9 www.jfsa.com

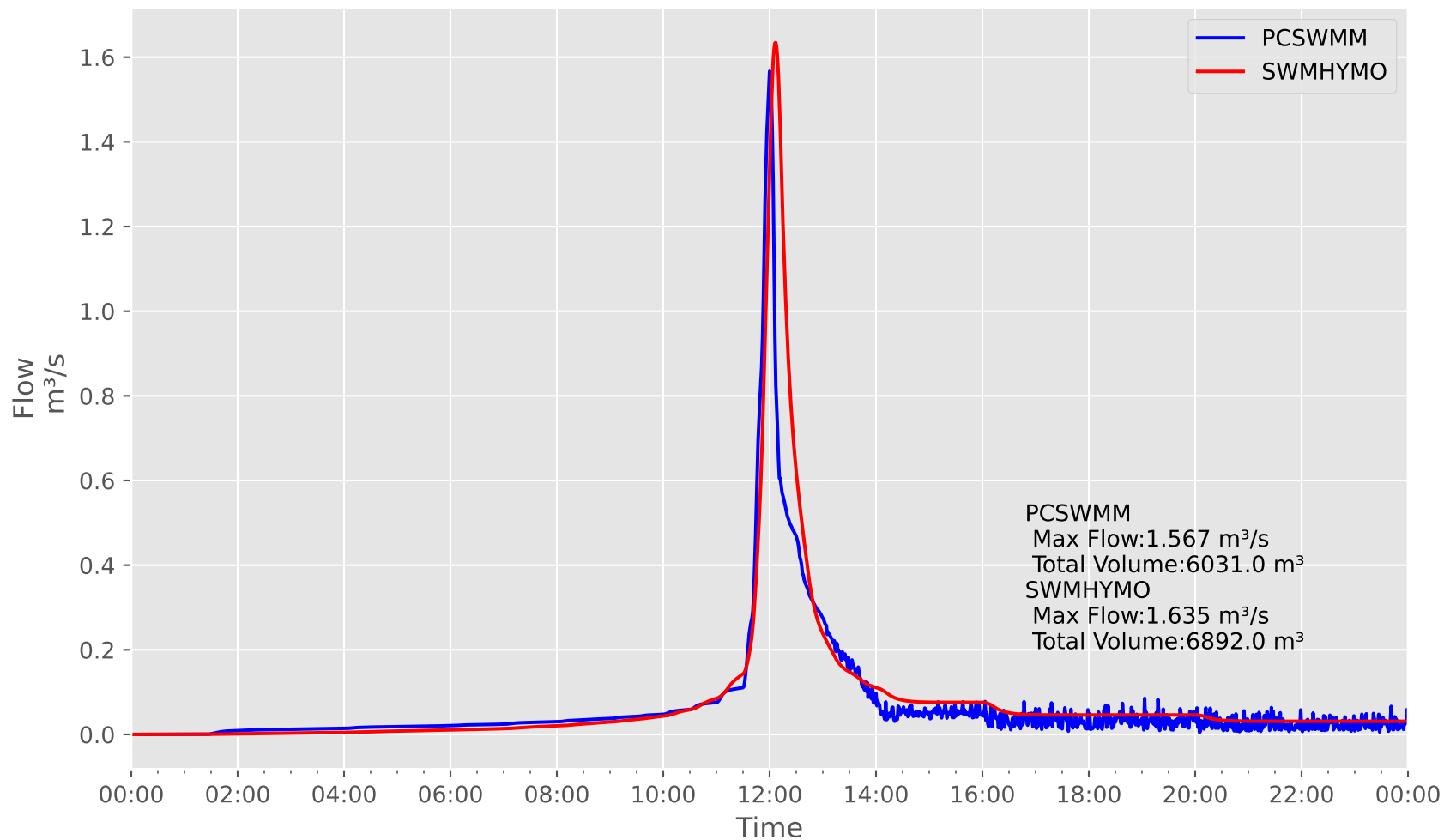
Thunder Road Partnership

6150 Thunder Road

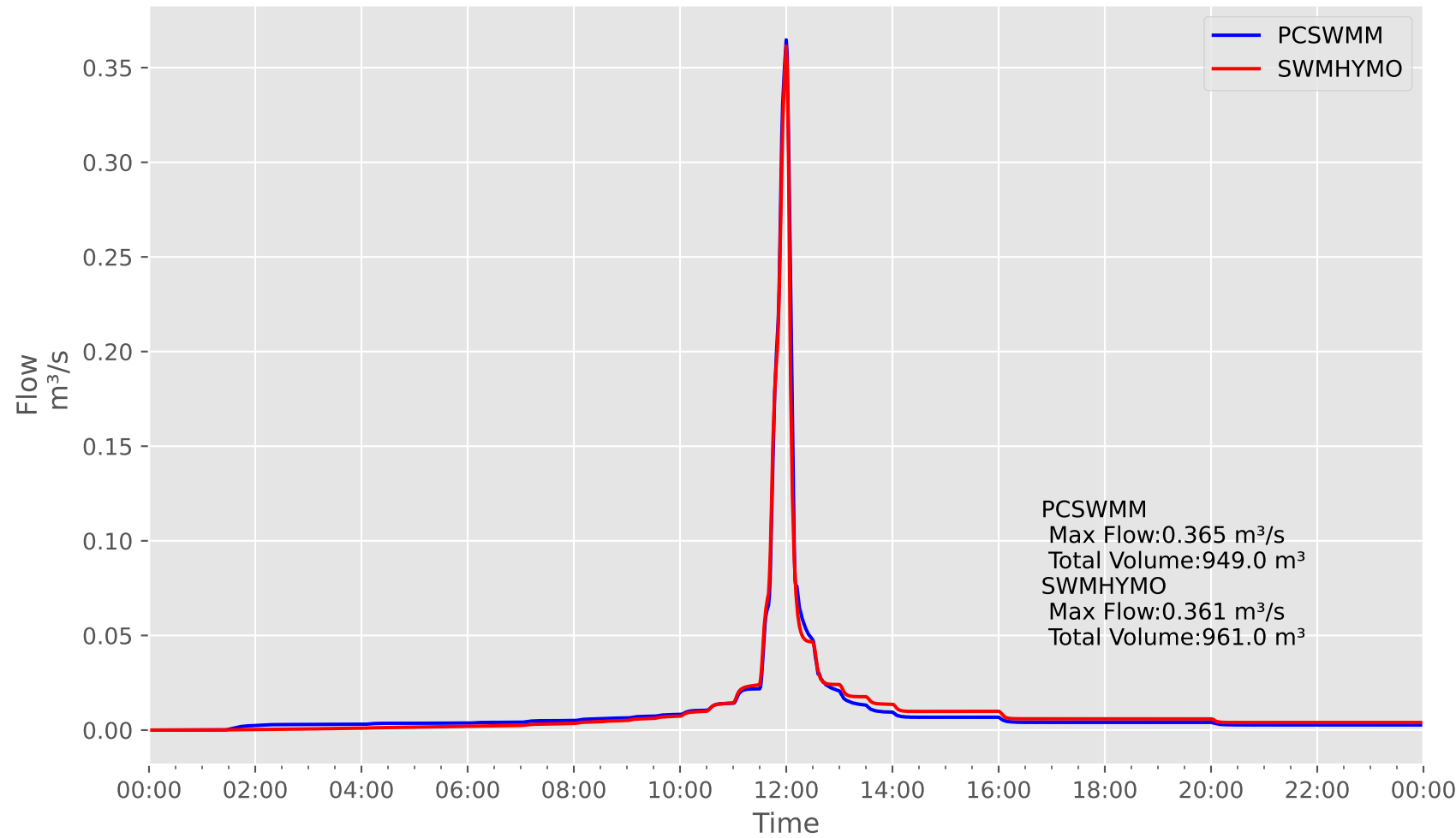
Figure C3 - Soils

|         |             |
|---------|-------------|
| PROJECT | 2120(01)-21 |
| DRAWN   | JZ          |
| DATE    | AUG 2024    |

Pond1-100YrSCS24Hr



# Pond2-100YrSCS24Hr



```

1 20 Metric units / ID numbers OFF
2 *#*****
3 *# SWMHYMO / INPUT DATA FILE
4 *#*****
5 *# Project Name: [THUNDER ROAD] Project Number: [2128]
6 *# Date : 04-28-2021
7 *# Modeller : [J.B]
8 *# Company : JFSAinc.
9 *# License # : 2549237
10 *#*****
11 * Model Developed to assess the post development erosion/hydrologic conditions on the
    Bear Brook
12 * tributary near 6150 Thunder Road
13 *#*****
14 *#*****
15 START TZERO=[1967.0101], METOUT=[2], NSTORM=[0], NRUN=[1967]
16 *% [""] <-- storm filename, one per line for NSTORM time
17 *%-----|-----
18 *# Ottawa International Airport - April 1st to October 31st
19 READ AES DATA AES_FILENAME=["YOW_1967_2007.123"],
20 IELEM=[123], START_DATE=[0], END_DATE=[-213]
21 *%-----|-----
22 COMPUTE API APII=[50], APIK=[0.90]/day
23 *%-----|-----
24 * DRAINAGE AREAS NORTH OF HIGHWAY
25 *%-----|-----
26 CONTINUOUS NASHYD NHYD=["NORTH-1"], DT=[5](min), AREA=[34.701](ha),
27 DWF=[0](cms), CN/C=[38.1], IA=[4.67](mm), N=[3], TP=[4.12](hrs),
28 Continuous simulation parameters:
29 IaRECper=[6](hrs),
30 SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
31 InterEventTime=[12](hrs),
32 Baseflow simulation parameters:
33 BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
34 VHydCond=[.02](mm/hr), END=-1
35 *%-----|-----
36 CONTINUOUS NASHYD NHYD=["NORTH-2"], DT=[5](min), AREA=[12.444](ha),
37 DWF=[0](cms), CN/C=[53.0], IA=[4.67](mm), N=[3], TP=[1.29](hrs),
38 Continuous simulation parameters:
39 IaRECper=[6](hrs),
40 SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
41 InterEventTime=[12](hrs),
42 Baseflow simulation parameters:
43 BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
44 VHydCond=[.02](mm/hr), END=-1
45 *%-----|-----
46 CONTINUOUS NASHYD NHYD=["HWY-1"], DT=[5](min), AREA=[2.364](ha),
47 DWF=[0](cms), CN/C=[81.7], IA=[4.67](mm), N=[3], TP=[1.21](hrs),
48 Continuous simulation parameters:
49 IaRECper=[6](hrs),
50 SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
51 InterEventTime=[12](hrs),
52 Baseflow simulation parameters:
53 BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
54 VHydCond=[.02](mm/hr), END=-1
55 *%-----|-----
56 *ADD AREAS UPSTREAM OF HIGHWAY
57 ADD HYD NHYDsum=["J1"], NHYDs to add=["NORTH-1"+"NORTH-2"+"HWY-1"]
58 *%-----|-----
59 * ROUTE UPSTREAM FLOWS TO THUNDER ROAD
60 ROUTE CHANNEL NHYDout=["R1"], NHYDin=["J1"], RDT=[5](min),
61 CHLGTH=[.478](m), CHSLOPE=[0.44](%), FPSLOPE=[0.44](%),
62 SECNUM=[1], NSEG=[3]
63 ( SEGROUGH, SEGDIST (m))=[0.05, 2.49, -0.035, 8.73, 0.05, 26.18] NSEG
    times
64 ( DISTANCE (m), ELEVATION (m))=[0, 76.83]
65 [1.25, 76.8]
66 [2.49, 76.64]
67 [3.74, 76.45]

```

```

68 ..... [4.99, 76.22]
69 ..... [6.23, 76.3]
70 ..... [7.48, 76.52]
71 ..... [8.73, 76.58]
72 ..... [9.97, 76.61]
73 ..... [22.44, 76.62]
74 ..... [23.69, 76.7]
75 ..... [24.93, 76.75]
76 ..... [26.18, 76.85]
77 *%------|-----
78 * DRAINAGE AREAS AROUND HIGHWAY INTERCHANGE
79 *%------|-----
80 CONTINUOUS NASHYD NHYD=["INT-1"], DT=[5](min), AREA=[4.388](ha),
81 DWF=[0](cms), CN/C=[60.4], IA=[4.67](mm), N=[3], TP=[1.66](hrs),
82 Continuous simulation parameters:
83 IaRECper=[6](hrs),
84 SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
85 InterEventTime=[12](hrs),
86 Baseflow simulation parameters:
87 BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
88 VHydCond=[.02](mm/hr), END=-1
89 *%------|-----
90 CONTINUOUS NASHYD NHYD=["INT-2"], DT=[5](min), AREA=[3.61](ha),
91 DWF=[0](cms), CN/C=[47.4], IA=[4.67](mm), N=[3], TP=[0.95](hrs),
92 Continuous simulation parameters:
93 IaRECper=[6](hrs),
94 SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
95 InterEventTime=[12](hrs),
96 Baseflow simulation parameters:
97 BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
98 VHydCond=[.02](mm/hr), END=-1
99 *%------|-----
100 CONTINUOUS NASHYD NHYD=["A3A"], DT=[5](min), AREA=[3.84](ha),
101 DWF=[0](cms), CN/C=[58.4], IA=[4.67](mm), N=[3], TP=[1.46](hrs),
102 Continuous simulation parameters:
103 IaRECper=[6](hrs),
104 SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
105 InterEventTime=[12](hrs),
106 Baseflow simulation parameters:
107 BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
108 VHydCond=[.02](mm/hr), END=-1
109 *%------|-----
110 CONTINUOUS NASHYD NHYD=["A3B"], DT=[5](min), AREA=[5.294](ha),
111 DWF=[0](cms), CN/C=[42.6], IA=[4.67](mm), N=[3], TP=[1.26](hrs),
112 Continuous simulation parameters:
113 IaRECper=[6](hrs),
114 SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
115 InterEventTime=[12](hrs),
116 Baseflow simulation parameters:
117 BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
118 VHydCond=[.02](mm/hr), END=-1
119 *%------|-----
120 CONTINUOUS NASHYD NHYD=["A3C"], DT=[5](min), AREA=[1.205](ha),
121 DWF=[0](cms), CN/C=[37.8], IA=[4.67](mm), N=[3], TP=[0.87](hrs),
122 Continuous simulation parameters:
123 IaRECper=[6](hrs),
124 SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
125 InterEventTime=[12](hrs),
126 Baseflow simulation parameters:
127 BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
128 VHydCond=[.02](mm/hr), END=-1
129 *%------|-----
130 *Route runoff from north site lands through road side ditch (500m @ 0.14%)
131 ROUTE CHANNEL NHYDout=["A3C-R"], NHYDin=["A3C"], RDT=[5](min),
132 CHLGTH=[500](m), CHSLOPE=[0.14](%), FPSLOPE=[0.14](%),
133 SECNUM=[1], NSEG=[3]
134 (SEGROUGH, SEGDIST (m))=[0.05, 2.95, -0.035, 7.38, 0.05, 10.33] NSEG
times
135 (DISTANCE (m), ELEVATION (m))=[0.00, 76.58]

```

```

136 ..... [1.48, 76.57]
137 ..... [2.95, 76.49]
138 ..... [4.43, 76.15]
139 ..... [5.90, 76.11]
140 ..... [7.38, 76.58]
141 ..... [8.85, 76.95]
142 ..... [10.33, 77.20]
143 ..... [-1, -1]
144 *%-----|-----
145 CONTINUOUS NASHYD NHYD=["INT-3"], DT=[5](min), AREA=[5.712](ha),
146 DWF=[0](cms), CN/C=[58.5 ], IA=[4.67](mm), N=[3], TP=[0.89 ](hrs),
147 Continuous simulation parameters:
148 IaRECper=[6](hrs),
149 SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
150 InterEventTime=[12](hrs),
151 Baseflow simulation parameters:
152 BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
153 VHydCond=[.02](mm/hr), END=-1
154 *%-----|-----
155 ADD HYD NHYDsum=["J2"], NHYDs to
156 add=["R1"+"INT-1"+"INT-2"+"INT-3"+"A3A"+"A3B"+"A3C-R"]
157 *%-----|-----
158 ROUTE CHANNEL NHYDout=["R2"], NHYDin=["J2"], RDT=[5](min),
159 CHLGTH=[ 359 ](m), CHSLOPE=[0.56](%), FPSLOPE=[0.56](%),
160 SECNUM=[ 1 ], NSEG=[ 3 ]
161 ( SEGROUGH, SEGDIST (m))=[0.05, 15.18, -0.035, 25.29, 0.05, 30.35]
162 NSEG times
163 ( DISTANCE (m), ELEVATION (m))=[0, 77.2]
164 ..... [1.26, 77.14]
165 ..... [2.53, 77.09]
166 ..... [6.32, 77.02]
167 ..... [7.59, 77.01]
168 ..... [8.85, 76.99]
169 ..... [11.38, 76.96]
170 ..... [13.91, 76.92]
171 ..... [15.18, 76.86]
172 ..... [16.44, 76.63]
173 ..... [17.71, 76.28]
174 ..... [18.97, 76.24]
175 ..... [20.23, 76.23]
176 ..... [21.5, 76.33]
177 ..... [22.76, 76.62]
178 ..... [24.03, 76.73]
179 ..... [25.29, 76.8]
180 ..... [27.82, 76.8]
181 ..... [29.09, 76.81]
182 ..... [30.35, 77]
183 ..... [-1, -1]
184 *%-----|-----
185 * DRAINAGE AREAS DOPWNSTREAM OF THUNDERROAD
186 *%-----|-----
187 CONTINUOUS NASHYD NHYD=["A1A"], DT=[5](min), AREA=[21.435](ha),
188 DWF=[0](cms), CN/C=[36.1 ], IA=[4.67](mm), N=[3], TP=[1.68](hrs),
189 Continuous simulation parameters:
190 IaRECper=[6](hrs),
191 SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
192 InterEventTime=[12](hrs),
193 Baseflow simulation parameters:
194 BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
195 VHydCond=[.02](mm/hr), END=-1
196 *%-----|-----
197 CONTINUOUS NASHYD NHYD=["A1B"], DT=[5](min), AREA=[4.701](ha),
198 DWF=[0](cms), CN/C=[44.6 ], IA=[4.67](mm), N=[3], TP=[1.72 ](hrs),
199 Continuous simulation parameters:
200 IaRECper=[6](hrs),
201 SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
202 InterEventTime=[12](hrs),
203 Baseflow simulation parameters:
204 BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),

```

```

203 ..... VHydCond=[.02](mm/hr), END=-1
204 *%-----|
205 CONTINUOUS NASHYD ..... NHYD=["A2"], DT=[5](min), AREA=[9.144](ha),
206 ..... DWF=[0](cms), CN/C=[68.4 ], IA=[4.67](mm), N=[3], TP=[1.12 ](hrs),
207 ..... Continuous simulation parameters:
208 ..... IaRECper=[6](hrs),
209 ..... SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
210 ..... InterEventTime=[12](hrs),
211 ..... Baseflow simulation parameters:
212 ..... BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
213 ..... VHydCond=[.02](mm/hr), END=-1
214 *%-----|
215 ADD HYD ..... NHYDsum=["J3"], NHYDs to add=["R2"+"A1A"+"A1B"+"A2"]
216 *%-----|
217 ROUTE CHANNEL ..... NHYDout=["R3"], NHYDin=["J3"], RDT=[5](min),
218 ..... CHLGTH=[ 396 ](m), CHSLOPE=[0.305](%), FPSLOPE=[0.305](%),
219 ..... SECNUM=[ 1 ], NSEG=[ 3 ]
220 ..... ( SEGROUGH, SEGDIST (m))=[0.05, 20.3, -0.035, 25.43, 0.05, 43.65]
221 ..... NSEG times
222 ..... ( DISTANCE (m), ELEVATION (m))=[0, 75.94]
223 ..... [5.08, 75.73]
224 ..... [10.15, 75.63]
225 ..... [15.23, 75.56]
226 ..... [20.3, 75.36]
227 ..... [21.32, 75.15]
228 ..... [22.33, 75.04]
229 ..... [23.35, 74.98]
230 ..... [24.36, 75.13]
231 ..... [25.38, 75.21]
232 ..... [30.45, 75.36]
233 ..... [35.53, 75.5]
234 ..... [40.61, 75.85]
235 ..... [43.65, 76.04]
236 ..... [-1, -1]
237 *%-----|
238 CONTINUOUS NASHYD ..... NHYD=["SOUTH-1"], DT=[5](min), AREA=[20.21](ha),
239 ..... DWF=[0](cms), CN/C=[35.5 ], IA=[4.67](mm), N=[3], TP=[1.4 ](hrs),
240 ..... Continuous simulation parameters:
241 ..... IaRECper=[6](hrs),
242 ..... SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
243 ..... InterEventTime=[12](hrs),
244 ..... Baseflow simulation parameters:
245 ..... BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
246 ..... VHydCond=[.02](mm/hr), END=-1
247 *%-----|
248 ADD HYD ..... NHYDsum=["J4"], NHYDs to add=["R3"+"SOUTH-1"]
249 *%-----|
250 ROUTE CHANNEL ..... NHYDout=["R4"], NHYDin=["J4"], RDT=[5](min),
251 ..... CHLGTH=[ 482 ](m), CHSLOPE=[0.41](%), FPSLOPE=[0.41](%),
252 ..... SECNUM=[ 1 ], NSEG=[ 3 ]
253 ..... ( SEGROUGH, SEGDIST (m))=[0.05, 20.48, -0.035, 24.1, 0.05, 40.97]
254 ..... NSEG times
255 ..... ( DISTANCE (m), ELEVATION (m))=[0.00, 75.19]
256 ..... [4.82, 75.02]
257 ..... [10.84, 74.46]
258 ..... [20.48, 73.88]
259 ..... [21.69, 73.71]
260 ..... [22.89, 73.79]
261 ..... [24.1, 74.07]
262 ..... [25.3, 74.18]
263 ..... [30.12, 74.6]
264 ..... [34.94, 74.69]
265 ..... [40.97, 75.14]
266 ..... [-1, -1]
267 *%-----|
268 CONTINUOUS NASHYD ..... NHYD=["SOUTH-2"], DT=[5](min), AREA=[11.612](ha),
269 ..... DWF=[0](cms), CN/C=[36.7 ], IA=[4.67](mm), N=[3], TP=[0.96 ](hrs),
270 ..... Continuous simulation parameters:
271 ..... IaRECper=[6](hrs),

```

```

270 ..... SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
271 ..... InterEventTime=[12](hrs),
272 ..... Baseflow simulation parameters:
273 ..... BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
274 ..... VHydCond=[.02](mm/hr), END=-1
275 *%-----|
276 ADD HYD ..... NHYDsum=["J5"], NHYDs to add=["R4"+"SOUTH-2"]
277 *%-----|
278 ROUTE CHANNEL ..... NHYDout=["R5"], NHYDin=["J5"], RDT=[5](min),
279 ..... CHLGTH=[181](m), CHSLOPE=[0.5](%), FPSLOPE=[0.5](%),
280 ..... SECNUM=[1], NSEG=[3]
281 ..... ( SEGROUGH, SEGDIST (m))=[0.05, 42.50, -0.035, 47.69, 0.05, 65.31]
282 ..... NSEG times
283 ..... ( DISTANCE (m), ELEVATION (m))=[0.000, 75.10]
284 ..... [10.37, 74.34]
285 ..... [20.73, 73.72]
286 ..... [30.06, 73.11]
287 ..... [42.50, 72.86]
288 ..... [45.61, 72.59]
289 ..... [47.69, 72.82]
290 ..... [60.13, 73.68]
291 ..... [65.31, 74.98]
292 ..... [-1, -1]
293 *%-----|
294 CONTINUOUS NASHYD ..... NHYD=["SOUTH-3"], DT=[5](min), AREA=[7.982](ha),
295 ..... DWF=[0](cms), CN/C=[42.6], IA=[4.67](mm), N=[3], TP=[0.89](hrs),
296 ..... Continuous simulation parameters:
297 ..... IaRECper=[6](hrs),
298 ..... SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
299 ..... InterEventTime=[12](hrs),
300 ..... Baseflow simulation parameters:
301 ..... BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
302 ..... VHydCond=[.02](mm/hr), END=-1
303 *%-----|
304 ADD HYD ..... NHYDsum=["J6"], NHYDs to add=["R5"+"SOUTH-3"]
305 *%-----|
306 SAVE HYD ..... NHYD=["J6"], # OF PCYCLES=[-1], ICASEsh=[1]
307 ..... HYD_COMMENT=["J6-Bearbrook Tributary Upstream of Thunder Road
308 ..... Crossing"]
309 *%-----|
310 ROUTE CHANNEL ..... NHYDout=["R6"], NHYDin=["J6"], RDT=[5](min),
311 ..... CHLGTH=[323](m), CHSLOPE=[0.44](%), FPSLOPE=[0.44](%),
312 ..... SECNUM=[1], NSEG=[3]
313 ..... ( SEGROUGH, SEGDIST (m))=[0.05, 20.48, -0.035, 24.1, 0.05, 40.97]
314 ..... NSEG times
315 ..... ( DISTANCE (m), ELEVATION (m))=[0, 75.19]
316 ..... [4.82, 75.02]
317 ..... [10.84, 74.46]
318 ..... [20.48, 73.88]
319 ..... [21.69, 73.71]
320 ..... [22.89, 73.79]
321 ..... [24.1, 74.07]
322 ..... [25.3, 74.18]
323 ..... [30.12, 74.6]
324 ..... [34.94, 74.69]
325 ..... [40.97, 75.14]
326 ..... [-1, -1]
327 *%-----|
328 CONTINUOUS NASHYD ..... NHYD=["SOUTH-4"], DT=[5](min), AREA=[14.985](ha),
329 ..... DWF=[0](cms), CN/C=[39.5], IA=[4.67](mm), N=[3], TP=[1.23](hrs),
330 ..... Continuous simulation parameters:
331 ..... IaRECper=[6](hrs),
332 ..... SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
333 ..... InterEventTime=[12](hrs),
334 ..... Baseflow simulation parameters:
335 ..... BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
336 ..... VHydCond=[.02](mm/hr), END=-1
337 *%-----|
338 ADD HYD ..... NHYDsum=["Total"], NHYDs to add=["R6"+"SOUTH-4"]

```

```

336 *%-----|-----|
337 *#=====
338 *          DESIGN STORMS
339 *#=====
340 *#####
341 *# CONTINUOUS RAINFALL DATA
342 *#####
343 *#*****
344 *# STORMS
345 *#*****
346 START.....TZERO=[1968.0401], METOUT=[2], NSTORM=[0], NRUN=[1968]
347 *%-----|-----|
348 START.....TZERO=[1969.0401], METOUT=[2], NSTORM=[0], NRUN=[1969]
349 *%-----|-----|
350 START.....TZERO=[1970.0401], METOUT=[2], NSTORM=[0], NRUN=[1970]
351 *%-----|-----|
352 START.....TZERO=[1971.0401], METOUT=[2], NSTORM=[0], NRUN=[1971]
353 *%-----|-----|
354 START.....TZERO=[1972.0401], METOUT=[2], NSTORM=[0], NRUN=[1972]
355 *%-----|-----|
356 START.....TZERO=[1973.0401], METOUT=[2], NSTORM=[0], NRUN=[1973]
357 *%-----|-----|
358 START.....TZERO=[1974.0401], METOUT=[2], NSTORM=[0], NRUN=[1974]
359 *%-----|-----|
360 START.....TZERO=[1975.0401], METOUT=[2], NSTORM=[0], NRUN=[1975]
361 *%-----|-----|
362 START.....TZERO=[1976.0401], METOUT=[2], NSTORM=[0], NRUN=[1976]
363 *%-----|-----|
364 START.....TZERO=[1977.0401], METOUT=[2], NSTORM=[0], NRUN=[1977]
365 *%-----|-----|
366 START.....TZERO=[1978.0401], METOUT=[2], NSTORM=[0], NRUN=[1978]
367 *%-----|-----|
368 START.....TZERO=[1979.0401], METOUT=[2], NSTORM=[0], NRUN=[1979]
369 *%-----|-----|
370 START.....TZERO=[1980.0401], METOUT=[2], NSTORM=[0], NRUN=[1980]
371 *%-----|-----|
372 START.....TZERO=[1981.0401], METOUT=[2], NSTORM=[0], NRUN=[1981]
373 *%-----|-----|
374 START.....TZERO=[1982.0401], METOUT=[2], NSTORM=[0], NRUN=[1982]
375 *%-----|-----|
376 START.....TZERO=[1983.0401], METOUT=[2], NSTORM=[0], NRUN=[1983]
377 *%-----|-----|
378 START.....TZERO=[1984.0401], METOUT=[2], NSTORM=[0], NRUN=[1984]
379 *%-----|-----|
380 START.....TZERO=[1985.0401], METOUT=[2], NSTORM=[0], NRUN=[1985]
381 *%-----|-----|
382 START.....TZERO=[1986.0401], METOUT=[2], NSTORM=[0], NRUN=[1986]
383 *%-----|-----|
384 START.....TZERO=[1987.0401], METOUT=[2], NSTORM=[0], NRUN=[1987]
385 *%-----|-----|
386 START.....TZERO=[1988.0401], METOUT=[2], NSTORM=[0], NRUN=[1988]
387 *%-----|-----|
388 START.....TZERO=[1989.0401], METOUT=[2], NSTORM=[0], NRUN=[1989]
389 *%-----|-----|
390 START.....TZERO=[1990.0401], METOUT=[2], NSTORM=[0], NRUN=[1990]
391 *%-----|-----|
392 START.....TZERO=[1991.0401], METOUT=[2], NSTORM=[0], NRUN=[1991]
393 *%-----|-----|
394 START.....TZERO=[1992.0401], METOUT=[2], NSTORM=[0], NRUN=[1992]
395 *%-----|-----|
396 START.....TZERO=[1993.0401], METOUT=[2], NSTORM=[0], NRUN=[1993]
397 *%-----|-----|
398 START.....TZERO=[1994.0401], METOUT=[2], NSTORM=[0], NRUN=[1994]
399 *%-----|-----|
400 START.....TZERO=[1995.0401], METOUT=[2], NSTORM=[0], NRUN=[1995]
401 *%-----|-----|
402 START.....TZERO=[1996.0401], METOUT=[2], NSTORM=[0], NRUN=[1996]
403 *%-----|-----|
404 START.....TZERO=[1997.0401], METOUT=[2], NSTORM=[0], NRUN=[1997]

```

```
405  *%------|-----|
406  START.....TZERO=[1998.0401], METOUT=[2], NSTORM=[0], NRUN=[1998]
407  *%------|-----|
408  START.....TZERO=[1999.0401], METOUT=[2], NSTORM=[0], NRUN=[1999]
409  *%------|-----|
410  START.....TZERO=[2000.0401], METOUT=[2], NSTORM=[0], NRUN=[2000]
411  *%------|-----|
412  START.....TZERO=[2002.0401], METOUT=[2], NSTORM=[0], NRUN=[2002]
413  *%------|-----|
414  START.....TZERO=[2003.0401], METOUT=[2], NSTORM=[0], NRUN=[2003]
415  *%------|-----|
416  START.....TZERO=[2004.0401], METOUT=[2], NSTORM=[0], NRUN=[2004]
417  *%------|-----|
418  START.....TZERO=[2006.0401], METOUT=[2], NSTORM=[0], NRUN=[2006]
419  *%------|-----|
420  START.....TZERO=[2007.0401], METOUT=[2], NSTORM=[0], NRUN=[2007]
421  *%------|-----|
422  FINISH
423
```

```
00001 *****
00002
00003 SSSSS W W M M H H Y Y M M M 0 0 0 222 000 11 5555 *****
00004 S W W M M M H H Y Y M M M 0 0 0 2 0 0 11 5
00005 SSSSS W W M M M H H Y Y M M M 0 0 0 2 0 0 11 5 Ver 5.900
00006 S W W M M M H H Y Y M M M 0 0 0 222 0 0 11 555 FEB 2015
00007 SSSSS W W M M M H H Y Y M M M 0 0 0 2 0 0 11 5
00008 *****
00009 StormWater Management Hydrologic Model 222 000 11 555 *****
00010
00011 *****
00012 ***** SWHYND Ver 5.000 *****
00013 ***** A single event and continuous hydrologic simulation model *****
00014 ***** based on the principles of HYND and its successors *****
00015 ***** OTWMD-83 and OTWMD-89 *****
00016 *****
00017 ***** Distributed by: J.F. Sabourin and Associates Inc. *****
00018 ***** Ottawa, Ontario: (613) 856-3884 *****
00019 ***** Gatineau, Quebec: (819) 243-6858 *****
00020 ***** E-Mail: jsa@jfsa.com *****
00021 *****
00022 *****
00023 *****
00024 ***** Licensed user: JFSaInc. *****
00025 ***** SERIAL#: 2549237 *****
00026 *****
00027 *****
00028 *****
00029 *****
00030 *****
00031 ***** Max. number of rainfall points: 105408 *****
00032 ***** Max. number of flow points: 105408 *****
00033 *****
00034 *****
00035 *****
00036 ***** S U M M A R Y O U T P U T *****
00037 *****
00038 *****
00039 *****
00040 ***** RUN DATE: 2024-07-31 TIME: 16:06:00 RUN COUNTER: 000804 *****
00041 *****
00042 ***** * Input file: C:\Temp\202407-TUNMD_V4.0-Pre-Cont\TUNMD_V4.0-Pre-Cont.dat *****
00043 ***** * Output file: C:\Temp\202407-TUNMD_V4.0-Pre-Cont\TUNMD_V4.0-Pre-Cont.out *****
00044 ***** * Summary file: C:\Temp\202407-TUNMD_V4.0-Pre-Cont\TUNMD_V4.0-Pre-Cont.sum *****
00045 ***** * User comments: *****
00046 ***** 1. *****
00047 ***** 2. *****
00048 ***** 3. *****
00049 *****
00050 *****
00051 ***** SWHYND / INPUT DATA FILE *****
00052 *****
00053 ***** * Project Name: [THUNDER ROAD] Project Number: [2128] *****
00054 ***** * Date : 04-20-2021 *****
00055 ***** * Modeler : [J.B.] *****
00056 ***** * Company : JFSaInc. *****
00057 ***** * License # : 2549237 *****
00058 ***** * *****
00059 ***** * *****
00060 ***** * *****
00061 ***** ** END OF RUN : 1966 *****
00062 *****
00063 *****
00064 *****
00065 *****
00066 *****
00067 *****
00068 *****
00069 *****
00070 ***** RUN COMMAND *****
00071 ***** START *****
00072 ***** [TZERO = .00 hrs on 19670101] *****
00073 ***** [METOUT= 2 (1=imperial, 2=metric output)] *****
00074 ***** [NSTORE = 0] *****
00075 ***** [NRUN = 1967] *****
00076 *****
00077 ***** SWHYND / INPUT DATA FILE *****
00078 *****
00079 ***** * Project Name: [THUNDER ROAD] Project Number: [2128] *****
00080 ***** * Date : 04-20-2021 *****
00081 ***** * Modeler : [J.B.] *****
00082 ***** * Company : JFSaInc. *****
00083 ***** * License # : 2549237 *****
00084 ***** * *****
00085 ***** * *****
00086 ***** * *****
00087 ***** * Ottawa International Airport - April 1st to October 31st *****
00088 ***** R1967.C00002 *****
00089 ***** READ AES DATA *****
00090 ***** [Filename = Y0M.1967.2007.123 *****
00091 ***** [Start date= 1967.0101; End date= 1967.0802] *****
00092 ***** [DT= 60 min; Length= 360 hrs; Wetness: 41 Dryhrs= 356; PTO= 27.00] *****
00093 ***** Maximum average rainfall intensities over *****
00094 ***** 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs *****
00095 ***** 17.36 31.98 41.45 57.64 64.75 74.27 79.00 mm/hr *****
00096 ***** 17.36 22.90 22.90 23.20 23.20 23.20 23.20 27.00 mm *****
00097 ***** 19670725 19670725 19670725 19670725 19670725 19670725 19670725 19670725 date *****
00098 ***** Number of rainfall events per following interval time *****
00099 ***** 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs *****
00100 ***** 3 4 4 3 3 3 3 3 3 *****
00101 ***** Number of events with at least the following durations *****
00102 ***** 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs *****
00103 ***** 3 1 0 0 0 0 0 0 0 *****
00104 ***** R1967.C00003 *****
00105 ***** COMPUTE API *****
00106 ***** [APIIN= 50.00; APIID= 9000; APIID= 9956] *****
00107 ***** [APIIN= 50.00; APIID= 9956; APIID= 20.40] *****
00108 ***** R1967.C00004 *****
00109 ***** CONTINUOUS NASHYND 5.0 01:10NTH-1 34.70 .016 1967.0725.5.20 11.53 .427 .000 *****
00110 ***** [Cn= 36.1; W= 3.00; Tp= 1.60] *****
00111 ***** [IAREC= 6.00; SMIN=168.62; SMAX=*****; SK= .030] *****
00112 ***** [InterEventTime= 12.00] *****
00113 ***** R1967.C00005 *****
00114 ***** CONTINUOUS NASHYND 5.0 01:10NTH-2 12.44 .021 1967.0725.2.40 11.95 .443 .000 *****
00115 ***** [Cn= 36.1; W= 3.00; Tp= 1.60] *****
00116 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00117 ***** [InterEventTime= 12.00] *****
00118 ***** R1967.C00006 *****
00119 ***** CONTINUOUS NASHYND 5.0 01:10NTH-1 2.36 .012 1967.0725.2.35 13.05 .513 .000 *****
00120 ***** [Cn= 36.1; W= 3.00; Tp= 1.60] *****
00121 ***** [IAREC= 6.00; SMIN= 25.21; SMAX=168.09; SK= .030] *****
00122 ***** [InterEventTime= 12.00] *****
00123 ***** R1967.C00007 *****
00124 ***** CONTINUOUS NASHYND 5.0 01:10NTH-1 34.70 .016 1967.0725.5.20 11.53 n/a .000 *****
00125 ***** ADD HYD + 5.0 02:NORTH-2 12.44 .021 1967.0725.2.40 11.95 n/a .000 *****
00126 ***** + 5.0 02:NORTH-1 2.36 .012 1967.0725.2.35 13.05 n/a .000 *****
00127 ***** SUM 5.0 01:10NTH-1 34.70 .016 1967.0725.5.20 11.53 n/a .000 *****
00128 ***** R1967.C00008 *****
00129 ***** ROUTE CHANNEL -> 5.0 02:13 49.51 .043 1967.0725.2.45 11.74 n/a .000 *****
00130 ***** [RDT= 5.00] out-> 5.0 01:10 49.51 .043 1967.0725.3.05 11.74 n/a .000 *****
00131 ***** [L/S= 478.7 / 440 / 035] *****
00132 ***** [Vmax= 307.0 / 181.7 / 500 / 035] *****
00133 ***** R1967.C00009 *****
00134 ***** CONTINUOUS NASHYND 5.0 01:10NTH-1 4.39 .008 1967.0725.3.00 12.26 .454 .000 *****
00135 ***** [Cn= 36.1; W= 3.00; Tp= 1.60] *****
00136 ***** [IAREC= 6.00; SMIN= 67.24; SMAX=448.24; SK= .030] *****
00137 ***** [InterEventTime= 12.00] *****
00138 ***** R1967.C00010 *****
00139 ***** CONTINUOUS NASHYND 5.0 01:10NTH-2 3.61 .006 1967.0725.2.20 11.76 .436 .000 *****
00140 ***** [Cn= 36.1; W= 3.00; Tp= 1.60] *****
00141 ***** [IAREC= 6.00; SMIN=115.26; SMAX=768.40; SK= .030] *****
00142 ***** [InterEventTime= 12.00] *****
00143 ***** R1967.C00011 *****
00144 ***** CONTINUOUS NASHYND 5.0 01:10NTH-1 3.84 .007 1967.0725.2.50 12.16 .451 .000 *****
00145 ***** [Cn= 36.1; W= 3.00; Tp= 1.60] *****
00146 ***** [IAREC= 6.00; SMIN= 73.13; SMAX=487.55; SK= .030] *****
00147 ***** [InterEventTime= 12.00] *****
00148 ***** R1967.C00012 *****
00149 ***** CONTINUOUS NASHYND 5.0 01:10NTH-1 5.29 .009 1967.0725.2.40 11.62 .430 .000 *****
00150 ***** [Cn= 36.1; W= 3.00; Tp= 1.60] *****
00151 ***** [IAREC= 6.00; SMIN=141.94; SMAX=946.27; SK= .030] *****
00152 ***** [InterEventTime= 12.00] *****
00153 ***** R1967.C00013 *****
00154 ***** CONTINUOUS NASHYND 5.0 01:10NTH-1 1.21 .001 1967.0725.2.20 11.50 .426 .000 *****
00155 ***** [Cn= 36.1; W= 3.00; Tp= 1.60] *****
00156 ***** [IAREC= 6.00; SMIN=179.29; SMAX=*****; SK= .030] *****
00157 ***** [InterEventTime= 12.00] *****
00158 ***** R1967.C00014 *****
00159 ***** ROUTE CHANNEL -> 5.0 02:13 1.21 .001 1967.0725.2.20 11.50 n/a .000 *****
00160 ***** [RDT= 5.00] out-> 5.0 02:13 1.21 .001 1967.0725.2.20 11.50 n/a .000 *****
00161 ***** [L/S= 500.7 / 140 / 035] *****
00162 ***** [Vmax= 307.0 / 181.7 / 500 / 035] *****
00163 ***** R1967.C00015 *****
00164 ***** CONTINUOUS NASHYND 5.0 01:10NTH-3 5.71 .015 1967.0725.2.20 12.16 .451 .000 *****
00165 ***** [Cn= 36.1; W= 3.00; Tp= 1.60] *****
00166 ***** [IAREC= 6.00; SMIN= 73.13; SMAX=487.55; SK= .030] *****
00167 ***** [InterEventTime= 12.00] *****
00168 ***** R1967.C00016 *****
00169 ***** ADD HYD + 5.0 02:13 49.51 .043 1967.0725.3.05 11.74 n/a .000 *****
00170 ***** + 5.0 02:13 4.39 .008 1967.0725.3.00 12.26 n/a .000 *****
00171 ***** + 5.0 02:13 3.61 .006 1967.0725.2.20 11.76 n/a .000 *****
00172 ***** + 5.0 02:13 3.84 .007 1967.0725.2.50 12.16 n/a .000 *****
00173 ***** + 5.0 02:13 5.29 .009 1967.0725.2.40 11.62 n/a .000 *****
00174 ***** + 5.0 02:13 1.21 .001 1967.0725.2.20 11.50 n/a .000 *****
00175 ***** SUM 5.0 01:12 73.56 .080 1967.0725.2.45 11.82 n/a .000 *****
00176 ***** R1967.C00017 *****
00177 ***** ROUTE CHANNEL -> 5.0 02:12 73.56 .080 1967.0725.2.45 11.82 n/a .000 *****
00178 ***** [RDT= 5.00] out-> 5.0 01:12 73.56 .078 1967.0725.3.00 11.82 n/a .000 *****
00179 ***** [L/S= 359.7 / 500 / 035] *****
00180 *****
00181 ***** [Vmax= 324.0 / 181.7 / 500 / 035] *****
00182 ***** R1967.C00018 *****
00183 ***** CONTINUOUS NASHYND 5.0 01:10NTH-1 21.43 .017 1967.0725.3.00 11.47 .425 .000 *****
00184 ***** [Cn= 36.1; W= 3.00; Tp= 1.60] *****
00185 ***** [IAREC= 6.00; SMIN=154.47; SMAX=*****; SK= .030] *****
00186 ***** [InterEventTime= 12.00] *****
00187 ***** R1967.C00019 *****
00188 ***** CONTINUOUS NASHYND 5.0 01:10NTH-1 4.70 .005 1967.0725.3.05 11.66 .432 .000 *****
00189 ***** [Cn= 44.6; W= 3.00; Tp= 1.72] *****
00190 ***** [IAREC= 6.00; SMIN=154.47; SMAX=896.47; SK= .030] *****
00191 ***** [InterEventTime= 12.00] *****
00192 ***** R1967.C00020 *****
00193 ***** CONTINUOUS NASHYND 5.0 01:10NTH-1 9.14 .029 1967.0725.2.30 12.68 .469 .000 *****
00194 ***** [Cn= 68.4; W= 3.00; Tp= 1.12] *****
00195 ***** [IAREC= 6.00; SMIN= 48.16; SMAX=323.73; SK= .030] *****
00196 ***** [InterEventTime= 12.00] *****
00197 ***** R1967.C00021 *****
00198 ***** ADD HYD + 5.0 02:13 73.56 .078 1967.0725.3.00 11.82 n/a .000 *****
00199 ***** + 5.0 02:13 21.43 .017 1967.0725.3.00 11.47 n/a .000 *****
00200 ***** + 5.0 02:13 4.70 .005 1967.0725.3.05 11.66 n/a .000 *****
00201 ***** + 5.0 02:13 9.14 .029 1967.0725.2.30 12.68 n/a .000 *****
00202 ***** SUM 5.0 01:13 109.84 .125 1967.0725.2.50 11.81 n/a .000 *****
00203 ***** R1967.C00022 *****
00204 ***** ROUTE CHANNEL -> 5.0 02:13 109.84 .125 1967.0725.2.50 11.81 n/a .000 *****
00205 ***** [RDT= 5.00] out-> 5.0 01:13 109.84 .122 1967.0725.3.05 11.81 n/a .000 *****
00206 ***** [L/S= 396.7 / 305 / 035] *****
00207 ***** [Vmax= 340.0 / 190 / 035] *****
00208 ***** R1967.C00023 *****
00209 ***** CONTINUOUS NASHYND 5.0 01:10NTH-1 20.21 .017 1967.0725.2.45 11.44 .424 .000 *****
00210 ***** [Cn= 36.1; W= 3.00; Tp= 1.60] *****
00211 ***** [IAREC= 6.00; SMIN=204.20; SMAX=*****; SK= .030] *****
00212 ***** [InterEventTime= 12.00] *****
00213 ***** R1967.C00024 *****
00214 ***** ADD HYD + 5.0 02:13 109.84 .122 1967.0725.3.05 11.81 n/a .000 *****
00215 ***** + 5.0 02:13 20.21 .017 1967.0725.2.45 11.44 n/a .000 *****
00216 ***** + 5.0 02:13 120.05 .138 1967.0725.3.05 11.75 n/a .000 *****
00217 ***** R1967.C00025 *****
00218 ***** ROUTE CHANNEL -> 5.0 02:14 120.05 .138 1967.0725.3.05 11.75 n/a .000 *****
00219 ***** [RDT= 5.00] out-> 5.0 01:14 120.05 .133 1967.0725.3.25 11.75 n/a .000 *****
00220 ***** [L/S= 422.7 / 440 / 035] *****
00221 ***** [Vmax= 405.0 / 184 / 035] *****
00222 ***** R1967.C00026 *****
00223 ***** CONTINUOUS NASHYND 5.0 01:10NTH-2 11.61 .013 1967.0725.2.25 11.47 .425 .000 *****
00224 ***** [Cn= 36.1; W= 3.00; Tp= .96] *****
00225 ***** [IAREC= 6.00; SMIN=151.09; SMAX=*****; SK= .030] *****
00226 ***** [InterEventTime= 12.00] *****
00227 ***** R1967.C00027 *****
00228 ***** ADD HYD + 5.0 02:14 120.05 .133 1967.0725.3.25 11.75 n/a .000 *****
00229 ***** + 5.0 02:14 11.61 .013 1967.0725.2.25 11.47 n/a .000 *****
00230 ***** SUM 5.0 01:13 140.66 .141 1967.0725.3.20 11.73 n/a .000 *****
00231 ***** R1967.C00028 *****
00232 ***** ROUTE CHANNEL -> 5.0 02:14 140.66 .141 1967.0725.3.20 11.73 n/a .000 *****
00233 ***** [RDT= 5.00] out-> 5.0 01:15 140.66 .141 1967.0725.3.25 11.73 n/a .000 *****
00234 ***** [L/S= 181.7 / 500 / 035] *****
00235 ***** [Vmax= 362.0 / 160 / 035] *****
00236 ***** R1967.C00029 *****
00237 ***** CONTINUOUS NASHYND 5.0 01:10NTH-3 7.99 .012 1967.0725.2.20 11.62 .430 .000 *****
00238 ***** [Cn= 42.6; W= 3.00; Tp= .89] *****
00239 ***** [IAREC= 6.00; SMIN=141.94; SMAX=946.27; SK= .030] *****
00240 ***** [InterEventTime= 12.00] *****
00241 ***** R1967.C00030 *****
00242 ***** ADD HYD + 5.0 02:14 140.66 .141 1967.0725.3.25 11.73 n/a .000 *****
00243 ***** + 5.0 02:14 7.99 .012 1967.0725.2.20 11.62 n/a .000 *****
00244 ***** SUM 5.0 01:16 140.64 .147 1967.0725.3.20 11.72 n/a .000 *****
00245 ***** R1967.C00031 *****
00246 ***** SAVE HYD + 5.0 01:16 140.64 .147 1967.0725.3.20 11.72 n/a .000 *****
00247 ***** [Vmax= 362.0 / 160 / 035] *****
00248 ***** remark: 36-Bearbrook Tributary Upstream of Thunder Road Crossing *****
00249 ***** R1967.C00032 *****
00250 ***** ROUTE CHANNEL -> 5.0 02:16 140.64 .147 1967.0725.3.20 11.72 n/a .000 *****
00251 ***** [RDT= 5.00] out-> 5.0 01:16 140.64 .145 1967.0725.3.35 11.72 n/a .000 *****
00252 ***** [L/S= 422.7 / 440 / 035] *****
00253 ***** [Vmax= 422.0 / 185 / 035] *****
00254 ***** R1967.C00033 *****
00255 ***** CONTINUOUS NASHYND 5.0 01:10NTH-4 14.39 .016 1967.0725.2.35 11.53 .427 .000 *****
00256 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00257 ***** [IAREC= 6.00; SMIN=151.09; SMAX=*****; SK= .030] *****
00258 ***** [InterEventTime= 12.00] *****
00259 ***** R1967.C00034 *****
00260 ***** CONTINUOUS NASHYND 5.0 01:10NTH-4 14.84 .016 1967.0725.2.35 11.53 n/a .000 *****
00261 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00262 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00263 ***** [InterEventTime= 12.00] *****
00264 ***** R1967.C00035 *****
00265 ***** CONTINUOUS RAINFALL DATA *****
00266 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00267 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00268 ***** [InterEventTime= 12.00] *****
00269 ***** R1967.C00036 *****
00270 ***** CONTINUOUS RAINFALL DATA *****
00271 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00272 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00273 ***** [InterEventTime= 12.00] *****
00274 ***** R1967.C00037 *****
00275 ***** CONTINUOUS RAINFALL DATA *****
00276 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00277 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00278 ***** [InterEventTime= 12.00] *****
00279 ***** R1967.C00038 *****
00280 ***** CONTINUOUS RAINFALL DATA *****
00281 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00282 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00283 ***** [InterEventTime= 12.00] *****
00284 ***** R1967.C00039 *****
00285 ***** CONTINUOUS RAINFALL DATA *****
00286 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00287 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00288 ***** [InterEventTime= 12.00] *****
00289 ***** R1967.C00040 *****
00290 ***** CONTINUOUS RAINFALL DATA *****
00291 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00292 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00293 ***** [InterEventTime= 12.00] *****
00294 ***** R1967.C00041 *****
00295 ***** CONTINUOUS RAINFALL DATA *****
00296 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00297 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00298 ***** [InterEventTime= 12.00] *****
00299 ***** R1967.C00042 *****
00300 ***** CONTINUOUS RAINFALL DATA *****
00301 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00302 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00303 ***** [InterEventTime= 12.00] *****
00304 ***** R1967.C00043 *****
00305 ***** CONTINUOUS RAINFALL DATA *****
00306 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00307 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00308 ***** [InterEventTime= 12.00] *****
00309 ***** R1967.C00044 *****
00310 ***** CONTINUOUS RAINFALL DATA *****
00311 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00312 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00313 ***** [InterEventTime= 12.00] *****
00314 ***** R1967.C00045 *****
00315 ***** CONTINUOUS RAINFALL DATA *****
00316 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00317 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00318 ***** [InterEventTime= 12.00] *****
00319 ***** R1967.C00046 *****
00320 ***** CONTINUOUS RAINFALL DATA *****
00321 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00322 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00323 ***** [InterEventTime= 12.00] *****
00324 ***** R1967.C00047 *****
00325 ***** CONTINUOUS RAINFALL DATA *****
00326 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00327 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00328 ***** [InterEventTime= 12.00] *****
00329 ***** R1967.C00048 *****
00330 ***** CONTINUOUS RAINFALL DATA *****
00331 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00332 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00333 ***** [InterEventTime= 12.00] *****
00334 ***** R1967.C00049 *****
00335 ***** CONTINUOUS RAINFALL DATA *****
00336 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00337 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00338 ***** [InterEventTime= 12.00] *****
00339 ***** R1967.C00050 *****
00340 ***** CONTINUOUS RAINFALL DATA *****
00341 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00342 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00343 ***** [InterEventTime= 12.00] *****
00344 ***** R1967.C00051 *****
00345 ***** CONTINUOUS RAINFALL DATA *****
00346 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00347 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00348 ***** [InterEventTime= 12.00] *****
00349 ***** R1967.C00052 *****
00350 ***** CONTINUOUS RAINFALL DATA *****
00351 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00352 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00353 ***** [InterEventTime= 12.00] *****
00354 ***** R1967.C00053 *****
00355 ***** CONTINUOUS RAINFALL DATA *****
00356 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00357 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00358 ***** [InterEventTime= 12.00] *****
00359 ***** R1967.C00054 *****
00360 ***** CONTINUOUS RAINFALL DATA *****
00361 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00362 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00363 ***** [InterEventTime= 12.00] *****
00364 ***** R1967.C00055 *****
00365 ***** CONTINUOUS RAINFALL DATA *****
00366 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00367 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00368 ***** [InterEventTime= 12.00] *****
00369 ***** R1967.C00056 *****
00370 ***** CONTINUOUS RAINFALL DATA *****
00371 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00372 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00373 ***** [InterEventTime= 12.00] *****
00374 ***** R1967.C00057 *****
00375 ***** CONTINUOUS RAINFALL DATA *****
00376 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00377 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00378 ***** [InterEventTime= 12.00] *****
00379 ***** R1967.C00058 *****
00380 ***** CONTINUOUS RAINFALL DATA *****
00381 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00382 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00383 ***** [InterEventTime= 12.00] *****
00384 ***** R1967.C00059 *****
00385 ***** CONTINUOUS RAINFALL DATA *****
00386 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00387 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00388 ***** [InterEventTime= 12.00] *****
00389 ***** R1967.C00060 *****
00390 ***** CONTINUOUS RAINFALL DATA *****
00391 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00392 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00393 ***** [InterEventTime= 12.00] *****
00394 ***** R1967.C00061 *****
00395 ***** CONTINUOUS RAINFALL DATA *****
00396 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00397 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00398 ***** [InterEventTime= 12.00] *****
00399 ***** R1967.C00062 *****
00400 ***** CONTINUOUS RAINFALL DATA *****
00401 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00402 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00403 ***** [InterEventTime= 12.00] *****
00404 ***** R1967.C00063 *****
00405 ***** CONTINUOUS RAINFALL DATA *****
00406 ***** [Cn= 39.5; W= 3.00; Tp= 1.23] *****
00407 ***** [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030] *****
00408 ***** [InterEventTime= 12.00] *****
00409 ***** R1
```

```

00364 [L[RcE: 6.00; SMIN=141.94; SMAK=946.27; SK= .030]
00365 [InterEventTime= 12.00]
00366 # CONTINUOUS NASHYD 5.0 0.01A3C 1.21 .005 1968.0817 5:40 199.24 399 .000
00367 [Cn: 37.8; N: 3.00; Tpi: .87]
00368 [L[RcE: 6.00; SMIN=179.29; SMAK=*****; SK= .030]
00369 [InterEventTime= 12.00]
00370 # CONTINUOUS NASHYD 5.0 0.01A3C 1.21 .005 1968.0817 5:40 199.24 n/a .000
00371 [L[S/n: 500 / 560 / 035]
00372 [Vmax= .000; Dmax= .000]
00373 [L[RcE: 6.00; SMIN=141.94; SMAK=946.27; SK= .030]
00374 # CONTINUOUS NASHYD 5.0 0.01NT-3 5.71 .048 1968.0817 5:40 199.11 401 .000
00375 [Cn: 58.5; N: 3.00; Tpi: .80]
00376 [L[RcE: 6.00; SMIN=179.29; SMAK=487.55; SK= .030]
00377 [InterEventTime= 12.00]
00378 # CONTINUOUS NASHYD 5.0 0.01A3C 1.21 .005 1968.0817 5:40 199.24 n/a .000
00379 ADD HYD + 5.0 0.021A 49.51 .114 1968.0817 6:25 199.60 n/a .000
00380 # CONTINUOUS NASHYD 5.0 0.02INT-1 4.39 .022 1968.0817 6:25 200.22 n/a .000
00381 [RDT: 5.00] out<-> 5.0 0.02SOUTH-2 5.71 .048 1968.0817 6:25 199.59 n/a .000
00382 # CONTINUOUS NASHYD 5.0 0.01A3C 1.21 .005 1968.0817 5:40 199.24 n/a .000
00383 [L[S/n: 500 / 560 / 035]
00384 # CONTINUOUS NASHYD 5.0 0.02A3B 5.29 .019 1968.0817 6:05 199.41 n/a .000
00385 # CONTINUOUS NASHYD 5.0 0.02A3C-R 1.21 .002 1968.0817 6:20 199.24 n/a .000
00386 # CONTINUOUS NASHYD 5.0 0.02SOUTH-2 5.71 .048 1968.0817 6:25 199.59 n/a .000
00387 # R1968-000017-.....-D-TIN-DT-INHYD-.....-AREHA-PEAKS-Tpeakdate:hh:mm-.....-RWM-R-C-.....-D-WFMS
00388 # ROUTE CHANNEL > 5.0 0.02A3C 1.21 .005 1968.0817 5:40 199.24 n/a .000
00389 [RDT: 5.00] out<-> 5.0 0.01R2 73.56 .227 1968.0817 6:15 199.68 n/a .000
00390 [L[S/n: 359 / 560 / 035]
00391 [Vmax= .484; Dmax= .295]
00392 # R1968-000018-.....-D-TIN-DT-INHYD-.....-AREHA-PEAKS-Tpeakdate:hh:mm-.....-RWM-R-C-.....-D-WFMS
00393 # CONTINUOUS NASHYD 5.0 0.01SOUTH-1 20.21 .049 1968.0817 6:10 199.16 399 .000
00394 [Cn: 36.1; N: 3.00; Tpi: 1.60]
00395 # CONTINUOUS NASHYD 5.0 0.01NT-3 5.71 .048 1968.0817 5:40 199.11 401 .000
00396 [L[RcE: 6.00; SMIN=191.09; SMAK=*****; SK= .030]
00397 # R1968-000019-.....-D-TIN-DT-INHYD-.....-AREHA-PEAKS-Tpeakdate:hh:mm-.....-RWM-R-C-.....-D-WFMS
00398 # CONTINUOUS NASHYD 5.0 0.01SOUTH-1 20.21 .049 1968.0817 6:10 199.16 399 .000
00399 [Cn: 44.6; N: 3.00; Tpi: 1.72]
00400 [L[RcE: 6.00; SMIN=124.47; SMAK=896.47; SK= .030]
00401 [InterEventTime= 12.00]
00402 # R1968-000020-.....-D-TIN-DT-INHYD-.....-AREHA-PEAKS-Tpeakdate:hh:mm-.....-RWM-R-C-.....-D-WFMS
00403 # CONTINUOUS NASHYD 5.0 0.01SOUTH-1 20.21 .049 1968.0817 6:10 199.16 399 .000
00404 [Cn: 68.4; N: 3.00; Tpi: 1.12]
00405 [L[RcE: 6.00; SMIN=40.56; SMAK=323.73; SK= .030]
00406 [InterEventTime= 12.00]
00407 # R1968-000021-.....-D-TIN-DT-INHYD-.....-AREHA-PEAKS-Tpeakdate:hh:mm-.....-RWM-R-C-.....-D-WFMS
00408 ADD HYD + 5.0 0.021A 21.43 .047 1968.0817 6:30 199.20 n/a .000
00409 # CONTINUOUS NASHYD 5.0 0.02A3B 5.29 .019 1968.0817 6:05 199.41 n/a .000
00410 # CONTINUOUS NASHYD 5.0 0.02SOUTH-1 20.21 .049 1968.0817 6:10 199.16 399 .000
00411 [RDT: 5.00] out<-> 5.0 0.02A3C 1.21 .005 1968.0817 5:40 199.24 n/a .000
00412 # CONTINUOUS NASHYD 5.0 0.01A3C 1.21 .005 1968.0817 5:40 199.24 n/a .000
00413 # R1968-000022-.....-D-TIN-DT-INHYD-.....-AREHA-PEAKS-Tpeakdate:hh:mm-.....-RWM-R-C-.....-D-WFMS
00414 # ROUTE CHANNEL > 5.0 0.02A3C 1.21 .005 1968.0817 5:40 199.24 n/a .000
00415 # CONTINUOUS NASHYD 5.0 0.01R2 73.56 .227 1968.0817 6:15 199.68 n/a .000
00416 [L[S/n: 396 / 395 / 035]
00417 [Vmax= .484; Dmax= .295]
00418 # R1968-000023-.....-D-TIN-DT-INHYD-.....-AREHA-PEAKS-Tpeakdate:hh:mm-.....-RWM-R-C-.....-D-WFMS
00419 # CONTINUOUS NASHYD 5.0 0.01SOUTH-1 20.21 .049 1968.0817 6:10 199.16 399 .000
00420 [Cn: 35.5; N: 3.00; Tpi: 1.40]
00421 [L[RcE: 6.00; SMIN=229.39; SMAK=*****; SK= .030]
00422 [InterEventTime= 12.00]
00423 # R1968-000024-.....-D-TIN-DT-INHYD-.....-AREHA-PEAKS-Tpeakdate:hh:mm-.....-RWM-R-C-.....-D-WFMS
00424 ADD HYD + 5.0 0.02A3C 1.21 .005 1968.0817 5:40 199.24 n/a .000
00425 # CONTINUOUS NASHYD 5.0 0.02SOUTH-1 20.21 .049 1968.0817 6:10 199.16 399 .000
00426 # CONTINUOUS NASHYD 5.0 0.02A3B 5.29 .019 1968.0817 6:05 199.41 n/a .000
00427 # R1968-000025-.....-D-TIN-DT-INHYD-.....-AREHA-PEAKS-Tpeakdate:hh:mm-.....-RWM-R-C-.....-D-WFMS
00428 # CONTINUOUS NASHYD 5.0 0.01SOUTH-1 20.21 .049 1968.0817 6:10 199.16 399 .000
00429 [RDT: 5.00] out<-> 5.0 0.01R4 129.05 .389 1968.0817 6:45 199.58 n/a .000
00430 [L[S/n: 402 / 418 / 035]
00431 [Vmax= .532; Dmax= .285]
00432 # R1968-000026-.....-D-TIN-DT-INHYD-.....-AREHA-PEAKS-Tpeakdate:hh:mm-.....-RWM-R-C-.....-D-WFMS
00433 # CONTINUOUS NASHYD 5.0 0.01SOUTH-1 20.21 .049 1968.0817 6:10 199.16 399 .000
00434 [Cn: 36.7; N: 3.00; Tpi: .90]
00435 [L[RcE: 6.00; SMIN=151.94; SMAK=946.27; SK= .030]
00436 [InterEventTime= 12.00]
00437 # R1968-000027-.....-D-TIN-DT-INHYD-.....-AREHA-PEAKS-Tpeakdate:hh:mm-.....-RWM-R-C-.....-D-WFMS
00438 # CONTINUOUS NASHYD 5.0 0.02SOUTH-2 5.71 .048 1968.0817 6:25 199.59 n/a .000
00439 # CONTINUOUS NASHYD 5.0 0.02SOUTH-2 5.71 .048 1968.0817 6:25 199.59 n/a .000
00440 # CONTINUOUS NASHYD 5.0 0.02A3B 5.29 .019 1968.0817 6:05 199.41 n/a .000
00441 # R1968-000028-.....-D-TIN-DT-INHYD-.....-AREHA-PEAKS-Tpeakdate:hh:mm-.....-RWM-R-C-.....-D-WFMS
00442 # ROUTE CHANNEL > 5.0 0.02A3C 1.21 .005 1968.0817 5:40 199.24 n/a .000
00443 [RDT: 5.00] out<-> 5.0 0.01R5 140.66 .413 1968.0817 6:45 199.58 n/a .000
00444 [L[S/n: 181 / 500 / 035]
00445 [Vmax= .000; Dmax= .000]
00446 # R1968-000029-.....-D
```

---

**Page 2**

Page 3

```
01441> (Vmax=.562;Dmax=.183)
01442> R1973:C08012-----Dtain-ID:NYHD-----AREAH-APEAKcms-TpeakDate,h:mm-----Rvmm-R,C-----DwfCms
01443> CONTINUOUS NASHDY 5.0 01:ASIA 21.43 .076 1973.0808,21:25 262.89 .425 .000
01444> [Cm 26.1; N= 3.00; Tps=1.68]
01445> [IAREC= 6.00; SMIN=154.7; SMAX=896.47; SK= .030]
01446> [InterEventTime= 12.00]
01447> R1973:C08013-----Dtain-ID:NYHD-----AREAH-APEAKcms-TpeakDate,h:mm-----Rvmm-R,C-----DwfCms
01448> CONTINUOUS NASHDY 5.0 01:ASIA 4.70 .622 1973.0808,21:30 263.43 .426 .000
01449> [Cm 44.6; N= 3.00; Tps=1.72]
01450> [IAREC= 6.00; SMIN=154.7; SMAX=896.47; SK= .030]
01451> [InterEventTime= 12.00]
01452> R1973:C08020-----Dtain-ID:NYHD-----AREAH-APEAKcms-TpeakDate,h:mm-----Rvmm-R,C-----DwfCms
01453> CONTINUOUS NASHDY 5.0 01:ASIA 9.14 .130 1973.0808,20:50 266.14 .430 .000
01454> [Cm 64.1; N= 3.00; Tps=1.12]
01455> [IAREC= 6.00; SMIN=154.7; SMAX=323.73; SK= .030]
01456> [InterEventTime= 12.00]
01457> R1973:C08021-----Dtain-ID:NYHD-----AREAH-APEAKcms-TpeakDate,h:mm-----Rvmm-R,C-----DwfCms
01458> ADD HYD 5.0 02:R2 73.56 .357 1973.0808,21:15 263.85 n/a .000
01459> + 5.0 02:ASIA 21.43 .076 1973.0808,21:25 262.89 n/a .000
01460> SUM 5.0 01:AS 4.70 .622 1973.0808,21:30 263.43 n/a .000
01461> + 5.0 02:R2 73.56 .357 1973.0808,21:25 263.85 n/a .000
01462> [L/S= 500 / .140 / .035]
01463> R1973:C08022-----Dtain-ID:NYHD-----AREAH-APEAKcms-TpeakDate,h:mm-----Rvmm-R,C-----DwfCms
01464> ROUTE CHANNEL -> 5.0 02:J3 108.84 .574 1973.0808,21:10 263.83 n/a .000
01465> [RTD= 5.0] out-> 5.0 01:R3 108.84 .556 1973.0808,21:25 263.84 n/a .000
01466> [L/S= 396 / .305 / .035]
01467> (Vmax=.437;Dmax=.147)
01468> R1973:C08023-----Dtain-ID:NYHD-----AREAH-APEAKcms-TpeakDate,h:mm-----Rvmm-R,C-----DwfCms
01469> CONTINUOUS NASHDY 5.0 01:SOUTH-1 20.21 .078 1973.0808,21:10 262.80 .425 .000
01470> [Cm 36.5; N= 3.00; Tps=1.40]
01471> [IAREC= 6.00; SMIN=204.20; SMAX=946.27; SK= .030]
01472> [InterEventTime= 12.00]
01473> R1973:C08024-----Dtain-ID:NYHD-----AREAH-APEAKcms-TpeakDate,h:mm-----Rvmm-R,C-----DwfCms
01474> ADD HYD 5.0 02:R2 108.84 .558 1973.0808,21:25 263.84 n/a .000
01475> + 5.0 02:SOUTH-1 20.21 .078 1973.0808,21:10 262.80 n/a .000
01476> SUM 5.0 01:AS 129.05 .634 1973.0808,21:20 263.67 n/a .000
01477> R1973:C08025-----Dtain-ID:NYHD-----AREAH-APEAKcms-TpeakDate,h:mm-----Rvmm-R,C-----DwfCms
01478> ROUTE CHANNEL -> 5.0 02:J4 129.05 .634 1973.0808,21:20 263.67 n/a .000
01479> [RTD= 5.0] out-> 5.0 01:R4 129.05 .622 1973.0808,21:25 263.67 n/a .000
01480> [L/S= 482 / .410 / .035]
01481> (Vmax=.585;Dmax=.241)
01482> R1973:C08026-----Dtain-ID:NYHD-----AREAH-APEAKcms-TpeakDate,h:mm-----Rvmm-R,C-----DwfCms
01483> CONTINUOUS NASHDY 5.0 01:SOUTH-2 11.61 .064 1973.0808,20:45 262.89 .425 .000
01484> [Cm 36.1; N= 3.00; Tps=.96]
01485> [IAREC= 6.00; SMIN=154.7; SMAX=323.73; SK= .030]
01486> [InterEventTime= 12.00]
01487> R1973:C08027-----Dtain-ID:NYHD-----AREAH-APEAKcms-TpeakDate,h:mm-----Rvmm-R,C-----DwfCms
01488> ADD HYD 5.0 02:R4 129.05 .622 1973.0808,21:25 263.67 n/a .000
01489> + 5.0 02:SOUTH-2 11.61 .064 1973.0808,20:45 262.89 n/a .000
01490> SUM 5.0 01:AS 140.66 .605 1973.0808,21:30 263.61 n/a .000
01491> R1973:C08028-----Dtain-ID:NYHD-----AREAH-APEAKcms-TpeakDate,h:mm-----Rvmm-R,C-----DwfCms
01492> ROUTE CHANNEL -> 5.0 02:J5 140.66 .605 1973.0808,21:30 263.61 n/a .000
01493> [RTD= 5.0] out-> 5.0 01:R5 140.66 .604 1973.0808,21:25 263.61 n/a .000
01494> [L/S= 396 / .305 / .035]
01495> (Vmax=.560;Dmax=.183)
01496> R1973:C08029-----Dtain-ID:NYHD-----AREAH-APEAKcms-TpeakDate,h:mm-----Rvmm-R,C-----DwfCms
01497> CONTINUOUS NASHDY 5.0 01:SOUTH-3 7.98 .060 1973.0808,20:40 263.34 .426 .000
01498> [Cm 42.6; N= 3.00; Tps=.89]
01499> [IAREC= 6.00; SMIN=142.94; SMAX=946.27; SK= .030]
01500> [InterEventTime= 12.00]
01501> R1973:C08030-----Dtain-ID:NYHD-----AREAH-APEAKcms-TpeakDate,h:mm-----Rvmm-R,C-----DwfCms
01502> ADD HYD 5.0 02:R5 140.66 .604 1973.0808,21:25 263.61 n/a .000
01503> + 5.0 02:SOUTH-3 7.98 .060 1973.0808,20:40 263.34 n/a .000
01504> SUM 5.0 01:AS 148.64 .609 1973.0808,21:30 263.59 n/a .000
01505> R1973:C08031-----Dtain-ID:NYHD-----AREAH-APEAKcms-TpeakDate,h:mm-----Rvmm-R,C-----DwfCms
01506> SAVE HYD 5.0 01:J6 148.64 .609 1973.0808,21:30 263.59 n/a .000
01507> [Cm 36.1; N= 3.00; Tps=.89]
01508> remark:36-Bearbrook Tributary Upstream of Thunder Road Crossing
01509> R1973:C08032-----Dtain-ID:NYHD-----AREAH-APEAKcms-TpeakDate,h:mm-----Rvmm-R,C-----DwfCms
01510> ROUTE CHANNEL -> 5.0 02:J6 148.64 .609 1973.0808,21:30 263.59 n/a .000
01511> [RTD= 5.0] out-> 5.0 01:R6 148.64 .604 1973.0808,21:25 263.59 n/a .000
01512> [L/S= 500 / .140 / .035]
01513> (Vmax=.612;Dmax=.349)
01514> R1973:C08033-----Dtain-ID:NYHD-----AREAH-APEAKcms-TpeakDate,h:mm-----Rvmm-R,C-----DwfCms
01515> CONTINUOUS NASHDY 5.0 01:SOUTH-4 14.99 .076 1973.0808,21:00 263.66 .425 .000
01516> [Cm 39.5; N= 3.00; Tps=1.23]
01517> [IAREC= 6.00; SMIN=154.7; SMAX=896.47; SK= .030]
01518> [InterEventTime= 12.00]
01519> R1973:C08034-----Dtain-ID:NYHD-----AREAH-APEAKcms-TpeakDate,h:mm-----Rvmm-R,C-----DwfCms
01520> ADD HYD 5.0 02:R6 148.64 .604 1973.0808,21:40 263.59 n/a .000
01521> + 5.0 02:SOUTH-4 14.99 .076 1973.0808,21:00 263.66 n/a .000
01522> SUM 5.0 01:AS 163.63 .597 1973.0808,21:25 263.55 n/a .000
01523> #####
01524> #####
01525> #####
01526> # CONTINUOUS RAINFALL DATA
01527> #####
01528> # *****
01529> # STORMS
01530> # *****
01531> ** END OF RUN : 1973
01532> #####
01533> #####
01534> #####
01535> #####
01536> #####
01537> #####
01538> #####
01539> RUN: COMMAND
01540> R1974:C08001-----Dtain-ID:NYHD-----AREAH-APEAKcms-TpeakDate,h:mm-----Rvmm-R,C-----DwfCms
01541> START [TZERO = .00 hrs on 19740401]
01542> [METOUT= 2 (1=Imperial, 2=metric output)]
01543> [NSTORE= 0]
01544> [NIN= 1974.1]
01545> # SWHYD / INPUT DATA FILE
01546> # *****
01547> # Project Name : [THUNDER ROAD] Project Number: [2128]
01548> # Date : 04-20-2021
01549> # Modeller : [J.B]
01550> # Company : JFSaInc.
01551> # License # : 2549237
01552> # *****
01553> # OTCWA International Airport - April 1st to October 31st
01554> # *****
01555> # OTCWA International Airport - April 1st to October 31st
01556> # *****
01557> # OTCWA International Airport - April 1st to October 31st
01558> R1974:C08002-----Dtain-ID:NYHD-----AREAH-APEAKcms-TpeakDate,h:mm-----Rvmm-R,C-----DwfCms
01559> READ AES DATA
01560> [Filename = YOM.1967.2807.123]
01561> [Start date= 1974.0401; End date= 1974.1031]
01562> [OT= 60 min; Length= 445.46; Nethrs= 284; Dryhrs= 4135; PTO= 332.10]
01563> Maximum average rainfall intensities over
01564> 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
01565> 20.60 35.40 48.00 72.00 96.00 120.00 144.00 168.00 192.00 mm/hr
01566> 20.60 30.80 31.10 31.10 31.10 32.40 32.40 32.40 32.40 mm/hr
01567> 1974018 1974019 1974020 1974021 1974022 1974023 1974024 1974025 1974026 1974027 1974028 1974029 1974030 1974031 1974032 1974033 1974034 1974035 1974036 1974037 1974038 1974039 1974040 1974041 1974042 1974043 1974044 1974045 1974046 1974047 1974048 1974049 1974050 1974051 1974052 1974053 1974054 1974055 1974056 1974057 1974058 1974059 1974060 1974061 1974062 1974063 1974064 1974065 1974066 1974067 1974068 1974069 1974070 1974071 1974072 1974073 1974074 1974075 1974076 1974077 1974078 1974079 1974080 1974081 1974082 1974083 1974084 1974085 1974086 1974087 1974088 1974089 1974090 1974091 1974092 1974093 1974094 1974095 1974096 1974097 1974098 1974099 1974100 1974101 1974102 1974103 1974104 1974105 1974106 1974107 1974108 1974109 1974110 1974111 1974112 1974113 1974114 1974115 1974116 1974117 1974118 1974119 1974120 1974121 1974122 1974123 1974124 1974125 1974126 1974127 1974128 1974129 1974130 1974131 1974132 1974133 1974134 1974135 1974136 1974137 1974138 1974139 1974140 1974141 1974142 1974143 1974144 1974145 1974146 1974147 1974148 1974149 1974150 1974151 1974152 1974153 1974154 1974155 1974156 1974157 1974158 1974159 1974160 1974161 1974162 1974163 1974164 1974165 1974166 1974167 1974168 1974169 1974170 1974171 1974172 1974173 1974174 1974175 1974176 1974177 1974178 1974179 1974180 1974181 1974182 1974183 1974184 1974185 1974186 1974187 1974188 1974189 1974190 1974191 1974192 1974193 1974194 1974195 1974196 1974197 1974198 1974199 1974200 1974201 1974202 1974203 1974204 1974205 1974206 1974207 1974208 1974209 1974210 1974211 1974212 1974213 1974214 1974215 1974216 1974217 1974218 1974219 1974220 1974221 1974222 1974223 1974224 1974225 1974226 1974227 1974228 1974229 1974230 1974231 1974232 1974233 1974234 1974235 1974236 1974237 1974238 1974239 1974240 1974241 1974242 1974243 1974244 1974245 1974246 1974247 1974248 1974249 1974250 1974251 1974252 1974253 1974254 1974255 1974256 1974257 1974258 1974259 1974260 1974261 1974262 1974263 1974264 1974265 1974266 1974267 1974268 1974269 1974270 1974271 1974272 1974273 1974274 1974275 1974276 1974277 1974278 1974279 1974280 1974281 1974282 1974283 1974284 1974285 1974286 1974287 1974288 1974289 1974290 1974291 1974292 1974293 1974294 1974295 1974296 1974297 1974298 1974299 1974300 1974301 1974302 1974303 1974304 1974305 1974306 1974307 1974308 1974309 1974310 1974311 1974312 1974313 1974314 1974315 1974316 1974317 1974318 1974319 1974320 1974321 1974322 1974323 1974324 1974325 1974326 1974327 1974328 1974329 1974330 1974331 1974332 1974333 1974334 1974335 1974336 1974337 1974338 1974339 1974340 1974341 1974342 1974343 1974344 1974345 1974346 1974347 1974348 1974349 1974350 1974351 1974352 1974353 1974354 1974355 1974356 1974357 1974358 1974359 1974360 1974361 1974362 1974363 1974364 1974365 1974366 1974367 1974368 1974369 1974370 1974371 1974372 1974373 1974374 1974375 1974376 1974377 1974378 1974379 1974380 1974381 1974382 1974383 1974384 1974385 1974386 1974387 1974388 1974389 1974390 1974391 1974392 1974393 1974394 1974395 1974396 1974397 1974398 1974399 1974400 1974401 1974402 1974403 1974404 1974405 1974406 1974407 1974408 1974409 1974410 1974411 1974412 1974413 1974414 1974415 1974416 1974417 1974418 1974419 1974420 1974421 1974422 1974423 1974424 1974425 1974426 1974427 1974428 1974429 1974430 1974431 1974432 1974433 1974434 1974435 1974436 1974437 1974438 1974439 1974440 1974441 1974442 1974443 1974444 1974445 1974446 1974447 1974448 1974449 1974450 1974451 1974452 1974453 1974454 1974455 1974456 1974457 1974458 1974459 1974460 1974461 1974462 1974463 1974464 1974465 1974466 1974467 1974468 1974469 1974470 1974471 1974472 1974473 1974474 1974475 1974476 1974477 1974478 1974479 1974480 1974481 1974482 1974483 1974484 1974485 1974486 1974487 1974488 1974489 1974490 1974491 1974492 1974493 1974494 1974495 1974496 1974497 1974498 1974499 1974500 1974501 1974502 1974503 1974504 1974505 1974506 1974507 1974508 1974509 1974510 1974511 1974512 1974513 1974514 1974515 1974516 1974517 1974518 1974519 1974520 1974521 1974522 1974523 1974524 1974525 1974526 1974527 1974528 1974529 1974530 1974531 1974532 1974533 1974534 1974535 1974536 1974537 1974538 1974539 1974540 1974541 1974542 1974543 1974544 1974545 1974546 1974547 1974548 1974549 1974550 1974551 1974552 1974553 1974554 1974555 1974556 1974557 1974558 1974559 1974560 1974561 1974562 1974563 1974564 1974565 1974566 1974567 1974568 1974569 1974570 1974571 1974572 1974573 1974574 1974575 1974576 1974577 1974578 1974579 1974580 1974581 1974582 1974583 1974584 1974585 1974586 1974587 1974588 1974589 1974590 1974591 1974592 1974593 1974594 1974595 1974596 1974597 1974598 1974599 1974600 1974601 1974602 1974603 1974604 1974605 1974606 1974607 1974608 1974609 1974610 1974611 1974612 1974613 1974614 1974615 1974616 1974617 1974618 1974619 1974620 1974621 1974622 1974623 1974624 1974625 1974626 1974627 1974628 1974629 1974630 1974631 1974632 1974633 1974634 1974635 1974636 1974637 1974638 1974639 1974640 1974641 1974642 1974643 1974644 1974645 1974646 1974647 1974648 1974649 1974650 1974651 1974652 1974653 1974654 1974655 1974656 1974657 1974658 1974659 1974660 1974661 1974662 1974663 1974664 1974665 1974666 1974667 1974668 1974669 1974670 1974671 1974672 1974673 1974674 1974675 1974676 1974677 1974678 1974679 1974680 1974681 1974682 1974683 1974684 1974685 1974686 1974687 1974688 1974689 1974690 1974691 1974692 1974693 1974694 1974695 1974696 1974697 1974698 1974699 1974700 1974701 1974702 1974703 1974704 1974705 1974706 1974707 1974708 1974709 1974710 1974711 1974712 1974713 1974714 1974715 1974716 1974717 1974718 1974719 1974720 1974721 1974722 1974723 1974724 1974725 1974726 1974727 1974728 1974729 1974730 1974731 1974732 1974733 1974734 1974735 1974736 1974737 1974738 1974739 1974740 1974741 1974742 1974743 1974744 1974745 1974746 1974747 1974748 1974749 1974750 1974751 1974752 1974753 1974754 1974755 1974756 1974757 1974758 1974759 1974760 1974761 1974762 1974763 1974764 1974765 1974766 1974767 1974768 1974769 1974770 1974771 1974772 1974773 1974774 1974775 1974776 1974777 1974778 1974779 1974780 1974781 1974782 1974783 1974784 1974785 1974786 1974787 1974788 1974789 1974790 1974791 1974792 1974793 1974794 1974795 1974796 1974797 1974798 1974799 1974800 1974801 1974802 1974803 1974804 1974805 1974806 1974807 1974808 1974809 1974810 1974811 1974812 1974813 1974814 1974815 1974816 1974817 1974818 1974819 1974820 1974821 1974822 1974823 1974824 1974825 1974826 1974827 1974828 1974829 1974830 1974831 1974832 1974833 1974834 1974835 1974836 1974837 1974838 1974839 1974840 1974841 1974842 1974843 1974844 1974845 1974846 1974847 1974848 1974849 1974850 1974851 1974852 1974853 1974854 1974855 1974856 1974857 1974858 1974859 1974860 1974861 1974862 1974863 1974864 1974865 1974866 1974867 1974868 1974869 1974870 1974871 1974872 1974873 1974874 1974875 1974876 1974877 1974878 1974879 1974880 1974881 1974882 1974883 1974884 1974885 1974886 1974887 1974888 1974889 1974890 1974891 1974892 1974893 1974894 1974895 1974896 1974897 1974898 1974899 1974900 1974901 1974902 1974903 1974904 1974905 1974906 1974907 1974908 1974909 1974910 1974911 1974912 1974913 1974914 1974915 1974916 1974917 1974918 1974919 1974920 1974921 1974922 1974923 1974924 1974925 1974926 1974927 1974928 1974929 1974930 1974931 1974932 1974933 1974934 1974935 1974936 1974937 1974938 1974939 1974940 1974941 1974942 1974943 1974944 1974945 1974946 1974947 1974948 1974949 1974950 1974951 1974952 1974953 1974954 1974955 1974956 1974957 1974958 1974
```

```
01801> [IaRec= 6.00; SMIN= 25.21; SMAX=168.09; SK= -030]
01802> [InterEventTime= 12.00]
01803> R1975-008007-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01804> ADD HYD + 5.0 02:NTHT-1 34.70 .045 1975.0724.20.09 167.28 n/a .000
01805> + 5.0 02:NTHT-2 12.44 .063 1975.0720.17.50 168.05 n/a .000
01806> + 5.0 02:HW-1 2.36 .091 1975.0720.17.40 171.48 n/a .000
01807> SUM= 5.0 01:Total 49.51 .118 1975.0720.17.55 167.67 n/a .000
01808> R1975-008008-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01809> ROUTE CHANNEL -> 5.0 02:J1 49.51 .118 1975.0720.17.55 167.67 n/a .000
01810> [RDT= 5.00] out-> 5.0 02:J1 49.51 .118 1975.0720.17.55 167.67 n/a .000
01811> [L/S= 478.7 / 440.0 / 035]
01812> (Vmax= 432.0;Dmax= 170.0)
01813> R1975-008009-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01814> CONTINUOUS NASHDY 5.0 01:INT-1 4.39 .023 1975.0720.18.10 168.59 .393 .000
01815> [C# 42.6; N= 3.00; Tp= .80]
01816> [IaRec= 6.00; SMIN= 67.24; SMAX=448.24; SK= -030]
01817> [InterEventTime= 12.00]
01818> R1975-008010-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01819> CONTINUOUS NASHDY 5.0 01:INT-2 3.61 .018 1975.0720.17.30 167.70 .390 .000
01820> [C# 47.4; N= 3.00; Tp= 1.40]
01821> [IaRec= 6.00; SMIN=115.94; SMAX=768.40; SK= -030]
01822> [InterEventTime= 12.00]
01823> R1975-008011-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01824> CONTINUOUS NASHDY 5.0 01:ASA 3.84 .021 1975.0720.18.00 168.42 .392 .000
01825> [C# 58.4; N= 3.00; Tp= 1.60]
01826> [IaRec= 6.00; SMIN= 73.13; SMAX=487.55; SK= -030]
01827> [InterEventTime= 12.00]
01828> R1975-008012-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01829> CONTINUOUS NASHDY 5.0 01:ASH 5.29 .019 1975.0720.17.50 167.46 .390 .000
01830> [C# 42.6; N= 3.00; Tp= 1.20]
01831> [IaRec= 6.00; SMIN=141.94; SMAX=946.27; SK= -030]
01832> [InterEventTime= 12.00]
01833> R1975-008013-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01834> CONTINUOUS NASHDY 5.0 01:ASC 1.21 .004 1975.0720.17.30 167.23 .389 .000
01835> [C# 37.8; N= 3.00; Tp= .87]
01836> [IaRec= 6.00; SMIN=179.29; SMAX=*****; SK= -030]
01837> [InterEventTime= 12.00]
01838> R1975-008014-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01839> ROUTE CHANNEL -> 5.0 02:ASC 1.21 .004 1975.0720.17.30 167.22 n/a .000
01840> [RDT= 5.00] out-> 5.0 02:ASC-R 1.21 .002 1975.0720.18.00 167.28 n/a .000
01841> [L/S= 500.7 / 440.0 / 035]
01842> (Vmax= 596.0;Dmax= 170.0)
01843> R1975-008015-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01844> CONTINUOUS NASHDY 5.0 01:INT-3 5.71 .043 1975.0720.17.30 168.42 .392 .000
01845> [C# 37.8; N= 3.00; Tp= 1.40]
01846> [IaRec= 6.00; SMIN= 73.13; SMAX=487.55; SK= -030]
01847> [InterEventTime= 12.00]
01848> R1975-008016-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01849> ADD HYD + 5.0 02:R1 49.51 .116 1975.0720.18.15 167.67 n/a .000
01850> + 5.0 02:INT-1 4.39 .023 1975.0720.18.10 168.59 n/a .000
01851> + 5.0 02:INT-2 3.61 .018 1975.0720.17.30 167.70 n/a .000
01852> + 5.0 02:NTHT-1 12.44 .063 1975.0720.17.50 168.05 n/a .000
01853> + 5.0 02:ASA 3.84 .021 1975.0720.18.00 168.42 n/a .000
01854> + 5.0 02:ASH 5.29 .019 1975.0720.17.50 167.46 n/a .000
01855> + 5.0 02:ASC-R 1.21 .002 1975.0720.18.00 167.28 n/a .000
01856> SUM= 5.0 01:J2 73.56 .231 1975.0720.17.55 167.80 n/a .000
01857> R1975-008017-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01858> ROUTE CHANNEL -> 5.0 02:J2 73.56 .231 1975.0720.17.55 167.80 n/a .000
01859> [RDT= 5.00] out-> 5.0 01:R2 73.56 .229 1975.0720.18.00 167.80 n/a .000
01860> [L/S= 500.7 / 560.0 / 035]
01861> (Vmax= 482.0;Dmax= 147.0)
01862> R1975-008018-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01863> CONTINUOUS NASHDY 5.0 01:ASA 21.43 .049 1975.0720.18.15 167.37 .389 .000
01864> [C# 36.1; N= 3.00; Tp= 1.60]
01865> [IaRec= 6.00; SMIN=154.97; SMAX=896.47; SK= -030]
01866> [InterEventTime= 12.00]
01867> R1975-008019-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01868> CONTINUOUS NASHDY 5.0 01:ASH 4.70 .014 1975.0720.18.15 167.52 .390 .000
01869> [C# 44.6; N= 3.00; Tp= 1.72]
01870> [IaRec= 6.00; SMIN=134.71; SMAX=896.47; SK= -030]
01871> [InterEventTime= 12.00]
01872> R1975-008020-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01873> CONTINUOUS NASHDY 5.0 01:AS2 9.14 .083 1975.0720.17.40 169.33 .394 .000
01874> [C# 64.1; N= 3.00; Tp= 1.12]
01875> [IaRec= 6.00; SMIN= 58.56; SMAX=323.73; SK= -030]
01876> [InterEventTime= 12.00]
01877> R1975-008021-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01878> ADD HYD + 5.0 02:R2 73.56 .229 1975.0720.18.00 167.80 n/a .000
01879> + 5.0 02:ASA 3.84 .021 1975.0720.18.15 167.37 n/a .000
01880> + 5.0 02:ASH 4.70 .014 1975.0720.18.15 167.52 n/a .000
01881> + 5.0 02:AS2 9.14 .083 1975.0720.17.40 169.33 n/a .000
01882> SUM= 5.0 01:Total 90.84 .368 1975.0720.18.00 167.79 n/a .000
01883> R1975-008022-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01884> ROUTE CHANNEL -> 5.0 02:J3 100.84 .368 1975.0720.18.00 167.79 n/a .000
01885> [RDT= 5.00] out-> 5.0 01:R3 100.84 .357 1975.0720.18.15 167.79 n/a .000
01886> [L/S= 396.7 / 305.0 / 035]
01887> (Vmax= 596.0;Dmax= 170.0)
01888> R1975-008023-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01889> CONTINUOUS NASHDY 5.0 01:SOUTH-1 20.21 .049 1975.0720.17.55 167.32 .389 .000
01890> [C# 35.5; N= 3.00; Tp= 1.40]
01891> [IaRec= 6.00; SMIN=204.20; SMAX=*****; SK= -030]
01892> [InterEventTime= 12.00]
01893> R1975-008024-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01894> ADD HYD + 5.0 02:R3 100.84 .357 1975.0720.18.15 167.79 n/a .000
01895> + 5.0 02:AS2 9.14 .083 1975.0720.17.55 167.32 n/a .000
01896> SUM= 5.0 01:Total 129.05 .405 1975.0720.18.10 167.69 n/a .000
01897> R1975-008025-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01898> ROUTE CHANNEL -> 5.0 02:J4 129.05 .405 1975.0720.18.10 167.69 n/a .000
01899> [RDT= 5.00] out-> 5.0 01:R4 129.05 .397 1975.0720.18.25 167.69 n/a .000
01900> [L/S= 482.7 / 410.0 / 035]
01901> (Vmax= 533.0;Dmax= 283.0)
01902> R1975-008026-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01903> CONTINUOUS NASHDY 5.0 01:SOUTH-2 11.61 .038 1975.0720.17.35 167.37 .389 .000
01904> [C# 36.7; N= 3.00; Tp= .90]
01905> [IaRec= 6.00; SMIN=155.62; SMAX=*****; SK= -030]
01906> [InterEventTime= 12.00]
01907> R1975-008027-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01908> ADD HYD + 5.0 02:R4 129.05 .397 1975.0720.18.25 167.69 n/a .000
01909> + 5.0 02:SOUTH-2 11.61 .038 1975.0720.17.35 167.37 n/a .000
01910> SUM= 5.0 01:Total 140.66 .444 1975.0720.18.20 167.65 n/a .000
01911> R1975-008028-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01912> ROUTE CHANNEL -> 5.0 02:J5 140.66 .444 1975.0720.18.20 167.65 n/a .000
01913> [RDT= 5.00] out-> 5.0 01:R5 140.66 .422 1975.0720.18.25 167.65 n/a .000
01914> [L/S= 181.7 / 560.0 / 035]
01915> (Vmax= 587.0;Dmax= 170.0)
01916> R1975-008029-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01917> CONTINUOUS NASHDY 5.0 01:Total 7.90 .035 1975.0720.17.30 167.46 .390 .000
01918> [C# 42.6; N= 3.00; Tp= .80]
01919> [IaRec= 6.00; SMIN=141.94; SMAX=946.27; SK= -030]
01920> [InterEventTime= 12.00]
01921> R1975-008030-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01922> ADD HYD + 5.0 02:R5 140.66 .422 1975.0720.18.25 167.65 n/a .000
01923> + 5.0 02:SOUTH-3 7.90 .035 1975.0720.17.30 167.46 n/a .000
01924> SUM= 5.0 01:J6 148.64 .444 1975.0720.18.25 167.64 n/a .000
01925> R1975-008031-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01926> SAVE HYD + 5.0 01:J6 148.64 .444 1975.0720.18.25 167.64 n/a .000
01927> Name : 36.1975
01928> remark:36-Bearbrook Tributary Upstream of Thunder Road Crossing
01929> R1975-008032-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01930> ROUTE CHANNEL -> 5.0 02:J6 148.64 .444 1975.0720.18.25 167.64 n/a .000
01931> [RDT= 5.00] out-> 5.0 01:R6 148.64 .441 1975.0720.18.30 167.64 n/a .000
01932> [L/S= 323.7 / 440.0 / 035]
01933> (Vmax= 558.0;Dmax= 290.0)
01934> R1975-008033-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01935> CONTINUOUS NASHDY 5.0 01:SOUTH-4 14.99 .047 1975.0720.17.45 167.28 .373 .000
01936> [C# 39.5; N= 3.00; Tp= 1.23]
01937> [IaRec= 6.00; SMIN=101.62; SMAX=*****; SK= -030]
01938> [InterEventTime= 12.00]
01939> R1975-008034-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01940> ADD HYD + 5.0 02:SOUTH-4 14.99 .047 1975.0720.18.30 167.64 n/a .000
01941> + 5.0 02:SOUTH-4 14.99 .047 1975.0720.17.45 167.28 n/a .000
01942> SUM= 5.0 01:Total 163.63 .495 1975.0720.18.30 167.60 n/a .000
01943> #####
01944> #####
01945> #####
01946> #####
01947> #####
01948> #####
01949> #####
01950> #####
01951> #####
01952> ** END OF RUN : 1975
01953> #####
01954> #####
01955> #####
01956> #####
01957> #####
01958> #####
01959> RUN: COMMAND#
01960> R1976-009001-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01961> START
01962> [TZED= 00 hrs on 19760401]
01963> [METOUT= 2 (1imperial, 2metric output)]
01964> [NFORM= 0]
01965> [NFORM= 1976 10]
01966> #####
01967> # SHWYD
01968> #####
01969> # Project Name : [THUNDER ROAD] Project Number: [2128]
01970> # Date : 04-20-2021
01971> # Modeller : [J.B]
01972> # Company : JFSaInc.
01973> # License # : 2549237
01974> #
01975> #
01976> #
01977> # OCEANO INTERNATIONAL Airport April 15 to October 31
01978> R1976-009002-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01979> # READ AES DATA
01980> [Filename : YOW.1967.2007.123 ]
01981> [Start_date= 1976.0401; End_date= 1976.1031]
01982> [OTS= 60 hrs; Length= 5336 hrs; Width= 352; Byrhm= 4784; PTO= 465.00]
01983> Maximum average rainfall intensities over
01984> 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
01985> 14.09 8.89 6.43 4.65 2.35 1.39 .97 .68 .48 mm/hr
01986> 14.00 17.00 19.30 27.90 28.20 33.30 35.19 47.00 67.50 mm
01987> 49.00 118.19 197.00 297.00 333.00 376.00 397.00 450.00 500.00
01988> Number of rainfall events per following interval time
01989> 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
01990> 141 117 70 61 53 37 31 22
01991> Number of events with at least the following durations
01992> 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
01993> 141 74 44 14 2 0 0 0 0
01994> R1976-009003-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01995> COMPUTE API
01996> [APIIN= 50.00; APIIDy= 9000; APIIDx= 9950]
01997> [APIIN= 50.00; APIIDy= 9000; APIIDx= 9950]
01998> R1976-009004-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
01999> CONTINUOUS NASHDY 5.0 01:NORTH-1 34.70 .035 1976.0520.11.55 127.03 .273 .000
02000> [C# 38.1; N= 3.00; Tp= 4.22]
02001> [IaRec= 6.00; SMIN=168.02; SMAX=*****; SK= -030]
02002> [InterEventTime= 12.00]
02003> R1976-009005-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
02004> CONTINUOUS NASHDY 5.0 01:NORTH-2 12.44 .032 1976.0519.23.25 127.91 .275 .000
02005> [C# 38.1; N= 3.00; Tp= 1.23]
02006> [IaRec= 6.00; SMIN= 81.01; SMAX=606.70; SK= -030]
02007> [InterEventTime= 12.00]
02008> R1976-009006-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
02009> CONTINUOUS NASHDY 5.0 01:HW-1 2.36 .014 1976.0519.23.20 131.96 .284 .000
02010> [C# 37.7; N= 3.00; Tp= 1.21]
02011> [IaRec= 6.00; SMIN= 25.21; SMAX=168.09; SK= -030]
02012> [InterEventTime= 12.00]
02013> R1976-009007-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
02014> ADD HYD + 5.0 02:NORTH-1 34.70 .035 1976.0520.11.55 127.03 n/a .000
02015> + 5.0 02:NORTH-2 12.44 .032 1976.0519.23.25 127.91 n/a .000
02016> + 5.0 02:HW-1 2.36 .014 1976.0519.23.20 131.96 n/a .000
02017> SUM= 5.0 01:Total 49.51 .117 1976.0519.23.40 127.49 n/a .000
02018> R1976-009008-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
02019> ROUTE CHANNEL -> 5.0 02:J1 49.51 .074 1976.0519.23.40 127.49 n/a .000
02020> [RDT= 5.00] out-> 5.0 01:ASC-R 1.21 .002 1976.0519.23.55 126.96 n/a .000
02021> [L/S= 478.7 / 440.0 / 035]
02022> (Vmax= 468.0;Dmax= 140.0)
02023> R1976-009009-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
02024> CONTINUOUS NASHDY 5.0 01:INT-1 4.39 .013 1976.0519.23.20 128.55 .276 .000
02025> [C# 58.4; N= 3.00; Tp= 1.40]
02026> [IaRec= 6.00; SMIN= 67.24; SMAX=448.24; SK= -030]
02027> [InterEventTime= 12.00]
02028> R1976-009010-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
02029> CONTINUOUS NASHDY 5.0 01:INT-2 3.61 .008 1976.0519.23.15 127.52 .274 .000
02030> [C# 47.4; N= 3.00; Tp= 1.63]
02031> [IaRec= 6.00; SMIN=115.26; SMAX=768.40; SK= -030]
02032> [InterEventTime= 12.00]
02033> R1976-009011-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
02034> CONTINUOUS NASHDY 5.0 01:ASA 3.84 .011 1976.0519.23.35 128.35 .276 .000
02035> [C# 58.4; N= 3.00; Tp= 1.40]
02036> [IaRec= 6.00; SMIN= 73.13; SMAX=487.55; SK= -030]
02037> [InterEventTime= 12.00]
02038> R1976-009012-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
02039> CONTINUOUS NASHDY 5.0 01:ASH 5.29 .016 1976.0519.23.25 127.23 .274 .000
02040> [C# 42.6; N= 3.00; Tp= 1.60]
02041> [IaRec= 6.00; SMIN=141.94; SMAX=946.27; SK= -030]
02042> [InterEventTime= 12.00]
02043> R1976-009013-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
02044> CONTINUOUS NASHDY 5.0 01:ASC 1.21 .002 1976.0519.23.15 126.96 .273 .000
02045> [C# 37.8; N= 3.00; Tp= 1.47]
02046> [IaRec= 6.00; SMIN=179.29; SMAX=*****; SK= -030]
02047> [InterEventTime= 12.00]
02048> R1976-009014-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
02049> ROUTE CHANNEL -> 5.0 02:ASC 1.21 .002 1976.0519.23.15 126.97 n/a .000
02050> [RDT= 5.00] out-> 5.0 01:ASC-R 1.21 .002 1976.0519.23.55 126.96 n/a .000
02051> [L/S= 500.7 / 440.0 / 035]
02052> (Vmax= 596.0;Dmax= 170.0)
02053> R1976-009015-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
02054> CONTINUOUS NASHDY 5.0 01:INT-3 5.71 .016 1976.0519.23.15 128.35 .276 .000
02055> [C# 58.5; N= 3.00; Tp= 1.60]
02056> [IaRec= 6.00; SMIN= 73.13; SMAX=487.55; SK= -030]
02057> [InterEventTime= 12.00]
02058> R1976-009016-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
02059> ADD HYD + 5.0 02:R1 49.51 .073 1976.0519.23.55 127.49 n/a .000
02060> + 5.0 02:INT-1 4.39 .013 1976.0519.23.40 128.55 n/a .000
02061> + 5.0 02:INT-2 3.61 .008 1976.0519.23.15 127.52 n/a .000
02062> + 5.0 02:NTHT-1 12.44 .032 1976.0519.23.25 127.91 n/a .000
02063> + 5.0 02:ASA 3.84 .011 1976.0519.23.35 128.35 n/a .000
02064> + 5.0 02:ASH 5.29 .016 1976.0519.23.25 127.23 n/a .000
02065> + 5.0 02:ASC-R 1.21 .002 1976.0519.23.55 126.96 n/a .000
02066> SUM= 5.0 01:J2 73.56 .133 1976.0519.23.35 127.64 n/a .000
02067> R1976-009017-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
02068> ROUTE CHANNEL -> 5.0 02:J2 73.56 .132 1976.0519.23.35 127.64 n/a .000
02069> [RDT= 5.00] out-> 5.0 01:R2 73.56 .132 1976.0519.23.40 127.64 n/a .000
02070> [L/S= 352.7 / 560.0 / 035]
02071> (Vmax= 482.0;Dmax= 144.0)
02072> R1976-009018-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
02073> CONTINUOUS NASHDY 5.0 01:ASA 21.43 .029 1976.0519.23.45 126.96 .273 .000
02074> [C# 36.1; N= 3.00; Tp= 1.60]
02075> [IaRec= 6.00; SMIN=154.97; SMAX=896.47; SK= -030]
02076> [InterEventTime= 12.00]
02077> R1976-009019-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
02078> CONTINUOUS NASHDY 5.0 01:ASH 4.70 .008 1976.0519.23.45 127.30 .274 .000
02079> [C# 44.6; N= 3.00; Tp= 1.72]
02080> [IaRec= 6.00; SMIN=134.71; SMAX=896.47; SK= -030]
02081> [InterEventTime= 12.00]
02082> R1976-009020-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
02083> CONTINUOUS NASHDY 5.0 01:AS2 9.14 .038 1976.0519.23.20 129.42 .278 .000
02084> [C# 64.1; N= 3.00; Tp= 1.12]
02085> [IaRec= 6.00; SMIN= 58.56; SMAX=323.73; SK= -030]
02086> [InterEventTime= 12.00]
02087> R1976-009021-----Dttm=ID: NYHD-----AREHA-QPEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DfMcns
02088> ADD HYD + 5.0 02:R2 73.56
```

---

**Page 6**

```

025240 [L$[CNC: 6.00; SMIN=20.00; SHAKE=*****; SK# :030]
025241 [InterEventTime= 12.00]
025242 ADD HYD * 5.0 02:03 198.84 417 1978.0618.18:30 166.64 n/a 000
025250 SUM= 5.0 02:02:South-1 20.21 468 1978.0618.18:15 166.42 n/a 000
025251 CONTINUOUS NASHVO 5.0 01:South-4 12.44 189 1978.0618.15:05 326.42 487 000
025252 ROUTE CHANNEL > 5.0 02:ASC-R 1.21 409 1978.0618.15:20 325.32 n/a 000
025253 [L$[N= 487.0 / 410.035]
025254 [L$[N= 500.0 / 360.0]
025255 [InterEventTime= 12.00]
025256 CONTINUOUS NASHVO 5.0 01:South-4 14.99 057 1978.0618.18:05 166.47 326 000
025257 [L$[CNC: 6.00; SMIN=191.09; SHAKE=*****; SK# :030]
025258 [InterEventTime= 12.00]
025259 ADD HYD * 5.0 02:South-2 11.61 649 1978.0618.17:45 166.43 326 000
025260 SUM= 5.0 02:South-2 11.61 649 1978.0618.17:45 166.43 n/a 000
025261 ROUTE CHANNEL > 5.0 02:ASC-R 1.21 409 1978.0618.18:40 166.59 n/a 000
025262 ROUTE CHANNEL > 5.0 02:ASC-R 1.21 409 1978.0618.18:40 166.59 n/a 000
025263 [L$[N= 487.0 / 410.035]
025264 [L$[N= 500.0 / 360.0]
025265 [InterEventTime= 12.00]
025266 CONTINUOUS NASHVO 5.0 01:South-4 14.99 057 1978.0618.18:05 166.47 326 000
025267 [L$[CNC: 6.00; SMIN=168.02; SHAKE=*****; SK# :030]
025268 [InterEventTime= 12.00]
025269 ADD HYD * 5.0 02:South-2 11.61 649 1978.0618.17:45 166.43 326 000
025270 SUM= 5.0 02:South-2 11.61 649 1978.0618.17:45 166.43 n/a 000
025271 ROUTE CHANNEL > 5.0 02:ASC-R 1.21 409 1978.0618.18:40 166.59 n/a 000
025272 [L$[N= 487.0 / 410.035]
025273 [L$[N= 500.0 / 360.0]
025274 [InterEventTime= 12.00]
025275 CONTINUOUS NASHVO 5.0 01:South-4 14.99 057 1978.0618.18:05 166.47 326 000
025276 [L$[CNC: 6.00; SMIN=141.94; SHAKE=946.27; SK# :030]
025277 [InterEventTime= 12.00]
025278 ADD HYD * 5.0 02:South-2 11.61 649 1978.0618.17:45 166.43 326 000
025279 SUM= 5.0 02:South-2 11.61 649 1978.0618.17:45 166.43 n/a 000
025280 ROUTE CHANNEL > 5.0 02:ASC-R 1.21 409 1978.0618.18:40 166.59 n/a 000
025281 [L$[N= 487.0 / 410.035]
025282 [L$[N= 500.0 / 360.0]
025283 [InterEventTime= 12.00]
025284 CONTINUOUS NASHVO 5.0 01:South-4 14.99 057 1978.0618.18:05 166.47 326 000
025285 [L$[CNC: 6.00; SMIN=168.02; SHAKE=*****; SK# :030]
025286 [InterEventTime= 12.00]
025287 ADD HYD * 5.0 02:South-2 11.61 649 1978.0618.17:45 166.43 326 000
025288 SUM= 5.0 02:South-2 11.61 649 1978.0618.17:45 166.43 n/a 000
025289 ROUTE CHANNEL > 5.0 02:ASC-R 1.21 409 1978.0618.18:40 166.59 n/a 000
025290 [L$[N= 487.0 / 410.035]
025291 [L$[N= 500.0 / 360.0]
025292 [InterEventTime= 12.00]
025293 CONTINUOUS NASHVO 5.0 01:South-4 14.99 057 1978.0618.18:05 166.47 326 000
025294 [L$[CNC: 6.00; SMIN=141.94; SHAKE=946.27; SK# :030]
025295 [InterEventTime= 12.00]
025296 ADD HYD * 5.0 02:South-2 11.61 649 1978.0618.17:45 166.43 326 000
025297 SUM= 5.0 02:South-2 11.61 649 1978.0618.17:45 166.43 n/a 000
025298 ROUTE CHANNEL > 5.0 02:ASC-R 1.21 409 1978.0618.18:40 166.59 n/a 000
025299 [L$[N= 487.0 / 410.035]
025300 [L$[N= 500.0 / 360.0]
025301 [InterEventTime= 12.00]
025302 CONTINUOUS NASHVO 5.0 01:South-4 14.99 057 1978.0618.18:05 166.47 326 000
025303 [L$[CNC: 6.00; SMIN=168.02; SHAKE=*****; SK# :030]
025304 [InterEventTime= 12.00]
025305 ADD HYD * 5.0 02:South-2 11.61 649 1978.0618.17:45 166.43 326 000
025306 SUM= 5.0 02:South-2 11.61 649 1978.0618.17:45 166.43 n/a 000
025307 ROUTE CHANNEL > 5.0 02:ASC-R 1.21 409 1978.0618.18:40 166.59 n/a 000
025308 [L$[N= 487.0 / 410.035]
025309 [L$[N= 500.0 / 360.0]
025310 [InterEventTime= 12.00]
025311 CONTINUOUS NASHVO 5.0 01:South-4 14.99 057 1978.0618.18:05 166.47 326 000
025312 [L$[CNC: 6.00; SMIN=141.94; SHAKE=946.27; SK# :030]
025313 [InterEventTime= 12.00]
025314 ADD HYD * 5.0 02:South-2 11.61 649 1978.0618.17:45 166.43 326 000
025315 SUM= 5.0 02:South-2 11.61 649 1978.0618.17:45 166.43 n/a 000
025316 ROUTE CHANNEL > 5.0 02:ASC-R 1.21 409 1978.0618.18:40 166.59 n/a 000
025317 [L$[N= 487.0 / 410.035]
025318 [L$[N= 500.0 / 360.0]
025319 [InterEventTime= 12.00]
025320 CONTINUOUS NASHVO 5.0 01:South-4 14.99 057 1978.0618.18:05 166.47 326 000
025321 [L$[CNC: 6.00; SMIN=168.02; SHAKE=*****; SK# :030]
025322 [InterEventTime= 12.00]
025323 ADD HYD * 5.0 02:South-2 11.61 649 1978.0618.17:45 166.43 326 000
025324 SUM= 5.0 02:South-2 11.61 649 1978.0618.17:45 166.43 n/a 000
025325 ROUTE CHANNEL > 5.0 02:ASC-R 1.21 409 1978.0618.18:40 166.59 n/a 000
025326 [L$[N= 487.0 / 410.035]
025327 [L$[N= 500.0 / 360.0]
025328 [InterEventTime= 12.00]
025329 CONTINUOUS NASHVO 5.0 01:South-4 14.99 057 1978.0618.18:05 166.47 326 000
025330 [L$[CNC: 6.00; SMIN=141.94; SHAKE=946.27; SK# :030]
025331 [InterEventTime= 12.00]
025332 ADD HYD * 5.0 02:South-2 11.61 649 1978.0618.17:45 166.43 326 000
025333 SUM= 5.0 02:South-2 11.61 649 1978.0618.17:45 166.43 n/a 000
025334 ROUTE CHANNEL > 5.0 02:ASC-R 1.21 409 1978.0618.18:40 166.59 n/a 000
025335 [L$[N= 487.0 / 410.035]
025336 [L$[N= 500.0 / 360.0]
025337 [InterEventTime= 12.00]
025338 CONTINUOUS NASHVO 5.0 01:South-4 14.99 057 1978.0618.18:05 166.47 326 000
025339 [L$[CNC: 6.00; SMIN=168.02; SHAKE=*****; SK# :030]
025340 [InterEventTime= 12.00]
025341 ADD HYD * 5.0 02:South
```

```
02881> [IaRec= 6.00; SMIN=141.94; SMAX=946.27; SK= .030]
02882> [InterEventTime= 12.00]
02883> R1980-19800913-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
02884> CONTINUOUS NASHDY 5.0 01:ASC 1.21 .063 1980.1926, 0.20 162.01 .299 .000
02885> [Cn= 37.8; N= 3.00; Tpe= .87]
02886> [IaRec= 6.00; SMIN=179.29; SMAX=*****; SK= .030]
02887> [InterEventTime= 12.00]
02888> R1980-19800914-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
02889> ROUTE CHANNEL -> 5.0 02:ASC 1.21 .063 1980.1926, 0.20 162.01 n/a .000
02890> * [RDT= 5.00] out-> 5.0 01:ASC-R 1.21 .062 1980.1926, 0.55 162.01 n/a .000
02891> [L/S= 500 / 1400 / 035]
02892> (Vmax= .071;Dmax= .400)
02893> R1980-19800915-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
02894> CONTINUOUS NASHDY 5.0 01:INT-3 5.71 .024 1980.0901,21.05 166.29 .307 .000
02895> [Cn= 50.0; N= 3.00; Tpe= .89]
02896> [IaRec= 6.00; SMIN= 73.13; SMAX=487.55; SK= .030]
02897> [InterEventTime= 12.00]
02898> R1980-19800916-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
02899> ADD HYD + 5.0 02:R1 49.51 .088 1980.1926, 1.00 163.56 n/a .000
02900> + 5.0 02:INT-1 4.39 .015 1980.1926, 0.50 166.05 n/a .000
02901> + 5.0 02:INT-2 3.61 .010 1980.1926, 0.25 163.76 n/a .000
02902> + 5.0 02:INT-3 5.71 .024 1980.0901,21.05 166.29 n/a .000
02903> + 5.0 02:ASC 3.84 .013 1980.1926, 0.45 166.29 n/a .000
02904> + 5.0 02:ASC 5.29 .012 1980.1926, 0.35 162.06 n/a .000
02905> * [RDT= 5.00] out-> 5.0 02:ASC-R 1.21 .062 1980.1926, 0.55 162.01 n/a .000
02906> SUM= 5.0 01:32 73.56 .160 1980.1926, 0.40 164.04 n/a .000
02907> R1980-19800917-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
02908> ROUTE CHANNEL -> 5.0 02:32 73.56 .160 1980.1926, 0.40 164.04 n/a .000
02909> * [RDT= 5.00] out-> 5.0 01:R2 73.56 .159 1980.1926, 0.50 164.04 n/a .000
02910> [L/S= 500 / 500 / 035]
02911> (Vmax= .420;Dmax= .123)
02912> R1980-19800918-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
02913> CONTINUOUS NASHDY 5.0 01:ASC 21.43 .034 1980.1926, 0.55 161.80 .299 .000
02914> [Cn= 36.1; N= 3.00; Tpe= 1.61]
02915> [IaRec= 6.00; SMIN=141.94; SMAX=946.27; SK= .030]
02916> [InterEventTime= 12.00]
02917> R1980-19800919-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
02918> CONTINUOUS NASHDY 5.0 01:ASC 4.70 .010 1980.1926, 0.55 163.08 .301 .000
02919> [Cn= 44.6; N= 3.00; Tpe= 1.72]
02920> [IaRec= 6.00; SMIN=141.94; SMAX=946.27; SK= .030]
02921> [InterEventTime= 12.00]
02922> R1980-19800920-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
02923> CONTINUOUS NASHDY 5.0 01:ASC 9.14 .046 1980.1926, 0.30 169.30 .313 .000
02924> [Cn= 64.1; N= 3.00; Tpe= 1.12]
02925> [IaRec= 6.00; SMIN= 323.73; SMAX=323.73; SK= .030]
02926> [InterEventTime= 12.00]
02927> R1980-19800921-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
02928> ADD HYD + 5.0 02:R2 73.56 .159 1980.1926, 0.50 164.04 n/a .000
02929> + 5.0 02:ASC 21.43 .034 1980.1926, 0.55 161.80 n/a .000
02930> + 5.0 02:ASC 4.70 .010 1980.1926, 0.55 163.08 n/a .000
02931> + 5.0 02:INT-2 3.61 .010 1980.1926, 0.25 163.76 n/a .000
02932> + 5.0 02:INT-3 5.71 .024 1980.0901,21.05 166.29 n/a .000
02933> R1980-19800922-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
02934> ROUTE CHANNEL -> 5.0 02:33 108.84 .248 1980.1926, 0.45 164.00 n/a .000
02935> * [RDT= 5.00] out-> 5.0 01:R3 180.84 .242 1980.1926, 1.00 164.00 n/a .000
02936> [L/S= 396 / 396 / 035]
02937> (Vmax= .387;Dmax= .387)
02938> R1980-19800923-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
02939> CONTINUOUS NASHDY 5.0 01:SOUTH-1 20.21 .033 1980.1926, 0.45 161.00 .299 .000
02940> [Cn= 35.0; N= 3.00; Tpe= .96]
02941> [IaRec= 6.00; SMIN=204.20; SMAX=*****; SK= .030]
02942> [InterEventTime= 12.00]
02943> R1980-19800924-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
02944> ADD HYD + 5.0 02:R2 108.84 .242 1980.1926, 1.00 164.00 n/a .000
02945> + 5.0 02:ASC 20.21 .033 1980.1926, 0.45 161.00 n/a .000
02946> SUM= 5.0 01:34 129.05 .274 1980.1926, 1.00 163.03 n/a .000
02947> R1980-19800925-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
02948> ROUTE CHANNEL -> 5.0 02:34 129.05 .274 1980.1926, 1.00 163.03 n/a .000
02949> * [RDT= 5.00] out-> 5.0 01:R4 129.05 .272 1980.1926, 1.10 163.03 n/a .000
02950> [L/S= 402 / 410 / 035]
02951> (Vmax= .497;Dmax= .244)
02952> R1980-19800926-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
02953> CONTINUOUS NASHDY 5.0 01:SOUTH-2 11.61 .022 1980.1926, 0.25 161.00 .299 .000
02954> [Cn= 36.7; N= 3.00; Tpe= .96]
02955> [IaRec= 6.00; SMIN=141.94; SMAX=946.27; SK= .030]
02956> [InterEventTime= 12.00]
02957> R1980-19800927-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
02958> ADD HYD + 5.0 02:R4 129.05 .272 1980.1926, 1.10 163.03 n/a .000
02959> + 5.0 02:SOUTH-2 11.61 .022 1980.1926, 0.25 161.00 n/a .000
02960> SUM= 5.0 01:36 140.66 .291 1980.1926, 1.05 163.47 n/a .000
02961> R1980-19800928-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
02962> ROUTE CHANNEL -> 5.0 02:36 140.66 .291 1980.1926, 1.05 163.47 n/a .000
02963> * [RDT= 5.00] out-> 5.0 01:R5 140.66 .290 1980.1926, 1.10 163.47 n/a .000
02964> [L/S= 181 / 500 / 035]
02965> (Vmax= .482;Dmax= .482)
02966> R1980-19800929-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
02967> CONTINUOUS NASHDY 5.0 01:ASC 7.98 .028 1980.1926, 0.25 162.86 .301 .000
02968> [Cn= 42.6; N= 3.00; Tpe= .89]
02969> [IaRec= 6.00; SMIN=141.94; SMAX=946.27; SK= .030]
02970> [InterEventTime= 12.00]
02971> R1980-19800930-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
02972> ADD HYD + 5.0 02:R5 140.58 .290 1980.1926, 1.10 163.47 n/a .000
02973> + 5.0 02:SOUTH-3 7.98 .028 1980.1926, 0.25 162.86 n/a .000
02974> SUM= 5.0 01:36 148.64 .305 1980.1926, 1.05 163.44 n/a .000
02975> R1980-19800931-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
02976> SAVE HYD + 5.0 01:36 148.64 .305 1980.1926, 1.05 163.44 n/a .000
02977> Frame :36.1980
02978> remark:36-Bearbrook Tributary Upstream of Thunder Road Crossing
02979> R1980-19800932-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
02980> ROUTE CHANNEL -> 5.0 02:36 148.64 .305 1980.1926, 1.05 163.44 n/a .000
02981> * [RDT= 5.00] out-> 5.0 01:R6 148.64 .304 1980.1926, 1.15 163.44 n/a .000
02982> [L/S= 520 / 440 / 035]
02983> (Vmax= .520;Dmax= .252)
02984> R1980-19800933-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
02985> CONTINUOUS NASHDY 5.0 01:SOUTH-4 14.99 .029 1980.1926, 0.35 162.22 .300 .000
02986> [Cn= 39.5; N= 3.00; Tpe= 1.23]
02987> [IaRec= 6.00; SMIN=141.94; SMAX=946.27; SK= .030]
02988> [InterEventTime= 12.00]
02989> R1980-19800934-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
02990> ADD HYD + 5.0 02:R6 148.64 .304 1980.1926, 1.15 163.44 n/a .000
02991> + 5.0 02:SOUTH-4 14.99 .029 1980.1926, 0.35 162.22 n/a .000
02992> + 5.0 01:Total 163.03 .302 1980.1926, 1.10 163.33 n/a .000
02993> #####
02994> #####
02995> #####
02996> # CONTINUOUS RAINFALL DATA
02997> #####
02998> #####
02999> # STORMS
03000> #####
03001> ** END OF RUN : 1980
03002> #####
03003> #####
03004> #####
03005> #####
03006> #####
03007> #####
03008> #####
03009> RUN: COMMAND#
03010> R1981-19810000-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03011> START [ZERO = .00 hrs on 19810401]
03012> [METOUT= 2 (1=imperial, 2=metric output)]
03013> [NSTORE= 0]
03014> [NRUN= 1981]
03015> #####
03016> # SHWIND / INPUT DATA FILE
03017> #####
03018> #####
03019> # Project Name: [THUNDER ROAD] Project Number: [2120]
03020> # Date : 04-20-2021
03021> # Modeller [J.B]
03022> # Company : JFSaInc.
03023> # License # : 2540237
03024> #####
03025> #####
03026> #####
03027> # Ottawa International Airport - April 1st to October 31st
03028> R1981-19810002-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03029> READ AES DATA
03030> [Filename = YOM_1967_2007_123 ]
03031> [Start date= 1981.0401; End date= 1981.0931]
03032> [DT= 60 min; Length= 5136 hrs; NetHrs= 480; DryHrs= 4648; PTO= 617.00]
03033> Maximum average rainfall intensities over
03034> 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
03035> 35.36 31.85 28.36 18.15 9.27 4.83 2.43 1.62 mm/hr
03036> 35.36 63.70 78.09 108.90 111.30 115.00 115.00 115.00 116.70
03037> 19810805 19810805 19810805 19810805 19810805 19810806 19810806 19810806 19810806 date
03038> Number of rainfall events per following interval
03039> 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
03040> 183 130 112 90 68 64 46 37 22
03041> Number of events with at least the following durations
03042> 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
03043> 182 101 63 39 19 5 0 0 0
03044> R1981-19810003-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03045> #####
03046> #####
03047> #####
03048> #####
03049> #####
03050> #####
03051> #####
03052> #####
03053> R1981-19810005-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03054> CONTINUOUS NASHDY 5.0 01:NORTH-2 12.44 .452 1981.0805, 3.25 378.35 .463 .000
03055> [Cn= 51.0; N= 3.00; Tpe= 1.29]
03056> [IaRec= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030]
03057> [InterEventTime= 12.00]
03058> R1981-19810006-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03059> CONTINUOUS NASHDY 5.0 01:HW-1 2.36 .143 1981.0805, 2.55 386.08 .473 .000
03060> [Cn= 61.7; N= 3.00; Tpe= 1.21]
03061> [IaRec= 6.00; SMIN= 25.21; SMAX=168.09; SK= .030]
03062> [InterEventTime= 12.00]
03063> R1981-19810007-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03064> ADD HYD + 5.0 02:NORTH-1 34.70 .462 1981.0805, 6.50 376.10 .460 .000
03065> + 5.0 02:NORTH-2 12.44 .452 1981.0805, 3.25 378.35 n/a .000
03066> + 5.0 02:HW-1 2.36 .143 1981.0805, 2.55 386.08 n/a .000
03067> SUM= 5.0 01:R1 49.51 .826 1981.0805, 4.40 377.18 n/a .000
03068> * [RDT= 5.00] out-> 5.0 01:ASC-R 1.21 .063 1980.1926, 0.55 162.01 n/a .000
03069> [L/S= 500 / 1400 / 035]
03070> (Vmax= .180;Dmax= .180)
03071> R1981-19810008-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03072> CONTINUOUS NASHDY 5.0 01:INT-1 4.39 .163 1981.0805, 3.25 379.86 .465 .000
03073> [Cn= 58.4; N= 3.00; Tpe= 1.46]
03074> [IaRec= 6.00; SMIN= 67.24; SMAX=448.24; SK= .030]
03075> [InterEventTime= 12.00]
03076> R1981-19810009-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03077> ADD HYD + 5.0 02:INT-2 3.61 .133 1981.0805, 2.45 377.37 .461 .000
03078> + 5.0 02:INT-3 5.71 .024 1980.0901,21.05 166.29 n/a .000
03079> + 5.0 02:ASC 3.84 .013 1980.1926, 0.45 166.29 n/a .000
03080> + 5.0 02:ASC 5.29 .012 1980.1926, 0.35 162.06 n/a .000
03081> * [RDT= 5.00] out-> 5.0 01:ASC-R 1.21 .062 1980.1926, 0.55 162.01 n/a .000
03082> SUM= 5.0 01:32 73.56 .160 1980.1926, 0.40 164.04 n/a .000
03083> R1981-19810011-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03084> CONTINUOUS NASHDY 5.0 01:ASC 3.84 .146 1981.0805, 3.25 379.42 .464 .000
03085> [Cn= 58.4; N= 3.00; Tpe= 1.46]
03086> [IaRec= 6.00; SMIN= 73.13; SMAX=487.55; SK= .030]
03087> [InterEventTime= 12.00]
03088> R1981-19810012-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03089> CONTINUOUS NASHDY 5.0 01:ASC 5.29 .151 1981.0805, 3.30 376.63 .461 .000
03090> [Cn= 42.6; N= 3.00; Tpe= 1.26]
03091> [IaRec= 6.00; SMIN=141.94; SMAX=946.27; SK= .030]
03092> [InterEventTime= 12.00]
03093> R1981-19810013-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03094> CONTINUOUS NASHDY 5.0 01:ASC 1.21 .035 1981.0805, 2.45 375.93 .460 .000
03095> [Cn= 37.8; N= 3.00; Tpe= .87]
03096> [IaRec= 6.00; SMIN=179.29; SMAX=*****; SK= .030]
03097> [InterEventTime= 12.00]
03098> R1981-19810014-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03099> ROUTE CHANNEL -> 5.0 02:ASC 1.21 .035 1981.0805, 2.45 375.93 n/a .000
03100> * [RDT= 5.00] out-> 5.0 01:ASC-R 1.21 .034 1981.0805, 3.30 379.81 n/a .000
03101> [L/S= 500 / 1400 / 035]
03102> (Vmax= .180;Dmax= .180)
03103> R1981-19810015-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03104> CONTINUOUS NASHDY 5.0 01:INT-3 5.71 .281 1981.0805, 2.40 379.41 .464 .000
03105> [Cn= 58.4; N= 3.00; Tpe= 1.46]
03106> [IaRec= 6.00; SMIN= 73.13; SMAX=487.55; SK= .030]
03107> [InterEventTime= 12.00]
03108> R1981-19810016-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03109> ADD HYD + 5.0 02:R1 49.51 .826 1981.0805, 4.40 377.18 n/a .000
03110> + 5.0 02:INT-1 4.39 .015 1980.1926, 0.50 166.05 n/a .000
03111> + 5.0 02:INT-2 3.61 .013 1981.0805, 2.45 377.37 n/a .000
03112> + 5.0 02:INT-3 5.71 .024 1980.0901,21.05 166.29 n/a .000
03113> + 5.0 02:ASC 3.84 .014 1981.0805, 3.30 379.41 n/a .000
03114> + 5.0 02:ASC 5.29 .151 1981.0805, 3.30 376.63 n/a .000
03115> + 5.0 02:ASC-R 1.21 .034 1981.0805, 3.30 379.81 n/a .000
03116> SUM= 5.0 01:32 73.56 .161 1981.0805, 3.35 377.58 n/a .000
03117> R1981-19810017-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03118> ROUTE CHANNEL -> 5.0 02:32 73.56 .161 1981.0805, 3.35 377.58 n/a .000
03119> * [RDT= 5.00] out-> 5.0 01:R2 73.56 .164 1981.0805, 3.40 377.58 n/a .000
03120> [L/S= 323 / 500 / 035]
03121> (Vmax= .905;Dmax= .393)
03122> R1981-19810018-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03123> CONTINUOUS NASHDY 5.0 01:ASC 21.43 .451 1981.0805, 4.25 375.76 .459 .000
03124> [Cn= 36.1; N= 3.00; Tpe= 1.61]
03125> [IaRec= 6.00; SMIN=141.94; SMAX=946.27; SK= .030]
03126> [InterEventTime= 12.00]
03127> R1981-19810019-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03128> CONTINUOUS NASHDY 5.0 01:ASC 4.70 .121 1981.0805, 4.25 376.81 .461 .000
03129> [Cn= 44.6; N= 3.00; Tpe= 1.72]
03130> [IaRec= 6.00; SMIN=141.94; SMAX=946.27; SK= .030]
03131> [InterEventTime= 12.00]
03132> R1981-19810020-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03133> CONTINUOUS NASHDY 5.0 01:ASC 9.14 .472 1981.0805, 2.55 381.84 .467 .000
03134> [Cn= 68.4; N= 3.00; Tpe= 1.12]
03135> [IaRec= 6.00; SMIN= 323.73; SMAX=323.73; SK= .030]
03136> [InterEventTime= 12.00]
03137> R1981-19810021-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03138> ADD HYD + 5.0 02:R2 73.56 .164 1981.0805, 3.40 377.58 n/a .000
03139> + 5.0 02:ASC 21.43 .451 1981.0805, 4.25 375.76 n/a .000
03140> + 5.0 02:ASC 4.70 .121 1981.0805, 4.25 376.81 n/a .000
03141> + 5.0 02:ASC 5.29 .151 1981.0805, 3.35 377.58 n/a .000
03142> + 5.0 02:ASC-R 1.21 .034 1981.0805, 3.40 377.58 n/a .000
03143> SUM= 5.0 01:32 73.56 .164 1981.0805, 3.40 377.58 n/a .000
03144> R1981-19810022-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03145> ROUTE CHANNEL -> 5.0 02:33 108.84 .257 1981.0805, 3.40 377.58 n/a .000
03146> * [RDT= 5.00] out-> 5.0 01:R3 180.84 .257 1981.0805, 3.50 377.58 n/a .000
03147> [L/S= 396 / 396 / 035]
03148> (Vmax= .387;Dmax= .387)
03149> R1981-19810023-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03150> CONTINUOUS NASHDY 5.0 01:SOUTH-1 20.21 .434 1981.0805, 3.45 375.59 .459 .000
03151> [Cn= 35.5; N= 3.00; Tpe= 1.46]
03152> [IaRec= 6.00; SMIN=204.20; SMAX=*****; SK= .030]
03153> [InterEventTime= 12.00]
03154> R1981-19810024-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03155> ADD HYD + 5.0 02:R3 108.84 .257 1981.0805, 3.50 377.58 n/a .000
03156> + 5.0 02:ASC 20.21 .434 1981.0805, 3.45 375.59 n/a .000
03157> SUM= 5.0 01:34 129.05 .302 1981.0805, 3.50 377.24 n/a .000
03158> R1981-19810025-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03159> ROUTE CHANNEL -> 5.0 02:34 129.05 .302 1981.0805, 3.50 377.24 n/a .000
03160> * [RDT= 5.00] out-> 5.0 01:R4 129.05 .302 1981.0805, 4.00 377.24 n/a .000
03161> [L/S= 402 / 410 / 035]
03162> (Vmax= .775;Dmax= .618)
03163> R1981-19810026-----DtnIn-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate,h:mm-----Rvm-R,C-----DfMcs
03164> CONTINUOUS NASHDY 5.0 01:SOUTH-2 11.61 .306 1981.0805, 2.50 375.76 .459 .000
03165> [Cn= 36.7; N= 3.00; Tpe= .96]
03166> [IaRec= 6.00; SMIN=141.94; SMAX=946.27; SK= .030]
03167> [InterEventTime= 12.00]
03168> R1981-19810027-----DtnIn-ID:NYHD-----AREAhA-QPE
```

---

**Page 9**

---

**Page 10**

[illegible]

[illegible]

```
04681* ** END OF RUN : 1988
04682*
04683*
04684*
04685*
04686*
04687*
04688*
04689* RUN: COMMAND#
04690* R1989-C08001-----
04901* START
04902* [TZERO = .00 hrs on 19890401]
04903* [METOUT= 2 (1=imperial, 2=metric output)]
04904* [NSTORM= 0]
04905* [NRUN = 1989]
04906* #*****
04907* # SHWYNO / INPUT DATA FILE
04908* #*****
04909* # Project Name: [THUNDER ROAD] Project Number: [2128]
04910* # Date : 04-28-2021
04911* # Modeller : [J.B]
04912* # Company : JFSaInc.
04913* # License # : 2549237
04914* #*****
04915* #*****
04916* #*****
04917* # Orléans International Airport April 1st to October 31st
04918* R1989-C08002-----
04919* READ AES DATA
04920* [Filename = YOM.1967.2007.123 ]
04921* [Start_date= 1989.0401; End_date= 1989.1031]
04922* [OTF 60.0in; Length= 5336.0hrs; WetHrs= 350; DryHrs= 4786; PTOF= 458.0in]
04923* Maximum average rainfall intensities over
04924* 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
04925* 22.70 12.00 8.17 5.75 3.03 1.69 1.14 .88 .59 mm/hr
04926* 22.70 25.20 26.80 34.50 36.30 40.00 49.50 41.30 42.50
04927* 19890727 19890727 19890727 19890727 19890727 19890727 19890727 19890727 19890727
04928* Number of rainfall events per following interval time
04929* 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
04930* 126 105 69 42 35 39 23
04931* Number of events with at least the following durations
04932* 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
04933* 126 69 45 15 3 0 0 0 0
04724* R1989-C08003-----
04725* COMPUTE API
04726* [APIN= 59.00; APIID= 9900; APIID= 9950]
04727* [APIN= 59.00; APIID= 9900; APIID= 9950]
04728* R1989-C08004-----
04729* CONTINUOUS NASHVO 5.0 01 NORTH-1 34.70 .029 1989.0727.15.20 132.39 .289 .000
04730* [Cm 36.1; Nr 3.00; Tm 1.46]
04731* [IAREC= 6.00; SMIN=168.62; SMAX=*****; SK= .030]
04732* [InterEventTime= 12.00]
04733* R1989-C08005-----
04734* CONTINUOUS NASHVO 5.0 01 NORTH-2 12.44 .039 1989.0727.16.20 133.65 .291 .000
04735* [Cm 53.0; Nr 3.00; Tm 1.29]
04736* [IAREC= 6.00; SMIN= 91.01; SMAX=606.70; SK= .030]
04737* [InterEventTime= 12.00]
04738* R1989-C08006-----
04739* CONTINUOUS NASHVO 5.0 01 HWY-1 2.36 .021 1989.0727.16.10 140.45 .306 .000
04740* [Cm 42.4; Nr 3.00; Tm 1.46]
04741* [IAREC= 6.00; SMIN= 25.21; SMAX=168.09; SK= .030]
04742* [InterEventTime= 12.00]
04743* R1989-C08007-----
04744* ADD HYD + 5.0 02 NORTH-1 34.70 .029 1989.0727.15.20 132.39 n/a .000
04745* [Cm 36.1; Nr 3.00; Tm 1.46]
04746* + 5.0 02 HWY-1 2.36 .021 1989.0727.16.10 140.45 n/a .000
04747* SUM= 5.0 01.13 108.84 .226 1989.0727.16.10 133.29 n/a .000
04748* R1989-C08008-----
04749* ROUTE CHANNEL -> 5.0 02.13 49.51 .074 1989.0727.16.30 133.09 n/a .000
04750* [ROF= 5.00] out-> 5.0 02.13 49.51 .074 1989.0727.16.30 133.09 n/a .000
04751* [L/S= 478 / 440 / .035]
04752* [Vmax= 554; Dmax= 180]
04753* R1989-C08009-----
04754* CONTINUOUS NASHVO 5.0 01 INT-1 4.39 .015 1989.0727.16.45 134.60 .293 .000
04755* [Cm 60.4; Nr 3.00; Tm 1.80]
04756* [IAREC= 6.00; SMIN= 67.24; SMAX=448.24; SK= .030]
04757* [InterEventTime= 12.00]
04758* R1989-C08010-----
04759* CONTINUOUS NASHVO 5.0 01 INT-2 3.61 .011 1989.0727.15.50 133.09 .290 .000
04760* [Cm 42.4; Nr 3.00; Tm 1.46]
04761* [IAREC= 6.00; SMIN=115.26; SMAX=768.40; SK= .030]
04762* [InterEventTime= 12.00]
04763* R1989-C08011-----
04764* CONTINUOUS NASHVO 5.0 01 A3A 3.84 .013 1989.0727.16.30 134.27 .290 .000
04765* [Cm 60.4; Nr 3.00; Tm 1.80]
04766* [IAREC= 6.00; SMIN= 73.13; SMAX=487.55; SK= .030]
04767* [InterEventTime= 12.00]
04768* R1989-C08012-----
04769* CONTINUOUS NASHVO 5.0 01 A3B 5.29 .012 1989.0727.16.20 132.68 .289 .000
04770* [Cm 42.4; Nr 3.00; Tm 1.46]
04771* [IAREC= 6.00; SMIN=141.94; SMAX=946.27; SK= .030]
04772* [InterEventTime= 12.00]
04773* R1989-C08013-----
04774* CONTINUOUS NASHVO 5.0 01 A3C 1.21 .003 1989.0727.15.45 132.29 .288 .000
04775* [Cm 60.4; Nr 3.00; Tm 1.80]
04776* [IAREC= 6.00; SMIN=179.29; SMAX=*****; SK= .030]
04777* [InterEventTime= 12.00]
04778* R1989-C08014-----
04779* ROUTE CHANNEL -> 5.0 02.A3C 1.21 .003 1989.0727.15.45 132.29 n/a .000
04780* [ROF= 5.00] out-> 5.0 02.A3C-R 1.21 .003 1989.0727.15.45 132.29 n/a .000
04781* [L/S= 580 / 140 / .035]
04782* [Vmax= 580; Dmax= 140]
04783* R1989-C08015-----
04784* CONTINUOUS NASHVO 5.0 01 INT-3 5.71 .028 1989.0727.15.45 134.28 .293 .000
04785* [Cm 60.4; Nr 3.00; Tm 1.80]
04786* [IAREC= 6.00; SMIN= 73.13; SMAX=487.55; SK= .030]
04787* [InterEventTime= 12.00]
04788* R1989-C08016-----
04789* ADD HYD + 5.0 02.R1 49.51 .074 1989.0727.16.45 133.09 n/a .000
04790* + 5.0 02.INT-1 4.39 .015 1989.0727.15.45 134.60 n/a .000
04791* + 5.0 02.INT-2 3.61 .011 1989.0727.15.50 133.09 n/a .000
04792* + 5.0 02.A3A 3.84 .013 1989.0727.16.30 134.27 n/a .000
04793* + 5.0 02.A3B 5.29 .012 1989.0727.16.20 132.68 n/a .000
04794* + 5.0 02.A3C 1.21 .003 1989.0727.15.45 132.29 n/a .000
04795* SUM= 5.0 01.12 73.56 .145 1989.0727.16.25 133.29 n/a .000
04796* R1989-C08017-----
04797* ROUTE CHANNEL -> 5.0 02.12 73.56 .145 1989.0727.16.40 133.29 n/a .000
04798* [ROF= 5.00] out-> 5.0 02.12 73.56 .144 1989.0727.16.40 133.29 n/a .000
04799* [L/S= 580 / 560 / .035]
04800* [Vmax= 480; Dmax= 118]
04801* R1989-C08018-----
04802* CONTINUOUS NASHVO 5.0 01 A1A 21.43 .030 1989.0727.16.50 132.20 .288 .000
04803* [Cm 36.1; Nr 3.00; Tm 1.61]
04804* [IAREC= 6.00; SMIN=134.47; SMAX=896.47; SK= .030]
04805* [InterEventTime= 12.00]
04806* R1989-C08019-----
04807* CONTINUOUS NASHVO 5.0 01 A1B 4.70 .009 1989.0727.16.50 132.78 .289 .000
04808* [Cm 44.6; Nr 3.00; Tm 1.72]
04809* [IAREC= 6.00; SMIN=134.47; SMAX=896.47; SK= .030]
04810* [InterEventTime= 12.00]
04811* R1989-C08020-----
04812* CONTINUOUS NASHVO 5.0 01 A1C 9.14 .063 1989.0727.16.05 136.02 .296 .000
04813* [Cm 68.4; Nr 3.00; Tm 1.12]
04814* [IAREC= 6.00; SMIN= 48.56; SMAX=323.73; SK= .030]
04815* [InterEventTime= 12.00]
04816* R1989-C08021-----
04817* ADD HYD + 5.0 02.R1 73.56 .144 1989.0727.16.40 133.29 n/a .000
04818* + 5.0 02.A1A 21.43 .030 1989.0727.16.50 132.20 n/a .000
04819* + 5.0 02.A1B 4.70 .009 1989.0727.16.50 132.78 n/a .000
04820* + 5.0 02.A1C 9.14 .063 1989.0727.16.05 136.02 n/a .000
04821* SUM= 5.0 01.13 108.84 .226 1989.0727.16.50 133.29 n/a .000
04822* R1989-C08022-----
04823* ROUTE CHANNEL -> 5.0 02.13 108.84 .221 1989.0727.16.30 133.28 n/a .000
04824* [ROF= 5.00] out-> 5.0 02.13 108.84 .226 1989.0727.16.30 133.28 n/a .000
04825* [L/S= 396 / 305 / .035]
04826* [Vmax= 396; Dmax= 305]
04827* R1989-C08023-----
04828* CONTINUOUS NASHVO 5.0 01 SOUTH-1 29.21 .039 1989.0727.16.30 132.11 .288 .000
04829* [Cm 52.0; Nr 3.00; Tm 1.46]
04830* [IAREC= 6.00; SMIN=264.20; SMAX=*****; SK= .030]
04831* [InterEventTime= 12.00]
04832* R1989-C08024-----
04833* ADD HYD + 5.0 02.R2 129.05 .252 1989.0727.17.00 133.10 n/a .000
04834* + 5.0 02.SOUTH-1 20.21 .039 1989.0727.16.30 132.11 n/a .000
04835* SUM= 5.0 01.14 129.05 .255 1989.0727.16.45 133.10 n/a .000
04836* R1989-C08025-----
04837* ROUTE CHANNEL -> 5.0 02.14 129.05 .252 1989.0727.16.45 133.10 n/a .000
04838* [ROF= 5.00] out-> 5.0 02.14 129.05 .252 1989.0727.17.00 133.10 n/a .000
04839* [L/S= 482 / 410 / .035]
04840* [Vmax= 482; Dmax= 236]
04841* R1989-C08026-----
04842* CONTINUOUS NASHVO 5.0 01 SOUTH-2 11.61 .024 1989.0727.15.50 132.20 .288 .000
04843* [Cm 36.7; Nr 3.00; Tm .96]
04844* [IAREC= 6.00; SMIN=150.40; SMAX=*****; SK= .030]
04845* [InterEventTime= 12.00]
04846* R1989-C08027-----
04847* ADD HYD + 5.0 02.R4 129.05 .252 1989.0727.17.00 133.10 n/a .000
04848* + 5.0 02.SOUTH-2 11.61 .024 1989.0727.15.50 132.20 n/a .000
04849* SUM= 5.0 01.15 140.66 .268 1989.0727.16.05 133.63 n/a .000
04850* R1989-C08028-----
04851* ROUTE CHANNEL -> 5.0 02.15 140.66 .268 1989.0727.16.05 133.63 n/a .000
04852* [ROF= 5.00] out-> 5.0 02.15 140.66 .268 1989.0727.16.05 133.63 n/a .000
04853* [L/S= 396 / 305 / .035]
04854* [Vmax= 396; Dmax= 305]
04855* R1989-C08029-----
04856* CONTINUOUS NASHVO 5.0 01 SOUTH-3 7.98 .022 1989.0727.15.45 132.68 .289 .000
04857* [Cm 42.6; Nr 3.00; Tm .89]
04858* [IAREC= 6.00; SMIN=141.94; SMAX=946.27; SK= .030]
04859* [InterEventTime= 12.00]
04860*
04861*
04862*
04863*
04864*
04865*
04866*
04867*
04868*
04869*
04870*
04871*
04872*
04873*
04874*
04875*
04876*
04877*
04878*
04879*
04880*
04881*
04882*
04883*
04884*
04885*
04886*
04887*
04888*
04889*
04890*
04891*
04892*
04893*
04894*
04895*
04896*
04897*
04898*
04899*
04900*
04901*
04902*
04903*
04904*
04905*
04906*
04907*
04908*
04909*
04910*
04911*
04912*
04913*
04914*
04915*
04916*
04917*
04918*
04919*
04920*
04921*
04922*
04923*
04924*
04925*
04926*
04927*
04928*
04929*
04930*
04931*
04932*
04933*
04934*
04935*
04936*
04937*
04938*
04939*
04940*
04941*
04942*
04943*
04944*
04945*
04946*
04947*
04948*
04949*
04950*
04951*
04952*
04953*
04954*
04955*
04956*
04957*
04958*
04959*
04960*
04961*
04962*
04963*
04964*
04965*
04966*
04967*
04968*
04969*
04970*
04971*
04972*
04973*
04974*
04975*
04976*
04977*
04978*
04979*
04980*
04981*
04982*
04983*
04984*
04985*
04986*
04987*
04988*
04989*
04990*
04991*
04992*
04993*
04994*
04995*
04996*
04997*
04998*
04999*
05000*
05001*
05002*
05003*
05004*
05005*
05006*
05007*
05008*
05009*
05010*
05011*
05012*
05013*
05014*
05015*
05016*
05017*
05018*
05019*
05020*
05021*
05022*
05023*
05024*
05025*
05026*
05027*
05028*
05029*
05030*
05031*
05032*
05033*
05034*
05035*
05036*
05037*
05038*
05039*
05040*
```

```
050411 [IAREC: 6.00; SMIN:204.20; DMAX:*****; SK: -030]
05042 [InterEventTime: 12.00]
05043 R1990: C08024-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05044 ADD HYD + 5.0 02:R2 108.84 .539 1990.0720.14:00 243.29 n/a .000
05045 SUM: 5.0 02:R2 20.21 .077 1990.0720.14:25 242.97 n/a .000
05046 SUM: 5.0 02:R4 129.05 .614 1990.0720.14:35 243.20 n/a .000
05047 R1990: C08025-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05048 ROUTE CHANNEL -> 5.0 02:R4 129.05 .614 1990.0720.14:35 243.20 n/a .000
05049 * [RDT= 5.00] out-> 5.0 01:R4 129.05 .606 1990.0720.14:50 243.20 n/a .000
05050 [L/S= 82 / 440 / 035]
05051 (Vmax: .582; Dmax: .337)
05052 R1990: C08026-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05053 CONTINUOUS NASHYD 5.0 01: SOUTH-2 11.61 .056 1990.0720.13:50 242.27 .402 .000
05054 [C# 36.7; N: 3.00; Tps: .96]
05055 [IAREC: 6.00; SMIN:141.94; SMAX:946.27; SK: -030]
05056 [InterEventTime: 12.00]
05057 R1990: C08027-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05058 ADD HYD + 5.0 02:R4 129.05 .606 1990.0720.14:50 243.20 n/a .000
05059 SUM: 5.0 02: SOUTH-2 11.61 .056 1990.0720.13:50 242.27 n/a .000
05060 SUM: 5.0 01:R5 140.66 .650 1990.0720.14:45 243.02 n/a .000
05061 R1990: C08028-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05062 ROUTE CHANNEL -> 5.0 02:R5 140.66 .650 1990.0720.14:45 243.02 n/a .000
05063 * [RDT= 5.00] out-> 5.0 01:R5 140.66 .649 1990.0720.14:50 243.02 n/a .000
05064 [L/S= 181 / 560 / 035]
05065 (Vmax: .582; Dmax: .337)
05066 R1990: C08029-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05067 CONTINUOUS NASHYD 5.0 01: SOUTH-3 7.98 .051 1990.0720.13:45 242.69 .402 .000
05068 [C# 42.6; N: 3.00; Tps: .89]
05069 [IAREC: 6.00; SMIN:141.94; SMAX:946.27; SK: -030]
05070 [InterEventTime: 12.00]
05071 R1990: C08030-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05072 ADD HYD + 5.0 02: SOUTH-3 7.98 .051 1990.0720.13:45 242.69 n/a .000
05073 SUM: 5.0 02: SOUTH-3 7.98 .051 1990.0720.13:45 242.69 n/a .000
05074 SUM: 5.0 01:R6 148.64 .686 1990.0720.14:45 243.01 n/a .000
05075 R1990: C08031-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05076 SAVE HYD + 5.0 01:R6 148.64 .686 1990.0720.14:45 243.01 n/a .000
05077 Frame :36.1990
05078 remark:36-Bearbrook Tributary Upstream of Thunder Road Crossing
05079 R1990: C08032-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05080 ROUTE CHANNEL -> 5.0 02:R6 148.64 .686 1990.0720.14:45 243.01 n/a .000
05081 * [RDT= 5.00] out-> 5.0 01:R6 148.64 .682 1990.0720.14:50 243.01 n/a .000
05082 [L/S= 82 / 440 / 035]
05083 (Vmax: .610; Dmax: .346)
05084 R1990: C08033-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05085 CONTINUOUS NASHYD 5.0 01: SOUTH-4 14.99 .071 1990.0720.14:15 242.37 .402 .000
05086 [C# 39.5; N: 3.00; Tps: 1.23]
05087 [IAREC: 6.00; SMIN:141.94; SMAX:946.27; SK: -030]
05088 [InterEventTime: 12.00]
05089 R1990: C08034-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05090 ADD HYD + 5.0 02:R6 148.64 .682 1990.0720.14:50 243.01 n/a .000
05091 SUM: 5.0 02: SOUTH-4 14.99 .071 1990.0720.14:15 242.37 n/a .000
05092 SUM: 5.0 02:R7 140.66 .650 1990.0720.14:45 242.95 n/a .000
05093 #####
05094 #####
05095 #####
05096 # CONTINUOUS RAINFALL DATA
05097 #####
05098 #####
05099 # STORMS
05100 #####
05101 ** END OF RUN : 1990
05102 #####
05103 #####
05104 #####
05105 #####
05106 #####
05107 #####
05108 #####
05109 RUN: COMMAND#
05110 R1990: C08035-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05111 START [TZERO = .00 hrs on 19900401]
05112 [METOUT= 2 (1=imperial, 2=metric output)]
05113 [NSTORE = 0]
05114 [NROW = 1991]
05115 # SWHYD / INPUT DATA
05116 # *****
05117 # *****
05118 # *****
05119 # Project Name: [THUNDER ROAD] Project Number: [2128]
05120 # Date : 04-20-2021
05121 # Modeller [J.B]
05122 # Company : JFSaInc.
05123 # License # : 2540237
05124 # *****
05125 # *****
05126 # *****
05127 # OTCWA International Airport - April 1st to October 31st
05128 R1990: C08002-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05129 READ AES DATA
05130 [Filename = YOM.1967.2007.123]
05131 [Start date= 1991.0401; End date= 1991.1031]
05132 [OTF 60 min; Length= 5216 hrs; WtHrs= 4724; PTOF= 482.20]
05133 Maximum average rainfall intensities over
05134 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
05135 11.36 19.80 26.60 24.60 30.40 41.20 46.00 51.60 57.00 mm/hr
05136 19920409 19920409 19920409 19920409 19920422 19920418 19920418 19920423 date
05137 Number of rainfall events per following interval time
05138 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
05139 135 113 83 65 49 39 34 27
05140 Number of events with at least the following durations
05141 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
05142 134 75 49 17 5 1 0 0 0
05143 R1990: C08003-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05144 COMPUTE API
05145 [APIN= 50.00; APIID= 9000; APIID= 9956]
05146 [APIN= 97; APIID= 26.28; APIID= 7.40]
05147 R1990: C08004-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05148 CONTINUOUS NASHYD 5.0 01: NORTH-1 34.70 .038 1991.0422.16:20 142.99 .297 .000
05149 SUM: 5.0 01: NORTH-2 12.44 .045 1991.0410.4:10 144.05 n/a .000
05150 [C# 36.7; N: 3.00; Tps: .96]
05151 [IAREC: 6.00; SMIN:168.62; SMAX:*****; SK: -030]
05152 [InterEventTime: 12.00]
05153 R1990: C08005-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05154 CONTINUOUS NASHYD 5.0 01: NORTH-2 12.44 .045 1991.0410.4:10 144.05 .299 .000
05155 [C# 36.7; N: 3.00; Tps: .96]
05156 [IAREC: 6.00; SMIN: 91.01; SMAX:606.70; SK: -030]
05157 [InterEventTime: 12.00]
05158 R1990: C08006-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05159 CONTINUOUS NASHYD 5.0 01: HWY-1 2.36 .019 1991.0410.4:00 148.83 .309 .000
05160 [C# 61.7; N: 3.00; Tps: 1.40]
05161 [IAREC: 6.00; SMIN: 25.21; SMAX:168.09; SK: -030]
05162 [InterEventTime: 12.00]
05163 R1990: C08007-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05164 ADD HYD + 5.0 02: NORTH-1 34.70 .038 1991.0422.16:20 142.99 n/a .000
05165 SUM: 5.0 02: NORTH-2 12.44 .045 1991.0410.4:10 144.05 n/a .000
05166 SUM: 5.0 02: HWY-1 2.36 .019 1991.0410.4:00 148.83 n/a .000
05167 SUM: 5.0 02:R1 108.84 .539 1990.0720.14:00 243.29 n/a .000
05168 R1990: C08008-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05169 ROUTE CHANNEL -> 5.0 02:R1 108.84 .539 1990.0720.14:00 243.29 n/a .000
05170 * [RDT= 5.00] out-> 5.0 01:R1 108.84 .539 1990.0720.14:00 243.29 n/a .000
05171 [L/S= 478 / 440 / 035]
05172 (Vmax: .574; Dmax: .354)
05173 R1990: C08009-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05174 CONTINUOUS NASHYD 5.0 01: INT-1 4.39 .016 1991.0410.4:30 144.00 .300 .000
05175 [C# 64.7; N: 3.00; Tps: 1.66]
05176 [IAREC: 6.00; SMIN: 67.24; SMAX:448.24; SK: -030]
05177 [InterEventTime: 12.00]
05178 R1990: C08010-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05179 CONTINUOUS NASHYD 5.0 01: INT-2 3.61 .014 1991.0410.3:45 143.58 .298 .000
05180 [C# 47.4; N: 3.00; Tps: .95]
05181 [IAREC: 6.00; SMIN:115.26; SMAX:768.40; SK: -030]
05182 [InterEventTime: 12.00]
05183 R1990: C08011-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05184 CONTINUOUS NASHYD 5.0 01: A3A 3.84 .015 1991.0410.4:20 144.57 .300 .000
05185 [C# 58.4; N: 3.00; Tps: 1.46]
05186 [IAREC: 6.00; SMIN: 73.13; SMAX:487.55; SK: -030]
05187 [InterEventTime: 12.00]
05188 R1990: C08012-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05189 CONTINUOUS NASHYD 5.0 01: A3B 5.29 .014 1991.0410.4:05 143.23 .297 .000
05190 [C# 42.6; N: 3.00; Tps: 1.20]
05191 [IAREC: 6.00; SMIN:141.94; SMAX:946.27; SK: -030]
05192 [InterEventTime: 12.00]
05193 R1990: C08013-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05194 CONTINUOUS NASHYD 5.0 01: A3C 1.21 .003 1991.0410.3:40 142.91 .296 .000
05195 [C# 58.4; N: 3.00; Tps: 1.46]
05196 [IAREC: 6.00; SMIN:179.29; SMAX:*****; SK: -030]
05197 [InterEventTime: 12.00]
05198 R1990: C08014-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05199 ROUTE CHANNEL -> 5.0 02: A3C 1.21 .003 1991.0410.3:40 142.91 n/a .000
05200 * [RDT= 5.00] out-> 5.0 02: A3C 1.21 .003 1991.0410.3:40 142.91 n/a .000
05201 [L/S= 580 / 140 / 035]
05202 (Vmax: .083; Dmax: .256)
05203 R1990: C08015-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05204 CONTINUOUS NASHYD 5.0 01: INT-3 5.71 .032 1991.0410.3:40 144.57 .300 .000
05205 [C# 42.6; N: 3.00; Tps: 1.20]
05206 [IAREC: 6.00; SMIN: 73.13; SMAX:487.55; SK: -030]
05207 [InterEventTime: 12.00]
05208 R1990: C08016-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05209 ADD HYD + 5.0 02:R1 108.84 .539 1990.0720.14:00 243.29 n/a .000
05210 SUM: 5.0 02: INT-1 4.39 .016 1991.0410.4:30 144.00 n/a .000
05211 SUM: 5.0 02: INT-2 3.61 .014 1991.0410.3:45 143.58 n/a .000
05212 SUM: 5.0 02: INT-3 5.71 .032 1991.0410.3:40 144.57 n/a .000
05213 SUM: 5.0 02: A3A 3.84 .015 1991.0410.4:20 144.57 n/a .000
05214 SUM: 5.0 02: A3B 5.29 .014 1991.0410.4:05 143.23 n/a .000
05215 SUM: 5.0 02: A3C 1.21 .003 1991.0410.3:40 142.91 n/a .000
05216 SUM: 5.0 02: INT 73.56 .163 1991.0410.4:15 143.71 n/a .000
05217 R1990: C08017-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05218 ROUTE CHANNEL -> 5.0 02: INT 73.56 .163 1991.0410.4:15 143.71 n/a .000
05219 * [RDT= 5.00] out-> 5.0 01:R2 73.56 .160 1991.0410.4:25 143.71 n/a .000
05220 [L/S= 359 / 560 / 035]
05221 (Vmax: .422; Dmax: .124)
05222 R1990: C08018-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05223 CONTINUOUS NASHYD 5.0 01: A1A 21.43 .036 1991.0410.4:30 142.83 .296 .000
05224 [C# 36.1; N: 3.00; Tps: 1.08]
05225 [IAREC: 6.00; SMIN:134.47; SMAX:923.73; SK: -030]
05226 [InterEventTime: 12.00]
05227 R1990: C08019-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05228 CONTINUOUS NASHYD 5.0 01: A1B 4.70 .010 1991.0410.4:35 143.31 .297 .000
05229 [C# 44.6; N: 3.00; Tps: 1.72]
05230 [IAREC: 6.00; SMIN:134.47; SMAX:923.73; SK: -030]
05231 [InterEventTime: 12.00]
05232 R1990: C08020-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05233 CONTINUOUS NASHYD 5.0 01: A2 9.14 .056 1991.0410.3:55 145.85 .302 .000
05234 [C# 68.4; N: 3.00; Tps: 1.12]
05235 [IAREC: 6.00; SMIN: 48.56; SMAX:323.73; SK: -030]
05236 [InterEventTime: 12.00]
05237 R1990: C08021-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05238 ADD HYD + 5.0 02:R2 73.56 .160 1991.0410.4:25 143.71 n/a .000
05239 SUM: 5.0 02: A1A 21.43 .036 1991.0410.4:30 142.83 n/a .000
05240 SUM: 5.0 02: A1B 4.70 .010 1991.0410.4:35 143.31 n/a .000
05241 SUM: 5.0 02: A2 9.14 .056 1991.0410.3:55 145.85 n/a .000
05242 SUM: 5.0 02:R3 108.84 .539 1990.0720.14:00 243.29 n/a .000
05243 R1990: C08022-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05244 ROUTE CHANNEL -> 5.0 02:R3 108.84 .539 1990.0720.14:00 243.29 n/a .000
05245 [L/S= 396 / 305 / 035]
05246 (Vmax: .389; Dmax: .255)
05247 [IAREC: 6.00; SMIN:141.94; SMAX:946.27; SK: -030]
05248 R1990: C08023-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05249 CONTINUOUS NASHYD 5.0 01: SOUTH-1 20.21 .037 1991.0410.4:15 142.76 .296 .000
05250 [C# 35.5; N: 3.00; Tps: 1.40]
05251 [IAREC: 6.00; SMIN:141.94; SMAX:946.27; SK: -030]
05252 [InterEventTime: 12.00]
05253 R1990: C08024-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05254 ADD HYD + 5.0 02:R3 108.84 .539 1990.0720.14:00 243.29 n/a .000
05255 SUM: 5.0 02: SOUTH-1 20.21 .037 1991.0410.4:15 142.76 n/a .000
05256 SUM: 5.0 01: A4 129.05 .614 1990.0720.14:35 243.56 n/a .000
05257 R1990: C08025-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05258 ROUTE CHANNEL -> 5.0 02: R4 129.05 .614 1991.0410.4:35 243.56 n/a .000
05259 * [RDT= 5.00] out-> 5.0 01:R4 129.05 .614 1991.0410.4:35 243.56 n/a .000
05260 [L/S= 82 / 440 / 035]
05261 (Vmax: .505; Dmax: .249)
05262 R1990: C08026-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05263 CONTINUOUS NASHYD 5.0 01: SOUTH-2 11.61 .030 1991.0410.3:45 142.83 .296 .000
05264 [C# 36.7; N: 3.00; Tps: .96]
05265 [IAREC: 6.00; SMIN:141.94; SMAX:946.27; SK: -030]
05266 [InterEventTime: 12.00]
05267 R1990: C08027-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05268 ADD HYD + 5.0 02: R4 129.05 .614 1991.0410.4:35 243.56 n/a .000
05269 SUM: 5.0 02: SOUTH-2 11.61 .030 1991.0410.3:45 142.83 n/a .000
05270 SUM: 5.0 01:R5 140.66 .650 1990.0720.14:45 243.02 n/a .000
05271 R1990: C08028-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05272 ROUTE CHANNEL -> 5.0 02:R5 140.66 .650 1991.0410.4:40 243.58 n/a .000
05273 * [RDT= 5.00] out-> 5.0 01:R5 140.66 .650 1991.0410.4:45 243.58 n/a .000
05274 [L/S= 82 / 440 / 035]
05275 (Vmax: .484; Dmax: .238)
05276 R1990: C08029-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05277 CONTINUOUS NASHYD 5.0 01: SOUTH-3 7.98 .027 1991.0410.3:40 142.76 .297 .000
05278 [C# 42.6; N: 3.00; Tps: .89]
05279 [IAREC: 6.00; SMIN:141.94; SMAX:946.27; SK: -030]
05280 [InterEventTime: 12.00]
05281 R1990: C08030-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05282 ADD HYD + 5.0 02: R6 148.64 .682 1990.0720.14:50 243.01 n/a .000
05283 SUM: 5.0 02: SOUTH-3 7.98 .027 1991.0410.3:40 142.76 n/a .000
05284 SUM: 5.0 01:R6 148.64 .686 1990.0720.14:45 243.01 n/a .000
05285 R1990: C08031-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05286 SAVE HYD + 5.0 01:R6 148.64 .686 1990.0720.14:45 243.01 n/a .000
05287 Frame :36.1991
05288 remark:36-Bearbrook Tributary Upstream of Thunder Road Crossing
05289 R1990: C08032-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05290 ROUTE CHANNEL -> 5.0 02:R6 148.64 .686 1990.0720.14:45 243.01 n/a .000
05291 * [RDT= 5.00] out-> 5.0 01:R6 148.64 .682 1990.0720.14:50 243.01 n/a .000
05292 [L/S= 82 / 440 / 035]
05293 (Vmax: .528; Dmax: .255)
05294 R1990: C08033-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05295 CONTINUOUS NASHYD 5.0 01: SOUTH-4 14.99 .035 1991.0410.4:15 142.99 .297 .000
05296 [C# 39.5; N: 3.00; Tps: 1.23]
05297 [IAREC: 6.00; SMIN:141.94; SMAX:946.27; SK: -030]
05298 [InterEventTime: 12.00]
05299 R1990: C08034-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05300 ADD HYD + 5.0 02: SOUTH-4 14.99 .035 1991.0410.4:15 142.99 n/a .000
05301 SUM: 5.0 02: SOUTH-4 14.99 .035 1991.0410.4:15 142.99 n/a .000
05302 SUM: 5.0 01:R7 140.66 .650 1990.0720.14:45 242.95 n/a .000
05303 #####
05304 #####
05305 #####
05306 # CONTINUOUS RAINFALL DATA
05307 #####
05308 #####
05309 # STORMS
05310 #####
05311 ** END OF RUN : 1991
05312 #####
05313 #####
05314 #####
05315 #####
05316 #####
05317 #####
05318 #####
05319 RUN: COMMAND#
05320 R1992: C08001-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05321 START [TZERO = .00 hrs on 19920401]
05322 [METOUT= 2 (1=imperial, 2=metric output)]
05323 [NSTORE = 0]
05324 [NROW = 1992]
05325 # SWHYD / INPUT DATA
05326 # *****
05327 # *****
05328 # *****
05329 # Project Name: [THUNDER ROAD] Project Number: [2128]
05330 # Date : 04-20-2021
05331 # Modeller [J.B]
05332 # Company : JFSaInc.
05333 # License # : 2540237
05334 # *****
05335 # *****
05336 # *****
05337 # OTCWA International Airport - April 1st to October 31st
05338 R1992: C08002-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05339 READ AES DATA
05340 [Filename = YOM.1967.2007.123]
05341 [Start date= 1992.0401; End date= 1992.1031]
05342 [OTF 60 min; Length= 5216 hrs; WtHrs= 391; PTOF= 552.00]
05343 Maximum average rainfall intensities over
05344 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
05345 31.50 18.00 13.30 7.22 4.14 2.40 1.92 1.32 0.62 mm/hr
05346 31.50 36.00 39.00 43.30 49.70 54.20 54.20 72.00 73.00
05347 19920804 19920804 19920804 19920804 19920817 19920818 19920818 19920820 date
05348 Number of rainfall events per following interval time
05349 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
05350 148 119 78 64 49 41 24 28
05351 Number of events with at least the following durations
05352 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
05353 147 83 49 12 3 0 0 0 0
05354 R1992: C08003-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05355 COMPUTE API
05356 [APIN= 50.00; APIID= 9000; APIID= 9956]
05357 [APIN= 97; APIID= 26.28; APIID= 7.40]
05358 R1992: C08004-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05359 CONTINUOUS NASHYD 5.0 01: NORTH-1 34.70 .113 1992.0717.22:20 220.97 .400 .000
05360 [C# 39.1; N: 3.00; Tps: .92]
05361 [IAREC: 6.00; SMIN:168.62; SMAX:*****; SK: -030]
05362 [InterEventTime: 12.00]
05363 R1992: C08005-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05364 CONTINUOUS NASHYD 5.0 01: NORTH-2 12.44 .145 1992.0717.19:35 221.24 .401 .000
05365 [C# 53.0; N: 3.00; Tps: 1.29]
05366 [IAREC: 6.00; SMIN: 91.01; SMAX:606.70; SK: -030]
05367 [InterEventTime: 12.00]
05368 R1992: C08006-----DTIN:ID-NHYD-----AREHA-APEAKCS-TpeakDate_hh:mm-----Rvmm-R.C-----DfCms
05369 CONTINUOUS NASHYD 5.0 01: HWY-1
```

[illegible]

Page 16

```
06121> R1995-C00830-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06122> ADD HYD + 5.0 02:SOOUTH-3 7.98 .104 1995.0603.9:20 204.13 n/a .000
06123> SUM= 5.0 02:SOOUTH-3 7.98 .104 1995.0603.9:20 204.13 n/a .000
06124> ROUTE CHANNEL -> 5.0 02:SOOUTH-3 148.64 1.436 1995.0603.10:05 205.25 n/a .000
06125> R1995-C00831-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06126> SAVE HYD + 5.0 01:16 148.64 1.436 1995.0603.10:05 205.25 n/a .000
06127> Frame :36.1995
06128> remark:36-Bearbrook Tributary Upstream of Thunder Road Crossing
06129> R1995-C00832-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06130> ROUTE CHANNEL -> 5.0 02:SOOUTH-3 148.64 1.436 1995.0603.10:05 205.25 n/a .000
06131> * [ROT= 5.00] out-> 5.0 01:06 148.64 1.431 1995.0603.10:15 205.25 n/a .000
06132> [L/S= 589 / 440 / 035]
06133> [Vmax= 700:Dmax= 400]
06134> R1995-C00833-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06135> CONTINUOUS NASHYD 5.0 01:SOOUTH-4 14.99 .153 1995.0603.9:40 202.02 .407 .000
06136> [Cn= 39.5; N= 3.00; Tp= 1.23]
06137> [IareC= 6.00; SMIN=168.62; SMAX=*****; Sk= .030]
06138> [InterEventTime= 12.00]
06139> R1995-C00834-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06140> ADD HYD + 5.0 02:SOOUTH-4 14.99 .153 1995.0603.9:40 202.02 n/a .000
06141> SUM= 5.0 02:SOOUTH-4 14.99 .153 1995.0603.9:40 202.02 n/a .000
06142> [L/S= 589 / 440 / 035]
06143> [Vmax= 700:Dmax= 400]
06144> # CONTINUOUS RAINFALL DATA
06145> #####
06146> # SHWYD / INPUT DATA FILE
06147> [IareC= 6.00; SMIN=168.62; SMAX=*****; Sk= .030]
06148> # STORMS
06149> # STORMS
06150> # STORMS
06151> ** END OF RUN : 1995
06152>
06153>
06154>
06155>
06156>
06157>
06158>
06159> RUN: COMMAND#
06160> R1996-C00901-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06161> START
06162> [TZERO = .00 hrs on 19960401]
06163> [METOUT= 2 (1=Imperial, 2=metric output)]
06164> [NSTORM= 0]
06165> [NRM= 1996]
06166> # SHWYD / INPUT DATA FILE
06167> [IareC= 6.00; SMIN=168.62; SMAX=*****; Sk= .030]
06168> # STORMS
06169> # STORMS
06170> # Project Name: [THUNDER ROAD] Project Number: [2120]
06171> # Date : 04-20-2021
06172> # Modeller : [J.B]
06173> # Company : JFSaInc.
06174> # License # : 2540237
06175> # STORMS
06176> # STORMS
06177> # OTHAWA International Airport - April 1st to October 31st
06178> R1996-C00902-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06179> READ AES DATA
06180> [File Name = YOM.1967.2007.123]
06181> [Start Date= 1996.0401; End Date= 1996.1031]
06182> [DT= 60 min; Length= 480; Nrm= 1996; DryRns= 4066; PTO= 426.50]
06183> Maximum average rainfall intensities over
06184> 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
06185> 10.50 21.50 31.50 5.42 2.09 1.00 1.25 0.59 mm/hr
06186> 10.50 27.10 27.10 32.50 35.10 38.50 45.10 47.50 50.30
06187> 19960731 19960731 19960731 19960731 19960731 19960731 19960801 19960802 date
06188> Number of rainfall events per following interval time
06189> 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
06190> 111 87 63 53 38 31 29 19 00
06191> Number of events with at least the following durations
06192> 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
06193> 110 63 42 14 1 0 0 0 0
06194> R1996-C00903-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06195> COMPUTE API
06196> [APIIn= 50.00; APIkdy= 9000; APIkdt= 9956]
06197> [APIkdt= 22; APIkdy= 23.00; APIIn= 4.15]
06198> R1996-C00904-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06199> CONTINUOUS NASHYD 5.0 01:NORTH-1 34.70 .039 1996.0731.20:40 115.53 .271 .000
06200> [Cn= 39.5; N= 3.00; Tp= 1.23]
06201> [IareC= 6.00; SMIN=168.62; SMAX=*****; Sk= .030]
06202> [InterEventTime= 12.00]
06203> R1996-C00905-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06204> CONTINUOUS NASHYD 5.0 01:NORTH-2 12.44 .045 1996.0731.16:40 116.75 .274 .000
06205> [Cn= 39.5; N= 3.00; Tp= 1.23]
06206> [IareC= 6.00; SMIN= 91.01; SMAX=606.70; Sk= .030]
06207> [InterEventTime= 12.00]
06208> R1996-C00906-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06209> CONTINUOUS NASHYD 5.0 01:HWY-1 2.36 .023 1996.0731.16:35 122.64 .288 .000
06210> [Cn= 39.5; N= 3.00; Tp= 1.23]
06211> [IareC= 6.00; SMIN= 25.21; SMAX=168.09; Sk= .030]
06212> [InterEventTime= 12.00]
06213> R1996-C00907-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06214> ADD HYD + 5.0 02:NORTH-1 34.70 .039 1996.0731.20:40 115.53 n/a .000
06215> SUM= 5.0 02:NORTH-1 34.70 .039 1996.0731.20:40 115.53 n/a .000
06216> [L/S= 589 / 440 / 035]
06217> [Vmax= 700:Dmax= 400]
06218> R1996-C00908-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06219> ROUTE CHANNEL -> 5.0 02:1 49.51 .086 1996.0731.16:50 116.18 n/a .000
06220> * [ROT= 5.00] out-> 5.0 02:1 49.51 .086 1996.0731.16:50 116.18 n/a .000
06221> [L/S= 589 / 440 / 035]
06222> [Vmax= 700:Dmax= 400]
06223> R1996-C00909-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06224> CONTINUOUS NASHYD 5.0 01:INT-1 4.39 .017 1996.0731.17:00 117.62 .276 .000
06225> [Cn= 39.5; N= 3.00; Tp= 1.23]
06226> [IareC= 6.00; SMIN= 67.24; SMAX=448.24; Sk= .030]
06227> [InterEventTime= 12.00]
06228> R1996-C00910-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06229> CONTINUOUS NASHYD 5.0 01:INT-2 3.61 .013 1996.0731.16:25 116.21 .272 .000
06230> [Cn= 47.4; N= 3.00; Tp= 1.61]
06231> [IareC= 6.00; SMIN=115.26; SMAX=768.40; Sk= .030]
06232> [InterEventTime= 12.00]
06233> R1996-C00911-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06234> CONTINUOUS NASHYD 5.0 01:ASA 3.84 .015 1996.0731.16:50 117.36 .275 .000
06235> [Cn= 50.5; N= 3.00; Tp= 1.80]
06236> [IareC= 6.00; SMIN= 73.13; SMAX=487.55; Sk= .030]
06237> [InterEventTime= 12.00]
06238> R1996-C00912-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06239> CONTINUOUS NASHYD 5.0 01:ASA 5.29 .019 1996.0731.16:40 115.82 .272 .000
06240> [Cn= 42.6; N= 3.00; Tp= 1.40]
06241> [IareC= 6.00; SMIN=141.94; SMAX=946.27; Sk= .030]
06242> [InterEventTime= 12.00]
06243> R1996-C00913-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06244> CONTINUOUS NASHYD 5.0 01:ASC 1.21 .003 1996.0731.16:25 115.44 .271 .000
06245> [Cn= 39.5; N= 3.00; Tp= 1.23]
06246> [IareC= 6.00; SMIN=179.29; SMAX=*****; Sk= .030]
06247> [InterEventTime= 12.00]
06248> R1996-C00914-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06249> ROUTE CHANNEL -> 5.0 02:ASC 1.21 .003 1996.0731.16:25 115.44 n/a .000
06250> * [ROT= 5.00] out-> 5.0 02:ASC-R 1.21 .002 1996.0731.16:40 115.44 n/a .000
06251> [L/S= 589 / 440 / 035]
06252> [Vmax= 700:Dmax= 400]
06253> R1996-C00915-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06254> CONTINUOUS NASHYD 5.0 01:INT-3 5.71 .031 1996.0731.16:20 117.36 .275 .000
06255> [Cn= 50.5; N= 3.00; Tp= 1.80]
06256> [IareC= 6.00; SMIN= 73.13; SMAX=487.55; Sk= .030]
06257> [InterEventTime= 12.00]
06258> R1996-C00916-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06259> ADD HYD + 5.0 02:R1 49.51 .083 1996.0731.17:05 116.18 n/a .000
06260> SUM= 5.0 02:INT-1 4.39 .017 1996.0731.17:00 117.62 n/a .000
06261> + 5.0 02:INT-2 3.61 .013 1996.0731.16:25 116.21 n/a .000
06262> + 5.0 02:INT-3 3.61 .013 1996.0731.16:25 116.21 n/a .000
06263> + 5.0 02:ASA 3.84 .015 1996.0731.16:50 117.36 n/a .000
06264> + 5.0 02:ASC 1.21 .003 1996.0731.16:40 115.82 n/a .000
06265> + 5.0 02:ASC-R 1.21 .002 1996.0731.16:40 115.44 n/a .000
06266> SUM= 5.0 02:12 73.56 .167 1996.0731.16:45 116.38 n/a .000
06267> R1996-C00917-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06268> ROUTE CHANNEL -> 5.0 02:12 73.56 .167 1996.0731.16:45 116.38 n/a .000
06269> * [ROT= 5.00] out-> 5.0 02:12 73.56 .164 1996.0731.16:50 116.38 n/a .000
06270> [L/S= 589 / 440 / 035]
06271> [Vmax= 700:Dmax= 400]
06272> R1996-C00918-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06273> CONTINUOUS NASHYD 5.0 01:ASA 21.43 .035 1996.0731.17:05 115.36 .270 .000
06274> [Cn= 39.5; N= 3.00; Tp= 1.61]
06275> [IareC= 6.00; SMIN=134.67; SMAX=896.47; Sk= .030]
06276> [InterEventTime= 12.00]
06277> R1996-C00919-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06278> CONTINUOUS NASHYD 5.0 01:ASA 4.70 .010 1996.0731.17:05 115.92 .272 .000
06279> [Cn= 44.6; N= 3.00; Tp= 1.72]
06280> [IareC= 6.00; SMIN=134.67; SMAX=896.47; Sk= .030]
06281> [InterEventTime= 12.00]
06282> R1996-C00920-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06283> CONTINUOUS NASHYD 5.0 01:ASA 9.14 .060 1996.0731.16:30 118.82 .279 .000
06284> [Cn= 44.6; N= 3.00; Tp= 1.72]
06285> [IareC= 6.00; SMIN= 50.5; N= 3.00; Tp= 1.80]
06286> [IareC= 6.00; SMIN= 73.13; SMAX=487.55; Sk= .030]
06287> R1996-C00921-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06288> ADD HYD + 5.0 02:R1 49.51 .083 1996.0731.17:05 116.18 n/a .000
06289> SUM= 5.0 02:R1 49.51 .083 1996.0731.17:05 116.18 n/a .000
06290> + 5.0 02:R2 49.51 .083 1996.0731.17:05 116.18 n/a .000
06291> + 5.0 02:R3 49.51 .083 1996.0731.17:05 116.18 n/a .000
06292> + 5.0 02:R4 49.51 .083 1996.0731.17:05 116.18 n/a .000
06293> R1996-C00922-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06294> ROUTE CHANNEL -> 5.0 02:12 73.56 .167 1996.0731.16:50 116.38 n/a .000
06295> * [ROT= 5.00] out-> 5.0 02:12 73.56 .164 1996.0731.17:00 116.38 n/a .000
06296> [L/S= 589 / 440 / 035]
06297> [Vmax= 700:Dmax= 400]
06298> R1996-C00923-----Dtain:ID:NYHD-----AREAH-APEAKCns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
06299> CONTINUOUS NASHYD 5.0 01:SOOUTH-1 20.21 .035 1996.0731.16:50 115.27 .270 .000
06300> [Cn= 39.5; N= 3.00; Tp= 1.40]
```

Page 18

```
06841> [IareC: 6.00; SMIN: 25.21; SMAX=168.09; SK= -030]
06842> [InterEventTime: 12.00]
06843> R1999>R00807-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06844> ADD HYD + 5.0 02:INT-1 34.70 .036 1999.0906.10:50 156.36 n/a .000
06845> + 5.0 02:INT-2 12.44 .040 1999.0906.10:25 156.61 n/a .000
06846> + 5.0 02:INT-3 2.36 .020 1999.0906.10:15 159.00 n/a .000
06847> SUM= 5.0 01:1 49.51 .005 1999.0906.10:40 156.60 n/a .000
06848> R1999>R00808-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06849> ROUTE CHANNEL -> 5.0 02:INT-1 49.51 .005 1999.0906.10:40 156.60 n/a .000
06850> * [RDT: 5.00] out-> 5.0 01:1 49.51 .005 1999.0906.10:50 156.60 n/a .000
06851> [L/S/m= 478.7 / 440.0 / 035]
06852> (Vmax= 375.0Dmax= 155.0)
06853> R1999>R00809-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06854> CONTINUOUS NASHDY 5.0 01:INT-1 4.39 .017 1999.0906.10:45 157.14 .370 .000
06855> [Cm: 42.6; N= 3.00; Tm= .85]
06856> [IareC: 6.00; SMIN: 67.24; SMAX=448.24; SK= -030]
06857> [InterEventTime: 12.00]
06858> R1999>R00810-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06859> CONTINUOUS NASHDY 5.0 01:INT-2 3.61 .010 1999.0906.10:15 156.61 .369 .000
06860> [Cm: 47.4; N= 3.00; Tm= .85]
06861> [IareC: 6.00; SMIN=115.94; SMAX=768.40; SK= -030]
06862> [InterEventTime: 12.00]
06863> R1999>R00811-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06864> CONTINUOUS NASHDY 5.0 01:ASA 3.84 .014 1999.0906.10:35 157.04 .370 .000
06865> [Cm: 58.4; N= 3.00; Tm= 1.46]
06866> [IareC: 6.00; SMIN: 73.13; SMAX=487.55; SK= -030]
06867> [InterEventTime: 12.00]
06868> R1999>R00812-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06869> CONTINUOUS NASHDY 5.0 01:ASA 5.29 .012 1999.0906.10:25 156.46 .369 .000
06870> [Cm: 42.6; N= 3.00; Tm= 1.20]
06871> [IareC: 6.00; SMIN=141.94; SMAX=946.27; SK= -030]
06872> [InterEventTime: 12.00]
06873> R1999>R00813-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06874> CONTINUOUS NASHDY 5.0 01:ASC 1.21 .002 1999.0906.10:15 156.33 .368 .000
06875> [Cm: 37.4; N= 3.00; Tm= .87]
06876> [IareC: 6.00; SMIN=179.29; SMAX=*****; SK= -030]
06877> [InterEventTime: 12.00]
06878> R1999>R00814-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06879> ROUTE CHANNEL -> 5.0 02:ASC 1.21 .002 1999.0906.10:15 156.33 n/a .000
06880> * [RDT: 5.00] out-> 5.0 01:ASC-R 1.21 .002 1999.0906.10:50 156.33 n/a .000
06881> [L/S/m= 580.7 / 440.0 / 035]
06882> (Vmax= 570.0Dmax= 155.0)
06883> R1999>R00815-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06884> CONTINUOUS NASHDY 5.0 01:INT-3 5.71 .024 1999.0906.10:40 157.04 .370 .000
06885> [Cm: 58.4; N= 3.00; Tm= 1.46]
06886> [IareC: 6.00; SMIN: 73.13; SMAX=487.55; SK= -030]
06887> [InterEventTime: 12.00]
06888> R1999>R00816-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06889> ADD HYD + 5.0 02:RI 49.51 .004 1999.0906.10:50 156.60 n/a .000
06890> + 5.0 02:INT-1 4.39 .017 1999.0906.10:45 157.14 n/a .000
06891> + 5.0 02:INT-2 3.61 .010 1999.0906.10:15 156.61 n/a .000
06892> + 5.0 02:INT-3 2.36 .020 1999.0906.10:15 159.00 n/a .000
06893> + 5.0 02:ASA 3.84 .014 1999.0906.10:35 157.04 n/a .000
06894> + 5.0 02:ASC 5.29 .012 1999.0906.10:25 156.46 n/a .000
06895> + 5.0 02:ASC-R 1.21 .002 1999.0906.10:50 156.33 n/a .000
06896> SUM= 5.0 01:1 73.56 .159 1999.0906.10:35 156.60 n/a .000
06897> R1999>R00817-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06898> ROUTE CHANNEL -> 5.0 02:12 73.56 .159 1999.0906.10:35 156.60 n/a .000
06899> * [RDT: 5.00] out-> 5.0 01:RI 73.56 .158 1999.0906.10:45 156.60 n/a .000
06900> [L/S/m= 580.7 / 560.0 / 035]
06901> (Vmax= 419.0Dmax= 123.0)
06902> R1999>R00818-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06903> CONTINUOUS NASHDY 5.0 01:ASA 21.43 .034 1999.0906.10:45 156.30 .368 .000
06904> [Cm: 36.1; N= 3.00; Tm= 1.68]
06905> [IareC: 6.00; SMIN=154.73; SMAX=896.47; SK= -030]
06906> [InterEventTime: 12.00]
06907> R1999>R00819-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06908> CONTINUOUS NASHDY 5.0 01:ASB 4.70 .010 1999.0906.10:50 156.50 .369 .000
06909> [Cm: 44.6; N= 3.00; Tm= 1.72]
06910> [IareC: 6.00; SMIN=134.73; SMAX=896.47; SK= -030]
06911> [InterEventTime: 12.00]
06912> R1999>R00820-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06913> CONTINUOUS NASHDY 5.0 01:AS2 9.14 .060 1999.0906.10:15 157.00 .371 .000
06914> [Cm: 68.4; N= 3.00; Tm= 1.12]
06915> [IareC: 6.00; SMIN= 58.5; SMAX=323.73; SK= -030]
06916> [InterEventTime: 12.00]
06917> R1999>R00821-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06918> ADD HYD + 5.0 02:RI 73.56 .158 1999.0906.10:45 156.60 n/a .000
06919> + 5.0 02:ASA 21.43 .034 1999.0906.10:45 156.30 n/a .000
06920> + 5.0 02:ASB 4.70 .010 1999.0906.10:50 156.50 n/a .000
06921> + 5.0 02:AS2 9.14 .060 1999.0906.10:15 157.00 n/a .000
06922> SUM= 5.0 01:1 108.84 .247 1999.0906.10:50 156.67 n/a .000
06923> R1999>R00822-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06924> ROUTE CHANNEL -> 5.0 02:12 108.84 .250 1999.0906.10:35 156.67 n/a .000
06925> * [RDT: 5.00] out-> 5.0 01:AS2 108.84 .247 1999.0906.10:50 156.67 n/a .000
06926> [L/S/m= 396.7 / 305.0 / 035]
06927> (Vmax= 396.0Dmax= 155.0)
06928> R1999>R00823-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06929> CONTINUOUS NASHDY 5.0 01:SOUTH-1 20.21 .033 1999.0906.10:35 156.26 .368 .000
06930> [Cm: 36.1; N= 3.00; Tm= 1.68]
06931> [IareC: 6.00; SMIN=204.20; SMAX=*****; SK= -030]
06932> [InterEventTime: 12.00]
06933> R1999>R00824-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06934> ADD HYD + 5.0 02:RI 108.84 .247 1999.0906.10:50 156.67 n/a .000
06935> + 5.0 02:ASA 20.21 .033 1999.0906.10:35 156.26 n/a .000
06936> + 5.0 02:AS2 129.05 .279 1999.0906.10:50 156.61 n/a .000
06937> R1999>R00825-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06938> ROUTE CHANNEL -> 5.0 02:12 129.05 .279 1999.0906.10:50 156.61 n/a .000
06939> * [RDT: 5.00] out-> 5.0 01:AS2 129.05 .277 1999.0906.10:55 156.61 n/a .000
06940> [L/S/m= 482.7 / 410.0 / 035]
06941> (Vmax= 581.0Dmax= 247.0)
06942> R1999>R00826-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06943> CONTINUOUS NASHDY 5.0 01:SOUTH-2 11.61 .022 1999.0906.10:15 156.30 .368 .000
06944> [Cm: 36.1; N= 3.00; Tm= .96]
06945> [IareC: 6.00; SMIN=151.62; SMAX=*****; SK= -030]
06946> [InterEventTime: 12.00]
06947> R1999>R00827-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06948> ADD HYD + 5.0 02:RI 129.05 .277 1999.0906.10:55 156.61 n/a .000
06949> + 5.0 02:SOUTH-2 11.61 .022 1999.0906.10:15 156.30 n/a .000
06950> SUM= 5.0 01:1 140.66 .296 1999.0906.10:55 156.58 n/a .000
06951> R1999>R00828-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06952> ROUTE CHANNEL -> 5.0 02:12 140.66 .296 1999.0906.10:55 156.58 n/a .000
06953> * [RDT: 5.00] out-> 5.0 01:RI 140.66 .295 1999.0906.11:00 156.58 n/a .000
06954> [L/S/m= 181.7 / 560.0 / 035]
06955> (Vmax= 483.0Dmax= 155.0)
06956> R1999>R00829-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06957> CONTINUOUS NASHDY 5.0 01:ASA 7.90 .019 1999.0906.10:15 156.46 .369 .000
06958> [Cm: 42.6; N= 3.00; Tm= .89]
06959> [IareC: 6.00; SMIN=141.94; SMAX=946.27; SK= -030]
06960> [InterEventTime: 12.00]
06961> R1999>R00830-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06962> ADD HYD + 5.0 02:RI 140.66 .295 1999.0906.10:55 156.58 n/a .000
06963> + 5.0 02:SOUTH-3 7.90 .019 1999.0906.10:15 156.46 n/a .000
06964> SUM= 5.0 01:1 148.64 .311 1999.0906.10:55 156.58 n/a .000
06965> R1999>R00831-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06966> SAVE HYD + 5.0 01:12 148.64 .311 1999.0906.10:55 156.58 n/a .000
06967> Tname :36.1999
06968> remark:36-Bearbrook Tributary Upstream of Thunder Road Crossing
06969> R1999>R00832-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06970> ROUTE CHANNEL -> 5.0 02:16 148.64 .310 1999.0906.11:05 156.58 n/a .000
06971> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
06972> [L/S/m= 323.7 / 440.0 / 035]
06973> (Vmax= 527.0Dmax= 254.0)
06974> R1999>R00833-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06975> CONTINUOUS NASHDY 5.0 01:SOUTH-4 14.99 .030 1999.0906.10:25 156.36 .368 .000
06976> [Cm: 39.5; N= 3.00; Tm= 1.23]
06977> [IareC: 6.00; SMIN=181.62; SMAX=*****; SK= -030]
06978> [InterEventTime: 12.00]
06979> R1999>R00834-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
06980> ADD HYD + 5.0 02:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
06981> + 5.0 02:SOUTH-4 14.99 .030 1999.0906.10:25 156.36 n/a .000
06982> SUM= 5.0 01:Total 163.63 .237 1999.0906.11:05 156.56 n/a .000
06983> #####
06984> #####
06985> #####
06986> #####
06987> #####
06988> #####
06989> #####
06990> #####
06991> #####
06992> #####
06993> #####
06994> #####
06995> #####
06996> #####
06997> #####
06998> #####
06999> #####
07000> R2000>R00835-----Dtain-ID:NYHD-----AREAhA-QPEAKcs-TpeakDate_hh:mm-----Rvmm-R.C-----Dfmcns
07001> START
07002> [T2000 = 00 hrs on 20000401]
07003> [METOUT= 2 (1imperial, 2metric output)]
07004> [NFORM= 0]
07005> [NFORM= 2000]
07006> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07007> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07008> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07009> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07010> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07011> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07012> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07013> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07014> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07015> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07016> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07017> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07018> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07019> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07020> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07021> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07022> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07023> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07024> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07025> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07026> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07027> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07028> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07029> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07030> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07031> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07032> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07033> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07034> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07035> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07036> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07037> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07038> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07039> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07040> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07041> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07042> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07043> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07044> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07045> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07046> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07047> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07048> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07049> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07050> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07051> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07052> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07053> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07054> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07055> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07056> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07057> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07058> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07059> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07060> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07061> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07062> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07063> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07064> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07065> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07066> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07067> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07068> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07069> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07070> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07071> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07072> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07073> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07074> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07075> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07076> * [RDT: 5.00] out-> 5.0 01:RI 148.64 .310 1999.0906.11:05 156.58 n/a .000
07077> * [RDT: 5.
```

Page 20

```
07561 [IAREC=6.00; SMIN=204.20; SMAK=*****; SK= .030]
07562 [InterEventTime= 12.00]
07563 R2003 R2003-0002-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07564 ADD HYD + 5.0 02:02R 108.84 .384 2003.1021.9:40 181.72 n/a .000
07565 SUM= 20.21 .055 2003.1021.9:25 178.30 n/a .000
07566 CONTINUOUS NASHDY 5.0 01:SOUTH-1 129.05 .438 2003.1021.9:40 181.15 n/a .000
07567 R2003 R2003-0002-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07568 ROUTE CHANNEL -> 5.0 02:14 129.05 .438 2003.1021.9:40 181.15 n/a .000
07569 # [ROT=5.00] out-> 5.0 01:R4 129.05 .434 2003.1021.9:50 181.15 n/a .000
07570 [L/S= 482 / 440 / 035]
07571 (Vmax= .541;Dmax= .293)
07572 R2003 R2003-0002-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07573 CONTINUOUS NASHDY 5.0 01:SOUTH-2 11.61 .641 2003.0717.17:40 178.41 .322 .000
07574 [C# 36.7; N= 3.00; T= 1.23]
07575 [IAREC=6.00; SMIN=151.09; SMAK=*****; SK= .030]
07576 [InterEventTime= 12.00]
07577 R2003 R2003-0002-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07578 ADD HYD + 5.0 02:R4 129.05 .434 2003.1021.9:50 181.15 n/a .000
07579 SUM= 5.0 02:SOUTH-2 11.61 .641 2003.0717.17:40 178.41 n/a .000
07580 CONTINUOUS NASHDY 5.0 01:SOUTH-1 140.66 .465 2003.1021.9:45 180.93 n/a .000
07581 R2003 R2003-0002-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07582 ROUTE CHANNEL -> 5.0 02:14 140.66 .465 2003.1021.9:45 180.93 n/a .000
07583 # [ROT=5.00] out-> 5.0 01:R5 140.66 .464 2003.1021.9:50 180.93 n/a .000
07584 [L/S= 181 / 560 / 035]
07585 (Vmax= .515;Dmax= .297)
07586 R2003 R2003-0002-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07587 CONTINUOUS NASHDY 5.0 01:SOUTH-3 7.98 .638 2003.0717.17:35 180.02 .325 .000
07588 [C# 42.6; N= 3.00; T= .89]
07589 [IAREC=6.00; SMIN=141.94; SMAK=946.27; SK= .030]
07590 [InterEventTime= 12.00]
07591 R2003 R2003-0003-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07592 ADD HYD + 5.0 02:R4 140.66 .464 2003.1021.9:50 180.93 n/a .000
07593 SUM= 5.0 02:SOUTH-3 7.98 .638 2003.0717.17:35 180.02 n/a .000
07594 CONTINUOUS NASHDY 5.0 01:SOUTH-1 148.64 .489 2003.1021.9:45 180.88 n/a .000
07595 R2003 R2003-0003-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07596 SAVE HYD + 5.0 01:16 148.64 .489 2003.1021.9:45 180.88 n/a .000
07597 Frame :36.2003
07598 remark:36-Bearbrook Tributary Upstream of Thunder Road Crossing
07599 R2003 R2003-0003-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07600 ROUTE CHANNEL -> 5.0 02:16 148.64 .489 2003.1021.9:45 180.88 n/a .000
07601 # [ROT=5.00] out-> 5.0 01:R6 148.64 .487 2003.1021.9:55 180.88 n/a .000
07602 [L/S= 523 / 440 / 035]
07603 (Vmax= .570;Dmax= .302)
07604 R2003 R2003-0003-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07605 CONTINUOUS NASHDY 5.0 01:SOUTH-4 14.99 .649 2003.0717.17:00 179.04 .323 .000
07606 [C# 39.5; N= 3.00; T= 1.23]
07607 [IAREC=6.00; SMIN=151.09; SMAK=*****; SK= .030]
07608 [InterEventTime= 12.00]
07609 R2003 R2003-0004-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07610 ADD HYD + 5.0 02:R4 148.64 .487 2003.1021.9:55 180.88 n/a .000
07611 SUM= 5.0 02:SOUTH-4 14.99 .649 2003.0717.17:50 179.04 n/a .000
07612 S# 5.0 02:16 148.64 .487 2003.1021.9:50 180.71 n/a .000
07613 #####
07614 #####
07615 # CONTINUOUS RAINFALL DATA
07616 #####
07617 # STORMS
07618 # *****
07619 # STORMS
07620 # *****
07621 ** END OF RUN : 2003
07622 #####
07623 #####
07624 #####
07625 #####
07626 #####
07627 #####
07628 #####
07629 RUN: COMMAND
07630 R2004 R2004-00001-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07631 START [ZERO= .00 hrs on 20040401]
07632 [METOUT= 2 (1=imperial, 2=metric out)]
07633 [NSTORM= 0]
07634 [NRUN= 2004]
07635 # SWHYD / INPUT DATA FILE
07636 # *****
07637 # Project Name : [THUNDER ROAD] Project Number: [2128]
07638 # Date : 04-20-2004
07639 # Modeller : [J.B]
07640 # Company : JFSaInc.
07641 # License # : 2540237
07642 #####
07643 #####
07644 #####
07645 #####
07646 #####
07647 # OTCWA International Airport - April 1st to October 31st
07648 R2004 R2004-00002-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07649 # READ AES DATA
07650 [File Name = YOM.1967.2007.123 ]
07651 [Start Date: 2004.0401; End Date: 2004.1031]
07652 [OT= 60 min; Length: 5040 hrs; Withrs= 327; Dryhrs= 4713; PTO= 573.30]
07653 Maximum average rainfall intensities over
07654 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
07655 30.36 23.48 19.87 15.87 10.42 5.69 3.79 2.85 1.88 mm/hr
07656 30.36 46.80 60.70 95.20 125.00 136.60 136.60 142.30 142.30 date
07657 20040909 20040909 20040909 20040909 20040909 20040909 20040909 20040909 20040909
07658 Number of rainfall events per following interval
07659 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
07660 121 98 68 56 40 27 20
07661 Number of events with at least the following durations
07662 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
07663 120 74 41 11 1 0 0 0 0
07664 R2004 R2004-00003-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07665 COMPUTE API
07666 [APIIN= 50.00; APIID= 9900; APIID= 9950]
07667 [APIIN= 50; APIID= 99; APIID= 99]
07668 R2004 R2004-00004-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07669 CONTINUOUS NASHDY 5.0 01:NORTH-1 34.70 .534 2004.0909.17:00 236.78 .413 .000
07670 [C# 36.7; N= 3.00; T= 1.23]
07671 [IAREC=6.00; SMIN=168.62; SMAK=*****; SK= .030]
07672 [InterEventTime= 12.00]
07673 R2004 R2004-00005-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07674 CONTINUOUS NASHDY 5.0 01:NORTH-2 12.44 .348 2004.0909.14:30 238.08 .417 .000
07675 [C# 36.7; N= 3.00; T= 1.23]
07676 [IAREC=6.00; SMIN= 91.01; SMAK=606.70; SK= .030]
07677 [InterEventTime= 12.00]
07678 R2004 R2004-00006-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07679 CONTINUOUS NASHDY 5.0 01:HW-1 2.36 .112 2004.0909.11:20 245.26 .428 .000
07680 [C# 31.7; N= 3.00; T= 1.21]
07681 [IAREC=6.00; SMIN= 25.21; SMAK=168.09; SK= .030]
07682 [InterEventTime= 12.00]
07683 R2004 R2004-00007-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07684 ADD HYD + 5.0 02:NORTH-1 34.70 .534 2004.0909.17:00 236.78 n/a .000
07685 SUM= 5.0 02:NORTH-2 12.44 .348 2004.0909.14:30 238.08 n/a .000
07686 # 5.0 02:HW-1 2.36 .112 2004.0909.11:20 245.26 n/a .000
07687 SUM= 5.0 02:16 148.64 .489 2003.1021.9:45 180.88 n/a .000
07688 R2004 R2004-00008-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07689 ROUTE CHANNEL -> 5.0 02:11 49.51 .689 2004.0909.15:30 237.71 n/a .000
07690 # [ROT=5.00] out-> 5.0 01:R1 49.51 .684 2004.0909.15:45 237.71 n/a .000
07691 [L/S= 478 / 440 / 035]
07692 (Vmax= .602;Dmax= .407)
07693 R2004 R2004-00009-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07694 CONTINUOUS NASHDY 5.0 01:INT-1 4.39 .133 2004.0909.13:50 240.05 .419 .000
07695 [C# 42.6; N= 3.00; T= 1.20]
07696 [IAREC=6.00; SMIN= 67.24; SMAK=448.24; SK= .030]
07697 [InterEventTime= 12.00]
07698 R2004 R2004-00010-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07699 CONTINUOUS NASHDY 5.0 01:INT-2 3.61 .097 2004.0909.11:25 238.03 .415 .000
07700 [C# 36.7; N= 3.00; T= .95]
07701 [IAREC=6.00; SMIN=115.26; SMAK=768.40; SK= .030]
07702 [InterEventTime= 12.00]
07703 R2004 R2004-00011-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07704 CONTINUOUS NASHDY 5.0 01:A3A 3.84 .115 2004.0909.13:45 239.72 .410 .000
07705 [C# 58.4; N= 3.00; T= 1.46]
07706 [IAREC=6.00; SMIN= 73.13; SMAK=487.55; SK= .030]
07707 [InterEventTime= 12.00]
07708 R2004 R2004-00012-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07709 CONTINUOUS NASHDY 5.0 01:A3B 5.29 .124 2004.0909.15:10 237.32 .414 .000
07710 [C# 42.6; N= 3.00; T= 1.20]
07711 [IAREC=6.00; SMIN=141.94; SMAK=946.27; SK= .030]
07712 [InterEventTime= 12.00]
07713 R2004 R2004-00013-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07714 CONTINUOUS NASHDY 5.0 01:A3C 1.21 .026 2004.0909.14:35 236.59 .413 .000
07715 [C# 37.0; N= 3.00; T= 1.46]
07716 [IAREC=6.00; SMIN=179.29; SMAK=*****; SK= .030]
07717 [InterEventTime= 12.00]
07718 R2004 R2004-00014-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07719 ROUTE CHANNEL -> 5.0 02:A3C 1.21 .026 2004.0909.14:35 236.59 n/a .000
07720 # [ROT=5.00] out-> 5.0 02:A3C-R 1.21 .026 2004.0909.15:15 236.59 n/a .000
07721 [L/S= 500 / 340 / 035]
07722 (Vmax= .178;Dmax= .407)
07723 R2004 R2004-00015-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07724 CONTINUOUS NASHDY 5.0 01:INT-3 5.71 .202 2004.0909.11:15 239.72 .418 .000
07725 [C# 36.7; N= 3.00; T= 1.20]
07726 [IAREC=6.00; SMIN= 73.13; SMAK=487.55; SK= .030]
07727 [InterEventTime= 12.00]
07728 R2004 R2004-00016-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07729 ADD HYD + 5.0 02:R1 49.51 .684 2004.0909.15:45 237.71 n/a .000
07730 SUM= 5.0 02:INT-1 4.39 .133 2004.0909.13:50 240.05 n/a .000
07731 # 5.0 02:INT-2 3.61 .097 2004.0909.11:25 238.03 n/a .000
07732 SUM= 5.0 02:16 148.64 .489 2003.1021.9:45 180.88 n/a .000
07733 # 5.0 02:A3A 3.84 .115 2004.0909.13:45 239.72 n/a .000
07734 # 5.0 02:A3B 5.29 .124 2004.0909.15:10 237.32 n/a .000
07735 # 5.0 02:A3C-R 1.21 .026 2004.0909.15:15 236.59 n/a .000
07736 SUM= 5.0 02:12 73.56 1.512 2004.0909.15:15 238.08 n/a .000
07737 R2004 R2004-00017-.....DTIN-ID:NYHD.....AREAhA-PFEAKCS-TpeakDate_hh:mm.....Rvmm-R.C.....DfCms
07738 ROUTE CHANNEL -> 5.0 02:32 73.56 1.512 2004.0909.15:15 238.08 n/a .000
07739 # [ROT=5.00] out-> 5.0 01:R2 73.56 1.510 2004.0909.15:20 238.08 n/a .000
07740 [L/S= 359 / 560 / 035]
```

```
07921> [IaRec: 6.00; SMIN=141.94; SMAX=946.27; SK= .030]
07922> [InterEventTime: 12.00]
07923> R2006/C08013-----Dttm:ID:NYHD-----AREAh-QPEAKcs-TpeaDate:hh:mm-----Rvmm-R.C-----DfMcs
07924> CONTINUOUS NASHVY 5.0 01:ASC 1.21 .086 2006.0801.3:35 284.54 .393 .000
07925> [Cn: 37.8; N: 3.00; Tpe: .87]
07926> [IaRec: 6.00; SMIN=179.29; SMAX=*****; SK= .030]
07927> [InterEventTime: 12.00]
07928> R2006/C08014-----Dttm:ID:NYHD-----AREAh-QPEAKcs-TpeaDate:hh:mm-----Rvmm-R.C-----DfMcs
07929> ROUTE CHANNEL -> 5.0 02:ASC 1.21 .086 2006.0801.3:35 284.54 n/a .000
07930> * [RDT: 5.00] out-> 5.0 01:ASC-R 1.21 .084 2006.0801.4:10 284.54 n/a .000
07931> [L/S=N: 500 / 1400 / 035]
07932> (Vmax: .182;Dmax: .329)
07933> R2006/C08015-----Dttm:ID:NYHD-----AREAh-QPEAKcs-TpeaDate:hh:mm-----Rvmm-R.C-----DfMcs
07934> CONTINUOUS NASHVY 5.0 01:INT-3 5.71 .055 2006.0801.3:35 287.47 .397 .000
07935> [Cn: 58.5; N: 3.00; Tpe: .89]
07936> [IaRec: 6.00; SMIN: 73.13; SMAX=487.55; SK= .030]
07937> [InterEventTime: 12.00]
07938> R2006/C08016-----Dttm:ID:NYHD-----AREAh-QPEAKcs-TpeaDate:hh:mm-----Rvmm-R.C-----DfMcs
07939> ADD HYD + 5.0 02:R1 49.51 .143 2006.0801.4:15 285.82 n/a .000
07940> + 5.0 02:INT-1 4.39 .028 2006.0801.4:10 287.87 n/a .000
07941> + 5.0 02:INT-2 3.61 .023 2006.0801.3:35 285.72 n/a .000
07942> + 5.0 02:INT-3 5.71 .055 2006.0801.3:35 287.47 n/a .000
07943> + 5.0 02:ASA 3.84 .026 2006.0801.4:00 287.47 n/a .000
07944> + 5.0 02:ASC 5.29 .024 2006.0801.3:50 285.11 n/a .000
07945> * [RDT: 5.00] out-> 5.0 02:ASC-R 1.21 .084 2006.0801.4:10 284.54 n/a .000
07946> SUM: 5.0 01:32 73.56 .287 2006.0801.3:55 285.95 n/a .000
07947> R2006/C08017-----Dttm:ID:NYHD-----AREAh-QPEAKcs-TpeaDate:hh:mm-----Rvmm-R.C-----DfMcs
07948> ROUTE CHANNEL -> 5.0 02:32 73.56 .287 2006.0801.3:55 285.95 n/a .000
07949> * [RDT: 5.00] out-> 5.0 01:R2 73.56 .284 2006.0801.4:05 285.95 n/a .000
07950> [L/S=N: 500 / 500 / 035]
07951> (Vmax: .510;Dmax: .163)
07952> R2006/C08018-----Dttm:ID:NYHD-----AREAh-QPEAKcs-TpeaDate:hh:mm-----Rvmm-R.C-----DfMcs
07953> CONTINUOUS NASHVY 5.0 01:ASA 21.43 .061 2006.0801.4:15 284.41 .393 .000
07954> [Cn: 36.1; N: 3.00; Tpe: 1.61]
07955> [IaRec: 6.00; SMIN=151.56; SMAX=896.47; SK= .030]
07956> [InterEventTime: 12.00]
07957> R2006/C08019-----Dttm:ID:NYHD-----AREAh-QPEAKcs-TpeaDate:hh:mm-----Rvmm-R.C-----DfMcs
07958> CONTINUOUS NASHVY 5.0 01:ASA 4.70 .017 2006.0801.4:15 285.25 .394 .000
07959> [Cn: 44.6; N: 3.00; Tpe: 1.72]
07960> [IaRec: 6.00; SMIN=154.77; SMAX=896.47; SK= .030]
07961> [InterEventTime: 12.00]
07962> R2006/C08020-----Dttm:ID:NYHD-----AREAh-QPEAKcs-TpeaDate:hh:mm-----Rvmm-R.C-----DfMcs
07963> CONTINUOUS NASHVY 5.0 01:ASC 9.14 .099 2006.0801.3:45 289.66 .400 .000
07964> [Cn: 64.1; N: 3.00; Tpe: 1.12]
07965> [IaRec: 6.00; SMIN=151.56; SMAX=323.73; SK= .030]
07966> [InterEventTime: 12.00]
07967> R2006/C08021-----Dttm:ID:NYHD-----AREAh-QPEAKcs-TpeaDate:hh:mm-----Rvmm-R.C-----DfMcs
07968> ADD HYD + 5.0 02:R2 73.56 .284 2006.0801.4:05 285.95 n/a .000
07969> + 5.0 02:ASA 21.43 .061 2006.0801.4:15 284.41 n/a .000
07970> ROUTE CHANNEL -> 5.0 02:ASA 4.70 .017 2006.0801.4:15 285.25 n/a .000
07971> + 5.0 02:ASC 9.14 .099 2006.0801.3:45 289.66 n/a .000
07972> SUM: 5.0 01:33 108.84 .441 2006.0801.4:15 285.93 n/a .000
07973> R2006/C08022-----Dttm:ID:NYHD-----AREAh-QPEAKcs-TpeaDate:hh:mm-----Rvmm-R.C-----DfMcs
07974> ROUTE CHANNEL -> 5.0 02:33 108.84 .441 2006.0801.4:00 285.93 n/a .000
07975> * [RDT: 5.00] out-> 5.0 01:R3 108.84 .441 2006.0801.4:15 285.93 n/a .000
07976> [L/S=N: 396 / 306 / 035]
07977> (Vmax: .182;Dmax: .329)
07978> R2006/C08023-----Dttm:ID:NYHD-----AREAh-QPEAKcs-TpeaDate:hh:mm-----Rvmm-R.C-----DfMcs
07979> CONTINUOUS NASHVY 5.0 01:SOUTH-1 29.21 .062 2006.0801.4:00 284.29 .393 .000
07980> [Cn: 35.5; N: 3.00; Tpe: 1.40]
07981> [IaRec: 6.00; SMIN=204.20; SMAX=*****; SK= .030]
07982> [InterEventTime: 12.00]
07983> R2006/C08024-----Dttm:ID:NYHD-----AREAh-QPEAKcs-TpeaDate:hh:mm-----Rvmm-R.C-----DfMcs
07984> ADD HYD + 5.0 02:R2 108.84 .441 2006.0801.4:15 285.93 n/a .000
07985> + 5.0 02:INT-1 20.21 .062 2006.0801.4:00 284.29 n/a .000
07986> SUM: 5.0 01:34 129.05 .502 2006.0801.4:15 285.87 n/a .000
07987> R2006/C08025-----Dttm:ID:NYHD-----AREAh-QPEAKcs-TpeaDate:hh:mm-----Rvmm-R.C-----DfMcs
07988> ROUTE CHANNEL -> 5.0 02:34 129.05 .502 2006.0801.4:15 285.87 n/a .000
07989> * [RDT: 5.00] out-> 5.0 01:R4 129.05 .492 2006.0801.4:25 285.87 n/a .000
07990> [L/S=N: 482 / 410 / 035]
07991> (Vmax: .558;Dmax: .311)
07992> R2006/C08026-----Dttm:ID:NYHD-----AREAh-QPEAKcs-TpeaDate:hh:mm-----Rvmm-R.C-----DfMcs
07993> CONTINUOUS NASHVY 5.0 01:SOUTH-2 11.61 .049 2006.0801.3:40 284.41 .393 .000
07994> [Cn: 36.7; N: 3.00; Tpe: .96]
07995> [IaRec: 6.00; SMIN=151.56; SMAX=*****; SK= .030]
07996> [InterEventTime: 12.00]
07997> R2006/C08027-----Dttm:ID:NYHD-----AREAh-QPEAKcs-TpeaDate:hh:mm-----Rvmm-R.C-----DfMcs
07998> ADD HYD + 5.0 02:R4 129.05 .492 2006.0801.4:25 285.87 n/a .000
07999> + 5.0 02:SOUTH-2 11.61 .049 2006.0801.3:40 284.41 n/a .000
08000> SUM: 5.0 01:36 140.66 .526 2006.0801.4:20 285.54 n/a .000
08001> R2006/C08028-----Dttm:ID:NYHD-----AREAh-QPEAKcs-TpeaDate:hh:mm-----Rvmm-R.C-----DfMcs
08002> ROUTE CHANNEL -> 5.0 02:36 140.66 .526 2006.0801.4:20 285.54 n/a .000
08003> * [RDT: 5.00] out-> 5.0 01:R5 140.66 .524 2006.0801.4:25 285.56 n/a .000
08004> [L/S=N: 181 / 500 / 035]
08005> (Vmax: .520;Dmax: .319)
08006> R2006/C08029-----Dttm:ID:NYHD-----AREAh-QPEAKcs-TpeaDate:hh:mm-----Rvmm-R.C-----DfMcs
08007> CONTINUOUS NASHVY 5.0 01:ASC 7.98 .046 2006.0801.3:35 285.11 .394 .000
08008> [Cn: 42.6; N: 3.00; Tpe: .89]
08009> [IaRec: 6.00; SMIN=141.94; SMAX=946.27; SK= .030]
08010> [InterEventTime: 12.00]
08011> R2006/C08030-----Dttm:ID:NYHD-----AREAh-QPEAKcs-TpeaDate:hh:mm-----Rvmm-R.C-----DfMcs
08012> ADD HYD + 5.0 02:R5 140.66 .524 2006.0801.4:25 285.56 n/a .000
08013> + 5.0 02:SOUTH-3 7.98 .046 2006.0801.3:35 285.11 n/a .000
08014> SUM: 5.0 01:36 148.64 .552 2006.0801.4:25 285.54 n/a .000
08015> R2006/C08031-----Dttm:ID:NYHD-----AREAh-QPEAKcs-TpeaDate:hh:mm-----Rvmm-R.C-----DfMcs
08016> SAVE HYD + 5.0 01:36 148.64 .552 2006.0801.4:25 285.54 n/a .000
08017> Frame :36 2006
08018> remark:36-Bearbrook Tributary Upstream of Thunder Road Crossing
08019> R2006/C08032-----Dttm:ID:NYHD-----AREAh-QPEAKcs-TpeaDate:hh:mm-----Rvmm-R.C-----DfMcs
08020> ROUTE CHANNEL -> 5.0 02:36 148.64 .552 2006.0801.4:25 285.54 n/a .000
08021> * [RDT: 5.00] out-> 5.0 01:R6 148.64 .548 2006.0801.4:30 285.54 n/a .000
08022> [L/S=N: 223 / 440 / 035]
08023> (Vmax: .586;Dmax: .329)
08024> R2006/C08033-----Dttm:ID:NYHD-----AREAh-QPEAKcs-TpeaDate:hh:mm-----Rvmm-R.C-----DfMcs
08025> CONTINUOUS NASHVY 5.0 01:SOUTH-4 14.99 .059 2006.0801.3:50 284.68 .394 .000
08026> [Cn: 39.5; N: 3.00; Tpe: 1.23]
08027> [IaRec: 6.00; SMIN=151.56; SMAX=*****; SK= .030]
08028> [InterEventTime: 12.00]
08029> R2006/C08034-----Dttm:ID:NYHD-----AREAh-QPEAKcs-TpeaDate:hh:mm-----Rvmm-R.C-----DfMcs
08030> ADD HYD + 5.0 02:R6 148.64 .548 2006.0801.4:30 285.54 n/a .000
08031> + 5.0 02:SOUTH-4 14.99 .059 2006.0801.3:50 284.68 n/a .000
08032> SUM: 5.0 01:37 140.66 .526 2006.0801.4:20 285.54 n/a .000
08033> #####
08034> #####
08035> #####
08036> # CONTINUOUS RAINFALL DATA
08037> #####
08038> #####
08039> # STORMS
08040> #####
08041> *** END OF RUN : 2006
08042> #####
08043> #####
08044> #####
08045> #####
08046> #####
08047> #####
08048> #####
08049> RUN COMMAND#
08050> R2007/C08001-----Dttm:ID:NYHD-----AREAh-QPEAKcs-TpeaDate:hh:mm-----Rvmm-R.C-----DfMcs
08051> START [TZED = .00 hrs on 20070401]
08052> [METOUT= 2 (1=imperial,2=metric output)]
08053> [NFORM = 0]
08054> [NFORM = 0]
08055> # SWHYD / INPUT DATA FILE
08056> # Date : 04-20-2021
08057> # Project Name: [THUNDER ROAD] Project Number: [2120]
08058> # Date : 04-20-2021
08059> # Modeler [J.F.]
08060> # Company : JFSaInc.
08061> # License # : 2540237
08062> # Date : 04-20-2021
08063> # Project Name: [THUNDER ROAD] Project Number: [2120]
08064> # Date : 04-20-2021
08065> # Modeler [J.F.]
08066> # Company : JFSaInc.
08067> # License # : 2540237
08068> # Date : 04-20-2021
08069> # Project Name: [THUNDER ROAD] Project Number: [2120]
08070> # Date : 04-20-2021
08071> # Modeler [J.F.]
08072> # Company : JFSaInc.
08073> # License # : 2540237
08074> # Date : 04-20-2021
08075> # Project Name: [THUNDER ROAD] Project Number: [2120]
08076> # Date : 04-20-2021
08077> # Modeler [J.F.]
08078> # Company : JFSaInc.
08079> # License # : 2540237
08080> # Date : 04-20-2021
08081> # Project Name: [THUNDER ROAD] Project Number: [2120]
08082> # Date : 04-20-2021
08083> # Modeler [J.F.]
08084> # Company : JFSaInc.
08085> # License # : 2540237
08086> # Date : 04-20-2021
08087> # Project Name: [THUNDER ROAD] Project Number: [2120]
08088> # Date : 04-20-2021
08089> # Modeler [J.F.]
08090> # Company : JFSaInc.
08091> # License # : 2540237
08092> # Date : 04-20-2021
08093> # Project Name: [THUNDER ROAD] Project Number: [2120]
08094> # Date : 04-20-2021
08095> # Modeler [J.F.]
08096> # Company : JFSaInc.
08097> # License # : 2540237
08098> # Date : 04-20-2021
08099> # Project Name: [THUNDER ROAD] Project Number: [2120]
08100> # Date : 04-20-2021
08101> # Modeler [J.F.]
08102> # Company : JFSaInc.
08103> # License # : 2540237
08104> # Date : 04-20-2021
08105> # Project Name: [THUNDER ROAD] Project Number: [2120]
08106> # Date : 04-20-2021
08107> # Modeler [J.F.]
08108> # Company : JFSaInc.
08109> # License # : 2540237
08110> # Date : 04-20-2021
08111> # Project Name: [THUNDER ROAD] Project Number: [2120]
08112> # Date : 04-20-2021
08113> # Modeler [J.F.]
08114> # Company : JFSaInc.
08115> # License # : 2540237
08116> # Date : 04-20-2021
08117> # Project Name: [THUNDER ROAD] Project Number: [2120]
08118> # Date : 04-20-2021
08119> # Modeler [J.F.]
08120> # Company : JFSaInc.
08121> # License # : 2540237
08122> # Date : 04-20-2021
08123> # Project Name: [THUNDER ROAD] Project Number: [2120]
08124> # Date : 04-20-2021
08125> # Modeler [J.F.]
08126> # Company : JFSaInc.
08127> # License # : 2540237
08128> # Date : 04-20-2021
08129> # Project Name: [THUNDER ROAD] Project Number: [2120]
08130> # Date : 04-20-2021
08131> # Modeler [J.F.]
08132> # Company : JFSaInc.
08133> # License # : 2540237
08134> # Date : 04-20-2021
08135> # Project Name: [THUNDER ROAD] Project Number: [2120]
08136> # Date : 04-20-2021
08137> # Modeler [J.F.]
08138> # Company : JFSaInc.
08139> # License # : 2540237
08140> # Date : 04-20-2021
08141> # Project Name: [THUNDER ROAD] Project Number: [2120]
08142> # Date : 04-20-2021
08143> # Modeler [J.F.]
08144> # Company : JFSaInc.
08145> # License # : 2540237
08146> # Date : 04-20-2021
08147> # Project Name: [THUNDER ROAD] Project Number: [2120]
08148> # Date : 04-20-2021
08149> # Modeler [J.F.]
08150> # Company : JFSaInc.
08151> # License # : 2540237
08152> # Date : 04-20-2021
08153> # Project Name: [THUNDER ROAD] Project Number: [2120]
08154> # Date : 04-20-2021
08155> # Modeler [J.F.]
08156> # Company : JFSaInc.
08157> # License # : 2540237
08158> # Date : 04-20-2021
08159> # Project Name: [THUNDER ROAD] Project Number: [2120]
08160> # Date : 04-20-2021
08161> # Modeler [J.F.]
08162> # Company : JFSaInc.
08163> # License # : 2540237
08164> # Date : 04-20-2021
08165> # Project Name: [THUNDER ROAD] Project Number: [2120]
08166> # Date : 04-20-2021
08167> # Modeler [J.F.]
08168> # Company : JFSaInc.
08169> # License # : 2540237
08170> # Date : 04-20-2021
08171> # Project Name: [THUNDER ROAD] Project Number: [2120]
08172> # Date : 04-20-2021
08173> # Modeler [J.F.]
08174> # Company : JFSaInc.
08175> # License # : 2540237
08176> # Date : 04-20-2021
08177> # Project Name: [THUNDER ROAD] Project Number: [2120]
08178> # Date : 04-20-2021
08179> # Modeler [J.F.]
08180> # Company : JFSaInc.
08181> # License # : 2540237
08182> # Date : 04-20-2021
08183> # Project Name: [THUNDER ROAD] Project Number: [2120]
08184> # Date : 04-20-2021
08185> # Modeler [J.F.]
08186> # Company : JFSaInc.
08187> # License # : 2540237
08188> # Date : 04-20-2021
08189> # Project Name: [THUNDER ROAD] Project Number: [2120]
08190> # Date : 04-20-2021
08191> # Modeler [J.F.]
08192> # Company : JFSaInc.
08193> # License # : 2540237
08194> # Date : 04-20-2021
08195> # Project Name: [THUNDER ROAD] Project Number: [2120]
08196> # Date : 04-20-2021
08197> # Modeler [J.F.]
08198> # Company : JFSaInc.
08199> # License # : 2540237
08200> # Date : 04-20-2021
08201> # Project Name: [THUNDER ROAD] Project Number: [2120]
08202> # Date : 04-20-2021
08203> # Modeler [J.F.]
08204> # Company : JFSaInc.
08205> # License # : 2540237
08206> # Date : 04-20-2021
08207> # Project Name: [THUNDER ROAD] Project Number: [2120]
08208> # Date : 04-20-2021
08209> # Modeler [J.F.]
08210> # Company : JFSaInc.
08211> # License # : 2540237
08212> # Date : 04-20-2021
08213> # Project Name: [THUNDER ROAD] Project Number: [2120]
08214> # Date : 04-20-2021
08215> # Modeler [J.F.]
08216> # Company : JFSaInc.
08217> # License # : 2540237
08218> # Date : 04-20-2021
08219> # Project Name: [THUNDER ROAD] Project Number: [2120]
08220> # Date : 04-20-2021
08221> # Modeler [J.F.]
08222> # Company : JFSaInc.
08223> # License # : 2540237
08224> # Date : 04-20-2021
08225> # Project Name: [THUNDER ROAD] Project Number: [2120]
08226> # Date : 04-20-2021
08227> # Modeler [J.F.]
08228> # Company : JFSaInc.
08229> # License # : 2540237
08230> # Date : 04-20-2021
08231> # Project Name: [THUNDER ROAD] Project Number: [2120]
08232> # Date : 04-20-2021
08233> # Modeler [J.F.]
08234> # Company : JFSaInc.
08235> # License # : 2540237
08236> # Date : 04-20-2021
08237> # Project Name: [THUNDER ROAD] Project Number: [2120]
08238> # Date : 04-20-2021
08239> # Modeler [J.F.]
08240> # Company : JFSaInc.
08241> # License # : 2540237
08242> # Date : 04-20-2021
08243> # Project Name: [THUNDER ROAD] Project Number: [2120]
08244> # Date : 04-20-2021
08245> # Modeler [J.F.]
08246> # Company : JFSaInc.
08247> # License # : 2540237
08248> # Date : 04-20-2021
08249> # Project Name: [THUNDER ROAD] Project Number: [2120]
08250> # Date : 04-20-2021
08251> # Modeler [J.F.]
08252> # Company : JFSaInc.
08253> # License # : 2540237
08254> # Date : 04-20-2021
08255> # Project Name: [THUNDER ROAD] Project Number: [2120]
08256> # Date : 04-20-2021
08257> # Modeler [J.F.]
08258> # Company : JFSaInc.
08259> # License # : 2540237
08260> # Date : 04-20-2021
08261> # Project Name: [THUNDER ROAD] Project Number: [2120]
08262> # Date : 04-20-2021
08263> # Modeler [J.F.]
08264> # Company : JFSaInc.
08265> # License # : 2540237
08266> # Date : 04-20-2021
08267> # Project Name: [THUNDER ROAD] Project Number: [2120]
08268> # Date : 04-20-2021
08269> # Modeler [J.F.]
08270> # Company : JFSaInc.
08271> # License # : 2540237
08272> # Date : 04-20-2021
08273> # Project Name: [THUNDER ROAD] Project Number: [2120]
08274> # Date : 04-20-2021
08275> # Modeler [J.F.]
08276> # Company : JFSaInc.
08277> # License # : 2540237
08278> # Date : 04-20-2021
08279> # Project Name: [THUNDER ROAD] Project Number: [2120]
08280> # Date : 04-20-2021
08281> # Modeler [J.F.]
08282> # Company : JFSaInc.
08283> # License # : 2540237
08284> # Date : 04-20-2021
08285> # Project Name: [THUNDER ROAD] Project Number: [2120]
08286> # Date : 04-20-2021
08287> # Modeler [J.F.]
08288> # Company : JFSaInc.
08289> # License # : 2540237
08290> # Date : 04-20-2021
08291> # Project Name: [THUNDER ROAD] Project Number: [2120]
08292> # Date : 04-20-2021
08293> # Modeler [J.F.]
08294> # Company : JFSaInc.
08295> # License # : 2540237
08296> # Date : 04-20-2021
08297> # Project Name: [THUNDER ROAD] Project Number: [2120]
08298> # Date : 04-20-2021
08299> # Modeler [J.F.]
08300> # Company : JFSaInc.
08301> # License # : 2540237
08302> # Date : 04-20-2021
08303> # Project Name: [THUNDER ROAD] Project Number: [2120]
08304> # Date : 04-20-2021
08305> # Modeler [J.F.]
08306> # Company : JFSaInc.
08307> # License # : 2540237
08308> # Date : 04-20-2021
08309> # Project Name: [THUNDER ROAD] Project Number: [2120]
08310> # Date : 04-20-2021
08311> # Modeler [J.F.]
08312> # Company : JFSaInc.
08313> # License # : 2540237
08314> # Date : 04-20-2021
08315> # Project Name: [THUNDER ROAD] Project Number: [2120]
08316> # Date : 04-20-2021
08317> # Modeler [J.F.]
08318> # Company : JFSaInc.
08319> # License # : 2540237
08320> # Date : 04-20-2021
08321> # Project Name: [THUNDER ROAD] Project Number: [2120]
08322> # Date : 04-20-2021
08323> # Modeler [J.F.]
08324> # Company : JFSaInc.
08325> # License # : 2540237
08326> # Date : 04-20-2021
08327> # Project Name: [THUNDER ROAD] Project Number: [2120]
08328> # Date : 04-20-2021
08329> # Modeler [J.F.]
08330> # Company : JFSaInc.
08331> # License # : 2540237
08332> # Date : 04-20-2021
08333> # Project Name: [THUNDER ROAD] Project Number: [2120]
08334> # Date : 04-20-2021
08335> # Modeler [J.F.]
08336> # Company : JFSaInc.
08337> # License # : 2540237
08338> # Date : 04-20-2021
08339> # Project Name: [THUNDER ROAD] Project Number: [2120]
08340> # Date : 04-20-2021
08341> # Modeler [J.F.]
08342> # Company : JFSaInc.
08343> # License # : 2540237
08344> # Date : 04-20-2021
08345> # Project Name: [THUNDER ROAD] Project Number: [2120]
08346> # Date : 04-20-2021
08347> # Modeler [J.F.]
08348> # Company : JFSaInc.
08349> # License # : 2540237
08350> # Date : 04-20-2021
08351> # Project Name: [THUNDER ROAD] Project Number: [2120]
08352> # Date : 04-20-2021
08353> # Modeler [J.F.]
08354> # Company : JFSaInc.
08355> # License # : 2540237
08356> # Date : 04-20-2021
08357> # Project Name: [THUNDER ROAD] Project Number: [2120]
08358> # Date : 04-20-2021
08359> # Modeler [J.F.]
08360> # Company : JFSaInc.
08361> # License # : 2540237
08362> # Date : 04-20-2021
08363> # Project Name: [THUNDER ROAD] Project Number: [2120]
08364> # Date : 04-20-2021
08365> # Modeler [J.F.]
08366> # Company : JFSaInc.
08367> # License # : 2540237
08368> # Date : 04-20-2021
08369> # Project Name: [THUNDER ROAD] Project Number: [2120]
08370> # Date : 04-20-2021
08371> # Modeler [J.F.]
08372> # Company : JFSaInc.
08373> # License # : 2540237
08374> # Date : 04-20-2021
08375> # Project Name: [THUNDER ROAD] Project Number: [2120]
08376> # Date : 04-20-2021
08377> # Modeler [J.F.]
08378> # Company : JFSaInc.
08379> # License # : 2540237
08380> # Date : 04-20-2021
08
```

08281- \*\*\* WARNING: Requested start date is less than start date in file.  
08282- \*\*\* WARNING: Missing rainfall increments were set to 0.  
08283- \*\*\* WARNING: Missing rainfall increments were set to 0.  
08284- \*\*\* WARNING: Requested start date is less than start date in file.  
08285- \*\*\* WARNING: Missing rainfall increments were set to 0.  
08286- \*\*\* WARNING: Requested start date is less than start date in file.  
08287- \*\*\* WARNING: Missing rainfall increments were set to 0.  
08288- \*\*\* WARNING: Missing rainfall increments were set to 0.  
08289- \*\*\* WARNING: Requested start date is less than start date in file.  
08290- \*\*\* WARNING: Missing rainfall increments were set to 0.  
08291- \*\*\* WARNING: Requested start date is less than start date in file.  
08292- \*\*\* WARNING: Missing rainfall increments were set to 0.  
08293- \*\*\* WARNING: Requested start date is less than start date in file.  
08294- \*\*\* WARNING: Missing rainfall increments were set to 0.  
08295- \*\*\* WARNING: Requested start date is less than start date in file.  
08296- \*\*\* WARNING: Missing rainfall increments were set to 0.  
08297- \*\*\* WARNING: Missing rainfall increments were set to 0.  
08298- Simulation ended on 2024-07-31 at 16:08:34  
08299- =====  
08300-

```

1 20 Metric units / ID numbers OFF
2 *#*****
3 *# SWMHYMO / INPUT DATA FILE
4 *#*****
5 *# Project Name: [THUNDER ROAD] Project Number: [2128]
6 *# Date : 04-28-2021
7 *# Modeller : [J.B]
8 *# Company : JFSAinc.
9 *# License # : 2549237
10 *#*****
11 * Model Developed to assess the post development erosion/hydrologic conditions on the
    Bear Brook
12 * tributary near 6150 Thunder Road
13 *#*****
14 *#*****
15 START TZERO=[1967.0101], METOUT=[2], NSTORM=[0], NRUN=[1967]
16 *% [""] <-- storm filename, one per line for NSTORM time
17 *%-----|-----
18 *# Ottawa International Airport - April 1st to October 31st
19 READ AES DATA AES_FILENAME=["YOW_1967_2007.123"],
20 IELEM=[123], START_DATE=[0], END_DATE=[-213]
21 *%-----|-----
22 COMPUTE API APII=[50], APIK=[0.90]/day
23 *%-----|-----
24 * DRAINAGE AREAS NORTH OF HIGHWAY
25 *%-----|-----
26 CONTINUOUS NASHYD NHYD=["NORTH-1"], DT=[5](min), AREA=[34.701](ha),
27 DWF=[0](cms), CN/C=[38.1], IA=[4.67](mm), N=[3], TP=[4.12](hrs),
28 Continuous simulation parameters:
29 IaRECper=[6](hrs),
30 SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
31 InterEventTime=[12](hrs),
32 Baseflow simulation parameters:
33 BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
34 VHydCond=[.02](mm/hr), END=-1
35 *%-----|-----
36 CONTINUOUS NASHYD NHYD=["NORTH-2"], DT=[5](min), AREA=[12.444](ha),
37 DWF=[0](cms), CN/C=[53.0], IA=[4.67](mm), N=[3], TP=[1.29](hrs),
38 Continuous simulation parameters:
39 IaRECper=[6](hrs),
40 SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
41 InterEventTime=[12](hrs),
42 Baseflow simulation parameters:
43 BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
44 VHydCond=[.02](mm/hr), END=-1
45 *%-----|-----
46 CONTINUOUS NASHYD NHYD=["HWY-1"], DT=[5](min), AREA=[2.364](ha),
47 DWF=[0](cms), CN/C=[81.7], IA=[4.67](mm), N=[3], TP=[1.21](hrs),
48 Continuous simulation parameters:
49 IaRECper=[6](hrs),
50 SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
51 InterEventTime=[12](hrs),
52 Baseflow simulation parameters:
53 BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
54 VHydCond=[.02](mm/hr), END=-1
55 *%-----|-----
56 *ADD AREAS UPSTREAM OF HIGHWAY
57 ADD HYD NHYDsum=["J1"], NHYDs to add=["NORTH-1"+"NORTH-2"+"HWY-1"]
58 *%-----|-----
59 * ROUTE UPSTREAM FLOWS TO THUNDER ROAD
60 ROUTE CHANNEL NHYDout=["R1"], NHYDin=["J1"], RDT=[5](min),
61 CHLGTH=[.478](m), CHSLOPE=[0.44](%), FPSLOPE=[0.44](%),
62 SECNUM=[1], NSEG=[3]
63 ( SEGROUGH, SEGDIST (m))=[0.05, 2.49, -0.035, 8.73, 0.05, 26.18] NSEG
    times
64 ( DISTANCE (m), ELEVATION (m))=[0, 76.83]
65 [1.25, 76.8]
66 [2.49, 76.64]
67 [3.74, 76.45]

```

```

68 ..... [4.99,76.22]
69 ..... [6.23,76.3]
70 ..... [7.48,76.52]
71 ..... [8.73,76.58]
72 ..... [9.97,76.61]
73 ..... [22.44,76.62]
74 ..... [23.69,76.7]
75 ..... [24.93,76.75]
76 ..... [26.18,76.85]
77 *%------|-----
78 * DRAINAGE AREAS AROUND HIGHWAY INTERCHANGE
79 *%------|-----
80 CONTINUOUS NASHYD NHYD=["INT-1"], DT=[5](min), AREA=[4.388](ha),
81 DWF=[0](cms), CN/C=[60.4], IA=[4.67](mm), N=[3], TP=[1.66](hrs),
82 Continuous simulation parameters:
83 IaRECper=[6](hrs),
84 SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
85 InterEventTime=[12](hrs),
86 Baseflow simulation parameters:
87 BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
88 VHydCond=[.02](mm/hr), END=-1
89 *%------|-----
90 CONTINUOUS NASHYD NHYD=["INT-2"], DT=[5](min), AREA=[3.61](ha),
91 DWF=[0](cms), CN/C=[47.4], IA=[4.67](mm), N=[3], TP=[0.95](hrs),
92 Continuous simulation parameters:
93 IaRECper=[6](hrs),
94 SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
95 InterEventTime=[12](hrs),
96 Baseflow simulation parameters:
97 BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
98 VHydCond=[.02](mm/hr), END=-1
99 *%------|-----
100 CONTINUOUS NASHYD NHYD=["A3A"], DT=[5](min), AREA=[3.84](ha),
101 DWF=[0](cms), CN/C=[58.4], IA=[4.67](mm), N=[3], TP=[1.46](hrs),
102 Continuous simulation parameters:
103 IaRECper=[6](hrs),
104 SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
105 InterEventTime=[12](hrs),
106 Baseflow simulation parameters:
107 BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
108 VHydCond=[.02](mm/hr), END=-1
109 *%------|-----
110 *Lumped subcatchment with parameters calibrated to match detailed PCSwMM model
111 CONTINUOUS STANDHYD NHYD=["Pond3-In"], DT=[5](min), AREA=[1.205](ha), XIMP=[0.64],
TIMP=[0.75], DWF=[0](cms),
112 LOSS=[1], Horton: Fo=[76.20](mm/hr), Fc=[13.20](mm/hr),
DCAY=[4.14](/hr), F=[12](mm),
113 Pervious areas: IAper=[4.67](mm), SLPP=[2.5](%), LGP=[100](m),
MNP=[0.25], SCP=[0](min),
114 Impervious areas: IAimp=[1.57](mm), SLPI=[2.5](%), LGI={50}(m),
MNI=[0.013], SCI=[0](min),
115 Continuous simulation parameters:
116 IaRECper=[12](hrs), IaRECimp=[12](hrs),
117 SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.01]/(mm),
InterEventTime=[24](hrs), END=-1
118 *%------|-----
119 *SWM Pond Outflow Storage Curve
120 ROUTE RESERVOIR NHYDout=["Pond3-Out"], NHYDin=["Pond3-In"], RDT=[5](min),
121 TABLE of ( OUTFLOW-STORAGE ) values
122 ----->----->----->----->-----> (cms) -- (ha-m)
123 ..... [ 0,0]
124 ..... [ 0.0001,0.0078]
125 ..... [ 0.0002,0.0088]
126 ..... [ 0.0004,0.0098]
127 ..... [ 0.0008,0.0108]
128 ..... [ 0.0012,0.0119]
129 ..... [ 0.0017,0.013]
130 ..... [ 0.0021,0.0141]
131 ..... [ 0.0024,0.0152]

```

```

132 ..... [ 0.0026,0.0164]
133 ..... [ 0.0028,0.0176]
134 ..... [ 0.0029,0.0405]
135 ..... [ 0.0030,0.042]
136 ..... [ 0.0031,0.0451]
137 ..... [ 0.0035,0.0576]
138 ..... [ 0.0039,0.0703]
139 ..... [ 0.0043,0.0832]
140 ..... [ 0.0044,0.0893]
141 ..... [ 0.1091,0.097]
142 ..... [ 0.4887,0.1104]
143 ..... [ 1.018,0.1239]
144 ..... [ 1.6597,0.1377]
145 ..... NHYDovf=["Pond3-Over"],
146 *%-----|-----|
147 ADD HYD ..... NHYDsum=["Pond3-Ditch"]NHYDs to add=["Pond3-Over"+"Pond3-Out"]
148 *%-----|-----|
149 *Route runoff from north site lands through road side ditch (500m @ 0.14%)
150 ROUTE CHANNEL ..... NHYDout=["A3C-R"], NHYDin=["Pond3-Out"], RDT=[5](min),
151 ..... CHLGTH=[ 500 ](m), CHSLOPE=[0.14](%), FPSLOPE=[0.14](%),
152 ..... SECNUM=[ 1 ], NSEG=[ 3 ]
153 ..... ( SEGROUGH, SEGDIST (m))=[0.05, 2.95, -0.035, 7.38, 0.05, 10.33] NSEG
times
154 ..... ( DISTANCE (m), ELEVATION (m))=[0.00, 76.58]
155 ..... [1.48, 76.57]
156 ..... [2.95, 76.49]
157 ..... [4.43, 76.15]
158 ..... [5.90, 76.11]
159 ..... [7.38, 76.58]
160 ..... [8.85, 76.95]
161 ..... [10.33, 77.20]
162 ..... [-1, -1]
163 *%-----|-----|
164 CONTINUOUS NASHYD ..... NHYD=["INT-3"], DT=[5](min), AREA=[5.712](ha),
165 ..... DWF=[0](cms), CN/C=[58.5 ], IA=[4.67](mm), N=[3], TP=[0.89 ](hrs),
166 ..... Continuous simulation parameters:
167 ..... IaRECper=[6](hrs),
168 ..... SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
169 ..... InterEventTime=[12](hrs),
170 ..... Baseflow simulation parameters:
171 ..... BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
172 ..... VHydCond=[.02](mm/hr), END=-1
173 *%-----|-----|
174 ADD HYD ..... NHYDsum=["J2"], NHYDs to
add=["R1"+"INT-1"+"INT-2"+"INT-3"+"A3A"+"A3C-R"]
175 *%-----|-----|
176 ROUTE CHANNEL ..... NHYDout=["R2"], NHYDin=["J2"], RDT=[5](min),
177 ..... CHLGTH=[ 359 ](m), CHSLOPE=[0.56](%), FPSLOPE=[0.56](%),
178 ..... SECNUM=[ 1 ], NSEG=[ 3 ]
179 ..... ( SEGROUGH, SEGDIST (m))=[0.05, 15.18, -0.035, 25.29, 0.05, 30.35]
NSEG times
180 ..... ( DISTANCE (m), ELEVATION (m))=[0, 77.2]
181 ..... [1.26, 77.14]
182 ..... [2.53, 77.09]
183 ..... [6.32, 77.02]
184 ..... [7.59, 77.01]
185 ..... [8.85, 76.99]
186 ..... [11.38, 76.96]
187 ..... [13.91, 76.92]
188 ..... [15.18, 76.86]
189 ..... [16.44, 76.63]
190 ..... [17.71, 76.28]
191 ..... [18.97, 76.24]
192 ..... [20.23, 76.23]
193 ..... [21.5, 76.33]
194 ..... [22.76, 76.62]
195 ..... [24.03, 76.73]
196 ..... [25.29, 76.8]
197 ..... [27.82, 76.8]

```

```

198 ..... [29.09,76.81]
199 ..... [30.35,77]
200 ..... [-1,-1]
201 *%-----|-----
202 * DRAINAGE AREAS DOWNSTREAM OF THUNDERROAD
203 *%-----|-----
204 CONTINUOUS NASHYD NHYD=["A1A"], DT=[5](min), AREA=[21.435](ha),
205 ..... DWF=[0](cms), CN/C=[36.1], IA=[4.67](mm), N=[3], TP=[1.68](hrs),
206 ..... Continuous simulation parameters:
207 ..... IaRECper=[6](hrs),
208 ..... SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
209 ..... InterEventTime=[12](hrs),
210 ..... Baseflow simulation parameters:
211 ..... BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
212 ..... VHydCond=[.02](mm/hr), END=-1
213 *%-----|-----
214 *Lumped subcatchment with parameters calibrated to match detailed PCSwMM model
215 CONTINUOUS STANDHYD NHYD=["Pond1-In"], DT=[5](min), AREA=[9.998](ha), XIMP=[0.38],
216 ..... TIMP=[0.74], DWF=[0](cms),
217 ..... LOSS=[1], Horton: Fo=[76.20](mm/hr), Fc=[13.20](mm/hr),
218 ..... DCAY=[4.14](/hr), F=[12](mm),
219 ..... Pervious areas: IAper=[4.67](mm), SLPP=[2.0](%), LGP=[500](m),
220 ..... MNP=[0.25], SCP=[0](min),
221 ..... Impervious areas: IAimp=[1.57](mm), SLPI=[1.5](%), LGI=[250](m),
222 ..... MNI=[0.013], SCI=[0](min),
223 ..... Continuous simulation parameters:
224 ..... IaRECper=[12]hrs), IaRECimp=[12](hrs),
225 ..... SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.01]/(mm),
226 ..... InterEventTime=[24](hrs), END=-1
227 *%-----|-----
228 *SWM Pond Outflow Storage Curve
229 ROUTE RESERVOIR NHYDout=["Pond1-Out"], NHYDin=["Pond1-In"], RDT=[5](min),
230 ..... TABLE of ( OUTFLOW-STORAGE ) values
231 ..... (cms) - (ha-m)
232 ..... [ 0 , 0 ]
233 ..... [ 0.0096 , 0.001 ]
234 ..... [ 0.0115 , 0.002 ]
235 ..... [ 0.0131 , 0.003 ]
236 ..... [ 0.0136 , 0.004 ]
237 ..... [ 0.0141 , 0.005 ]
238 ..... [ 0.0146 , 0.006 ]
239 ..... [ 0.015 , 0.008 ]
240 ..... [ 0.0155 , 0.009 ]
241 ..... [ 0.0159 , 0.011 ]
242 ..... [ 0.0163 , 0.013 ]
243 ..... [ 0.0167 , 0.015 ]
244 ..... [ 0.0171 , 0.017 ]
245 ..... [ 0.0175 , 0.02 ]
246 ..... [ 0.0179 , 0.022 ]
247 ..... [ 0.0182 , 0.025 ]
248 ..... [ 0.0186 , 0.028 ]
249 ..... [ 0.0189 , 0.031 ]
250 ..... [ 0.0193 , 0.033 ]
251 ..... [ 0.0196 , 0.036 ]
252 ..... [ 0.02 , 0.039 ]
253 ..... [ 0.0203 , 0.042 ]
254 ..... [ 0.0206 , 0.046 ]
255 ..... [ 0.0209 , 0.049 ]
256 ..... [ 0.0213 , 0.052 ]
257 ..... [ 0.0216 , 0.056 ]
258 ..... [ 0.0219 , 0.059 ]
259 ..... [ 0.0222 , 0.063 ]
260 ..... [ 0.0225 , 0.067 ]
261 ..... [ 0.0228 , 0.071 ]
262 ..... [ 0.0231 , 0.076 ]
263 ..... [ 0.0233 , 0.08 ]
264 ..... [ 0.0236 , 0.085 ]
265 ..... [ 0.0239 , 0.09 ]
266 ..... [ 0.0242 , 0.095 ]

```

```

262 ..... [ 0.0245 , 0.1 ]
263 ..... [ 0.0247 , 0.106 ]
264 ..... [ 0.025 , 0.111 ]
265 ..... [ 0.0253 , 0.117 ]
266 ..... [ 0.0255 , 0.122 ]
267 ..... [ 0.0258 , 0.128 ]
268 ..... [ 0.026 , 0.133 ]
269 ..... [ 0.0263 , 0.139 ]
270 ..... [ 0.0265 , 0.144 ]
271 ..... [ 0.0268 , 0.15 ]
272 ..... [ 0.027 , 0.156 ]
273 ..... [ 0.0273 , 0.162 ]
274 ..... [ 0.0275 , 0.168 ]
275 ..... [ 0.0278 , 0.174 ]
276 ..... [ 0.028 , 0.18 ]
277 ..... [ 0.0282 , 0.187 ]
278 ..... [ 0.0285 , 0.193 ]
279 ..... [ 0.0287 , 0.2 ]
280 ..... [ 0.0289 , 0.208 ]
281 ..... [ 0.0292 , 0.215 ]
282 ..... [ 0.0294 , 0.223 ]
283 ..... [ 0.0296 , 0.23 ]
284 ..... [ 0.0298 , 0.238 ]
285 ..... [ 0.0301 , 0.247 ]
286 ..... [ 0.0303 , 0.255 ]
287 ..... [ 0.0305 , 0.264 ]
288 ..... [ 0.0307 , 0.273 ]
289 ..... [ 0.0309 , 0.282 ]
290 ..... [ 0.0311 , 0.291 ]
291 ..... [ 0.0314 , 0.301 ]
292 ..... [ 0.0316 , 0.311 ]
293 ..... [ 0.0318 , 0.321 ]
294 ..... [ 0.032 , 0.331 ]
295 ..... [ 0.0322 , 0.341 ]
296 ..... [ 0.0324 , 0.352 ]
297 ..... [ 0.0326 , 0.362 ]
298 ..... [ 0.0328 , 0.373 ]
299 ..... [ 0.033 , 0.384 ]
300 ..... [ 0.0332 , 0.394 ]
301 ..... [ 0.0334 , 0.405 ]
302 ..... [ 0.0336 , 0.416 ]
303 ..... [ 0.0338 , 0.427 ]
304 ..... [ 0.034 , 0.438 ]
305 ..... [ 0.0342 , 0.448 ]
306 ..... [ 0.0344 , 0.459 ]
307 ..... [ 0.0346 , 0.47 ]
308 ..... [ 0.0348 , 0.481 ]
309 ..... [ 0.035 , 0.493 ]
310 ..... [ 0.0352 , 0.504 ]
311 ..... [ 0.0353 , 0.515 ]
312 ..... [ 0.0355 , 0.526 ]
313 ..... [ 0.0357 , 0.538 ]
314 ..... [ 0.0359 , 0.549 ]
315 ..... [ 0.0361 , 0.56 ]
316 ..... [ 0.0363 , 0.572 ]
317 ..... [ 0.0365 , 0.583 ]
318 ..... [ 0.0366 , 0.595 ]
319 ..... [ 0.0368 , 0.606 ]
320 ..... [ 0.037 , 0.618 ]
321 ..... [ 0.0372 , 0.63 ]
322 ..... [ 0.0374 , 0.641 ]
323 ..... [ 0.0375 , 0.653 ]
324 ..... [ 0.0377 , 0.665 ]
325 ..... [ 0.0379 , 0.677 ]
326 ..... NHYDovf=["Pond1-Over"],
327 *%-----|
328 CONTINUOUS NASHYD NHYD=["A2"], DT=[5](min), AREA=[9.144](ha),
329 DWF=[0](cms), CN/C=[68.4 ], IA=[4.67](mm), N=[3], TP=[1.12 ](hrs),
330 Continuous simulation parameters:

```

```

331 ..... IaRECper=[6](hrs),
332 ..... SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
333 ..... InterEventTime=[12](hrs),
334 ..... Baseflow simulation parameters:
335 ..... BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
336 ..... VHydCond=[.02](mm/hr), END=-1
337 *%-----|
338 ADD HYD ..... NHYDsum=["J3"], NHYDs to
add=["R2"+"A1A"+"A2"+"Pond1-Over"+"Pond1-Out"]
339 *%-----|
340 ROUTE CHANNEL ..... NHYDout=["R3"], NHYDin=["J3"], RDT=[5](min),
341 ..... CHLGTH=[ 396 ](m), CHSLOPE=[0.305](%), FPSLOPE=[0.305](%),
342 ..... SECNUM=[ 1 ], NSEG=[ 3 ]
343 ..... ( SEGROUGH, SEGDIST (m))=[0.05, 20.3, -0.035, 25.43, 0.05, 43.65]
NSEG times
344 ..... ( DISTANCE (m), ELEVATION (m))=[0, 75.94]
345 ..... [5.08, 75.73]
346 ..... [10.15, 75.63]
347 ..... [15.23, 75.56]
348 ..... [20.3, 75.36]
349 ..... [21.32, 75.15]
350 ..... [22.33, 75.04]
351 ..... [23.35, 74.98]
352 ..... [24.36, 75.13]
353 ..... [25.38, 75.21]
354 ..... [30.45, 75.36]
355 ..... [35.53, 75.5]
356 ..... [40.61, 75.85]
357 ..... [43.65, 76.04]
358 ..... [-1, -1]
359 *%-----|
360 CONTINUOUS NASHYD ..... NHYD=["SOUTH-1"], DT=[5](min), AREA=[20.21](ha),
361 ..... DWF=[0](cms), CN/C=[35.5], IA=[4.67](mm), N=[3], TP=[1.4](hrs),
362 ..... Continuous simulation parameters:
363 ..... IaRECper=[6](hrs),
364 ..... SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
365 ..... InterEventTime=[12](hrs),
366 ..... Baseflow simulation parameters:
367 ..... BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
368 ..... VHydCond=[.02](mm/hr), END=-1
369 *%-----|
370 ADD HYD ..... NHYDsum=["J4"], NHYDs to add=["R3"+"SOUTH-1"]
371 *%-----|
372 ROUTE CHANNEL ..... NHYDout=["R4"], NHYDin=["J4"], RDT=[5](min),
373 ..... CHLGTH=[ 482 ](m), CHSLOPE=[0.41](%), FPSLOPE=[0.41](%),
374 ..... SECNUM=[ 1 ], NSEG=[ 3 ]
375 ..... ( SEGROUGH, SEGDIST (m))=[0.05, 20.48, -0.035, 24.1, 0.05, 40.97]
NSEG times
376 ..... ( DISTANCE (m), ELEVATION (m))=[0.00, 75.19]
377 ..... [4.82, 75.02]
378 ..... [10.84, 74.46]
379 ..... [20.48, 73.88]
380 ..... [21.69, 73.71]
381 ..... [22.89, 73.79]
382 ..... [24.1, 74.07]
383 ..... [25.3, 74.18]
384 ..... [30.12, 74.6]
385 ..... [34.94, 74.69]
386 ..... [40.97, 75.14]
387 ..... [-1, -1]
388 *%-----|
389 CONTINUOUS NASHYD ..... NHYD=["SOUTH-2"], DT=[5](min), AREA=[11.612](ha),
390 ..... DWF=[0](cms), CN/C=[36.7], IA=[4.67](mm), N=[3], TP=[0.96](hrs),
391 ..... Continuous simulation parameters:
392 ..... IaRECper=[6](hrs),
393 ..... SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
394 ..... InterEventTime=[12](hrs),
395 ..... Baseflow simulation parameters:
396 ..... BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),

```

```

397 ..... VHydCond=[.02](mm/hr), END=-1
398 *%-----|
399 ADD HYD ..... NHYDsum=["J5"], NHYDs to add=["R4"+"SOUTH-2"]
400 *%-----|
401 ROUTE CHANNEL ..... NHYDout=["R5"], NHYDin=["J5"], RDT=[5](min),
402 ..... CHLGTH=[181](m), CHSLOPE=[0.5](%), FPSLOPE=[0.5](%),
403 ..... SECNUM=[1], NSEG=[3]
404 ..... (SEGROUGH, SEGDIST (m))=[0.05, 42.50, -0.035, 47.69, 0.05, 65.31]
..... NSEG times
405 ..... (DISTANCE (m), ELEVATION (m))=[0.000, 75.10]
406 ..... [10.37, 74.34]
407 ..... [20.73, 73.72]
408 ..... [30.06, 73.11]
409 ..... [42.50, 72.86]
410 ..... [45.61, 72.59]
411 ..... [47.69, 72.82]
412 ..... [60.13, 73.68]
413 ..... [65.31, 74.98]
414 ..... [-1, -1]
415 *%-----|
416 CONTINUOUS NASHYD ..... NHYD=["SOUTH-3"], DT=[5](min), AREA=[7.982](ha),
417 ..... DWF=[0](cms), CN/C=[42.6], IA=[4.67](mm), N=[3], TP=[0.89](hrs),
418 ..... Continuous simulation parameters:
419 ..... IaRECper=[6](hrs),
420 ..... SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
421 ..... InterEventTime=[12](hrs),
422 ..... Baseflow simulation parameters:
423 ..... BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
424 ..... VHydCond=[.02](mm/hr), END=-1
425 *%-----|
426 ADD HYD ..... NHYDsum=["J6"], NHYDs to add=["R5"+"SOUTH-3"]
427 *%-----|
428 SAVE HYD ..... NHYD=["J6"], # OF PCYCLES=[-1], ICASEsh=[1]
429 ..... HYD_COMMENT=["J6-Bearbrook Tributary Upstream of Thunder Road
..... Crossing"]
430 *%-----|
431 ROUTE CHANNEL ..... NHYDout=["R6"], NHYDin=["J6"], RDT=[5](min),
432 ..... CHLGTH=[323](m), CHSLOPE=[0.44](%), FPSLOPE=[0.44](%),
433 ..... SECNUM=[1], NSEG=[3]
434 ..... (SEGROUGH, SEGDIST (m))=[0.05, 20.48, -0.035, 24.1, 0.05, 40.97]
..... NSEG times
435 ..... (DISTANCE (m), ELEVATION (m))=[0, 75.19]
436 ..... [4.82, 75.02]
437 ..... [10.84, 74.46]
438 ..... [20.48, 73.88]
439 ..... [21.69, 73.71]
440 ..... [22.89, 73.79]
441 ..... [24.1, 74.07]
442 ..... [25.3, 74.18]
443 ..... [30.12, 74.6]
444 ..... [34.94, 74.69]
445 ..... [40.97, 75.14]
446 ..... [-1, -1]
447 *%-----|
448 CONTINUOUS NASHYD ..... NHYD=["SOUTH-4"], DT=[5](min), AREA=[14.985](ha),
449 ..... DWF=[0](cms), CN/C=[39.5], IA=[4.67](mm), N=[3], TP=[1.23](hrs),
450 ..... Continuous simulation parameters:
451 ..... IaRECper=[6](hrs),
452 ..... SMIN=[-1](mm), SMAX=[-1](mm), SK=[0.03]/(mm),
453 ..... InterEventTime=[12](hrs),
454 ..... Baseflow simulation parameters:
455 ..... BaseFlowOption=[1], InitGWResVol=[12](mm), GWResK=[0.95](mm/day/mm),
456 ..... VHydCond=[.02](mm/hr), END=-1
457 *%-----|
458 ADD HYD ..... NHYDsum=["Total"], NHYDs to add=["R6"+"SOUTH-4"]
459 *%-----|
460 *#=====
461 * ..... DESIGN STORMS
462 *#=====

```

```

463 *#####
464 *# CONTINUOUS RAINFALL DATA
465 *#####
466 *#*****
467 *# STORMS
468 *#*****
469 START ..... TZERO=[1968.0401], METOUT=[2], NSTORM=[0], NRUN=[1968]
470 *%- .....
471 START ..... TZERO=[1969.0401], METOUT=[2], NSTORM=[0], NRUN=[1969]
472 *%- .....
473 START ..... TZERO=[1970.0401], METOUT=[2], NSTORM=[0], NRUN=[1970]
474 *%- .....
475 START ..... TZERO=[1971.0401], METOUT=[2], NSTORM=[0], NRUN=[1971]
476 *%- .....
477 START ..... TZERO=[1972.0401], METOUT=[2], NSTORM=[0], NRUN=[1972]
478 *%- .....
479 START ..... TZERO=[1973.0401], METOUT=[2], NSTORM=[0], NRUN=[1973]
480 *%- .....
481 START ..... TZERO=[1974.0401], METOUT=[2], NSTORM=[0], NRUN=[1974]
482 *%- .....
483 START ..... TZERO=[1975.0401], METOUT=[2], NSTORM=[0], NRUN=[1975]
484 *%- .....
485 START ..... TZERO=[1976.0401], METOUT=[2], NSTORM=[0], NRUN=[1976]
486 *%- .....
487 START ..... TZERO=[1977.0401], METOUT=[2], NSTORM=[0], NRUN=[1977]
488 *%- .....
489 START ..... TZERO=[1978.0401], METOUT=[2], NSTORM=[0], NRUN=[1978]
490 *%- .....
491 START ..... TZERO=[1979.0401], METOUT=[2], NSTORM=[0], NRUN=[1979]
492 *%- .....
493 START ..... TZERO=[1980.0401], METOUT=[2], NSTORM=[0], NRUN=[1980]
494 *%- .....
495 START ..... TZERO=[1981.0401], METOUT=[2], NSTORM=[0], NRUN=[1981]
496 *%- .....
497 START ..... TZERO=[1982.0401], METOUT=[2], NSTORM=[0], NRUN=[1982]
498 *%- .....
499 START ..... TZERO=[1983.0401], METOUT=[2], NSTORM=[0], NRUN=[1983]
500 *%- .....
501 START ..... TZERO=[1984.0401], METOUT=[2], NSTORM=[0], NRUN=[1984]
502 *%- .....
503 START ..... TZERO=[1985.0401], METOUT=[2], NSTORM=[0], NRUN=[1985]
504 *%- .....
505 START ..... TZERO=[1986.0401], METOUT=[2], NSTORM=[0], NRUN=[1986]
506 *%- .....
507 START ..... TZERO=[1987.0401], METOUT=[2], NSTORM=[0], NRUN=[1987]
508 *%- .....
509 START ..... TZERO=[1988.0401], METOUT=[2], NSTORM=[0], NRUN=[1988]
510 *%- .....
511 START ..... TZERO=[1989.0401], METOUT=[2], NSTORM=[0], NRUN=[1989]
512 *%- .....
513 START ..... TZERO=[1990.0401], METOUT=[2], NSTORM=[0], NRUN=[1990]
514 *%- .....
515 START ..... TZERO=[1991.0401], METOUT=[2], NSTORM=[0], NRUN=[1991]
516 *%- .....
517 START ..... TZERO=[1992.0401], METOUT=[2], NSTORM=[0], NRUN=[1992]
518 *%- .....
519 START ..... TZERO=[1993.0401], METOUT=[2], NSTORM=[0], NRUN=[1993]
520 *%- .....
521 START ..... TZERO=[1994.0401], METOUT=[2], NSTORM=[0], NRUN=[1994]
522 *%- .....
523 START ..... TZERO=[1995.0401], METOUT=[2], NSTORM=[0], NRUN=[1995]
524 *%- .....
525 START ..... TZERO=[1996.0401], METOUT=[2], NSTORM=[0], NRUN=[1996]
526 *%- .....
527 START ..... TZERO=[1997.0401], METOUT=[2], NSTORM=[0], NRUN=[1997]
528 *%- .....
529 START ..... TZERO=[1998.0401], METOUT=[2], NSTORM=[0], NRUN=[1998]
530 *%- .....
531 START ..... TZERO=[1999.0401], METOUT=[2], NSTORM=[0], NRUN=[1999]

```

```
532  *%------|-----|
533  START.....TZERO=[2000.0401], METOUT=[2], NSTORM=[0], NRUN=[2000]
534  *%------|-----|
535  START.....TZERO=[2002.0401], METOUT=[2], NSTORM=[0], NRUN=[2002]
536  *%------|-----|
537  START.....TZERO=[2003.0401], METOUT=[2], NSTORM=[0], NRUN=[2003]
538  *%------|-----|
539  START.....TZERO=[2004.0401], METOUT=[2], NSTORM=[0], NRUN=[2004]
540  *%------|-----|
541  START.....TZERO=[2006.0401], METOUT=[2], NSTORM=[0], NRUN=[2006]
542  *%------|-----|
543  START.....TZERO=[2007.0401], METOUT=[2], NSTORM=[0], NRUN=[2007]
544  *%------|-----|
545  FINISH
546
```

```
00001 =====
00002
00003 SSSSS W W M M H H Y Y M M 000 222 000 11 5555
00004 S W W M M H H Y Y M M 0 0 2 0 0 11 5
00005 SSSSS W W M M H H Y Y M M 0 0 2 0 0 11 5 Ver 5.000
00006 S W W M M H H Y Y M M 0 0 222 0 0 11 555 Feb 2015
00007 SSSSS W W M M H H Y Y M M 000 2 0 0 11 5
00008
00009 Stormwater Management Hydrologic Model 222 000 11 555
00010
00011
00012 ***** SWMHYD Ver 5.000 *****
00013 ***** A single event and continuous hydrologic simulation model *****
00014 ***** based on the principles of HYMO and its successors *****
00015 ***** OTWMO-83 and OTWMO-89 *****
00016 ***** Distributed by: J.F. Sabourin and Associates Inc. *****
00017 ***** Ottawa, Ontario: (613) 856-3884 *****
00018 ***** Gatineau, Quebec: (819) 243-6858 *****
00019 ***** E-Mail: jsa@jfsa.com *****
00020 *****
00021 *****
00022 *****
00023 *****
00024 ***** Licensed user: JFSaInc. *****
00025 ***** SERIAL#: 2549237 *****
00026 *****
00027 *****
00028 *****
00029 ***** PROGRAM ARRAY DIMENSIONS *****
00030 ***** Maximum value for ID numbers: 31 *****
00031 ***** Max. number of rainfall points: 105408 *****
00032 ***** Max. number of flow points: 105408 *****
00033 *****
00034 *****
00035 ***** S U M M A R Y O U T P U T *****
00036 *****
00037 ***** RUN DATE: 2024-07-31 TIME: 20:01:32 RUN COUNTER: 009908 *****
00038 *****
00039 ***** * Input file: C:\Temp\202407-THUND_V4.0-Post-Cont\THUND_V4.0-Post-Cont.dat *****
00040 ***** * Output file: C:\Temp\202407-THUND_V4.0-Post-Cont\THUND_V4.0-Post-Cont.out *****
00041 ***** * Summary file: C:\Temp\202407-THUND_V4.0-Post-Cont\THUND_V4.0-Post-Cont.sum *****
00042 ***** * User comments: *****
00043 *****
00044 ***** 1. *****
00045 ***** 2. *****
00046 ***** 3. *****
00047 *****
00048 *****
00049 *****
00050 *****
00051 ***** SWMHYD / INPUT DATA FILE *****
00052 *****
00053 ***** # Project Name: [THUNDER ROAD] Project Number: [2128] *****
00054 ***** # Date : 04-20-2021 *****
00055 ***** # Modeler : [J.B.] *****
00056 ***** # Company : JFSaInc. *****
00057 ***** # License # : 2549237 *****
00058 ***** # *****
00059 ***** [InterEventTime= 12.00] *****
00060 *****
00061 ***** ** END OF RUN : 1967 *****
00062 *****
00063 *****
00064 *****
00065 *****
00066 *****
00067 *****
00068 *****
00069 *****
00070 ***** RUN: COMMAND *****
00071 ***** START *****
00072 ***** [ZERO = .00 hrs on 19670801] *****
00073 ***** [NETOUT= 2 (Imperial, 2-metric output)] *****
00074 ***** [NSTORM= 0] *****
00075 ***** [NRUN = 1968] *****
00076 *****
00077 ***** SWMHYD / INPUT DATA FILE *****
00078 *****
00079 ***** # Project Name: [THUNDER ROAD] Project Number: [2128] *****
00080 ***** # Date : 04-20-2021 *****
00081 ***** # Modeler : [J.B.] *****
00082 ***** # Company : JFSaInc. *****
00083 ***** # License # : 2549237 *****
00084 ***** # *****
00085 ***** [InterEventTime= 12.00] *****
00086 *****
00087 ***** # Ottawa International Airport - April 1st to October 31st *****
00088 ***** R1967-C08002 *****
00089 ***** READ AES DATA *****
00090 ***** [Filename = YOM.1967.2007.123] *****
00091 ***** [Start date: 1967-01-01; End date: 1967-08-01] *****
00092 ***** [DTs 60 min; Length: 360 hrs; NetHrs= 356; PTO= 27.00] *****
00093 ***** Maximum average rainfall intensities over *****
00094 ***** 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs *****
00095 ***** 17.36 21.45 21.98 21.98 21.98 21.98 21.98 21.98 21.98 mm/hr *****
00096 ***** 17.36 22.90 22.90 22.90 22.90 22.90 22.90 22.90 22.90 date *****
00097 ***** 19670725 19670725 19670725 19670725 19670725 19670725 19670725 19670725 19670725 *****
00098 ***** Number of rainfall events per following interval time *****
00099 ***** 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs *****
00100 ***** 4 3 3 3 3 3 3 3 3 *****
00101 ***** Number of events with at least the following durations *****
00102 ***** 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs *****
00103 ***** 3 1 0 0 0 0 0 0 0 *****
00104 *****
00105 ***** R1967-C08003 *****
00106 ***** COMPUTE API *****
00107 ***** [APIIN= 50.00; APIID= 9900; APIID= 9950] *****
00108 ***** [APIIN= 50.00; APIID= 9950; APIID= 9950] *****
00109 ***** R1967-C08004 *****
00110 ***** # *****
00111 ***** [InterEventTime= 12.00] *****
00112 *****
00113 ***** R1967-C08005 *****
00114 ***** # *****
00115 ***** [InterEventTime= 12.00] *****
00116 *****
00117 ***** R1967-C08006 *****
00118 ***** # *****
00119 ***** [InterEventTime= 12.00] *****
00120 *****
00121 ***** R1967-C08007 *****
00122 ***** # *****
00123 ***** R1967-C08008 *****
00124 ***** # *****
00125 ***** [InterEventTime= 12.00] *****
00126 *****
00127 ***** R1967-C08009 *****
00128 ***** # *****
00129 ***** [InterEventTime= 12.00] *****
00130 *****
00131 ***** R1967-C08010 *****
00132 ***** # *****
00133 ***** R1967-C08011 *****
00134 ***** # *****
00135 ***** [InterEventTime= 12.00] *****
00136 *****
00137 ***** R1967-C08012 *****
00138 ***** # *****
00139 ***** [InterEventTime= 12.00] *****
00140 *****
00141 ***** R1967-C08013 *****
00142 ***** # *****
00143 ***** R1967-C08014 *****
00144 ***** # *****
00145 ***** [InterEventTime= 12.00] *****
00146 *****
00147 ***** R1967-C08015 *****
00148 ***** # *****
00149 ***** [InterEventTime= 12.00] *****
00150 *****
00151 ***** R1967-C08016 *****
00152 ***** # *****
00153 ***** [InterEventTime= 12.00] *****
00154 *****
00155 ***** R1967-C08017 *****
00156 ***** # *****
00157 ***** [InterEventTime= 12.00] *****
00158 *****
00159 ***** R1967-C08018 *****
00160 ***** # *****
00161 ***** [InterEventTime= 12.00] *****
00162 *****
00163 ***** R1967-C08019 *****
00164 ***** # *****
00165 ***** [InterEventTime= 12.00] *****
00166 *****
00167 ***** R1967-C08020 *****
00168 ***** # *****
00169 ***** [InterEventTime= 12.00] *****
00170 *****
00171 ***** R1967-C08021 *****
00172 ***** # *****
00173 ***** [InterEventTime= 12.00] *****
00174 *****
00175 ***** R1967-C08022 *****
00176 ***** # *****
00177 ***** [InterEventTime= 12.00] *****
00178 *****
00179 ***** R1967-C08023 *****
00180 ***** # *****
00181 ***** [InterEventTime= 12.00] *****
00182 *****
00183 ***** R1967-C08024 *****
00184 ***** # *****
00185 ***** [InterEventTime= 12.00] *****
00186 *****
00187 ***** R1967-C08025 *****
00188 ***** # *****
00189 ***** [InterEventTime= 12.00] *****
00190 *****
00191 ***** R1967-C08026 *****
00192 ***** # *****
00193 ***** [InterEventTime= 12.00] *****
00194 *****
00195 ***** R1967-C08027 *****
00196 ***** # *****
00197 ***** [InterEventTime= 12.00] *****
00198 *****
00199 ***** R1967-C08028 *****
00200 ***** # *****
00201 ***** [InterEventTime= 12.00] *****
00202 *****
00203 ***** R1967-C08029 *****
00204 ***** # *****
00205 ***** [InterEventTime= 12.00] *****
00206 *****
00207 ***** R1967-C08030 *****
00208 ***** # *****
00209 ***** [InterEventTime= 12.00] *****
00210 *****
00211 ***** R1967-C08031 *****
00212 ***** # *****
00213 ***** [InterEventTime= 12.00] *****
00214 *****
00215 ***** R1967-C08032 *****
00216 ***** # *****
00217 ***** [InterEventTime= 12.00] *****
00218 *****
00219 ***** R1967-C08033 *****
00220 ***** # *****
00221 ***** [InterEventTime= 12.00] *****
00222 *****
00223 ***** R1967-C08034 *****
00224 ***** # *****
00225 ***** [InterEventTime= 12.00] *****
00226 *****
00227 ***** R1967-C08035 *****
00228 ***** # *****
00229 ***** [InterEventTime= 12.00] *****
00230 *****
00231 ***** R1967-C08036 *****
00232 ***** # *****
00233 ***** [InterEventTime= 12.00] *****
00234 *****
00235 ***** R1967-C08037 *****
00236 ***** # *****
00237 ***** [InterEventTime= 12.00] *****
00238 *****
00239 ***** R1967-C08038 *****
00240 ***** # *****
00241 ***** [InterEventTime= 12.00] *****
00242 *****
00243 ***** R1967-C08039 *****
00244 ***** # *****
00245 ***** [InterEventTime= 12.00] *****
00246 *****
00247 ***** R1967-C08040 *****
00248 ***** # *****
00249 ***** [InterEventTime= 12.00] *****
00250 *****
00251 ***** R1967-C08041 *****
00252 ***** # *****
00253 ***** [InterEventTime= 12.00] *****
00254 *****
00255 ***** R1967-C08042 *****
00256 ***** # *****
00257 ***** [InterEventTime= 12.00] *****
00258 *****
00259 ***** R1967-C08043 *****
00260 ***** # *****
00261 ***** [InterEventTime= 12.00] *****
00262 *****
00263 ***** R1967-C08044 *****
00264 ***** # *****
00265 ***** [InterEventTime= 12.00] *****
00266 *****
00267 ***** R1967-C08045 *****
00268 ***** # *****
00269 ***** [InterEventTime= 12.00] *****
00270 *****
00271 ***** R1967-C08046 *****
00272 ***** # *****
00273 ***** [InterEventTime= 12.00] *****
00274 *****
00275 ***** R1967-C08047 *****
00276 ***** # *****
00277 ***** [InterEventTime= 12.00] *****
00278 *****
00279 ***** R1967-C08048 *****
00280 ***** # *****
00281 ***** [InterEventTime= 12.00] *****
00282 *****
00283 ***** R1967-C08049 *****
00284 ***** # *****
00285 ***** [InterEventTime= 12.00] *****
00286 *****
00287 ***** R1967-C08050 *****
00288 ***** # *****
00289 ***** [InterEventTime= 12.00] *****
00290 *****
00291 ***** R1967-C08051 *****
00292 ***** # *****
00293 ***** [InterEventTime= 12.00] *****
00294 *****
00295 ***** R1967-C08052 *****
00296 ***** # *****
00297 ***** [InterEventTime= 12.00] *****
00298 *****
00299 ***** R1967-C08053 *****
00300 ***** # *****
00301 ***** [InterEventTime= 12.00] *****
00302 *****
00303 ***** R1967-C08054 *****
00304 ***** # *****
00305 ***** [InterEventTime= 12.00] *****
00306 *****
00307 ***** R1967-C08055 *****
00308 ***** # *****
00309 ***** [InterEventTime= 12.00] *****
00310 *****
00311 ***** R1967-C08056 *****
00312 ***** # *****
00313 ***** [InterEventTime= 12.00] *****
00314 *****
00315 ***** R1967-C08057 *****
00316 ***** # *****
00317 ***** [InterEventTime= 12.00] *****
00318 *****
00319 ***** R1967-C08058 *****
00320 ***** # *****
00321 ***** [InterEventTime= 12.00] *****
00322 *****
00323 ***** R1967-C08059 *****
00324 ***** # *****
00325 ***** [InterEventTime= 12.00] *****
00326 *****
00327 ***** R1967-C08060 *****
00328 ***** # *****
00329 ***** [InterEventTime= 12.00] *****
00330 *****
00331 ***** R1967-C08061 *****
00332 ***** # *****
00333 ***** [InterEventTime= 12.00] *****
00334 *****
00335 ***** R1967-C08062 *****
00336 ***** # *****
00337 ***** [InterEventTime= 12.00] *****
00338 *****
00339 ***** R1967-C08063 *****
00340 ***** # *****
00341 ***** [InterEventTime= 12.00] *****
00342 *****
00343 ***** R1967-C08064 *****
00344 ***** # *****
00345 ***** [InterEventTime= 12.00] *****
00346 *****
00347 ***** R1967-C08065 *****
00348 ***** # *****
00349 ***** [InterEventTime= 12.00] *****
00350 *****
00351 ***** R1967-C08066 *****
00352 ***** # *****
00353 ***** [InterEventTime= 12.00] *****
00354 *****
00355 ***** R1967-C08067 *****
00356 ***** # *****
00357 ***** [InterEventTime= 12.00] *****
00358 *****
00359 ***** R1967-C08068 *****
00360 ***** # *****
00361 ***** [InterEventTime= 12.00] *****
00362 *****
00363 ***** R1967-C08069 *****
00364 ***** # *****
00365 ***** [InterEventTime= 12.00] *****
00366 *****
00367 ***** R1967-C08070 *****
00368 ***** # *****
00369 ***** [InterEventTime= 12.00] *****
00370 *****
00371 ***** R1967-C08071 *****
00372 ***** # *****
00373 ***** [InterEventTime= 12.00] *****
00374 *****
00375 ***** R1967-C08072 *****
00376 ***** # *****
00377 ***** [InterEventTime= 12.00] *****
00378 *****
00379 ***** R1967-C08073 *****
00380 ***** # *****
00381 ***** [InterEventTime= 12.00] *****
00382 *****
00383 ***** R1967-C08074 *****
00384 ***** # *****
00385 ***** [InterEventTime= 12.00] *****
00386 *****
00387 ***** R1967-C08075 *****
00388 ***** # *****
00389 ***** [InterEventTime= 12.00] *****
00390 *****
00391 ***** R1967-C08076 *****
00392 ***** # *****
00393 ***** [InterEventTime= 12.00] *****
00394 *****
00395 ***** R1967-C08077 *****
00396 ***** # *****
00397 ***** [InterEventTime= 12.00] *****
00398 *****
00399 ***** R1967-C08078 *****
00400 ***** # *****
00401 ***** [InterEventTime= 12.00] *****
00402 *****
00403 ***** R1967-C08079 *****
00404 ***** # *****
00405 ***** [InterEventTime= 12.00] *****
00406 *****
00407 ***** R1967-C08080 *****
00408 ***** # *****
00409 ***** [InterEventTime= 12.00] *****
00410 *****
00411 ***** R1967-C08081 *****
00412 ***** # *****
00413 ***** [InterEventTime= 12.00] *****
00414 *****
00415 ***** R1967-C08082 *****
00416 ***** # *****
00417 ***** [InterEventTime= 12.00] *****
00418 *****
00419 ***** R1967-C08083 *****
00420 ***** # *****
00421 ***** [InterEventTime= 12.00] *****
00422 *****
00423 ***** R1967-C08084 *****
00424 ***** # *****
00425 ***** [InterEventTime= 12.00] *****
00426 *****
00427 ***** R1967-C08085 *****
00428 ***** # *****
00429 ***** [InterEventTime= 12.00] *****
00430 *****
00431 ***** R1967-C08086 *****
00432 ***** # *****
00433 ***** [InterEventTime= 12.00] *****
00434 *****
00435 ***** R1967-C08087 *****
00436 ***** # *****
00437 ***** [InterEventTime= 12.00] *****
00438 *****
00439 ***** R1967-C08088 *****
00440 ***** # *****
00441 ***** [InterEventTime= 12.00] *****
00442 *****
00443 ***** R1967-C08089 *****
00444 ***** # *****
00445 ***** [InterEventTime= 12.00] *****
00446 *****
00447 ***** R1967-C08090 *****
00448 ***** # *****
00449 ***** [InterEventTime= 12.00] *****
00450 *****
00451 ***** R1967-C08091 *****
00452 ***** # *****
00453 ***** [InterEventTime= 12.00] *****
00454 *****
00455 ***** R1967-C08092 *****
00456 ***** # *****
00457 ***** [InterEventTime= 12.00] *****
00458 *****
00459 ***** R1967-C08093 *****
00460 ***** # *****
00461 ***** [InterEventTime= 12.00] *****
00462 *****
00463 ***** R1967-C08094 *****
00464 ***** # *****
00465 ***** [InterEventTime= 12.00] *****
00466 *****
00467 ***** R1967-C08095 *****
00468 ***** # *****
00469 ***** [InterEventTime= 12.00] *****
00470 *****
00471 ***** R1967-C08096 *****
00472 ***** # *****
00473 ***** [InterEventTime= 12.00] *****
00474 *****
00475 ***** R1967-C08097 *****
00476 ***** # *****
00477 ***** [InterEventTime= 12.00] *****
00478 *****
00479 ***** R1967-C08098 *****
00480 ***** # *****
00481 ***** [InterEventTime= 12.00] *****
00482 *****
00483 ***** R1967-C08099 *****
00484 ***** # *****
00485 ***** [InterEventTime= 12.00] *****
00486 *****
00487 ***** R1967-C08100 *****
00488 ***** # *****
00489 ***** [InterEventTime= 12.00] *****
00490 *****
00491 ***** R1967-C08101 *****
00492 ***** # *****
00493 ***** [InterEventTime= 12.00] *****
00494 *****
00495 ***** R1967-C08102 *****
00496 ***** # *****
00497 ***** [InterEventTime= 12.00] *****
00498 *****
00499 ***** R1967-C08103 *****
00500 ***** # *****
00501 ***** [InterEventTime= 12.00] *****
00502 *****
00503 ***** R1967-C08104 *****
00504 ***** # *****
00505 ***** [InterEventTime= 12.00] *****
00506 *****
00507 ***** R1967-C08105 *****
00508 ***** # *****
00509 ***** [InterEventTime= 12.00] *****
00510 *****
00511 ***** R1967-C08106 *****
00512 ***** # *****
00513 ***** [InterEventTime= 12.00] *****
00514 *****
00515 ***** R1967-C08107 *****
00516 ***** # *****
00517 ***** [InterEventTime= 12.00] *****
00518 *****
00519 ***** R1967-C08108 *****
00520 ***** # *****
00521 ***** [InterEventTime= 12.00] *****
00522 *****
00523 ***** R1967-C08109 *****
00524 ***** # *****
00525 ***** [InterEventTime= 12.00] *****
00526 *****
00527 ***** R1967-C08110 *****
00528 ***** # *****
00529 ***** [InterEventTime= 12.00] *****
00530 *****
00531 ***** R1967-C08111 *****
00532 ***** # *****
00533 ***** [InterEventTime= 12.00] *****
00534 *****
00535 ***** R1967-C08112 *****
00536 ***** # *****
00537 ***** [InterEventTime= 12.00] *****
00538 *****
00539 ***** R1967-C08113 *****
00540 ***** # *****
00541 ***** [InterEventTime= 12.00] *****
00542 *****
00543 ***** R1967-C08114 *****
00544 ***** # *****
00545 ***** [InterEventTime= 12.00] *****
00546 *****
00547 ***** R1967-C08115 *****
00548 ***** # *****
00549 ***** [InterEventTime= 12.00] *****
00550 *****
00551 ***** R1967-C08116 *****
00552 ***** # *****
00553 ***** [InterEventTime= 12.00] *****
00554 *****
00555 ***** R1967-C08117 *****
00556 ***** # *****
00557 ***** [InterEventTime= 12.00] *****
00558 *****
00559 ***** R1967-C08118 *****
00560 ***** # *****
00561 ***** [InterEventTime= 12.00] *****
00562 *****
00563 ***** R1967-C08119 *****
00564 ***** # *****
00565 ***** [InterEventTime= 12.00] *****
00566 *****
00567 ***** R1967-C08120 *****
00568 ***** # *****
00569 ***** [InterEventTime= 12.00] *****
00570 *****
00571 ***** R1967-C08121 *****
00572 ***** # *****
00573 ***** [InterEventTime= 12.00] *****
00574 *****
00575 ***** R1967-C08122 *****
00576 ***** # *****
00577 ***** [InterEventTime= 12.00] *****
00578 *****
00579 ***** R1967-C08123 *****
00580 ***** # *****
00581 ***** [InterEventTime= 12.00] *****
00582 *****
00583 ***** R1967-C08124 *****
00584 ***** # *****
00585 ***** [InterEventTime= 12.00] *****
00586 *****
00587 ***** R1967-C08125 *****
00588 ***** # *****
00589 ***** [InterEventTime= 12.00] *****
00590 *****
00591 ***** R1967-C08126 *****
00592 ***** # *****
00593 ***** [InterEventTime= 12.00] *****
00594 *****
00595 ***** R1967-C08127 *****
00596 ***** # *****
00597 ***** [InterEventTime= 12.00] *****
00598 *****
00599 ***** R1967-C08128 *****
00600 ***** # *****
00601 ***** [InterEventTime= 12.00] *****
00602 *****
00603 ***** R1967-C08129 *****
00604 ***** # *****
00605 ***** [InterEventTime= 12.00] *****
00606 *****
00607 ***** R1967-C08130 *****
00608 ***** # *****
00609 ***** [InterEventTime= 12.00] *****
00610 *****
00611 ***** R1967-C08131 *****
00612 ***** # *****
00613 ***** [InterEventTime= 12.00] *****
00614 *****
00615 ***** R1967-C08132 *****
00616 ***** # *****
00617 ***** [InterEventTime= 12.00] *****
00618 *****
00619 ***** R1967-C08133 *****
00620 ***** # *****
00621 ***** [InterEventTime= 12.00] *****
00622 *****
00623 ***** R1967-C08134 *****
00624 ***** # *****
00625 ***** [InterEventTime= 12.00] *****
00626 *****
00627 ***** R1967-C08135 *****
00628 ***** # *****
00629 ***** [InterEventTime= 12.00] *****
00630 *****
00631 ***** R1967-C08136 *****
00632 ***** # *****
00633 ***** [InterEventTime= 12.00] *****
00634 *****
00635 ***** R1967-C08137 *****
00636 ***** # *****
00637 ***** [InterEventTime= 12.00] *****
00638 *****
00639 ***** R1967-C08138 *****
00640 ***** # *****
00641 ***** [InterEventTime= 12.00] *****
00642 *****
00643 ***** R1967-C08139 *****
00644 ***** # *****
00645 ***** [InterEventTime= 12.00] *****
00646 *****
00647 ***** R1967-C08140 *****
00648 ***** # *****
00649 ***** [InterEventTime= 12.00] *****
00650 *****
00651 ***** R1967-C08141 *****
00652 ***** # *****
00653 ***** [InterEventTime= 12.00] *****
00654 *****
00655 ***** R1967-C08142 *****
00656 ***** # *****
00657 ***** [InterEventTime= 12.00] *****
00658 *****
00659 ***** R1967-C08143 *****
00660 ***** # *****
00661 ***** [InterEventTime= 12.00] *****
00662 *****
00663 ***** R1967-C08144 *****
00664 ***** # *****
00665 ***** [InterEventTime= 12.00] *****
00666 *****
00667 ***** R1967-C08145 *****
00668 ***** # *****
00669 ***** [InterEventTime= 12.00] *****
00670 *****
00671 ***** R1967-C08146 *****
00672 ***** # *****
00673 ***** [InterEventTime= 12.00] *****
00674 *****
00675 ***** R1967-C08147 *****
00676 ***** # *****
00677 ***** [InterEventTime= 12.00] *****
00678 *****
00679 ***** R1967-C08148 *****
00680 ***** # *****
00681 ***** [InterEventTime= 12.00] *****
00682 *****
00683 ***** R1967-C08149 *****
00684 ***** # *****
00685 ***** [InterEventTime= 12.00] *****
00686 *****
00687 ***** R1967-C08150 *****
00688 ***** # *****
00689 ***** [InterEventTime= 12.00] *****
00690 *****
00691 ***** R1967-C08151 *****
00692 ***** # *****
00693 ***** [InterEventTime= 12.00] *****
00694 *****
00695 ***** R1967-C08152 *****
00696 ***** # *****
00697 ***** [InterEventTime= 12.00] *****
00698 *****
00699 ***** R1967-C08153 *****
00700 ***** # *****
00701 ***** [InterEventTime= 12.00] *****
00702 *****
00703 ***** R1967-C08154 *****
00704 ***** # *****
00705 ***** [InterEventTime= 12.00] *****
00706 *****
00707 ***** R1967-C08155 *****
00708 ***** # *****
00709 ***** [InterEventTime= 12.00] *****
00710 *****
00711 ***** R1967-C08156 *****
00712 ***** # *****
00713 ***** [InterEventTime= 12.00] *****
00714 *****
00715 ***** R1967-C08157 *****
00716 ***** # *****
00717 ***** [InterEventTime= 12.00] *****
00718 *****
00719 ***** R1967-C08158 *****
00720 ***** # *****
00721 ***** [InterEventTime= 12.00] *****
00722 *****
00723 ***** R1967-C08159 *****
00724 ***** # *****
00725 ***** [InterEventTime= 12.00] *****
00726 *****
00727 ***** R1967-C08160 *****
00728 ***** # *****
00729 ***** [InterEventTime= 12.00] *****
00730 *****
00731 ***** R1967-C08161 *****
00732 ***** # *****
00733 ***** [InterEventTime= 12.00] *****
00734 *****
00735 ***** R1967-C08162 *****
00736 ***** # *****
00737 ***** [InterEventTime= 12.00] *****
00738 *****
00739 ***** R1967-C08163 *****
00740 ***** # *****
00741 ***** [InterEventTime= 12.00] *****
00742 *****
00743 ***** R1967-C08164 *****
00744 ***** # *****
00745 ***** [InterEventTime= 12.00] *****
00746 *****
00747 ***** R1967-C08165 *****
00748 ***** # *****
00749 ***** [InterEventTime= 12.00] *****
00750 *****
00751 ***** R1967-C08166 *****
00752 ***** # *****
00753 ***** [InterEventTime= 12.00] *****
00754 *****
00755 ***** R1967-C08167 *****
00756 ***** # *****
00757 ***** [InterEventTime= 12.00] *****
00758 *****
00759 ***** R1967-C08168 *****
00760 ***** # *****
00761 ***** [InterEventTime= 12.00] *****
00762 *****
00763 ***** R1967-C08169 *****
00764 ***** # *****
00765 ***** [InterEventTime= 12.00] *****
00766 *****
00767 ***** R1967-C08170 *****
00768 ***** # *****
00769 ***** [InterEventTime= 12.00] *****
00770 *****
00771 ***** R1967-C08171 *****
00772 ***** # *****
00773 ***** [InterEventTime= 12.00] *****
00774 *****
00775 ***** R1967-C08172 *****
00776 ***** # *****
00777 ***** [InterEventTime= 12.00] *****
00778 *****
00779 ***** R1967-C08173 *****
00780 ***** # *****
00781 ***** [InterEventTime= 12.00] *****
00782 *****
00783 ***** R1967-C08174 *****
00784 ***** # *****
00785 ***** [InterEventTime= 12.00] *****
00786 *****
00787 ***** R1967-C08175 *****
00788 ***** # *****
00789 ***** [InterEventTime= 12.00] *****
00790 *****
00791 ***** R1967-C08176 *****
00792 ***** # *****
00793 ***** [InterEventTime= 12.00] *****
00794 *****
00795 ***** R1967-C08177 *****
00796 ***** # *****
00797 ***** [InterEventTime= 12.00] *****
00798 *****
00799 ***** R1967-C08178 *****
00800 ***** # *****
00801 ***** [InterEventTime= 12.00] *****
00802 *****
00803 ***** R1967-C08179 *****
00804 ***** # *****
00805 ***** [InterEventTime= 12.00] *****
00806 *****
00807 ***** R1967-C08180 *****
00808 ***** # *****
00809 ***** [InterEventTime= 12.00] *****
00810 *****
00811 ***** R1967-C08181 *****
00812 ***** # *****
00813 ***** [InterEventTime= 12.00] *****
00814 *****
00815 ***** R1967-C08182 *****
00816 ***** # *****
00817 ***** [InterEventTime= 12.00] *****
00818 *****
00819 ***** R1967-C08183 *****
00820 ***** # *****
00821 ***** [InterEventTime= 12.00] *****
00822 *****
00823 ***** R1967-C08184 *****
00824 ***** # *****
00825 ***** [InterEventTime= 12.00] *****
00826 *****
00827 ***** R1967-C08185 *****
00828 ***** # *****
00829 ***** [InterEventTime= 12.00] *****
00830 *****
00831 ***** R1967-C08186 *****
00832 ***** # *****
00833 ***** [InterEventTime= 12.00] *****
00834 *****
00835 ***** R1967-C08187 *****
00836 ***** # *****
00837 ***** [InterEventTime= 12.00] *****
00838 *****
00839 ***** R1967-C08188 *****
00840 ***** # *****
00841 ***** [InterEventTime= 12.00] *****
00842 *****
00843 ***** R1967-C08189 *****
00844 ***** # *****
00845 ***** [InterEventTime= 12.00] *****
00846 *****
00847 ***** R1967-C08190 *****
00848 ***** # *****
00849 ***** [InterEventTime
```

```

000361 R1968 R00010 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000362 CONTINUOUS NASHDY 5.0 01:INT-2 3.61 .628 1968.0817, 5:45 199.59 .400 .000
000363 [Cm 47.4: N= 3.00: Tps .95]
000364 [InterEventTime: 12.00]
000365 [IareC= 6.00: SMIN=115.26: SMAX=768.40: Sk= .030]
000366 R1968 R00011 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000367 CONTINUOUS NASHDY 5.0 01:INT-2 3.61 .621 1968.0817, 6:15 200.11 .401 .000
000368 [Cm 58.4: N= 3.00: Tps 1.46]
000369 [IareC= 6.00: SMIN= 73.13: SMAX=487.55: Sk= .030]
000370 [InterEventTime: 12.00]
000371 R1968 R00012 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000372 CONTINUOUS STANDWY 5.0 01:Pond-1-In 10.00 .525 1968.0817, 5:00 208.97 .357 .000
000373 [XIMP: 64:TMP= 75]
000374 [Horton parameters: Fm= 76.20:Fcc= 13.20:DCAY4= 14: F=****]
000375 [Perivous area: Iapex= 4.67:SLP2=2.50:LGPs= 580:MMp= 250:SCP= .0]
000376 [Impervious area: IAlmp= 1.57:SLP1=2.50:LG1= 50:MM1= .013:SC1= .0]
000377 [IareC= 6.00: SMIN= 73.13: SMAX=487.55: Sk= .030]
000378 R1968 R00013 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000379 ROUTE RESERVOIR -> 5.0 02:Pond-1-In 1.21 .089 1968.0817, 5:50 208.97 n/a .000
000380 out <= 5.0 02:Pond-1-Out 1.21 .089 1968.0817, 5:50 208.95 n/a .000
000381 overflow <= 5.0 02:Pond-1-Over 0.00 .000 1968.0401, 0:00 .00 n/a .000
000382 (MstUsed= 2378.01: n3, TotDrVol= 60000+0: n3, N-DvT= 0, TotDrVrT= 0 hrs)
000383 R1968 R00014 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000384 ADD HYD + 5.0 02:Pond-1-Over 0.00 .000 1968.0401, 0:00 .00 n/a .000
000385 SUM = 5.0 02:Pond-1-Out 1.21 .089 1968.0817, 5:50 208.95 n/a .000
000386 R1968 R00015 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000387 ROUTE CHANNEL -> 5.0 02:Pond-1-Out 1.21 .089 1968.0817, 5:50 208.95 n/a .000
000388 [RT= 5.00] out<= 5.0 02:AC-R 1.21 .083 1968.0817, 5:55 208.95 n/a .000
000389 [L/S= 500 / 140 / 035]
000390 (Vmax= .075:Dmax= .030)
000391 R1968 R00016 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000392 CONTINUOUS NASHDY 5.0 01:INT-3 5.71 .648 1968.0817, 5:40 200.11 .401 .000
000393 [Cm 58.5: N= 3.00: Tps .89]
000394 [IareC= 6.00: SMIN= 73.13: SMAX=487.55: Sk= .030]
000395 [InterEventTime: 12.00]
000396 R1968 R00017 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000397 ADD HYD + 5.0 02:INT-1 4.39 .622 1968.0817, 6:25 199.60 n/a .000
000398 SUM = 5.0 02:INT-1 4.39 .622 1968.0817, 6:25 199.60 n/a .000
000399 R1968 R00018 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000400 CONTINUOUS NASHDY 5.0 01:INT-2 3.61 .621 1968.0817, 5:40 200.11 n/a .000
000401 SUM = 5.0 02:INT-3 5.71 .648 1968.0817, 5:40 200.11 n/a .000
000402 R1968 R00019 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000403 ADD HYD + 5.0 02:AC-R 1.21 .083 1968.0817, 5:55 208.95 n/a .000
000404 SUM = 5.0 01:INT-2 3.61 .622 1968.0817, 5:40 200.11 n/a .000
000405 R1968 R00020 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000406 ROUTE CHANNEL -> 5.0 02:INT-2 3.61 .622 1968.0817, 5:40 200.11 n/a .000
000407 [RT= 5.00] out<= 5.0 02:INT-2 3.61 .622 1968.0817, 5:40 200.11 n/a .000
000408 [L/S= 500 / 500 / 035]
000409 (Vmax= .402:Dmax= .140)
000410 R1968 R00021 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000411 CONTINUOUS NASHDY 5.0 01:AC 21.43 .047 1968.0817, 6:30 199.20 .399 .000
000412 [Cm 26.1: N= 3.00: Tps .60]
000413 [IareC= 6.00: SMIN=191.09: SMAX=****: Sk= .030]
000414 [InterEventTime: 12.00]
000415 R1968 R00022 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000416 CONTINUOUS STANDWY 5.0 01:Pond-1-In 10.00 .525 1968.0817, 5:00 178.28 .357 .000
000417 [XIMP: 64:TMP= 75]
000418 [Horton parameters: Fm= 76.20:Fcc= 13.20:DCAY4= 14: F=****]
000419 [Perivous area: Iapex= 4.67:SLP2=2.50:LGPs= 580:MMp= 250:SCP= .0]
000420 [Impervious area: IAlmp= 1.57:SLP1=2.50:LG1= 50:MM1= .013:SC1= .0]
000421 [IareC= 6.00: SMIN= 73.13: SMAX=487.55: Sk= .030]
000422 R1968 R00023 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000423 ROUTE RESERVOIR -> 5.0 02:Pond-1-In 10.00 .525 1968.0817, 5:00 178.28 n/a .000
000424 out <= 5.0 02:Pond-1-Out 10.00 .629 1968.0817, 7:55 178.28 n/a .000
000425 overflow <= 5.0 02:Pond-1-Over 0.00 .000 1968.0401, 0:00 n/a .000
000426 (MstUsed= 2154.00: n3, TotDrVol= 60000+0: n3, N-DvT= 0, TotDrVrT= 0 hrs)
000427 R1968 R00024 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000428 CONTINUOUS NASHDY 5.0 01:AC 9.14 .085 1968.0817, 5:55 200.74 .402 .000
000429 [Cm 4.1: N= 3.00: Tps 1.12]
000430 [IareC= 6.00: SMIN= 48.56: SMAX=323.73: Sk= .030]
000431 [InterEventTime: 12.00]
000432 R1968 R00025 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000433 ADD HYD + 5.0 02:INT-2 6.26 .207 1968.0817, 6:20 209.92 n/a .000
000434 SUM = 5.0 02:AC 9.14 .085 1968.0817, 6:30 199.20 n/a .000
000435 R1968 R00026 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000436 ADD HYD + 5.0 02:Pond-1-Over 0.00 .000 1968.0401, 0:00 n/a .000
000437 SUM = 5.0 01:INT-3 10.00 .525 1968.0817, 5:00 178.28 n/a .000
000438 R1968 R00027 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000439 ROUTE CHANNEL -> 5.0 02:INT-2 3.61 .622 1968.0817, 6:30 199.20 n/a .000
000440 [RT= 5.00] out<= 5.0 01:AC 21.43 .047 1968.0817, 6:30 199.20 n/a .000
000441 [L/S= 500 / 200 / 035]
000442 (Vmax= .403:Dmax= .294)
000443 R1968 R00028 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000444 CONTINUOUS NASHDY 5.0 01:SOUTH-1 20.21 .058 1968.0817, 6:10 199.16 .399 .000
000445 [Cm 35.5: N= 3.00: Tps 1.40]
000446 [IareC= 6.00: SMIN=191.09: SMAX=****: Sk= .030]
000447 [InterEventTime: 12.00]
000448 R1968 R00029 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000449 ADD HYD + 5.0 02:INT-3 5.71 .648 1968.0817, 6:30 199.20 n/a .000
000450 SUM = 5.0 02:SOUTH-1 20.21 .058 1968.0817, 6:10 199.16 n/a .000
000451 R1968 R00030 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000452 ROUTE CHANNEL -> 5.0 02:INT-2 3.61 .622 1968.0817, 6:30 199.20 n/a .000
000453 [RT= 5.00] out<= 5.0 01:AC 21.43 .047 1968.0817, 6:30 199.20 n/a .000
000454 [L/S= 482 / 410 / 035]
000455 (Vmax= .555:Dmax= .280)
000456 R1968 R00031 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000457 CONTINUOUS NASHDY 5.0 01:SOUTH-2 11.61 .041 1968.0817, 5:45 199.20 .399 .000
000458 [Cm 36.7: N= 3.00: Tps .90]
000459 [IareC= 6.00: SMIN=191.09: SMAX=****: Sk= .030]
000460 [InterEventTime: 12.00]
000461 R1968 R00032 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000462 ADD HYD + 5.0 02:INT-2 3.61 .622 1968.0817, 6:30 199.20 n/a .000
000463 SUM = 5.0 02:SOUTH-1 20.21 .058 1968.0817, 6:10 199.16 n/a .000
000464 R1968 R00033 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000465 ROUTE CHANNEL -> 5.0 02:INT-2 3.61 .622 1968.0817, 6:30 199.20 n/a .000
000466 [RT= 5.00] out<= 5.0 02:INT-2 3.61 .622 1968.0817, 6:30 199.20 n/a .000
000467 [L/S= 482 / 410 / 035]
000468 (Vmax= .555:Dmax= .280)
000469 R1968 R00034 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000470 CONTINUOUS NASHDY 5.0 01:SOUTH-3 7.98 .039 1968.0817, 5:40 199.41 .400 .000
000471 [Cm 42.6: N= 3.00: Tps .89]
000472 [IareC= 6.00: SMIN=141.94: SMAX=946.27: Sk= .030]
000473 [InterEventTime: 12.00]
000474 R1968 R00035 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000475 ADD HYD + 5.0 02:INT-3 7.98 .039 1968.0817, 5:40 199.41 n/a .000
000476 SUM = 5.0 02:INT-3 7.98 .039 1968.0817, 5:40 199.41 n/a .000
000477 R1968 R00036 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000478 ROUTE CHANNEL -> 5.0 02:INT-3 7.98 .039 1968.0817, 5:40 199.41 n/a .000
000479 [RT= 5.00] out<= 5.0 02:INT-3 7.98 .039 1968.0817, 5:40 199.41 n/a .000
000480 [L/S= 323 / 440 / 035]
000481 (Vmax= .555:Dmax= .280)
000482 R1968 R00037 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000483 CONTINUOUS NASHDY 5.0 01:SOUTH-4 14.99 .048 1968.0817, 6:00 199.28 .399 .000
000484 [Cm 26.1: N= 3.00: Tps .60]
000485 [IareC= 6.00: SMIN=191.09: SMAX=****: Sk= .030]
000486 [InterEventTime: 12.00]
000487 R1968 R00038 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000488 ADD HYD + 5.0 02:INT-4 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000489 SUM = 5.0 02:INT-4 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000490 R1968 R00039 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000491 ROUTE CHANNEL -> 5.0 02:INT-4 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000492 [RT= 5.00] out<= 5.0 02:INT-4 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000493 [L/S= 323 / 440 / 035]
000494 (Vmax= .555:Dmax= .280)
000495 R1968 R00040 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000496 CONTINUOUS NASHDY 5.0 01:SOUTH-5 14.99 .048 1968.0817, 6:00 199.28 .399 .000
000497 [Cm 26.1: N= 3.00: Tps .60]
000498 [IareC= 6.00: SMIN=191.09: SMAX=****: Sk= .030]
000499 [InterEventTime: 12.00]
000500 R1968 R00041 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000501 ADD HYD + 5.0 02:INT-5 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000502 SUM = 5.0 02:INT-5 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000503 R1968 R00042 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000504 ROUTE CHANNEL -> 5.0 02:INT-5 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000505 [RT= 5.00] out<= 5.0 02:INT-5 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000506 [L/S= 323 / 440 / 035]
000507 (Vmax= .555:Dmax= .280)
000508 R1968 R00043 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000509 CONTINUOUS NASHDY 5.0 01:SOUTH-6 14.99 .048 1968.0817, 6:00 199.28 .399 .000
000510 [Cm 26.1: N= 3.00: Tps .60]
000511 [IareC= 6.00: SMIN=191.09: SMAX=****: Sk= .030]
000512 [InterEventTime: 12.00]
000513 R1968 R00044 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000514 ADD HYD + 5.0 02:INT-6 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000515 SUM = 5.0 02:INT-6 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000516 R1968 R00045 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000517 ROUTE CHANNEL -> 5.0 02:INT-6 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000518 [RT= 5.00] out<= 5.0 02:INT-6 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000519 [L/S= 323 / 440 / 035]
000520 (Vmax= .555:Dmax= .280)
000521 R1968 R00046 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000522 CONTINUOUS NASHDY 5.0 01:SOUTH-7 14.99 .048 1968.0817, 6:00 199.28 .399 .000
000523 [Cm 26.1: N= 3.00: Tps .60]
000524 [IareC= 6.00: SMIN=191.09: SMAX=****: Sk= .030]
000525 [InterEventTime: 12.00]
000526 R1968 R00047 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000527 ADD HYD + 5.0 02:INT-7 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000528 SUM = 5.0 02:INT-7 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000529 R1968 R00048 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000530 ROUTE CHANNEL -> 5.0 02:INT-7 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000531 [RT= 5.00] out<= 5.0 02:INT-7 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000532 [L/S= 323 / 440 / 035]
000533 (Vmax= .555:Dmax= .280)
000534 R1968 R00049 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000535 CONTINUOUS NASHDY 5.0 01:SOUTH-8 14.99 .048 1968.0817, 6:00 199.28 .399 .000
000536 [Cm 26.1: N= 3.00: Tps .60]
000537 [IareC= 6.00: SMIN=191.09: SMAX=****: Sk= .030]
000538 [InterEventTime: 12.00]
000539 R1968 R00050 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000540 ADD HYD + 5.0 02:INT-8 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000541 SUM = 5.0 02:INT-8 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000542 R1968 R00051 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000543 ROUTE CHANNEL -> 5.0 02:INT-8 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000544 [RT= 5.00] out<= 5.0 02:INT-8 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000545 [L/S= 323 / 440 / 035]
000546 (Vmax= .555:Dmax= .280)
000547 R1968 R00052 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000548 CONTINUOUS NASHDY 5.0 01:SOUTH-9 14.99 .048 1968.0817, 6:00 199.28 .399 .000
000549 [Cm 26.1: N= 3.00: Tps .60]
000550 [IareC= 6.00: SMIN=191.09: SMAX=****: Sk= .030]
000551 [InterEventTime: 12.00]
000552 R1968 R00053 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000553 ADD HYD + 5.0 02:INT-9 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000554 SUM = 5.0 02:INT-9 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000555 R1968 R00054 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000556 ROUTE CHANNEL -> 5.0 02:INT-9 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000557 [RT= 5.00] out<= 5.0 02:INT-9 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000558 [L/S= 323 / 440 / 035]
000559 (Vmax= .555:Dmax= .280)
000560 R1968 R00055 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000561 CONTINUOUS NASHDY 5.0 01:SOUTH-10 14.99 .048 1968.0817, 6:00 199.28 .399 .000
000562 [Cm 26.1: N= 3.00: Tps .60]
000563 [IareC= 6.00: SMIN=191.09: SMAX=****: Sk= .030]
000564 [InterEventTime: 12.00]
000565 R1968 R00056 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000566 ADD HYD + 5.0 02:INT-10 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000567 SUM = 5.0 02:INT-10 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000568 R1968 R00057 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000569 ROUTE CHANNEL -> 5.0 02:INT-10 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000570 [RT= 5.00] out<= 5.0 02:INT-10 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000571 [L/S= 323 / 440 / 035]
000572 (Vmax= .555:Dmax= .280)
000573 R1968 R00058 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000574 CONTINUOUS NASHDY 5.0 01:SOUTH-11 14.99 .048 1968.0817, 6:00 199.28 .399 .000
000575 [Cm 26.1: N= 3.00: Tps .60]
000576 [IareC= 6.00: SMIN=191.09: SMAX=****: Sk= .030]
000577 [InterEventTime: 12.00]
000578 R1968 R00059 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000579 ADD HYD + 5.0 02:INT-11 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000580 SUM = 5.0 02:INT-11 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000581 R1968 R00060 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000582 ROUTE CHANNEL -> 5.0 02:INT-11 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000583 [RT= 5.00] out<= 5.0 02:INT-11 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000584 [L/S= 323 / 440 / 035]
000585 (Vmax= .555:Dmax= .280)
000586 R1968 R00061 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000587 CONTINUOUS NASHDY 5.0 01:SOUTH-12 14.99 .048 1968.0817, 6:00 199.28 .399 .000
000588 [Cm 26.1: N= 3.00: Tps .60]
000589 [IareC= 6.00: SMIN=191.09: SMAX=****: Sk= .030]
000590 [InterEventTime: 12.00]
000591 R1968 R00062 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000592 ADD HYD + 5.0 02:INT-12 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000593 SUM = 5.0 02:INT-12 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000594 R1968 R00063 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000595 ROUTE CHANNEL -> 5.0 02:INT-12 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000596 [RT= 5.00] out<= 5.0 02:INT-12 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000597 [L/S= 323 / 440 / 035]
000598 (Vmax= .555:Dmax= .280)
000599 R1968 R00064 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000600 CONTINUOUS NASHDY 5.0 01:SOUTH-13 14.99 .048 1968.0817, 6:00 199.28 .399 .000
000601 [Cm 26.1: N= 3.00: Tps .60]
000602 [IareC= 6.00: SMIN=191.09: SMAX=****: Sk= .030]
000603 [InterEventTime: 12.00]
000604 R1968 R00065 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000605 ADD HYD + 5.0 02:INT-13 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000606 SUM = 5.0 02:INT-13 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000607 R1968 R00066 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000608 ROUTE CHANNEL -> 5.0 02:INT-13 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000609 [RT= 5.00] out<= 5.0 02:INT-13 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000610 [L/S= 323 / 440 / 035]
000611 (Vmax= .555:Dmax= .280)
000612 R1968 R00067 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000613 CONTINUOUS NASHDY 5.0 01:SOUTH-14 14.99 .048 1968.0817, 6:00 199.28 .399 .000
000614 [Cm 26.1: N= 3.00: Tps .60]
000615 [IareC= 6.00: SMIN=191.09: SMAX=****: Sk= .030]
000616 [InterEventTime: 12.00]
000617 R1968 R00068 .....DTIn:ID:NYHD.....AREAh-A-PEAKcs-TpeakDate,h:mm.....Rvmm-R.C.....DfWcs
000618 ADD HYD + 5.0 02:INT-14 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000619 SUM = 5.0 02:INT-14 14.99 .048 1968.0817, 6:00 199.28 n/a .000
000620 R1
```

```
00721# SUM= 5.0 01:Total 163.63 .485 1969.0819 3.35 126.89 n/a .000
00722# *****
00723# *****
00724# *****
00725# # CONTINUOUS RAINFALL DATA
00726# *****
00727# *****
00728# # STORMS
00729# *****
00730# ** END OF RUN : 1969
00731# *****
00732# *****
00733# *****
00734# *****
00735# *****
00736# *****
00737# *****
00738# RUN:COMMAND#
00739# R1970-C0000#
00740# *****
00741# [TZERO = .00 hrs on 19700401]
00742# [NETOUT= 2 (Imperial, Zmetric output)]
00743# [NSTORM= 0]
00744# [NRUN = 1970]
00745# # SWHYMO / INPUT DATA FILE
00746# # Project Name: [THUNDER ROAD] Project Number: [2128]
00747# # Date : 04-20-2021
00748# # Modeler : [J.B]
00749# # Company : JFSaInc.
00750# # License #: 2549237
00751# *****
00752# # *****
00753# *****
00754# *****
00755# # Ottawa International Airport - April 1st to October 31st
00756# *****
00757# R1970-C0002#
00758# READ AES DATA
00759# [Filename = YOW_1967_2007_123
00760# [Start date: 1970.0401 End date: 1970.1031]
00761# [DT= 60 min; Length: 5126 hrs; Wehrs= 281; Dryhrs= 4855; PTOT= 477.08]
00762# Maximum average rainfall intensities over
00763# 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
00764# 35.36 18.39 12.29 6.10 3.63 1.81 1.21 1.46 .99 mm/hr
00765# 35.36 36.68 36.68 43.50 43.50 43.50 69.99 71.29 n/a
00766# 19700926 19700926 19700926 19700927 19700917 19700817 19700818 19700926 19700927 date
00767# Number of rainfall events per following interval time
00768# 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
00769# 118 99 86 69 69 44 33 22
00770# Number of events with at least the following durations
00771# 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
00772# 117 99 86 69 69 44 33 22
00773# R1970-C0003#
00774# COMPUTE AP#
00775# [APIN= 58.00; APIKdy= 9900; APIKdt= 9956]
00776# [APIMax= 76.00; APIAvg= 22.75; APIMin= 2.66]
00777# R1970-C0004#
00778# CONTINUOUS NASHYMO 5.0 01:NORTH-1 34.70 .064 1970.0927 1.00 150.39 .315 .000
00779# [CN= 36.1; N= 3.00; TP= 1.23]
00780# [IAREC= 6.00; SMIN=168.62; SMAX=*****; SK= .030]
00781# *****
00782# R1970-C0005#
00783# CONTINUOUS NASHYMO 5.0 01:NORTH-2 12.44 .083 1970.0926 22.10 151.68 .317 .000
00784# [CN= 58.1; N= 3.00; TP= 1.23]
00785# [IAREC= 6.00; SMIN= 61.81; SMAX=606.70; SK= .030]
00786# [InterEventTime= 12.00]
00787# R1970-C0006#
00788# CONTINUOUS NASHYMO 5.0 01:HWY-1 2.36 .040 1970.0926 22.00 157.23 .329 .000
00789# [CN= 36.1; N= 3.00; TP= 1.23]
00790# [IAREC= 6.00; SMIN= 25.21; SMAX=168.09; SK= .030]
00791# [InterEventTime= 12.00]
00792# R1970-C0007#
00793# ADD HYD 5.0 02:NORTH-1 34.70 .064 1970.0927 1.00 150.39 n/a .000
00794# + 5.0 02:NORTH-2 12.44 .083 1970.0926 22.10 151.68 n/a .000
00795# + 5.0 02:HWY-1 2.36 .040 1970.0926 22.00 157.23 n/a .000
00796# SUM= 5.0 01:1 49.51 .152 1970.0926 22.15 151.04 n/a .000
00797# R1970-C0008#
00798# ROUTE CHANNEL -> 5.0 02:1 out- 49.51 .152 1970.0926 22.15 151.04 n/a .000
00799# * [RDT= 5.00] out- 49.51 .148 1970.0926 22.39 151.04 n/a .000
00800# [L/S/n= 181.7 / .500 / .035]
00801# [Vmax= .441;Dmax= .197]
00802# R1970-C0009#
00803# CONTINUOUS NASHYMO 5.0 01:INT-1 4.39 .030 1970.0926 22.30 152.59 .319 .000
00804# [CN= 61.4; N= 3.00; TP= 1.60]
00805# [IAREC= 6.00; SMIN= 61.24; SMAX=448.24; SK= .030]
00806# [InterEventTime= 12.00]
00807# R1970-C0010#
00808# CONTINUOUS NASHYMO 5.0 01:INT-2 3.61 .026 1970.0926 21.45 151.11 .316 .000
00809# [CN= 47.4; N= 3.00; TP= .95]
00810# [IAREC= 6.00; SMIN=15.26; SMAX=768.40; SK= .030]
00811# [InterEventTime= 12.00]
00812# R1970-C0011#
00813# CONTINUOUS NASHYMO 5.0 01:ASA 3.84 .027 1970.0926 22.20 152.32 .319 .000
00814# [CN= 58.4; N= 3.00; TP= 1.45]
00815# [IAREC= 6.00; SMIN= 73.13; SMAX=487.55; SK= .030]
00816# [InterEventTime= 12.00]
00817# R1970-C0012#
00818# * CONTINUOUS STANDHYD 5.0 01:Pond3-In 1.21 .095 1970.0926 21.00 252.22 .528 .000
00819# [XHPM= 64;TWP= 74]
00820# [Norton parameters: For 76.20;F= 13.20;DCAY=4.14; F=*****]
00821# [Previous area: Iager= 4.67;SLPP=2.50;LGP= 100;PNP= 250;SCPI= 0]
00822# [Imperious area: IAlmp= 1.57;SLPI=1.50;LGI= 250;WMI= 013;SCI= 0]
00823# [IARECimp= 12.00; IARECdep= 12.00]
00824# R1970-C0013#
00825# ROUTE RESERVOIR -> 5.0 02:Pond3-In 1.21 .095 1970.0926 21.00 252.22 n/a .000
00826# out- 5.0 01:Pond3-Out 1.21 .083 1970.0926 22.05 252.29 n/a .000
00827# overFlow <= 5.0 02:Pond3-Over .00 000 1970.0401 0.00 .00 n/a .000
00828# (MxStoUsed= 3924E+01 m3; TotOfVol= .0000E+00 m3; N-OfV= 0; TotOfDurV= 0 hrs)
00829# R1970-C0014#
00830# ADD HYD 5.0 02:Pond3-Over .00 000 1970.0401 0.00 .00 n/a .000
00831# + 5.0 02:Pond3-Out 1.21 .083 1970.0926 22.05 252.29 n/a .000
00832# SUM= 5.0 01:1 49.51 .152 1970.0926 22.05 252.29 n/a .000
00833# R1970-C0015#
00834# ROUTE CHANNEL -> 5.0 02:Pond3-Out 1.21 .083 1970.0926 22.05 252.29 n/a .000
00835# [RDT= 5.00] out- 1.21 .083 1970.0927 5.50 252.29 n/a .000
00836# [L/S/n= 580 / .140 / .035]
00837# [Vmax= .075;Dmax= .100]
00838# R1970-C0016#
00839# CONTINUOUS NASHYMO 5.0 01:INT-3 5.71 .062 1970.0926 21.45 152.32 .319 .000
00840# [CN= 58.1; N= 3.00; TP= 1.45]
00841# [IAREC= 6.00; SMIN= 73.13; SMAX=487.55; SK= .030]
00842# [InterEventTime= 12.00]
00843# R1970-C0017#
00844# ADD HYD 5.0 02:1 49.51 .148 1970.0926 22.30 151.04 n/a .000
00845# + 5.0 02:INT-1 4.39 .030 1970.0926 22.30 152.59 n/a .000
00846# + 5.0 02:INT-2 3.61 .026 1970.0926 21.45 151.11 n/a .000
00847# + 5.0 02:INT-3 5.71 .062 1970.0926 21.45 152.32 n/a .000
00848# + 5.0 02:ASA 3.84 .027 1970.0926 22.20 152.32 n/a .000
00849# SUM= 5.0 01:1 49.51 .152 1970.0926 22.05 252.29 n/a .000
00850# R1970-C0018#
00851# ROUTE CHANNEL -> 5.0 02:1 49.51 .152 1970.0926 22.15 151.04 n/a .000
00852# overFlow <= 5.0 02:Pond3-Over .00 000 1970.0401 0.00 .00 n/a .000
00853# (MxStoUsed= 3924E+01 m3; TotOfVol= .0000E+00 m3; N-OfV= 0; TotOfDurV= 0 hrs)
00854# R1970-C0019#
00855# ADD HYD 5.0 02:1 49.51 .152 1970.0926 22.15 151.04 n/a .000
00856# SUM= 5.0 01:1 49.51 .152 1970.0926 22.15 151.04 n/a .000
00857# [L/S/n= 580 / .140 / .035]
00858# [Vmax= .512;Dmax= .160]
00859# R1970-C0020#
00860# CONTINUOUS NASHYMO 5.0 01:ASA 3.84 .027 1970.0926 21.45 152.32 .319 .000
00861# [CN= 36.1; N= 3.00; TP= 1.60]
00862# [IAREC= 6.00; SMIN=195.09; SMAX=*****; SK= .030]
00863# [InterEventTime= 12.00]
00864# R1970-C0021#
00865# CONTINUOUS NASHYMO 5.0 01:Pond3-In 1.21 .095 1970.0926 21.00 252.22 .528 .000
00866# [XHPM= 64;TWP= 74]
00867# [Norton parameters: For 76.20;F= 13.20;DCAY=4.14; F=*****]
00868# [Previous area: Iager= 4.67;SLPP=2.50;LGP= 100;PNP= 250;SCPI= 0]
00869# [Imperious area: IAlmp= 1.57;SLPI=1.50;LGI= 250;WMI= 013;SCI= 0]
00870# [IARECimp= 12.00; IARECdep= 12.00]
00871# R1970-C0022#
00872# ROUTE RESERVOIR -> 5.0 02:Pond3-In 1.21 .095 1970.0926 21.00 252.22 n/a .000
00873# out- 5.0 01:Pond3-Out 1.21 .083 1970.0926 22.05 252.29 n/a .000
00874# overFlow <= 5.0 02:Pond3-Over .00 000 1970.0401 0.00 .00 n/a .000
00875# (MxStoUsed= 3924E+01 m3; TotOfVol= .0000E+00 m3; N-OfV= 0; TotOfDurV= 0 hrs)
00876# R1970-C0023#
00877# CONTINUOUS NASHYMO 5.0 01:ASA 3.84 .027 1970.0926 21.45 152.32 .319 .000
00878# [CN= 58.1; N= 3.00; TP= 1.45]
00879# [IAREC= 6.00; SMIN= 48.56; SMAX=327.73; SK= .030]
00880# [InterEventTime= 12.00]
00881# R1970-C0024#
00882# ADD HYD 5.0 02:1 49.51 .148 1970.0926 22.30 151.04 n/a .000
00883# + 5.0 02:INT-1 4.39 .030 1970.0926 22.30 152.59 n/a .000
00884# + 5.0 02:INT-2 3.61 .026 1970.0926 21.45 151.11 n/a .000
00885# + 5.0 02:INT-3 5.71 .062 1970.0926 21.45 152.32 n/a .000
00886# + 5.0 02:ASA 3.84 .027 1970.0926 22.20 152.32 n/a .000
00887# SUM= 5.0 01:1 49.51 .152 1970.0926 22.05 252.29 n/a .000
00888# R1970-C0025#
00889# ROUTE CHANNEL -> 5.0 02:1 49.51 .152 1970.0926 22.15 151.04 n/a .000
00890# [RDT= 5.00] out- 1.21 .083 1970.0926 22.30 151.04 n/a .000
00891# [L/S/n= 396 / .305 / .035]
00892# [Vmax= .421;Dmax= .223]
00893# R1970-C0026#
00894# CONTINUOUS NASHYMO 5.0 01:SOUTH-1 20.21 .066 1970.0926 21.55 150.11 .314 .000
00895# [CN= 58.1; N= 3.00; TP= 1.40]
00896# [IAREC= 6.00; SMIN=204.20; SMAX=*****; SK= .030]
00897# [InterEventTime= 12.00]
00898# R1970-C0027#
00899# ADD HYD 5.0 02:1 49.51 .148 1970.0926 22.30 151.04 n/a .000
00900# + 5.0 02:INT-1 4.39 .030 1970.0926 22.30 152.59 n/a .000
00901# + 5.0 02:SOUTH-1 20.21 .066 1970.0926 21.55 150.11 n/a .000
00902# SUM= 5.0 01:1 49.51 .152 1970.0926 22.30 151.04 n/a .000
00903# R1970-C0028#
00904# ROUTE CHANNEL -> 5.0 02:1 49.51 .152 1970.0926 22.30 151.04 n/a .000
00905# [RDT= 5.00] out- 1.21 .083 1970.0926 22.30 151.04 n/a .000
00906# [L/S/n= 396 / .305 / .035]
00907# [Vmax= .421;Dmax= .223]
00908# R1970-C0029#
00909# CONTINUOUS NASHYMO 5.0 01:ASA 3.84 .027 1970.0926 21.45 152.32 .319 .000
00910# [CN= 58.1; N= 3.00; TP= 1.45]
00911# [IAREC= 6.00; SMIN= 73.13; SMAX=487.55; SK= .030]
00912# [InterEventTime= 12.00]
00913# R1970-C0030#
00914# ADD HYD 5.0 02:1 49.51 .148 1970.0926 22.30 151.04 n/a .000
00915# + 5.0 02:INT-1 4.39 .030 1970.0926 22.30 152.59 n/a .000
00916# + 5.0 02:ASA 3.84 .027 1970.0926 21.45 152.32 n/a .000
00917# SUM= 5.0 01:1 49.51 .152 1970.0926 22.05 252.29 n/a .000
00918# R1970-C0031#
00919# ROUTE CHANNEL -> 5.0 02:1 49.51 .152 1970.0926 22.15 151.04 n/a .000
00920# [RDT= 5.00] out- 1.21 .083 1970.0926 22.30 151.04 n/a .000
00921# [L/S/n= 396 / .305 / .035]
00922# [Vmax= .421;Dmax= .223]
00923# R1970-C0032#
00924# CONTINUOUS NASHYMO 5.0 01:ASA 3.84 .027 1970.0926 21.45 152.32 .319 .000
00925# [CN= 58.1; N= 3.00; TP= 1.45]
00926# [IAREC= 6.00; SMIN= 73.13; SMAX=487.55; SK= .030]
00927# [InterEventTime= 12.00]
00928# R1970-C0033#
00929# ADD HYD 5.0 02:1 49.51 .148 1970.0926 22.30 151.04 n/a .000
00930# + 5.0 02:INT-1 4.39 .030 1970.0926 22.30 152.59 n/a .000
00931# + 5.0 02:ASA 3.84 .027 1970.0926 21.45 152.32 n/a .000
00932# SUM= 5.0 01:1 49.51 .152 1970.0926 22.05 252.29 n/a .000
00933# R1970-C0034#
00934# ROUTE CHANNEL -> 5.0 02:1 49.51 .152 1970.0926 22.15 151.04 n/a .000
00935# [RDT= 5.00] out- 1.21 .083 1970.0926 22.30 151.04 n/a .000
00936# [L/S/n= 396 / .305 / .035]
00937# [Vmax= .421;Dmax= .223]
00938# R1970-C0035#
00939# CONTINUOUS NASHYMO 5.0 01:ASA 3.84 .027 1970.0926 21.45 152.32 .319 .000
00940# [CN= 58.1; N= 3.00; TP= 1.45]
00941# [IAREC= 6.00; SMIN= 73.13; SMAX=487.55; SK= .030]
00942# [InterEventTime= 12.00]
00943# R1970-C0036#
00944# ADD HYD 5.0 02:1 49.51 .148 1970.0926 22.30 151.04 n/a .000
00945# + 5.0 02:INT-1 4.39 .030 1970.0926 22.30 152.59 n/a .000
00946# + 5.0 02:ASA 3.84 .027 1970.0926 21.45 152.32 n/a .000
00947# SUM= 5.0 01:1 49.51 .152 1970.0926 22.05 252.29 n/a .000
00948# R1970-C0037#
00949# ROUTE CHANNEL -> 5.0 02:1 49.51 .152 1970.0926 22.15 151.04 n/a .000
00950# [RDT= 5.00] out- 1.21 .083 1970.0926 22.30 151.04 n/a .000
00951# [L/S/n= 396 / .305 / .035]
00952# [Vmax= .421;Dmax= .223]
00953# R1970-C0038#
00954# CONTINUOUS NASHYMO 5.0 01:ASA 3.84 .027 1970.0926 21.45 152.32 .319 .000
00955# [CN= 58.1; N= 3.00; TP= 1.45]
00956# [IAREC= 6.00; SMIN= 73.13; SMAX=487.55; SK= .030]
00957# [InterEventTime= 12.00]
00958# R1970-C0039#
00959# ADD HYD 5.0 02:1 49.51 .148 1970.0926 22.30 151.04 n/a .000
00960# + 5.0 02:INT-1 4.39 .030 1970.0926 22.30 152.59 n/a .000
00961# + 5.0 02:ASA 3.84 .027 1970.0926 21.45 152.32 n/a .000
00962# SUM= 5.0 01:1 49.51 .152 1970.0926 22.05 252.29 n/a .000
00963# R1970-C0040#
00964# ROUTE CHANNEL -> 5.0 02:1 49.51 .152 1970.0926 22.15 151.04 n/a .000
00965# [RDT= 5.00] out- 1.21 .083 1970.0926 22.30 151.04 n/a .000
00966# [L/S/n= 396 / .305 / .035]
00967# [Vmax= .421;Dmax= .223]
00968# R1970-C0041#
00969# CONTINUOUS NASHYMO 5.0 01:ASA 3.84 .027 1970.0926 21.45 152.32 .319 .000
00970# [CN= 58.1; N= 3.00; TP= 1.45]
00971# [IAREC= 6.00; SMIN= 73.13; SMAX=487.55; SK= .030]
00972# [InterEventTime= 12.00]
00973# R1970-C0042#
00974# ADD HYD 5.0 02:1 49.51 .148 1970.0926 22.30 151.04 n/a .000
00975# + 5.0 02:INT-1 4.39 .030 1970.0926 22.30 152.59 n/a .000
00976# + 5.0 02:ASA 3.84 .027 1970.0926 21.45 152.32 n/a .000
00977# SUM= 5.0 01:1 49.51 .152 1970.0926 22.05 252.29 n/a .000
00978# R1970-C0043#
00979# ROUTE CHANNEL -> 5.0 02:1 49.51 .152 1970.0926 22.15 151.04 n/a .000
00980# [RDT= 5.00] out- 1.21 .083 1970.0926 22.30 151.04 n/a .000
00981# [L/S/n= 396 / .305 / .035]
00982# [Vmax= .421;Dmax= .223]
00983# R1970-C0044#
00984# CONTINUOUS NASHYMO 5.0 01:ASA 3.84 .027 1970.0926 21.45 152.32 .319 .000
00985# [CN= 58.1; N= 3.00; TP= 1.45]
00986# [IAREC= 6.00; SMIN= 73.13; SMAX=487.55; SK= .030]
00987# [InterEventTime= 12.00]
00988# R1970-C0045#
00989# ADD HYD 5.0 02:1 49.51 .148 1970.0926 22.30 151.04 n/a .000
00990# + 5.0 02:INT-1 4.39 .030 1970.0926 22.30 152.59 n/a .000
00991# + 5.0 02:ASA 3.84 .027 1970.0926 21.45 152.32 n/a .000
00992# SUM= 5.0 01:1 49.51 .152 1970.0926 22.05 252.29 n/a .000
00993# R1970-C0046#
00994# ROUTE CHANNEL -> 5.0 02:1 49.51 .152 1970.0926 22.15 151.04 n/a .000
00995# [RDT= 5.00] out- 1.21 .083 1970.0926 22.30 151.04 n/a .000
00996# [L/S/n= 396 / .305 / .035]
00997# [Vmax= .421;Dmax= .223]
00998# R1970-C0047#
00999# CONTINUOUS NASHYMO 5.0 01:ASA 3.84 .027 1970.0926 21.45 152.32 .319 .000
01000# [CN= 58.1; N= 3.00; TP= 1.45]
01001# [IAREC= 6.00; SMIN= 73.13; SMAX=487.55; SK= .030]
01002# [InterEventTime= 12.00]
01003# R1970-C0048#
01004# ADD HYD 5.0 02:1 49.51 .148 1970.0926 22.30 151.04 n/a .000
01005# + 5.0 02:INT-1 4.39 .030 1970.0926 22.30 152.59 n/a .000
01006# + 5.0 02:ASA 3.84 .027 1970.0926 21.45 152.32 n/a .000
01007# SUM= 5.0 01:1 49.51 .152 1970.0926 22.05 252.29 n/a .000
01008# R1970-C0049#
01009# ROUTE CHANNEL -> 5.0 02:1 49.51 .152 1970.0926 22.15 151.04 n/a .000
01010# [RDT= 5.00] out- 1.21 .083 1970.0926 22.30 151.04 n/a .000
01011# [L/S/n= 396 / .305 / .035]
01012# [Vmax= .421;Dmax= .223]
01013# R1970-C0050#
01014# CONTINUOUS NASHYMO 5.0 01:ASA 3.84 .027 1970.0926 21.45 152.32 .319 .000
01015# [CN= 58.1; N= 3.00; TP= 1.45]
01016# [IAREC= 6.00; SMIN= 73.13; SMAX=487.55; SK= .030]
01017# [InterEventTime= 12.00]
01018# R1970-C0051#
01019# ADD HYD 5.0 02:1 49.51 .148 1970.0926 22.30 151.04 n/a .000
01020# + 5.0 02:INT-1 4.39 .030 1970.0926 22.30 152.59 n/a .000
01021# + 5.0 02:ASA 3.84 .027 1970.0926 21.45 152.32 n/a .000
01022# SUM= 5.0 01:1 49.51 .152 1970.0926 22.05 252.29 n/a .000
01023# R1970-C0052#
01024# ROUTE CHANNEL -> 5.0 02:1 49.51 .152 1970.0926 22.15 151.04 n/a .000
01025# [RDT= 5.00] out- 1.21 .083 1970.0926 22.30 151.04 n/a .000
01026# [L/S/n= 396 / .305 / .035]
01027# [Vmax= .421;Dmax= .223]
01028# R1970-C0053#
01029# CONTINUOUS NASHYMO 5.0 01:ASA 3.84 .027 1970.0926 21.45 152.32 .319 .000
01030# [CN= 58.1; N= 3.00; TP= 1.45]
01031# [IAREC= 6.00; SMIN= 73.13; SMAX=487.55; SK= .030]
01032# [InterEventTime= 12.00]
01033# R1970-C0054#
01034# ADD HYD 5.0 02:1 49.51 .148 1970.0926 22.30 151.04 n/a .000
01035# + 5.0 02:INT-1 4.39 .030 1970.0926 22.30 152.59 n/a .000
01036# + 5.0 02:ASA 3.84 .027 1970.0926 21.45 152.32 n/a .000
01037# SUM= 5.0 01:1 49.51 .152 1970.0926 22.05 252.29 n/a .000
01038# R1970-C0055#
01039# ROUTE CHANNEL -> 5.0 02:1 49.51 .152 1970.0926 22.15 151.04 n/a .000
01040# [RDT= 5.00] out- 1.21 .083 1970.0926 22.30 151.04 n/a .000
01041# [L/S/n= 396 / .305 / .035]
01042# [Vmax= .421;Dmax= .223]
01043# R1970-C0056#
01044# CONTINUOUS NASHYMO 5.0 01:ASA 3.84 .027 1970.0926 21.45 152.32 .319 .000
01045# [CN= 58.1; N= 3.00; TP= 1.45]
01046# [IAREC= 6.00; SMIN= 73.13; SMAX=487.55; SK= .030]
01047# [InterEventTime= 12.00]
01048# R1970-C0057#
01049# ADD HYD 5.0 02:1 49.51 .148 1970.0926 22.30 151.04 n/a .
```

Page 3

```
014411 142 69 46 16 4 0 0 0 0
014420 R1973-C08020-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
014430 COMPUTE API
014440 [APInfx= 50.00; APIdkx= 9000; APIdmx= .9950]
014450 [APTime= 78.27; APTime= 5.73; APTime= 5.73]
014460 AREHA-1973-C08004-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
014470 CONTINUOUS NASHDY 5.0 01:INT-1 34.70 .064 1973.0808.20:50 263.06 .425 .000
014480 [Cm 38.1; N= 3.00; Tm 4.12]
014490 [IAREC 6.00; SMIN=168.62; SMAX=*****; SK= .030]
014500 [InterEventTime= 12.00]
014510 AREHA-1973-C08005-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
014520 CONTINUOUS NASHDY 5.0 01:INT-2 12.44 .099 1973.0808.21:00 264.24 .427 .000
014530 [Cm 53.0; N= 3.00; Tm 1.29]
014540 [IAREC 6.00; SMIN= 95.01; SMAX=606.70; SK= .030]
014550 [InterEventTime= 12.00]
014560 AREHA-1973-C08006-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
014570 CONTINUOUS NASHDY 5.0 01:INT-1 2.36 .047 1973.0808.20:55 269.03 .435 .000
014580 [Cm 81.7; N= 3.00; Tm 1.21]
014590 [IAREC 6.00; SMIN= 25.21; SMAX=168.09; SK= .030]
014600 [InterEventTime= 12.00]
014610 AREHA-1973-C08007-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
014620 ADD HYD + 5.0 02:NORTH-2 12.44 .099 1973.0808.21:00 264.24 n/a .000
014630 + 5.0 02:NORTH-2 12.44 .099 1973.0808.20:55 269.03 n/a .000
014640 + 5.0 02:INT-1 1.21 .061 1973.0808.21:00 263.72 n/a .000
014650 SUM= 5.0 01:INT-2 12.44 .099 1973.0808.21:00 263.72 n/a .000
014660 AREHA-1973-C08008-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
014670 ROUTE CHANNEL -> 5.0 02:Pond3-Out 49.51 .179 1973.0808.21:10 263.64 n/a .000
014680 [RDT 5.00] out-> 5.0 01:R1 49.51 .175 1973.0808.21:25 263.64 n/a .000
014690 [L/S= 500 / 140 / .035]
014700 [Vmax= .464; Dmax= .342]
014710 AREHA-1973-C08009-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
014720 CONTINUOUS NASHDY 5.0 01:INT-1 4.39 .036 1973.0808.21:25 265.06 .429 .000
014730 [Cm 60.4; N= 3.00; Tm 1.66]
014740 [IAREC 6.00; SMIN= 87.24; SMAX=440.24; SK= .030]
014750 [InterEventTime= 12.00]
014760 AREHA-1973-C08010-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
014770 CONTINUOUS NASHDY 5.0 01:INT-2 3.61 .031 1973.0808.20:40 263.72 .426 .000
014780 [Cm 47.4; N= 3.00; Tm .95]
014790 [IAREC 6.00; SMIN=115.26; SMAX=768.40; SK= .030]
014800 [InterEventTime= 12.00]
014810 AREHA-1973-C08011-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
014820 CONTINUOUS NASHDY 5.0 01:INT-1 5.84 .033 1973.0808.21:10 264.81 .428 .000
014830 [Cm 58.4; N= 3.00; Tm 1.46]
014840 [IAREC 6.00; SMIN= 73.13; SMAX=487.55; SK= .030]
014850 [InterEventTime= 12.00]
014860 AREHA-1973-C08012-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
014870 CONTINUOUS NASHDY 5.0 01:INT-1 5.71 .073 1973.0808.21:00 264.81 .428 .000
014880 [XMPM= 64; TmP= 75]
014890 [Norton parameters: Fm= 76.20; Fc= 13.20; DCAY=14.14; F=****]
014900 [Pervious area: Iaper= 4.67; SLPP=2.00; LGR= 100; MPM= .250; SC= .0]
014910 [Imperious area: Ialmp= 1.57; SLPI=2.50; LGI= 250; MNI= .013; SCl= .0]
014920 [IAREC= 12.00; IAREC= 12.00]
014930 AREHA-1973-C08013-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
014940 ROUTE RESERVOIR -> 5.0 02:Pond3-In 1.21 .077 1973.0811.17:00 339.82 n/a .000
014950 out-> 5.0 02:INT-1 1.21 .061 1973.0808.21:00 339.80 n/a .000
014960 overflow=> 5.0 03:Pond3-Over 0.00 .000 1973.0801.0:00 .00 n/a .000
014970 [MStoused=.2460E+00; M3, TotDvVol=.0000E+00; M3, N-DvFr= 0. TotDvOrFr= 0 hrs]
014980 AREHA-1973-C08014-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
014990 ADD HYD + 5.0 02:Pond3-Over 0.00 .000 1973.0801.0:00 .00 n/a .000
015000 + 5.0 02:Pond3-Over 1.21 .061 1973.0808.21:00 339.80 n/a .000
015010 SUM= 5.0 01:Pond3-Dilt 1.21 .063 1973.0808.21:00 339.80 n/a .000
015020 AREHA-1973-C08015-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
015030 ROUTE CHANNEL -> 5.0 02:Pond3-Out 1.21 .063 1973.0808.21:00 339.80 n/a .000
015040 [RDT 5.00] out-> 5.0 01:ASC-R 1.21 .063 1973.0809.4:00 339.80 n/a .000
015050 [L/S= 500 / 140 / .035]
015060 [Vmax= .076; Dmax= .039]
015070 AREHA-1973-C08016-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
015080 CONTINUOUS NASHDY 5.0 01:INT-3 5.71 .073 1973.0808.20:40 264.81 .428 .000
015090 [Cm 58.4; N= 3.00; Tm .89]
015100 [IAREC 6.00; SMIN= 73.13; SMAX=487.55; SK= .030]
015110 [InterEventTime= 12.00]
015120 AREHA-1973-C08017-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
015130 ADD HYD + 5.0 02:INT-1 49.51 .175 1973.0808.21:25 263.64 n/a .000
015140 + 5.0 02:INT-1 4.39 .036 1973.0808.21:25 265.06 n/a .000
015150 + 5.0 02:INT-1 1.21 .061 1973.0808.20:40 263.72 n/a .000
015160 + 5.0 02:INT-3 5.71 .073 1973.0808.20:40 264.81 n/a .000
015170 + 5.0 02:INT-3 1.21 .063 1973.0808.21:00 264.81 n/a .000
015180 + 5.0 02:ASC-R 1.21 .063 1973.0809.4:00 339.80 n/a .000
015190 SUM= 5.0 01:INT 68.26 .327 1973.0808.21:05 265.23 n/a .000
015200 AREHA-1973-C08018-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
015210 ROUTE CHANNEL -> 5.0 02:INT 68.26 .327 1973.0808.21:05 265.23 n/a .000
015220 [RDT 5.00] out-> 5.0 01:R2 68.26 .324 1973.0808.21:15 265.23 n/a .000
015230 [L/S= 359 / 560 / .035]
015240 [Vmax= .542; Dmax= .174]
015250 AREHA-1973-C08019-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
015260 CONTINUOUS NASHDY 5.0 01:ASC 21.43 .076 1973.0808.21:25 269.49 .425 .000
015270 [Cm 36.1; N= 3.00; Tm .96]
015280 [IAREC 6.00; SMIN=191.09; SMAX=*****; SK= .030]
015290 [InterEventTime= 12.00]
015300 AREHA-1973-C08020-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
015310 CONTINUOUS STANDHY 5.0 01:Pond1-In 10.00 .455 1973.0808.20:00 236.24 .382 .000
015320 [XMPM= 64; TmP= 75]
015330 [Norton parameters: Fm= 76.20; Fc= 13.20; DCAY=14.14; F=****]
015340 [Pervious area: Iaper= 4.67; SLPP=2.00; LGR= 100; MPM= .250; SC= .0]
015350 [Imperious area: Ialmp= 1.57; SLPI=2.50; LGI= 250; MNI= .013; SCl= .0]
015360 [IAREC= 12.00; IAREC= 12.00]
015370 AREHA-1973-C08021-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
015380 ROUTE RESERVOIR -> 5.0 02:Pond1-In 10.00 .455 1973.0808.20:00 236.24 n/a .000
015390 out-> 5.0 01:Pond1-Out 10.00 .455 1973.0808.21:15 236.24 n/a .000
015400 overflow=> 5.0 03:Pond1-Over 0.00 .000 1973.0801.0:00 .00 n/a .000
015410 [MStoused=.2460E+00; M3, TotDvVol=.0000E+00; M3, N-DvFr= 0. TotDvOrFr= 0 hrs]
015420 AREHA-1973-C08022-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
015430 CONTINUOUS NASHDY 5.0 01:ASC 9.14 .130 1973.0808.20:50 266.14 .430 .000
015440 [Cm 48.4; N= 3.00; Tm 1.12]
015450 [IAREC 6.00; SMIN= 48.56; SMAX=323.73; SK= .030]
015460 [InterEventTime= 12.00]
015470 AREHA-1973-C08023-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
015480 ADD HYD + 5.0 02:ASC 68.26 .324 1973.0808.21:15 265.23 n/a .000
015490 + 5.0 02:ASC 21.43 .076 1973.0808.21:25 269.49 n/a .000
015500 + 5.0 02:ASC 9.14 .130 1973.0808.20:50 266.14 n/a .000
015510 + 5.0 02:Pond1-Over 0.00 .000 1973.0801.0:00 .00 n/a .000
015520 + 5.0 02:Pond1-Out 10.00 .455 1973.0808.21:15 236.24 n/a .000
015530 SUM= 5.0 01:ASC 108.84 .550 1973.0808.21:10 262.17 n/a .000
015540 AREHA-1973-C08024-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
015550 ROUTE CHANNEL -> 5.0 01:ASC 108.84 .550 1973.0808.21:10 262.17 n/a .000
015560 [RDT 5.00] out-> 5.0 01:R3 108.84 .535 1973.0808.21:25 262.17 n/a .000
015570 [L/S= 500 / 201 / .035]
015580 [Vmax= .433; Dmax= .342]
015590 AREHA-1973-C08025-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
015600 CONTINUOUS NASHDY 5.0 01:ASC 20.21 .078 1973.0808.21:10 262.80 .425 .000
015610 [Cm 35.5; N= 3.00; Tm 1.49]
015620 [IAREC 6.00; SMIN=191.09; SMAX=*****; SK= .030]
015630 [InterEventTime= 12.00]
015640 AREHA-1973-C08026-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
015650 ADD HYD + 5.0 02:INT-3 108.84 .535 1973.0808.21:25 262.17 n/a .000
015660 + 5.0 02:INT-3 20.21 .078 1973.0808.21:10 262.80 n/a .000
015670 + 5.0 02:INT-3 11.61 .064 1973.0808.20:45 262.80 n/a .000
015680 SUM= 5.0 01:ASC 140.66 .644 1973.0808.21:30 262.32 n/a .000
015690 AREHA-1973-C08027-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
015700 ROUTE CHANNEL -> 5.0 01:ASC 140.66 .644 1973.0808.21:30 262.32 n/a .000
015710 [L/S= 482 / 410 / .035]
015720 [Vmax= .581; Dmax= .297]
015730 AREHA-1973-C08028-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
015740 CONTINUOUS NASHDY 5.0 01:ASC 11.61 .064 1973.0808.20:45 262.80 .425 .000
015750 [Cm 36.7; N= 3.00; Tm .96]
015760 [IAREC 6.00; SMIN=191.09; SMAX=*****; SK= .030]
015770 [InterEventTime= 12.00]
015780 AREHA-1973-C08029-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
015790 ADD HYD + 5.0 02:ASC 129.05 .600 1973.0808.21:35 262.32 n/a .000
015800 + 5.0 02:ASC 11.61 .064 1973.0808.20:45 262.80 n/a .000
015810 SUM= 5.0 01:ASC 140.66 .644 1973.0808.21:30 262.32 n/a .000
015820 AREHA-1973-C08030-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
015830 ROUTE CHANNEL -> 5.0 02:ASC 140.66 .644 1973.0808.21:30 262.32 n/a .000
015840 [RDT 5.00] out-> 5.0 01:R3 140.66 .644 1973.0808.21:35 262.32 n/a .000
015850 [L/S= 381 / 500 / .035]
015860 [Vmax= .554; Dmax= .299]
015870 AREHA-1973-C08031-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
015880 CONTINUOUS NASHDY 5.0 01:ASC 7.98 .060 1973.0808.20:40 263.34 .426 .000
015890 [Cm 42.6; N= 3.00; Tm .89]
015900 [IAREC 6.00; SMIN=141.42; SMAX=946.27; SK= .030]
015910 [InterEventTime= 12.00]
015920 AREHA-1973-C08032-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
015930 ADD HYD + 5.0 02:ASC 140.66 .644 1973.0808.21:35 262.32 n/a .000
015940 + 5.0 02:ASC 7.98 .060 1973.0808.20:40 263.34 n/a .000
015950 SUM= 5.0 01:ASC 148.64 .678 1973.0808.21:30 262.32 n/a .000
015960 AREHA-1973-C08033-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
015970 SAVE HYD + 148.64 .678 1973.0808.21:30 262.32 n/a .000
015980 name 136-1973
015990 remark 136-Bearbrook Tributary Upstream of Thunder Road Crossing
016000 AREHA-1973-C08034-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
016010 ROUTE CHANNEL -> 5.0 02:ASC 148.64 .678 1973.0808.21:30 262.32 n/a .000
016020 [RDT 5.00] out-> 5.0 01:R4 148.64 .673 1973.0808.21:40 262.32 n/a .000
016030 [L/S= 323 / 440 / .035]
016040 [Vmax= .609; Dmax= .245]
016050 AREHA-1973-C08035-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
016060 CONTINUOUS NASHDY 5.0 01:ASC 14.99 .076 1973.0808.21:00 263.06 .425 .000
016070 [Cm 26.7; N= 3.00; Tm .96]
016080 [IAREC 6.00; SMIN=168.62; SMAX=*****; SK= .030]
016090 [InterEventTime= 12.00]
016100 AREHA-1973-C08036-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
016110 ADD HYD + 5.0 02:ASC 148.64 .673 1973.0808.21:40 262.32 n/a .000
016120 + 5.0 02:ASC 14.99 .076 1973.0808.21:00 263.06 n/a .000
016130 SUM= 5.0 01:Total 163.63 .737 1973.0808.21:35 262.44 n/a .000
016140 #####
016150 #####
016160 #####
016170 # CONTINUOUS RAINFALL DATA
016180 #####
016190 #
016200 # STORMS
016210 #####
016220 ** END OF RUN : 1973
016230 #####
016240 #####
016250 #####
016260 #####
016270 #####
016280 #####
016290 #####
016300 #####
016310 #####
016320 #####
016330 #####
016340 [TZERO = .00 hrs on 19740401]
016350 [NETOUT= 2 (Imperial, 2-metric output)]
016360 [NETDMM= 0]
016370 [NRUN = 1974]
016380 #####
016390 # SWHYD / INPUT DATA FILE
016400 #####
016410 # Project Name: [THUNDER ROAD] Project Number: [2128]
016420 # Date : 04-28-2021
016430 # Modeler : [J.F. Sabourin]
016440 # Company : JFSaInc.
016450 # License # : 2549237
016460 #####
016470 #####
016480 # Ottawa International Airport - April 1st to October 31st
016490 R1974-C08001-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
016500 [start date: 1974.0401; end date: 1974.1031]
016510 [File name = YOM.1987.2007.123]
016520 [Start date: 1974.0401; end date: 1974.1031]
016530 [Dts: 60 min; Length: 4416 hrs; WEThrs= 281; Dryhrs= 4135; PTOFr= 332.10]
016540 [Maximum average rainfall intensities over]
016550 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
016560 20.60 15.40 10.37 5.10 2.50 1.35 .90 .68 .45 mm/hr
016570 40.60 30.40 21.10 10.60 5.10 2.50 1.35 .90 .68 mm/hr
016580 19740718 19740719 19740719 19740719 19740719 19740719 19740719 19740721 19740721
016590 Number of rainfall events per following interval time
016600 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
016610 117 .95 .82 .68 .56 .43 .31 .26 .16
016620 Number of events with at least the following durations
016630 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
016640 116 .59 .28 .9 2 .8 0 0 0
016650 R1974-C08003-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
016660 COMPUTE API
016670 [APInfx= 50.00; APIdkx= 9000; APIdmx= .9950]
016680 [APTime= 78.27; APTime= 5.73; APTime= 5.73]
016690 AREHA-1973-C08004-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
016700 CONTINUOUS NASHDY 5.0 01:NORTH-1 12.44 .034 1974.0719.1:50 74.99 .226 .000
016710 [Cm 38.1; N= 3.00; Tm 4.12]
016720 [IAREC 6.00; SMIN=168.62; SMAX=*****; SK= .030]
016730 [InterEventTime= 12.00]
016740 AREHA-1973-C08005-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
016750 CONTINUOUS NASHDY 5.0 01:NORTH-2 12.44 .034 1974.0719.1:50 74.99 .226 .000
016760 [Cm 53.0; N= 3.00; Tm 1.29]
016770 [IAREC 6.00; SMIN= 95.01; SMAX=606.70; SK= .030]
016780 [InterEventTime= 12.00]
016790 AREHA-1973-C08006-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
016800 CONTINUOUS NASHDY 5.0 01:INT-1 49.51 .065 1974.0719.1:50 74.81 n/a .000
016810 [Cm 81.7; N= 3.00; Tm 1.21]
016820 [IAREC 6.00; SMIN=168.62; SMAX=*****; SK= .030]
016830 [InterEventTime= 12.00]
016840 AREHA-1973-C08007-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
016850 ADD HYD + 5.0 02:NORTH-2 12.44 .034 1974.0719.1:50 74.99 n/a .000
016860 + 5.0 02:NORTH-2 12.44 .034 1974.0719.1:50 74.99 n/a .000
016870 + 5.0 02:INT-1 1.21 .061 1974.0719.1:50 74.81 n/a .000
016880 SUM= 5.0 01:INT-1 49.51 .065 1974.0719.1:50 74.81 n/a .000
016890 AREHA-1973-C08008-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
016900 ROUTE CHANNEL -> 5.0 02:INT-1 49.51 .065 1974.0719.1:50 74.81 n/a .000
016910 [RDT 5.00] out-> 5.0 01:R1 49.51 .062 1974.0719.2:10 74.81 n/a .000
016920 [L/S= 500 / 140 / .035]
016930 [Vmax= .344; Dmax= .139]
016940 AREHA-1973-C08009-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
016950 CONTINUOUS NASHDY 5.0 01:INT-1 5.84 .033 1974.0719.1:50 75.27 .227 .000
016960 [Cm 58.4; N= 3.00; Tm 1.66]
016970 [IAREC 6.00; SMIN= 73.13; SMAX=440.24; SK= .030]
016980 [InterEventTime= 12.00]
016990 AREHA-1973-C08010-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
017000 CONTINUOUS NASHDY 5.0 01:INT-2 3.61 .031 1974.0719.1:50 75.27 .227 .000
017010 [Cm 47.4; N= 3.00; Tm .95]
017020 [IAREC 6.00; SMIN=115.26; SMAX=768.40; SK= .030]
017030 [InterEventTime= 12.00]
017040 AREHA-1973-C08011-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
017050 CONTINUOUS NASHDY 5.0 01:INT-2 3.61 .031 1974.0719.1:50 75.27 .227 .000
017060 [Cm 58.4; N= 3.00; Tm 1.46]
017070 [IAREC 6.00; SMIN= 73.13; SMAX=487.55; SK= .030]
017080 [InterEventTime= 12.00]
017090 AREHA-1973-C08012-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
017100 CONTINUOUS NASHDY 5.0 01:Pond1-In 10.00 .455 1974.0719.0:00 156.72 .472 .000
017110 [XMPM= 64; TmP= 75]
017120 [Norton parameters: Fm= 76.20; Fc= 13.20; DCAY=14.14; F=****]
017130 [Pervious area: Iaper= 4.67; SLPP=2.00; LGR= 100; MPM= .250; SC= .0]
017140 [Imperious area: Ialmp= 1.57; SLPI=2.50; LGI= 250; MNI= .013; SCl= .0]
017150 [IAREC= 12.00; IAREC= 12.00]
017160 AREHA-1973-C08013-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
017170 ROUTE RESERVOIR -> 5.0 02:Pond1-In 10.00 .455 1974.0719.0:00 156.72 n/a .000
017180 out-> 5.0 01:Pond1-Out 10.00 .455 1974.0719.1:05 156.71 n/a .000
017190 overflow=> 5.0 03:Pond1-Over 0.00 .000 1974.0801.0:00 .00 n/a .000
017200 [MStoused=.2460E+00; M3, TotDvVol=.0000E+00; M3, N-DvFr= 0. TotDvOrFr= 0 hrs]
017210 AREHA-1973-C08014-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
017220 ADD HYD + 5.0 02:Pond1-Over 0.00 .000 1974.0801.0:00 .00 n/a .000
017230 + 5.0 02:Pond1-Dilt 1.21 .063 1974.0719.1:05 156.71 n/a .000
017240 SUM= 5.0 01:Pond1-Dilt 1.21 .063 1974.0719.1:05 156.71 n/a .000
017250 AREHA-1973-C08015-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
017260 ROUTE CHANNEL -> 5.0 02:Pond1-Out 1.21 .063 1974.0719.1:05 156.71 n/a .000
017270 [RDT 5.00] out-> 5.0 01:ASC-R 1.21 .063 1974.0719.1:05 156.71 n/a .000
017280 [L/S= 500 / 140 / .035]
017290 [Vmax= .076; Dmax= .039]
017300 AREHA-1973-C08016-----DRAIN-ID:NYHD-----AREHA-QPEAKns-TpeakDate:hh:mm-----Rvmm-R.C-----Dfncns
017310 CONTINUOUS NASHDY 5.0 01:INT-3 5.71 .073 1974.0719.1:30 75.19 .226 .000
017320 [Cm 58.4; N= 3.00; Tm .89]
017330 [IAREC 6.00; SMIN= 73.13; SMAX=487.55; SK= .030]
017
```

---

**Page 5**

---

**Page 6**

```
02521- RUN=COMMAND
02522- R1978:008001-----
02523- # SMWYHO / INPUT DATA FILE
02524- # Project Name: [THUNDER ROAD] Project Number: [2128]
02525- # Date : 04-28-2021
02526- # Modeler : [J.F.]
02527- # Company : JFSaInc.
02528- # License # : 2549237
02529- # *****
02530- # *****
02531- # *****
02532- # *****
02533- # *****
02534- # *****
02535- # *****
02536- # *****
02537- # *****
02538- # *****
02539- # *****
02540- # *****
02541- # *****
02542- # *****
02543- # *****
02544- # *****
02545- # *****
02546- # *****
02547- # *****
02548- # *****
02549- # *****
02550- # *****
02551- # *****
02552- # *****
02553- # *****
02554- # *****
02555- # *****
02556- # *****
02557- # *****
02558- # *****
02559- # *****
02560- # *****
02561- # *****
02562- # *****
02563- # *****
02564- # *****
02565- # *****
02566- # *****
02567- # *****
02568- # *****
02569- # *****
02570- # *****
02571- # *****
02572- # *****
02573- # *****
02574- # *****
02575- # *****
02576- # *****
02577- # *****
02578- # *****
02579- # *****
02580- # *****
02581- # *****
02582- # *****
02583- # *****
02584- # *****
02585- # *****
02586- # *****
02587- # *****
02588- # *****
02589- # *****
02590- # *****
02591- # *****
02592- # *****
02593- # *****
02594- # *****
02595- # *****
02596- # *****
02597- # *****
02598- # *****
02599- # *****
02600- # *****
02601- # *****
02602- # *****
02603- # *****
02604- # *****
02605- # *****
02606- # *****
02607- # *****
02608- # *****
02609- # *****
02610- # *****
02611- # *****
02612- # *****
02613- # *****
02614- # *****
02615- # *****
02616- # *****
02617- # *****
02618- # *****
02619- # *****
02620- # *****
02621- # *****
02622- # *****
02623- # *****
02624- # *****
02625- # *****
02626- # *****
02627- # *****
02628- # *****
02629- # *****
02630- # *****
02631- # *****
02632- # *****
02633- # *****
02634- # *****
02635- # *****
02636- # *****
02637- # *****
02638- # *****
02639- # *****
02640- # *****
02641- # *****
02642- # *****
02643- # *****
02644- # *****
02645- # *****
02646- # *****
02647- # *****
02648- # *****
02649- # *****
02650- # *****
02651- # *****
02652- # *****
02653- # *****
02654- # *****
02655- # *****
02656- # *****
02657- # *****
02658- # *****
02659- # *****
02660- # *****
02661- # *****
02662- # *****
02663- # *****
02664- # *****
02665- # *****
02666- # *****
02667- # *****
02668- # *****
02669- # *****
02670- # *****
02671- # *****
02672- # *****
02673- # *****
02674- # *****
02675- # *****
02676- # *****
02677- # *****
02678- # *****
02679- # *****
02680- # *****
02681- # *****
02682- # *****
02683- # *****
02684- # *****
02685- # *****
02686- # *****
02687- # *****
02688- # *****
02689- # *****
02690- # *****
02691- # *****
02692- # *****
02693- # *****
02694- # *****
02695- # *****
02696- # *****
02697- # *****
02698- # *****
02699- # *****
02700- # *****
02701- # *****
02702- # *****
02703- # *****
02704- # *****
02705- # *****
02706- # *****
02707- # *****
02708- # *****
02709- # *****
02710- # *****
02711- # *****
02712- # *****
02713- # *****
02714- # *****
02715- # *****
02716- # *****
02717- # *****
02718- # *****
02719- # *****
02720- # *****
02721- # *****
02722- # *****
02723- # *****
02724- # *****
02725- # *****
02726- # *****
02727- # *****
02728- # *****
02729- # *****
02730- # *****
02731- # *****
02732- # *****
02733- # *****
02734- # *****
02735- # *****
02736- # *****
02737- # *****
02738- # *****
02739- # *****
02740- # *****
02741- # *****
02742- # *****
02743- # *****
02744- # *****
02745- # *****
02746- # *****
02747- # *****
02748- # *****
02749- # *****
02750- # *****
02751- # *****
02752- # *****
02753- # *****
02754- # *****
02755- # *****
02756- # *****
02757- # *****
02758- # *****
02759- # *****
02760- # *****
02761- # *****
02762- # *****
02763- # *****
02764- # *****
02765- # *****
02766- # *****
02767- # *****
02768- # *****
02769- # *****
02770- # *****
02771- # *****
02772- # *****
02773- # *****
02774- # *****
02775- # *****
02776- # *****
02777- # *****
02778- # *****
02779- # *****
02780- # *****
02781- # *****
02782- # *****
02783- # *****
02784- # *****
02785- # *****
02786- # *****
02787- # *****
02788- # *****
02789- # *****
02790- # *****
02791- # *****
02792- # *****
02793- # *****
02794- # *****
02795- # *****
02796- # *****
02797- # *****
02798- # *****
02799- # *****
02800- # *****
02801- # *****
02802- # *****
02803- # *****
02804- # *****
02805- # *****
02806- # *****
02807- # *****
02808- # *****
02809- # *****
02810- # *****
02811- # *****
02812- # *****
02813- # *****
02814- # *****
02815- # *****
02816- # *****
02817- # *****
02818- # *****
02819- # *****
02820- # *****
02821- # *****
02822- # *****
02823- # *****
02824- # *****
02825- # *****
02826- # *****
02827- # *****
02828- # *****
02829- # *****
02830- # *****
02831- # *****
02832- # *****
02833- # *****
02834- # *****
02835- # *****
02836- # *****
02837- # *****
02838- # *****
02839- # *****
02840- # *****
02841- # *****
02842- # *****
02843- # *****
02844- # *****
02845- # *****
02846- # *****
02847- # *****
02848- # *****
02849- # *****
02850- # *****
02851- # *****
02852- # *****
02853- # *****
02854- # *****
02855- # *****
02856- # *****
02857- # *****
02858- # *****
02859- # *****
02860- # *****
02861- # *****
02862- # *****
02863- # *****
02864- # *****
02865- # *****
02866- # *****
02867- # *****
02868- # *****
02869- # *****
02870- # *****
02871- # *****
02872- # *****
02873- # *****
02874- # *****
02875- # *****
02876- # *****
02877- # *****
02878- # *****
02879- # *****
02880- # *****
02881- # *****
02882- # *****
02883- # *****
02884- # *****
02885- # *****
02886- # *****
02887- # *****
02888- # *****
02889- # *****
02890- # *****
02891- # *****
02892- # *****
02893- # *****
02894- # *****
02895- # *****
02896- # *****
02897- # *****
02898- # *****
02899- # *****
02900- # *****
02901- # *****
02902- # *****
02903- # *****
02904- # *****
02905- # *****
02906- # *****
02907- # *****
02908- # *****
02909- # *****
02910- # *****
02911- # *****
02912- # *****
02913- # *****
02914- # *****
02915- # *****
02916- # *****
02917- # *****
02918- # *****
02919- # *****
02920- # *****
02921- # *****
02922- # *****
02923- # *****
02924- # *****
02925- # *****
02926- # *****
02927- # *****
02928- # *****
02929- # *****
02930- # *****
02931- # *****
02932- # *****
02933- # *****
02934- # *****
02935- # *****
02936- # *****
02937- # *****
02938- # *****
02939- # *****
02940- # *****
02941- # *****
02942- # *****
02943- # *****
02944- # *****
02945- # *****
02946- # *****
02947- # *****
02948- # *****
02949- # *****
02950- # *****
02951- # *****
02952- # *****
02953- # *****
02954- # *****
02955- # *****
02956- # *****
02957- # *****
02958- # *****
02959- # *****
02960- # *****
02961- # *****
02962- # *****
02963- # *****
02964- # *****
02965- # *****
02966- # *****
02967- # *****
02968- # *****
02969- # *****
02970- # *****
02971- # *****
02972- # *****
02973- # *****
02974- # *****
02975- # *****
02976- # *****
02977- # *****
02978- # *****
02979- # *****
02980- # *****
02981- # *****
02982- # *****
02983- # *****
02984- # *****
02985- # *****
02986- # *****
02987- # *****
02988- # *****
02989- # *****
02990- # *****
02991- # *****
02992- # *****
02993- # *****
02994- # *****
02995- # *****
02996- # *****
02997- # *****
02998- # *****
02999- # *****
03000- # *****
```

```
02881> CONTINUOUS NASHYD 5.0 01:2A2 9.14 .143 1979.0616:14:55 327.96 .489 .000
02882> [C# 36.7: N= 3.00: Tpe= 96]
02883> [IAREC= 6.00: SMIN=48.56: SMAX=323.73: SK= .030]
02884> [InterEventTime= 12.00]
02885> R1979-C08024-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
02886> ADD HYD + 5.0 02:R2 68.26 .351 1979.0616:15:15 326.92 n/a .000
02887> + 5.0 02:A1A 21.43 .081 1979.0616:15:25 325.24 n/a .000
02888> + 5.0 02:R2 9.14 .143 1979.0616:14:55 327.96 n/a .000
02889> + 5.0 02:Pond1-Over 0.00 .000 1979.0401:0:00 .000 n/a .000
02890> + 5.0 02:Pond1-Out 10.00 .031 1979.0616:15:10 321.20 n/a .000
02891> SUM= 5.0 01:23 108.84 .596 1979.0616:15:10 321.20 n/a .000
02892> R1979-C08024-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
02893> ROUTE CHANNEL -> 5.0 02:R3 108.84 .596 1979.0616:15:10 321.20 n/a .000
02894> [ROT= 5.00] out<- 5.0 01:23 108.84 .577 1979.0616:15:25 321.20 n/a .000
02895> [L/S/= 396 / 440 / 035]
02896> (Vmax=.440:Dmax=.251)
02897> R1979-C08025-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
02898> CONTINUOUS NASHYD 5.0 01:SOUTH-1 20.21 .085 1979.0616:15:10 325.16 .485 .000
02899> [C# 35.5: N= 3.00: Tpe= 1.40]
02900> [IAREC= 6.00: SMIN=204.20: SMAX=*****: SK= .030]
02901> [InterEventTime= 12.00]
02902> R1979-C08025-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
02903> ADD HYD + 5.0 02:R3 108.84 .577 1979.0616:15:25 321.20 n/a .000
02904> + 5.0 02:SOUTH-1 20.21 .085 1979.0616:15:10 325.16 n/a .000
02905> SUM= 5.0 01:24 129.05 .660 1979.0616:15:25 321.82 n/a .000
02906> R1979-C08027-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
02907> ROUTE CHANNEL -> 5.0 02:14 129.05 .660 1979.0616:15:25 321.82 n/a .000
02908> [ROT= 5.00] out<- 5.0 01:R4 129.05 .646 1979.0616:15:35 321.82 n/a .000
02909> [L/S/= 482 / 410 / 035]
02910> (Vmax=.580:Dmax=.346)
02911> R1979-C08028-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
02912> CONTINUOUS NASHYD 5.0 01:SOUTH-3 11.61 .072 1979.0616:14:45 325.24 .485 .000
02913> [C# 36.7: N= 3.00: Tpe= 96]
02914> [IAREC= 6.00: SMIN=192.09: SMAX=*****: SK= .030]
02915> [InterEventTime= 12.00]
02916> R1979-C08029-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
02917> ADD HYD + 5.0 01:25 129.05 .646 1979.0616:15:35 321.82 n/a .000
02918> + 5.0 02:SOUTH-2 11.61 .072 1979.0616:14:45 325.24 n/a .000
02919> SUM= 5.0 01:25 140.66 .692 1979.0616:15:30 322.10 n/a .000
02920> R1979-C08030-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
02921> ROUTE CHANNEL -> 5.0 02:25 140.66 .692 1979.0616:15:30 322.10 n/a .000
02922> [ROT= 5.00] out<- 5.0 01:R5 140.66 .691 1979.0616:15:35 322.10 n/a .000
02923> [L/S/= 181 / 500 / 035]
02924> (Vmax=.566:Dmax=.308)
02925> R1979-C08031-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
02926> CONTINUOUS NASHYD 5.0 01:SOUTH-3 7.98 .068 1979.0616:14:40 325.64 .486 .000
02927> [C# 42.6: N= 3.00: Tpe= .80]
02928> [IAREC= 6.00: SMIN=141.94: SMAX=946.27: SK= .030]
02929> [InterEventTime= 12.00]
02930> R1979-C08031-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
02931> ADD HYD + 5.0 02:R5 140.66 .691 1979.0616:15:35 322.10 n/a .000
02932> + 5.0 02:SOUTH-3 7.98 .068 1979.0616:14:40 325.64 n/a .000
02933> SUM= 5.0 01:36 148.64 .729 1979.0616:15:30 322.29 n/a .000
02934> R1979-C08033-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
02935> SAVE HYD + 5.0 01:36 148.64 .729 1979.0616:15:30 322.29 n/a .000
02936> fname :J6:1979
02937> remark:J6-Bearhook Tributary Upstream of Thunder Road Crossing
02938> R1979-C08034-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
02939> ROUTE CHANNEL -> 5.0 02:26 148.64 .729 1979.0616:15:30 322.29 n/a .000
02940> [ROT= 5.00] out<- 5.0 01:R6 148.64 .729 1979.0616:15:40 322.29 n/a .000
02941> [L/S/= 323 / 440 / 035]
02942> (Vmax=.580:Dmax=.346)
02943> R1979-C08035-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
02944> CONTINUOUS NASHYD 5.0 01:SOUTH-4 14.99 .083 1979.0616:15:00 325.40 .486 .000
02945> [C# 35.5: N= 3.00: Tpe= 1.40]
02946> [IAREC= 6.00: SMIN=168.62: SMAX=*****: SK= .030]
02947> [InterEventTime= 12.00]
02948> R1979-C08035-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
02949> ADD HYD + 5.0 02:R6 148.64 .723 1979.0616:15:40 322.29 n/a .000
02950> + 5.0 02:SOUTH-4 14.99 .083 1979.0616:15:00 325.40 n/a .000
02951> SUM= 5.0 01:Total 163.63 .792 1979.0616:15:30 322.58 n/a .000
02952> [L/S/= 482 / 410 / 035]
02953> (Vmax=.580:Dmax=.346)
02954> R1979-C08036-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
02955> CONTINUOUS RAINFALL DATA
02956> [File name: Y06_1967_2007_123 ]
02957> [Start date: 1980.0401:End date: 1980.1031]
02958> [DT= 60.min: Length: 5126.hrs: Wehrs= 365: Dryhrs= 4771: PTD= 541.00]
02959> Maximum average rainfall intensities over
02960> 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
02961> 15.00 9.20 6.50 4.72 3.57 1.97 1.35 1.04 .86 mm/hr
02962> 15.00 9.20 6.50 4.72 3.57 1.97 1.35 1.04 .86 mm
02963> 19800809 19800830 19801025 19801025 19801026 19801026 19801027 19801027 date
02964> Number of rainfall events per following interval time
02965> 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
02966> 134 112 98 82 69 45 43 38 23
02967> Number of events with at least the following durations
02968> 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
02969> 132 77 48 30 24 19 16 13 9
02970> R1980-C08037-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
02971> COMPUTE API
02972> [API=150.00: APIKdy= 9900: APIKdt= 9956]
02973> [API=68.72: APIAvg= 24.91: APImin= 3.26]
02974> R1980-C08038-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
02975> CONTINUOUS NASHYD 5.0 01:NORTH-1 34.70 .043 1980.1026: 3.05 162.22 .300 .000
02976> [C# 31.1: N= 3.00: Tpe= 1.21]
02977> [IAREC= 6.00: SMIN=168.62: SMAX=*****: SK= .030]
02978> [InterEventTime= 12.00]
02979> R1980-C08038-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
02980> CONTINUOUS NASHYD 5.0 01:NORTH-2 12.44 .038 1980.1026: 0.35 164.97 .305 .000
02981> [C# 53.0: N= 3.00: Tpe= 1.29]
02982> [IAREC= 6.00: SMIN= 71.01: SMAX=606.70: SK= .030]
02983> [InterEventTime= 12.00]
02984> R1980-C08038-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
02985> CONTINUOUS NASHYD 5.0 01:HW-1 2.36 .017 1980.0901:21:20 175.78 .325 .000
02986> [C# 17.1: N= 3.00: Tpe= 1.21]
02987> [IAREC= 6.00: SMIN= 25.21: SMAX=168.09: SK= .030]
02988> [InterEventTime= 12.00]
02989> R1980-C08037-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
02990> ADD HYD + 5.0 02:NORTH-1 34.70 .043 1980.1026: 3.05 162.22 .300 .000
02991> + 5.0 02:NORTH-2 12.44 .038 1980.1026: 0.35 164.97 .305 .000
02992> + 5.0 02:NORTH-1 2.36 .017 1980.0901:21:20 175.78 n/a .000
02993> SUM= 5.0 01:21 49.51 .099 1980.1026: 0.45 163.56 n/a .000
02994> R1980-C08038-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
02995> ROUTE CHANNEL -> 5.0 02:21 49.51 .099 1980.1026: 0.45 163.56 n/a .000
02996> [ROT= 5.00] out<- 5.0 01:R1 49.51 .088 1980.1026: 1.00 163.56 n/a .000
02997> [L/S/= 478 / 440 / 035]
02998> (Vmax=.380:Dmax=.251)
02999> R1980-C08039-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
03000> CONTINUOUS NASHYD 5.0 01:INT-1 4.39 .015 1980.1026: 0.50 166.85 .308 .000
03001> [C# 64.1: N= 3.00: Tpe= 1.60]
03002> [IAREC= 6.00: SMIN= 51.26: SMAX=448.24: SK= .030]
03003> [InterEventTime= 12.00]
03004> R1980-C08039-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
03005> CONTINUOUS NASHYD 5.0 01:INT-2 3.61 .010 1980.1026: 0.25 163.76 .303 .000
03006> [C# 47.4: N= 3.00: Tpe= .95]
03007> [IAREC= 6.00: SMIN=15.26: SMAX=768.40: SK= .030]
03008> [InterEventTime= 12.00]
03009> R1980-C08039-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
03010> CONTINUOUS NASHYD 5.0 01:A3A 3.84 .013 1980.1026: 0.45 166.29 .307 .000
03011> [C# 54.1: N= 3.00: Tpe= 1.40]
03012> [IAREC= 6.00: SMIN= 73.13: SMAX=487.55: SK= .030]
03013> [InterEventTime= 12.00]
03014> R1980-C08039-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
03015> CONTINUOUS STANDHYD 5.0 01:Pond3-In 1.21 .032 1980.0808:13:40 278.62 .515 .000
03016> [XMP= 64.TIME= .75]
03017> [Port parameters: Fw= 76.20:Fc= 13.20:DCAY=14: F=****]
03018> [Previous area: Iaper= 4.67:SLPP=2.50:LP= 100: MPM=.250:SCP= .0]
03019> [Imperious area: Iaper= 1.57:SLPP=1.50:LP= 50: MPM=.013:SCI= .0]
03020> [IAREC= 12.00: IAREC= 12.00]
03021> R1980-C08039-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
03022> ROUTE RESERVOIR -> 5.0 02:Pond3-Out 1.21 .030 1980.1026: 0.25 163.76 .303 .000
03023> out<- 5.0 01:Pond3-Out 1.21 .030 1980.1026: 0.25 163.76 .303 .000
03024> overFlow= 5.0 02:Pond3-Out 1.21 .030 1980.1026: 0.25 163.76 .303 .000
03025> (MxStoP= 26380.01: MxTotVol= 0.0000: Mx= 0.0: N=0:V= 0: TotDrOfV= 0.0: N=0:V= 0.0)
03026> R1980-C0804-----DttmIn:ID-NVHD-----AREAH-APEAKS-TpeaDate_hh:mm-----Rvmm-R.C-----Dfmcns
03027> ADD HYD + 5.0 02:Pond3-Over 0.00 .000 1980.0401:0:00 .000 n/a .000
```

```
03241# CONTINUOUS NASHDY 5.0 01:HW-1 2.36 .143 1981.0805, 2:55 386.88 .473 .000
03242# [Cm: 68.4: N: 3.00; Tp: .95]
03243# [IAREC: 6.00; SMIN=25.21; SMAK=168.09; SK= .030]
03244# [InterEventTime: 12.00]
03245# R1981-C08001-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03246# ADD HYD + 5.0 02:NORTH-1 34.70 .462 1981.0805, 6:50 376.18 n/a .000
03247# + 5.0 02:NORTH-2 12.44 .462 1981.0805, 2:55 376.35 n/a .000
03248# + 5.0 02:HW-1 2.36 .143 1981.0805, 2:55 386.88 n/a .000
03249# SUM= 5.0 01:J2 49.51 .829 1981.0805, 4:30 377.18 n/a .000
03250# R1981-C08008-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03251# ROUTE CHANNEL -> 5.0 02:J1 49.51 .829 1981.0805, 4:30 377.18 n/a .000
03252# [RTD: 5.0] out< 5.0 01:J2 49.51 .826 1981.0805, 4:45 377.18 n/a .000
03253# [L/S=N: 478.7 / 440.0 / 035]
03254# (Vmax: .615;Dmax= .400)
03255# R1981-C08010-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03256# CONTINUOUS NASHDY 5.0 01:INT-1 4.39 .163 1981.0805, 3:55 379.86 .465 .000
03257# [Cm: 68.4: N: 3.00; Tp: .95]
03258# [IAREC: 6.00; SMIN= 67.24; SMAK=448.24; SK= .030]
03259# [InterEventTime: 12.00]
03260# CONTINUOUS NASHDY 5.0 01:INT-2 3.61 .133 1981.0805, 2:45 377.37 .461 .000
03261# [IAREC: 6.00; SMIN=115.26; SMAK=768.40; SK= .030]
03262# [InterEventTime: 12.00]
03263# R1981-C08015-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03264# CONTINUOUS NASHDY 5.0 01:A3A 3.84 .146 1981.0805, 3:35 379.42 .464 .000
03265# [Cm: 68.4: N: 3.00; Tp: 1.40]
03266# [IAREC: 6.00; SMIN= 73.13; SMAK=487.55; SK= .030]
03267# [InterEventTime: 12.00]
03268# R1981-C08017-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03269# CONTINUOUS STANDYD 5.0 01:Pond3-In 1.21 .106 1981.0805, 2:00 460.88 .564 .000
03270# [Xfmp: 64:TMP=75]
03271# [Norton parameters: F= 76.20;F= 13.20;DCAY=14; F=****]
03272# [Perivus area: Iape= 4.67;SLP=2.00;LGP= .500; MNP=.250;SCP= .0]
03273# [Perivus area: Iape= 1.57;SLP=2.50;LGI= .50; MNI=.013;SCI= .0]
03274# [IAREC= 12.00; IAREC= 12.00]
03275# R1981-C08018-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03276# ROUTE RESERVOIR -> 5.0 02:Pond3-In 1.21 .106 1981.0805, 2:00 460.88 n/a .000
03277# out< 5.0 01:Pond3-Out 1.21 .069 1981.0805, 3:45 460.84 n/a .000
03278# overflow< 5.0 02:Pond3-Over .00 .000 1981.0801, 0:00 .00 n/a .000
03279# (MStoUser= .913E-04 n3, TotDvVol= .000E+00 n3, N-Dv= 0, TotDvOrV= 0 hrs)
03280# R1981-C08019-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03281# ADD HYD + 5.0 02:Pond3-Over .00 .000 1981.0801, 0:00 .00 n/a .000
03282# + 5.0 02:Pond3-Out 1.21 .069 1981.0805, 3:45 460.84 n/a .000
03283# SUM= 5.0 01:Pond3-Ditc 5.0 01 .029 1981.0805, 2:40 379.42 n/a .000
03284# R1981-C08015-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03285# ROUTE CHANNEL -> 5.0 01:A3A 3.84 .146 1981.0805, 3:35 379.42 .464 .000
03286# [RTD: 5.0] out< 5.0 01:A3A-R 1.21 .024 1981.0805, 4:05 460.84 n/a .000
03287# [L/S=N: 508.7 / 140.0 / 035]
03288# (Vmax: .180;Dmax= .107)
03289# R1981-C08016-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03290# CONTINUOUS NASHDY 5.0 01:A1A 5.71 .201 1981.0805, 2:40 379.41 .464 .000
03291# [Cm: 58.5: N: 3.00; Tp: .95]
03292# [IAREC: 6.00; SMIN= 73.13; SMAK=487.55; SK= .030]
03293# [InterEventTime: 12.00]
03294# R1981-C08017-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03295# ADD HYD + 5.0 02:INT-1 4.39 .163 1981.0805, 3:55 379.86 n/a .000
03296# + 5.0 02:INT-2 3.61 .133 1981.0805, 2:45 377.37 n/a .000
03297# + 5.0 02:INT-3 .00 .000 1981.0801, 0:00 .00 n/a .000
03298# + 5.0 02:A3A 3.84 .146 1981.0805, 3:35 379.41 n/a .000
03299# + 5.0 02:A3A-R 1.21 .024 1981.0805, 4:05 460.84 n/a .000
03300# SUM= 5.0 01:J2 68.26 1.455 1981.0805, 4:40 379.13 n/a .000
03301# R1981-C08018-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03302# ROUTE CHANNEL -> 5.0 01:J2 68.26 1.455 1981.0805, 3:45 379.13 n/a .000
03303# [RTD: 5.0] out< 5.0 01:J2 68.26 1.454 1981.0805, 3:45 379.13 n/a .000
03304# [L/S=N: 508.7 / 140.0 / 035]
03305# (Vmax: .081;Dmax= .371)
03306# R1981-C08019-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03307# CONTINUOUS NASHDY 5.0 01:A1A 5.71 .201 1981.0805, 2:40 379.41 .464 .000
03308# [Cm: 58.5: N: 3.00; Tp: 1.60]
03309# [IAREC: 6.00; SMIN= 73.13; SMAK=487.55; SK= .030]
03310# [InterEventTime: 12.00]
03311# R1981-C08020-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03312# CONTINUOUS STANDYD 5.0 01:Pond3-In 1.00 .095 1981.0805, 2:00 331.69 .460 .000
03313# [Xfmp: 38:TMP=74]
03314# [Norton parameters: F= 76.20;F= 13.20;DCAY=14; F=****]
03315# [Perivus area: Iape= 4.67;SLP=2.00;LGP= .500; MNP=.250;SCP= .0]
03316# [Perivus area: Iape= 1.57;SLP=1.50;LGI= .250; MNI=.013;SCI= .0]
03317# [IAREC= 12.00; IAREC= 12.00]
03318# R1981-C08021-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03319# ROUTE RESERVOIR -> 5.0 02:Pond3-In 1.21 .043 1982.0805, 1:00 237.19 n/a .000
03320# out< 5.0 01:Pond3-Out 9.74 .038 1981.0805, 3:45 331.69 n/a .000
03321# overflow< 5.0 03:Pond3-Over .00 .000 1982.0801, 0:00 .00 n/a .000
03322# (MStoUser= .312E-04 n3, TotDvVol= .000E+00 n3, N-Dv= 0, TotDvOrV= 0 hrs)
03323# R1981-C08022-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03324# ROUTE CHANNEL -> 5.0 01:J2 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03325# [RTD: 5.0] out< 5.0 01:J2 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03326# [L/S=N: 321.7 / 410.0 / 035]
03327# (Vmax: .816;Dmax= .640)
03328# R1981-C08023-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03329# CONTINUOUS NASHDY 5.0 01:J2 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03330# [Cm: 68.4: N: 3.00; Tp: 1.12]
03331# [IAREC: 6.00; SMIN= 48.56; SMAK=323.73; SK= .030]
03332# [InterEventTime: 12.00]
03333# R1981-C08023-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03334# ADD HYD + 5.0 02:INT-1 4.39 .163 1981.0805, 3:55 379.86 n/a .000
03335# + 5.0 02:INT-2 3.61 .133 1981.0805, 2:45 377.37 n/a .000
03336# + 5.0 02:INT-3 .00 .000 1981.0801, 0:00 .00 n/a .000
03337# + 5.0 02:A3A 3.84 .146 1981.0805, 3:35 379.41 n/a .000
03338# + 5.0 02:A3A-R 1.21 .024 1981.0805, 4:05 460.84 n/a .000
03339# SUM= 5.0 01:J2 68.26 1.455 1981.0805, 4:40 379.13 n/a .000
03340# R1981-C08024-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03341# ROUTE CHANNEL -> 5.0 02:J1 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03342# [RTD: 5.0] out< 5.0 02:J1 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03343# [L/S=N: 396.7 / 305.0 / 035]
03344# (Vmax: .634;Dmax= .265)
03345# R1981-C08025-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03346# CONTINUOUS NASHDY 5.0 01:J2 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03347# [Cm: 58.5: N: 3.00; Tp: .95]
03348# [IAREC: 6.00; SMIN=264.20; SMAK=****; SK= .030]
03349# [InterEventTime: 12.00]
03350# R1981-C08026-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03351# ADD HYD + 5.0 02:INT-1 4.39 .163 1981.0805, 3:55 379.86 n/a .000
03352# + 5.0 02:INT-2 3.61 .133 1981.0805, 2:45 377.37 n/a .000
03353# + 5.0 02:INT-3 .00 .000 1981.0801, 0:00 .00 n/a .000
03354# + 5.0 02:A3A 3.84 .146 1981.0805, 3:35 379.41 n/a .000
03355# + 5.0 02:A3A-R 1.21 .024 1981.0805, 4:05 460.84 n/a .000
03356# SUM= 5.0 01:J2 68.26 1.455 1981.0805, 4:40 379.13 n/a .000
03357# R1981-C08027-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03358# ROUTE CHANNEL -> 5.0 02:J1 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03359# [RTD: 5.0] out< 5.0 02:J1 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03360# [L/S=N: 482.7 / 410.0 / 035]
03361# (Vmax: .774;Dmax= .615)
03362# R1981-C08028-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03363# CONTINUOUS NASHDY 5.0 01:J2 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03364# [Cm: 58.5: N: 3.00; Tp: .95]
03365# [IAREC: 6.00; SMIN=191.09; SMAK=****; SK= .030]
03366# [InterEventTime: 12.00]
03367# R1981-C08029-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03368# ADD HYD + 5.0 02:INT-1 4.39 .163 1981.0805, 3:55 379.86 n/a .000
03369# + 5.0 02:INT-2 3.61 .133 1981.0805, 2:45 377.37 n/a .000
03370# + 5.0 02:INT-3 .00 .000 1981.0801, 0:00 .00 n/a .000
03371# + 5.0 02:A3A 3.84 .146 1981.0805, 3:35 379.41 n/a .000
03372# + 5.0 02:A3A-R 1.21 .024 1981.0805, 4:05 460.84 n/a .000
03373# SUM= 5.0 01:J2 68.26 1.455 1981.0805, 4:40 379.13 n/a .000
03374# R1981-C08030-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03375# ROUTE CHANNEL -> 5.0 02:J1 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03376# [RTD: 5.0] out< 5.0 02:J1 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03377# [L/S=N: 321.7 / 410.0 / 035]
03378# (Vmax: .816;Dmax= .640)
03379# R1981-C08031-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03380# CONTINUOUS NASHDY 5.0 01:J2 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03381# [Cm: 58.5: N: 3.00; Tp: 1.23]
03382# [IAREC: 6.00; SMIN=191.09; SMAK=****; SK= .030]
03383# [InterEventTime: 12.00]
03384# R1981-C08032-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03385# ADD HYD + 5.0 02:INT-1 4.39 .163 1981.0805, 3:55 379.86 n/a .000
03386# + 5.0 02:INT-2 3.61 .133 1981.0805, 2:45 377.37 n/a .000
03387# + 5.0 02:INT-3 .00 .000 1981.0801, 0:00 .00 n/a .000
03388# + 5.0 02:A3A 3.84 .146 1981.0805, 3:35 379.41 n/a .000
03389# + 5.0 02:A3A-R 1.21 .024 1981.0805, 4:05 460.84 n/a .000
03390# SUM= 5.0 01:J2 68.26 1.455 1981.0805, 4:40 379.13 n/a .000
03391# R1981-C08033-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03392# ROUTE CHANNEL -> 5.0 02:J1 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03393# [RTD: 5.0] out< 5.0 02:J1 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03394# [L/S=N: 321.7 / 410.0 / 035]
03395# (Vmax: .816;Dmax= .640)
03396# R1981-C08034-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03397# CONTINUOUS NASHDY 5.0 01:J2 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03398# [Cm: 58.5: N: 3.00; Tp: 1.23]
03399# [IAREC: 6.00; SMIN=191.09; SMAK=****; SK= .030]
03400# [InterEventTime: 12.00]
03401# R1981-C08035-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03402# ADD HYD + 5.0 02:INT-1 4.39 .163 1981.0805, 3:55 379.86 n/a .000
03403# + 5.0 02:INT-2 3.61 .133 1981.0805, 2:45 377.37 n/a .000
03404# + 5.0 02:INT-3 .00 .000 1981.0801, 0:00 .00 n/a .000
03405# + 5.0 02:A3A 3.84 .146 1981.0805, 3:35 379.41 n/a .000
03406# + 5.0 02:A3A-R 1.21 .024 1981.0805, 4:05 460.84 n/a .000
03407# SUM= 5.0 01:J2 68.26 1.455 1981.0805, 4:40 379.13 n/a .000
03408# R1981-C08036-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03409# ROUTE CHANNEL -> 5.0 02:J1 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03410# [RTD: 5.0] out< 5.0 02:J1 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03411# [L/S=N: 321.7 / 410.0 / 035]
03412# (Vmax: .816;Dmax= .640)
03413# R1981-C08037-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03414# CONTINUOUS NASHDY 5.0 01:J2 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03415# [Cm: 58.5: N: 3.00; Tp: 1.23]
03416# [IAREC: 6.00; SMIN=191.09; SMAK=****; SK= .030]
03417# [InterEventTime: 12.00]
03418# R1981-C08038-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03419# ADD HYD + 5.0 02:INT-1 4.39 .163 1981.0805, 3:55 379.86 n/a .000
03420# + 5.0 02:INT-2 3.61 .133 1981.0805, 2:45 377.37 n/a .000
03421# + 5.0 02:INT-3 .00 .000 1981.0801, 0:00 .00 n/a .000
03422# + 5.0 02:A3A 3.84 .146 1981.0805, 3:35 379.41 n/a .000
03423# + 5.0 02:A3A-R 1.21 .024 1981.0805, 4:05 460.84 n/a .000
03424# SUM= 5.0 01:J2 68.26 1.455 1981.0805, 4:40 379.13 n/a .000
03425# R1981-C08039-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03426# ROUTE CHANNEL -> 5.0 02:J1 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03427# [RTD: 5.0] out< 5.0 02:J1 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03428# [L/S=N: 321.7 / 410.0 / 035]
03429# (Vmax: .816;Dmax= .640)
03430# R1981-C08040-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03431# CONTINUOUS NASHDY 5.0 01:J2 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03432# [Cm: 58.5: N: 3.00; Tp: 1.23]
03433# [IAREC: 6.00; SMIN=191.09; SMAK=****; SK= .030]
03434# [InterEventTime: 12.00]
03435# R1981-C08041-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03436# ADD HYD + 5.0 02:INT-1 4.39 .163 1981.0805, 3:55 379.86 n/a .000
03437# + 5.0 02:INT-2 3.61 .133 1981.0805, 2:45 377.37 n/a .000
03438# + 5.0 02:INT-3 .00 .000 1981.0801, 0:00 .00 n/a .000
03439# + 5.0 02:A3A 3.84 .146 1981.0805, 3:35 379.41 n/a .000
03440# + 5.0 02:A3A-R 1.21 .024 1981.0805, 4:05 460.84 n/a .000
03441# SUM= 5.0 01:J2 68.26 1.455 1981.0805, 4:40 379.13 n/a .000
03442# R1981-C08042-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03443# ROUTE CHANNEL -> 5.0 02:J1 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03444# [RTD: 5.0] out< 5.0 02:J1 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03445# [L/S=N: 321.7 / 410.0 / 035]
03446# (Vmax: .816;Dmax= .640)
03447# R1981-C08043-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03448# CONTINUOUS NASHDY 5.0 01:J2 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03449# [Cm: 58.5: N: 3.00; Tp: 1.23]
03450# [IAREC: 6.00; SMIN=191.09; SMAK=****; SK= .030]
03451# [InterEventTime: 12.00]
03452# R1981-C08044-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03453# ADD HYD + 5.0 02:INT-1 4.39 .163 1981.0805, 3:55 379.86 n/a .000
03454# + 5.0 02:INT-2 3.61 .133 1981.0805, 2:45 377.37 n/a .000
03455# + 5.0 02:INT-3 .00 .000 1981.0801, 0:00 .00 n/a .000
03456# + 5.0 02:A3A 3.84 .146 1981.0805, 3:35 379.41 n/a .000
03457# + 5.0 02:A3A-R 1.21 .024 1981.0805, 4:05 460.84 n/a .000
03458# SUM= 5.0 01:J2 68.26 1.455 1981.0805, 4:40 379.13 n/a .000
03459# R1981-C08045-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03460# ROUTE CHANNEL -> 5.0 02:J1 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03461# [RTD: 5.0] out< 5.0 02:J1 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03462# [L/S=N: 321.7 / 410.0 / 035]
03463# (Vmax: .816;Dmax= .640)
03464# R1981-C08046-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03465# CONTINUOUS NASHDY 5.0 01:J2 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03466# [Cm: 58.5: N: 3.00; Tp: 1.23]
03467# [IAREC: 6.00; SMIN=191.09; SMAK=****; SK= .030]
03468# [InterEventTime: 12.00]
03469# R1981-C08047-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03470# ADD HYD + 5.0 02:INT-1 4.39 .163 1981.0805, 3:55 379.86 n/a .000
03471# + 5.0 02:INT-2 3.61 .133 1981.0805, 2:45 377.37 n/a .000
03472# + 5.0 02:INT-3 .00 .000 1981.0801, 0:00 .00 n/a .000
03473# + 5.0 02:A3A 3.84 .146 1981.0805, 3:35 379.41 n/a .000
03474# + 5.0 02:A3A-R 1.21 .024 1981.0805, 4:05 460.84 n/a .000
03475# SUM= 5.0 01:J2 68.26 1.455 1981.0805, 4:40 379.13 n/a .000
03476# R1981-C08048-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03477# ROUTE CHANNEL -> 5.0 02:J1 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03478# [RTD: 5.0] out< 5.0 02:J1 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03479# [L/S=N: 321.7 / 410.0 / 035]
03480# (Vmax: .816;Dmax= .640)
03481# R1981-C08049-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03482# CONTINUOUS NASHDY 5.0 01:J2 129.05 2.978 1981.0805, 4:10 374.62 n/a .000
03483# [Cm: 58.5: N: 3.00; Tp: 1.23]
03484# [IAREC: 6.00; SMIN=191.09; SMAK=****; SK= .030]
03485# [InterEventTime: 12.00]
03486# R1981-C08050-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Dfncms
03487# ADD HYD + 5.0 02:INT-1 4.39 .163 1981.0805, 3:55 379.86 n/a .000
03488# + 5.0 02:INT-2 3.61 .133 1981.0805, 2:45 377.37 n/a .000
03489# + 5.0 02:INT-3 .00 .000 1981.0801, 0:00 .00 n/a .000
03490# + 5.0 02:A3A 3.84 .146 1981.0805, 3:35 379.41 n/a .000
03491# + 5.0 02:A3A-R 1.21 .024 1981.0805, 4:05 460.84 n/a .000
03492# SUM= 5.0 01:J2 68.26 1.455 1981.0805, 4:40 379.13 n/a .000
03493# R1981-C08051-----Dtain-ID:NYHD-----AREHA-QPEAKS-TpeakDate,h:mm-----Rvmm-R,C-----Df
```

---

**Page 10**

```
03961# CONTINUOUS NASHDY 5.0 01:INT-3 5.71 .039 1984.0813. 6:45 147.81 .423 .000
03962# [Cm 58.4: Nr 3.00: Tm 1.40]
03963# [IAREC 6.00: SMIN=73.13: SMAX=487.55: SK= .030]
03964# [InterEventTime= 12.00]
03965# ADD HYD + 5.0 02:RT-1 49.51 .019 1984.0813. 8:05 147.56 n/a .000
03966# + 5.0 02:INT-1 4.39 .024 1984.0813. 7:55 147.56 n/a .000
03967# + 5.0 02:INT-2 3.61 .018 1984.0813. 6:50 147.49 n/a .000
03968# + 5.0 02:INT-3 5.71 .039 1984.0813. 6:45 147.81 n/a .000
03969# + 5.0 02:RTA 21.43 .019 1984.0813. 7:35 147.81 n/a .000
03970# + 5.0 02:ASC-R 1.21 .003 1984.0813.18:50 185.25 n/a .000
03971# + 5.0 02:ASC-R 60.26 .195 1984.0813. 7:35 148.27 n/a .000
03972# SUM 5.0 01:Total 163.63 .430 1984.0813. 8:10 146.11 n/a .000
03973# R1984-C00018 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
03974# ROUTE CHANNEL -> 5.0 02:INT 68.26 .195 1984.0813. 7:35 148.27 n/a .000
03975# [RDT 5.00] out-< 5.0 02:INT 68.26 .195 1984.0813. 7:45 148.27 n/a .000
03976# [L/S/= 359 / 560 / 035]
03977# (Vmax= .502:Dmax= .250)
03978# R1984-C00019 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
03979# CONTINUOUS NASHDY 5.0 01:ASA 21.43 .052 1984.0813. 8:05 147.31 .422 .000
03980# [Cm 58.4: Nr 3.00: Tm 1.40]
03981# [IAREC 6.00: SMIN=191.09: SMAX=*****: SK= .030]
03982# [InterEventTime= 12.00]
03983# R1984-C00020 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
03984# CONTINUOUS STANDHYD 5.0 01:Pond3-In 10.00 .220 1984.0812. 7:00 119.88 .343 .000
03985# [CmP: 38:TIMP: 74]
03986# [Norton parameters: Fov: 78.20:Fov: 13.20:DCAV4: 14: P=****]
03987# [Previous area: IAREC 6.00: SMIN=151.00: L01: 250. MN1: 013: SCL= .0]
03988# [InterEventTime= 12.00]
03989# [IAREC 6.00: SMIN=151.00: L01: 250. MN1: 013: SCL= .0]
03990# [IAREC 6.00: SMIN=151.00: L01: 250. MN1: 013: SCL= .0]
03991# R1984-C00021 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
03992# ROUTE RESERVOIR -> 5.0 02:Pond1-In 10.00 .220 1984.0812. 7:00 119.88 n/a .000
03993# overFlow -> 5.0 03:Pond1-Over .00 .000 1984.0812. 0:00 n/a n/a .000
03994# [PxdToUsed: 95466.03: TdToVVol: 0.0000E+00: N-ovT: 0. TdToVVol: 0. hrs]
03995# R1984-C00022 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
03996# CONTINUOUS NASHDY 5.0 01:ASA 9.14 .068 1984.0813. 7:05 148.00 .425 .000
03997# [Cm 58.4: Nr 3.00: Tm 1.40]
03998# [IAREC 6.00: SMIN=48.56: SMAX=323.73: SK= .030]
03999# [InterEventTime= 12.00]
04000# R1984-C00023 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04001# ADD HYD + 5.0 02:RT 68.26 .195 1984.0813. 7:45 148.27 n/a .000
04002# + 5.0 02:INT-1 4.39 .024 1984.0813. 7:55 145.78 n/a .000
04003# + 5.0 02:INT-2 3.61 .018 1984.0813. 6:50 147.31 n/a .000
04004# + 5.0 02:Pond1-Over .00 .000 1984.0812. 0:00 n/a n/a .000
04005# SUM 5.0 01:Total 10.00 .024 1984.0812. 9:15 119.88 n/a .000
04006# ROUTE CHANNEL -> 5.0 02:INT 108.84 .330 1984.0813. 7:35 145.50 n/a .000
04007# R1984-C00024 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04008# ROUTE CHANNEL -> 5.0 02:INT 108.84 .330 1984.0813. 7:35 145.50 n/a .000
04009# [RDT 5.00] out-< 5.0 01:RT 108.84 .325 1984.0813. 7:55 145.50 n/a .000
04010# [L/S/= 396 / 307 / 035]
04011# (Vmax= .398:Dmax= .286)
04012# R1984-C00025 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04013# CONTINUOUS NASHDY 5.0 01:SOUTH-1 20.21 .652 1984.0813. 7:35 147.30 .422 .000
04014# [Cm 35.5: Nr 3.00: Tm 1.40]
04015# [IAREC 6.00: SMIN=24.44: SMAX=*****: SK= .030]
04016# [InterEventTime= 12.00]
04017# R1984-C00026 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04018# ADD HYD + 5.0 02:RT 108.84 .325 1984.0813. 7:55 145.50 n/a .000
04019# + 5.0 02:SOUTH-1 20.21 .652 1984.0813. 7:35 147.30 n/a .000
04020# SUM 5.0 01:Total 129.05 .375 1984.0813. 7:50 145.78 n/a .000
04021# R1984-C00027 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04022# ROUTE CHANNEL -> 5.0 02:Pond1-In 10.00 .220 1984.0812. 7:00 119.88 n/a .000
04023# overFlow -> 5.0 03:Pond1-Over .00 .000 1984.0812. 0:00 n/a n/a .000
04024# [RDT 5.00] out-< 5.0 01:RT 129.05 .372 1984.0813. 8:10 145.78 n/a .000
04025# [L/S/= 482 / 410 / 035]
04026# (Vmax= .521:Dmax= .270)
04027# R1984-C00028 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04028# CONTINUOUS NASHDY 5.0 01:INT-3 11.61 .039 1984.0813. 6:50 147.31 .422 .000
04029# [Cm 36.7: Nr 3.00: Tm .90]
04030# [IAREC 6.00: SMIN=191.09: SMAX=*****: SK= .030]
04031# R1984-C00029 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04032# ADD HYD + 5.0 02:RT 129.05 .372 1984.0813. 8:10 145.78 n/a .000
04033# + 5.0 02:SOUTH-2 11.61 .039 1984.0813. 6:50 147.31 n/a .000
04034# SUM 5.0 01:Total 140.66 .400 1984.0813. 8:05 145.91 n/a .000
04035# R1984-C00030 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04036# ROUTE CHANNEL -> 5.0 02:INT 140.66 .400 1984.0813. 8:05 145.91 n/a .000
04037# [RDT 5.00] out-< 5.0 02:INT 140.66 .400 1984.0813. 8:10 145.91 n/a .000
04038# [L/S/= 181 / 500 / 035]
04039# (Vmax= .502:Dmax= .250)
04040# R1984-C00031 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04041# CONTINUOUS NASHDY 5.0 01:SOUTH-3 7.98 .035 1984.0813. 6:45 147.41 .422 .000
04042# [Cm 42.6: Nr 3.00: Tm .80]
04043# [IAREC 6.00: SMIN=141.94: SMAX=946.27: SK= .030]
04044# [InterEventTime= 12.00]
04045# R1984-C00032 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04046# ADD HYD + 5.0 02:RTS 140.66 .400 1984.0813. 8:10 145.91 n/a .000
04047# + 5.0 02:SOUTH-3 7.98 .035 1984.0813. 6:45 147.41 n/a .000
04048# SUM 5.0 01:Total 148.64 .423 1984.0813. 8:05 145.99 n/a .000
04049# R1984-C00033 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04050# SAVE HYD 148.64 .423 1984.0813. 8:05 145.99 n/a .000
04051# name :36:1984
04052# remark:36-BearBrook Tributary Upstream of Thunder Road Crossing
04053# R1984-C00034 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04054# ROUTE CHANNEL -> 5.0 02:RT 148.64 .423 1984.0813. 8:05 145.99 n/a .000
04055# [RDT 5.00] out-< 5.0 02:RT 148.64 .422 1984.0813. 8:15 145.99 n/a .000
04056# [L/S/= 323 / 440 / 035]
04057# (Vmax= .553:Dmax= .253)
04058# R1984-C00035 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04059# CONTINUOUS NASHDY 5.0 01:SOUTH-4 14.99 .047 1984.0813. 7:20 147.35 .422 .000
04060# [Cm 30.5: Nr 3.00: Tm 1.23]
04061# [IAREC 6.00: SMIN=168.62: SMAX=*****: SK= .030]
04062# [InterEventTime= 12.00]
04063# R1984-C00036 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04064# ADD HYD + 5.0 02:RT 148.64 .422 1984.0813. 8:15 145.99 n/a .000
04065# + 5.0 02:SOUTH-4 14.99 .047 1984.0813. 7:20 147.35 n/a .000
04066# SUM 5.0 01:Total 163.63 .463 1984.0813. 8:10 146.11 n/a .000
04067# [L/S/= 181 / 500 / 035]
04068# (Vmax= .502:Dmax= .250)
04069# R1984-C00037 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04070# CONTINUOUS RAINFALL DATA
04071# *****
04072# *****
04073# *****
04074# *****
04075# ** END OF RUN : 1984
04076# *****
04077# *****
04078# *****
04079# *****
04080# *****
04081# *****
04082# *****
04083# RUN: COMMAND
04084# R1984-C00038
04085# START
04086# [TZERO = .00 hrs on 19850401]
04087# [NETOUT = 2 (Imperial, 2-metric output)]
04088# [NSTORM = 0]
04089# [NRUN = 1985]
04090# *****
04091# # SWMMHYD / INPUT DATA FILE
04092# *****
04093# # Project Name: [THUNDER ROAD] Project Number: [2128]
04094# # Date : 04-20-2021
04095# # Modeler : [J.B]
04096# # Company : JFSaInc.
04097# # License #: 2549237
04098# *****
04099# *****
04100# *****
04101# # Ottawa International Airport - April 1st to October 31st
04102# R1985-C00002
04103# READ AES DATA
04104# [Filename = YOW_1967_2007_323 ]
04105# [Start Date= 1985.0401: End Date= 1985.1031]
04106# [DT= 60 min: Length= 5138 hrs: Wethrs= 279: Dryhrs= 4857: PTD= 456.00]
04107# Maximum average rainfall intensities over
04108# 1 hr 2 hrs 3 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
04109# 10.00 13.68 11.73 6.60 3.90 1.65 1.11 .89 .66 mm/hr
04110# 19.00 27.20 35.30 39.60 39.60 46.10 42.80 43.40 mm
04111# 19850716 19850817 19850918 19850918 19850918 19850918 19850827 19850827 date
04112# Number of rainfall events per following interval time
04113# 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
04114# 94 79 76 66 61 58 44 38 27
04115# Number of events with least the following durations
04116# 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
04117# 9 62 6 0 0 0 0 0 0
04118# R1985-C00003
04119# COMPUTE API
04120# [APIInls: 00.00: APIKdy= 9900: APIKdx= 9956]
04121# [APIKax= 57.30: APIKax= 21.73: APIKax= 4.86]
04122# R1985-C00004 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04123# CONTINUOUS NASHDY 5.0 01:NORTH-1 34.70 .046 1985.0618. 4:00 155.62 .340 .000
04124# [Cm 58.4: Nr 3.00: Tm 1.42]
04125# [IAREC 6.00: SMIN=168.62: SMAX=*****: SK= .030]
04126# [InterEventTime= 12.00]
04127# R1985-C00005 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04128# CONTINUOUS NASHDY 5.0 01:NORTH-2 12.44 .054 1985.0618. 0:45 156.12 .342 .000
04129# [Cm 58.4: Nr 3.00: Tm 1.29]
04130# [IAREC 6.00: SMIN= 91.81: SMAX=606.70: SK= .030]
04131# [InterEventTime= 12.00]
04132# R1985-C00006 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04133# CONTINUOUS NASHDY 5.0 01:INT-1 2.36 .027 1985.0618. 0:35 161.58 .354 .000
04134# [Cm 11.7: Nr 3.00: Tm 1.12]
04135# [IAREC 6.00: SMIN= 25.21: SMAX=*****: SK= .030]
04136# [InterEventTime= 12.00]
04137# R1985-C00007 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04138# ADD HYD + 5.0 02:NORTH-1 34.70 .046 1985.0618. 4:00 155.62 n/a .000
04139# + 5.0 02:NORTH-2 12.44 .054 1985.0618. 0:45 156.12 n/a .000
04140# + 5.0 02:INT-1 2.36 .027 1985.0618. 0:35 161.58 n/a .000
04141# SUM 5.0 01:Total 70.86 .128 1985.0618. 4:00 155.62 n/a .000
04142# [L/S/= 478 / 440 / 035]
04143# (Vmax= .397:Dmax= .169)
04144# R1985-C00008 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04145# CONTINUOUS NASHDY 5.0 01:INT-1 4.39 .024 1985.0618. 1:15 156.94 .344 .000
04146# [Cm 60.4: Nr 3.00: Tm 1.00]
04147# [IAREC 6.00: SMIN= 47.24: SMAX=448.24: SK= .030]
04148# [InterEventTime= 12.00]
04149# R1985-C00009 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04150# CONTINUOUS NASHDY 5.0 01:INT-2 3.61 .015 1985.0618. 0:30 155.62 .341 .000
04151# [Cm 47.4: Nr 3.00: Tm .90]
04152# [IAREC 6.00: SMIN= 376.80: SMAX=768.40: SK= .030]
04153# [InterEventTime= 12.00]
04154# R1985-C00010 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04155# CONTINUOUS NASHDY 5.0 01:ASA 3.84 .018 1985.0618. 1:00 156.69 .344 .000
04156# [Cm 58.4: Nr 3.00: Tm 1.40]
04157# [IAREC 6.00: SMIN=151.00: L01: 250. MN1: 013: SCL= .0]
04158# [InterEventTime= 12.00]
04159# R1985-C00011 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04160# CONTINUOUS STANDHYD 5.0 01:Pond3-In 1.21 .044 1985.0716.14:00 237.34 .520 .000
04161# [CmP: 64:TIMP: 75]
04162# [Norton parameters: Fov: 78.20:Fov: 13.20:DCAV4: 14: F=****]
04163# [Previous area: IAREC 6.00: SMIN=151.00: L01: 250. MN1: 013: SCL= .0]
04164# [InterEventTime= 12.00]
04165# [IAREC 6.00: SMIN=151.00: L01: 250. MN1: 013: SCL= .0]
04166# [IAREC 6.00: SMIN=151.00: L01: 250. MN1: 013: SCL= .0]
04167# R1985-C00012 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04168# ROUTE RESERVOIR -> 5.0 02:Pond3-In 1.21 .044 1985.0716.14:00 237.34 n/a .000
04169# overFlow -> 5.0 03:Pond3-Over .00 .000 1985.0716.14:00 237.34 n/a .000
04170# [MStoUsed= 3156E-01: M3: TdToVVol= 0.0000E+00: N-ovT: 0. TdToVVol: 0. hrs]
04171# R1985-C00013 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04172# ROUTE CHANNEL -> 5.0 02:Pond3-In 1.21 .044 1985.0716.14:00 237.34 n/a .000
04173# ADD HYD + 5.0 02:Pond3-Over .00 .000 1985.0716.14:00 237.34 n/a .000
04174# SUM 5.0 01:Total 1.21 .044 1985.0716.14:00 237.34 n/a .000
04175# [RDT 5.00] out-< 5.0 02:Pond3-In 1.21 .044 1985.0716.14:00 237.34 n/a .000
04176# [L/S/= 500 / 140 / 035]
04177# (Vmax= .500:Dmax= .250)
04178# R1985-C00014 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04179# ROUTE CHANNEL -> 5.0 02:Pond3-In 1.21 .044 1985.0716.14:00 237.34 n/a .000
04180# [Cm 58.5: Nr 3.00: Tm .80]
04181# [IAREC 6.00: SMIN=151.00: SMAX=*****: SK= .030]
04182# [InterEventTime= 12.00]
04183# R1985-C00015 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04184# CONTINUOUS NASHDY 5.0 01:INT-3 5.71 .035 1985.0618. 0:25 156.69 .344 .000
04185# [Cm 58.5: Nr 3.00: Tm .80]
04186# [IAREC 6.00: SMIN= 73.13: SMAX=487.55: SK= .030]
04187# [InterEventTime= 12.00]
04188# R1985-C00016 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04189# CONTINUOUS NASHDY 5.0 01:ASA 4.39 .024 1985.0618. 1:15 156.94 n/a .000
04190# ADD HYD + 5.0 02:INT-1 4.39 .024 1985.0618. 1:15 156.94 n/a .000
04191# + 5.0 02:INT-2 3.61 .015 1985.0618. 0:30 155.62 n/a .000
04192# + 5.0 02:INT-3 3.61 .015 1985.0618. 0:30 155.62 n/a .000
04193# + 5.0 02:ASA 5.71 .035 1985.0618. 0:25 156.69 n/a .000
04194# + 5.0 02:ASC-R 3.84 .018 1985.0618. 1:00 156.69 n/a .000
04195# + 5.0 02:ASC-R 1.21 .044 1985.0618. 0:25 156.69 n/a .000
04196# SUM 68.26 .195 1985.0618. 0:55 157.28 n/a .000
04197# R1985-C00017 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04198# ROUTE CHANNEL -> 5.0 02:Pond3-In 1.21 .044 1985.0716.14:00 237.34 n/a .000
04199# [RDT 5.00] out-< 5.0 01:RT 68.26 .185 1985.0618. 1:05 157.28 n/a .000
04200# [L/S/= 359 / 560 / 035]
04201# (Vmax= .441:Dmax= .282)
04202# R1985-C00018 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04203# CONTINUOUS NASHDY 5.0 01:INT-3 5.71 .035 1985.0618. 0:25 156.69 .344 .000
04204# [Cm 36.1: Nr 3.00: Tm 1.68]
04205# [IAREC 6.00: SMIN=191.09: SMAX=*****: SK= .030]
04206# [InterEventTime= 12.00]
04207# R1985-C00019 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04208# CONTINUOUS STANDHYD 5.0 01:Pond3-In 21.43 .218 1985.0716.14:00 157.39 .345 .000
04209# [CmP: 38:TIMP: 74]
04210# [Norton parameters: Fov: 78.20:Fov: 13.20:DCAV4: 14: P=****]
04211# [Previous area: IAREC 6.00: SMIN=151.00: L01: 250. MN1: 013: SCL= .0]
04212# [InterEventTime= 12.00]
04213# [IAREC 6.00: SMIN=151.00: L01: 250. MN1: 013: SCL= .0]
04214# R1985-C00020 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04215# ROUTE RESERVOIR -> 5.0 02:Pond1-In 10.00 .218 1985.0716.14:00 157.39 n/a .000
04216# overFlow -> 5.0 03:Pond1-Over .00 .000 1985.0716.14:00 157.39 n/a .000
04217# [MStoUsed= 1780E-01: M3: TdToVVol= 0.0000E+00: N-ovT: 0. TdToVVol: 0. hrs]
04218# R1985-C00021 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04219# CONTINUOUS NASHDY 5.0 01:ASA 9.14 .070 1985.0618. 0:35 158.09 .347 .000
04220# [Cm 68.4: Nr 3.00: Tm 1.21]
04221# [IAREC 6.00: SMIN=48.56: SMAX=323.73: SK= .030]
04222# [InterEventTime= 12.00]
04223# R1985-C00022 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04224# CONTINUOUS NASHDY 5.0 02:RT 68.26 .185 1985.0618. 1:05 157.28 n/a .000
04225# + 5.0 02:ASA 4.39 .024 1985.0618. 1:15 156.94 n/a .000
04226# + 5.0 02:ASA 3.61 .018 1985.0618. 0:30 155.62 n/a .000
04227# + 5.0 02:Pond1-Over .00 .000 1985.0618. 1:15 156.94 n/a .000
04228# SUM 10.00 .028 1985.0618. 1:10 157.39 n/a .000
04229# R1985-C00023 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04230# ROUTE CHANNEL -> 5.0 01:INT 108.84 .320 1985.0618. 1:00 156.88 n/a .000
04231# [RDT 5.00] out-< 5.0 01:RT 108.84 .314 1985.0618. 1:20 156.88 n/a .000
04232# [L/S/= 396 / 305 / 035]
04233# (Vmax= .397:Dmax= .262)
04234# R1985-C00024 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04235# CONTINUOUS NASHDY 5.0 01:SOUTH-1 20.21 .643 1985.0618. 1:00 154.82 .340 .000
04236# [Cm 35.5: Nr 3.00: Tm 1.40]
04237# [IAREC 6.00: SMIN=204.20: SMAX=*****: SK= .030]
04238# [InterEventTime= 12.00]
04239# R1985-C00025 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04240# CONTINUOUS NASHDY 5.0 01:SOUTH-2 10.00 .218 1985.0618. 1:00 157.39 n/a .000
04241# ADD HYD + 5.0 02:RT 108.84 .314 1985.0618. 1:20 156.88 n/a .000
04242# + 5.0 02:SOUTH-1 20.21 .643 1985.0618. 1:00 154.82 n/a .000
04243# SUM 5.0 01:Total 129.05 .357 1985.0618. 1:15 156.55 n/a .000
04244# R1985-C00026 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04245# ROUTE CHANNEL -> 5.0 02:RT 140.66 .377 1985.0618. 1:30 156.55 n/a .000
04246# [RDT 5.00] out-< 5.0 01:RT 129.05 .353 1985.0618. 1:30 156.55 n/a .000
04247# [L/S/= 482 / 410 / 035]
04248# (Vmax= .521:Dmax= .270)
04249# R1985-C00027 -----DtnIn-DtNdy-----AREAh-APEAKS-TPeakDate_hh:mm-----Rvmm-R.C-----DmFms
04250# CONTINUOUS NASHDY 5.0 01:SOUTH-2 11.61 .031 1985.0618. 0:30 154.88 .340 .000
04251# [Cm 36.7: Nr 3.00: Tm .90]
04252# [IAREC 6.00: SMIN=168.62: SMAX=*****: SK= .030]
04253# [
```

Page 12

```

046827 # R1987-000025-----DttIn:IDtNY-----AREHA-APEAKS-Tpeakdate:hh:mm-----Rwm-R-C-----Dfncms
046828 # CONTINUOUS NASHVY 5.0 01:50:UT-1 20.21 .075 1987.02:27:45 189.68 336 .000
046829 # [Cn: 25.5; N: 3.00; Tpe: 1.40]
046830 # [Iarc6: 6.00; IMIN=14.94; SMAK=946.27; SK: .030]
046831 # [InterEventTime: 12.00]
046832 # R1987-0198700010-----DttIn:IDtNY-----AREHA-APEAKS-Tpeakdate:hh:mm-----Rwm-R-C-----Dfncms
046833 # ADD HYD 5.0 02:03 108.84 .641 1987.02:27:45 191.97 n/a .000
046834 # remark:30-Bearbrook Tributary Upstream of Thunder Road Crossing
046835 # [Rms: 5.0 02:50:UT-1 20.21 .075 1987.02:27:45 189.68 336 .000]
046836 # SUM 128.04 555 1987.02:27:45 191.91 n/a .000
046837 # R1987-0198700017-----DttIn:IDtNY-----AREHA-APEAKS-Tpeakdate:hh:mm-----Rwm-R-C-----Dfncms
046838 # ROUTE CHANNEL 5.0 02:21 49.51 .185 1988.06:25:14:00 190.73 n/a .000
046839 # [Rds: 5.0] out-> 5.0 01:84 129.05 .547 1987.02:27:45 191.91 n/a .000
046840 # [L/S/m: 482.7 / 430 / 035]
046841 # [Vmax: 572.0dmax: 349]
046842 # R1987-0198700020-----DttIn:IDtNY-----AREHA-APEAKS-Tpeakdate:hh:mm-----Rwm-R-C-----Dfncms
046843 # CONTINUOUS NASHVY 5.0 01:50:UT-1 20.21 .075 1987.02:27:45 189.73 336 .000
046844 # [Cn: 25.5; N: 3.00; Tpe: .96]
046845 # [Iarc6: 6.00; IMIN=14.94; SMAK=946.27; SK: .030]
046846 # [InterEventTime: 12.00]
046847 # R1987-0198700023-----DttIn:IDtNY-----AREHA-APEAKS-Tpeakdate:hh:mm-----Rwm-R-C-----Dfncms
046848 # ADD HYD 5.0 02:03 108.84 .641 1987.02:27:45 191.97 n/a .000
046849 # remark:30-Bearbrook Tributary Upstream of Thunder Road Crossing
046850 # [Rms: 5.0 02:50:UT-1 20.21 .075 1987.02:27:45 189.68 336 .000]
046851 # SUM 128.04 555 1987.02:27:45 191.91 n/a .000
046852 # R1987-0198700027-----DttIn:IDtNY-----AREHA-APEAKS-Tpeakdate:hh:mm-----Rwm-R-C-----Dfncms
046853 # ROUTE CHANNEL 5.0 02:21 49.51 .185 1988.06:25:14:00 190.73 n/a .000
046854 # [Rds: 5.0] out-> 5.0 01:84 129.05 .547 1987.02:27:45 191.91 n/a .000
046855 # [L/S/m: 482.7 / 430 / 035]
046856 # [Vmax: 572.0dmax: 349]
046857 # R1987-0198700030-----DttIn:IDtNY-----AREHA-APEAKS-Tpeakdate:hh:mm-----Rwm-R-C-----Dfncms
046858 # CONTINUOUS NASHVY 5.0 01:50:UT-1 20.21 .075 1987.02:27:45 189.73 336 .000
046859 # [Cn: 25.5; N: 3.00; Tpe: .96]
046860 # [Iarc6: 6.00; IMIN=14.94; SMAK=946.27; SK: .030]
046861 # [InterEventTime: 12.00]
046862 # R1987-0198700033-----DttIn:IDtNY-----AREHA-APEAKS-Tpeakdate:hh:mm-----Rwm-R-C-----Dfncms
046863 # ADD HYD 5.0 02:03 108.84 .641 1987.02:27:45 191.97 n/a .000
046864 # remark:30-Bearbrook Tributary Upstream of Thunder Road Crossing
046865 # [Rms: 5.0 02:50:UT-1 20.21 .075 1987.02:27:45 189.68 336 .000]
046866 # SUM 128.04 555 1987.02:27:45 191.91 n/a .000
046867 # R1987-0198700037-----DttIn:IDtNY-----AREHA-APEAKS-Tpeakdate:hh:mm-----Rwm-R-C-----Dfncms
046868 # ROUTE CHANNEL 5.0 02:21 49.51 .185 1988.06:25:14:00 190.73 n/a .000
046869 # [Rds: 5.0] out-> 5.0 01:84 129.05 .547 1987.02:27:45 191.91 n/a .000
046870 # [L/S/m: 482.7 / 430 / 035]
046871 # [Vmax: 572.0dmax: 349]
046872 # R1987-0198700040-----DttIn:IDtNY-----AREHA-APEAKS-Tpeakdate:hh:mm-----Rwm-R-C-----Dfncms
046873 # CONTINUOUS NASHVY 5.0 01:50:UT-1 20.21 .075 1987.02:27:45 189.73 336 .000
046874 # [Cn: 25.5; N: 3.00; Tpe: .96]
046875 # [Iarc6: 6.00; IMIN=14.94; SMAK=946.27; SK: .030]
046876 # [InterEventTime: 12.00]
046877 # R1987-0198700043-----DttIn:IDtNY-----AREHA-APEAKS-Tpeakdate:hh:mm-----Rwm-R-C-----Dfncms
046878 # ADD HYD 5.0 02:03 108.84 .641 1987.02:27:45 191.97 n/a .000
046879 # remark:30-Bearbrook Tributary Upstream of Thunder Road Crossing
046880 # [Rms: 5.0 02:50:UT-1 20.21 .075 1987.02:27:45 189.68 336 .000]
046881 # SUM 128.04 555 1987.02:27:45 191.91 n/a .000
046882 # R1987-0198700047-----DttIn:IDtNY-----AREHA-APEAKS-Tpeakdate:hh:mm-----Rwm-R-C-----Dfncms
046883 # ROUTE CHANNEL 5.0 02:21 49.51 .185 1988.06:25:14:00 190.73 n/a .000
046884 # [Rds: 5.0] out-> 5.0 01:84 129.05 .547 1987.02:27:45 191.91 n/a .000
046885 # [L/S/m: 482.7 / 430 / 035]
046886 # [Vmax: 572.0dmax: 349]
046887 # R1987-0198700050-----DttIn:IDtNY-----AREHA-APEAKS-Tpeakdate:hh:mm-----Rwm-R-C-----Dfncms
046888 # CONTINUOUS NASHVY 5.0 01:50:UT-1 20.21 .075 1987.02:27:45 189.73 336 .000
046889 # [Cn: 25.5; N: 3.00; Tpe: .96]
046890 # [Iarc6: 6.00; IMIN=14.94; SMAK=946.27; SK: .030]
046891 # [InterEventTime: 12.00]
046892 # R1987-0198700053-----DttIn:IDtNY-----AREHA-APEAKS-Tpeakdate:hh:mm-----Rwm-R-C-----Dfncms
046893 # ADD HYD 5.0 02:03 108.84 .641 1987.02:27:45 191.97 n/a .000
046894 # remark:30-Bearbrook Tributary Upstream of Thunder Road Crossing
046895 # [Rms: 5.0 02:50:UT-1 20.21 .075 1987.02:27:45 189.68 336 .000]
046896 # SUM 128.04 555 1987.02:27:45 191.91 n/a .000
046897 # R1987-0198700057-----DttIn:IDtNY-----AREHA-APEAKS-Tpeakdate:hh:mm-----Rwm-R-C-----Dfncms
046898 # ROUTE CHANNEL 5.0 02:21 49.51 .185 1988.06:25:14:00 190.73 n/a .000
046899 # [Rds: 5.0] out-> 5.0 01:84 129.05 .547 1987.02:27:45 191.91 n/a .000
046900 # [L/S/m: 482.7 / 430 / 035]
046901 # [Vmax: 572.0dmax: 349]
046902 # R1987-0198700060-----DttIn:IDtNY-----AREHA-APEAKS-Tpeakdate:hh:mm-----Rwm-R-C-----Dfncms
046903 # CONTINUOUS NASHVY 5.0 01:50:UT-1 20.21 .075 1987.02:27:45 189.73 336 .000
046904 # [Cn: 25.5; N: 3.00; Tpe: .96]
046905 # [Iarc6: 6.00; IMIN=14.94; SMAK=946.27; SK: .030]
046906 # [InterEventTime: 12.00]
046907 # R1987-0198700063-----DttIn:IDtNY-----AREHA-APEAKS-Tpeakdate:hh:mm-----Rwm-R-C-----Dfncms
046908 # ADD HYD 5.0 02:03 108.84 .641 1987.02:27:45 191.97 n/a .000
046909 # remark:30-Bearbrook Tributary Upstream of Thunder Road Crossing
046910 # [Rms: 5.0 02:50:UT-1 20.21 .075 1987.02:27:45 189.68 336 .000]
046911 # SUM 128.04 555 1987.02:27:45 191.91 n/a .000
046912 # R1987-0198700067-----DttIn:IDtNY-----AREHA-APEAKS-Tpeakdate:hh:mm-----Rwm-R-C-----Dfncms
046913 # ROUTE
```

[illegible]

```
05401> R19901.C00036 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05402> ADD HYD + 5.0 02:SOUTH-4 14.99 .071 1990.0720.14:15 242.37 n/a .000
05403> SUM= 5.0 02:Total 163.63 .727 1990.0720.14:45 241.24 n/a .000
05404> #####
05405> #####
05406> #####
05407> #####
05408> # CONTINUOUS RAINFALL DATA
05409> #####
05410> #####
05411> # STORMS
05412> #####
05413> ** END OF RUN : 1990
05414> #####
05415> #####
05416> #####
05417> #####
05418> #####
05419> #####
05420> #####
05421> RUN: COMMAND#
05422> R1991.C00001 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05423> START [TZERO = .00 hrs on 1990/04/1]
05424> [METOUT= 2 [1=imperial, 2=metric output]]
05425> [NSTORM= 0]
05426> [RUN = 1991]
05427> #####
05428> #####
05429> # SMWYHD / INPUT DATA FILE
05430> #####
05431> # Project Name: [THUNDER ROAD] Project Number: [1218]
05432> # Date : 04-20-2021
05433> # Modeler : [J.B]
05434> # Company : JFS.AIC
05435> # License #: 2549237
05436> #####
05437> #####
05438> #####
05439> # Ottawa International Airport - April 1st to October 31st
05440> R1991.C00002 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05441> # READ AES DATA
05442> [Filename = YOM.1967.2007.123 ]
05443> [Start_date= 1991.0401; End_date= 1991.1031]
05444> [Dtr 60.min; Length= 5136.hrs; Wethrs= 412; Dryhrs= 4724; PLOT= 482.20]
05445> Max Ave. Average rainfall intensities over
05446> 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
05447> 11.30 9.90 8.20 5.30 3.72 2.30 1.60 1.00 0.60 mm/hr
05448> 11.30 19.00 20.60 24.60 30.60 41.20 46.00 51.60 57.00 mm/hr
05449> 19910409 19910409 19910409 19910409 19910422 19910410 19910410 19910423 date
05450> Number of rainfall events per following interval time
05451> 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
05452> 130 113 105 83 65 40 39 34 27
05453> Number of events with at least the following durations
05454> 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
05455> 134 75 49 17 5 1 0 0 0
05456> R1991.C00003 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05457> COMPUTE API
05458> [APIN= 50.00; APIKdy= 9900; APIKdt= 9950]
05459> [APFmax= 77.10; APFavg= 22.50; APFmin= 3.80]
05460> R1991.C00004 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05461> CONTINUOUS NASHYD 5.0 01:NORTH-1 34.70 .038 1991.0422.16:20 142.99 .297 .000
05462> [Cn= 36.1; N= 3.00; Tp= 1.6]
05463> [IAREC= 6.00; DMIn=168.62; SMAX=*****; SK= .030]
05464> [InterEventTime= 12.00]
05465> R1991.C00005 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05466> CONTINUOUS NASHYD 5.0 01:NORTH-2 12.44 .045 1991.0410.4:10 144.05 .299 .000
05467> [Cn= 60.4; N= 3.00; Tp= 1.6]
05468> [IAREC= 6.00; DMIn= 91.01; SMAX=606.70; SK= .030]
05469> [InterEventTime= 12.00]
05470> R1991.C00006 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05471> CONTINUOUS NASHYD 5.0 01:HWY-1 2.36 .019 1991.0410.4:00 148.83 .309 .000
05472> [Cn= 61.7; N= 3.00; Tp= 1.6]
05473> [IAREC= 6.00; DMIn= 25.21; SMAX=168.09; SK= .030]
05474> [InterEventTime= 12.00]
05475> R1991.C00007 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05476> ADD HYD + 5.0 02:NORTH-1 34.70 .038 1991.0422.16:20 142.99 n/a .000
05477> SUM= 5.0 02:NORTH-1 34.70 .038 1991.0422.16:20 142.99 n/a .000
05478> + 5.0 02:HWY-1 2.36 .019 1991.0410.4:00 148.83 n/a .000
05479> + 5.0 01:HWY-1 2.36 .019 1991.0410.4:00 148.83 n/a .000
05480> R1991.C00008 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05481> ROUTE CHANNEL > 5.0 02:HWY-1 49.51 .084 1991.0410.4:15 143.53 n/a .000
05482> [RTD= 5.00] out< 5.0 01:HWY-1 49.51 .084 1991.0410.4:15 143.53 n/a .000
05483> [L/S= 478 / 440 / 035]
05484> [Vmax= .374; Dmax= .154]
05485> R1991.C00009 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05486> CONTINUOUS NASHYD 5.0 01:INT-1 4.39 .016 1991.0410.4:30 144.80 .300 .000
05487> [Cn= 60.4; N= 3.00; Tp= 1.6]
05488> [IAREC= 6.00; DMIn= 67.24; SMAX=448.24; SK= .030]
05489> [InterEventTime= 12.00]
05490> R1991.C00010 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05491> CONTINUOUS NASHYD 5.0 01:INT-2 3.61 .014 1991.0410.3:45 143.58 .297 .000
05492> [Cn= 47.4; N= 3.00; Tp= 1.6]
05493> [IAREC= 6.00; DMIn=115.26; SMAX=768.40; SK= .030]
05494> [InterEventTime= 12.00]
05495> R1991.C00011 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05496> CONTINUOUS NASHYD 5.0 01:ASIA 3.84 .015 1991.0410.4:20 144.57 .300 .000
05497> [Cn= 58.1; N= 3.00; Tp= 1.6]
05498> [IAREC= 6.00; DMIn= 73.13; SMAX=487.55; SK= .030]
05499> [InterEventTime= 12.00]
05500> R1991.C00012 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05501> # CONTINUOUS STANDHYD 5.0 01: Pond3-In 1.21 .024 1991.0409.1:00 242.00 .502 .000
05502> [XIMP= 64;TIMP= 75]
05503> [Horton parameters: F= 76.20; Fc= 13.20; DCAY=14; F=****]
05504> [Pervious area: IAPer= 4.67;SLPP=2.50;LGP= .500;MNP= .250;SCP= .0]
05505> [Impervious area: IAImp= 1.57;SLPI=2.50;LGI= .250;MNI= .013;SCI= .0]
05506> [IAREC= 12.00; IAREC= 12.00]
05507> R1991.C00013 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05508> ROUTE RESERVOIR > 5.0 02: Pond3-In 1.21 .024 1991.0409.1:00 242.00 n/a .000
05509> overflow < 5.0 01: Pond3-In 1.21 .024 1991.0422.4:05 241.98 n/a .000
05510> overflow < 5.0 02: Pond3-Over .00 .000 1991.0401.0:00 .00 n/a .000
05511> (MStoUser= 2183E-01 n3, TotDvVol= .0000E+00 n3, N-DvT= 0, TotDvDvF= 0 hrs)
05512> R1991.C00014 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05513> ADD HYD + 5.0 02: Pond3-Over .00 .000 1991.0401.0:00 .00 n/a .000
05514> SUM= 5.0 02: Pond3-Over 1.21 .024 1991.0422.4:05 241.98 n/a .000
05515> + 5.0 02: Pond3-Dltc 1.21 .024 1991.0422.4:05 241.98 n/a .000
05516> R1991.C00015 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05517> ROUTE CHANNEL > 5.0 01:ASAC-R 1.21 .003 1991.0422.7:00 241.98 n/a .000
05518> [RTD= 5.00] out< 5.0 01:ASAC-R 1.21 .003 1991.0422.7:00 241.98 n/a .000
05519> [L/S= 500 / 140 / 035]
05520> [Vmax= .071; Dmax= .000]
05521> R1991.C00016 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05522> CONTINUOUS NASHYD 5.0 01: Pond3-In 5.71 .032 1991.0410.3:40 144.57 .300 .000
05523> [Cn= 58.1; N= 3.00; Tp= 1.6]
05524> [InterEventTime= 12.00]
05525> [IAREC= 6.00; DMIn= 73.13; SMAX=487.55; SK= .030]
05526> R1991.C00017 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05527> ADD HYD + 5.0 02:INT-1 4.39 .016 1991.0410.4:30 144.80 n/a .000
05528> + 5.0 02:INT-2 3.61 .014 1991.0410.3:45 143.58 n/a .000
05529> + 5.0 02:INT-3 3.71 .032 1991.0410.3:40 144.57 n/a .000
05530> + 5.0 02:INT-4 3.84 .015 1991.0410.4:20 144.57 n/a .000
05531> + 5.0 02:ASAC-R 1.21 .003 1991.0422.7:00 241.98 n/a .000
05532> SUM= 5.0 01:INT-1 4.39 .016 1991.0410.4:30 144.80 n/a .000
05533> + 5.0 01:INT-2 3.61 .014 1991.0410.3:45 143.58 n/a .000
05534> R1991.C00018 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05535> ROUTE CHANNEL > 5.0 02:INT-1 4.39 .016 1991.0410.4:30 144.80 n/a .000
05536> [RTD= 5.00] out< 5.0 01:INT-1 4.39 .016 1991.0410.4:30 144.80 n/a .000
05537> [L/S= 500 / 500 / 035]
05538> [Vmax= .412; Dmax= .120]
05539> R1991.C00019 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05540> CONTINUOUS NASHYD 5.0 01:ASIA 3.84 .015 1991.0410.4:30 144.83 .300 .000
05541> [Cn= 36.1; N= 3.00; Tp= 1.6]
05542> [IAREC= 6.00; DMIn=191.00; SMAX=*****; SK= .030]
05543> [InterEventTime= 12.00]
05544> R1991.C00020 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05545> CONTINUOUS STANDHYD 5.0 01: Pond3-In 1.21 .024 1991.0409.1:00 242.00 .502 .000
05546> [XIMP= 64;TIMP= 75]
05547> [Horton parameters: F= 76.20; Fc= 13.20; DCAY=14; F=****]
05548> [Pervious area: IAPer= 4.67;SLPP=2.50;LGP= .500;MNP= .250;SCP= .0]
05549> [Impervious area: IAImp= 1.57;SLPI=1.50;LGI= .250;MNI= .013;SCI= .0]
05550> [IAREC= 12.00; IAREC= 12.00]
05551> R1991.C00021 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05552> ROUTE RESERVOIR > 5.0 02: Pond3-In 1.21 .024 1991.0409.1:00 242.00 n/a .000
05553> overflow < 5.0 01: Pond3-In 1.21 .024 1991.0409.1:00 242.00 n/a .000
05554> overflow < 5.0 02: Pond3-Over .00 .000 1991.0401.0:00 .00 n/a .000
05555> (MStoUser= 0.00E+00 n3, TotDvVol= .0000E+00 n3, N-DvT= 0, TotDvDvF= 0 hrs)
05556> R1991.C00022 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05557> CONTINUOUS NASHYD 5.0 01:ASIA 3.84 .015 1991.0410.4:30 144.83 .300 .000
05558> [Cn= 60.4; N= 3.00; Tp= 1.6]
05559> [IAREC= 6.00; DMIn= 48.56; SMAX=323.73; SK= .030]
05560> [InterEventTime= 12.00]
05561> R1991.C00023 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05562> ADD HYD + 5.0 02:INT-1 4.39 .016 1991.0410.4:30 144.80 n/a .000
05563> + 5.0 02:INT-2 3.61 .014 1991.0410.3:45 143.58 n/a .000
05564> + 5.0 02:INT-3 3.71 .032 1991.0410.3:40 144.57 n/a .000
05565> + 5.0 02:INT-4 3.84 .015 1991.0410.4:20 144.57 n/a .000
05566> + 5.0 02:ASAC-R 1.21 .003 1991.0422.7:00 241.98 n/a .000
05567> SUM= 5.0 01:INT-1 4.39 .016 1991.0410.4:30 144.80 n/a .000
05568> R1991.C00024 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05569> ROUTE CHANNEL > 5.0 02:INT-1 4.39 .016 1991.0410.4:30 144.80 n/a .000
05570> [RTD= 5.00] out< 5.0 02:INT-1 4.39 .016 1991.0410.4:30 144.80 n/a .000
05571> [L/S= 396 / 300 / 035]
05572> [Vmax= .380; Dmax= .154]
05573> R1991.C00025 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05574> CONTINUOUS NASHYD 5.0 01: SOUTHW-1 29.21 .037 1991.0410.4:15 142.76 .296 .000
05575> [Cn= 36.1; N= 3.00; Tp= 1.6]
05576> [IAREC= 6.00; DMIn=204.20; SMAX=*****; SK= .030]
05577> [InterEventTime= 12.00]
05578> R1991.C00026 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05579> ADD HYD + 5.0 02:INT-1 29.21 .037 1991.0410.4:15 142.76 n/a .000
05580> + 5.0 02: SOUTHW-1 29.21 .037 1991.0410.4:15 142.76 n/a .000
05581> SUM= 5.0 01: SOUTHW-1 29.21 .037 1991.0410.4:15 142.76 n/a .000
05582> + 5.0 02: SOUTHW-2 11.61 .030 1991.0410.3:45 142.83 .296 .000
05583> [Cn= 36.7; N= 3.00; Tp= .80]
05584> [IAREC= 6.00; DMIn=191.00; SMAX=*****; SK= .030]
05585> [InterEventTime= 12.00]
05586> R1991.C00027 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05587> CONTINUOUS NASHYD 5.0 01: SOUTHW-2 11.61 .030 1991.0410.3:45 142.83 .296 .000
05588> [Cn= 36.7; N= 3.00; Tp= .80]
05589> [IAREC= 6.00; DMIn=191.00; SMAX=*****; SK= .030]
05590> [InterEventTime= 12.00]
05591> R1991.C00028 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05592> CONTINUOUS NASHYD 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05593> ADD HYD + 5.0 02: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05594> SUM= 5.0 02: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05595> R1991.C00029 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05596> ROUTE CHANNEL > 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05597> [RTD= 5.00] out< 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05598> [L/S= 181 / 500 / 035]
05599> [Vmax= .483; Dmax= .237]
05600> R1991.C00030 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05601> CONTINUOUS NASHYD 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05602> [Cn= 42.6; N= 3.00; Tp= .80]
05603> [IAREC= 6.00; DMIn=141.94; SMAX=946.27; SK= .030]
05604> [InterEventTime= 12.00]
05605> R1991.C00031 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05606> CONTINUOUS NASHYD 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05607> ADD HYD + 5.0 02: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05608> SUM= 5.0 02: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05609> R1991.C00032 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05610> ROUTE CHANNEL > 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05611> [RTD= 5.00] out< 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05612> [L/S= 181 / 500 / 035]
05613> [Vmax= .527; Dmax= .254]
05614> R1991.C00033 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05615> CONTINUOUS NASHYD 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05616> [Cn= 39.5; N= 3.00; Tp= 1.23]
05617> [IAREC= 6.00; DMIn=141.94; SMAX=946.27; SK= .030]
05618> [InterEventTime= 12.00]
05619> R1991.C00034 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05620> CONTINUOUS NASHYD 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05621> ADD HYD + 5.0 02: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05622> SUM= 5.0 02: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05623> R1991.C00035 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05624> ROUTE CHANNEL > 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05625> [RTD= 5.00] out< 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05626> [L/S= 181 / 500 / 035]
05627> [Vmax= .527; Dmax= .254]
05628> R1991.C00036 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05629> CONTINUOUS NASHYD 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05630> ADD HYD + 5.0 02: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05631> SUM= 5.0 02: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05632> R1991.C00037 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05633> ROUTE CHANNEL > 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05634> [RTD= 5.00] out< 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05635> [L/S= 181 / 500 / 035]
05636> [Vmax= .527; Dmax= .254]
05637> R1991.C00038 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05638> CONTINUOUS NASHYD 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05639> ADD HYD + 5.0 02: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05640> SUM= 5.0 02: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05641> R1991.C00039 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05642> ROUTE CHANNEL > 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05643> [RTD= 5.00] out< 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05644> [L/S= 181 / 500 / 035]
05645> [Vmax= .527; Dmax= .254]
05646> R1991.C00040 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05647> CONTINUOUS NASHYD 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05648> ADD HYD + 5.0 02: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05649> SUM= 5.0 02: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05650> R1991.C00041 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05651> ROUTE CHANNEL > 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05652> [RTD= 5.00] out< 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05653> [L/S= 181 / 500 / 035]
05654> [Vmax= .527; Dmax= .254]
05655> R1991.C00042 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05656> CONTINUOUS NASHYD 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05657> ADD HYD + 5.0 02: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05658> SUM= 5.0 02: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05659> R1991.C00043 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05660> ROUTE CHANNEL > 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05661> [RTD= 5.00] out< 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05662> [L/S= 181 / 500 / 035]
05663> [Vmax= .527; Dmax= .254]
05664> R1991.C00044 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05665> CONTINUOUS NASHYD 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05666> ADD HYD + 5.0 02: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05667> SUM= 5.0 02: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05668> R1991.C00045 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05669> ROUTE CHANNEL > 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05670> [RTD= 5.00] out< 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05671> [L/S= 181 / 500 / 035]
05672> [Vmax= .527; Dmax= .254]
05673> R1991.C00046 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns-TpeakDate_hh:mm.....Rvmm-R.C.....Dfmcns
05674> CONTINUOUS NASHYD 5.0 01: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05675> ADD HYD + 5.0 02: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05676> SUM= 5.0 02: SOUTHW-3 7.98 .027 1991.0410.3:40 143.23 n/a .000
05677> R1991.C00047 .....DTIn-ID: NYHD.....AREAh-A-PEAKcns
```

Page 16

Page 17

Page 18

Page 19

Page 20

[illegible]

```
079221 [IAREC: 6.00; SMIN: 91.01; SMAX:606.70; SK: -030]
079222 [InterEventTime: 12.00]
079223 R2003:R2003000000-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079224 CONTINUOUS NASHYD 5.0 01:INT-1 2.36 .031 2003.0711.17:45 199.04 .359 .000
079225 [Cm: 61.4; N: 3.00; Tpe: 1.66]
079226 [IAREC: 6.00; SMIN: 25.21; SMAX:168.09; SK: -030]
079227 [InterEventTime: 12.00]
079228 R2003:R200300007-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079229 ADD HYD + 5.0 02:NORTH-1 34.70 .062 2003.1021.11:35 179.04 n/a .000
079230 + 5.0 02:INT-2 12.44 .005 2003.0711.17:05 183.22 n/a .000
079231 + 5.0 02:INT-3 2.36 .031 2003.0711.17:45 199.04 n/a .000
079232 SUM 5.0 01:INT 49.51 .135 2003.1021.9:30 181.05 n/a .000
079233 R2003:R200300008-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079234 ROUTE CHANNEL -> 5.0 02:INT 49.51 .135 2003.1021.9:30 181.05 n/a .000
079235 [RTOT 5.00] out-< 5.0 01:INT 49.51 .134 2003.1021.9:45 181.05 n/a .000
079236 [L/S=N: 478 / 440 / 035]
079237 (Vmax: 428.0Dmax: 299)
079238 R2003:R200300009-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079239 CONTINUOUS NASHYD 5.0 01:INT-1 4.39 .024 2003.1021.9:35 186.02 .335 .000
079240 ADD HYD + 5.0 02:INT-2 12.44 .005 2003.0711.17:05 183.22 n/a .000
079241 [IAREC: 6.00; SMIN: 67.24; SMAX:448.24; SK: -030]
079242 [InterEventTime: 12.00]
079243 R2003:R200300010-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079244 CONTINUOUS NASHYD 5.0 01:INT-2 3.61 .029 2003.0711.17:35 181.39 .327 .000
079245 [Cm: 47.4; N: 3.00; Tpe: .95]
079246 [IAREC: 6.00; SMIN:115.26; SMAX:768.40; SK: -030]
079247 [InterEventTime: 12.00]
079248 R2003:R200300011-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079249 CONTINUOUS NASHYD 5.0 01:ASIA 3.84 .022 2003.0711.18:05 185.19 .334 .000
079250 ADD HYD + 5.0 02:Pond3-Out 1.21 .003 2003.1021.9:05 285.97 n/a .000
079251 [IAREC: 6.00; SMIN: 73.13; SMAX:487.55; SK: -030]
079252 [InterEventTime: 12.00]
079253 R2003:R200300012-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079254 CONTINUOUS STANDHYD 5.0 01:Pond3-In 1.21 .035 2003.0711.17:00 285.99 .516 .000
079255 [XIMP: 64;TIMP: 75]
079256 [Norton parameters: For: 76.20;Fcc: 13.20;DCAY4: 14; F=****]
079257 [Previous area: Iaper: 4.67;SLPP:2.00;LGP: 500. NMP: 250;SCP: .0]
079258 [Impervious area: IALimp: 1.57;SLP1:2.00;LGI: 50. NMT: 013;SCT: .0]
079259 [IARECmp: 12.00; IARECdep: 12.00]
079260 R2003:R200300013-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079261 ROUTE RESERVOIR -> 5.0 02:Pond3-In 1.21 .035 2003.0711.17:00 285.99 n/a .000
079262 out-< 5.0 02:Pond3-Out 1.21 .003 2003.1021.9:05 285.97 n/a .000
079263 overflow< 5.0 03:Pond3-Over .00 .000 2003.0501.0:00 n/a n/a .000
079264 (MxStoUsed: 28242.01 n3, TotDvVol: 0.000E+00 n3, N-DvF: 0, TotDvWrt: 0 hrs)
079265 R2003:R200300014-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079266 ADD HYD + 5.0 02:Pond3-Out .00 .000 2003.0501.0:00 n/a n/a .000
079267 SUM 5.0 01:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079268 ROUTE CHANNEL -> 5.0 02:Pond3-Dltc 1.21 .003 2003.1021.9:05 285.97 n/a .000
079269 [RTOT 5.00] out-< 5.0 01:ASIA 3.84 .022 2003.0711.18:05 185.19 .334 .000
079270 [L/S=N: 478 / 440 / 035]
079271 [Vmax: 428.0Dmax: 299]
079272 [InterEventTime: 12.00]
079273 R2003:R200300015-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079274 CONTINUOUS NASHYD 5.0 01:INT-3 7.71 .047 2003.0711.17:35 185.19 .334 .000
079275 [Cm: 58.5; N: 3.00; Tpe: .89]
079276 [IAREC: 6.00; SMIN:115.26; SMAX:768.40; SK: -030]
079277 [InterEventTime: 12.00]
079278 R2003:R200300016-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079279 CONTINUOUS STANDHYD 5.0 01:Pond1-In 10.00 .201 2003.0711.17:00 177.11 .319 .000
079280 [XIMP: 38;TIMP: 74]
079281 [Norton parameters: For: 76.20;Fcc: 13.20;DCAY4: 14; F=****]
079282 [Previous area: Iaper: 4.67;SLPP:2.00;LGP: 500. NMP: 250;SCP: .0]
079283 [Impervious area: IALimp: 1.57;SLP1:2.00;LGI: 50. NMT: 013;SCT: .0]
079284 [IARECmp: 12.00; IARECdep: 12.00]
079285 R2003:R200300017-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079286 ROUTE RESERVOIR -> 5.0 02:Pond3-In 10.00 .201 2003.0711.17:00 177.11 n/a .000
079287 out-< 5.0 02:Pond3-Out 10.00 .024 2003.0711.15:15 177.11 n/a .000
079288 overflow< 5.0 03:Pond3-Over .00 .000 2003.0501.0:00 n/a n/a .000
079289 (MxStoUsed: 96545.01 n3, TotDvVol: 0.000E+00 n3, N-DvF: 0, TotDvWrt: 0 hrs)
079290 R2003:R200300018-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079291 CONTINUOUS NASHYD 5.0 01:INT 9.14 .005 2003.0711.17:45 189.05 .342 .000
079292 [Cm: 61.4; N: 3.00; Tpe: 1.12]
079293 [IAREC: 6.00; SMIN: 49.10; SMAX:323.73; SK: -030]
079294 [InterEventTime: 12.00]
079295 R2003:R200300019-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079296 ADD HYD + 5.0 02:ASIA 21.43 .057 2003.1021.9:40 178.41 .322 .000
079297 SUM 5.0 01:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079298 [IAREC: 6.00; SMIN:151.09; SMAX:****; SK: -030]
079299 [InterEventTime: 12.00]
079300 R2003:R200300020-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079301 CONTINUOUS STANDHYD 5.0 01:Pond1-In 10.00 .201 2003.0711.17:00 177.11 .319 .000
079302 [XIMP: 64;TIMP: 75]
079303 [Norton parameters: For: 76.20;Fcc: 13.20;DCAY4: 14; F=****]
079304 [Previous area: Iaper: 4.67;SLPP:2.00;LGP: 500. NMP: 250;SCP: .0]
079305 [Impervious area: IALimp: 1.57;SLP1:2.00;LGI: 50. NMT: 013;SCT: .0]
079306 [IARECmp: 12.00; IARECdep: 12.00]
079307 R2003:R200300021-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079308 ROUTE RESERVOIR -> 5.0 02:Pond3-In 10.00 .201 2003.0711.17:00 177.11 n/a .000
079309 out-< 5.0 02:Pond3-Out 10.00 .024 2003.0711.15:15 177.11 n/a .000
079310 overflow< 5.0 03:Pond3-Over .00 .000 2003.0501.0:00 n/a n/a .000
079311 (MxStoUsed: 96545.01 n3, TotDvVol: 0.000E+00 n3, N-DvF: 0, TotDvWrt: 0 hrs)
079312 R2003:R200300022-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079313 CONTINUOUS NASHYD 5.0 01:INT 9.14 .005 2003.0711.17:45 189.05 .342 .000
079314 [Cm: 61.4; N: 3.00; Tpe: 1.12]
079315 [IAREC: 6.00; SMIN: 49.10; SMAX:323.73; SK: -030]
079316 [InterEventTime: 12.00]
079317 R2003:R200300023-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079318 ADD HYD + 5.0 02:ASIA 21.43 .057 2003.1021.9:40 178.41 .322 .000
079319 SUM 5.0 01:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079320 [IAREC: 6.00; SMIN:151.09; SMAX:****; SK: -030]
079321 [InterEventTime: 12.00]
079322 R2003:R200300024-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079323 ROUTE CHANNEL -> 5.0 02:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079324 [RTOT 5.00] out-< 5.0 01:ASIA 3.84 .022 2003.0711.18:05 185.19 .334 .000
079325 [L/S=N: 478 / 440 / 035]
079326 (Vmax: 428.0Dmax: 299)
079327 [InterEventTime: 12.00]
079328 R2003:R200300025-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079329 CONTINUOUS NASHYD 5.0 01:INT-3 7.71 .047 2003.0711.17:35 185.19 .334 .000
079330 [Cm: 58.5; N: 3.00; Tpe: 1.40]
079331 [IAREC: 6.00; SMIN:204.20; SMAX:****; SK: -030]
079332 [InterEventTime: 12.00]
079333 R2003:R200300026-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079334 ADD HYD + 5.0 02:SOUTH-1 20.21 .055 2003.1021.9:25 178.10 n/a .000
079335 SUM 5.0 01:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079336 R2003:R200300027-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079337 ROUTE CHANNEL -> 5.0 02:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079338 [RTOT 5.00] out-< 5.0 01:ASIA 3.84 .022 2003.0711.18:05 185.19 .334 .000
079339 [L/S=N: 482 / 410 / 035]
079340 (Vmax: 538.0Dmax: 299)
079341 R2003:R200300028-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079342 CONTINUOUS NASHYD 5.0 01:SOUTH-2 11.61 .041 2003.0711.17:40 178.41 .322 .000
079343 [Cm: 26.7; N: 3.00; Tpe: .96]
079344 [IAREC: 6.00; SMIN:191.09; SMAX:****; SK: -030]
079345 [InterEventTime: 12.00]
079346 R2003:R200300029-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079347 ADD HYD + 5.0 02:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079348 SUM 5.0 01:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079349 R2003:R200300030-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079350 ROUTE CHANNEL -> 5.0 02:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079351 [RTOT 5.00] out-< 5.0 01:ASIA 3.84 .022 2003.0711.18:05 185.19 .334 .000
079352 [L/S=N: 482 / 410 / 035]
079353 (Vmax: 513.0Dmax: 295)
079354 R2003:R200300031-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079355 CONTINUOUS NASHYD 5.0 01:SOUTH-3 7.98 .038 2003.0711.17:35 180.02 .325 .000
079356 [Cm: 42.6; N: 3.00; Tpe: .89]
079357 [IAREC: 6.00; SMIN:141.94; SMAX:946.27; SK: -030]
079358 [InterEventTime: 12.00]
079359 R2003:R200300032-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079360 ADD HYD + 5.0 02:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079361 SUM 5.0 02:SOUTH-3 7.98 .038 2003.0711.17:35 180.02 n/a .000
079362 [IAREC: 6.00; SMIN: 50.12; SMAX:448.24; SK: -030]
079363 R2003:R200300033-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079364 SAVE HYD 5.0 01:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079365 [Cm: 36.0; N: 3.00; Tpe: 1.00]
079366 [IAREC: 6.00; SMIN:191.09; SMAX:****; SK: -030]
079367 [InterEventTime: 12.00]
079368 R2003:R200300034-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079369 ROUTE CHANNEL -> 5.0 02:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079370 [RTOT 5.00] out-< 5.0 01:ASIA 3.84 .022 2003.0711.18:05 185.19 .334 .000
079371 [L/S=N: 423 / 440 / 035]
079372 (Vmax: 567.0Dmax: 299)
079373 R2003:R200300035-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079374 CONTINUOUS NASHYD 5.0 01:INT-4 14.99 .049 2003.0711.17:50 179.04 .323 .000
079375 [Cm: 39.5; N: 3.00; Tpe: 1.23]
079376 [IAREC: 6.00; SMIN:151.09; SMAX:****; SK: -030]
079377 [InterEventTime: 12.00]
079378 R2003:R200300036-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079379 ADD HYD + 5.0 02:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079380 SUM 5.0 02:SOUTH-4 14.99 .049 2003.0711.17:50 179.04 n/a .000
079381 [IAREC: 6.00; SMIN: 50.12; SMAX:448.24; SK: -030]
079382 R2003:R200300037-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079383 ROUTE CHANNEL -> 5.0 02:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079384 [RTOT 5.00] out-< 5.0 01:ASIA 3.84 .022 2003.0711.18:05 185.19 .334 .000
079385 [L/S=N: 482 / 410 / 035]
079386 (Vmax: 513.0Dmax: 295)
079387 R2003:R200300038-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079388 CONTINUOUS NASHYD 5.0 01:SOUTH-2 11.61 .041 2003.0711.17:40 178.41 .322 .000
079389 [Cm: 36.7; N: 3.00; Tpe: .96]
079390 [IAREC: 6.00; SMIN:191.09; SMAX:****; SK: -030]
079391 [InterEventTime: 12.00]
079392 R2003:R200300039-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079393 ADD HYD + 5.0 02:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079394 SUM 5.0 02:SOUTH-2 11.61 .041 2003.0711.17:40 178.41 .322 .000
079395 [IAREC: 6.00; SMIN:151.09; SMAX:****; SK: -030]
079396 [InterEventTime: 12.00]
079397 R2003:R200300040-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079398 ROUTE CHANNEL -> 5.0 02:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079399 [RTOT 5.00] out-< 5.0 01:ASIA 3.84 .022 2003.0711.18:05 185.19 .334 .000
079400 [L/S=N: 482 / 410 / 035]
079401 (Vmax: 513.0Dmax: 295)
079402 R2003:R200300041-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079403 CONTINUOUS NASHYD 5.0 01:SOUTH-2 11.61 .041 2003.0711.17:40 178.41 .322 .000
079404 [Cm: 36.7; N: 3.00; Tpe: .96]
079405 [IAREC: 6.00; SMIN:151.09; SMAX:****; SK: -030]
079406 [InterEventTime: 12.00]
079407 R2003:R200300042-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079408 ADD HYD + 5.0 02:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079409 SUM 5.0 02:SOUTH-2 11.61 .041 2003.0711.17:40 178.41 .322 .000
079410 [IAREC: 6.00; SMIN:151.09; SMAX:****; SK: -030]
079411 [InterEventTime: 12.00]
079412 R2003:R200300043-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079413 ROUTE CHANNEL -> 5.0 02:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079414 [RTOT 5.00] out-< 5.0 01:ASIA 3.84 .022 2003.0711.18:05 185.19 .334 .000
079415 [L/S=N: 482 / 410 / 035]
079416 (Vmax: 513.0Dmax: 295)
079417 R2003:R200300044-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079418 CONTINUOUS NASHYD 5.0 01:SOUTH-2 11.61 .041 2003.0711.17:40 178.41 .322 .000
079419 [Cm: 36.7; N: 3.00; Tpe: .96]
079420 [IAREC: 6.00; SMIN:151.09; SMAX:****; SK: -030]
079421 [InterEventTime: 12.00]
079422 R2003:R200300045-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079423 ADD HYD + 5.0 02:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079424 SUM 5.0 02:SOUTH-2 11.61 .041 2003.0711.17:40 178.41 .322 .000
079425 [IAREC: 6.00; SMIN:151.09; SMAX:****; SK: -030]
079426 [InterEventTime: 12.00]
079427 R2003:R200300046-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079428 ROUTE CHANNEL -> 5.0 02:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079429 [RTOT 5.00] out-< 5.0 01:ASIA 3.84 .022 2003.0711.18:05 185.19 .334 .000
079430 [L/S=N: 482 / 410 / 035]
079431 (Vmax: 513.0Dmax: 295)
079432 R2003:R200300047-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079433 CONTINUOUS NASHYD 5.0 01:SOUTH-2 11.61 .041 2003.0711.17:40 178.41 .322 .000
079434 [Cm: 36.7; N: 3.00; Tpe: .96]
079435 [IAREC: 6.00; SMIN:151.09; SMAX:****; SK: -030]
079436 [InterEventTime: 12.00]
079437 R2003:R200300048-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079438 ROUTE CHANNEL -> 5.0 02:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079439 [RTOT 5.00] out-< 5.0 01:ASIA 3.84 .022 2003.0711.18:05 185.19 .334 .000
079440 [L/S=N: 482 / 410 / 035]
079441 (Vmax: 513.0Dmax: 295)
079442 R2003:R200300049-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079443 CONTINUOUS NASHYD 5.0 01:SOUTH-2 11.61 .041 2003.0711.17:40 178.41 .322 .000
079444 [Cm: 36.7; N: 3.00; Tpe: .96]
079445 [IAREC: 6.00; SMIN:151.09; SMAX:****; SK: -030]
079446 [InterEventTime: 12.00]
079447 R2003:R200300050-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079448 ROUTE CHANNEL -> 5.0 02:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079449 [RTOT 5.00] out-< 5.0 01:ASIA 3.84 .022 2003.0711.18:05 185.19 .334 .000
079450 [L/S=N: 482 / 410 / 035]
079451 (Vmax: 513.0Dmax: 295)
079452 R2003:R200300051-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079453 CONTINUOUS NASHYD 5.0 01:SOUTH-2 11.61 .041 2003.0711.17:40 178.41 .322 .000
079454 [Cm: 36.7; N: 3.00; Tpe: .96]
079455 [IAREC: 6.00; SMIN:151.09; SMAX:****; SK: -030]
079456 [InterEventTime: 12.00]
079457 R2003:R200300052-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079458 ROUTE CHANNEL -> 5.0 02:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079459 [RTOT 5.00] out-< 5.0 01:ASIA 3.84 .022 2003.0711.18:05 185.19 .334 .000
079460 [L/S=N: 482 / 410 / 035]
079461 (Vmax: 513.0Dmax: 295)
079462 R2003:R200300053-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079463 CONTINUOUS NASHYD 5.0 01:SOUTH-2 11.61 .041 2003.0711.17:40 178.41 .322 .000
079464 [Cm: 36.7; N: 3.00; Tpe: .96]
079465 [IAREC: 6.00; SMIN:151.09; SMAX:****; SK: -030]
079466 [InterEventTime: 12.00]
079467 R2003:R200300054-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079468 ROUTE CHANNEL -> 5.0 02:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079469 [RTOT 5.00] out-< 5.0 01:ASIA 3.84 .022 2003.0711.18:05 185.19 .334 .000
079470 [L/S=N: 482 / 410 / 035]
079471 (Vmax: 513.0Dmax: 295)
079472 R2003:R200300055-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079473 CONTINUOUS NASHYD 5.0 01:SOUTH-2 11.61 .041 2003.0711.17:40 178.41 .322 .000
079474 [Cm: 36.7; N: 3.00; Tpe: .96]
079475 [IAREC: 6.00; SMIN:151.09; SMAX:****; SK: -030]
079476 [InterEventTime: 12.00]
079477 R2003:R200300056-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079478 ROUTE CHANNEL -> 5.0 02:INT 49.51 .135 2003.1021.9:05 285.97 n/a .000
079479 [RTOT 5.00] out-< 5.0 01:ASIA 3.84 .022 2003.0711.18:05 185.19 .334 .000
079480 [L/S=N: 482 / 410 / 035]
079481 (Vmax: 513.0Dmax: 295)
079482 R2003:R200300057-----DTIN-ID:NYHD-----AREHA-QPEAKNS-TpeakDate:hh:mm-----Rvmm-R.C-----Dfmcns
079483 CONTINUOUS NASHYD 5.0 01:SOUTH-2 11.61 .041 2003.0711.17:40 178.41 .322 .000
079484 [Cm: 36.7; N: 3.00; Tpe: .96]
079485 [IAREC: 6.00; SMIN:151.09; SMAX:****; SK
```

```
08281# [InterEventTime= 12.00]
08282# R2004:R200802-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08283# ADD HYD + 5.0 02:05 140.66 2.912 2004.0909.15:05 239.30 n/a .000
08284# SUM= 5.0 02:SOUTH-3 7.98 1.59 2004.0909.15:20 237.32 n/a .000
08285# [Chk 36.1: N= 3.00; Tm= .80]
08286# R2004:R200803-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08287# SAVE HYD + 5.0 02:16 140.64 3.097 2004.0909.15:05 239.15 n/a .000
08288# name :36.2004
08289# remark:36-Bearbrook Tributary Upstream of Thunder Road Crossing
08290# R2004:R200804-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08291# ROUTE CHANNEL -> 5.0 02:16 140.64 3.097 2004.0909.15:05 239.15 n/a .000
08292# [ROT= 5.00] out<= 5.0 01:ASC-R 14.09 324 2004.0909.15:10 236.78 413 .000
08293# [L/S= 323 / 440 / 035]
08294# (Vmax :.802:Dmax= .518)
08295# R2004:R200805-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08296# CONTINUOUS NASHDY 5.0 01:SOUTH-4 14.99 324 2004.0909.15:10 236.78 413 .000
08297# [Chk 36.1: N= 3.00; Tm= .80]
08298# [IAREC= 6.00; SMIN=168.62; SMAX=*****; SK= .030]
08299# [InterEventTime= 12.00]
08300# R2004:R200806-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08301# ADD HYD + 5.0 02:06 140.64 3.093 2004.0909.15:10 239.19 n/a .000
08302# SUM= 5.0 01:Total 163.63 3.417 2004.0909.15:10 238.97 n/a .000
08303#
08304# =====
08305# #####
08306# CONTINUOUS RAINFALL DATA
08307# #####
08308# #####
08309# * STORMS
08310# *****
08311# ** END OF RUN : 2006
08312#
08313#
08314#
08315#
08316#
08317#
08318#
08319#
08320# RUN:COMMAND#
08321# R2006:R200601-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08322# START
08323# [TZERO = .00 hrs on 20060401]
08324# [METOUT= 2 (Imperial, 2-metric output)]
08325# [NSTORE= 0]
08326# [NRUN = 2006]
08327# *****
08328# * SWHYMO / INPUT DATA FILE
08329# * #####
08330# * Project Name: [THUNDER ROAD] Project Number: [2128]
08331# * Date : [04-20-2021]
08332# * Modeler : [J.F.]
08333# * Company : JFSaInc.
08334# * License #: 2540227
08335# * #####
08336# * #####
08337# * #####
08338# * Ottawa International Airport - April list to October 31st
08339# R2006:R200602-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08340# READ AFS DATA
08341# [Filename = YOM_1967_2007_123 ]
08342# [Start date= 2006.0401; End date= 2006.1031]
08343# [DT= 60 min; Length= 5112 hrs; Wethrs= 477; Dryhrs= 4635; PTO= 723.40]
08344# Maximum average rainfall intensities over
08345# 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
08346# 10.90 10.60 9.23 6.67 3.84 2.11 1.49 1.32 1.03 mm/hr
08347# 10.90 10.20 9.79 7.00 4.10 2.36 1.60 1.50 1.20
08348# 20060801 20060903 20060903 20060903 20060904 20060904 20060905 20060905
08349# Number of rainfall events per following interval time
08350# 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
08351# 141 113 90 74 60 47 40 30 21
08352# Number of events with at least the following durations
08353# 1 hr 2 hrs 3 hrs 6 hrs 12 hrs 24 hrs 36 hrs 48 hrs 72 hrs
08354# 140 88 58 22 9 0 0 0 0
08355# R2006:R200603-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08356# COMPUTE API
08357# [APIIn: 50.00; APIQty= 9000; APIKdt= 9956]
08358# [APIvax= 85.47; APIAvg= 32.83; APImin= 8.90]
08359# R2006:R200604-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08360# CONTINUOUS NASHDY 5.0 01:NORTH-1 34.79 655 2006.0801.3:05 284.68 394 .000
08361# [Chk 36.1: N= 3.00; Tm= 4.12]
08362# [IAREC= 6.00; SMIN=168.62; SMAX=*****; SK= .030]
08363# [InterEventTime= 12.00]
08364# R2006:R200605-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08365# CONTINUOUS NASHDY 5.0 01:NORTH-2 14.44 677 2006.0801.3:05 286.55 396 .000
08366# [Chk 53.0: N= 3.00; Tm= 1.29]
08367# [IAREC= 6.00; SMIN= 61.62; SMAX=606.70; SK= .030]
08368# [InterEventTime= 12.00]
08369# R2006:R200606-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08370# CONTINUOUS NASHDY 5.0 01:NORTH-1 34.79 656 2006.0801.3:05 284.61 407 .000
08371# [Chk 61.7: N= 3.00; Tm= 1.21]
08372# [IAREC= 6.00; SMIN= 25.21; SMAX=168.89; SK= .030]
08373# [InterEventTime= 12.00]
08374# R2006:R200607-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08375# ADD HYD + 5.0 02:NORTH-2 14.44 676 2006.0801.3:05 284.68 n/a .000
08376# SUM= 5.0 02:NORTH-2 12.44 677 2006.0801.3:05 286.55 n/a .000
08377# [Chk 36.1: N= 3.00; Tm= 1.21]
08378# [IAREC= 6.00; SMIN= 61.62; SMAX=606.70; SK= .030]
08379# R2006:R200608-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08380# ROUTE CHANNEL -> 5.0 02:16 140.64 3.093 2006.0801.4:05 285.62 n/a .000
08381# [ROT= 5.00] out<= 5.0 01:ASC-R 49.51 143 2006.0801.4:15 285.62 n/a .000
08382# [L/S= 323 / 440 / 035]
08383# (Vmax :.437:Dmax= .194)
08384# R2006:R200609-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08385# CONTINUOUS NASHDY 5.0 01:INT-1 4.39 626 2006.0801.4:10 287.47 398 .000
08386# [Chk 64.4: N= 3.00; Tm= 1.66]
08387# [IAREC= 6.00; SMIN= 61.62; SMAX=448.24; SK= .030]
08388# [InterEventTime= 12.00]
08389# R2006:R200610-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08390# CONTINUOUS NASHDY 5.0 01:NORTH-2 3.61 623 2006.0801.3:05 285.72 395 .000
08391# [Chk 47.4: N= 3.00; Tm= .95]
08392# [IAREC= 6.00; SMIN=15.26; SMAX=768.40; SK= .030]
08393# [InterEventTime= 12.00]
08394# R2006:R200611-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08395# CONTINUOUS NASHDY 5.0 01:NORTH-1 34.79 656 2006.0801.4:05 287.47 397 .000
08396# [Chk 58.4: N= 3.00; Tm= 1.46]
08397# [IAREC= 6.00; SMIN= 73.13; SMAX=487.55; SK= .030]
08398# [InterEventTime= 12.00]
08399# R2006:R200612-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08400# CONTINUOUS STANDYD 5.0 01:Pond3-1n 1.21 643 2006.0801.3:00 292.87 343 .000
08401# [XIMP= 64.TIMP= 75]
08402# [Horton parameters: F= 76.20; Fc= 13.20; DCAY= 1.4; F= *****]
08403# [Previous area: IArea= 4.67; SLP= 2.50; LOP= .00; MNP= .250; SCP= .0]
08404# [Impervious area: IArea= 1.57; SLP= 1.50; LOP= .00; MNP= .013; SCP= .0]
08405# [IARECimp= 12.00; IARECp= 12.00]
08406# R2006:R200613-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08407# ROUTE RESERVOIR -> 5.0 02:Pond3-Over 10.00 239 2006.0802.0:00 .00 n/a .000
08408# out<= 5.0 01:Pond3-out 1.21 .003 2006.0801.3:45 392.93 n/a .000
08409# overflow<= 5.0 03:Pond3-Over 10.00 2006.0802.0:00 .00 n/a .000
08410# (MxStoUsed= 3.08E-01 n3, TotDvVol= .0000E+00 n3, N-OvF= 0, TotDvOrvF= 0 hrs)
08411# R2006:R200614-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08412# ADD HYD + 5.0 02:Pond3-out 1.21 .003 2006.0801.3:45 392.93 n/a .000
08413# SUM= 5.0 02:Pond3-out 1.21 .003 2006.0801.3:45 392.93 n/a .000
08414# [Chk 36.1: N= 3.00; Tm= 1.21]
08415# R2006:R200615-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08416# ROUTE CHANNEL -> 5.0 02:Pond3-out 1.21 .003 2006.0801.3:45 392.93 n/a .000
08417# [ROT= 5.00] out<= 5.0 01:ASC-R 1.21 .003 2006.0903.10:25 392.93 n/a .000
08418# [L/S= 500 / 140 / 035]
08419# (Vmax :.075:Dmax= .039)
08420# R2006:R200616-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08421# CONTINUOUS NASHDY 5.0 01:INT-3 5.71 655 2006.0801.3:35 287.47 397 .000
08422# [Chk 68.5: N= 3.00; Tm= .80]
08423# [IAREC= 6.00; SMIN= 73.13; SMAX=487.55; SK= .030]
08424# [InterEventTime= 12.00]
08425# R2006:R200617-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08426# ADD HYD + 5.0 02:INT-1 4.39 626 2006.0801.4:10 287.47 n/a .000
08427# SUM= 5.0 02:INT-1 4.39 626 2006.0801.4:10 287.47 n/a .000
08428# + 5.0 02:INT-2 3.61 623 2006.0801.3:35 285.72 n/a .000
08429# + 5.0 02:INT-3 5.71 655 2006.0801.3:35 287.47 n/a .000
08430# + 5.0 02:ASC-R 1.21 626 2006.0801.4:05 285.62 n/a .000
08431# + 5.0 02:ASC-R 1.21 .003 2006.0903.10:25 392.93 n/a .000
08432# SUM= 5.0 01:12 68.26 263 2006.0801.3:55 287.90 n/a .000
08433# R2006:R200618-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08434# ROUTE CHANNEL -> 5.0 02:12 68.26 263 2006.0801.3:55 287.90 n/a .000
08435# [ROT= 5.00] out<= 5.0 01:ASC-R 68.26 268 2006.0801.4:05 287.90 n/a .000
08436# [L/S= 359 / 560 / 035]
08437# (Vmax :.565:Dmax= .194)
08438# R2006:R200619-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08439# CONTINUOUS NASHDY 5.0 01:ASC-R 21.43 .061 2006.0801.4:15 284.41 393 .000
08440# [Chk 36.1: N= 3.00; Tm= 1.66]
08441# [IAREC= 6.00; SMIN=191.09; SMAX=*****; SK= .030]
08442# [InterEventTime= 12.00]
08443# R2006:R200620-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08444# CONTINUOUS STANDYD 5.0 01:Pond1-1n 10.00 239 2006.0801.3:00 293.68 351 .000
08445# [XIMP= 36.TIMP= 74]
08446# [Horton parameters: F= 76.20; Fc= 13.20; DCAY= 1.4; F= *****]
08447# [Previous area: IArea= 4.67; SLP= 2.50; LOP= .00; MNP= .250; SCP= .0]
08448# [Impervious area: IArea= 1.57; SLP= 1.50; LOP= .00; MNP= .013; SCP= .0]
08449# [IARECimp= 12.00; IARECp= 12.00]
08450# R2006:R200621-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08451# ROUTE RESERVOIR -> 5.0 02:Pond1-1n 10.00 239 2006.0801.3:00 293.68 n/a .000
08452# out<= 5.0 02:Pond1-Over 1.21 .003 2006.0802.0:00 .00 n/a .000
08453# overflow<= 5.0 03:Pond1-Over 10.00 2006.0802.0:00 .00 n/a .000
08454# (MxStoUsed= .1637E+03 n3, TotDvVol= .0000E+00 n3, N-OvF= 0, TotDvOrvF= 0 hrs)
08455# R2006:R200622-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08456# CONTINUOUS NASHDY 5.0 01:ASC-R 9.14 .099 2006.0801.3:45 289.66 .000
08457# [Chk 68.4: N= 3.00; Tm= 1.32]
08458# [IAREC= 6.00; SMIN= 48.56; SMAX=323.73; SK= .030]
08459# [InterEventTime= 12.00]
08460# R2006:R200623-01-----DTIn:ID:NYHD-----AREAh-A-PEAKs-TPeakDate:hh:mm-----Rvmm-R-C-----DwFms
08461# ADD HYD + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08462# SUM= 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08463# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08464# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08465# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08466# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08467# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08468# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08469# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08470# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08471# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08472# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08473# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08474# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08475# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08476# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08477# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08478# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08479# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08480# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08481# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08482# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08483# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08484# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08485# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08486# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08487# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08488# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08489# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08490# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08491# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08492# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08493# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08494# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08495# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08496# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08497# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08498# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08499# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08500# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08501# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08502# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08503# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08504# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08505# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08506# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08507# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08508# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08509# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08510# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08511# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08512# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08513# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08514# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08515# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08516# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08517# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08518# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08519# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08520# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08521# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08522# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08523# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08524# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08525# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08526# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08527# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08528# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08529# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08530# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08531# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08532# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08533# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08534# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08535# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08536# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08537# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08538# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08539# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08540# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08541# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08542# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08543# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08544# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08545# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08546# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08547# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08548# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08549# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08550# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08551# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08552# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08553# + 5.0 02:ASC-R 10.00 239 2006.0801.3:00 293.68 n/a .000
08554# +
```

Page 24

# Appendix D

## Oil and Grit Separators

## Detailed Stormceptor Sizing Report – WS-1-39

| Project Information & Location |                               |                            |                     |
|--------------------------------|-------------------------------|----------------------------|---------------------|
| <b>Project Name</b>            | 6160 Thunder Rd.              | <b>Project Number</b>      | 200578              |
| <b>City</b>                    | Ottawa                        | <b>State/ Province</b>     | Ontario             |
| <b>Country</b>                 | Canada                        | <b>Date</b>                | 5/17/2023           |
| Designer Information           |                               | EOR Information (optional) |                     |
| <b>Name</b>                    | Brandon O'Leary               | <b>Name</b>                | Virginia Johnson    |
| <b>Company</b>                 | Rinker                        | <b>Company</b>             | LRL Associates Ltd. |
| <b>Phone #</b>                 | 905-630-0359                  | <b>Phone #</b>             | 613-915-9503        |
| <b>Email</b>                   | brandon.oleary@rinkerpipe.com | <b>Email</b>               | vjohnson@lrl.ca     |

### Stormwater Treatment Recommendation

The recommended Stormceptor Model(s) which achieve or exceed the user defined water quality objective for each site within the project are listed in the below Sizing Summary table.

|                                         |                                  |
|-----------------------------------------|----------------------------------|
| <b>Site Name</b>                        | WS-1-39                          |
| <b>Recommended Stormceptor Model</b>    | EFO6                             |
| <b>TSS Removal (%) Provided</b>         | 83                               |
| <b>Particle Size Distribution (PSD)</b> | Fine Distribution                |
| <b>Rainfall Station</b>                 | OTTAWA MACDONALD-CARTIER INT'L A |

The recommended Stormceptor model achieves the water quality objectives based on the selected inputs, historical rainfall records and selected particle size distribution.

| EFO Sizing Summary   |                        |                                   |                                           |
|----------------------|------------------------|-----------------------------------|-------------------------------------------|
| EFO Model            | % TSS Removal Provided | % Runoff Volume Captured Provided | Standard EFO Hydrocarbon Storage Capacity |
| EFO4                 | 72                     | 88                                | 265 L (70 gal)                            |
| <b>EFO6</b>          | <b>83</b>              | <b>99</b>                         | <b>610 L (160 gal)</b>                    |
| EFO8                 | 88                     | 99                                | 1070 L (280 gal)                          |
| EFO10                | 91                     | 99                                | 1670 L (440 gal)                          |
| EFO12                | 97                     | 99                                | 2475 L (655 gal)                          |
| Parallel Units / MAX | Custom                 | Custom                            | Custom                                    |

**For Stormceptor Specifications and Drawings Please Visit:**  
<http://www.imbriumsystems.com/technical-specifications>

## OVERVIEW

**Stormceptor® EF** is a continuation and evolution of the most globally recognized oil-grit separator (OGS) stormwater treatment technology - **Stormceptor®**. Also known as a hydrodynamic separator, the enhanced flow Stormceptor EF is a high performing oil-grit separator that effectively removes a wide variety of pollutants from stormwater and snowmelt runoff at higher flow rates as compared to the original Stormceptor. Stormceptor EF captures and retains sediment (TSS), free oils, gross pollutants and other pollutants that attach to particles, such as nutrients and metals. Stormceptor EF's patent-pending treatment and scour prevention technology and internal bypass ensures sediment is retained during all rainfall events.

## Design Methodology

Stormceptor is sized using PCSWMM for Stormceptor, a continuous simulation model based on US EPA SWMM. The program calculates hydrology using local historical rainfall data and specified site parameters. With US EPA SWMM's precision, every Stormceptor unit is designed to achieve a defined water quality objective. The TSS removal data presented follows US EPA guidelines to reduce the average annual TSS load. The Stormceptor's unit process for TSS removal is settling. The settling model calculates TSS removal by analyzing:

- Site parameters
- Continuous historical rainfall data, including duration, distribution, peaks & inter-event dry periods
- Particle size distribution, and associated settling velocities (Stokes Law, corrected for drag)
- TSS load
- Detention time of the system

| Hydrology Analysis                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                  |                                    |         |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|------------------------------------|---------|
| PCSWMM for Stormceptor calculates annual hydrology with the US EPA SWMM and local continuous historical rainfall data. Performance calculations of Stormceptor are based on the average annual removal of TSS for the selected site parameters. The Stormceptor is engineered to capture sediment particles by treating the required average annual runoff volume, ensuring positive removal efficiency is maintained during each rainfall event, and preventing negative removal efficiency (scour). Smaller recurring storms account for the majority of rainfall events and average annual runoff volume, as observed in the historical rainfall data analyses presented in this section. |                                  |                                    |         |
| Rainfall Station                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                  |                                    |         |
| State/Province                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Ontario                          | Total Number of Rainfall Events    | 4093    |
| Rainfall Station Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | OTTAWA MACDONALD-CARTIER INT'L A | Total Rainfall (mm)                | 20978.1 |
| Station ID #                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 6000                             | Average Annual Rainfall (mm)       | 567.0   |
| Coordinates                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 45°19'N, 75°40'W                 | Total Evaporation (mm)             | 1657.0  |
| Elevation (ft)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 370                              | Total Infiltration (mm)            | 5442.4  |
| Years of Rainfall Data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 37                               | Total Rainfall that is Runoff (mm) | 13878.7 |
| Notes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                  |                                    |         |
| <ul style="list-style-type: none"> <li>• Stormceptor performance estimates are based on simulations using PCSWMM for Stormceptor, which uses the EPA Rainfall and Runoff modules.</li> <li>• Design estimates listed are only representative of specific project requirements based on total suspended solids (TSS) removal defined by the selected PSD, and based on stable site conditions only, after construction is completed.</li> <li>• For submerged applications or sites specific to spill control, please contact your local Stormceptor representative for further design assistance.</li> </ul>                                                                                 |                                  |                                    |         |

## ONLINE APPLICATION

Stormceptor EF's internal bypass and patent-pending scour prevention technology has demonstrated very effective retention of pollutants in third-party testing and verification following the Canadian ETV's **Procedure for Laboratory Testing of Oil-Grit Separators**. Sediment scour prevention demonstrated an effluent concentration of less than 10 mg/L for sediment particles ranging from 1 to 1,000 microns, even during peak influent flow rates associated with infrequent high intensity storm events. While Stormceptor EF will capture oil, only the Stormceptor EFO configuration has been third-party tested and verified to retain greater than 99% of captured oil. Based on these verified performance attributes, the most efficient and widely accepted application of Stormceptor EF is an online configuration, which allows all upstream conveyance flows to enter and exit the unit. The online application eliminates the need for costly additional bypass structures, piping and installation expense.

**FLOW ENTRANCE OPTIONS**

**Single Inlet Pipe** – A common design which includes one inlet pipe and one outlet pipe. A 90-degree (maximum) bend is also accepted with this configuration.

**Inlet Grate** – Allows surface runoff to enter the unit from grade. The inlet grate option can also be used in conjunction with one inlet pipe or multiple inlet pipes. A removable flow deflector is added in the Stormceptor EF4/EFO4.

| Maximum Pipe Diameter |               |                |
|-----------------------|---------------|----------------|
| Model                 | Inlet (in/mm) | Outlet (in/mm) |
| EF4 / EFO4            | 24 / 610      | 24 / 610       |
| EF6 / EFO6            | 36 / 915      | 36 / 915       |
| EF8 / EFO8            | 48 / 1220     | 48 / 1220      |
| EF10 / EFO10          | 72 / 1828     | 72 / 1828      |
| EF12 / EFO12          | 72 / 1828     | 72 / 1828      |

**Multiple Inlet Pipe** – Allows for multiple inlet pipes of various diameters to enter the unit.

| Maximum Pipe Diameter |               |                |
|-----------------------|---------------|----------------|
| Model                 | Inlet (in/mm) | Outlet (in/mm) |
| EF4 / EFO4            | 18 / 457      | 24 / 610       |
| EF6 / EFO6            | 30 / 762      | 36 / 915       |
| EF8 / EFO8            | 42 / 1067     | 48 / 1220      |
| EF10 / EFO10          | 60 / 1524     | 72 / 1828      |
| EF12 / EFO12          | 60 / 1524     | 72 / 1828      |

| Drainage Area    |       | Up Stream Storage |                 |
|------------------|-------|-------------------|-----------------|
| Total Area (ha)  | 10.00 | Storage (ha-m)    | Discharge (cms) |
| Imperviousness % | 74.00 | 0.0000            | 0.000           |
|                  |       | 0.2061            | 0.022           |
|                  |       | 0.3279            | 0.026           |
|                  |       | 0.5930            | 0.032           |

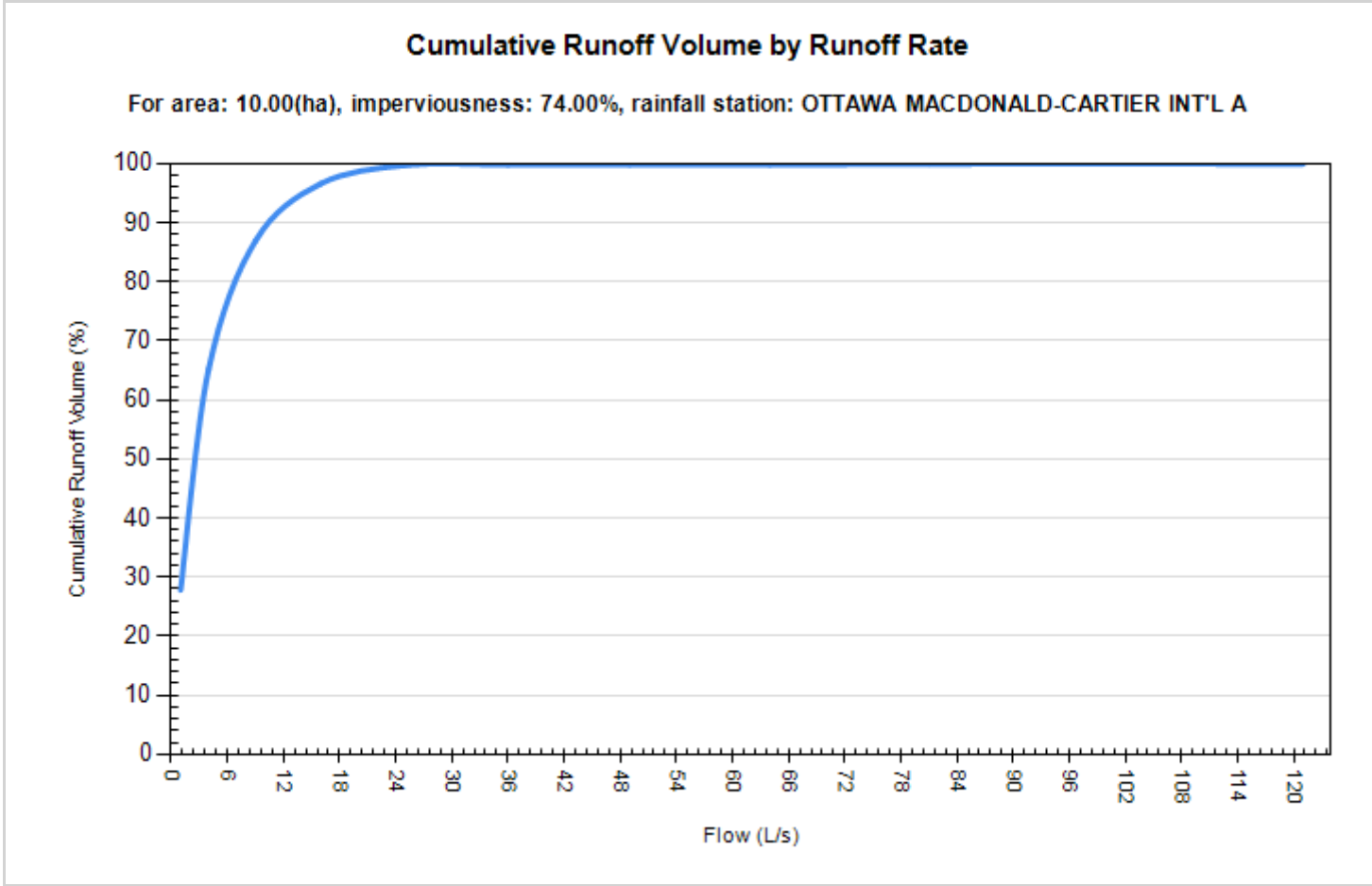
| Up Stream Flow Diversion       |  | Design Details                     |    |
|--------------------------------|--|------------------------------------|----|
| Max. Flow to Stormceptor (cms) |  | Stormceptor Inlet Invert Elev (m)  |    |
|                                |  | Stormceptor Outlet Invert Elev (m) |    |
|                                |  | Stormceptor Rim Elev (m)           |    |
|                                |  | Normal Water Level Elevation (m)   |    |
|                                |  | Pipe Diameter (mm)                 |    |
|                                |  | Pipe Material                      |    |
|                                |  | Multiple Inlets (Y/N)              | No |
|                                |  | Grate Inlet (Y/N)                  | No |

| Water Quality Objective       |       |
|-------------------------------|-------|
| TSS Removal (%)               | 80.0  |
| Runoff Volume Capture (%)     | 90.00 |
| Oil Spill Capture Volume (L)  |       |
| Peak Conveyed Flow Rate (L/s) | 32.00 |
| Water Quality Flow Rate (L/s) | 20.00 |

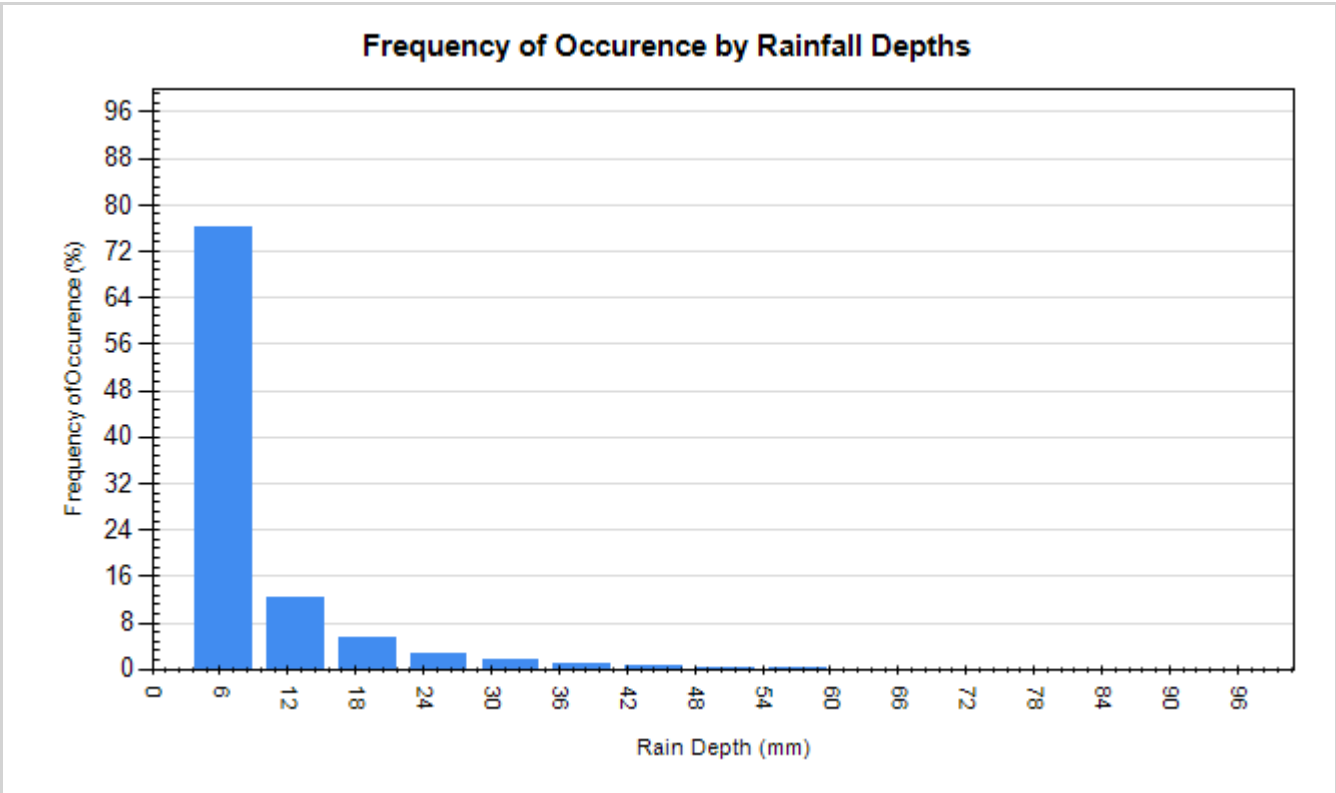
| Particle Size Distribution (PSD)                                                                                                                                                                                                                                                            |                |                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------|
| Removing the smallest fraction of particulates from runoff ensures the majority of pollutants, such as metals, hydrocarbons and nutrients are captured. The table below identifies the Particle Size Distribution (PSD) that was selected to define TSS removal for the Stormceptor design. |                |                  |
| Fine Distribution                                                                                                                                                                                                                                                                           |                |                  |
| Particle Diameter (microns)                                                                                                                                                                                                                                                                 | Distribution % | Specific Gravity |
| 20.0                                                                                                                                                                                                                                                                                        | 20.0           | 1.30             |
| 60.0                                                                                                                                                                                                                                                                                        | 20.0           | 1.80             |
| 150.0                                                                                                                                                                                                                                                                                       | 20.0           | 2.20             |
| 400.0                                                                                                                                                                                                                                                                                       | 20.0           | 2.65             |
| 2000.0                                                                                                                                                                                                                                                                                      | 20.0           | 2.65             |

|                                    |        |                                                      |         |
|------------------------------------|--------|------------------------------------------------------|---------|
| Site Name                          |        | WS-1-39                                              |         |
| Site Details                       |        |                                                      |         |
| Drainage Area                      |        | Infiltration Parameters                              |         |
| Total Area (ha)                    | 10.00  | Horton's equation is used to estimate infiltration   |         |
| Imperviousness %                   | 74.00  | Max. Infiltration Rate (mm/hr)                       | 61.98   |
| Oil Spill Capture Volume (L)       |        | Min. Infiltration Rate (mm/hr)                       | 10.16   |
|                                    |        | Decay Rate (1/sec)                                   | 0.00055 |
|                                    |        | Regeneration Rate (1/sec)                            | 0.01    |
| Surface Characteristics            |        | Evaporation                                          |         |
| Width (m)                          | 632.00 | Daily Evaporation Rate (mm/day)                      | 2.54    |
| Slope %                            | 2      | Dry Weather Flow                                     |         |
| Impervious Depression Storage (mm) | 0.508  | Dry Weather Flow (L/s)                               | 0       |
| Pervious Depression Storage (mm)   | 5.08   |                                                      |         |
| Impervious Manning's n             | 0.015  |                                                      |         |
| Pervious Manning's n               | 0.25   |                                                      |         |
| Maintenance Frequency              |        | Winter Months                                        |         |
| Maintenance Frequency (months) >   | 12     | Winter Infiltration                                  | 0       |
| TSS Loading Parameters             |        |                                                      |         |
| TSS Loading Function               |        | Build Up/ Wash-off                                   |         |
| Buildup/Wash-off Parameters        |        | TSS Availability Parameters                          |         |
| Target Event Mean Conc. (EMC) mg/L | 125    | Availability Constant A                              | 0.057   |
| Exponential Buildup Power          | 0.40   | Availability Factor B                                | 0.04    |
| Exponential Washoff Exponent       | 0.20   | Availability Exponent C                              | 1.10    |
|                                    |        | Min. Particle Size Affected by Availability (micron) | 400     |

| Cumulative Runoff Volume by Runoff Rate |                    |                  |                              |
|-----------------------------------------|--------------------|------------------|------------------------------|
| Runoff Rate (L/s)                       | Runoff Volume (m³) | Volume Over (m³) | Cumulative Runoff Volume (%) |
| 1                                       | 386840             | 1004826          | 27.8                         |
| 4                                       | 906169             | 490108           | 65.2                         |
| 9                                       | 1208098            | 182261           | 86.9                         |
| 16                                      | 1343630            | 47577            | 96.6                         |
| 25                                      | 1385946            | 4655             | 99.7                         |
| 36                                      | 1388007            | 2542             | 99.8                         |
| 49                                      | 1388159            | 2390             | 99.8                         |
| 64                                      | 1388327            | 2221             | 99.8                         |
| 81                                      | 1388509            | 2034             | 99.9                         |
| 100                                     | 1388707            | 1836             | 99.9                         |
| 121                                     | 1388907            | 1634             | 99.9                         |



| Rainfall Event Analysis |               |                                |                   |                                 |
|-------------------------|---------------|--------------------------------|-------------------|---------------------------------|
| Rainfall Depth (mm)     | No. of Events | Percentage of Total Events (%) | Total Volume (mm) | Percentage of Annual Volume (%) |
| 6.35                    | 3113          | 76.1                           | 5230              | 24.9                            |
| 12.70                   | 501           | 12.2                           | 4497              | 21.4                            |
| 19.05                   | 225           | 5.5                            | 3469              | 16.5                            |
| 25.40                   | 105           | 2.6                            | 2317              | 11.0                            |
| 31.75                   | 62            | 1.5                            | 1765              | 8.4                             |
| 38.10                   | 35            | 0.9                            | 1206              | 5.8                             |
| 44.45                   | 28            | 0.7                            | 1163              | 5.5                             |
| 50.80                   | 12            | 0.3                            | 557               | 2.7                             |
| 57.15                   | 7             | 0.2                            | 378               | 1.8                             |
| 63.50                   | 1             | 0.0                            | 63                | 0.3                             |
| 69.85                   | 1             | 0.0                            | 64                | 0.3                             |
| 76.20                   | 1             | 0.0                            | 76                | 0.4                             |
| 82.55                   | 0             | 0.0                            | 0                 | 0.0                             |
| 88.90                   | 1             | 0.0                            | 84                | 0.4                             |
| 95.25                   | 0             | 0.0                            | 0                 | 0.0                             |
| 101.60                  | 0             | 0.0                            | 0                 | 0.0                             |



Stormceptor®EF Sizing Report

|                                                                                                                                                                                                                                                                                                                                   |                          |                               |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-------------------------------|--|-------------------|--------------------------|------|----|------|-----|------|-----|-------|-----|-------|-----|
| <div>Imbrium® Systems</div> <div>ESTIMATED NET ANNUAL SEDIMENT (TSS) LOAD REDUCTION</div> <div>08/13/2024</div>                                                                                                                                                                                                                   |                          |                               |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| Province:                                                                                                                                                                                                                                                                                                                         |                          | Ontario                       |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| City:                                                                                                                                                                                                                                                                                                                             |                          | Ottawa                        |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| Nearest Rainfall Station:                                                                                                                                                                                                                                                                                                         |                          | OTTAWA CDA RCS                |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| Climate Station Id:                                                                                                                                                                                                                                                                                                               |                          | 6105978                       |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| Years of Rainfall Data:                                                                                                                                                                                                                                                                                                           |                          | 20                            |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| Site Name:                                                                                                                                                                                                                                                                                                                        |                          | WS-40                         |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| Drainage Area (ha):                                                                                                                                                                                                                                                                                                               |                          | 1.23                          |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| Runoff Coefficient 'c':                                                                                                                                                                                                                                                                                                           |                          | 0.74                          |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| Particle Size Distribution:                                                                                                                                                                                                                                                                                                       |                          | Fine                          |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| Target TSS Removal (%):                                                                                                                                                                                                                                                                                                           |                          | 80.0                          |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| Required Water Quality Runoff Volume Capture (%):                                                                                                                                                                                                                                                                                 |                          | 90.0                          |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| Oil / Fuel Spill Risk Site?                                                                                                                                                                                                                                                                                                       |                          | Yes                           |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| Upstream Flow Control?                                                                                                                                                                                                                                                                                                            |                          | Yes                           |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| Upstream Orifice Control Flow Rate to Stormceptor (L/s):                                                                                                                                                                                                                                                                          |                          | 4                             |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| Peak Conveyance (maximum) Flow Rate (L/s):                                                                                                                                                                                                                                                                                        |                          | 4                             |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| Project Name:                                                                                                                                                                                                                                                                                                                     |                          | 6160 Thunder Rd.              |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| Project Number:                                                                                                                                                                                                                                                                                                                   |                          | 200578                        |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| Designer Name:                                                                                                                                                                                                                                                                                                                    |                          | Brandon O'Leary               |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| Designer Company:                                                                                                                                                                                                                                                                                                                 |                          | Rinker                        |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| Designer Email:                                                                                                                                                                                                                                                                                                                   |                          | brandon.oleary@rinkerpipe.com |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| Designer Phone:                                                                                                                                                                                                                                                                                                                   |                          | 905-630-0359                  |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| EOR Name:                                                                                                                                                                                                                                                                                                                         |                          | Virginia Johnson              |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| EOR Company:                                                                                                                                                                                                                                                                                                                      |                          | LRL Associates Ltd.           |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| EOR Email:                                                                                                                                                                                                                                                                                                                        |                          | vjohnson@lrl.ca               |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| EOR Phone:                                                                                                                                                                                                                                                                                                                        |                          | 613-915-9503                  |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| <div>Net Annual Sediment (TSS) Load Reduction Sizing Summary</div> <table><tr><td>Stormceptor Model</td><td>TSS Removal Provided (%)</td></tr><tr><td>EFO4</td><td>94</td></tr><tr><td>EFO6</td><td>100</td></tr><tr><td>EFO8</td><td>100</td></tr><tr><td>EFO10</td><td>100</td></tr><tr><td>EFO12</td><td>100</td></tr></table> |                          |                               |  | Stormceptor Model | TSS Removal Provided (%) | EFO4 | 94 | EFO6 | 100 | EFO8 | 100 | EFO10 | 100 | EFO12 | 100 |
| Stormceptor Model                                                                                                                                                                                                                                                                                                                 | TSS Removal Provided (%) |                               |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| EFO4                                                                                                                                                                                                                                                                                                                              | 94                       |                               |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| EFO6                                                                                                                                                                                                                                                                                                                              | 100                      |                               |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| EFO8                                                                                                                                                                                                                                                                                                                              | 100                      |                               |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| EFO10                                                                                                                                                                                                                                                                                                                             | 100                      |                               |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| EFO12                                                                                                                                                                                                                                                                                                                             | 100                      |                               |  |                   |                          |      |    |      |     |      |     |       |     |       |     |
| <div>Recommended Stormceptor EFO Model: EFO4</div> <div>Estimated Net Annual Sediment (TSS) Load Reduction (%): 94</div> <div>Water Quality Runoff Volume Capture (%): &gt; 90</div>                                                                                                                                              |                          |                               |  |                   |                          |      |    |      |     |      |     |       |     |       |     |



Stormceptor®EF Sizing Report

THIRD-PARTY TESTING AND VERIFICATION

► **Stormceptor® EF and Stormceptor® EFO** are the latest evolutions in the Stormceptor® oil-grit separator (OGS) technology series, and are designed to remove a wide variety of pollutants from stormwater and snowmelt runoff. These technologies have been third-party tested in accordance with the Canadian ETV **Procedure for Laboratory Testing of Oil-Grit Separators** and performance has been third-party verified in accordance with the **ISO 14034 Environmental Technology Verification (ETV)** protocol.

PERFORMANCE

► **Stormceptor® EF and EFO** remove stormwater pollutants through gravity separation and floatation, and feature a patent-pending design that generates positive removal of total suspended solids (TSS) throughout each storm event, including high-intensity storms. Captured pollutants include sediment, free oils, and sediment-bound pollutants such as nutrients, heavy metals, and petroleum hydrocarbons. Stormceptor is sized to remove a high level of TSS from the frequent rainfall events that contribute the vast majority of annual runoff volume and pollutant load. The technology incorporates an internal bypass to convey excessive stormwater flows from high-intensity storms through the device without resuspension and washout (scour) of previously captured pollutants. Proper routine maintenance ensures high pollutant removal performance and protection of downstream waterways.

PARTICLE SIZE DISTRIBUTION (PSD)

► The **Canadian ETV PSD** shown in the table below was used, or in part, for this sizing. This is the identical PSD that is referenced in the Canadian ETV **Procedure for Laboratory Testing of Oil-Grit Separators** for both sediment removal testing and scour testing. The Canadian ETV PSD contains a wide range of particle sizes in the sand and silt fractions, and is considered reasonably representative of the particle size fractions found in typical urban stormwater runoff.

| Particle Size (µm) | Percent Less Than | Particle Size Fraction (µm) | Percent |
|--------------------|-------------------|-----------------------------|---------|
| 1000               | 100               | 500-1000                    | 5       |
| 500                | 95                | 250-500                     | 5       |
| 250                | 90                | 150-250                     | 15      |
| 150                | 75                | 100-150                     | 15      |
| 100                | 60                | 75-100                      | 10      |
| 75                 | 50                | 50-75                       | 5       |
| 50                 | 45                | 20-50                       | 10      |
| 20                 | 35                | 8-20                        | 15      |
| 8                  | 20                | 5-8                         | 10      |
| 5                  | 10                | 2-5                         | 5       |
| 2                  | 5                 | <2                          | 5       |



Stormceptor®EF Sizing Report

Upstream Flow Controlled Results

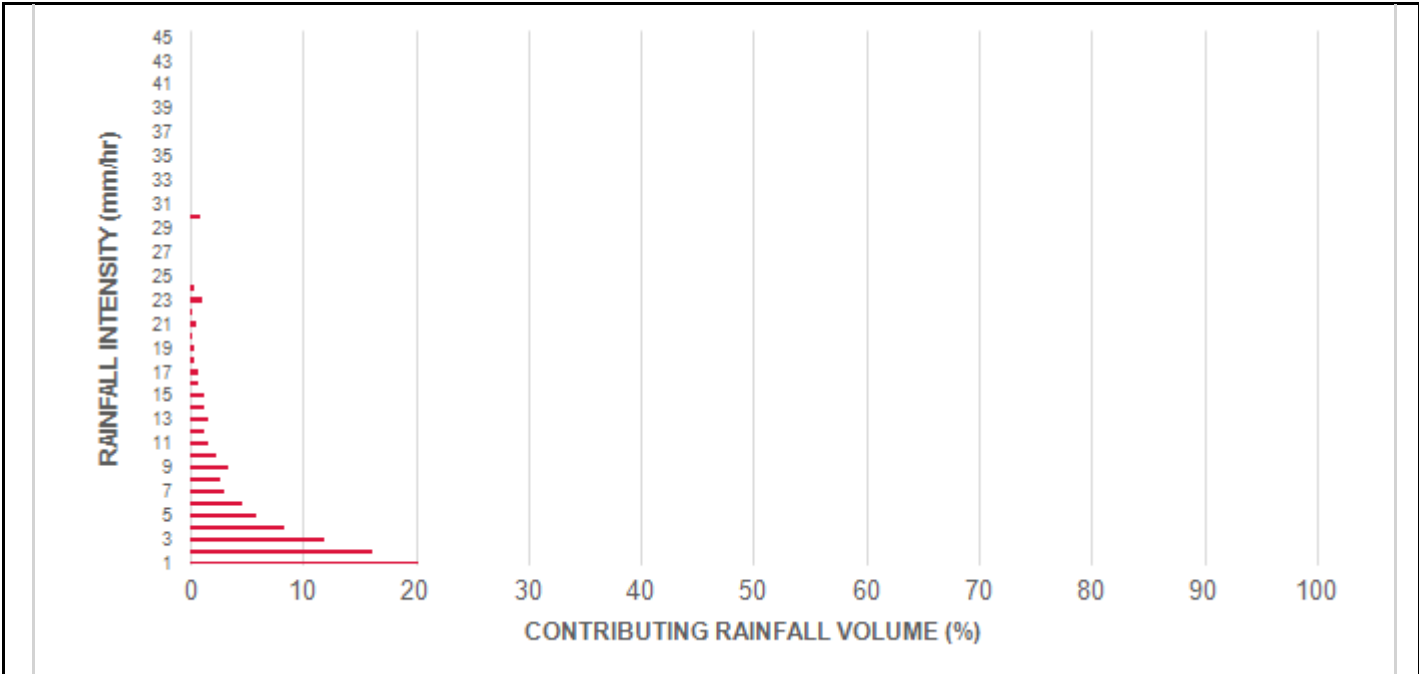
| Rainfall Intensity (mm / hr)                         | Percent Rainfall Volume (%) | Cumulative Rainfall Volume (%) | Flow Rate (L/s) | Flow Rate (L/min) | Surface Loading Rate (L/min/m²) | Removal Efficiency (%) | Incremental Removal (%) | Cumulative Removal (%) |
|------------------------------------------------------|-----------------------------|--------------------------------|-----------------|-------------------|---------------------------------|------------------------|-------------------------|------------------------|
| 0.50                                                 | 8.6                         | 8.6                            | 1.27            | 76.0              | 63.0                            | 100                    | 8.6                     | 8.6                    |
| 1.00                                                 | 91.4                        | 100.0                          | 2.53            | 152.0             | 127.0                           | 93                     | 85.3                    | 93.9                   |
| 2.00                                                 | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 3.00                                                 | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 4.00                                                 | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 5.00                                                 | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 6.00                                                 | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 7.00                                                 | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 8.00                                                 | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 9.00                                                 | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 10.00                                                | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 11.00                                                | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 12.00                                                | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 13.00                                                | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 14.00                                                | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 15.00                                                | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 16.00                                                | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 17.00                                                | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 18.00                                                | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 19.00                                                | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 20.00                                                | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 21.00                                                | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 22.00                                                | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 23.00                                                | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 24.00                                                | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 25.00                                                | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 30.00                                                | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 35.00                                                | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 40.00                                                | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| 45.00                                                | 0.0                         | 100.0                          | 4.00            | 240.0             | 200.0                           | 83                     | 0.0                     | 93.9                   |
| Estimated Net Annual Sediment (TSS) Load Reduction = |                             |                                |                 |                   |                                 |                        |                         | 94 %                   |

Climate Station ID: 6105978 Years of Rainfall Data: 20

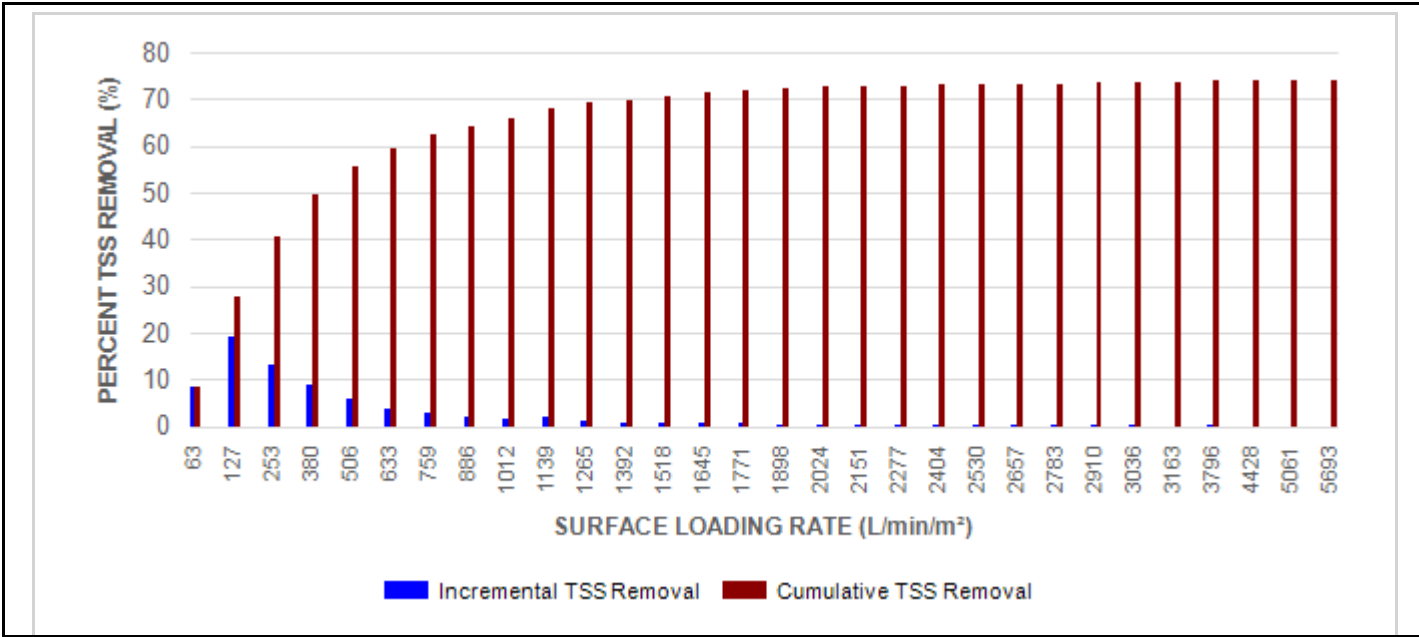


Stormceptor®EF Sizing Report

RAINFALL DATA FROM OTTAWA CDA RCS RAINFALL STATION



INCREMENTAL AND CUMULATIVE TSS REMOVAL  
FOR THE RECOMMENDED STORMCEPTOR® MODEL



Stormceptor®EF Sizing Report

Maximum Pipe Diameter / Peak Conveyance

| Stormceptor<br>EF / EFO | Model Diameter |      | Min Angle Inlet /<br>Outlet Pipes | Max Inlet Pipe<br>Diameter |      | Max Outlet Pipe<br>Diameter |      | Peak Conveyance<br>Flow Rate |       |
|-------------------------|----------------|------|-----------------------------------|----------------------------|------|-----------------------------|------|------------------------------|-------|
|                         | (m)            | (ft) |                                   | (mm)                       | (in) | (mm)                        | (in) | (L/s)                        | (cfs) |
| EF4 / EFO4              | 1.2            | 4    | 90                                | 609                        | 24   | 609                         | 24   | 425                          | 15    |
| EF6 / EFO6              | 1.8            | 6    | 90                                | 914                        | 36   | 914                         | 36   | 990                          | 35    |
| EF8 / EFO8              | 2.4            | 8    | 90                                | 1219                       | 48   | 1219                        | 48   | 1700                         | 60    |
| EF10 / EFO10            | 3.0            | 10   | 90                                | 1828                       | 72   | 1828                        | 72   | 2830                         | 100   |
| EF12 / EFO12            | 3.6            | 12   | 90                                | 1828                       | 72   | 1828                        | 72   | 2830                         | 100   |

SCOUR PREVENTION AND ONLINE CONFIGURATION

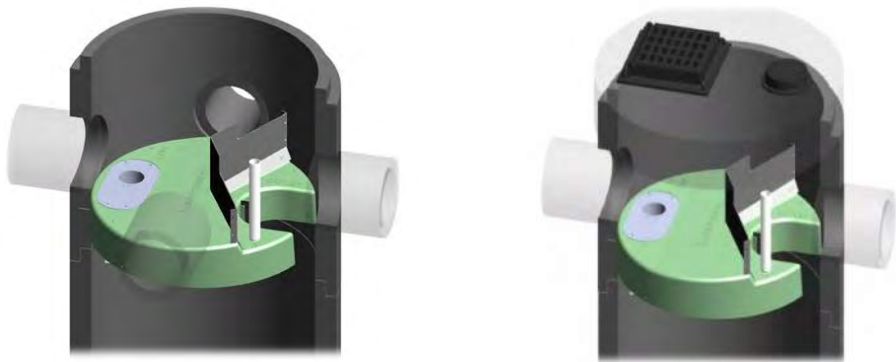
► Stormceptor® EF and EFO feature an internal bypass and superior scour prevention technology that have been demonstrated in third-party testing according to the scour testing provisions of the Canadian ETV **Procedure for Laboratory Testing of Oil-Grit Separators**, and the exceptional scour test performance has been third-party verified in accordance with the ISO 14034 ETV protocol. As a result, Stormceptor EF and EFO are approved for online installation, eliminating the need for costly additional bypass structures, piping, and installation expense.

DESIGN FLEXIBILITY

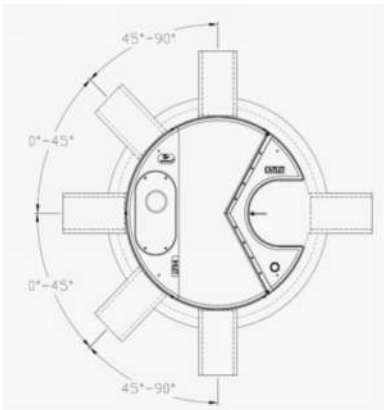
► Stormceptor® EF and EFO offers design flexibility in one simplified platform, accepting stormwater flow from a single inlet pipe or multiple inlet pipes, and/or surface runoff through an inlet grate. The device can also serve as a junction structure, accommodate a 90-degree inlet-to-outlet bend angle, and can be modified to ensure performance in submerged conditions.

OIL CAPTURE AND RETENTION

► While Stormceptor® EF will capture and retain oil from dry weather spills and low intensity runoff, Stormceptor® EFO has demonstrated superior oil capture and greater than 99% oil retention in third-party testing according to the light liquid re-entrainment testing provisions of the Canadian ETV **Procedure for Laboratory Testing of Oil-Grit Separators**. Stormceptor EFO is recommended for sites where oil capture and retention is a requirement.



Stormceptor®EF Sizing Report



INLET-TO-OUTLET DROP

Elevation differential between inlet and outlet pipe inverts is dictated by the angle at which the inlet pipe(s) enters the unit.

0° - 45° : The inlet pipe is 1-inch (25mm) higher than the outlet pipe.

45° - 90° : The inlet pipe is 2-inches (50mm) higher than the outlet pipe.

HEAD LOSS

The head loss through Stormceptor EF is similar to that of a 60-degree bend structure. The applicable K value for calculating minor losses through the unit is 1.1.

For submerged conditions the applicable K value is 3.0.

Pollutant Capacity

| Stormceptor<br>EF / EFO | Model<br>Diameter |      | Depth (Outlet<br>Pipe Invert to<br>Sump Floor) |      | Oil Volume |       | Recommended<br>Sediment<br>Maintenance Depth * |      | Maximum<br>Sediment Volume * |       | Maximum<br>Sediment Mass ** |        |
|-------------------------|-------------------|------|------------------------------------------------|------|------------|-------|------------------------------------------------|------|------------------------------|-------|-----------------------------|--------|
|                         | (m)               | (ft) | (m)                                            | (ft) | (L)        | (Gal) | (mm)                                           | (in) | (L)                          | (ft³) | (kg)                        | (lb)   |
| EF4 / EFO4              | 1.2               | 4    | 1.52                                           | 5.0  | 265        | 70    | 203                                            | 8    | 1190                         | 42    | 1904                        | 5250   |
| EF6 / EFO6              | 1.8               | 6    | 1.93                                           | 6.3  | 610        | 160   | 305                                            | 12   | 3470                         | 123   | 5552                        | 15375  |
| EF8 / EFO8              | 2.4               | 8    | 2.59                                           | 8.5  | 1070       | 280   | 610                                            | 24   | 8780                         | 310   | 14048                       | 38750  |
| EF10 / EFO10            | 3.0               | 10   | 3.25                                           | 10.7 | 1670       | 440   | 610                                            | 24   | 17790                        | 628   | 28464                       | 78500  |
| EF12 / EFO12            | 3.6               | 12   | 3.89                                           | 12.8 | 2475       | 655   | 610                                            | 24   | 31220                        | 1103  | 49952                       | 137875 |

\*Increased sump depth may be added to increase sediment storage capacity

\*\* Average density of wet packed sediment in sump = 1.6 kg/L (100 lb/ft³ )

| Feature                                                                 | Benefit                                           | Feature Appeals To                                  |
|-------------------------------------------------------------------------|---------------------------------------------------|-----------------------------------------------------|
| Patent-pending enhanced flow treatment and scour prevention technology  | Superior, verified third-party performance        | Regulator, Specifying & Design Engineer             |
| Third-party verified light liquid capture and retention for EFO version | Proven performance for fuel/oil hotspot locations | Regulator, Specifying & Design Engineer, Site Owner |
| Functions as bend, junction or inlet structure                          | Design flexibility                                | Specifying & Design Engineer                        |
| Minimal drop between inlet and outlet                                   | Site installation ease                            | Contractor                                          |
| Large diameter outlet riser for inspection and maintenance              | Easy maintenance access from grade                | Maintenance Contractor & Site Owner                 |

STANDARD STORMCEPTOR EF/EFO DRAWINGS

For standard details, please visit <http://www.imbriumsystems.com/stormwater-treatment-solutions/stormceptor-ef>

STANDARD STORMCEPTOR EF/EFO SPECIFICATION

For specifications, please visit <http://www.imbriumsystems.com/stormwater-treatment-solutions/stormceptor-ef>



Stormceptor® EF Sizing Report



Stormceptor®EF Sizing Report

STANDARD PERFORMANCE SPECIFICATION FOR  
“OIL GRIT SEPARATOR” (OGS) STORMWATER QUALITY TREATMENT DEVICE

PART 1 – GENERAL

1.1 WORK INCLUDED

This section specifies requirements for selecting, sizing, and designing an underground Oil Grit Separator (OGS) device for stormwater quality treatment, with third-party testing results and a Statement of Verification in accordance with ISO 14034 Environmental Management – Environmental Technology Verification (ETV).

1.2 REFERENCE STANDARDS & PROCEDURES

ISO 14034:2016 Environmental management – Environmental technology verification (ETV)

Canadian Environmental Technology Verification (ETV) Program's **Procedure for Laboratory Testing of Oil-Grit Separators**

1.3 SUBMITTALS

1.3.1 All submittals, including sizing reports & shop drawings, shall be submitted upon request with each order to the contractor then forwarded to the Engineer of Record for review and acceptance. Shop drawings shall detail all OGS components, elevations, and sequence of construction.

1.3.2 Alternative devices shall have features identical to or greater than the specified device, including: treatment chamber diameter, treatment chamber wet volume, sediment storage volume, and oil storage volume.

1.3.3 Unless directed otherwise by the Engineer of Record, OGS stormwater quality treatment product substitutions or alternatives submitted within ten days prior to project bid shall not be accepted. All alternatives or substitutions submitted shall be signed and sealed by a local registered Professional Engineer, based on the exact same criteria detailed in Section 3, in entirety, subject to review and approval by the Engineer of Record.

PART 2 – PRODUCTS

2.1 OGS POLLUTANT STORAGE

The OGS device shall include a sump for sediment storage, and a protected volume for the capture and storage of petroleum hydrocarbons and buoyant gross pollutants. The minimum sediment & petroleum hydrocarbon storage capacity shall be as follows:

|       |                                     |                                             |
|-------|-------------------------------------|---------------------------------------------|
| 2.1.1 | 4 ft (1219 mm) Diameter OGS Units:  | 1.19 m <sup>3</sup> sediment / 265 L oil    |
|       | 6 ft (1829 mm) Diameter OGS Units:  | 3.48 m <sup>3</sup> sediment / 609 L oil    |
|       | 8 ft (2438 mm) Diameter OGS Units:  | 8.78 m <sup>3</sup> sediment / 1,071 L oil  |
|       | 10 ft (3048 mm) Diameter OGS Units: | 17.78 m <sup>3</sup> sediment / 1,673 L oil |
|       | 12 ft (3657 mm) Diameter OGS Units: | 31.23 m <sup>3</sup> sediment / 2,476 L oil |



## Stormceptor<sup>®</sup> EF Sizing Report

### PART 3 – PERFORMANCE & DESIGN

#### 3.1 GENERAL

The OGS stormwater quality treatment device shall be verified in accordance with ISO 14034:2016 Environmental management – Environmental technology verification (ETV). The OGS stormwater quality treatment device shall remove oil, sediment and gross pollutants from stormwater runoff during frequent wet weather events, and retain these pollutants during less frequent high flow wet weather events below the insert within the OGS for later removal during maintenance. The Manufacturer shall have at least ten (10) years of local experience, history and success in engineering design, manufacturing and production and supply of OGS stormwater quality treatment device systems, acceptable to the Engineer of Record.

#### 3.2 SIZING METHODOLOGY

The OGS device shall be engineered, designed and sized to provide stormwater quality treatment based on treating a minimum of 90 percent of the average annual runoff volume and a minimum removal of an annual average 60% of the sediment (TSS) load based on the Particle Size Distribution (PSD) specified in the sizing report for the specified device. Sizing of the OGS shall be determined by use of a minimum ten (10) years of local historical rainfall data provided by Environment Canada. Sizing shall also be determined by use of the sediment removal performance data derived from the ISO 14034 ETV third-party verified laboratory testing data from testing conducted in accordance with the Canadian ETV protocol Procedure for Laboratory Testing of Oil-Grit Separators, as follows:

3.2.1 Sediment removal efficiency for a given surface loading rate and its associated flow rate shall be based on sediment removal efficiency demonstrated at the seven (7) tested surface loading rates specified in the protocol, ranging 40 L/min/m<sup>2</sup> to 1400 L/min/m<sup>2</sup>, and as stated in the ISO 14034 ETV Verification Statement for the OGS device.

3.2.2 Sediment removal efficiency for surface loading rates between 40 L/min/m<sup>2</sup> and 1400 L/min/m<sup>2</sup> shall be based on linear interpolation of data between consecutive tested surface loading rates.

3.2.3 Sediment removal efficiency for surface loading rates less than the lowest tested surface loading rate of 40 L/min/m<sup>2</sup> shall be assumed to be identical to the sediment removal efficiency at 40 L/min/m<sup>2</sup>. No extrapolation shall be allowed that results in a sediment removal efficiency that is greater than that demonstrated at 40 L/min/m<sup>2</sup>.

3.2.4 Sediment removal efficiency for surface loading rates greater than the highest tested surface loading rate of 1400 L/min/m<sup>2</sup> shall assume zero sediment removal for the portion of flow that exceeds 1400 L/min/m<sup>2</sup>, and shall be calculated using a simple proportioning formula, with 1400 L/min/m<sup>2</sup> in the numerator and the higher surface loading rate in the denominator, and multiplying the resulting fraction times the sediment removal efficiency at 1400 L/min/m<sup>2</sup>.

The OGS device shall also have sufficient annual sediment storage capacity as specified and calculated in Section 2.1.

#### 3.3 CANADIAN ETV or ISO 14034 ETV VERIFICATION OF SCOUR TESTING

The OGS device shall have Canadian ETV or ISO 14034 ETV Verification of third-party scour testing conducted in

## Stormceptor<sup>®</sup> EF Sizing Report

accordance with the Canadian ETV Program's **Procedure for Laboratory Testing of Oil-Grit Separators**.

3.3.1 To be acceptable for on-line installation, the OGS device must demonstrate an average scour test effluent concentration less than 10 mg/L at each surface loading rate tested, up to and including 2600 L/min/m<sup>2</sup>.

### 3.4 LIGHT LIQUID RE-ENTRAINMENT SIMULATION TESTING

The OGS device shall have Canadian ETV or ISO 14034 ETV Verification of completed third-party Light Liquid Re-entrainment Simulation Testing in accordance with the Canadian ETV **Program's Procedure for Laboratory Testing of Oil-Grit Separators**, with results reported within the Canadian ETV or ISO 14034 ETV verification. This re-entrainment testing is conducted with the device pre-loaded with low density polyethylene (LDPE) plastic beads as a surrogate for light liquids such as oil and fuel. Testing is conducted on the same OGS unit tested for sediment removal to assess whether light liquids captured after a spill are effectively retained at high flow rates.

3.4.1 For an OGS device to be an acceptable stormwater treatment device on a site where vehicular traffic occurs and the potential for an oil or fuel spill exists, the OGS device must have reported verified performance results of greater than 99% cumulative retention of LDPE plastic beads for the five specified surface loading rates (ranging 200 L/min/m<sup>2</sup> to 2600 L/min/m<sup>2</sup>) in accordance with the Light Liquid Re-entrainment Simulation Testing within the Canadian ETV Program's **Procedure for Laboratory Testing of Oil-Grit Separators**. However, an OGS device shall not be allowed if the Light Liquid Re-entrainment Simulation Testing was performed with screening components within the OGS device that are effective at retaining the LDPE plastic beads, but would not be expected to retain light liquids such as oil and fuel.

# STANDARD SPECIFICATION FOR “OIL GRIT SEPARATOR” (OGS) STORMWATER QUALITY TREATMENT DEVICE WITH THIRD-PARTY VERIFIED LIGHT LIQUID RE-ENTRAINMENT SIMULATION PERFORMANCE TESTING RESULTS

## PART 1 – GENERAL

### 1.1 WORK INCLUDED

This section specifies requirements for selecting, sizing, designing, maintaining, and constructing an underground Oil Grit Separator (OGS) device for stormwater quality treatment, **specifically an OGS device that has been third-party tested for oil and fuel retention capability using a protocol for light liquid re-entrainment simulation testing, with testing results and a Statement of Verification in accordance with all the provisions of ISO 14034 Environmental Management – Environmental Technology Verification (ETV).** Work includes supply and installation of concrete bases, precast sections, and the appropriate precast section with OGS internal components correctly installed within the system, watertight sealed to the precast concrete prior to arrival to the project site.

### 1.2 REFERENCE STANDARDS

#### 1.2.1 For Canadian projects only, the following reference standards apply:

CAN/CSA-A257.4-14: Joints for Circular Concrete Sewer and Culvert Pipe, Manhole Sections, and Fittings Using Rubber Gaskets

CAN/CSA-A257.4-14: Precast Reinforced Circular Concrete Manhole Sections, Catch Basins, and Fittings

CAN/CSA-S6-00: Canadian Highway Bridge Design Code

#### 1.2.2 For ALL projects, the following reference standards apply:

ASTM D-4097: Contact Molded Glass Fiber Reinforced Chemical Resistant Tanks

ASTM C 478: Specification for Precast Reinforced Concrete Manhole Sections

ASTM C 443: Specification for Joints for Concrete Pipe and Manholes, Using Rubber Gaskets

ASTM C 891: Standard Practice for Installation of Underground Precast Concrete Utility Structures

ASTM D2563: Standard Practice for Classification of Visual Defects in Reinforced Plastics

### 1.3 SHOP DRAWINGS

1.3.1 Shop drawings shall be submitted upon request with each order to the contractor then forwarded to the Engineer of Record for review and acceptance. Shop drawings shall detail the precast concrete components and OGS internal components prior to shipment, including the sequence for installation.

1.3.2 Unless directed otherwise by the Engineer of Record, OGS stormwater quality treatment product substitutions or alternatives submitted within ten days prior to project bid shall not be accepted. All alternatives or substitutions submitted shall be based on the exact same criteria detailed in Section 3, in entirety, subject to review and approval by the Engineer of Record. Any and all changes to project cost estimates, bonding amounts, plan check fees for revision of approved documents, or design impacts due to regulatory requirements as a result of a product substitution shall be coordinated by the Contractor with the Engineer of Record.

### 1.4 HANDLING AND STORAGE

Prevent damage to materials during storage and handling.

1.4.1 OGS internal components supplied by the Manufacturer for attachment to the precast concrete vessel shall be pre-fabricated, bolted to the precast and watertight sealed to the precast vessel surface prior to site delivery to ensure Manufacturer's internal assembly process and quality control processes are fully adhered to, and to prevent materials damage on site.

1.4.2 Follow all instructions including the sequence for installation in the shop drawings during installation.

## **PART 2 – PRODUCTS**

### **2.1 GENERAL**

2.1.1 The OGS vessel shall be cylindrical and constructed from precast concrete riser and slab components.

2.1.2 The precast concrete OGS internal components shall include a fiberglass insert bolted and watertight sealed inside the precast concrete vessel, prior to site delivery. Primary internal components that are to be anchored and watertight sealed to the precast concrete vessel shall be done so only by the Manufacturer prior to arrival at the job site to ensure product quality.

2.1.3 The OGS shall be allowed to be specified and have the ability to function as a 240-degree bend structure in the stormwater drainage system, or as a junction structure.

2.1.4 The OGS to be specified shall have the capability to accept influent flow from an inlet grate and an inlet pipe.

### **2.2 PRECAST CONCRETE SECTIONS**

All precast concrete components shall be designed and manufactured to meet highway loading conditions per State/Provincial or local requirements.

### **2.3 GASKETS**

Only profile neoprene or nitrile rubber gaskets that are oil resistant shall be accepted. For Canadian projects only, gaskets shall be in accordance to CSA A257.4-14. Mastic sealants, butyl tape/rope or Conseal CS-101 alone are not acceptable gasket materials.

### **2.4 JOINTS**

The concrete joints shall be watertight and meet the design criteria according to ASTM C-990. For projects where joints require gaskets, the concrete joints shall be watertight and oil resistant and meet the design criteria according to ASTM C-443. Mastic sealants or butyl tape/rope alone are not an acceptable alternative.

### **2.5 FRAMES AND COVERS**

Frames and covers shall be manufactured in accordance with State/Provincial or local requirements for inspection and maintenance access purposes. A minimum of one cover, at least 22-inch (560 mm) in diameter, shall be clearly embossed with the OGS manufacturer's product name to properly identify this asset's purpose is for stormwater quality treatment.

### **2.6 PRECAST CONCRETE**

All precast concrete components shall conform to the appropriate CSA or ASTM specifications.

### **2.7 FIBERGLASS**

The fiberglass portion of the OGS device shall be constructed in accordance with ASTM D2563, and in accordance with the PS15-69 manufacturing standard, and shall only be installed, bolted and watertight sealed to the precast concrete by the Manufacturer prior to arrival at the project site to ensure product quality.

## **2.8 OGS POLLUTANT STORAGE**

The OGS device shall include a sump for sediment storage, and a fiberglass insert for the capture and storage of petroleum hydrocarbons and buoyant gross pollutants. The total sediment storage capacity shall be a minimum 40 ft<sup>3</sup> (1.1 m<sup>3</sup>). The total petroleum hydrocarbon storage capacity shall be a minimum 50 gallons (189 liters). The access opening to the sump of the OGS device for periodic inspection and maintenance purposes shall be a minimum 16 inches (406 mm) in diameter.

## **2.9 LADDERS**

Ladder rungs shall be provided upon request or to comply with State/Provincial or local requirements.

## **2.10 INSPECTION**

All precast concrete sections shall be level and inspected to ensure dimensions, appearance, integrity of internal components, and quality of the product meets State/Provincial or local specifications and associated standards.

# **PART 3 – PERFORMANCE & DESIGN**

## **3.1 GENERAL**

The OGS stormwater quality treatment device shall be verified in accordance with ISO 14034:2016 Environmental management – Environmental technology verification (ETV). The OGS stormwater quality treatment device shall remove oil, sediment and gross pollutants from stormwater runoff during frequent wet weather events, and retain these pollutants during less frequent high flow wet weather events below the insert within the OGS for later removal during maintenance. The Manufacturer shall have at least ten (10) years of local experience, history and success in engineering design, manufacturing and production and supply of OGS stormwater quality treatment device systems, acceptable to the Engineer of Record.

## **3.2 HYDROLOGY AND RUNOFF VOLUME**

The OGS device shall be engineered, designed and sized to treat a minimum of 90 percent of the average annual runoff volume, unless otherwise stated by the Engineer of Record, using historical rainfall data. Rainfall data sets should be comprised of a minimum 15-years of rainfall data or a longer continuous period if available for a given location, but in all cases a minimum 5-year period of rainfall data.

## **3.3 ANNUAL (TSS) SEDIMENT LOAD AND STORAGE CAPACITY**

The OGS device shall be capable of removing and have sufficient storage capacity for the calculated annual total suspended solids (TSS) mass load and volume without scouring previously captured pollutants prior to maintenance being required. The annual (TSS) sediment load and volume transported from the drainage area should be calculated and compared to the OGS device's available storage capacity by the specifying Engineer to ensure adequate capacity between maintenance cycles. Sediment loadings shall be determined by land use and defined as a minimum of 450 kg (992 lb) of sediment (TSS) per impervious hectare of drainage area per year, or greater based on land use, as noted in Table 1 below.

Annual sediment volume calculations shall be performed using the projected average annual treated runoff volume, a typical sediment bulk density of 1602 kg/m<sup>3</sup> (100 lbs/ft<sup>3</sup>) and an assumed Event Mean Concentration (EMC) of 125 mg/L TSS in the runoff, or as otherwise determined by the Engineer of Record.

Example calculation for a 1.3-hectares parking lot site:

- 1.28 meters of rainfall depth, per year
- 1.3 hectares of 100% impervious drainage area
- EMC of 125 mg/L TSS in runoff
- Treatment of 90% of the average annual runoff volume
- Target average annual TSS removal rate of 60% by OGS

Annual Runoff Volume:

- $1.28 \text{ m rain depth} \times 1.3 \text{ ha} \times 10,000 \text{ m}^2/\text{ha} = 16,640 \text{ m}^3$  of runoff volume
- $16,640 \text{ m}^3 \times 1000 \text{ L/m}^3 = 16,640,000 \text{ L}$  of runoff volume
- $16,640,000 \text{ L} \times 0.90 = 14,976,000 \text{ L}$  to be treated by OGS unit

Annual Sediment Mass and Sediment Volume Load Calculation:

- $14,976,000 \text{ L} \times 125 \text{ mg/L} \times \text{kg}/1,000,000 \text{ mg} = 1,872 \text{ kg}$  annual sediment mass
- $1,872 \text{ kg} \times \text{m}^3/1602 \text{ kg} = 1.17 \text{ m}^3$  annual sediment volume
- $1.17 \text{ m}^3 \times 60\% \text{ TSS removal rate by OGS} = 0.70 \text{ m}^3$  minimum expected annual storage requirement in OGS

As a guideline, the U.S. EPA has determined typical annual sediment loads per drainage area for various sites by land use (see Table 1). Certain States, Provinces and local jurisdictions have also established such guidelines.

| Table 1 – Annual Mass Sediment Loading by Land Use |            |             |             |      |     |          |            |                 |
|----------------------------------------------------|------------|-------------|-------------|------|-----|----------|------------|-----------------|
|                                                    | Commercial | Parking Lot | Residential |      |     | Highways | Industrial | Shopping Center |
| (lbs/acre/yr)                                      | 1,000      | 400         | High        | Med. | Low | 880      | 500        | 440             |
| (kg/hectare/yr)                                    | 1,124      | 450         | 472         | 281  | 11  | 989      | 562        | 494             |

Source: U.S. EPA Stormwater Best Management Practice Design Guide Volume 1, Appendix D, Table D-1, Burton and Pitt 2002

### 3.4 SIZING METHODOLOGY

The OGS device shall be engineered, designed and sized to provide stormwater quality treatment based on treating a minimum of 90 percent of the average annual runoff volume and a minimum removal of an annual average 60% of the sediment (TSS) load based on the Particle Size Distribution (PSD) specified in Table 2, Section 3.5, and based on third-party performance testing conducted in accordance with the Canadian Environmental Technology Verification (ETV) Program's **Procedure for Laboratory Testing of Oil-Grit Separators**. Sizing of the OGS shall be determined by use of a minimum ten (10) years of local historical rainfall data provided by Environment Canada. Sizing shall also be determined by use of the sediment removal performance data derived from the ISO 14034 ETV third-party verified laboratory testing data from testing conducted in accordance with the Canadian ETV protocol *Procedure for Laboratory Testing of Oil-Grit Separators*, as follows:

3.4.1 Sediment removal efficiency for a given surface loading rate and its associated flow rate shall be based on sediment removal efficiency demonstrated at the seven (7) tested surface loading rates specified in the protocol, ranging 40 L/min/m<sup>2</sup> to 1400 L/min/m<sup>2</sup>, and as stated in the ISO 14034 ETV Verification Statement for the OGS device.

3.4.2 Sediment removal efficiency for surface loading rates between 40 L/min/m<sup>2</sup> and 1400 L/min/m<sup>2</sup> shall be based on linear interpolation of data between consecutive tested surface loading rates.

3.4.3 Sediment removal efficiency for surface loading rates less than the lowest tested surface loading rate of 40 L/min/m<sup>2</sup> shall be assumed to be identical to the sediment removal efficiency at 40 L/min/m<sup>2</sup>. No extrapolation shall be allowed that results in a sediment removal efficiency that is greater than that demonstrated at 40 L/min/m<sup>2</sup>.

3.4.4 Sediment removal efficiency for surface loading rates greater than the highest tested surface loading rate of 1400 L/min/m<sup>2</sup> shall assume zero sediment removal for the portion of flow that exceeds 1400 L/min/m<sup>2</sup>, and shall be calculated using a simple proportioning formula, with 1400 L/min/m<sup>2</sup> in the numerator and the higher surface loading rate in the denominator, and multiplying the resulting fraction times the sediment removal efficiency at 1400 L/min/m<sup>2</sup>.

The OGS device shall also have sufficient annual sediment storage capacity as specified and calculated in Section 3.3.

3.4.5 The Peclet Number is not an approved method or model for calculating TSS removal, sizing, or scaling OGS devices.

3.4.6 If an alternate OGS device is proposed, supporting documentation shall be submitted that demonstrates:

- Canadian ETV or ISO 14034 ETV Verification Statement which verifies third-party performance testing conducted in accordance with the **Procedure for Laboratory Testing of Oil-Grit Separators**, including the Light Liquid Re-entrainment Simulation Testing.
- Equal or better sediment (TSS) removal of the PSD specified in Table 2 at equivalent surface loading rates, as compared to the OGS device specified herein.
- Equal or better Light Liquid Re-entrainment Simulation Test results (using low-density polyethylene beads as a surrogate for light liquids such as oil and fuel) at equivalent surface loading rates, as compared to the OGS device specified herein. However, an alternative OGS device shall not be allowed as a substitute if the Light Liquid Re-entrainment Simulation Test was performed with screening components within the OGS device that are effective at retaining the low-density polyethylene beads, but would not be expected to retain light liquids such as oil and fuel.
- Equal or greater sediment storage capacity, as compared to the OGS device specified herein.
- Supporting documentation shall be signed and sealed by a local registered Professional Engineer. All costs associated with preparing and certifying this documentation shall be born solely by the Contractor.

### 3.5 PARTICLE SIZE DISTRIBUTION (PSD) FOR SIZING

The OGS device shall be sized to achieve the Engineer-specified average annual percent sediment (TSS) removal based solely on the test sediment used in the Canadian ETV Program's **Procedure for Laboratory Testing of Oil-Grit Separators**. This test sediment is comprised of inorganic ground silica with a specific gravity of 2.65, uniformly mixed, and containing a broad range of particle sizes as specified in Table 2. No alternative PSDs or deviations from Table 2 shall be accepted.

| <b>Table 2</b><br><b>Canadian ETV Program Procedure for Laboratory</b><br><b>Testing of Oil-Grit Separators</b><br><b>Particle Size Distribution (PSD) of Test Sediment</b> |                                   |                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------|-------------------------|
| <b>Particle Diameter</b><br><b>(Microns)</b>                                                                                                                                | <b>% by Mass of All Particles</b> | <b>Specific Gravity</b> |
| 1000                                                                                                                                                                        | 5%                                | 2.65                    |
| 500                                                                                                                                                                         | 5%                                | 2.65                    |
| 250                                                                                                                                                                         | 15%                               | 2.65                    |
| 150                                                                                                                                                                         | 15%                               | 2.65                    |
| 100                                                                                                                                                                         | 10%                               | 2.65                    |
| 75                                                                                                                                                                          | 5%                                | 2.65                    |
| 50                                                                                                                                                                          | 10%                               | 2.65                    |
| 20                                                                                                                                                                          | 15%                               | 2.65                    |
| 8                                                                                                                                                                           | 10%                               | 2.65                    |
| 5                                                                                                                                                                           | 5%                                | 2.65                    |
| 2                                                                                                                                                                           | 5%                                | 2.65                    |

### 3.6 CANADIAN ETV or ISO 14034 ETV VERIFICATION OF SCOUR TESTING

The OGS device shall have Canadian ETV or ISO 14034 ETV Verification of completed third-party scour testing conducted and have in accordance with the Canadian ETV Program's **Procedure for Laboratory Testing of Oil-Grit Separators**. This scour testing is conducted with the device pre-loaded with test sediment comprised of the particle size distribution (PSD) illustrated in Table 2.

3.6.1 To be acceptable for on-line installation, the OGS device must demonstrate an average scour test effluent concentration less than 10 mg/L at each surface loading rate tested, up to and including 2600 L/min/m<sup>2</sup>.

Data generated from laboratory scour testing performed with an OGS device pre-loaded with a coarser PSD than in Table 2 (i.e. the coarser PSD has no particles in the 1-micron to 50-micron size range, or the D<sub>50</sub> of the test sediment exceeds 75 microns) shall not be acceptable for the determination of the device's suitability for on-line installation.

### 3.7 DESIGN ACCOUNTING FOR BYPASS

3.7.1 The OGS device shall be specified to achieve the TSS removal performance and water quality objectives without washout of previously captured pollutants. The OGS device shall also have sufficient hydraulic conveyance capacity to convey the peak storm event, in accordance with hydraulic conditions per the Engineer of Record. To ensure this is achieved, there are two design options with associated requirements:

3.7.1.1 The OGS device shall be placed **off-line** with an upstream diversion structure (typically in an upstream manhole) that only allows the water quality volume to be diverted to the OGS device, and excessive flows diverted downstream around the OGS device to prevent high flow washout of pollutants previously captured. This design typically incorporates a triangular layout including an upstream bypass manhole with an appropriately engineered weir wall, the OGS device, and a downstream junction manhole, which is connected to both the OGS device and bypass structure. In this case with an external bypass required, the OGS device manufacturer must provide calculations and designs for all structures, piping and any other required material applicable to the proper functioning of the system, stamped by a Professional Engineer.

3.7.1.2 Alternatively, OGS devices in compliance with Section 3.6 shall be acceptable for an **on-line** design configuration, thereby eliminating the requirement for an upstream bypass manhole and downstream junction manhole.

3.7.2 The OGS device shall also have sufficient hydraulic conveyance capacity to convey the peak storm event, in accordance with hydraulic conditions per the Engineer of Record. If an alternate OGS device is proposed, supporting documentation shall be submitted that demonstrates equal or better hydraulic conveyance capacity as compared to the OGS device specified herein. This documentation shall be signed and sealed by a local registered Professional Engineer. All costs associated with preparing and certifying this documentation shall be born solely by the Contractor.

### 3.8 LIGHT LIQUID RE-ENTRAINMENT SIMULATION TESTING

The OGS device shall have Canadian ETV or ISO 14034 ETV Verification of completed third-party Light Liquid Re-entrainment Simulation Testing in accordance with the Canadian ETV Program's **Procedure for Laboratory Testing of Oil-Grit Separators**, with results reported within the Canadian ETV or ISO 14034 ETV verification. This re-entrainment testing is conducted with the device pre-loaded with low density polyethylene (LDPE) plastic beads as a surrogate for light liquids such as oil and fuel. Testing is conducted on the same OGS unit tested for sediment removal to assess whether light liquids captured after a spill are effectively retained at high flow rates.

3.8.1 For an OGS device to be an acceptable stormwater treatment device on a site where vehicular traffic occurs and the potential for an oil or fuel spill exists, the OGS device must have reported verified performance results of greater than 99% cumulative retention of LDPE plastic beads for the five specified surface loading rates (ranging 200 L/min/m<sup>2</sup> to 2600 L/min/m<sup>2</sup>) in accordance with the Light Liquid Re-entrainment Simulation Testing within the Canadian ETV Program's **Procedure for Laboratory Testing of Oil-Grit Separators**. However, an OGS device shall not be allowed if the Light Liquid Re-entrainment Simulation Testing was performed with screening components within the OGS device that are effective at retaining the LDPE plastic beads, but would not be expected to retain light liquids such as oil and fuel.

### 3.9 PETROLEUM HYDROCARBONS AND FLOATABLES STORAGE CAPACITY

Petroleum hydrocarbons and floatables storage capacity in the OGS device shall be a minimum 50 gallons (189 Liters), or more as specified.

3.9.1 The OGS device shall have gasketed precast concrete joints that are watertight, and oil resistant and meet the design criteria according to ASTM C-443 to provide safe oil and other hydrocarbon materials storage and ground water protection. Mastic sealants or butyl tape/rope alone are not an acceptable alternative.

### 3.10 SURFACE LOADING RATE SCALING OF DIFFERENT MODEL SIZES

The reference device for scaling shall be an OGS device that has been third-party tested in accordance with the Canadian ETV Program's **Procedure for Laboratory Testing of Oil-Grit Separators**. Other model sizes of the tested device shall only be scaled such that the claimed TSS removal efficiency of the scaled device shall be no greater than the TSS removal efficiency of the tested device at identical **surface loading rates** (flow rate divided by settling surface area). The depth of other model sizes of the tested device shall be scaled in accordance with the depth scaling provisions within Section 6.0 of the Canadian ETV Program's **Procedure for Laboratory Testing of Oil-Grit Separators**.

3.10.1 The Peclet Number and volumetric scaling are not approved methods for scaling OGS devices.

## PART 4 – INSPECTION & MAINTENANCE

The OGS manufacturer shall provide an Owner's Manual upon request. Maintenance shall be performed by a professional service provider who has experience in cleaning OGS devices and has been trained and certified in applicable health and safety practices, including confined space entry procedures.

- 4.1 A Quality Assurance Plan that provides inspection for a minimum of 5 years shall be included with the OGS stormwater quality device, and written into the Environmental Compliance Approval (ECA) or the appropriate State/Provincial or local approval document.
- 4.2 OGS device inspection shall include determination of sediment depth and presence of petroleum hydrocarbons below the insert. Inspection shall be easily conducted from finished grade through a frame and cover of at least 22 inch (560 mm) in diameter.
- 4.3 Inspection and pollutant removal shall be conducted periodically. For routine maintenance cleaning activities, pollutant removal shall typically utilize a truck equipped with vacuum apparatus, and shall be easily conducted from finished grade through a frame and cover of at least 22-inches (560 mm) in diameter.
- 4.4 Diameter of the maintenance access opening to the lower chamber and sump shall be scaled consistently across all model sizes, and shall be 1/3 the inside diameter of the OGS structure, or larger.
- 4.5 No confined space entry shall be required for routine inspection and maintenance cleaning activities.

- 4.6 For OGS model sizes of diameter 72 inches (1828 mm) and greater, the access opening to the OGS device's lower chamber and sump shall be large enough to allow a maintenance worker to enter the lower chamber to facilitate non-routine maintenance cleaning activities and repairs, as needed.
- 4.7 The orifice-containing component (i.e. drop pipe, duct, chute, etc.) of the OGS device used to control flow rate into the lower chamber shall be removable from the insert to facilitate cleaning, repair, or replacement of the orifice-containing component, as needed.

## **PART 5 – EXECUTION**

### **5.1 PRECAST CONCRETE INSTALLATION**

The installation of the precast concrete OGS stormwater quality treatment device shall conform to ASTM C 891, ASTM C 478, ASTM C 443, CAN/CSA-A257.4-14, CAN/CSA-A257.4-14, CAN/CSA-S6-00 and all highway, State/Provincial, or local specifications for the construction of manholes. Selected sections of a general specification that are applicable are summarized below. The Contractor shall furnish all labor, equipment and materials necessary to offload, assemble as needed the OGS internal components as specified in the Shop Drawings.

### **5.2 EXCAVATION**

5.2.1 Excavation for the installation of the OGS stormwater quality treatment device shall conform to highway, State/Provincial or local specifications. Topsoil that is removed during the excavation for the OGS stormwater quality treatment device shall be stockpiled in designated areas and not be mixed with subsoil or other materials. Topsoil stockpiles and the general site preparation for the installation of the OGS stormwater quality device shall conform to highway, State/Provincial or local specifications.

5.2.2 The OGS device shall not be installed on frozen ground. Excavation shall extend a minimum of 12 inch (300 mm) from the precast concrete surfaces plus an allowance for shoring and bracing where required. If the bottom of the excavation provides an unsuitable foundation additional excavation may be required.

5.2.3 In areas with a high water table, continuous dewatering shall be provided to ensure that the excavation is stable and free of water.

### **5.3 BACKFILLING**

Backfill material shall conform to highway, State/Provincial or local specifications. Backfill material shall be placed in uniform layers not exceeding 12 inches (300 mm) in depth and compacted to highway, State/Provincial or local specifications.

### **5.4 OGS WATER QUALITY DEVICE CONSTRUCTION SEQUENCE**

5.4.1 The precast concrete OGS stormwater quality treatment device is installed and leveled in sections in the following sequence:

- aggregate base
- base slab, or base
- riser section(s) (if required)
- riser section w/ pre-installed fiberglass insert
- upper riser section(s)
- internal OGS device components
- connect inlet and outlet pipes
- riser section, top slab and/or transition (if required)
- frame and access cover

5.4.2 The precast concrete base shall be placed level at the specified grade. The entire base shall be in contact with the underlying compacted granular material. Subsequent sections, complete with oil resistant, watertight joint seals, shall be installed in accordance with the precast concrete manufacturer's recommendations.

5.4.3 Adjustment of the OGS stormwater quality treatment device can be performed by lifting the upper sections free of the excavated area, re-leveling the base, and re-installing the sections. Damaged sections and gaskets shall be repaired or replaced as necessary. Once the OGS stormwater quality treatment device has been constructed, any lift holes must be plugged with mortar.

#### 5.5 DROP PIPE AND OIL INSPECTION PIPE

Once the upper precast concrete riser has been attached to the lower precast concrete riser section, the OGS device Drop Pipe and Oil Inspection Pipe must be attached, and watertight sealed to the fiberglass insert using Sikaflex 1a. Installation instructions and required materials shall be provided by the OGS manufacturer.

#### 5.6 INLET AND OUTLET PIPES

Inlet and outlet pipes shall be securely set using grout or approved pipe seals (flexible boot connections, where applicable) so that the structure is watertight. Non-secure inlets and outlets will result in improper performance.

#### 5.7 FRAME AND COVER OR FRAME AND GRATE INSTALLATION

Precast concrete adjustment units shall be installed to set the frame and cover/grate at the required elevation. The adjustment units shall be laid in a full bed of mortar with successive units being joined using sealant recommended by the manufacturer. Frames for the cover/grate should be set in a full bed of mortar at the elevation specified.

5.7.1 A minimum of one cover, at least 22-inch (560 mm) in diameter, shall be clearly embossed with the OGS device brand or product name to properly identify this asset's purpose is for stormwater quality treatment.

# Appendix E

## HEC-RAS Modelling



Legend

- SNC XS
- River
- JFSA Additional XS

SCALE: 1:5000

0 100 200 m

 **J.F. Sabourin and Associates Inc.**  
WATER RESOURCES AND ENVIRONMENTAL CONSULTANTS  
52 Springbrook Drive (613) 836-3884  
Ottawa, ON, K2S 1B9 www.jfsa.com

Thunder Road Partnership

6150 Thunder Road

Figure E1: HEC-RAS Modifications

|         |             |
|---------|-------------|
| PROJECT | 2120(01)-21 |
| DRAWN   | JB          |
| DATE    | NOV-2024    |

HEC-RAS Model Plan: JFSA-June2024-Extension-QMax-1.0n 2024-08-09

SBB\_Main Reach-0-DS-0-1

**Legend**

WS 100Yr10DSnow

WS 100Yr

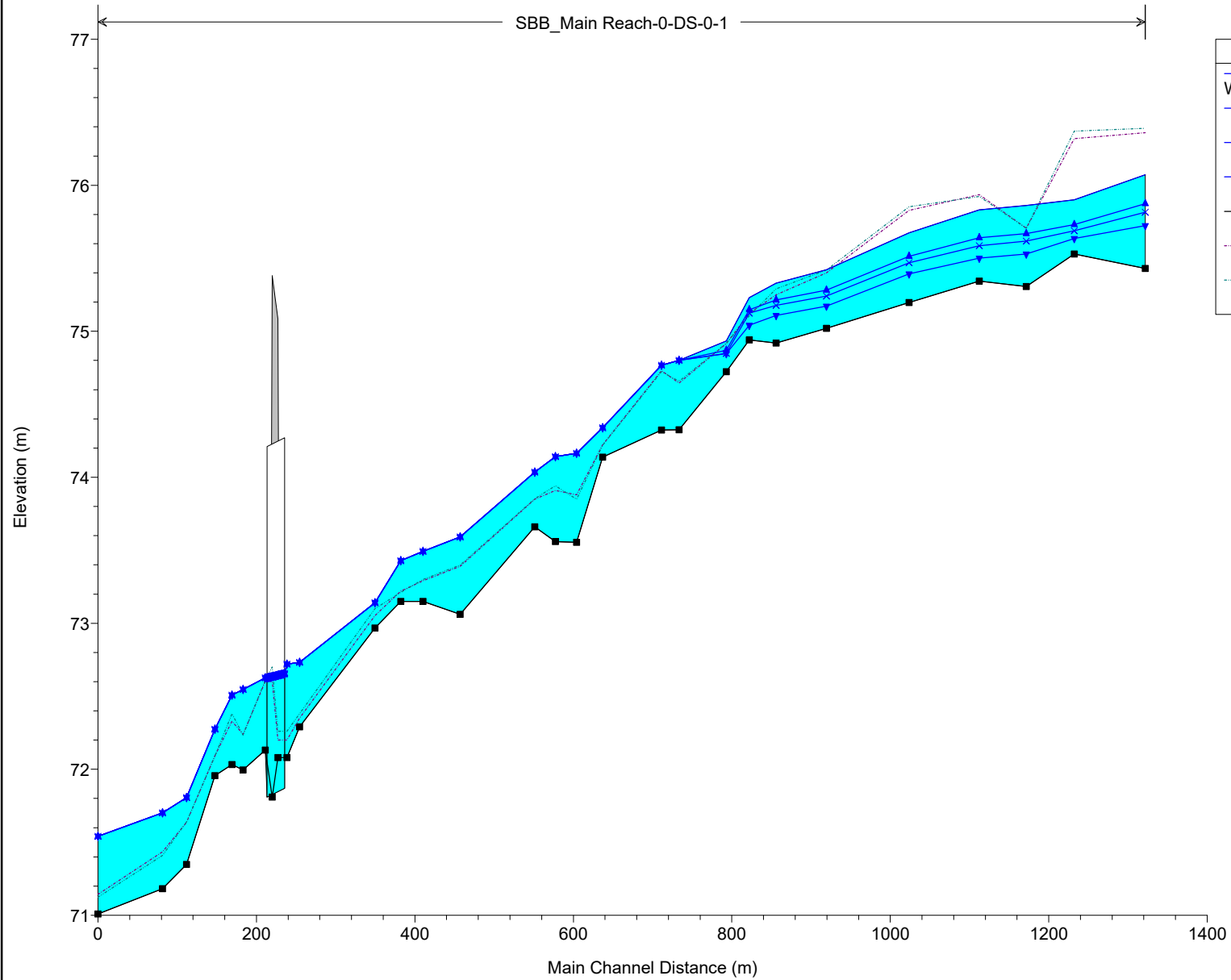
WS 2Yr

WS 25Yr

Ground

LOB

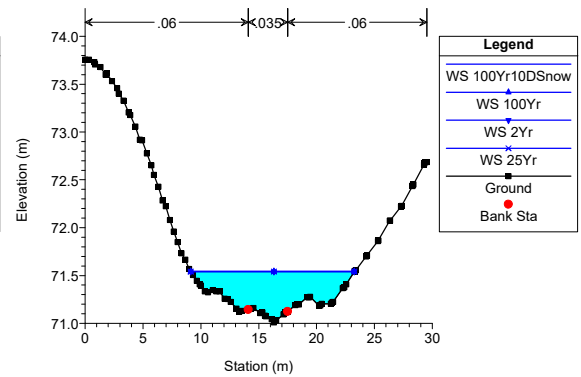
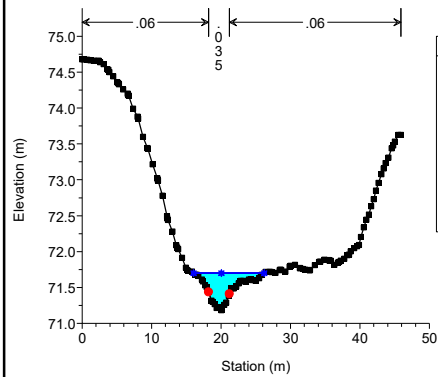
ROB











HEC-RAS Plan: JFSA-June2024-Extension River: SBB\_Main Reach: Reach-0-DS-0-1

| Reach          | River Sta | Profile      | Q Total<br>(m3/s) | Min Ch El<br>(m) | W.S. Elev<br>(m) | Crit W.S.<br>(m) | E.G. Elev<br>(m) | E.G. Slope<br>(m/m) | Vel Chnl<br>(m/s) | Flow Area<br>(m2) | Top Width<br>(m) | Froude # Chl |
|----------------|-----------|--------------|-------------------|------------------|------------------|------------------|------------------|---------------------|-------------------|-------------------|------------------|--------------|
| Reach-0-DS-0-1 | 84663.10  | 100Yr10DSnow | 0.60              | 75.43            | 76.07            | 75.73            | 76.08            | 0.000638            | 0.36              | 1.67              | 4.53             | 0.19         |
| Reach-0-DS-0-1 | 84663.10  | 100Yr        | 0.20              | 75.43            | 75.87            | 75.61            | 75.88            | 0.000397            | 0.23              | 0.88              | 3.37             | 0.14         |
| Reach-0-DS-0-1 | 84663.10  | 2Yr          | 0.05              | 75.43            | 75.72            | 75.53            | 75.72            | 0.000177            | 0.12              | 0.44              | 2.50             | 0.09         |
| Reach-0-DS-0-1 | 84663.10  | 25Yr         | 0.13              | 75.43            | 75.82            | 75.58            | 75.82            | 0.000326            | 0.19              | 0.70              | 3.04             | 0.13         |
| Reach-0-DS-0-1 | 84574     | 100Yr10DSnow | 0.60              | 75.53            | 75.90            | 75.82            | 75.94            | 0.007139            | 0.84              | 0.72              | 3.42             | 0.58         |
| Reach-0-DS-0-1 | 84574     | 100Yr        | 0.20              | 75.53            | 75.73            | 75.71            | 75.77            | 0.016524            | 0.83              | 0.24              | 2.17             | 0.80         |
| Reach-0-DS-0-1 | 84574     | 2Yr          | 0.05              | 75.53            | 75.63            | 75.63            | 75.66            | 0.037138            | 0.76              | 0.07              | 1.30             | 1.06         |
| Reach-0-DS-0-1 | 84574     | 25Yr         | 0.13              | 75.53            | 75.69            | 75.69            | 75.73            | 0.025368            | 0.86              | 0.15              | 1.84             | 0.95         |
| Reach-0-DS-0-1 | 84513     | 100Yr10DSnow | 0.60              | 75.31            | 75.86            | 75.56            | 75.87            | 0.000385            | 0.28              | 2.22              | 11.97            | 0.15         |
| Reach-0-DS-0-1 | 84513     | 100Yr        | 0.20              | 75.31            | 75.67            | 75.46            | 75.67            | 0.000481            | 0.20              | 0.99              | 5.33             | 0.15         |
| Reach-0-DS-0-1 | 84513     | 2Yr          | 0.05              | 75.31            | 75.53            | 75.39            | 75.53            | 0.000390            | 0.13              | 0.39              | 3.27             | 0.13         |
| Reach-0-DS-0-1 | 84513     | 25Yr         | 0.13              | 75.31            | 75.62            | 75.44            | 75.62            | 0.000485            | 0.18              | 0.73              | 4.70             | 0.15         |
| Reach-0-DS-0-1 | 84454     | 100Yr10DSnow | 0.60              | 75.34            | 75.83            |                  | 75.84            | 0.000599            | 0.32              | 1.89              | 6.07             | 0.18         |
| Reach-0-DS-0-1 | 84454     | 100Yr        | 0.20              | 75.34            | 75.64            |                  | 75.64            | 0.000531            | 0.23              | 0.89              | 4.37             | 0.16         |
| Reach-0-DS-0-1 | 84454     | 2Yr          | 0.05              | 75.34            | 75.50            |                  | 75.50            | 0.000527            | 0.15              | 0.35              | 3.29             | 0.14         |
| Reach-0-DS-0-1 | 84454     | 25Yr         | 0.13              | 75.34            | 75.59            |                  | 75.59            | 0.000538            | 0.20              | 0.66              | 3.97             | 0.16         |
| Reach-0-DS-0-1 | 84366     | 100Yr10DSnow | 0.60              | 75.20            | 75.67            |                  | 75.71            | 0.006188            | 0.83              | 0.72              | 3.06             | 0.55         |
| Reach-0-DS-0-1 | 84366     | 100Yr        | 0.20              | 75.20            | 75.51            |                  | 75.53            | 0.005598            | 0.62              | 0.32              | 1.99             | 0.49         |
| Reach-0-DS-0-1 | 84366     | 2Yr          | 0.05              | 75.20            | 75.39            |                  | 75.40            | 0.005235            | 0.42              | 0.12              | 1.29             | 0.43         |
| Reach-0-DS-0-1 | 84366     | 25Yr         | 0.13              | 75.20            | 75.47            |                  | 75.48            | 0.005569            | 0.55              | 0.24              | 1.75             | 0.47         |
| Reach-0-DS-0-1 | 84261     | 100Yr10DSnow | 0.60              | 75.02            | 75.42            |                  | 75.43            | 0.001426            | 0.41              | 1.51              | 7.90             | 0.27         |
| Reach-0-DS-0-1 | 84261     | 100Yr        | 0.20              | 75.02            | 75.28            |                  | 75.29            | 0.001274            | 0.29              | 0.69              | 4.50             | 0.24         |
| Reach-0-DS-0-1 | 84261     | 2Yr          | 0.05              | 75.02            | 75.17            |                  | 75.17            | 0.001224            | 0.19              | 0.27              | 3.18             | 0.21         |
| Reach-0-DS-0-1 | 84261     | 25Yr         | 0.13              | 75.02            | 75.24            |                  | 75.24            | 0.001229            | 0.25              | 0.52              | 4.00             | 0.23         |
| Reach-0-DS-0-1 | 84199     | 100Yr10DSnow | 0.60              | 74.92            | 75.33            |                  | 75.34            | 0.001422            | 0.41              | 1.51              | 7.58             | 0.27         |
| Reach-0-DS-0-1 | 84199     | 100Yr        | 0.20              | 74.92            | 75.21            |                  | 75.22            | 0.000978            | 0.26              | 0.78              | 5.01             | 0.21         |
| Reach-0-DS-0-1 | 84199     | 2Yr          | 0.05              | 74.92            | 75.11            |                  | 75.11            | 0.000702            | 0.16              | 0.33              | 3.50             | 0.16         |
| Reach-0-DS-0-1 | 84199     | 25Yr         | 0.13              | 74.92            | 75.18            |                  | 75.18            | 0.000855            | 0.22              | 0.60              | 4.49             | 0.19         |
| Reach-0-DS-0-1 | 84165     | 100Yr10DSnow | 0.60              | 74.94            | 75.23            | 75.18            | 75.25            | 0.005523            | 0.75              | 1.26              | 14.57            | 0.52         |
| Reach-0-DS-0-1 | 84165     | 100Yr        | 0.20              | 74.94            | 75.15            | 75.08            | 75.16            | 0.004383            | 0.48              | 0.47              | 5.70             | 0.43         |
| Reach-0-DS-0-1 | 84165     | 2Yr          | 0.05              | 74.94            | 75.04            |                  | 75.05            | 0.010324            | 0.45              | 0.12              | 1.89             | 0.58         |
| Reach-0-DS-0-1 | 84165     | 25Yr         | 0.13              | 74.94            | 75.12            | 75.06            | 75.13            | 0.003942            | 0.40              | 0.36              | 4.44             | 0.39         |
| Reach-0-DS-0-1 | 84136     | 100Yr10DSnow | 0.60              | 74.72            | 74.93            | 74.93            | 74.98            | 0.021645            | 0.99              | 0.80              | 10.01            | 0.93         |
| Reach-0-DS-0-1 | 84136     | 100Yr        | 0.20              | 74.72            | 74.87            | 74.87            | 74.90            | 0.024843            | 0.79              | 0.28              | 5.33             | 0.93         |
| Reach-0-DS-0-1 | 84136     | 2Yr          | 0.05              | 74.72            | 74.85            |                  | 74.85            | 0.004831            | 0.30              | 0.19              | 3.70             | 0.39         |
| Reach-0-DS-0-1 | 84136     | 25Yr         | 0.13              | 74.72            | 74.85            | 74.85            | 74.88            | 0.029898            | 0.74              | 0.19              | 3.72             | 0.98         |
| Reach-0-DS-0-1 | 84077     | 100Yr10DSnow | 1.25              | 74.32            | 74.80            |                  | 74.81            | 0.000672            | 0.39              | 3.41              | 12.40            | 0.20         |
| Reach-0-DS-0-1 | 84077     | 100Yr        | 1.25              | 74.32            | 74.80            |                  | 74.81            | 0.000672            | 0.39              | 3.41              | 12.40            | 0.20         |
| Reach-0-DS-0-1 | 84077     | 2Yr          | 1.25              | 74.32            | 74.80            |                  | 74.81            | 0.000672            | 0.39              | 3.41              | 12.40            | 0.20         |
| Reach-0-DS-0-1 | 84077     | 25Yr         | 1.25              | 74.32            | 74.80            |                  | 74.81            | 0.000672            | 0.39              | 3.41              | 12.40            | 0.20         |
| Reach-0-DS-0-1 | 84055     | 100Yr10DSnow | 1.25              | 74.32            | 74.77            | 74.58            | 74.78            | 0.002116            | 0.57              | 2.21              | 9.58             | 0.34         |
| Reach-0-DS-0-1 | 84055     | 100Yr        | 1.25              | 74.32            | 74.77            | 74.58            | 74.78            | 0.002116            | 0.57              | 2.21              | 9.58             | 0.34         |
| Reach-0-DS-0-1 | 84055     | 2Yr          | 1.25              | 74.32            | 74.77            | 74.58            | 74.78            | 0.002116            | 0.57              | 2.21              | 9.58             | 0.34         |
| Reach-0-DS-0-1 | 84055     | 25Yr         | 1.25              | 74.32            | 74.77            | 74.58            | 74.78            | 0.002116            | 0.57              | 2.21              | 9.58             | 0.34         |
| Reach-0-DS-0-1 | 83980     | 100Yr10DSnow | 1.25              | 74.14            | 74.34            | 74.34            | 74.41            | 0.021311            | 1.23              | 1.18              | 9.13             | 0.98         |
| Reach-0-DS-0-1 | 83980     | 100Yr        | 1.25              | 74.14            | 74.34            | 74.34            | 74.41            | 0.021311            | 1.23              | 1.18              | 9.13             | 0.98         |
| Reach-0-DS-0-1 | 83980     | 2Yr          | 1.25              | 74.14            | 74.34            | 74.34            | 74.41            | 0.021311            | 1.23              | 1.18              | 9.13             | 0.98         |
| Reach-0-DS-0-1 | 83980     | 25Yr         | 1.25              | 74.14            | 74.34            | 74.34            | 74.41            | 0.021311            | 1.23              | 1.18              | 9.13             | 0.98         |
| Reach-0-DS-0-1 | 83947     | 100Yr10DSnow | 1.25              | 73.55            | 74.16            |                  | 74.17            | 0.000718            | 0.46              | 3.07              | 8.42             | 0.21         |
| Reach-0-DS-0-1 | 83947     | 100Yr        | 1.25              | 73.55            | 74.16            |                  | 74.17            | 0.000718            | 0.46              | 3.07              | 8.42             | 0.21         |
| Reach-0-DS-0-1 | 83947     | 2Yr          | 1.25              | 73.55            | 74.16            |                  | 74.17            | 0.000718            | 0.46              | 3.07              | 8.42             | 0.21         |
| Reach-0-DS-0-1 | 83947     | 25Yr         | 1.25              | 73.55            | 74.16            |                  | 74.17            | 0.000718            | 0.46              | 3.07              | 8.42             | 0.21         |
| Reach-0-DS-0-1 | 83920     | 100Yr10DSnow | 1.25              | 73.56            | 74.14            |                  | 74.15            | 0.000955            | 0.51              | 3.00              | 13.28            | 0.24         |
| Reach-0-DS-0-1 | 83920     | 100Yr        | 1.25              | 73.56            | 74.14            |                  | 74.15            | 0.000955            | 0.51              | 3.00              | 13.28            | 0.24         |
| Reach-0-DS-0-1 | 83920     | 2Yr          | 1.25              | 73.56            | 74.14            |                  | 74.15            | 0.000955            | 0.51              | 3.00              | 13.28            | 0.24         |
| Reach-0-DS-0-1 | 83920     | 25Yr         | 1.25              | 73.56            | 74.14            |                  | 74.15            | 0.000955            | 0.51              | 3.00              | 13.28            | 0.24         |
| Reach-0-DS-0-1 | 83894     | 100Yr10DSnow | 1.25              | 73.66            | 74.03            |                  | 74.09            | 0.007914            | 1.10              | 1.27              | 5.85             | 0.66         |
| Reach-0-DS-0-1 | 83894     | 100Yr        | 1.25              | 73.66            | 74.03            |                  | 74.09            | 0.007914            | 1.10              | 1.27              | 5.85             | 0.66         |
| Reach-0-DS-0-1 | 83894     | 2Yr          | 1.25              | 73.66            | 74.03            |                  | 74.09            | 0.007914            | 1.10              | 1.27              | 5.85             | 0.66         |
| Reach-0-DS-0-1 | 83894     | 25Yr         | 1.25              | 73.66            | 74.03            |                  | 74.09            | 0.007914            | 1.10              | 1.27              | 5.85             | 0.66         |
| Reach-0-DS-0-1 | 83803     | 100Yr10DSnow | 1.25              | 73.06            | 73.59            |                  | 73.62            | 0.003312            | 0.77              | 2.29              | 13.73            | 0.43         |
| Reach-0-DS-0-1 | 83803     | 100Yr        | 1.25              | 73.06            | 73.59            |                  | 73.62            | 0.003312            | 0.77              | 2.29              | 13.73            | 0.43         |
| Reach-0-DS-0-1 | 83803     | 2Yr          | 1.25              | 73.06            | 73.59            |                  | 73.62            | 0.003312            | 0.77              | 2.29              | 13.73            | 0.43         |
| Reach-0-DS-0-1 | 83803     | 25Yr         | 1.25              | 73.06            | 73.59            |                  | 73.62            | 0.003312            | 0.77              | 2.29              | 13.73            | 0.43         |
| Reach-0-DS-0-1 | 83757     | 100Yr10DSnow | 1.25              | 73.15            | 73.49            |                  | 73.50            | 0.001872            | 0.53              | 3.52              | 18.53            | 0.32         |
| Reach-0-DS-0-1 | 83757     | 100Yr        | 1.25              | 73.15            | 73.49            |                  | 73.50            | 0.001872            | 0.53              | 3.52              | 18.53            | 0.32         |
| Reach-0-DS-0-1 | 83757     | 2Yr          | 1.25              | 73.15            | 73.49            |                  | 73.50            | 0.001872            | 0.53              | 3.52              | 18.53            | 0.32         |
| Reach-0-DS-0-1 | 83757     | 25Yr         | 1.25              | 73.15            | 73.49            |                  | 73.50            | 0.001872            | 0.53              | 3.52              | 18.53            | 0.32         |
| Reach-0-DS-0-1 | 83729     | 100Yr10DSnow | 1.25              | 73.15            | 73.43            | 73.34            | 73.44            | 0.002971            | 0.62              | 4.18              | 30.44            | 0.40         |
| Reach-0-DS-0-1 | 83729     | 100Yr        | 1.25              | 73.15            | 73.43            | 73.34            | 73.44            | 0.002971            | 0.62              | 4.18              | 30.44            | 0.40         |
| Reach-0-DS-0-1 | 83729     | 2Yr          | 1.25              | 73.15            | 73.43            | 73.34            | 73.44            | 0.002971            | 0.62              | 4.18              | 30.44            | 0.40         |
| Reach-0-DS-0-1 | 83729     | 25Yr         | 1.25              | 73.15            | 73.43            | 73.34            | 73.44            | 0.002971            | 0.62              | 4.18              | 30.44            | 0.40         |

HEC-RAS Plan: JFSA-June2024-Extension River: SBB\_Main Reach: Reach-0-DS-0-1 (Continued)

| Reach          | River Sta   | Profile      | Q Total<br>(m3/s) | Min Ch El<br>(m) | W.S. Elev<br>(m) | Crit W.S.<br>(m) | E.G. Elev<br>(m) | E.G. Slope<br>(m/m) | Vel Chnl<br>(m/s) | Flow Area<br>(m2) | Top Width<br>(m) | Froude # Chl |
|----------------|-------------|--------------|-------------------|------------------|------------------|------------------|------------------|---------------------|-------------------|-------------------|------------------|--------------|
| Reach-0-DS-0-1 | 83696       | 100Yr10DSnow | 1.25              | 72.97            | 73.14            | 73.14            | 73.20            | 0.029603            | 1.29              | 1.39              | 15.06            | 1.12         |
| Reach-0-DS-0-1 | 83696       | 100Yr        | 1.25              | 72.97            | 73.14            | 73.14            | 73.20            | 0.029603            | 1.29              | 1.39              | 15.06            | 1.12         |
| Reach-0-DS-0-1 | 83696       | 2Yr          | 1.25              | 72.97            | 73.14            | 73.14            | 73.20            | 0.029603            | 1.29              | 1.39              | 15.06            | 1.12         |
| Reach-0-DS-0-1 | 83696       | 25Yr         | 1.25              | 72.97            | 73.14            | 73.14            | 73.20            | 0.029603            | 1.29              | 1.39              | 15.06            | 1.12         |
| Reach-0-DS-0-1 | 83604       | 100Yr10DSnow | 1.25              | 72.29            | 72.73            |                  | 72.74            | 0.000778            | 0.45              | 5.47              | 21.16            | 0.22         |
| Reach-0-DS-0-1 | 83604       | 100Yr        | 1.25              | 72.29            | 72.73            |                  | 72.74            | 0.000778            | 0.45              | 5.47              | 21.16            | 0.22         |
| Reach-0-DS-0-1 | 83604       | 2Yr          | 1.25              | 72.29            | 72.73            |                  | 72.74            | 0.000778            | 0.45              | 5.47              | 21.16            | 0.22         |
| Reach-0-DS-0-1 | 83604       | 25Yr         | 1.25              | 72.29            | 72.73            |                  | 72.74            | 0.000778            | 0.45              | 5.47              | 21.16            | 0.22         |
| Reach-0-DS-0-1 | 83589       | 100Yr10DSnow | 1.25              | 72.08            | 72.72            | 72.34            | 72.73            | 0.000389            | 0.38              | 3.64              | 22.63            | 0.16         |
| Reach-0-DS-0-1 | 83589       | 100Yr        | 1.25              | 72.08            | 72.72            | 72.34            | 72.73            | 0.000389            | 0.38              | 3.64              | 22.63            | 0.16         |
| Reach-0-DS-0-1 | 83589       | 2Yr          | 1.25              | 72.08            | 72.72            | 72.34            | 72.73            | 0.000389            | 0.38              | 3.64              | 22.63            | 0.16         |
| Reach-0-DS-0-1 | 83589       | 25Yr         | 1.25              | 72.08            | 72.72            | 72.34            | 72.73            | 0.000389            | 0.38              | 3.64              | 22.63            | 0.16         |
| Reach-0-DS-0-1 | 83574 PB_20 | Culvert      |                   |                  |                  |                  |                  |                     |                   |                   |                  |              |
| Reach-0-DS-0-1 | 83562       | 100Yr10DSnow | 1.25              | 72.13            | 72.63            | 72.54            | 72.67            | 0.006408            | 0.91              | 1.37              | 7.53             | 0.58         |
| Reach-0-DS-0-1 | 83562       | 100Yr        | 1.25              | 72.13            | 72.63            | 72.54            | 72.67            | 0.006408            | 0.91              | 1.37              | 7.53             | 0.58         |
| Reach-0-DS-0-1 | 83562       | 2Yr          | 1.25              | 72.13            | 72.63            | 72.54            | 72.67            | 0.006408            | 0.91              | 1.37              | 7.53             | 0.58         |
| Reach-0-DS-0-1 | 83562       | 25Yr         | 1.25              | 72.13            | 72.63            | 72.54            | 72.67            | 0.006408            | 0.91              | 1.37              | 7.53             | 0.58         |
| Reach-0-DS-0-1 | 83532       | 100Yr10DSnow | 1.25              | 71.99            | 72.55            |                  | 72.57            | 0.002015            | 0.73              | 2.82              | 19.89            | 0.35         |
| Reach-0-DS-0-1 | 83532       | 100Yr        | 1.25              | 71.99            | 72.55            |                  | 72.57            | 0.002015            | 0.73              | 2.82              | 19.89            | 0.35         |
| Reach-0-DS-0-1 | 83532       | 2Yr          | 1.25              | 71.99            | 72.55            |                  | 72.57            | 0.002015            | 0.73              | 2.82              | 19.89            | 0.35         |
| Reach-0-DS-0-1 | 83532       | 25Yr         | 1.25              | 71.99            | 72.55            |                  | 72.57            | 0.002015            | 0.73              | 2.82              | 19.89            | 0.35         |
| Reach-0-DS-0-1 | 83518       | 100Yr10DSnow | 1.25              | 72.03            | 72.51            | 72.38            | 72.53            | 0.003205            | 0.74              | 2.23              | 19.54            | 0.42         |
| Reach-0-DS-0-1 | 83518       | 100Yr        | 1.25              | 72.03            | 72.51            | 72.38            | 72.53            | 0.003205            | 0.74              | 2.23              | 19.54            | 0.42         |
| Reach-0-DS-0-1 | 83518       | 2Yr          | 1.25              | 72.03            | 72.51            | 72.38            | 72.53            | 0.003205            | 0.74              | 2.23              | 19.54            | 0.42         |
| Reach-0-DS-0-1 | 83518       | 25Yr         | 1.25              | 72.03            | 72.51            | 72.38            | 72.53            | 0.003205            | 0.74              | 2.23              | 19.54            | 0.42         |
| Reach-0-DS-0-1 | 83496       | 100Yr10DSnow | 1.25              | 71.96            | 72.27            | 72.27            | 72.39            | 0.017666            | 1.55              | 0.91              | 4.30             | 0.96         |
| Reach-0-DS-0-1 | 83496       | 100Yr        | 1.25              | 71.96            | 72.27            | 72.27            | 72.39            | 0.017666            | 1.55              | 0.91              | 4.30             | 0.96         |
| Reach-0-DS-0-1 | 83496       | 2Yr          | 1.25              | 71.96            | 72.27            | 72.27            | 72.39            | 0.017666            | 1.55              | 0.91              | 4.30             | 0.96         |
| Reach-0-DS-0-1 | 83496       | 25Yr         | 1.25              | 71.96            | 72.27            | 72.27            | 72.39            | 0.017666            | 1.55              | 0.91              | 4.30             | 0.96         |
| Reach-0-DS-0-1 | 83460       | 100Yr10DSnow | 1.25              | 71.35            | 71.81            |                  | 71.85            | 0.005642            | 1.00              | 1.47              | 7.83             | 0.56         |
| Reach-0-DS-0-1 | 83460       | 100Yr        | 1.25              | 71.35            | 71.81            |                  | 71.85            | 0.005642            | 1.00              | 1.47              | 7.83             | 0.56         |
| Reach-0-DS-0-1 | 83460       | 2Yr          | 1.25              | 71.35            | 71.81            |                  | 71.85            | 0.005642            | 1.00              | 1.47              | 7.83             | 0.56         |
| Reach-0-DS-0-1 | 83460       | 25Yr         | 1.25              | 71.35            | 71.81            |                  | 71.85            | 0.005642            | 1.00              | 1.47              | 7.83             | 0.56         |
| Reach-0-DS-0-1 | 83430       | 100Yr10DSnow | 1.25              | 71.18            | 71.70            |                  | 71.73            | 0.002815            | 0.85              | 2.10              | 10.15            | 0.41         |
| Reach-0-DS-0-1 | 83430       | 100Yr        | 1.25              | 71.18            | 71.70            |                  | 71.73            | 0.002815            | 0.85              | 2.10              | 10.15            | 0.41         |
| Reach-0-DS-0-1 | 83430       | 2Yr          | 1.25              | 71.18            | 71.70            |                  | 71.73            | 0.002815            | 0.85              | 2.10              | 10.15            | 0.41         |
| Reach-0-DS-0-1 | 83430       | 25Yr         | 1.25              | 71.18            | 71.70            |                  | 71.73            | 0.002815            | 0.85              | 2.10              | 10.15            | 0.41         |
| Reach-0-DS-0-1 | 83350       | 100Yr10DSnow | 1.90              | 71.01            | 71.54            |                  | 71.56            | 0.001785            | 0.71              | 4.37              | 14.13            | 0.34         |
| Reach-0-DS-0-1 | 83350       | 100Yr        | 1.90              | 71.01            | 71.54            |                  | 71.56            | 0.001785            | 0.71              | 4.37              | 14.13            | 0.34         |
| Reach-0-DS-0-1 | 83350       | 2Yr          | 1.90              | 71.01            | 71.54            |                  | 71.56            | 0.001785            | 0.71              | 4.37              | 14.13            | 0.34         |
| Reach-0-DS-0-1 | 83350       | 25Yr         | 1.90              | 71.01            | 71.54            |                  | 71.56            | 0.001785            | 0.71              | 4.37              | 14.13            | 0.34         |

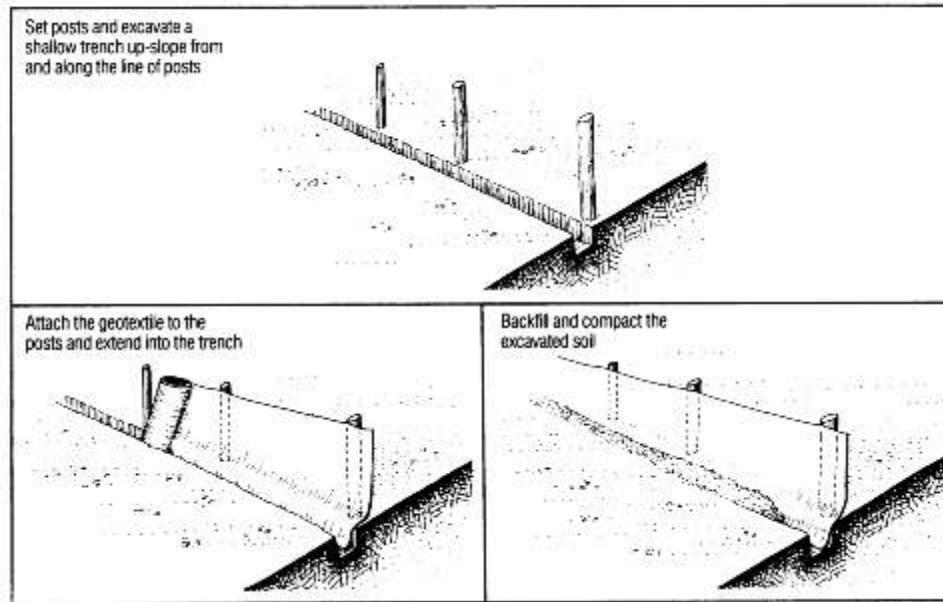


**Figure 7:** Typical installation of silt fences

## 4 CONCLUSION

As documented above, JFSA Canada Inc (JFSA) has completed a detailed hydrologic analysis of the proposed development site under pre-development conditions to establish target release rates. A detailed PCSWMM model was then created based on the detailed design developed by LRL to assess the hydrologic and hydraulic operations of the site under post-development conditions to ensure that: the development storm sewer network is sufficiently sized, the proposed SWM ponds have sufficient capacity to attenuate flows to pre-development conditions, that the major system storage locations do not pose a risk to the proposed building and the increase in runoff volume does not exacerbate downstream erosion issues. Based on this analysis it was determined that the proposed SWM infrastructure is sufficiently sized to ensure no risk to both the proposed development and surrounding existing lands.