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163 & 164 Edward Street East, Creemore

PRELIMINARY STORMWATER MANAGEMENT REPORT

Lamb Creemore Inc.

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Issue	Date	Description
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1 Introduction

Tatham Engineering Limited (Tatham) has been retained by Lamb Creemore Inc. (Lamb) to prepare a Preliminary Stormwater Management (SWM) Report in support of concurrent Official Plan Amendment (OPA) and Zoning By-law Amendment (ZBA) applications for a proposed residential development at 163 & 164 Edward Street East (the 'site'), in the Village of Creemore, Township of Clearview (Township).

1.1 OBJECTIVES

The objective of this report is to demonstrate the proposed SWM plan addresses any adverse impacts the development will have on the local surface water features and on surface water quality and quantity. This will be accomplished by evaluating the impact of the development on local drainage under pre- and post-development conditions and, where necessary, providing solutions to mitigate any adverse impacts.

1.2 GUIDELINES AND BACKGROUND REPORTS

This report has been prepared in consideration of the following municipal, provincial, and agency guideline documents and relevant background reports:

- The Ministry of the Environment, Conservation, and Parks (MECP, formerly known as Ministry of Environment), *Stormwater Management Practices Planning and Design Manual* (March 2003);
- Nottawasaga Valley Conservation Authority (NVCA), *NVCA Stormwater Technical Guide* (2013);
- Township of Clearview, *Engineering Design Criteria Standards* (October 2025); and
- R.J. Burnside & Associates Limited, *East Creemore Drainage Study, Community of Creemore, Clearview Township Municipal Class Environmental Assessment (Schedule B)* (September 2024).

This report is prepared in consideration of the following site-specific studies and reports:

- Grounded Engineering Inc., *Preliminary Geotechnical Engineering Report – 163-164 Edward Street East Clearview Township (Creemore) Ontario* (July 2022);
- Grounded Engineering Inc.*, Hydrogeological Assessment* (May 31 2023);
- Tatham, *Transportation Impact Study* (September 2026);

- Tatham, *Functional Servicing Report* (September 2026); and
- Tatham, *Flood Hazard Assessment* (September 2026).

2 Site Description

2.1 SUBJECT PROPERTY

The proposed development is located at 163 & 164 Edward Street East. The site is approximately 37 ha and consists of agricultural land, with the remains of a residential dwelling, barn and an existing driveway access located within the 163 Edward Street East property. The site is bound by agricultural lands to the north, east, and south lands, and undeveloped lands (future residential development) to the west, and is bisected by Edward Street East.

The site is located within the NVCA's regulated area potentially subject to flood hazards associated with the Mad River and the Edward Street Tributary of the Mad River. The site is partially within a Highly Vulnerable Aquifer Zone (HVA). However, it is not within a Source Water Protection area (SWPA), Significant Groundwater Recharge Area (SGRA), Wellhead Protection Zone (WPZ), or Intake Protection Zone.

Refer to Figure 1 for the Site Location Map.

2.2 SITE TOPOGRAPHY

Information related to existing topography, ground cover, and drainage patterns is based on a review of relevant background studies, and available LiDAR contour mapping. The site is generally flat, with an average slope of 0.7% to the southeast. A detailed topographic survey of the site was completed by Better Measures Inc. in October 2019.

2.3 GEOTECHNICAL INVESTIGATION

A preliminary geotechnical investigation was completed by Grounded Engineering Inc. to identify the subsurface conditions and determine the engineering properties of the in-situ soils for the design and construction of the proposed development. A total of sixteen boreholes (101 to 116) were drilled on site to depths of 8.2 to 9.8 m below ground surface (mbgs). All boreholes encountered the same stratigraphy at varying depths.

The report describes the existing stratigraphy as a layer of topsoil (100 to 200 mm depth) underlain by a layer of previously disturbed native soils, generally consisting of sandy silt to silty sand, with some clay to a depth of 0.8 to 0.9 mbgs. Beneath the disturbed soil, a layer of sandy gravel to gravelly sand was encountered to depths of 3.0 to 6.4 mbgs. Underlying the sand and gravel, a sand layer was encountered to depths of 8.2 to 9.8 mbgs. All boreholes were terminated within this layer.

Refer to the original report for further information.

2.4 HYDROGEOLOGICAL INVESTIGATION

A hydrogeological investigation was completed by Grounded Engineers Inc. (May 2023) to assess the presence of groundwater and the potential impact to groundwater due to construction of the proposed development. All sixteen boreholes (101-116) were developed into monitoring wells, with the monitoring wells screens advanced into the sand and sandy gravel layers. During the monitoring period, groundwater was present at depths ranging from 0.2 to 1.0 mbgs during the seasonal high period and 3.0 to 4.2 mbgs during the seasonal low period. The groundwater was determined to travel in a southeast direction following the ground surface topography.

Refer to the *Hydrogeological Assessment* for further information.

2.5 PROPOSED DEVELOPMENT

The conceptual draft plan proposes a residential development with a mixture of single-detached, semi-detached, townhouse, mixed-use, and commercial blocks, complete with internal roads, dedicated park and laneway blocks, drainage blocks, two stormwater management blocks, and retaining wall blocks.

The development concept proposes:

- total of 939 residential units, consisting of:
  - 216 single family (detached) dwelling units;
  - 164 semi-detached dwelling units;
  - 349 townhouse units;
  - 210 mixed-use units (apartments);
- 0.78 ha of mixed-use commercial blocks; and
- 0.09 ha hotel block.

Refer to the conceptual draft plan prepared by Robert Russell Planning Consultants (April 2026) in Appendix A for reference. The mixed-use residential unit count was determined through discussions with Robert Russell Planning Consultants and the owner.

3 East Creemore Drainage Study

The subject lands are within the study area of the *Community of Creemore, Clearview Township Municipal Class Environmental Assessment (Schedule B) Project File Report for Works Undertaken Within a Watercourse for the Purpose of Flood Control* prepared by R.J. Burnside & Associates (RJBA) in July 2010. This assessment includes the Creemore East Master Drainage Plan (MDP), also prepared by RJBA in July 2010. An addendum to these reports was completed and finalized in September 2024.

As the site is located within the study area, the ECD Study was consulted to ensure the overall SWM strategy is in general accordance with the approved design.

3.1 EAST CREEMORE DRAINAGE STUDY (2024) - EXISTING CONDITIONS

As part of the ECD Study, a hydrologic model was developed for the eastern portion of Creemore which encompasses the proposed development site. Per review of the ECD Study, the north parcel of the site (164 Edward Street East) is located within existing (undeveloped) Catchment 1a, and the south parcel of the site (163 Edward Street East) is located within existing (undeveloped) Catchment 1b and a portion of Catchment 5. Catchments 1a and 1b drain to an existing 1,500 mm dia. culvert crossing Airport Road via the Edward Street Tributary. Catchment 5 drains via overland sheet flow to a culvert of unknown size which crosses Airport Road north of Sideroad 6/7.

Flooding issues were present throughout the east portion of Creemore, triggering the ECD Study to improve drainage conditions.

Refer to the original Existing Catchments Areas figure prepared by RJBA in Appendix B for reference.

3.2 EAST CREEMORE DRAINAGE STUDY (2024) - PROPOSED CONDITIONS

The ECD study reports identify several drainage improvements within the subject area to resolve flooding issues and support proposed development. The preferred solution, referred to as Option 2 in the 2024 addendum, involves a combination of drainage improvements which will provide conveyance for the 1:100-year flow in the Edward Street Tributary. The preferred improvements include the following:

- Construct a 1,200 mm dia. storm sewer on Concession 3 from Edward Street to Nottawasaga 6/7 Sideroad. A proposed flow splitter will split flows between this 1,200 mm dia. storm sewer and the proposed channel along the north side of Edward Street E;

- Ditch improvements along the west side of Concession 3 from Edward Street to Nottawasaga 6/7 Sideroad;
- An outlet channel to the Mad River from the terminus of Concession 3 roadway within the existing municipal road allowance;
- Construct a ditch along the north side of Edward Street East (property acquisition is required);
- Replacement of Edward Street East north side driveway culverts;
- Re-location and replacement of a culvert to cross Edward Street north side ditch south into the proposed 187 and 237 Edward Street East channel; and
- A drainage channel through 187 and 237 Edward Street (easement is anticipated to be 25 m wide).

The preferred solution described above was considered to be in-place for the pre-development model completed for this preliminary SWM plan. Refer to Section 4 of this report for further details.

4 Pre-Development Drainage Conditions

A Pre-Development Drainage Plan (Drawing DP.1) for the site is enclosed in Appendix G. As mentioned previously, as the site is located within the ECD study area, the proposed conditions model of the ECD study prepared by RJB was utilized to establish the pre-development model for this report.

The PCSWMM model prepared by RJB was utilized to model the pre-development conditions on site, using RJB's input parameters including catchment boundaries, hydrologic and hydraulic parameters, rainfall data. The model parameters in the PCSWMM model were reviewed and confirmed that they provide an appropriate representation of pre-development conditions for the site.

4.1 PRE-DEVELOPMENT MODEL SUMMARY

The pre-development drainage conditions are summarized below:

- The north portion of the site (164 Edward Street E) is located within Catchment 1a_2. This catchment has an area of 28.57 ha, a calculated Curve Number (CN) of 66.0, and a total imperviousness (TIMP) of 2%. This catchment consists of cropland and the north side of the Edward Street East road allowance. Flows from this catchment drain to the Edward Street East north side ditch (per ECD Study) prior to draining to the culvert crossing Edward Street East to the drainage channel through 187 and 237 Edward Street East. Flows from this channel ultimately drain to Outlet #1, which is identified as the 1,500 mm dia. culvert crossing Airport Road approximately 800 m downstream of the site.
- Most of the south portion of the site (163 Edward Street East) is located within Catchment 1b_2. This catchment has an area of 19.44 ha, a calculated CN of 66.0, and a TIMP of 2%. This catchment also consists of cropland and the south side of the Edward Street East road allowance. Flows from this catchment drain as overland sheet flow to the proposed drainage channel through 187 and 237 Edward Street East, draining ultimately to Outlet #1.
- Catchment 1b_1 is farmland located to the east of the south property. It has an area of 29.72 ha, CN of 66.0, and a TIMP of 2%. Flows from this catchment drain as overland sheet flow to the proposed ECD Study drainage channel, draining ultimately to Outlet #1.
- Approximately 8.93 ha of the proposed development is located within Catchment 9 which consists primarily of cropland to the south of the site. It has an area of 91.37 ha, CN of 66.0, and a TIMP of 2%. Flows from this catchment drain as overland sheet flow to an assumed existing culvert crossing Airport Road north of Sideroad 6/7 (Outlet #2).

Since flows from the site ultimately drain to Outlets #1 and #2, the 1:100-year peak flow rates at these locations were assessed. It is noted that for the purpose preliminary SWM Facility (SWMF) sizing in support of the proposed development, only the 1:100-year 24-hour SCS Type II storm event was assessed as this was determined to be the governing storm for SWMF sizing. The design storm used in the ECD Study analysis with IDF data adjusted to account for climate change was used for the analysis. The 1:2-year through 1:50-year storm events using the 4-hour CHI, 6-hour SCS, and 12-hour SCS storm distributions at these outlet locations will be assessed during future design stages.

Table 1: Pre-Development Model Summary

OUTLET	TOTAL DRAINAGE AREA	PEAK FLOW RATE
Outlet #1 (1,500 mm dia. culvert crossing Airport Road)	327 ha	4.87 m^3/s
Outlet #2 (assumed existing culvert crossing)	91 ha	1.19 m^3/s

Note: The 1:100-year peak flow rate uses the 24-hour SCS Type II storm distribution.

As noted above, the peak flow rates at Outlets #1 and #2 from RJB's PCSWMM model establish the target peak flow rates under pre-development conditions. The proposed development will provide stormwater quantity control, for both the north and south properties, to attenuate peak flows at Outlets #1 and #2 to pre-development levels as described above.

5 Stormwater Management Plan

This preliminary SWM plan was developed to address any potential adverse impacts the development may have on local surface water features. The SWM plan is subject to the review and approval of the Township and the NVCA.

5.1 STORMWATER MANAGEMENT DESIGN CRITERIA

The preliminary SWM plan has been developed in accordance with Township, NVCA, and MECP standards/guidelines. Relevant design criteria include the following.

- Post-development peak flows must be controlled to pre-development rates for the 1:2-year through 1:100-year design storms at the site outlets to prevent impacts to downstream flooding.
- Stormwater quality controls must be provided to satisfy the *Stormwater Management Practices Planning and Design Manual* for enhanced level stormwater quality protection of 80% total suspended solids (TSS) removal.
- In accordance with policies outlined in the NVCA *Stormwater Technical Guide*, best efforts for retention must be provided for the first 5 mm of rainfall across the site.
- On-site detention of the 25 mm storm for a period of 24 hours to 48 hours must be provided for erosion protection for the downstream system; and
- An Erosion and Sediment Control (ESC) strategy will be provided for implementation during all construction activities.

5.2 POST-DEVELOPMENT DRAINAGE CONDITIONS

A Post-Development Drainage Plan (Drawing DP.2) for the site is enclosed in Appendix G. The PCSWMM model prepared by RJB was modified to incorporate the full buildout of the north and south properties to represent post-development conditions. New catchments were delineated representing the proposed development as well as modifications required to nearby catchments due to the proposed development.

The post-development drainage conditions are summarized below:

- Catchment 201 represents majority of the proposed north development (164 Edward Street East), with a total area of 7.91 ha, calculated CN of 49.0, and a TIMP of 60%. Flows from this catchment drain via the internal minor and major system to the north dry pond (SWMF1). Attenuated flows from SWMF1 drain to the Edward Street tributary and ultimately to Outlet #1.



- Catchment 1a_2A represents external drainage from the agricultural lands to the north of the northern property, with a total area of 5.69 ha and calculated CN of 66.0. Flows from this catchment will be collected by a wraparound ditch proposed in the north and eastern limits of the north property, bypassing SWMF1, and draining to the Edward Street Tributary.
- Catchment 1a_2B also represents external drainage from the agricultural lands to the north of the northern property, with a total area of 12.50 ha and calculated CN of 66.0. Flows from this catchment will drain as overland sheet flow through Catchment 1a_1 to the east of the north property prior to draining to the East Edward Tributary and ultimately to Outlet #1.
- Catchment 202A represents majority of the proposed south development property (163 Edward Street East), with a total area of 24.05 ha, calculated CN of 49.0, and a TIMP of 64%. Flows from this catchment drain via the internal minor and major system to the south wet pond (SWMF2). Attenuated flows from SWMF2 drain via a proposed outlet channel. To provide an outlet for flows from SWMF2, a drainage channel is proposed along the south limits of the adjacent properties (187 and 237 Edward Street East) which will convey discharge from SWMF2 to Outlet #1. A drainage agreement, easement and/or land acquisition is expected to be required in support of this solution.
- Catchment 202B represents a portion of the proposed south development, with a total area of 1.67 ha and calculated CN of 49.0. Flows from this catchment will be collected by a wraparound ditch towards the south and western limits of the south property, bypassing SWMF2, and draining to the proposed outlet channel draining flows eastward to Outlet #1.
- Catchment 203 represents the future urbanized Edward Street East road allowance and portions of the north and south development parcels draining uncontrolled to the road allowance, with a total area of 4.86 ha, calculated CN 49.0, and a TIMP of 55%. Flows from this catchment will be captured at the terminus of the proposed box culvert draining to the Edward Street Tributary and ultimately to Outlet #1.
- To create a fully urbanized cross-section for Edward Street East (and eliminate the large overland flow channel proposed as per RJB's ECD design), a box culvert is proposed to convey flow along the Edward Street East road allowance. A 2.4 x 1.2 m box culvert has been designed to convey the 1:100-year peak flow per the design of the channel in accordance with the ECD Study. Refer to the *Flood Hazard Assessment* prepared by Tatham for additional information.
- Due to the grading modifications in support of proposed outlet channel for SWMF2, the total drainage area from Catchment 1b_1 is has increased by approximately 0.28 ha. Under post-development, this catchment is denoted as Catchment 1b_1*, and has an area of 30.00 ha, CN of 66.0, and a TIMP of 2%. Flows from this catchment will drain to Outlet #1.



- Due to the proposed development and grading modifications in support of the proposed outlet channel for SWMF2, the total drainage area from Catchment 9 has decreased by approximately 9.66 ha. Under post-development, this catchment is denoted as Catchment 9*, and has an area of 81.71 ha, CN of 66.0, and a TIMP of 2%. Flows from this catchment will drain as overland sheet flow to Outlet #2.

5.3 STORMWATER QUANTITY CONTROLS

As previously mentioned, a dry pond (SWMF1) and a wet pond (SWMF2) are proposed to provide post-to-pre-development peak flow controls downstream of the site at Outlet #1.

5.3.1 SWMF1 – Dry Pond

SWMF1 is a proposed dry pond that will provide peak flow attenuation for the north property. Based on the available groundwater information, it is noted that SWMF1 will require a liner as a sufficient separation (minimum 1 m) between SWMF1 and high groundwater level (HGWL) of 248.10 masl cannot be achieved. Preliminary pond sizing and discharge calculations are provided in Appendix D of this report and summarized below.

Table 2: SWMF1 Dry Pond Design Summary (Stormwater Quantity)

FEATURE	ELEVATION (masl)	STORAGE (m^3)	DISCHARGE (m^3/s)
Bottom of Pond/ Primary Outlet – 75 mm dia. Orifice Plate	248.20	-	-
Extended Detention / Secondary Outlet – 355 mm dia. Orifice Plate	249.20	1,157	-
Outlet Pipe – 450 mm dia.	248.20	-	-
25 mm (Water Quality)	249.00	885	0.011
1:100-year Storm	249.98	2,743	0.230
Emergency Overflow Spillway – 20 m bottom Trapezoidal Weir (10:1 side slopes)	250.20	3,307	-
Top of Pond	250.50	4,146	-

The detailed design of SWMF1 will be advanced through future stages of the project. However, the preliminary design is illustrated on Drawing PND.1, enclosed. As mentioned previously, the 1:2-year through 1:50-year storm events using the 4-hour CHI, 6-hour SCS, and 12-hour SCS storm distributions at these outlet locations will be assessed during future design stages.

5.3.2 SWMF2 – Wet Pond

SWMF2 is proposed as a wet pond (complete with a forebay and wet cell) that will provide peak flow attenuation for the proposed development. Based on the available groundwater information, it is noted that SWMF2 will require a liner as a sufficient separation (minimum 1 m) between SWMF1 and HGWL of 247.85 masl cannot be achieved. Preliminary pond sizing and discharge calculations are provided in Appendix C of this report and summarized below.

The preliminary design of SWMF1 is summarized in Table 4 below:

Table 3: SWMF2 Wet Pond Design Summary (Stormwater Quantity)

FEATURE	ELEVATION (masl)	STORAGE (m^3)	DISCHARGE (m^3/s)
Bottom of Wet Cell	246.05	-	-
Permanent Pool / Primary Outlet – 170 mm dia. Orifice Plate	247.55	5,459	-
Extended Detention / Secondary Outlet – 340 mm dia. Orifice Plate	247.55	5,810	-
Outlet Pipe – 675 mm dia.	247.55	-	-
25 mm (Water Quality)	248.04	2,607	0.040
1:100-year Storm	249.34	11,582	0.284
Emergency Overflow Spillway – 20 m bottom Trapezoidal Weir (10:1 side slopes)	249.55	13,179	-
Top of Pond	249.85	15,686	-

The detailed design of SWMF2 (including forebay design) will be advanced through future stages of the project. However, the preliminary design is illustrated on Drawing PND.2, enclosed. As mentioned previously, the 1:2-year through 1:50-year storm events using the 4-hour CHI, 6-hour SCS, and 12-hour SCS storm distributions at these outlet locations will be assessed during future design stages.

5.3.3 Post-Development Model Summary

Since flows from the site ultimately drain to Outlets #1 and #2, the 1:100-year peak flow rates at these locations were assessed. As mentioned previously, the 1:2-year through 1:50-year storm events using the 4-hour CHI, 6-hour SCS, and 12-hour SCS storm distributions at these outlet locations will be assessed during future design stages. The model demonstrates the proposed

SWMFs provided sufficient quantity control to attenuate post development peak flows below pre-development rates at Outlet #1 and #2.

Table 4: Post-Development Model Summary

OUTLET	TOTAL DRAINAGE AREA	PEAK FLOW RATE
Outlet #1 (1,500 mm dia. culvert crossing Airport Road)	337 ha *(327 ha)*	4.76 m^3/s *(4.87 m^3/s)*
Outlet #2 (assumed existing culvert crossing)	82 ha *(91 ha)*	1.07 m^3/s *(1.19 m^3/s)*

Note: The 1:100-year peak flow rate uses the 24-hour SCS Type II storm distribution; and values in *(italics)* denote pre-development conditions.

5.4 SITE CONVEYANCE

5.4.1 Site Conveyance – North Development (164 Edward Street E)

Minor flows (1:5-year event) will be conveyed through the north development via internal storm sewers which will be designed in accordance with Township standards.

Major flows (up to and including the 1:100-year event) will be conveyed through the site via major overland flow routes within the road allowance. Preliminary road allowance capacity calculations and open channel design calculations are provided in Appendix E to demonstrate safe conveyance of major flows through the site.

Additionally, Catchment 1a_2A will be conveyed through a proposed wraparound ditch along the north and east limits of the site that bypasses SWMF1 and drains to the ECDS channel in the Edward Street East north roadside ditch. Preliminary sizing calculations are provided in Appendix E to demonstrate safe conveyance of the external drainage area around the site.

5.4.2 Site Conveyance – South Development (163 Edward Street E)

Minor flows (1:5-year event) will be conveyed through the south development via internal storm sewers which will be designed in accordance with Township standards.

Major flows (up to and including the 1:100-year event) will be conveyed through the site via major overland flow routes within the road allowance. Preliminary road allowance capacity calculations are provided in Appendix E to demonstrate safe conveyance of major flows through the site.

Additionally, a proposed outlet channel from SWMF2 will drain major flows (up to and including the 1:100-year event) eastward through the existing agricultural land to the east of the site (187 and 237 Edward Street East), and directly to Outlet #1. Preliminary open channel design

calculations are provided in Appendix E to demonstrate safe conveyance of major flows to Outlet #1.

5.5 STORMWATER QUALITY CONTROLS

Enhanced level stormwater quality control corresponding to 80% TSS removal is required for the north and south developments.

5.5.1 North Development – Treatment Train Approach

Stormwater quality control for Catchment 201A will be provided via a treatment train comprised of oil-grit separator (OGS) units and the dry pond. The NVCA recognizes a treatment removal efficiency of 50% minimum for OGS units and 60% for the dry pond for basic level treatment. A combination of both features results in 80% TSS removal for the north development. Other TSS removal measures will be explored at future design stages, including bioretention and infiltration-based facilities.

SWMF1 was designed considering a total drainage area to SWMF1 of 7.91 ha and a TIMP of 60% from Catchment 201A. A summary of the quality control provided by SWMF1 is summarized in Table 5 below.

Table 5: SWMF1 Dry Pond Design Summary (Stormwater Quality)

FEATURE	REQUIRED	PROVIDED
Extended Detention Volume	885 m^3	1,157 m^3
Erosion Control Volume	1,661 m^3	3,307 m^3
Water Quality Drawdown Zone	24-48 hrs	41.6 hrs
Extended Detention Drawdown Zone	48-72 hrs	51.0 hrs

Based on the above table, SWMF1 is adequately sized to provide basic level stormwater quality control as part of a treatment train approach to achieve 80% TSS removal for the north development. Detailed calculations are provided in Appendix D for reference. The preliminary pond design is depicted on Drawing PND.1, included in Appendix G for reference.

5.5.2 South Development – Wet Pond

SWMF2 was designed as a wet pond considering the total drainage area to SWMF2 of 24.05 ha and a TIMP of 64% from Catchment 202A. A summary of the quality control provided by the SWMF is summarized in Table 6 below.

Table 6: SWMF2 Wet Pond Design Summary (Stormwater Quality)

FEATURE	REQUIRED	PROVIDED
Permanent Pool Volume	3,006 m^3	5,459 m^3
Extended Detention Volume	2,607 m^3	5,810 m^3
Erosion Control Volume	5,291 m^3	13,179 m^3
Water Quality Drawdown Zone	24-48 hrs	32.5 hrs
Extended Detention Drawdown Zone	48-72 hrs	49.8 hrs

Based on the above table, SWMF2 is adequately sized to provide enhanced stormwater quality control for the south development. Detailed calculations are provided in Appendix D for reference. The preliminary pond design is depicted on Drawing PND.2, included in Appendix G for reference.

5.6 NVCA EROSION CONTROL VOLUME

As per NVCA requirements, erosion control must be achieved through on-site retention of the first 5 mm of rainfall.

5.6.1 NVCA Erosion Control – North Development

For the 9.30 ha north development, the first 5 mm of rainfall equates to a required storage volume of 287 m^3. Site constraints, including shallow seasonally high groundwater levels (HGWL), grading limitations, and limited space, restrict the potential strategies for achieving full retention of this volume. Best efforts to infiltrate the 287 m^3 of storage during the 5 mm event is expected to be provided in infiltration-based measures such as infiltration galleries within the mixed-use block. Other opportunities to increase the infiltration on-site will be explored during future design stages.

5.6.2 NVCA Erosion Control – South Development

For the 27.74 ha south development, the first 5 mm of rainfall equates to a required storage volume of 852 m^3. Site constraints, including shallow seasonally high groundwater levels (HGWL), grading limitations, and limited space, restrict the potential strategies for achieving full retention of this volume. Best efforts to infiltrate the 852 m^3 of storage during the 5 mm event is expected to be provided in infiltration-based measures such as infiltration galleries within the mixed-use

blocks, hotel block, parking lots, and park blocks. Other opportunities to increase the infiltration on-site will be explored during future design stages.

5.7 EROSION AND SEDIMENT CONTROL

Erosion and sediment control (ESC) measures will be implemented for all construction activities within the development site including vegetation clearing, topsoil stripping, earthworks, grading, servicing, road construction, and lot development. The basic principles considered to minimize erosion and sedimentation transport include:

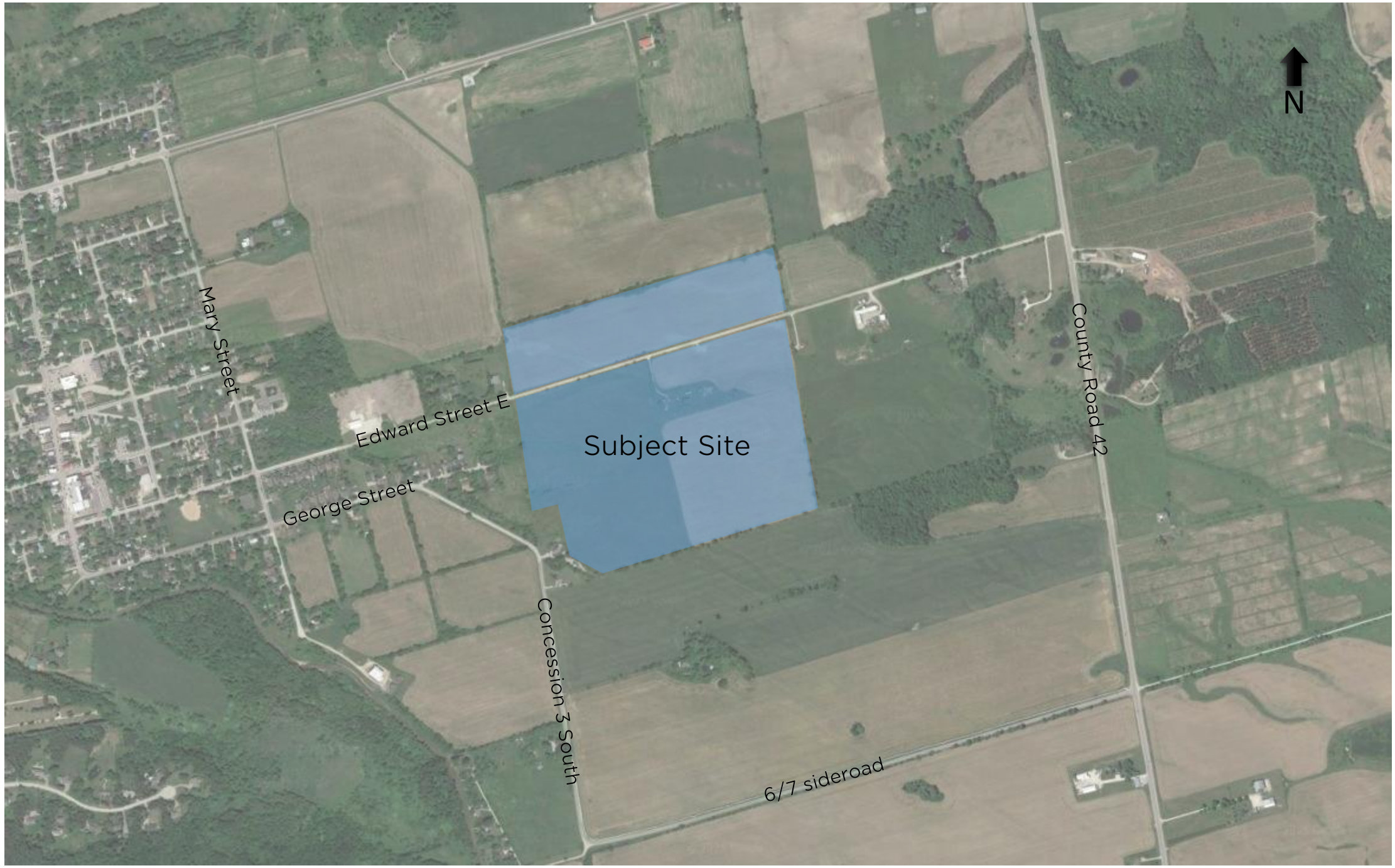
- All erosion control measures will be designed in accordance with relevant Township, NVCA, *Erosion & Sediment Control Guideline for Urban Construction*, and OPSD standards;
- Silt fences to be constructed prior to commencement of any grading operations;
- Designated construction vehicle entrance(s) with stone mud mat;
- Temporary swales, silt ponds, and check dams will be constructed to control runoff during construction by reducing velocities and promoting settlement of particulates;
- Catch basins will be provided with filter screens during construction;
- Long-term siltation and erosion control will be enhanced with a re-vegetation strategy for disturbed areas; and
- Confine refueling and servicing of equipment sufficiently away from existing drainage systems.

Regular inspection of control measures will be completed through a monitoring and mitigation plan, with regular repairs made as necessary. A detailed erosion and sediment control plan will be completed in support of detailed design.

6 Summary

This report was prepared to document the preliminary SWM plan for the proposed development of 163 and 164 Edward Street East in Creemore. The SWM plan demonstrates the proposed development can be constructed without adversely impacting local surface water conditions. The overall design demonstrates adherence to the proposed ECD works and achieves the relevant SWM design criteria as described below.

- Post-development peak flow rates will be controlled to pre-development rates or less for the 1:100-year design storm at all outlets. A detailed analysis for the 1:2-year through 1:50-year events will be provided at future design 1:2-year through 1:100-year design storms at all outlets. Stormwater quantity storage will be provided via the dry pond and wet pond for the north and south development, respectively.
- Enhanced level stormwater quality controls corresponding to 80% TSS removal will be provided for the north development via a treatment train approach comprising of OGS units and the dry pond. 80% TSS removal will be provided for the south development via the wet pond.
- Minor and major storms will be safely conveyed to the outlets via storm sewers and overland flow routes. A proposed wraparound ditch for the north development will bypass flows from the north external catchment around the site and drain flows to the ECDS channel and ultimately to Outlet #1. A new outlet ditch is proposed to drain flows from the south development to Outlet #1
- Best efforts to infiltrate the 5 mm erosion control volume will be provided during future design stages.
- A series of erosion and sediment controls will be implemented for all construction activities.



163 & 164 Edward Street East, Creemore

Figure 1: Site Location Plan

Appendix A:
Conceptual Site Plan





KEY PLAN

LAND USE SCHEDULE

DESCRIPTION	LOT / BLOCK	No. OF UNITS	AREA
SINGLE DETACHED (12.2m)	LOT 1 - 94	94	3.563ha
SINGLE DETACHED (9.1m)	LOT 95 - 216	122	3.866ha
SEMI-DETACHED (7.6m)	LOT 217 - 298	164	4.029ha
TOWNHOMES (6.1m)	299 - 347	349	7.171ha
MIXED USE	348 - 352	TBD	0.775ha
HOTEL	353		0.093ha
PARKING	354 - 355		0.364ha
VILLAGE SQUARE / PARK	356 - 359		2.023ha
DRAINAGE	360 - 364		1.878ha
STORMWATER POND	365 - 367		1.765ha
RETAINING WALL	368 - 370		0.094ha
LANEWAY	371 - 391		2.738ha
WALKWAY	392 - 393		0.024ha
ROADS			8.654ha
TOTAL		729	37.04ha

ROAD LENGTH

20m R.O.W.	1126.5m
18m R.O.W.	3060.0m

MIXED USE FLOOR AREA SCHEDUEL

TOTAL COMMERCIAL GCA	8,060sq.m
RESIDENTIAL GCA WITHIN MIXED USE BLOCKS (INCLUDING HOTEL ROOMS)	16,119sq.m
TOTAL GCA	24,179sq.m

NOTES:

Typical ROW is 18m unless otherwise stated
Typical laneway is 6.5m
4m x 4m daylighting triangle provided on all ROW intersections

No.	DATE:	REVISIONS:
1.	18/09/2025	---

CLIENT: LAMB CREEMORE INC.

SITE ADDRESS: 163 - 164 EDWARD STREET EAST
CREEMORE
TOWNSHIP OF CLEARVIEW
COUNTY OF SIMCOE

Robert Russell
PLANNING CONSULTANTS

162 Guelph Street, Suite 209
Georgetown, ON L7G 5X7

TITLE: COORDINATION PLAN

SCALE: 1:1200
DATE: APRIL 2026
DRAWN: B.C.
CHECKED: R.R.
PROJECT No: XXXX
DRAWING No: DC-01

Appendix B:
Background Documents

Node	Contributing Catchments	100-Year Flow (m^3/s)	25-Year Flow (m^3/s)	5-Year Flow (m^3/s)	Conveyance Mechanism
5	FLOW SPLIT + 1a + 1B	2.35	1.16	0.41	187 Edward Channel / Airport Road Crossing
Southern Conveyance					
6	FLOW SPLIT + 7	4.63	2.87	1.58	Concession 3 Storm Sewer
7	FLOW SPLIT + 7 + 8	4.64	3.07	1.69	Concession 3 West Ditch + Storm Sewer
8	FLOW SPLIT + 7 + 8	4.68	3.07	1.69	Overland Flow Channel to Mad River

8.1.2 Option 2

Option 2 reflects a similar scenario to the original preferred alternative. A 1,200 mm diameter pipe is proposed down Concession 3 to outlet into Mad River. Similar to Option 1, a weir would be placed in the ditch to divert runoff down the southern conveyance first. Once the capacity of the southern conveyance is exceeded, flow would be diverted east over the weir and into the Edward Street ditch.

A schematic of the proposed drainage infrastructure for Option 2 is provided in Figure 5 in Appendix A.

Preliminary modelling shows that the weir required would be offset 0.5 m from the bottom of the ditch, would be 1.9 m in length and 1 m high.

The north ditch size for Edward Street was determined to be:

- 3.5 m bottom width.
- 3:1 fore slope + 2:1 backslope.
- 1 m deep.
- 0.6% average slope.
- 9.5 m top width.

The size of this ditch will result in property being required on the north side of Edward Street. It is estimated that 4,500 m^2 of property will be required to construct the Edward Street ditch. This reflects an approximate 5 to 6 m road widening.

The north Edward ditch will drain south into the 187 Edward Street swale. This swale will connect into the culvert under Airport Road. For Option 2 the 187 and 237 Edward Swale has been sized as following:

- 5 m bottom width.
- 3:1 side slopes.
- 1 to 1.5 m deep.

- 0.4% to 0.2% slope.
- 3 m access road.

It is anticipated that a 25 m wide easement will be required on 187 Edward Street and 237 Edward Street to construct this swale. Berming of the swale near Airport Road may be required and is to be confirmed during detailed design.

Using PCSWMM it was determined that the north Edward Ditch could convey 3.71 m^3/s. The 1,200 mm diameter storm sewer proposed down Concession 3 can drain the 2.16 m^3/s of runoff.

A ditch along the west side of Concession 3 was also modelled to capture runoff from Catchments 7 and 8 to drain into the Mad River outlet channel. This ditch was sized to fit within the existing ROW and has been preliminarily modelled as follows:

- Triangular Ditch 2:1 side slopes.
- 0.5 m deep.
- 2 m top width.

The west Concession 3 ditch will be required to cross under 6/7 Nottawasaga Sideroad to connect into the outlet channel to Mad River. A 675 mm diameter concrete culvert has been preliminarily sized.

For Option 2 the overland flow channel to Mad River within the Concession 3 ROW has been sized as follows:

- 2 m bottom width.
- 3:1 side slopes.
- 0.8 m deep.
- 0.6% average slope.
- 6.8 m top width.

Table 12 provides a summary of the flows for each drainage pathway proposed in Option 2.

Table 12: Option 2 Flow Summary

Node	Contributing Catchments	100-Year Flow (m^3/s)	25-Year Flow (m^3/s)	5-Year Flow (m^3/s)	Conveyance Mechanism
2	3, 4	3.84	2.33	1.15	CR 9 Ditch
PNDOUT	EXT1, 2W	0.92	0.59	0.26	Overland Flow from Area A Pond
2B	3, 4, 2W, 2E, EXT1	4.47	2.61	1.03	Area A Perimeter Channel

Node	Contributing Catchments	100-Year Flow (m^3/s)	25-Year Flow (m^3/s)	5-Year Flow (m^3/s)	Conveyance Mechanism
3	3, 4, 2W, 2E, EXT1, 5, 6	4.72	2.78	1.21	FLOW SPLIT
Eastern Conveyance					
3B	FLOW SPLIT	3.05	1.57	0.43	Edward Street East Ditch
3B_1	FLOW SPLIT + 1a_2	3.71	1.95	0.49	Edward Street East Ditch
4	FLOW SPLIT + 1a	3.98	2.2	0.58	187 Edward Channel
4B_1	FLOW SPLIT + 1a + 1b_2	4.29	2.4	0.66	187 Edward Channel
5	FLOW SPLIT + 1a + 1B	4.5	2.58	0.76	187 Edward Channel / Airport Road Crossing
Southern Conveyance					
6	FLOW SPLIT + 7	1.89	1.51	1.17	Concession 3 Storm Sewer
7	FLOW SPLIT + 7 + 8	2.16	1.75	1.31	Concession 3 West Ditch + Storm Sewer
8	FLOW SPLIT + 7 + 8	2.2	1.73	1.30	Overland Flow Channel to Mad River

8.1.3 Option 3

Option 3 presents a middle ground option between Option 1 and Option 2. Less property will be required on the north side of Edward Street to construct the required ditching. A smaller storm sewer in comparison to Option 1 is proposed down Concession 3.

A schematic of the proposed drainage infrastructure for Option 3 is provided in Figure 6 in Appendix A.

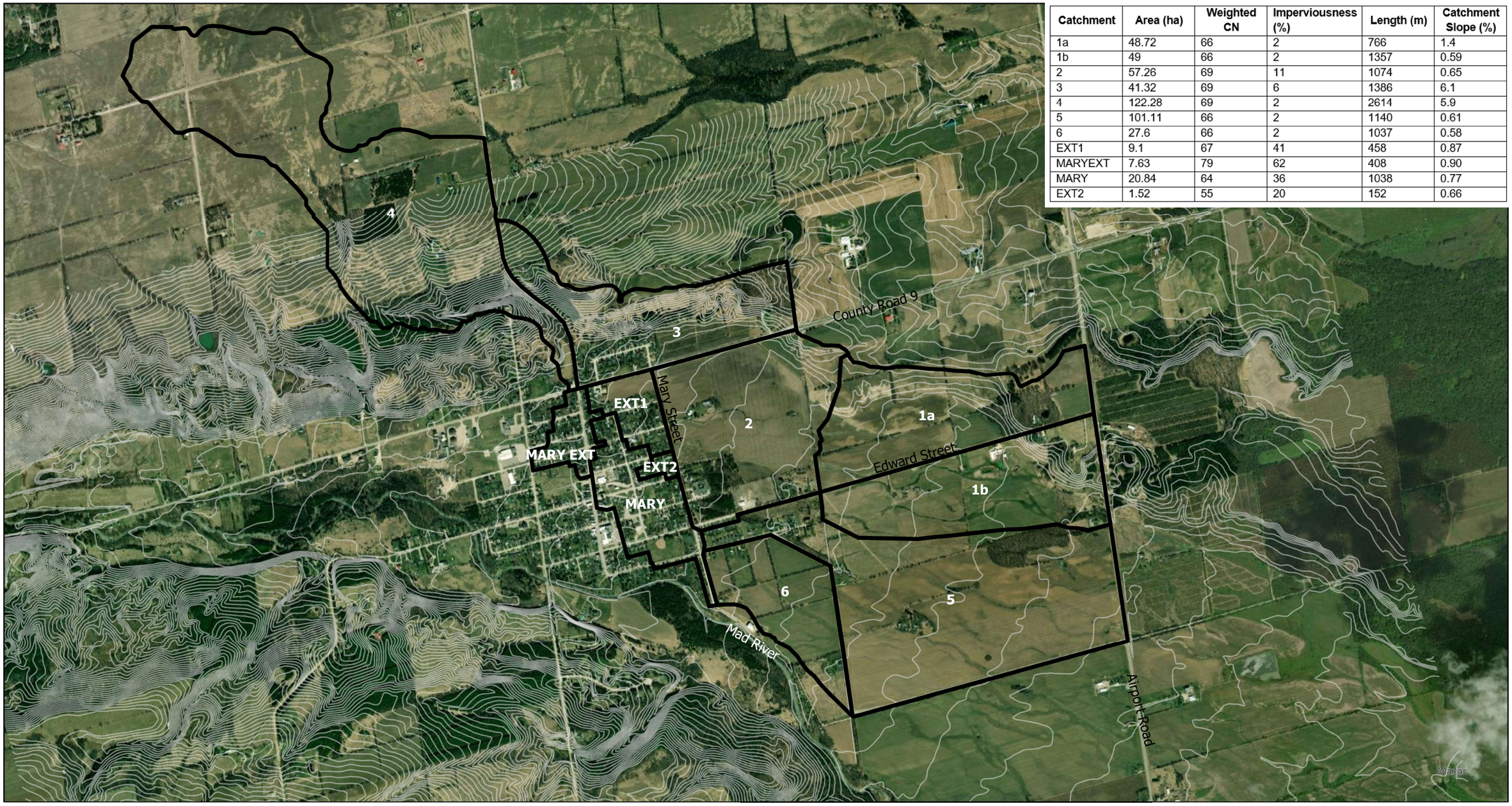
An 1,800 mm x 900 mm box culvert is proposed for the southern conveyance along Concession 3. This box culvert will outlet into Mad River. Again, a weir is proposed to allow flows in excess of the box culvert to drain east down the north Edward Street ditch.

Preliminary modelling shows that the weir required would be offset 0.5 m from the bottom of the ditch with a 1.5 m width and 1 m in height.

The north ditch size for Edward Street was determined to be:

- 2 m bottom width.
- 3:1 side slopes.
- 0.8 m deep.

Catchment	Area (ha)	Weighted CN	Imperviousness (%)	Length (m)	Catchment Slope (%)
1a	48.72	66	2	766	1.4
1b	49	66	2	1357	0.59
2	57.26	69	11	1074	0.65
3	41.32	69	6	1386	6.1
4	122.28	69	2	2614	5.9
5	101.11	66	2	1140	0.61
6	27.6	66	2	1037	0.58
EXT1	9.1	67	41	458	0.87
MARYEXT	7.63	79	62	408	0.90
MARY	20.84	64	36	1038	0.77
EXT2	1.52	55	20	152	0.66



Datum:	
Coord. System:	
Projection:	
Central Meridian:	
False Easting: m	False Northing: m
Page Orientation: °	Scale Factor:

N

Grid North

0 100 200 300 400 500 600 700 800

Metres

BURNSIDE

Client

TOWNSHIP OF CLEARVIEW

Figure Title

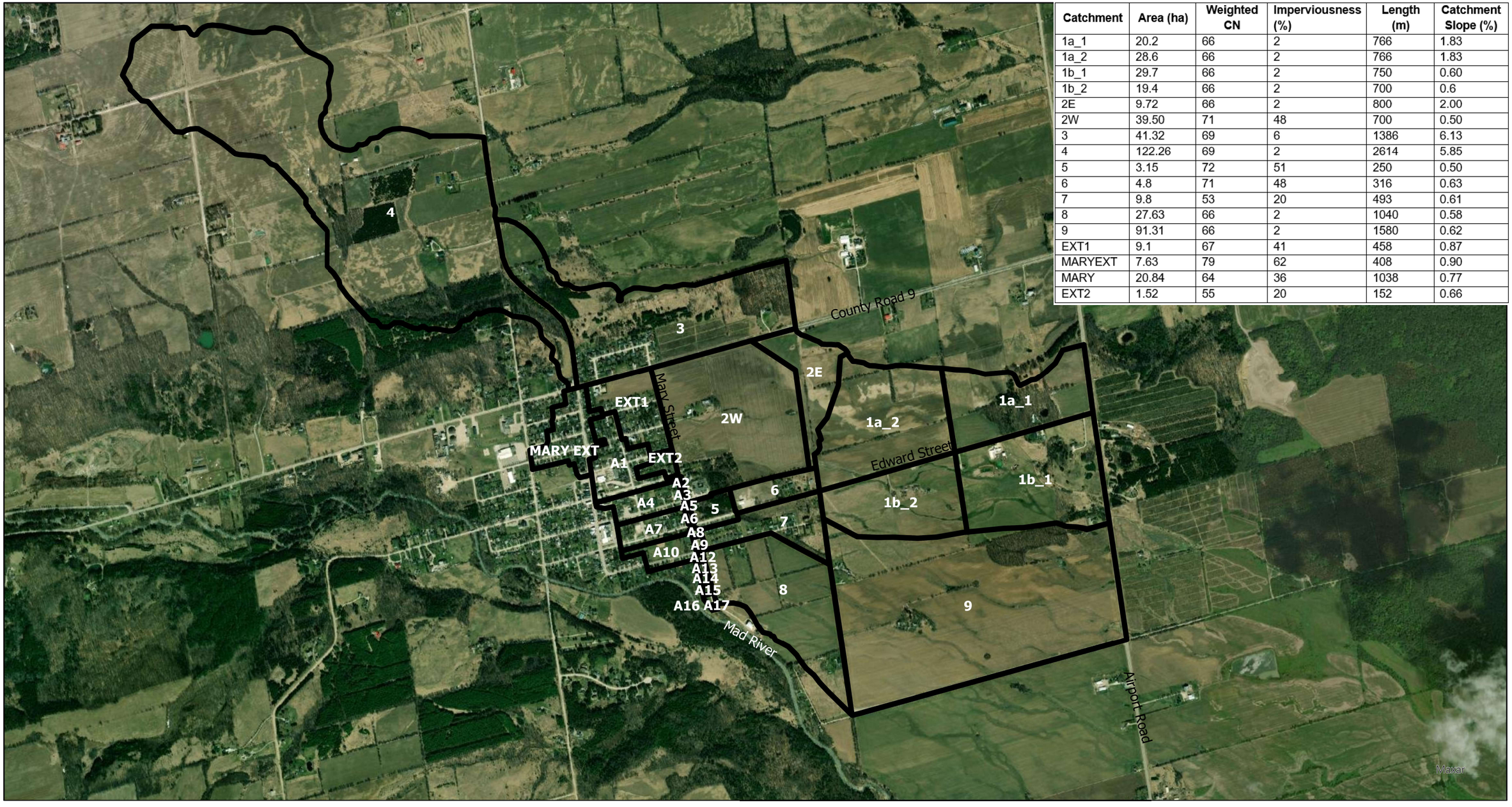
EAST CREEMORE DRAINAGE STUDY

EXISTING CATCHMENT AREAS

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Catchment	Area (ha)	Weighted CN	Imperviousness (%)	Length (m)	Catchment Slope (%)
1a_1	20.2	66	2	766	1.83
1a_2	28.6	66	2	766	1.83
1b_1	29.7	66	2	750	0.60
1b_2	19.4	66	2	700	0.6
2E	9.72	66	2	800	2.00
2W	39.50	71	48	700	0.50
3	41.32	69	6	1386	6.13
4	122.26	69	2	2614	5.85
5	3.15	72	51	250	0.50
6	4.8	71	48	316	0.63
7	9.8	53	20	493	0.61
8	27.63	66	2	1040	0.58
9	91.31	66	2	1580	0.62
EXT1	9.1	67	41	458	0.87
MARYEXT	7.63	79	62	408	0.90
MARY	20.84	64	36	1038	0.77
EXT2	1.52	55	20	152	0.66



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Central Meridian:
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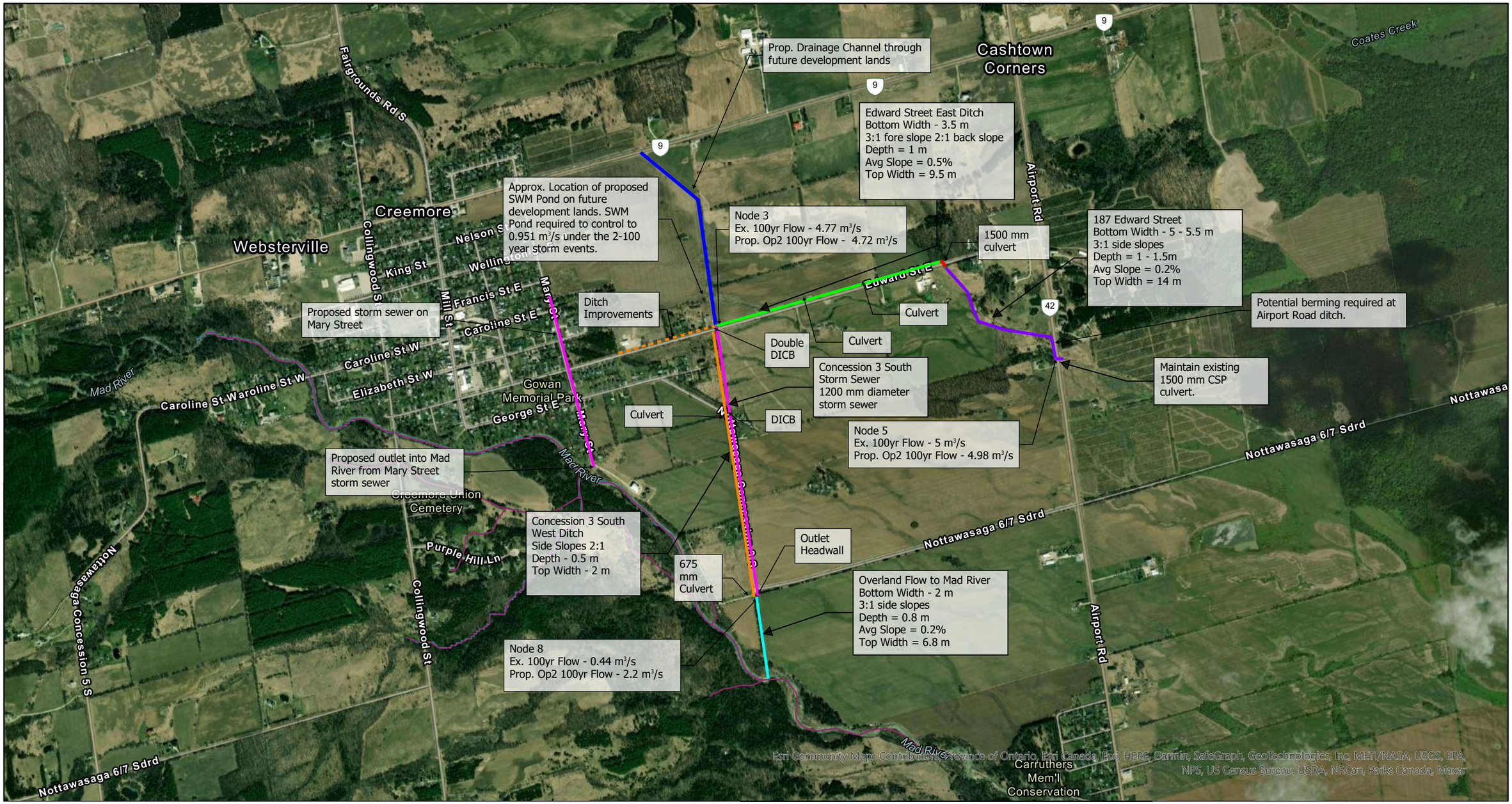
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PROPOSED CATCHMENT AREAS

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Metres

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Client
TOWNSHIP OF CLEARVIEW

Figure Title
EAST CREEMORE DRAINAGE STUDY
DRAINAGE OPTIONS
OPTION 2

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Appendix C:
Hydrology Parameter Calculations

TATHAM ENGINEERING

PROJECT	163 and 164 Edward Street, Creemore	FILE	419453
		DATE	6/11/2026
SUBJECT	Land Use Allocation - Post-Development	NAME	LJC
		PAGE	1 OF 2

Catchment 201								
Land Use Category	Area	Total Imperviousness (TIMP)	TIMP Area	Directly Connected Imperviousness (XIMP)	XIMP Area	Pervious Area	Pervious CN	Pervious IA
	ha	%	ha	%	ha	ha	-	mm
Single Detached Residential	4.32	66%	2.87	41%	1.79	1.45	49.0	5.00
Mixed Use Residential	0.06	90%	0.05	90%	0.05	0.01	49.0	5.00
Laneways	0.83	90%	0.75	90%	0.75	0.08	49.0	5.00
Road Allowances	1.52	58%	0.88	58%	0.88	0.64	49.0	5.00
SWMP Block	0.46	50%	0.23	50%	0.23	0.23	49.0	5.00
Lawn/Landscape	0.72	0%	0.00	0%	0.00	0.72	49.0	5.00
Total	**7.91**	**60%**	**4.78**	**47%**	**3.70**	**3.13**	**49.0**	**5.00**

Catchment 202A - StandHYD								
Land Use Category	Area	Total Imperviousness (TIMP)	TIMP Area	Directly Connected Imperviousness (XIMP)	XIMP Area	Pervious Area	Pervious CN	Pervious IA
	ha	%	ha	%	ha	ha	-	mm
Single Detached Residential	1.85	66%	1.23	41%	0.77	0.62	49.0	5.00
Semi Detached Residential	3.75	70%	2.61	40%	1.49	1.14	49.0	5.00
Townhomes	6.52	70%	4.54	40%	2.59	1.98	49.0	5.00
Mixed Use/Hotel	0.43	90%	0.38	90%	0.38	0.04	49.0	5.00
Parking Blocks	0.25	90%	0.23	90%	0.23	0.03	49.0	5.00
Laneways	1.69	90%	1.52	90%	1.52	0.17	49.0	5.00
Road Allowances	6.77	58%	3.93	58%	3.93	2.84	49.0	5.00
Village Square	0.11	50%	0.06	25%	0.03	0.06	49.0	5.00
Parks	1.41	10%	0.14	0%	0.00	1.27	49.0	5.00
SWMP Block	1.28	50%	0.64	50%	0.64	0.64	49.0	5.00
Total	**24.05**	**64%**	**15.27**	**48%**	**11.56**	**8.78**	**49.0**	**5.00**

TATHAM ENGINEERING

PROJECT	163 and 164 Edward Street, Creemore	FILE	419453
		DATE	6/11/2026
SUBJECT	Land Use Allocation - Post-Development	NAME	LJC
		PAGE	2 OF 2

Catchment 202B - StandHYD								
Land Use Category	Area	Total Imperviousness (TIMP)	TIMP Area	Directly Connected Imperviousness (XIMP)	XIMP Area	Pervious Area	Pervious CN	Pervious IA
	ha	%	ha	%	ha	ha	-	mm
Single Detached Residential	0.31	66%	0.21	41%	0.13	0.10	49.0	5.00
Semi Detached Residential	0.10	70%	0.07	40%	0.04	0.03	49.0	5.00
Laneways	0.15	90%	0.14	90%	0.14	0.02	49.0	5.00
Road Allowances	0.08	58%	0.05	58%	0.05	0.03	49.0	5.00
Lawn/Landscape	1.03	0%	0.00	0%	0.00	1.03	49.0	5.00
Total	**1.67**	**27%**	**0.46**	**21%**	**0.35**	**1.21**	**49.0**	**5.00**

Catchment 203 - StandHYD								
Land Use Category	Area	Total Imperviousness (TIMP)	TIMP Area	Directly Connected Imperviousness (XIMP)	XIMP Area	Pervious Area	Pervious CN	Pervious IA
	ha	%	ha	%	ha	ha	-	mm
Edward Street East	1.75	60%	1.05	60%	1.05	0.70	49.0	5.00
Single Detached Residential	1.04	66%	0.69	41%	0.43	0.35	49.0	5.00
Townhomes	0.66	70%	0.46	40%	0.26	0.20	49.0	5.00
Mixed Use	0.19	90%	0.17	90%	0.17	0.02	49.0	5.00
Parks	0.50	10%	0.05	0%	0.00	0.45	49.0	5.00
Parking Blocks	0.11	90%	0.10	90%	0.10	0.01	49.0	5.00
Laneways	0.05	90%	0.05	90%	0.05	0.01	49.0	5.00
Road Allowances	0.17	58%	0.10	58%	0.10	0.07	49.0	5.00
Lawn/Landscape	0.40	0%	0.00	0%	0.00	0.40	49.0	5.00
Total	**4.86**	**55%**	**2.66**	**44%**	**2.15**	**2.20**	**49.0**	**5.00**

TATHAM ENGINEERING

PROJECT	163 and 164 Edward Street, Creemore	FILE	419453
		DATE	6/11/2026
SUBJECT	Road Allowance Imperviousness	NAME	LJC
		PAGE	1 OF 1

North Property - 164 Edward Street							
Street Name	Area	Length	Pavement Area	Sidewalk Area	Driveway Area	Total Impervious Area	Total Impervious (TIMP)
	m^2	m	m^2	m^2	m^2	m^2	%
20 m Road Allowance	10,000	430	3,655	1,290	0	4,945	49%
18 m Road Allowance	6,300	350	2,800	1,050	0	3,850	61%
Total:	**16,300**					**Total:**	**54%**

South Property - 163 Edward Street							
Street Name	Area	Length	Pavement Area	Sidewalk Area	Driveway Area	Total Impervious Area	Total Impervious (TIMP)
	m^2	m	m^2	m^2	m^2	m^2	%
20 m Road Allowance	12,900	630	5,355	1,890	0	7,245	56%
18 m Road Allowance	57,300	3,130	25,040	9,390	0	34,430	60%
Total:	**70,200**					**Total:**	**59%**

Total Road Area:	86,500	m^2
Weighted Average:	58%	

Notes:

Local 8.5m Urban Road - 20m R.O.W.

Drawing B102

Township of Clearview

18.0m Local Road Cross-Section

Drawing R301

City of Barrie (Township of Clearview does not have a standard)

Driveways: Width: 6.0 m (assumed) (Townhouses assumed 3.0 m)
Length: 6.0 m (assumed)

```
  EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.015)
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  WARNING 03: negative offset ignored for Link C10
  WARNING 04: minimum elevation drop used for Conduit C43
  WARNING 03: negative offset ignored for Link C45
  WARNING 03: negative offset ignored for Link C46
  WARNING 03: negative offset ignored for Link C47
  WARNING 03: negative offset ignored for Link C48
  WARNING 03: negative offset ignored for Link C49
  WARNING 03: negative offset ignored for Link C50
  WARNING 03: negative offset ignored for Link C6
  WARNING 03: negative offset ignored for Link C7
  WARNING 03: negative offset ignored for Link C8
  WARNING 03: negative offset ignored for Link C9
  WARNING 02: maximum depth increased for Node J14
  WARNING 02: maximum depth increased for Node J2
  WARNING 02: maximum depth increased for Node J4
  WARNING 02: maximum depth increased for Node J6
  WARNING 02: maximum depth increased for Node J7
  WARNING 02: maximum depth increased for Node J9
  WARNING 02: maximum depth increased for Node NODE2B
  WARNING 02: maximum depth increased for Node NODE3B
  WARNING 02: maximum depth increased for Node NODE3B_1
  WARNING 02: maximum depth increased for Node NODE4_US
  WARNING 02: maximum depth increased for Node NODE5_US
  WARNING 02: maximum depth increased for Node AL_POND

  *************
  Element Count
  *************
  Number of rain gages ...... 19
  Number of subcatchments ... 34
  Number of nodes ........... 76
  Number of links ........... 96
  Number of pollutants ...... 0
  Number of land uses ....... 0


  ****************
  Raingage Summary
  ****************
                                                    Data       Recording
  Name                 Data Source                  Type       Interval
  ------------------------------------------------------------------------
  100yr_SCS_Type_II_106.85mm 100yr_SCS_Type_II_106.85mm     INTENSITY    6 min.
  100yr12_HISTORICAL_SCS_Type_I_93.87mm 100yr12_HISTORICAL_SCS_Type_I_93.87mm
INTENSITY    6 min.
  100yr12hr_SCS_Type_II_106.85mm 100yr12hr_SCS_Type_II_106.85mm INTENSITY    6 min.
  100yr24h_SCS_Type_II_106.85mm 100yr24h_SCS_Type_II_106.85mm  INTENSITY    6 min.
  100yr6hr_HISTORICAL_SCS_Type_II_93.87mm 100yr6hr_HISTORICAL_SCS_Type_II_93.87mm
INTENSITY    6 min.
  10yr_SCS_Type_II_63.92mm 10yr_SCS_Type_II_63.92mm       INTENSITY    6 min.
  20yr_SCS_Type_II_75.51mm 20yr_SCS_Type_II_75.51mm       INTENSITY    6 min.
  25mm_Chicago_4h_IDFCC Chicago_4h                      INTENSITY   10 min.
  25mm4hrCHI           25mm4hrCHI                   INTENSITY    5 min.
```

25yr_SCS_Type_II_79.23mm 25yr_SCS_Type_II_79.23mm INTENSITY 6 min.
2yr_SCS_Type_II_37.8mm 2yr_SCS_Type_II_37.8mm INTENSITY 6 min.
50yr_SCS_Type_II_93.2mm SCS_Type_II_93.2mm INTENSITY 6 min.
5yr_SCS_Type_II_52.25mm 5yr_SCS_Type_II_52.25mm INTENSITY 6 min.
5yr12hr_SCS_Type_II_63.63mm 5yr12hr_SCS_Type_II_63.63mm INTENSITY 6 min.
5yr24hr_SCS_Type_II_66.26mm 5yr24hr_SCS_Type_II_66.26mm INTENSITY 6 min.
CC_100yr_24hr_SCS_Type_II_111.87mm CC_100yr_24hr_SCS_Type_II_111.87mm INTENSITY 6 min.
CC_25yr_24hr_SCS_Type_II_92.74mm CC_25yr_24hr_SCS_Type_II_92.74mm INTENSITY 6 min.
CC_5yr_24hr_SCS_Type_II_69.44mm CC_5yr_24hr_SCS_Type_II_69.44mm INTENSITY 6 min.
Timmins_Storm_(0-25) Timmins_Storm_(0-25) INTENSITY 60 min.

****
Subcatchment Summary
****

Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
1a_1	20.20	263.66	2.00	1.8300	CC_100yr_24hr_SCS_Type_II_111.87mm	NODE4_US
1a_2	28.57	372.93	2.00	1.8300	CC_100yr_24hr_SCS_Type_II_111.87mm	J14
1b_1	29.72	396.31	2.00	0.6000	CC_100yr_24hr_SCS_Type_II_111.87mm	NODE5_US
1b_2	19.44	277.70	2.00	0.6000	CC_100yr_24hr_SCS_Type_II_111.87mm	NODE4B_1
2E	9.72	121.50	2.00	2.0000	CC_100yr_24hr_SCS_Type_II_111.87mm	NODE2B
2W	39.06	558.06	48.00	0.5000	CC_100yr_24hr_SCS_Type_II_111.87mm	AL_POND
3	41.32	298.12	6.00	6.1300	CC_100yr_24hr_SCS_Type_II_111.87mm	NODE2
4	122.26	467.71	2.00	5.8500	CC_100yr_24hr_SCS_Type_II_111.87mm	NODE2
5	3.15	126.00	51.00	0.5000	CC_100yr_24hr_SCS_Type_II_111.87mm	NODE3B
6	4.79	151.65	48.00	0.6300	CC_100yr_24hr_SCS_Type_II_111.87mm	NODE3B
7	9.71	197.00	20.00	0.6100	CC_100yr_24hr_SCS_Type_II_111.87mm	NODE6_S
8_1	9.62	641.24	2.00	0.5800	CC_100yr_24hr_SCS_Type_II_111.87mm	NODE7
8_3	14.19	473.08	2.00	0.5800	CC_100yr_24hr_SCS_Type_II_111.87mm	J10_s
8_4	3.44	229.14	2.00	0.5800	CC_100yr_24hr_SCS_Type_II_111.87mm	NODE8_S
9	91.37	578.32	2.00	0.6200	CC_100yr_24hr_SCS_Type_II_111.87mm	OF2
A1	8.15	237.63	36.00	0.5000	CC_100yr_24hr_SCS_Type_II_111.87mm	J6
A10	3.38	281.31	36.00	0.5000	CC_100yr_24hr_SCS_Type_II_111.87mm	MH2-S
A12	0.15	42.68	36.00	0.5000	CC_100yr_24hr_SCS_Type_II_111.87mm	DCBMH6-S
A13	0.24	41.75	36.00	0.5000	CC_100yr_24hr_SCS_Type_II_111.87mm	DCBMH7-S

A14	0.22	44.02	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm DCBMH8-S				
A15	0.22	48.73	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm DCBMH9-S				
A16	0.25	49.16	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm DCBMH10-S				
A17	0.08	20.00	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm OF1				
A2	0.08	22.00	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm CBMH1-S				
A3	0.10	20.00	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm CBMH2-S				
A4	4.46	371.58	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm CBMH2-S				
A5	0.10	23.24	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm CBMH3-S				
A6	0.17	28.97	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm CBMH4-S				
A7	4.09	340.92	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm CBMH4-S				
A8	0.19	34.94	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm CBMH5-S				
A9	0.26	39.69	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm MH2-S				
EXT1	9.15	501.89	41.00	0.8700
CC_100yr_24hr_SCS_Type_II_111.87mm AMH1				
EXT2	1.55	102.26	20.00	0.6600
CC_100yr_24hr_SCS_Type_II_111.87mm MH1-S				
MARYEXT	7.63	187.01	62.00	0.9000
CC_100yr_24hr_SCS_Type_II_111.87mm J2				

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Node Summary
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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
ACBMH1	JUNCTION	258.48	2.00	0.0	
ACBMH2	JUNCTION	258.03	0.60	0.0	
ACBMH3	JUNCTION	257.38	1.46	0.0	
ADCBMH1	JUNCTION	257.52	1.32	0.0	
AMH1	JUNCTION	256.20	2.65	0.0	
CBMH1	JUNCTION	255.50	2.06	0.0	
CBMH1-S	JUNCTION	257.56	0.20	0.0	
CBMH2	JUNCTION	255.04	2.07	0.0	
CBMH2-S	JUNCTION	257.11	0.20	0.0	
CBMH3	JUNCTION	254.82	2.11	0.0	
CBMH3-S	JUNCTION	256.93	0.20	0.0	
CBMH4	JUNCTION	254.29	2.23	0.0	
CBMH4-S	JUNCTION	256.52	0.20	0.0	
CBMH5	JUNCTION	254.14	2.24	0.0	
CBMH5-S	JUNCTION	256.38	0.20	0.0	
DCBMH10	JUNCTION	253.32	1.66	0.0	
DCBMH10-S	JUNCTION	254.98	0.20	0.0	
DCBMH6	JUNCTION	253.80	1.97	0.0	
DCBMH6-S	JUNCTION	255.77	0.20	0.0	
DCBMH7	JUNCTION	253.62	1.83	0.0	

DCBMH7-S	JUNCTION	255.45	0.20	0.0
DCBMH8	JUNCTION	253.51	1.78	0.0
DCBMH8-S	JUNCTION	255.29	0.20	0.0
DCBMH9	JUNCTION	253.42	1.72	0.0
DCBMH9-S	JUNCTION	255.14	0.20	0.0
J10	JUNCTION	248.10	1.78	0.0
J10_s	JUNCTION	249.13	0.50	0.0
J11	JUNCTION	247.41	1.26	0.0
J12	JUNCTION	266.00	1.00	0.0
J14	JUNCTION	248.06	1.12	0.0
J15	JUNCTION	247.37	1.80	0.0
J2	JUNCTION	260.75	1.50	0.0
J3	JUNCTION	250.38	3.05	0.0
J4	JUNCTION	259.20	1.50	0.0
J5	JUNCTION	248.24	1.65	0.0
J6	JUNCTION	257.75	1.50	0.0
J7	JUNCTION	256.75	1.50	0.0
J9	JUNCTION	259.20	1.50	0.0
MH1	JUNCTION	255.79	2.08	0.0
MH10	JUNCTION	247.07	2.23	0.0
MH12	JUNCTION	247.40	2.24	0.0
MH13	JUNCTION	247.73	2.45	0.0
MH14	JUNCTION	248.06	2.38	0.0
MH15	JUNCTION	248.39	2.61	0.0
MH16	JUNCTION	248.72	2.62	0.0
MH17	JUNCTION	249.05	3.08	0.0
MH1-S	JUNCTION	257.87	0.20	0.0
MH2	JUNCTION	253.93	2.15	0.0
MH2-S	JUNCTION	256.08	0.20	0.0
ND5_DS	JUNCTION	244.14	1.50	0.0
NODE1	JUNCTION	263.00	1.00	0.0
NODE2	JUNCTION	255.80	1.40	0.0
NODE2B	JUNCTION	252.45	1.69	0.0
NODE3	JUNCTION	252.26	1.17	0.0
NODE3B	JUNCTION	252.26	1.12	0.0
NODE3B_1	JUNCTION	248.86	1.12	0.0
NODE4_DS	JUNCTION	246.23	1.50	0.0
NODE4_US	JUNCTION	247.27	1.50	0.0
NODE4B_1	JUNCTION	245.00	1.50	0.0
NODE5_US	JUNCTION	244.30	2.20	0.0
NODE6	JUNCTION	250.32	2.38	0.0
NODE6_1	JUNCTION	249.93	2.53	0.0
NODE6_S	JUNCTION	252.70	0.50	0.0
NODE7	JUNCTION	250.91	0.50	0.0
NODE7_2	JUNCTION	249.49	2.84	0.0
NODE7_s	JUNCTION	249.18	3.18	0.0
NODE8	JUNCTION	246.74	1.99	0.0
NODE8_S	JUNCTION	247.62	0.80	0.0
PNDOUT	JUNCTION	253.00	3.00	0.0
J8	OUTFALL	253.27	0.00	0.0
MAD	OUTFALL	245.80	0.80	0.0
OF1	OUTFALL	253.27	1.05	0.0
OF2	OUTFALL	0.00	0.00	0.0
OF3	OUTFALL	259.00	1.50	0.0
OF4	OUTFALL	244.14	1.00	0.0
AL_POND	STORAGE	253.00	3.10	0.0

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  Link Summary
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Name	From Node	To Node	Type	Length	% Slope	Roughness
C1	MH1	CBMH1	CONDUIT	47.7	0.6080	0.0100
C1_1	NODE3B	NODE3B_1	CONDUIT	600.0	0.5670	0.0400
C1_2	NODE3B_1	J5	CONDUIT	56.0	1.1108	0.0400
C10	MH15	MH14	CONDUIT	100.0	0.3300	0.0130
C11	NODE8	MAD	CONDUIT	320.3	0.2935	0.0400
C12	CBMH1	CBMH2	CONDUIT	77.3	0.5951	0.0100
C12-S	CBMH1-S	CBMH2-S	CONDUIT	76.4	0.5891	0.0140
C13	CBMH2	CBMH3	CONDUIT	36.3	0.6061	0.0100
C13-S	CBMH2-S	CBMH3-S	CONDUIT	38.4	0.4687	0.0140
C14	CBMH3	CBMH4	CONDUIT	87.3	0.6071	0.0100
C14-S	CBMH3-S	CBMH4-S	CONDUIT	85.7	0.4782	0.0140
C15	CBMH4	CBMH5	CONDUIT	48.9	0.3067	0.0100
C15-S	CBMH4-S	CBMH5-S	CONDUIT	55.9	0.2503	0.0140
C16	CBMH5	MH2	CONDUIT	67.5	0.3111	0.0100
C16-S	CBMH5-S	MH2-S	CONDUIT	67.4	0.4454	0.0140
C17	MH2	DCBMH6	CONDUIT	41.3	0.3148	0.0100
C17-S	MH2-S	DCBMH6-S	CONDUIT	41.7	0.7437	0.0140
C18	DCBMH6	DCBMH7	CONDUIT	57.2	0.3148	0.0100
C18-S	DCBMH6-S	DCBMH7-S	CONDUIT	56.5	0.5663	0.0140
C19	DCBMH7	DCBMH8	CONDUIT	52.5	0.2095	0.0100
C19-S	DCBMH7-S	DCBMH8-S	CONDUIT	51.4	0.3112	0.0140
C1-S	MH1-S	CBMH1-S	CONDUIT	46.6	0.6649	0.0140
C2	NODE4_US	NODE4_DS	CONDUIT	26.5	3.9247	0.0130
C20	DCBMH8	DCBMH9	CONDUIT	46.9	0.1919	0.0100
C20-S	DCBMH8-S	DCBMH9-S	CONDUIT	46.6	0.3221	0.0140
C21	DCBMH9	DCBMH10	CONDUIT	51.8	0.1931	0.0100

C21-S		DCBMH9-S	DCBMH10-S	CONDUIT	53.4	
0.2999	0.0140					
C22		DCBMH10	OF1	CONDUIT	25.5	
0.1961	0.0100					
C23		J2	J4	CONDUIT	185.0	
0.8379	0.0100					
C24		J9	J6	CONDUIT	162.3	
0.8932	0.0100					
C25		J6	J7	CONDUIT	119.2	
0.8389	0.0100					
C26		J7	MH1	CONDUIT	213.3	
0.4501	0.0100					
C28		J4	OF3	CONDUIT	9.1	
2.2056	0.0100					
C29		NODE1	NODE2	CONDUIT	854.0	
0.8431	0.0450					
C3		NODE4_DS	NODE4B_1	CONDUIT	290.4	
0.4235	0.0400					
C30		J12	NODE2	CONDUIT	217.5	
4.6950	0.0450					
C31		NODE2	NODE2B	CONDUIT	705.5	
0.4749	0.0400					
C32		ACBMH1	ACBMH2	CONDUIT	89.9	
0.5004	0.0100					
C33		ACBMH2	ADCBMH1	CONDUIT	89.3	
0.5708	0.0100					
C34		ADCBMH1	ACBMH3	CONDUIT	28.7	
0.4878	0.0100					
C35		ACBMH3	AMH1	CONDUIT	111.0	
1.0631	0.0100					
C36		PNDOUT	NODE2B	CONDUIT	30.0	-
0.4667	0.0500					
C37		J3	NODE6	CONDUIT	30.3	
0.1983	0.0130					
C38		NODE2B	NODE3	CONDUIT	78.0	
0.2436	0.0400					
C39		AMH1	AL_POND	CONDUIT	608.2	
0.5261	0.0100					
C4		NODE4B_1	NODE5_US	CONDUIT	342.6	
0.2043	0.0400					
C40		NODE8_S	NODE8	CONDUIT	34.7	
2.5368	0.0240					
C41		NODE6_S	NODE7	CONDUIT	327.0	
0.5474	0.0400					
C42		J10_s	NODE8_S	CONDUIT	310.2	
0.4867	0.0400					
C43		ND5_DS	OF4	CONDUIT	16.1	
0.0019	0.0400					
C44		NODE7	J10_s	CONDUIT	376.4	
0.4729	0.0400					
C45		NODE7_s	MH17	CONDUIT	34.7	
0.3746	0.0130					
C46		MH17	MH16	CONDUIT	99.8	
0.3307	0.0130					
C47		MH14	MH13	CONDUIT	98.7	
0.3343	0.0130					
C48		MH13	MH12	CONDUIT	99.7	
0.3310	0.0130					
C49		MH12	MH10	CONDUIT	99.7	
0.3310	0.0130					

C5	NODE5_US	ND5_DS	CONDUIT	20.0	
0.8000	0.0240				
C50	MH10	NODE8	CONDUIT	103.5	
0.3188	0.0130				
C51	J11	J15	CONDUIT	12.3	
0.3252	0.0240				
C52	J5	J10	CONDUIT	21.4	
0.6167	0.0240				
C53	J14	NODE4_US	CONDUIT	225.5	
0.3503	0.0400				
C55	J10	J14	CONDUIT	4.0	
1.1001	0.0400				
C6	NODE6	NODE6_1	CONDUIT	113.8	
0.3427	0.0130				
C7	NODE6_1	NODE7_2	CONDUIT	135.1	
0.3257	0.0130				
C8	NODE7_2	NODE7_s	CONDUIT	92.9	
0.3337	0.0130				
C9	MH16	MH15	CONDUIT	100.3	
0.3290	0.0130				
EDORF	AL_POND	PNDOUT	ORIFICE		
C27	DCBMH10-S	J8	WEIR		
W1	NODE3	NODE3B	WEIR		
W2	NODE5_US	ND5_DS	WEIR		
W3	NODE4_US	NODE4_DS	WEIR		
W4	J5	J10	WEIR		
W5	J11	J15	WEIR		
WEIR1	AL_POND	PNDOUT	WEIR		
WEIR2	AL_POND	PNDOUT	WEIR		
CBMH10-IC	DCBMH10-S	DCBMH10	OUTLET		
CBMH1-IC	CBMH1-S	CBMH1	OUTLET		
CBMH2-IC	CBMH2-S	CBMH2	OUTLET		
CBMH3-IC	CBMH3-S	CBMH3	OUTLET		
CBMH4-IC	CBMH4-S	CBMH4	OUTLET		
CBMH5-IC	CBMH5-S	CBMH5	OUTLET		
CBMH6-IC	DCBMH6-S	DCBMH6	OUTLET		
CBMH7-IC	DCBMH7-S	DCBMH7	OUTLET		
CBMH8-IC	DCBMH8-S	DCBMH8	OUTLET		
CBMH9-IC	DCBMH9-S	DCBMH9	OUTLET		
MH1-IC	MH1-S	MH1	OUTLET		
MH2-IC	MH2-S	MH2	OUTLET		
OL1	CBMH2-S	CBMH2	OUTLET		
OL11	NODE3	J3	OUTLET		
OL2	CBMH4-S	CBMH4	OUTLET		
OL3	MH2-S	MH2	OUTLET		
OL4	DCBMH10-S	DCBMH10	OUTLET		
OL5	J10_s	MH13	OUTLET		
OL6	NODE6_S	NODE6	OUTLET		
OL7	NODE6_S	NODE6	OUTLET		
OL8	NODE7	MH17	OUTLET		

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Cross Section Summary
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow

C1	CIRCULAR	1.05	0.87	0.26	1.05	1
2.77						
C1_1	EdwardDitch	1.12	8.08	0.32	25.10	1
7.05						
C1_2	EdwardDitch	1.12	8.08	0.32	25.10	1
9.87						
C10	CIRCULAR	1.20	1.13	0.30	1.20	1
2.24						
C11	TRAPEZOIDAL	0.80	3.52	0.50	6.80	1
3.00						
C12	CIRCULAR	1.05	0.87	0.26	1.05	1
2.74						
C12-S	MarySt	0.20	1.57	0.12	18.50	1
2.11						
C13	CIRCULAR	1.05	0.87	0.26	1.05	1
2.76						
C13-S	MarySt	0.20	1.57	0.12	18.50	1
1.88						
C14	CIRCULAR	1.05	0.87	0.26	1.05	1
2.77						
C14-S	MarySt	0.20	1.57	0.12	18.50	1
1.90						
C15	CIRCULAR	1.05	0.87	0.26	1.05	1
1.97						
C15-S	MarySt	0.20	1.57	0.12	18.50	1
1.38						
C16	CIRCULAR	1.05	0.87	0.26	1.05	1
1.98						
C16-S	MarySt	0.20	1.57	0.12	18.50	1
1.84						
C17	CIRCULAR	1.05	0.87	0.26	1.05	1
1.99						
C17-S	MarySt	0.20	1.57	0.12	18.50	1
2.37						
C18	CIRCULAR	1.05	0.87	0.26	1.05	1
1.99						
C18-S	MarySt	0.20	1.57	0.12	18.50	1
2.07						
C19	CIRCULAR	1.05	0.87	0.26	1.05	1
1.63						
C19-S	MarySt	0.20	1.57	0.12	18.50	1
1.54						
C1-S	MarySt	0.20	1.57	0.12	18.50	1
2.24						
C2	CIRCULAR	1.50	1.77	0.38	1.50	1
14.01						
C20	CIRCULAR	1.05	0.87	0.26	1.05	1
1.56						
C20-S	MarySt	0.20	1.57	0.12	18.50	1
1.56						
C21	CIRCULAR	1.05	0.87	0.26	1.05	1
1.56						
C21-S	MarySt	0.20	1.57	0.12	18.50	1
1.51						
C22	CIRCULAR	1.05	0.87	0.26	1.05	1
1.57						
C23	CIRCULAR	1.50	1.77	0.38	1.50	1
8.41						

C24	CIRCULAR	1.50	1.77	0.38	1.50	1
8.69						
C25	CIRCULAR	1.50	1.77	0.38	1.50	1
8.42						
C26	CIRCULAR	1.50	1.77	0.38	1.50	1
6.17						
C28	CIRCULAR	1.50	1.77	0.38	1.50	1
13.65						
C29	TRAPEZOIDAL	1.00	5.40	0.62	8.40	1
8.00						
C3	TRAPEZOIDAL	1.00	8.00	0.71	11.00	1
10.33						
C30	TRAPEZOIDAL	1.00	5.40	0.62	8.40	1
18.89						
C31	TRAPEZOIDAL	1.00	18.00	0.84	21.00	1
27.70						
C32	CIRCULAR	0.45	0.16	0.11	0.45	1
0.26						
C33	CIRCULAR	0.60	0.28	0.15	0.60	1
0.60						
C34	CIRCULAR	0.68	0.36	0.17	0.68	1
0.76						
C35	CIRCULAR	0.68	0.36	0.17	0.68	1
1.13						
C36	TRAPEZOIDAL	1.00	11.50	0.53	21.50	1
10.32						
C37	CIRCULAR	1.20	1.13	0.30	1.20	1
1.74						
C38	TRAPEZOIDAL	1.00	18.00	0.84	21.00	1
19.84						
C39	CIRCULAR	1.20	1.13	0.30	1.20	1
3.68						
C4	TRAPEZOIDAL	1.50	14.25	0.98	14.00	1
15.93						
C40	CIRCULAR	0.80	0.50	0.20	0.80	1
1.14						
C41	TRIANGULAR	0.50	0.50	0.22	2.00	1
0.34						
C42	TRIANGULAR	0.50	0.50	0.22	2.00	1
0.32						
C43	TRAPEZOIDAL	1.00	8.00	0.71	11.00	1
0.69						
C44	TRIANGULAR	0.50	0.50	0.22	2.00	1
0.32						
C45	CIRCULAR	1.20	1.13	0.30	1.20	1
2.39						
C46	CIRCULAR	1.20	1.13	0.30	1.20	1
2.24						
C47	CIRCULAR	1.20	1.13	0.30	1.20	1
2.25						
C48	CIRCULAR	1.20	1.13	0.30	1.20	1
2.24						
C49	CIRCULAR	1.20	1.13	0.30	1.20	1
2.24						
C5	CIRCULAR	1.50	1.77	0.38	1.50	1
3.43						
C50	CIRCULAR	1.20	1.13	0.30	1.20	1
2.20						
C51	CIRCULAR	0.90	0.64	0.23	0.90	2
0.56						

C52	CIRCULAR	0.90	0.64	0.23	0.90	2
0.77						
C53	EdwardDitch	1.12	8.08	0.32	25.10	1
5.54						
C55	EdwardDitch	1.12	8.08	0.32	25.10	1
9.82						
C6	CIRCULAR	1.20	1.13	0.30	1.20	1
2.28						
C7	CIRCULAR	1.20	1.13	0.30	1.20	1
2.23						
C8	CIRCULAR	1.20	1.13	0.30	1.20	1
2.25						
C9	CIRCULAR	1.20	1.13	0.30	1.20	1
2.24						

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Transect Summary
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Transect EdwardDitch
Area:

0.0099	0.0200	0.0305	0.0413	0.0524
0.0638	0.0755	0.0875	0.0999	0.1125
0.1255	0.1388	0.1523	0.1662	0.1804
0.1949	0.2098	0.2249	0.2403	0.2561
0.2722	0.2885	0.3052	0.3222	0.3395
0.3571	0.3751	0.3933	0.4118	0.4307
0.4499	0.4694	0.4891	0.5092	0.5297
0.5504	0.5714	0.5927	0.6144	0.6364
0.6586	0.6812	0.7041	0.7273	0.7514
0.7825	0.8225	0.8719	0.9320	1.0000

Hrad:

0.0695	0.1366	0.2015	0.2645	0.3257
0.3853	0.4434	0.5001	0.5555	0.6098
0.6630	0.7152	0.7665	0.8169	0.8666
0.9154	0.9636	1.0111	1.0580	1.1043
1.1501	1.1953	1.2401	1.2845	1.3284
1.3718	1.4150	1.4577	1.5001	1.5422
1.5839	1.6254	1.6666	1.7075	1.7482
1.7886	1.8288	1.8687	1.9085	1.9480
1.9874	2.0266	2.0655	2.1044	1.9099
1.5088	1.2774	1.1051	0.9879	1.0000

Width:

0.1439	0.1484	0.1528	0.1573	0.1618
0.1662	0.1707	0.1751	0.1796	0.1841
0.1885	0.1930	0.1975	0.2019	0.2064
0.2108	0.2153	0.2198	0.2242	0.2287
0.2331	0.2376	0.2421	0.2465	0.2510
0.2555	0.2599	0.2644	0.2688	0.2733
0.2778	0.2822	0.2867	0.2912	0.2956
0.3001	0.3045	0.3090	0.3135	0.3179
0.3224	0.3269	0.3313	0.3358	0.3841
0.5114	0.6388	0.7863	0.9433	1.0000

Transect EdwardDitch-Deeper
Area:

0.0104 0.0211 0.0321 0.0435 0.0551
0.0671 0.0794 0.0920 0.1049 0.1181
0.1317 0.1455 0.1597 0.1742 0.1890
0.2041 0.2196 0.2353 0.2514 0.2678
0.2845 0.3015 0.3189 0.3365 0.3545
0.3728 0.3914 0.4103 0.4295 0.4491
0.4689 0.4891 0.5096 0.5304 0.5515
0.5730 0.5947 0.6168 0.6392 0.6619
0.6849 0.7083 0.7319 0.7559 0.7802
0.8048 0.8330 0.8741 0.9299 1.0000

Hrad:

0.0744 0.1460 0.2151 0.2818 0.3464
0.4092 0.4702 0.5295 0.5874 0.6440
0.6993 0.7535 0.8065 0.8586 0.9098
0.9601 1.0096 1.0584 1.1065 1.1539
1.2007 1.2469 1.2926 1.3377 1.3824
1.4267 1.4704 1.5138 1.5568 1.5995
1.6417 1.6837 1.7253 1.7667 1.8077
1.8485 1.8890 1.9293 1.9694 2.0092
2.0488 2.0882 2.1274 2.1664 2.2052
2.2439 1.7162 1.3177 1.0606 1.0000

Width:

0.1437 0.1480 0.1524 0.1567 0.1610
0.1653 0.1696 0.1739 0.1782 0.1825
0.1868 0.1911 0.1954 0.1997 0.2040
0.2083 0.2126 0.2169 0.2212 0.2255
0.2298 0.2341 0.2384 0.2427 0.2470
0.2513 0.2556 0.2599 0.2642 0.2685
0.2728 0.2771 0.2814 0.2857 0.2900
0.2943 0.2986 0.3029 0.3073 0.3116
0.3159 0.3202 0.3245 0.3288 0.3331
0.3374 0.4682 0.6524 0.8732 1.0000

Transect EdwardDitch-Wider

Area:

0.0105 0.0213 0.0324 0.0438 0.0555
0.0674 0.0797 0.0922 0.1051 0.1182
0.1316 0.1453 0.1593 0.1736 0.1882
0.2030 0.2182 0.2337 0.2494 0.2654
0.2817 0.2983 0.3152 0.3324 0.3499
0.3677 0.3858 0.4041 0.4227 0.4417
0.4609 0.4804 0.5002 0.5203 0.5407
0.5614 0.5823 0.6036 0.6251 0.6470
0.6691 0.6915 0.7142 0.7372 0.7610
0.7914 0.8301 0.8776 0.9351 1.0000

Hrad:

0.0664 0.1308 0.1933 0.2542 0.3135
0.3713 0.4279 0.4832 0.5373 0.5904
0.6425 0.6937 0.7440 0.7935 0.8422
0.8903 0.9376 0.9843 1.0305 1.0760
1.1211 1.1656 1.2097 1.2533 1.2965
1.3393 1.3817 1.4237 1.4654 1.5067
1.5478 1.5885 1.6290 1.6691 1.7090
1.7487 1.7881 1.8273 1.8663 1.9050
1.9436 1.9820 2.0201 2.0581 1.8788
1.4992 1.2757 1.1066 0.9900 1.0000

Width:

0.1606 0.1650 0.1694 0.1738 0.1781
0.1825 0.1869 0.1913 0.1956 0.2000
0.2044 0.2088 0.2131 0.2175 0.2219
0.2263 0.2306 0.2350 0.2394 0.2438
0.2481 0.2525 0.2569 0.2613 0.2656
0.2700 0.2744 0.2788 0.2831 0.2875
0.2919 0.2963 0.3006 0.3050 0.3094
0.3138 0.3181 0.3225 0.3269 0.3313
0.3356 0.3400 0.3444 0.3488 0.3961
0.5210 0.6458 0.7904 0.9444 1.0000

Transect MarySt
Area:
0.0005 0.0019 0.0043 0.0077 0.0121
0.0174 0.0236 0.0308 0.0390 0.0482
0.0583 0.0694 0.0815 0.0945 0.1085
0.1234 0.1393 0.1562 0.1740 0.1928
0.2126 0.2333 0.2549 0.2766 0.2982
0.3199 0.3416 0.3633 0.3850 0.4067
0.4284 0.4501 0.4718 0.4935 0.5152
0.5368 0.5585 0.5805 0.6042 0.6300
0.6578 0.6877 0.7196 0.7535 0.7895
0.8275 0.8676 0.9097 0.9538 1.0000
Hrad:
0.0160 0.0320 0.0480 0.0640 0.0800
0.0960 0.1120 0.1280 0.1440 0.1600
0.1760 0.1920 0.2080 0.2240 0.2400
0.2560 0.2720 0.2880 0.3040 0.3200
0.3360 0.3520 0.3758 0.4074 0.4390
0.4705 0.5019 0.5333 0.5646 0.5959
0.6271 0.6582 0.6893 0.7204 0.7513
0.7823 0.8131 0.8438 0.8712 0.8949
0.9152 0.9326 0.9472 0.9595 0.9698
0.9783 0.9854 0.9912 0.9960 1.0000
Width:
0.0204 0.0408 0.0613 0.0817 0.1021
0.1225 0.1429 0.1634 0.1838 0.2042
0.2246 0.2450 0.2655 0.2859 0.3063
0.3267 0.3471 0.3676 0.3880 0.4084
0.4288 0.4492 0.4595 0.4595 0.4595
0.4595 0.4595 0.4595 0.4595 0.4595
0.4595 0.4595 0.4595 0.4595 0.4595
0.4595 0.4595 0.4811 0.5243 0.5676
0.6108 0.6541 0.6973 0.7405 0.7838
0.8270 0.8703 0.9135 0.9568 1.0000

Transect ND3TOND4
Area:
0.0045 0.0098 0.0160 0.0229 0.0307
0.0393 0.0487 0.0589 0.0699 0.0817
0.0944 0.1078 0.1221 0.1372 0.1531
0.1698 0.1873 0.2057 0.2254 0.2478
0.2709 0.2941 0.3175 0.3410 0.3647
0.3885 0.4124 0.4365 0.4607 0.4850
0.5094 0.5340 0.5588 0.5836 0.6087
0.6338 0.6591 0.6845 0.7100 0.7357
0.7615 0.7875 0.8136 0.8398 0.8662

0.8927 0.9193 0.9461 0.9730 1.0000

Hrad:

0.0300 0.0558 0.0790 0.1004 0.1207
0.1401 0.1589 0.1772 0.1951 0.2127
0.2301 0.2473 0.2642 0.2811 0.2978
0.3144 0.3310 0.3474 0.3394 0.3420
0.3692 0.3960 0.4222 0.4480 0.4734
0.4983 0.5228 0.5470 0.5707 0.5941
0.6171 0.6398 0.6621 0.6842 0.7059
0.7273 0.7484 0.7692 0.7898 0.8101
0.8301 0.8499 0.8695 0.8888 0.9078
0.9267 0.9453 0.9638 0.9820 1.0000

Width:

0.1815 0.2115 0.2415 0.2715 0.3015
0.3315 0.3615 0.3915 0.4215 0.4515
0.4815 0.5115 0.5415 0.5715 0.6015
0.6315 0.6615 0.6915 0.7788 0.8500
0.8550 0.8600 0.8650 0.8700 0.8750
0.8800 0.8850 0.8900 0.8950 0.9000
0.9050 0.9100 0.9150 0.9200 0.9250
0.9300 0.9350 0.9400 0.9450 0.9500
0.9550 0.9600 0.9650 0.9700 0.9750
0.9800 0.9850 0.9900 0.9950 1.0000

Transect ND4.5TO5

Area:

0.0031 0.0066 0.0107 0.0152 0.0203
0.0259 0.0319 0.0385 0.0456 0.0532
0.0613 0.0699 0.0790 0.0887 0.0994
0.1108 0.1231 0.1362 0.1502 0.1650
0.1807 0.1972 0.2145 0.2327 0.2517
0.2716 0.2923 0.3138 0.3362 0.3594
0.3835 0.4083 0.4341 0.4607 0.4881
0.5163 0.5454 0.5753 0.6061 0.6377
0.6702 0.7035 0.7376 0.7726 0.8084
0.8450 0.8825 0.9208 0.9600 1.0000

Hrad:

0.0379 0.0708 0.1005 0.1280 0.1540
0.1789 0.2029 0.2262 0.2490 0.2715
0.2935 0.3153 0.3364 0.3475 0.3599
0.3735 0.3879 0.4030 0.4187 0.4349
0.4516 0.4686 0.4859 0.5035 0.5213
0.5393 0.5575 0.5759 0.5944 0.6130
0.6317 0.6506 0.6695 0.6885 0.7076
0.7268 0.7460 0.7653 0.7846 0.8040
0.8235 0.8429 0.8625 0.8820 0.9016
0.9212 0.9409 0.9606 0.9803 1.0000

Width:

0.0817 0.0942 0.1066 0.1191 0.1315
0.1440 0.1565 0.1689 0.1814 0.1938
0.2063 0.2188 0.2315 0.2523 0.2731
0.2938 0.3146 0.3354 0.3562 0.3769
0.3977 0.4185 0.4392 0.4600 0.4808
0.5015 0.5223 0.5431 0.5638 0.5846
0.6054 0.6262 0.6469 0.6677 0.6885
0.7092 0.7300 0.7508 0.7715 0.7923
0.8131 0.8338 0.8546 0.8754 0.8962

```
            0.9169     0.9377     0.9585     0.9792     1.0000

Transect ND4TOND4_5
Area:
            0.0045     0.0098     0.0160     0.0229     0.0307
            0.0393     0.0487     0.0589     0.0699     0.0817
            0.0944     0.1078     0.1221     0.1372     0.1531
            0.1698     0.1873     0.2057     0.2254     0.2478
            0.2709     0.2941     0.3175     0.3410     0.3647
            0.3885     0.4124     0.4365     0.4607     0.4850
            0.5094     0.5340     0.5588     0.5836     0.6087
            0.6338     0.6591     0.6845     0.7100     0.7357
            0.7615     0.7875     0.8136     0.8398     0.8662
            0.8927     0.9193     0.9461     0.9730     1.0000
Hrad:
            0.0300     0.0558     0.0790     0.1004     0.1207
            0.1401     0.1589     0.1772     0.1951     0.2127
            0.2301     0.2473     0.2642     0.2811     0.2978
            0.3144     0.3310     0.3474     0.3394     0.3420
            0.3692     0.3960     0.4222     0.4480     0.4734
            0.4983     0.5228     0.5470     0.5707     0.5941
            0.6171     0.6398     0.6621     0.6842     0.7059
            0.7273     0.7484     0.7692     0.7898     0.8101
            0.8301     0.8499     0.8695     0.8888     0.9078
            0.9267     0.9453     0.9638     0.9820     1.0000
Width:
            0.1815     0.2115     0.2415     0.2715     0.3015
            0.3315     0.3615     0.3915     0.4215     0.4515
            0.4815     0.5115     0.5415     0.5715     0.6015
            0.6315     0.6615     0.6915     0.7788     0.8500
            0.8550     0.8600     0.8650     0.8700     0.8750
            0.8800     0.8850     0.8900     0.8950     0.9000
            0.9050     0.9100     0.9150     0.9200     0.9250
            0.9300     0.9350     0.9400     0.9450     0.9500
            0.9550     0.9600     0.9650     0.9700     0.9750
            0.9800     0.9850     0.9900     0.9950     1.0000


*********************************************************
NOTE: The summary statistics displayed in this report are
based on results found at every computational time step,
not just on results from each reporting time step.
*********************************************************

****************
Analysis Options
****************
Flow Units ............... CMS
Process Models:
  Rainfall/Runoff ........ YES
  RDII ................... NO
  Snowmelt ............... NO
  Groundwater ............ NO
  Flow Routing ........... YES
  Ponding Allowed ........ NO
  Water Quality .......... NO
Infiltration Method ...... CURVE_NUMBER
```

```
Flow Routing Method ...... DYNWAVE
Surcharge Method ......... EXTRAN
Starting Date ............ 10/11/2022 00:00:00
Ending Date .............. 10/12/2022 00:00:00
Antecedent Dry Days ...... 0.0
Report Time Step ......... 00:01:00
Wet Time Step ............ 00:05:00
Dry Time Step ............ 00:05:00
Routing Time Step ........ 1.00 sec
Variable Time Step ....... YES
Maximum Trials ........... 8
Number of Threads ........ 4
Head Tolerance ........... 0.001500 m
```

Runoff Quantity Continuity	Volume hectare-m	Depth mm
Total Precipitation	54.484	111.870
Evaporation Loss	0.000	0.000
Infiltration Loss	25.645	52.655
Surface Runoff	22.249	45.682
Final Storage	6.627	13.607
Continuity Error (%)	-0.066	

Flow Routing Continuity	Volume hectare-m	Volume 10^6 ltr
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	22.233	222.336
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	20.501	205.009
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
Initial Stored Volume	0.000	0.001
Final Stored Volume	1.750	17.499
Continuity Error (%)	-0.077	

```
*************************
Highest Continuity Errors
*************************
Node NODE2B (1.27%)


****************************
Time-Step Critical Elements
****************************
Link C55 (1.65%)


******************************
Highest Flow Instability Indexes
```

```
  ********************************
  Link C52 (5)
  Link C55 (5)
  Link OL11 (4)
  Link C2 (4)
  Link C37 (3)


  *************************
  Routing Time Step Summary
  *************************
  Minimum Time Step           :     0.07 sec
  Average Time Step           :     1.00 sec
  Maximum Time Step           :     1.00 sec
  Percent in Steady State     :    -0.00
  Average Iterations per Step :     2.01
  Percent Not Converging      :     0.18
  Time Step Frequencies       :
      1.000 -  0.871 sec      :    99.96 %
      0.871 -  0.758 sec      :     0.01 %
      0.758 -  0.660 sec      :     0.01 %
      0.660 -  0.574 sec      :     0.00 %
      0.574 -  0.500 sec      :     0.02 %


  ***************************
  Subcatchment Runoff Summary
  ***************************

  ------------------------------------------------------------------------------------
-----------------------------------------------
                             Total      Total      Total      Total     Imperv
Perv      Total       Total     Peak  Runoff
                          Precip      Runon       Evap      Infil     Runoff
Runoff     Runoff      Runoff   Runoff   Coeff
  Subcatchment                mm         mm         mm         mm         mm
mm         mm    10^6 ltr      CMS
  ------------------------------------------------------------------------------------
-----------------------------------------------
  1a_1                    111.87       0.00       0.00      59.10       2.21
38.39      40.60        8.20     0.59   0.363
  1a_2                    111.87       0.00       0.00      59.10       2.21
38.39      40.60       11.60     0.84   0.363
  1b_1                    111.87       0.00       0.00      59.10       2.21
35.79      38.00       11.29     0.60   0.340
  1b_2                    111.87       0.00       0.00      59.10       2.21
36.19      38.40        7.46     0.41   0.343
  2E                      111.87       0.00       0.00      59.10       2.21
38.39      40.60        3.95     0.29   0.363
  2W                      111.87       0.00       0.00      27.99      52.31
23.77      76.08       29.72     6.14   0.680
  3                       111.87       0.00       0.00      53.10       6.62
40.47      47.10       19.46     1.91   0.421
  4                       111.87       0.00       0.00      55.36       2.21
38.60      40.81       49.90     2.61   0.365
  5                       111.87       0.00       0.00      25.70      56.00
25.41      81.41        2.56     0.69   0.728
  6                       111.87       0.00       0.00      27.99      52.68
26.10      78.78        3.78     0.97   0.704
```

7		111.87	0.00	0.00	59.80	22.04	
22.69	44.73	4.34	0.82	0.400			
8_1		111.87	0.00	0.00	59.10	2.21	
41.13	43.33	4.17	0.61	0.387			
8_3		111.87	0.00	0.00	59.10	2.21	
39.60	41.80	5.93	0.55	0.374			
8_4		111.87	0.00	0.00	59.10	2.21	
41.13	43.33	1.49	0.22	0.387			
9		111.87	0.00	0.00	59.10	2.21	
30.19	32.39	29.60	1.19	0.290			
A1		111.87	0.00	0.00	40.16	39.53	
26.00	65.53	5.34	1.22	0.586			
A10		111.87	0.00	0.00	40.16	39.70	
27.12	66.83	2.26	0.64	0.597			
A12		111.87	0.00	0.00	40.16	39.74	
27.77	67.51	0.10	0.03	0.603			
A13		111.87	0.00	0.00	40.16	39.74	
27.56	67.30	0.16	0.05	0.602			
A14		111.87	0.00	0.00	40.16	39.74	
27.62	67.36	0.15	0.05	0.602			
A15		111.87	0.00	0.00	40.16	39.74	
27.67	67.41	0.15	0.05	0.603			
A16		111.87	0.00	0.00	40.16	39.74	
27.62	67.36	0.17	0.05	0.602			
A17		111.87	0.00	0.00	40.16	39.74	
27.72	67.46	0.05	0.02	0.603			
A2		111.87	0.00	0.00	40.16	39.74	
27.75	67.49	0.05	0.02	0.603			
A3		111.87	0.00	0.00	40.16	39.74	
27.62	67.36	0.07	0.02	0.602			
A4		111.87	0.00	0.00	40.16	39.70	
27.12	66.83	2.98	0.84	0.597			
A5		111.87	0.00	0.00	40.16	39.74	
27.67	67.41	0.07	0.02	0.603			
A6		111.87	0.00	0.00	40.16	39.74	
27.54	67.28	0.12	0.04	0.601			
A7		111.87	0.00	0.00	40.16	39.70	
27.12	66.83	2.73	0.77	0.597			
A8		111.87	0.00	0.00	40.16	39.74	
27.60	67.34	0.12	0.04	0.602			
A9		111.87	0.00	0.00	40.16	39.74	
27.50	67.24	0.17	0.05	0.601			
EXT1		111.87	0.00	0.00	34.84	45.18	
27.10	72.29	6.62	1.90	0.646			
EXT2		111.87	0.00	0.00	58.18	22.08	
25.75	47.83	0.74	0.16	0.428			
MARYEXT		111.87	0.00	0.00	16.00	67.90	
23.63	91.52	6.98	1.87	0.818			

****
Node Depth Summary
****

Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters

ACBMH1	JUNCTION	0.00	0.00	258.48	0	00:00	0.00
ACBMH2	JUNCTION	0.00	0.00	258.03	0	00:00	0.00
ACBMH3	JUNCTION	0.00	0.00	257.38	0	00:00	0.00
ADCBMH1	JUNCTION	0.00	0.00	257.52	0	00:00	0.00
AMH1	JUNCTION	0.10	0.60	256.80	0	11:55	0.60
CBMH1	JUNCTION	0.09	0.55	256.05	0	11:59	0.55
CBMH1-S	JUNCTION	0.01	0.07	257.63	0	11:56	0.07
CBMH2	JUNCTION	0.11	1.07	256.11	0	11:58	1.06
CBMH2-S	JUNCTION	0.02	0.13	257.24	0	11:54	0.13
CBMH3	JUNCTION	0.11	1.50	256.32	0	11:57	1.21
CBMH3-S	JUNCTION	0.02	0.13	257.06	0	11:55	0.13
CBMH4	JUNCTION	0.15	2.43	256.72	0	11:55	1.57
CBMH4-S	JUNCTION	0.03	0.17	256.69	0	11:55	0.17
CBMH5	JUNCTION	0.15	1.95	256.09	0	11:55	1.57
CBMH5-S	JUNCTION	0.02	0.15	256.53	0	11:56	0.15
DCBMH10	JUNCTION	0.18	1.02	254.34	0	11:59	1.02
DCBMH10-S	JUNCTION	0.01	0.16	255.14	0	11:59	0.16
DCBMH6	JUNCTION	0.16	1.77	255.57	0	11:55	1.52
DCBMH6-S	JUNCTION	0.03	0.17	255.94	0	11:57	0.17
DCBMH7	JUNCTION	0.18	1.82	255.44	0	11:55	1.46
DCBMH7-S	JUNCTION	0.03	0.19	255.64	0	11:57	0.19
DCBMH8	JUNCTION	0.18	1.54	255.05	0	11:55	1.33
DCBMH8-S	JUNCTION	0.03	0.18	255.47	0	11:58	0.18
DCBMH9	JUNCTION	0.18	1.22	254.64	0	11:55	1.18
DCBMH9-S	JUNCTION	0.04	0.18	255.32	0	11:58	0.18
J10	JUNCTION	0.27	1.12	249.23	0	12:59	1.12
J10_s	JUNCTION	0.05	0.49	249.62	0	12:11	0.49
J11	JUNCTION	0.00	0.00	247.41	0	00:00	0.00
J12	JUNCTION	0.00	0.00	266.00	0	00:00	0.00
J14	JUNCTION	0.30	1.16	249.22	0	12:59	1.16
J15	JUNCTION	0.00	0.00	247.37	0	00:00	0.00
J2	JUNCTION	0.09	0.50	261.25	0	11:54	0.50
J3	JUNCTION	0.37	1.01	251.39	0	12:37	1.01
J4	JUNCTION	0.07	0.38	259.58	0	11:54	0.38
J5	JUNCTION	0.44	1.31	249.55	0	12:59	1.31
J6	JUNCTION	0.07	0.38	258.13	0	11:54	0.38
J7	JUNCTION	0.09	0.45	257.20	0	11:55	0.45
J9	JUNCTION	0.00	0.00	259.20	0	00:00	0.00
MH1	JUNCTION	0.09	0.50	256.29	0	11:55	0.50
MH10	JUNCTION	0.33	0.89	247.96	0	12:33	0.89
MH12	JUNCTION	0.33	0.95	248.35	0	12:33	0.95
MH13	JUNCTION	0.34	0.97	248.70	0	12:33	0.97
MH14	JUNCTION	0.32	0.88	248.94	0	12:34	0.88
MH15	JUNCTION	0.35	1.03	249.42	0	12:34	1.03
MH16	JUNCTION	0.36	1.09	249.81	0	12:33	1.09
MH17	JUNCTION	0.32	0.95	250.00	0	12:33	0.95
MH1-S	JUNCTION	0.01	0.07	257.94	0	11:54	0.07
MH2	JUNCTION	0.16	1.87	255.80	0	11:55	1.56
MH2-S	JUNCTION	0.03	0.16	256.24	0	11:56	0.16
ND5_DS	JUNCTION	0.24	0.62	244.76	0	13:30	0.62
NODE1	JUNCTION	0.00	0.00	263.00	0	00:00	0.00
NODE2	JUNCTION	0.10	0.31	256.11	0	12:03	0.31
NODE2B	JUNCTION	0.19	0.59	253.04	0	12:41	0.59
NODE3	JUNCTION	0.29	0.74	253.00	0	12:41	0.74
NODE3B	JUNCTION	0.23	0.63	252.89	0	12:22	0.63
NODE3B_1	JUNCTION	0.19	0.72	249.58	0	12:59	0.72
NODE4_DS	JUNCTION	0.21	0.63	246.86	0	13:00	0.63

NODE4_US	JUNCTION	0.55	1.56	248.83	0	12:58	1.56
NODE4B_1	JUNCTION	0.35	1.36	246.36	0	13:29	1.36
NODE5_US	JUNCTION	0.66	1.99	246.29	0	13:30	1.99
NODE6	JUNCTION	0.33	0.90	251.22	0	12:33	0.90
NODE6_1	JUNCTION	0.33	0.89	250.82	0	12:34	0.89
NODE6_S	JUNCTION	0.02	0.37	253.07	0	11:56	0.37
NODE7	JUNCTION	0.03	0.46	251.37	0	12:03	0.46
NODE7_2	JUNCTION	0.34	0.92	250.41	0	12:34	0.92
NODE7_s	JUNCTION	0.30	0.86	250.04	0	12:33	0.86
NODE8	JUNCTION	0.27	0.76	247.50	0	12:32	0.76
NODE8_S	JUNCTION	0.09	0.62	248.24	0	12:16	0.62
PNDOUT	JUNCTION	0.28	0.53	253.53	0	13:33	0.53
J8	OUTFALL	0.00	0.00	253.27	0	00:00	0.00
MAD	OUTFALL	0.27	0.75	246.55	0	12:32	0.75
OF1	OUTFALL	0.17	0.92	254.19	0	11:59	0.92
OF2	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
OF3	OUTFALL	0.07	0.38	259.38	0	11:54	0.38
OF4	OUTFALL	0.14	0.42	244.56	0	13:30	0.42
AL_POND	STORAGE	0.81	1.72	254.72	0	13:32	1.72

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Node Inflow Summary
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Node	Type	Maximum Lateral Inflow CMS	Maximum Total Inflow CMS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Flow Inflow Volume 10^6 ltr	Flow Balance Error Percent
ACBMH1	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
ACBMH2	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
ACBMH3	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
ADCBMH1	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
AMH1	JUNCTION	1.901	1.901	0 11:54	6.62	6.62	0.134
CBMH1	JUNCTION	0.000	1.263	0 11:56	0	5.74	0.031
CBMH1-S	JUNCTION	0.019	0.139	0 11:54	0.0535	0.399	0.256
CBMH2	JUNCTION	0.000	1.566	0 11:57	0	7.64	0.021
CBMH2-S	JUNCTION	0.863	0.978	0 11:54	3.05	3.44	-0.003
CBMH3	JUNCTION	0.000	1.558	0 11:55	0	7.72	0.024
CBMH3-S	JUNCTION	0.024	0.678	0 11:54	0.0705	1.61	0.063

CBMH4	JUNCTION	0.000	2.002	0	11:55	0	
10.2	0.040						
CBMH4-S	JUNCTION	0.809	1.409	0	11:55	2.85	
4.38	0.007						
CBMH5	JUNCTION	0.000	2.012	0	11:59	0	
10.3	0.022						
CBMH5-S	JUNCTION	0.041	1.008	0	11:55	0.125	
2.01	0.065						
DCBMH10	JUNCTION	0.000	2.696	0	11:59	0	
12.8	0.020						
DCBMH10-S	JUNCTION	0.055	1.229	0	11:59	0.166	
2.65	0.012						
DCBMH6	JUNCTION	0.000	2.315	0	11:59	0	
11.8	0.019						
DCBMH6-S	JUNCTION	0.035	1.406	0	11:56	0.098	
3.15	0.026						
DCBMH7	JUNCTION	0.000	2.399	0	11:59	0	
12.1	0.024						
DCBMH7-S	JUNCTION	0.052	1.363	0	11:57	0.16	
3.07	0.045						
DCBMH8	JUNCTION	0.000	2.483	0	11:59	0	
12.4	0.023						
DCBMH8-S	JUNCTION	0.049	1.318	0	11:57	0.148	
2.91	0.058						
DCBMH9	JUNCTION	0.000	2.567	0	11:59	0	
12.7	0.024						
DCBMH9-S	JUNCTION	0.050	1.272	0	11:58	0.148	
2.8	0.076						
J10	JUNCTION	0.000	3.378	0	12:32	0	
67.7	0.006						
J10_s	JUNCTION	0.546	0.741	0	12:03	5.93	
6.41	0.148						
J11	JUNCTION	0.000	0.000	0	00:00	0	
0	0.000 ltr						
J12	JUNCTION	0.000	0.000	0	00:00	0	
0	0.000 ltr						
J14	JUNCTION	0.841	4.072	0	12:32	11.6	
79.3	0.174						
J15	JUNCTION	0.000	0.000	0	00:00	0	
0	0.000 ltr						
J2	JUNCTION	1.875	1.875	0	11:54	6.98	
6.98	0.029						
J3	JUNCTION	0.000	1.410	0	12:41	0	
33.4	0.018						
J4	JUNCTION	0.000	1.887	0	11:54	0	
6.98	0.028						
J5	JUNCTION	0.000	3.419	0	12:31	0	
67.8	0.095						
J6	JUNCTION	1.219	1.219	0	11:54	5.34	
5.34	0.051						
J7	JUNCTION	0.000	1.207	0	11:54	0	
5.34	0.082						
J9	JUNCTION	0.000	0.000	0	00:00	0	
0	0.000 ltr						
MH1	JUNCTION	0.000	1.258	0	11:55	0	
5.73	0.072						
MH10	JUNCTION	0.000	2.242	0	12:34	0	
46.7	0.061						
MH12	JUNCTION	0.000	2.242	0	12:33	0	
46.7	0.061						

MH13	JUNCTION	0.000	2.242	0	12:32	0	
46.7	0.060						
MH14	JUNCTION	0.000	1.895	0	12:34	0	
41.3	0.064						
MH15	JUNCTION	0.000	1.895	0	12:33	0	
41.3	0.072						
MH16	JUNCTION	0.000	1.896	0	12:32	0	
41.4	0.072						
MH17	JUNCTION	0.000	1.896	0	12:31	0	
41.4	0.043						
MH1-S	JUNCTION	0.165	0.165	0	11:54	0.743	
0.743	-0.002						
MH2	JUNCTION	0.000	2.231	0	11:59	0	
11.6	0.021						
MH2-S	JUNCTION	0.692	1.608	0	11:56	2.43	
4.34	0.017						
ND5_DS	JUNCTION	0.000	4.871	0	13:30	0	
104	0.018						
NODE1	JUNCTION	0.000	0.000	0	00:00	0	
0	0.000 ltr						
NODE2	JUNCTION	4.519	4.519	0	12:00	69.3	
69.3	0.983						
NODE2B	JUNCTION	0.286	4.528	0	12:31	3.94	
96.9	1.282						
NODE3	JUNCTION	0.000	4.497	0	12:43	0	
95.9	0.231						
NODE3B	JUNCTION	1.664	3.377	0	12:33	6.34	
68.6	0.437						
NODE3B_1	JUNCTION	0.000	3.426	0	12:28	0	
68.1	0.397						
NODE4_DS	JUNCTION	0.000	4.339	0	12:58	0	
87.1	0.214						
NODE4_US	JUNCTION	0.595	4.339	0	12:57	8.19	
87.4	0.364						
NODE4B_1	JUNCTION	0.411	4.673	0	12:59	7.46	
94.3	0.625						
NODE5_US	JUNCTION	0.600	4.883	0	13:26	11.3	
105	0.800						
NODE6	JUNCTION	0.000	1.595	0	12:32	0	
37.7	0.052						
NODE6_1	JUNCTION	0.000	1.595	0	12:32	0	
37.7	0.091						
NODE6_S	JUNCTION	0.820	0.820	0	11:54	4.34	
4.34	-0.378						
NODE7	JUNCTION	0.613	0.733	0	12:00	4.17	
4.26	0.166						
NODE7_2	JUNCTION	0.000	1.594	0	12:34	0	
37.7	0.086						
NODE7_s	JUNCTION	0.000	1.594	0	12:35	0	
37.6	0.043						
NODE8	JUNCTION	0.000	2.669	0	12:35	0	
49.1	0.331						
NODE8_S	JUNCTION	0.219	0.475	0	12:09	1.49	
2.45	0.112						
PNDOUT	JUNCTION	0.000	0.934	0	13:32	0	
24.4	0.162						
J8	OUTFALL	0.000	1.098	0	11:59	0	
2.53	0.000						
MAD	OUTFALL	0.000	2.610	0	12:32	0	
48.9	0.000						

OF1	OUTFALL	0.018	2.711	0	11:59	0.0526	12.9	0.000
OF2	OUTFALL	1.193	1.193	0	12:00	29.6	29.6	0.000
OF3	OUTFALL	0.000	1.889	0	11:54	0	6.98	0.000
OF4	OUTFALL	0.000	4.871	0	13:30	0	104	0.000
AL_POND	STORAGE	6.138	7.832	0	12:00	29.7	36.3	0.959

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Node Surcharge Summary
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Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
CBMH2	JUNCTION	0.01	0.021	0.999
CBMH3	JUNCTION	0.09	0.454	0.606
CBMH4	JUNCTION	0.18	1.380	0.000
CBMH5	JUNCTION	0.19	0.901	0.289
DCBMH6	JUNCTION	0.21	0.720	0.200
DCBMH7	JUNCTION	0.23	0.770	0.010
DCBMH8	JUNCTION	0.21	0.485	0.245
DCBMH9	JUNCTION	0.17	0.172	0.498
J14	JUNCTION	0.67	0.042	0.000
J5	JUNCTION	1.99	0.174	0.338
MH2	JUNCTION	0.21	0.822	0.278
NODE4_US	JUNCTION	1.65	0.061	0.000

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Node Flooding Summary
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Flooding refers to all water that overflows a node, whether it ponds or not.

Node	Hours Flooded	Maximum Rate CMS	Time of Max Occurrence days hr:min	Total Flood Volume 10^6 ltr	Maximum Ponded Depth Meters
CBMH4	0.01	0.286	0 11:55	0.000	0.200

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Storage Volume Summary
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	Average	Avg	Evap	Exfil	Maximum	Max	Time of Max	Maximum

Storage Unit	Volume 1000 m3	Pcnt Full	Pcnt Loss	Pcnt Loss	Volume 1000 m3	Pcnt Full	Occurrence days	Occurrence hr:min	Outflow CMS
AL_POND	8.310	20	0	0	18.689	46	0	13:32	0.934

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Outfall Loading Summary
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Outfall Node	Flow Freq Pcnt	Avg Flow CMS	Max Flow CMS	Total Volume 10^6 ltr
J8	99.29	0.030	1.098	2.531
MAD	97.37	0.582	2.610	48.912
OF1	99.21	0.151	2.711	12.854
OF2	99.94	0.343	1.193	29.555
OF3	99.78	0.081	1.889	6.980
OF4	92.28	1.308	4.871	104.176
System	97.98	2.495	8.825	205.008

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Link Flow Summary
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Link	Type	Maximum |Flow| CMS	Time of Max Occurrence days	Time of Max Occurrence hr:min	Maximum |Veloc| m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	1.254	0	11:56	3.00	0.45	0.50
C1_1	CHANNEL	3.426	0	12:28	1.11	0.49	0.59
C1_2	CHANNEL	3.419	0	12:31	0.68	0.35	0.82
C10	CONDUIT	1.895	0	12:34	1.96	0.85	0.80
C11	CONDUIT	2.610	0	12:32	0.81	0.87	0.94
C12	CONDUIT	1.261	0	11:57	2.68	0.46	0.75
C12-S	CHANNEL	0.124	0	11:56	0.29	0.06	0.49
C13	CONDUIT	1.516	0	11:55	3.02	0.55	1.00
C13-S	CHANNEL	0.655	0	11:54	0.94	0.35	0.64
C14	CONDUIT	1.555	0	12:02	2.25	0.56	1.00
C14-S	CHANNEL	0.626	0	11:55	0.71	0.33	0.75
C15	CONDUIT	1.970	0	11:59	2.33	1.00	1.00
C15-S	CHANNEL	0.969	0	11:55	0.96	0.70	0.81
C16	CONDUIT	2.012	0	11:59	2.32	1.02	1.00
C16-S	CHANNEL	0.955	0	11:56	1.01	0.52	0.78
C17	CONDUIT	2.231	0	11:59	2.58	1.12	1.00
C17-S	CHANNEL	1.374	0	11:56	1.36	0.58	0.81
C18	CONDUIT	2.315	0	11:59	2.67	1.16	1.00
C18-S	CHANNEL	1.316	0	11:57	1.13	0.64	0.88

C19	CONDUIT	2.399	0	11:59	2.77	1.48	1.00
C19-S	CHANNEL	1.274	0	11:57	0.99	0.83	0.92
C1-S	CHANNEL	0.121	0	11:54	0.58	0.05	0.33
C2	CONDUIT	3.270	0	12:58	2.78	0.23	0.71
C20	CONDUIT	2.483	0	11:59	2.87	1.60	1.00
C20-S	CHANNEL	1.229	0	11:58	0.98	0.79	0.91
C21	CONDUIT	2.570	0	11:59	2.98	1.65	0.99
C21-S	CHANNEL	1.182	0	11:59	1.08	0.78	0.85
C22	CONDUIT	2.696	0	11:59	3.23	1.71	0.92
C23	CONDUIT	1.887	0	11:54	4.42	0.22	0.29
C24	CONDUIT	0.000	0	00:00	0.00	0.00	0.13
C25	CONDUIT	1.207	0	11:54	3.02	0.14	0.28
C26	CONDUIT	1.216	0	11:55	2.52	0.20	0.32
C28	CONDUIT	1.889	0	11:54	5.43	0.14	0.25
C29	CONDUIT	0.000	0	00:00	0.00	0.00	0.16
C3	CONDUIT	4.337	0	13:00	0.76	0.42	0.81
C30	CONDUIT	0.000	0	00:00	0.00	0.00	0.16
C31	CONDUIT	3.804	0	12:03	0.76	0.14	0.44
C32	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C33	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C34	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C35	CONDUIT	0.000	0	00:00	0.00	0.00	0.44
C36	CONDUIT	0.934	0	13:33	0.48	0.09	0.37
C37	CONDUIT	1.410	0	12:41	1.47	0.81	0.79
C38	CONDUIT	4.497	0	12:43	0.40	0.23	0.66
C39	CONDUIT	1.825	0	11:55	2.35	0.50	0.73
C4	CONDUIT	4.424	0	13:27	0.38	0.28	0.95
C40	CONDUIT	0.450	0	12:16	1.10	0.39	0.85
C41	CONDUIT	0.142	0	11:57	0.55	0.42	0.76
C42	CONDUIT	0.297	0	12:10	0.61	0.92	0.99
C43	CONDUIT	4.871	0	13:30	1.43	7.06	0.52
C44	CONDUIT	0.246	0	12:04	0.59	0.78	0.92
C45	CONDUIT	1.596	0	12:36	1.90	0.67	0.75
C46	CONDUIT	1.896	0	12:32	1.87	0.85	0.85
C47	CONDUIT	1.896	0	12:35	2.04	0.84	0.77
C48	CONDUIT	2.242	0	12:33	2.32	1.00	0.80
C49	CONDUIT	2.242	0	12:34	2.42	1.00	0.76
C5	CONDUIT	4.401	0	13:30	3.30	1.28	0.71
C50	CONDUIT	2.243	0	12:34	2.71	1.02	0.69
C51	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C52	CONDUIT	2.835	0	12:32	2.23	1.84	1.00
C53	CHANNEL	3.902	0	13:00	0.55	0.70	1.00
C55	CHANNEL	3.366	0	12:32	0.72	0.34	1.00
C6	CONDUIT	1.595	0	12:32	1.77	0.70	0.75
C7	CONDUIT	1.594	0	12:34	1.75	0.72	0.75
C8	CONDUIT	1.594	0	12:35	1.83	0.71	0.74
C9	CONDUIT	1.895	0	12:33	1.79	0.85	0.89
EDORF	ORIFICE	0.080	0	13:32			1.00
C27	WEIR	1.098	0	11:59			0.80
W1	WEIR	3.089	0	12:44			0.68
W2	WEIR	0.470	0	13:30			0.31
W3	WEIR	1.068	0	12:58			1.61
W4	WEIR	0.878	0	12:59			2.74
W5	WEIR	0.000	0	00:00			0.00
WEIR1	WEIR	0.854	0	13:32			0.42
WEIR2	WEIR	0.000	0	00:00			0.00
CBMH10-IC	DUMMY	0.042	0	11:54			

CBMH1-IC	DUMMY	0.009	0	11:56
CBMH2-IC	DUMMY	0.275	0	11:54
CBMH3-IC	DUMMY	0.042	0	11:52
CBMH4-IC	DUMMY	0.413	0	11:55
CBMH5-IC	DUMMY	0.042	0	11:50
CBMH6-IC	DUMMY	0.084	0	11:49
CBMH7-IC	DUMMY	0.084	0	11:48
CBMH8-IC	DUMMY	0.084	0	11:50
CBMH9-IC	DUMMY	0.084	0	11:51
MH1-IC	DUMMY	0.043	0	11:54
MH2-IC	DUMMY	0.185	0	11:56
OL1	DUMMY	0.042	0	11:50
OL11	DUMMY	1.410	0	12:41
OL2	DUMMY	0.042	0	11:46
OL3	DUMMY	0.042	0	11:48
OL4	DUMMY	0.084	0	11:54
OL5	DUMMY	0.374	0	12:11
OL6	DUMMY	0.329	0	11:56
OL7	DUMMY	0.329	0	11:56
OL8	DUMMY	0.362	0	12:03

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Flow Classification Summary
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	Adjusted	---------- Fraction of Time in Flow Class -------							
	/Actual		Up	Down	Sub	Sup	Up	Down	Norm Inlet
Conduit	Length	Dry	Dry	Dry	Crit	Crit	Crit	Crit	Ltd Ctrl
C1	1.00	0.00	0.00	0.00	0.01	0.99	0.00	0.00	0.75 0.00
C1_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.12 0.00
C1_2	1.00	0.03	0.00	0.00	0.97	0.00	0.00	0.00	0.76 0.00
C10	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00 0.00
C11	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03 0.00
C12	1.00	0.00	0.00	0.00	0.10	0.90	0.00	0.00	0.98 0.00
C12-S	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.93 0.00
C13	1.00	0.00	0.00	0.00	0.01	0.99	0.00	0.00	0.49 0.00
C13-S	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.91 0.00
C14	1.00	0.00	0.00	0.00	0.11	0.89	0.00	0.00	0.97 0.00
C14-S	1.00	0.00	0.00	0.00	0.97	0.03	0.00	0.00	0.67 0.00

C15	1.00	0.00	0.00	0.00	0.10	0.90	0.00	0.00	0.44
0.00									
C15-S	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.33
0.00									
C16	1.00	0.00	0.00	0.00	0.26	0.74	0.00	0.00	0.67
0.00									
C16-S	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.93
0.00									
C17	1.00	0.00	0.00	0.00	0.10	0.90	0.00	0.00	0.19
0.00									
C17-S	1.00	0.00	0.00	0.00	0.90	0.10	0.00	0.00	0.97
0.00									
C18	1.00	0.00	0.00	0.00	0.36	0.64	0.00	0.00	0.35
0.00									
C18-S	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.99
0.00									
C19	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.26
0.00									
C19-S	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.85
0.00									
C1-S	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.97
0.00									
C2	1.00	0.00	0.00	0.00	0.28	0.72	0.00	0.00	0.00
0.97									
C20	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03
0.00									
C20-S	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.98
0.00									
C21	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04
0.00									
C21-S	1.00	0.00	0.00	0.00	0.01	0.99	0.00	0.00	0.00
0.00									
C22	1.00	0.00	0.00	0.00	0.97	0.02	0.00	0.00	0.00
0.00									
C23	1.00	0.00	0.00	0.00	0.01	0.99	0.00	0.00	0.00
0.00									
C24	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C25	1.00	0.00	0.00	0.00	0.01	0.99	0.00	0.00	0.97
0.00									
C26	1.00	0.00	0.00	0.00	0.08	0.92	0.00	0.00	0.98
0.00									
C28	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.61
0.00									
C29	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C3	1.00	0.00	0.01	0.00	0.98	0.00	0.00	0.00	0.89
0.00									
C30	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C31	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.80
0.00									
C32	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C33	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C34	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C35	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									

C36	1.00	0.01	0.24	0.00	0.00	0.00	0.75	0.00	0.00
0.00									
C37	1.00	0.00	0.07	0.00	0.93	0.00	0.00	0.00	0.16
0.00									
C38	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.27
0.00									
C39	1.00	0.00	0.00	0.00	0.82	0.18	0.00	0.00	0.84
0.00									
C4	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.72
0.00									
C40	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.00
0.93									
C41	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.50
0.00									
C42	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.99
0.00									
C43	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00
0.00									
C44	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.55
0.00									
C45	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.36
0.00									
C46	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.47
0.00									
C47	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.47
0.00									
C48	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.11
0.00									
C49	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.45
0.00									
C5	1.00	0.00	0.00	0.00	0.88	0.12	0.00	0.00	0.00
0.79									
C50	1.00	0.00	0.00	0.00	0.04	0.95	0.00	0.00	0.00
0.00									
C51	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C52	1.00	0.05	0.00	0.00	0.84	0.11	0.00	0.00	0.00
0.72									
C53	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.79
0.00									
C55	1.00	0.00	0.06	0.00	0.94	0.00	0.00	0.00	0.40
0.00									
C6	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
C7	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
C8	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
C9	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01
0.00									

****
Conduit Surcharge Summary
****

	Hours Full			Hours Above Full	Hours Capacity
	---	---	---	---	---

Conduit	Both Ends	Upstream	Dnstream	Normal Flow	Limited
C1_2	0.01	0.01	2.41	0.01	0.01
C12	0.01	0.01	0.01	0.01	0.01
C13	0.01	0.01	0.09	0.01	0.01
C14	0.09	0.09	0.18	0.01	0.01
C15	0.18	0.18	0.19	0.01	0.02
C16	0.19	0.19	0.21	0.07	0.07
C17	0.21	0.21	0.21	0.15	0.15
C18	0.21	0.21	0.23	0.18	0.17
C19	0.21	0.23	0.21	0.29	0.21
C2	0.01	1.65	0.01	0.01	0.01
C20	0.17	0.21	0.17	0.32	0.17
C21	0.01	0.17	0.01	0.34	0.01
C22	0.01	0.01	0.01	0.34	0.01
C3	0.01	0.01	2.98	0.01	0.01
C39	0.01	0.01	11.04	0.01	0.01
C4	0.01	0.01	3.75	0.01	0.01
C42	0.01	0.01	0.58	0.01	0.01
C43	0.01	0.01	0.01	11.99	0.01
C5	0.01	3.75	0.01	3.03	0.01
C50	0.01	0.01	0.01	0.32	0.01
C52	1.91	3.94	1.91	4.72	1.91
C53	0.67	0.67	4.49	0.01	0.01
C55	0.17	0.17	0.67	0.01	0.01

Analysis begun on: Mon Jun 1 09:31:50 2026
Analysis ended on: Mon Jun 1 09:31:58 2026
Total elapsed time: 00:00:08

```
  EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.015)
  ---------------------------------------------------------------

  WARNING 03: negative offset ignored for Link C10
  WARNING 04: minimum elevation drop used for Conduit C43
  WARNING 03: negative offset ignored for Link C45
  WARNING 03: negative offset ignored for Link C46
  WARNING 03: negative offset ignored for Link C47
  WARNING 03: negative offset ignored for Link C48
  WARNING 03: negative offset ignored for Link C49
  WARNING 03: negative offset ignored for Link C50
  WARNING 03: negative offset ignored for Link C6
  WARNING 03: negative offset ignored for Link C7
  WARNING 03: negative offset ignored for Link C8
  WARNING 03: negative offset ignored for Link C9
  WARNING 02: maximum depth increased for Node J14
  WARNING 02: maximum depth increased for Node J2
  WARNING 02: maximum depth increased for Node J4
  WARNING 02: maximum depth increased for Node J6
  WARNING 02: maximum depth increased for Node J7
  WARNING 02: maximum depth increased for Node J9
  WARNING 02: maximum depth increased for Node NODE2B
  WARNING 02: maximum depth increased for Node NODE3B
  WARNING 02: maximum depth increased for Node NODE3B_1
  WARNING 02: maximum depth increased for Node NODE4_US
  WARNING 02: maximum depth increased for Node NODE5_US
  WARNING 02: maximum depth increased for Node AL_POND

  *************
  Element Count
  *************
  Number of rain gages ...... 19
  Number of subcatchments ... 38
  Number of nodes ........... 80
  Number of links ........... 99
  Number of pollutants ...... 0
  Number of land uses ....... 0


  ****************
  Raingage Summary
  ****************
                                                    Data       Recording
  Name                 Data Source                  Type       Interval
  ------------------------------------------------------------------------
  100yr_SCS_Type_II_106.85mm 100yr_SCS_Type_II_106.85mm     INTENSITY    6 min.
  100yr12_HISTORICAL_SCS_Type_I_93.87mm 100yr12_HISTORICAL_SCS_Type_I_93.87mm
INTENSITY    6 min.
  100yr12hr_SCS_Type_II_106.85mm 100yr12hr_SCS_Type_II_106.85mm INTENSITY    6 min.
  100yr24h_SCS_Type_II_106.85mm 100yr24h_SCS_Type_II_106.85mm  INTENSITY    6 min.
  100yr6hr_HISTORICAL_SCS_Type_II_93.87mm 100yr6hr_HISTORICAL_SCS_Type_II_93.87mm
INTENSITY    6 min.
  10yr_SCS_Type_II_63.92mm 10yr_SCS_Type_II_63.92mm       INTENSITY    6 min.
  20yr_SCS_Type_II_75.51mm 20yr_SCS_Type_II_75.51mm       INTENSITY    6 min.
  25mm_Chicago_4h_IDFCC Chicago_4h                      INTENSITY   10 min.
  25mm4hrCHI           25mm4hrCHI                   INTENSITY    5 min.
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25yr_SCS_Type_II_79.23mm 25yr_SCS_Type_II_79.23mm INTENSITY 6 min.
2yr_SCS_Type_II_37.8mm 2yr_SCS_Type_II_37.8mm INTENSITY 6 min.
50yr_SCS_Type_II_93.2mm SCS_Type_II_93.2mm INTENSITY 6 min.
5yr_SCS_Type_II_52.25mm 5yr_SCS_Type_II_52.25mm INTENSITY 6 min.
5yr12hr_SCS_Type_II_63.63mm 5yr12hr_SCS_Type_II_63.63mm INTENSITY 6 min.
5yr24hr_SCS_Type_II_66.26mm 5yr24hr_SCS_Type_II_66.26mm INTENSITY 6 min.
CC_100yr_24hr_SCS_Type_II_111.87mm CC_100yr_24hr_SCS_Type_II_111.87mm INTENSITY 6 min.
CC_25yr_24hr_SCS_Type_II_92.74mm CC_25yr_24hr_SCS_Type_II_92.74mm INTENSITY 6 min.
CC_5yr_24hr_SCS_Type_II_69.44mm CC_5yr_24hr_SCS_Type_II_69.44mm INTENSITY 6 min.
Timmins_Storm_(0-25) Timmins_Storm_(0-25) INTENSITY 60 min.

****
Subcatchment Summary
****

Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
1_b1*	30.00	400.00	2.00	0.6000	CC_100yr_24hr_SCS_Type_II_111.87mm	NODE5_US
1a_1	20.20	263.66	2.00	1.8300	CC_100yr_24hr_SCS_Type_II_111.87mm	NODE4_US
1a_2A	5.69	99.83	0.00	1.3200	CC_100yr_24hr_SCS_Type_II_111.87mm	J14
1a_2B	12.50	178.57	0.00	1.7900	CC_100yr_24hr_SCS_Type_II_111.87mm	1a_1
201	7.91	121.69	60.00	0.5000	CC_100yr_24hr_SCS_Type_II_111.87mm	SWMF1
202A	24.05	343.57	64.00	0.5000	CC_100yr_24hr_SCS_Type_II_111.87mm	SWMF2
202B	1.67	16.70	27.00	0.5000	CC_100yr_24hr_SCS_Type_II_111.87mm	J1
203	4.86	73.08	55.00	0.5000	CC_100yr_24hr_SCS_Type_II_111.87mm	J14
2E	9.72	121.50	2.00	2.0000	CC_100yr_24hr_SCS_Type_II_111.87mm	NODE2B
2W	39.06	558.06	48.00	0.5000	CC_100yr_24hr_SCS_Type_II_111.87mm	AL_POND
3	41.32	298.12	6.00	6.1300	CC_100yr_24hr_SCS_Type_II_111.87mm	NODE2
4	122.26	467.71	2.00	5.8500	CC_100yr_24hr_SCS_Type_II_111.87mm	NODE2
5	3.15	126.00	51.00	0.5000	CC_100yr_24hr_SCS_Type_II_111.87mm	NODE3B
6	4.79	151.65	48.00	0.6300	CC_100yr_24hr_SCS_Type_II_111.87mm	NODE3B
7	9.71	197.00	20.00	0.6100	CC_100yr_24hr_SCS_Type_II_111.87mm	NODE6_S
8_1	9.62	641.24	2.00	0.5800	CC_100yr_24hr_SCS_Type_II_111.87mm	NODE7
8_3	14.19	473.08	2.00	0.5800	CC_100yr_24hr_SCS_Type_II_111.87mm	J10_s
8_4	3.44	229.14	2.00	0.5800	CC_100yr_24hr_SCS_Type_II_111.87mm	NODE8_S
9*	81.71	517.15	2.00	0.6200	CC_100yr_24hr_SCS_Type_II_111.87mm	OF2

A1	8.15	237.63	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm J6				
A10	3.38	281.31	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm MH2-S				
A12	0.15	42.68	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm DCBMH6-S				
A13	0.24	41.75	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm DCBMH7-S				
A14	0.22	44.02	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm DCBMH8-S				
A15	0.22	48.73	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm DCBMH9-S				
A16	0.25	49.16	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm DCBMH10-S				
A17	0.08	20.00	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm OF1				
A2	0.08	22.00	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm CBMH1-S				
A3	0.10	20.00	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm CBMH2-S				
A4	4.46	371.58	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm CBMH2-S				
A5	0.10	23.24	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm CBMH3-S				
A6	0.17	28.97	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm CBMH4-S				
A7	4.09	340.92	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm CBMH4-S				
A8	0.19	34.94	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm CBMH5-S				
A9	0.26	39.69	36.00	0.5000
CC_100yr_24hr_SCS_Type_II_111.87mm MH2-S				
EXT1	9.15	501.89	41.00	0.8700
CC_100yr_24hr_SCS_Type_II_111.87mm AMH1				
EXT2	1.55	102.26	20.00	0.6600
CC_100yr_24hr_SCS_Type_II_111.87mm MH1-S				
MARYEXT	7.63	187.01	62.00	0.9000
CC_100yr_24hr_SCS_Type_II_111.87mm J2				

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Node Summary
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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
ACBMH1	JUNCTION	258.48	2.00	0.0	
ACBMH2	JUNCTION	258.03	0.60	0.0	
ACBMH3	JUNCTION	257.38	1.46	0.0	
ADCBMH1	JUNCTION	257.52	1.32	0.0	
AMH1	JUNCTION	256.20	2.65	0.0	
CBMH1	JUNCTION	255.50	2.06	0.0	
CBMH1-S	JUNCTION	257.56	0.20	0.0	
CBMH2	JUNCTION	255.04	2.07	0.0	
CBMH2-S	JUNCTION	257.11	0.20	0.0	
CBMH3	JUNCTION	254.82	2.11	0.0	
CBMH3-S	JUNCTION	256.93	0.20	0.0	
CBMH4	JUNCTION	254.29	2.23	0.0	
CBMH4-S	JUNCTION	256.52	0.20	0.0	

CBMH5	JUNCTION	254.14	2.24	0.0
CBMH5-S	JUNCTION	256.38	0.20	0.0
DCBMH10	JUNCTION	253.32	1.66	0.0
DCBMH10-S	JUNCTION	254.98	0.20	0.0
DCBMH6	JUNCTION	253.80	1.97	0.0
DCBMH6-S	JUNCTION	255.77	0.20	0.0
DCBMH7	JUNCTION	253.62	1.83	0.0
DCBMH7-S	JUNCTION	255.45	0.20	0.0
DCBMH8	JUNCTION	253.51	1.78	0.0
DCBMH8-S	JUNCTION	255.29	0.20	0.0
DCBMH9	JUNCTION	253.42	1.72	0.0
DCBMH9-S	JUNCTION	255.14	0.20	0.0
J1	JUNCTION	247.17	1.23	0.0
J10	JUNCTION	248.10	1.78	0.0
J10_s	JUNCTION	249.13	0.50	0.0
J11	JUNCTION	247.41	1.26	0.0
J12	JUNCTION	266.00	1.00	0.0
J14	JUNCTION	248.06	1.12	0.0
J15	JUNCTION	247.37	1.80	0.0
J2	JUNCTION	260.75	1.50	0.0
J3	JUNCTION	250.38	3.05	0.0
J4	JUNCTION	259.20	1.50	0.0
J5	JUNCTION	248.24	1.65	0.0
J6	JUNCTION	257.75	1.50	0.0
J7	JUNCTION	256.75	1.50	0.0
J9	JUNCTION	259.20	1.50	0.0
MH1	JUNCTION	255.79	2.08	0.0
MH10	JUNCTION	247.07	2.23	0.0
MH12	JUNCTION	247.40	2.24	0.0
MH13	JUNCTION	247.73	2.45	0.0
MH14	JUNCTION	248.06	2.38	0.0
MH15	JUNCTION	248.39	2.61	0.0
MH16	JUNCTION	248.72	2.62	0.0
MH17	JUNCTION	249.05	3.08	0.0
MH1-S	JUNCTION	257.87	0.20	0.0
MH2	JUNCTION	253.93	2.15	0.0
MH2-S	JUNCTION	256.08	0.20	0.0
ND5_DS	JUNCTION	244.14	1.50	0.0
NODE1	JUNCTION	263.00	1.00	0.0
NODE2	JUNCTION	255.80	1.40	0.0
NODE2B	JUNCTION	252.45	1.69	0.0
NODE3	JUNCTION	252.26	1.17	0.0
NODE3B	JUNCTION	252.26	1.12	0.0
NODE3B_1	JUNCTION	248.86	1.12	0.0
NODE4_DS	JUNCTION	246.23	1.50	0.0
NODE4_US	JUNCTION	247.27	1.50	0.0
NODE4B_1	JUNCTION	245.00	1.50	0.0
NODE5_US	JUNCTION	244.30	2.20	0.0
NODE6	JUNCTION	250.32	2.38	0.0
NODE6_1	JUNCTION	249.93	2.53	0.0
NODE6_S	JUNCTION	252.70	0.50	0.0
NODE7	JUNCTION	250.91	0.50	0.0
NODE7_2	JUNCTION	249.49	2.84	0.0
NODE7_s	JUNCTION	249.18	3.18	0.0
NODE8	JUNCTION	246.74	1.99	0.0
NODE8_S	JUNCTION	247.62	0.80	0.0
PNDOUT	JUNCTION	253.00	3.00	0.0

J8	OUTFALL	253.27	0.00	0.0
MAD	OUTFALL	245.80	0.80	0.0
OF1	OUTFALL	253.27	1.05	0.0
OF2	OUTFALL	0.00	0.00	0.0
OF3	OUTFALL	259.00	1.50	0.0
OF4	OUTFALL	244.14	1.00	0.0
AL_POND	STORAGE	253.00	3.10	0.0
SU1	STORAGE	0.00	5.00	0.0
SWMF1	STORAGE	248.20	2.30	0.0
SWMF2	STORAGE	247.55	2.60	0.0

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Link Summary
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Name	From Node	To Node	Type	Length	% Slope	Roughness
C1	MH1	CBMH1	CONDUIT	47.7	0.6080	0.0100
C1_1	NODE3B	NODE3B_1	CONDUIT	600.0	0.5670	0.0400
C1_2	NODE3B_1	J5	CONDUIT	56.0	1.1108	0.0400
C10	MH15	MH14	CONDUIT	100.0	0.3300	0.0130
C11	NODE8	MAD	CONDUIT	320.3	0.2935	0.0400
C12	CBMH1	CBMH2	CONDUIT	77.3	0.5951	0.0100
C12-S	CBMH1-S	CBMH2-S	CONDUIT	76.4	0.5891	0.0140
C13	CBMH2	CBMH3	CONDUIT	36.3	0.6061	0.0100
C13-S	CBMH2-S	CBMH3-S	CONDUIT	38.4	0.4687	0.0140
C14	CBMH3	CBMH4	CONDUIT	87.3	0.6071	0.0100
C14-S	CBMH3-S	CBMH4-S	CONDUIT	85.7	0.4782	0.0140
C15	CBMH4	CBMH5	CONDUIT	48.9	0.3067	0.0100
C15-S	CBMH4-S	CBMH5-S	CONDUIT	55.9	0.2503	0.0140
C16	CBMH5	MH2	CONDUIT	67.5	0.3111	0.0100
C16-S	CBMH5-S	MH2-S	CONDUIT	67.4	0.4454	0.0140
C17	MH2	DCBMH6	CONDUIT	41.3	0.3148	0.0100
C17-S	MH2-S	DCBMH6-S	CONDUIT	41.7	0.7437	0.0140
C18	DCBMH6	DCBMH7	CONDUIT	57.2	0.3148	0.0100
C18-S	DCBMH6-S	DCBMH7-S	CONDUIT	56.5	0.5663	0.0140
C19	DCBMH7	DCBMH8	CONDUIT	52.5	0.2095	0.0100

C19-S		DCBMH7-S	DCBMH8-S	CONDUIT	51.4	
0.3112	0.0140					
C1-S		MH1-S	CBMH1-S	CONDUIT	46.6	
0.6649	0.0140					
C2		NODE4_US	NODE4_DS	CONDUIT	26.5	
3.9247	0.0130					
C20		DCBMH8	DCBMH9	CONDUIT	46.9	
0.1919	0.0100					
C20-S		DCBMH8-S	DCBMH9-S	CONDUIT	46.6	
0.3221	0.0140					
C21		DCBMH9	DCBMH10	CONDUIT	51.8	
0.1931	0.0100					
C21-S		DCBMH9-S	DCBMH10-S	CONDUIT	53.4	
0.2999	0.0140					
C22		DCBMH10	OF1	CONDUIT	25.5	
0.1961	0.0100					
C23		J2	J4	CONDUIT	185.0	
0.8379	0.0100					
C24		J9	J6	CONDUIT	162.3	
0.8932	0.0100					
C25		J6	J7	CONDUIT	119.2	
0.8389	0.0100					
C26		J7	MH1	CONDUIT	213.3	
0.4501	0.0100					
C28		J4	OF3	CONDUIT	9.1	
2.2056	0.0100					
C29		NODE1	NODE2	CONDUIT	854.0	
0.8431	0.0450					
C3		NODE4_DS	NODE4B_1	CONDUIT	290.4	
0.4235	0.0400					
C30		J12	NODE2	CONDUIT	217.5	
4.6950	0.0450					
C31		NODE2	NODE2B	CONDUIT	705.5	
0.4749	0.0400					
C32		ACBMH1	ACBMH2	CONDUIT	89.9	
0.5004	0.0100					
C33		ACBMH2	ADCBMH1	CONDUIT	89.3	
0.5708	0.0100					
C34		ADCBMH1	ACBMH3	CONDUIT	28.7	
0.4878	0.0100					
C35		ACBMH3	AMH1	CONDUIT	111.0	
1.0631	0.0100					
C36		PNDOUT	NODE2B	CONDUIT	30.0	-
0.4667	0.0500					
C37		J3	NODE6	CONDUIT	30.3	
0.1983	0.0130					
C38		NODE2B	NODE3	CONDUIT	78.0	
0.2436	0.0400					
C39		AMH1	AL_POND	CONDUIT	608.2	
0.5261	0.0100					
C4		NODE4B_1	NODE5_US	CONDUIT	342.6	
0.2043	0.0400					
C40		NODE8_S	NODE8	CONDUIT	34.7	
2.5368	0.0240					
C41		NODE6_S	NODE7	CONDUIT	327.0	
0.5474	0.0400					
C42		J10_s	NODE8_S	CONDUIT	310.2	
0.4867	0.0400					
C43		ND5_DS	OF4	CONDUIT	16.1	
0.0019	0.0400					

C44		NODE7	J10_s	CONDUIT	376.4
0.4729	0.0400				
C45		NODE7_s	MH17	CONDUIT	34.7
0.3746	0.0130				
C46		MH17	MH16	CONDUIT	99.8
0.3307	0.0130				
C47		MH14	MH13	CONDUIT	98.7
0.3343	0.0130				
C48		MH13	MH12	CONDUIT	99.7
0.3310	0.0130				
C49		MH12	MH10	CONDUIT	99.7
0.3310	0.0130				
C5		NODE5_US	ND5_DS	CONDUIT	20.0
0.8000	0.0240				
C50		MH10	NODE8	CONDUIT	103.5
0.3188	0.0130				
C51		J11	J15	CONDUIT	12.3
0.3252	0.0240				
C52		J5	J10	CONDUIT	21.4
0.6167	0.0240				
C53		J14	NODE4_US	CONDUIT	225.5
0.3503	0.0400				
C54		J1	NODE5_US	CONDUIT	647.3
0.4434	0.0400				
C55		J10	J14	CONDUIT	4.0
1.1001	0.0400				
C6		NODE6	NODE6_1	CONDUIT	113.8
0.3427	0.0130				
C7		NODE6_1	NODE7_2	CONDUIT	135.1
0.3257	0.0130				
C8		NODE7_2	NODE7_s	CONDUIT	92.9
0.3337	0.0130				
C9		MH16	MH15	CONDUIT	100.3
0.3290	0.0130				
EDORF		AL_POND	PNDOUT	ORIFICE	
C27		DCBMH10-S	J8	WEIR	
W1		NODE3	NODE3B	WEIR	
W2		NODE5_US	ND5_DS	WEIR	
W3		NODE4_US	NODE4_DS	WEIR	
W4		J5	J10	WEIR	
W5		J11	J15	WEIR	
WEIR1		AL_POND	PNDOUT	WEIR	
WEIR2		AL_POND	PNDOUT	WEIR	
CBMH10-IC		DCBMH10-S	DCBMH10	OUTLET	
CBMH1-IC		CBMH1-S	CBMH1	OUTLET	
CBMH2-IC		CBMH2-S	CBMH2	OUTLET	
CBMH3-IC		CBMH3-S	CBMH3	OUTLET	
CBMH4-IC		CBMH4-S	CBMH4	OUTLET	
CBMH5-IC		CBMH5-S	CBMH5	OUTLET	
CBMH6-IC		DCBMH6-S	DCBMH6	OUTLET	
CBMH7-IC		DCBMH7-S	DCBMH7	OUTLET	
CBMH8-IC		DCBMH8-S	DCBMH8	OUTLET	
CBMH9-IC		DCBMH9-S	DCBMH9	OUTLET	
MH1-IC		MH1-S	MH1	OUTLET	
MH2-IC		MH2-S	MH2	OUTLET	
OL1		CBMH2-S	CBMH2	OUTLET	
OL11		NODE3	J3	OUTLET	
OL2		CBMH4-S	CBMH4	OUTLET	
OL3		MH2-S	MH2	OUTLET	

OL4	DCBMH10-S	DCBMH10	OUTLET
OL5	J10_s	MH13	OUTLET
OL6	NODE6_S	NODE6	OUTLET
OL7	NODE6_S	NODE6	OUTLET
OL8	NODE7	MH17	OUTLET
SWMF_Outlet	SWMF1	J14	OUTLET
SWMF2_Outlet	SWMF2	J1	OUTLET

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Cross Section Summary
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	1.05	0.87	0.26	1.05	1	2.77
C1_1	EdwardDitch	1.12	8.08	0.32	25.10	1	7.05
C1_2	EdwardDitch	1.12	8.08	0.32	25.10	1	9.87
C10	CIRCULAR	1.20	1.13	0.30	1.20	1	2.24
C11	TRAPEZOIDAL	0.80	3.52	0.50	6.80	1	3.00
C12	CIRCULAR	1.05	0.87	0.26	1.05	1	2.74
C12-S	MarySt	0.20	1.57	0.12	18.50	1	2.11
C13	CIRCULAR	1.05	0.87	0.26	1.05	1	2.76
C13-S	MarySt	0.20	1.57	0.12	18.50	1	1.88
C14	CIRCULAR	1.05	0.87	0.26	1.05	1	2.77
C14-S	MarySt	0.20	1.57	0.12	18.50	1	1.90
C15	CIRCULAR	1.05	0.87	0.26	1.05	1	1.97
C15-S	MarySt	0.20	1.57	0.12	18.50	1	1.38
C16	CIRCULAR	1.05	0.87	0.26	1.05	1	1.98
C16-S	MarySt	0.20	1.57	0.12	18.50	1	1.84
C17	CIRCULAR	1.05	0.87	0.26	1.05	1	1.99
C17-S	MarySt	0.20	1.57	0.12	18.50	1	2.37
C18	CIRCULAR	1.05	0.87	0.26	1.05	1	1.99
C18-S	MarySt	0.20	1.57	0.12	18.50	1	2.07
C19	CIRCULAR	1.05	0.87	0.26	1.05	1	1.63
C19-S	MarySt	0.20	1.57	0.12	18.50	1	1.54

C1-S	MarySt	0.20	1.57	0.12	18.50	1
2.24						
C2	CIRCULAR	1.50	1.77	0.38	1.50	1
14.01						
C20	CIRCULAR	1.05	0.87	0.26	1.05	1
1.56						
C20-S	MarySt	0.20	1.57	0.12	18.50	1
1.56						
C21	CIRCULAR	1.05	0.87	0.26	1.05	1
1.56						
C21-S	MarySt	0.20	1.57	0.12	18.50	1
1.51						
C22	CIRCULAR	1.05	0.87	0.26	1.05	1
1.57						
C23	CIRCULAR	1.50	1.77	0.38	1.50	1
8.41						
C24	CIRCULAR	1.50	1.77	0.38	1.50	1
8.69						
C25	CIRCULAR	1.50	1.77	0.38	1.50	1
8.42						
C26	CIRCULAR	1.50	1.77	0.38	1.50	1
6.17						
C28	CIRCULAR	1.50	1.77	0.38	1.50	1
13.65						
C29	TRAPEZOIDAL	1.00	5.40	0.62	8.40	1
8.00						
C3	TRAPEZOIDAL	1.00	8.00	0.71	11.00	1
10.33						
C30	TRAPEZOIDAL	1.00	5.40	0.62	8.40	1
18.89						
C31	TRAPEZOIDAL	1.00	18.00	0.84	21.00	1
27.70						
C32	CIRCULAR	0.45	0.16	0.11	0.45	1
0.26						
C33	CIRCULAR	0.60	0.28	0.15	0.60	1
0.60						
C34	CIRCULAR	0.68	0.36	0.17	0.68	1
0.76						
C35	CIRCULAR	0.68	0.36	0.17	0.68	1
1.13						
C36	TRAPEZOIDAL	1.00	11.50	0.53	21.50	1
10.32						
C37	CIRCULAR	1.20	1.13	0.30	1.20	1
1.74						
C38	TRAPEZOIDAL	1.00	18.00	0.84	21.00	1
19.84						
C39	CIRCULAR	1.20	1.13	0.30	1.20	1
3.68						
C4	TRAPEZOIDAL	1.50	14.25	0.98	14.00	1
15.93						
C40	CIRCULAR	0.80	0.50	0.20	0.80	1
1.14						
C41	TRIANGULAR	0.50	0.50	0.22	2.00	1
0.34						
C42	TRIANGULAR	0.50	0.50	0.22	2.00	1
0.32						
C43	TRAPEZOIDAL	1.00	8.00	0.71	11.00	1
0.69						
C44	TRIANGULAR	0.50	0.50	0.22	2.00	1
0.32						

C45	CIRCULAR	1.20	1.13	0.30	1.20	1
2.39						
C46	CIRCULAR	1.20	1.13	0.30	1.20	1
2.24						
C47	CIRCULAR	1.20	1.13	0.30	1.20	1
2.25						
C48	CIRCULAR	1.20	1.13	0.30	1.20	1
2.24						
C49	CIRCULAR	1.20	1.13	0.30	1.20	1
2.24						
C5	CIRCULAR	1.50	1.77	0.38	1.50	1
3.43						
C50	CIRCULAR	1.20	1.13	0.30	1.20	1
2.20						
C51	CIRCULAR	0.90	0.64	0.23	0.90	2
0.56						
C52	CIRCULAR	0.90	0.64	0.23	0.90	2
0.77						
C53	EdwardDitch	1.12	8.08	0.32	25.10	1
5.54						
C54	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1
5.18						
C55	EdwardDitch	1.12	8.08	0.32	25.10	1
9.82						
C6	CIRCULAR	1.20	1.13	0.30	1.20	1
2.28						
C7	CIRCULAR	1.20	1.13	0.30	1.20	1
2.23						
C8	CIRCULAR	1.20	1.13	0.30	1.20	1
2.25						
C9	CIRCULAR	1.20	1.13	0.30	1.20	1
2.24						

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Transect Summary
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Transect EdwardDitch
Area:

0.0099	0.0200	0.0305	0.0413	0.0524
0.0638	0.0755	0.0875	0.0999	0.1125
0.1255	0.1388	0.1523	0.1662	0.1804
0.1949	0.2098	0.2249	0.2403	0.2561
0.2722	0.2885	0.3052	0.3222	0.3395
0.3571	0.3751	0.3933	0.4118	0.4307
0.4499	0.4694	0.4891	0.5092	0.5297
0.5504	0.5714	0.5927	0.6144	0.6364
0.6586	0.6812	0.7041	0.7273	0.7514
0.7825	0.8225	0.8719	0.9320	1.0000

Hrad:

0.0695	0.1366	0.2015	0.2645	0.3257
0.3853	0.4434	0.5001	0.5555	0.6098
0.6630	0.7152	0.7665	0.8169	0.8666
0.9154	0.9636	1.0111	1.0580	1.1043
1.1501	1.1953	1.2401	1.2845	1.3284
1.3718	1.4150	1.4577	1.5001	1.5422
1.5839	1.6254	1.6666	1.7075	1.7482

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            1.7886     1.8288     1.8687     1.9085     1.9480
            1.9874     2.0266     2.0655     2.1044     1.9099
            1.5088     1.2774     1.1051     0.9879     1.0000
Width:
            0.1439     0.1484     0.1528     0.1573     0.1618
            0.1662     0.1707     0.1751     0.1796     0.1841
            0.1885     0.1930     0.1975     0.2019     0.2064
            0.2108     0.2153     0.2198     0.2242     0.2287
            0.2331     0.2376     0.2421     0.2465     0.2510
            0.2555     0.2599     0.2644     0.2688     0.2733
            0.2778     0.2822     0.2867     0.2912     0.2956
            0.3001     0.3045     0.3090     0.3135     0.3179
            0.3224     0.3269     0.3313     0.3358     0.3841
            0.5114     0.6388     0.7863     0.9433     1.0000

Transect EdwardDitch-Deeper
Area:
            0.0104     0.0211     0.0321     0.0435     0.0551
            0.0671     0.0794     0.0920     0.1049     0.1181
            0.1317     0.1455     0.1597     0.1742     0.1890
            0.2041     0.2196     0.2353     0.2514     0.2678
            0.2845     0.3015     0.3189     0.3365     0.3545
            0.3728     0.3914     0.4103     0.4295     0.4491
            0.4689     0.4891     0.5096     0.5304     0.5515
            0.5730     0.5947     0.6168     0.6392     0.6619
            0.6849     0.7083     0.7319     0.7559     0.7802
            0.8048     0.8330     0.8741     0.9299     1.0000
Hrad:
            0.0744     0.1460     0.2151     0.2818     0.3464
            0.4092     0.4702     0.5295     0.5874     0.6440
            0.6993     0.7535     0.8065     0.8586     0.9098
            0.9601     1.0096     1.0584     1.1065     1.1539
            1.2007     1.2469     1.2926     1.3377     1.3824
            1.4267     1.4704     1.5138     1.5568     1.5995
            1.6417     1.6837     1.7253     1.7667     1.8077
            1.8485     1.8890     1.9293     1.9694     2.0092
            2.0488     2.0882     2.1274     2.1664     2.2052
            2.2439     1.7162     1.3177     1.0606     1.0000
Width:
            0.1437     0.1480     0.1524     0.1567     0.1610
            0.1653     0.1696     0.1739     0.1782     0.1825
            0.1868     0.1911     0.1954     0.1997     0.2040
            0.2083     0.2126     0.2169     0.2212     0.2255
            0.2298     0.2341     0.2384     0.2427     0.2470
            0.2513     0.2556     0.2599     0.2642     0.2685
            0.2728     0.2771     0.2814     0.2857     0.2900
            0.2943     0.2986     0.3029     0.3073     0.3116
            0.3159     0.3202     0.3245     0.3288     0.3331
            0.3374     0.4682     0.6524     0.8732     1.0000

Transect EdwardDitch-Wider
Area:
            0.0105     0.0213     0.0324     0.0438     0.0555
            0.0674     0.0797     0.0922     0.1051     0.1182
            0.1316     0.1453     0.1593     0.1736     0.1882
            0.2030     0.2182     0.2337     0.2494     0.2654
            0.2817     0.2983     0.3152     0.3324     0.3499
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            0.3677     0.3858     0.4041     0.4227     0.4417
            0.4609     0.4804     0.5002     0.5203     0.5407
            0.5614     0.5823     0.6036     0.6251     0.6470
            0.6691     0.6915     0.7142     0.7372     0.7610
            0.7914     0.8301     0.8776     0.9351     1.0000
Hrad:
            0.0664     0.1308     0.1933     0.2542     0.3135
            0.3713     0.4279     0.4832     0.5373     0.5904
            0.6425     0.6937     0.7440     0.7935     0.8422
            0.8903     0.9376     0.9843     1.0305     1.0760
            1.1211     1.1656     1.2097     1.2533     1.2965
            1.3393     1.3817     1.4237     1.4654     1.5067
            1.5478     1.5885     1.6290     1.6691     1.7090
            1.7487     1.7881     1.8273     1.8663     1.9050
            1.9436     1.9820     2.0201     2.0581     1.8788
            1.4992     1.2757     1.1066     0.9900     1.0000
Width:
            0.1606     0.1650     0.1694     0.1738     0.1781
            0.1825     0.1869     0.1913     0.1956     0.2000
            0.2044     0.2088     0.2131     0.2175     0.2219
            0.2263     0.2306     0.2350     0.2394     0.2438
            0.2481     0.2525     0.2569     0.2613     0.2656
            0.2700     0.2744     0.2788     0.2831     0.2875
            0.2919     0.2963     0.3006     0.3050     0.3094
            0.3138     0.3181     0.3225     0.3269     0.3313
            0.3356     0.3400     0.3444     0.3488     0.3961
            0.5210     0.6458     0.7904     0.9444     1.0000

Transect MarySt
Area:
            0.0005     0.0019     0.0043     0.0077     0.0121
            0.0174     0.0236     0.0308     0.0390     0.0482
            0.0583     0.0694     0.0815     0.0945     0.1085
            0.1234     0.1393     0.1562     0.1740     0.1928
            0.2126     0.2333     0.2549     0.2766     0.2982
            0.3199     0.3416     0.3633     0.3850     0.4067
            0.4284     0.4501     0.4718     0.4935     0.5152
            0.5368     0.5585     0.5805     0.6042     0.6300
            0.6578     0.6877     0.7196     0.7535     0.7895
            0.8275     0.8676     0.9097     0.9538     1.0000
Hrad:
            0.0160     0.0320     0.0480     0.0640     0.0800
            0.0960     0.1120     0.1280     0.1440     0.1600
            0.1760     0.1920     0.2080     0.2240     0.2400
            0.2560     0.2720     0.2880     0.3040     0.3200
            0.3360     0.3520     0.3758     0.4074     0.4390
            0.4705     0.5019     0.5333     0.5646     0.5959
            0.6271     0.6582     0.6893     0.7204     0.7513
            0.7823     0.8131     0.8438     0.8712     0.8949
            0.9152     0.9326     0.9472     0.9595     0.9698
            0.9783     0.9854     0.9912     0.9960     1.0000
Width:
            0.0204     0.0408     0.0613     0.0817     0.1021
            0.1225     0.1429     0.1634     0.1838     0.2042
            0.2246     0.2450     0.2655     0.2859     0.3063
            0.3267     0.3471     0.3676     0.3880     0.4084
            0.4288     0.4492     0.4595     0.4595     0.4595
```

0.4595 0.4595 0.4595 0.4595 0.4595
0.4595 0.4595 0.4595 0.4595 0.4595
0.4595 0.4595 0.4811 0.5243 0.5676
0.6108 0.6541 0.6973 0.7405 0.7838
0.8270 0.8703 0.9135 0.9568 1.0000

Transect ND3TOND4
Area:
0.0045 0.0098 0.0160 0.0229 0.0307
0.0393 0.0487 0.0589 0.0699 0.0817
0.0944 0.1078 0.1221 0.1372 0.1531
0.1698 0.1873 0.2057 0.2254 0.2478
0.2709 0.2941 0.3175 0.3410 0.3647
0.3885 0.4124 0.4365 0.4607 0.4850
0.5094 0.5340 0.5588 0.5836 0.6087
0.6338 0.6591 0.6845 0.7100 0.7357
0.7615 0.7875 0.8136 0.8398 0.8662
0.8927 0.9193 0.9461 0.9730 1.0000
Hrad:
0.0300 0.0558 0.0790 0.1004 0.1207
0.1401 0.1589 0.1772 0.1951 0.2127
0.2301 0.2473 0.2642 0.2811 0.2978
0.3144 0.3310 0.3474 0.3394 0.3420
0.3692 0.3960 0.4222 0.4480 0.4734
0.4983 0.5228 0.5470 0.5707 0.5941
0.6171 0.6398 0.6621 0.6842 0.7059
0.7273 0.7484 0.7692 0.7898 0.8101
0.8301 0.8499 0.8695 0.8888 0.9078
0.9267 0.9453 0.9638 0.9820 1.0000
Width:
0.1815 0.2115 0.2415 0.2715 0.3015
0.3315 0.3615 0.3915 0.4215 0.4515
0.4815 0.5115 0.5415 0.5715 0.6015
0.6315 0.6615 0.6915 0.7788 0.8500
0.8550 0.8600 0.8650 0.8700 0.8750
0.8800 0.8850 0.8900 0.8950 0.9000
0.9050 0.9100 0.9150 0.9200 0.9250
0.9300 0.9350 0.9400 0.9450 0.9500
0.9550 0.9600 0.9650 0.9700 0.9750
0.9800 0.9850 0.9900 0.9950 1.0000

Transect ND4.5TO5
Area:
0.0031 0.0066 0.0107 0.0152 0.0203
0.0259 0.0319 0.0385 0.0456 0.0532
0.0613 0.0699 0.0790 0.0887 0.0994
0.1108 0.1231 0.1362 0.1502 0.1650
0.1807 0.1972 0.2145 0.2327 0.2517
0.2716 0.2923 0.3138 0.3362 0.3594
0.3835 0.4083 0.4341 0.4607 0.4881
0.5163 0.5454 0.5753 0.6061 0.6377
0.6702 0.7035 0.7376 0.7726 0.8084
0.8450 0.8825 0.9208 0.9600 1.0000
Hrad:
0.0379 0.0708 0.1005 0.1280 0.1540
0.1789 0.2029 0.2262 0.2490 0.2715
0.2935 0.3153 0.3364 0.3475 0.3599

0.3735 0.3879 0.4030 0.4187 0.4349
0.4516 0.4686 0.4859 0.5035 0.5213
0.5393 0.5575 0.5759 0.5944 0.6130
0.6317 0.6506 0.6695 0.6885 0.7076
0.7268 0.7460 0.7653 0.7846 0.8040
0.8235 0.8429 0.8625 0.8820 0.9016
0.9212 0.9409 0.9606 0.9803 1.0000

Width:

0.0817 0.0942 0.1066 0.1191 0.1315
0.1440 0.1565 0.1689 0.1814 0.1938
0.2063 0.2188 0.2315 0.2523 0.2731
0.2938 0.3146 0.3354 0.3562 0.3769
0.3977 0.4185 0.4392 0.4600 0.4808
0.5015 0.5223 0.5431 0.5638 0.5846
0.6054 0.6262 0.6469 0.6677 0.6885
0.7092 0.7300 0.7508 0.7715 0.7923
0.8131 0.8338 0.8546 0.8754 0.8962
0.9169 0.9377 0.9585 0.9792 1.0000

Transect ND4TOND4_5

Area:

0.0045 0.0098 0.0160 0.0229 0.0307
0.0393 0.0487 0.0589 0.0699 0.0817
0.0944 0.1078 0.1221 0.1372 0.1531
0.1698 0.1873 0.2057 0.2254 0.2478
0.2709 0.2941 0.3175 0.3410 0.3647
0.3885 0.4124 0.4365 0.4607 0.4850
0.5094 0.5340 0.5588 0.5836 0.6087
0.6338 0.6591 0.6845 0.7100 0.7357
0.7615 0.7875 0.8136 0.8398 0.8662
0.8927 0.9193 0.9461 0.9730 1.0000

Hrad:

0.0300 0.0558 0.0790 0.1004 0.1207
0.1401 0.1589 0.1772 0.1951 0.2127
0.2301 0.2473 0.2642 0.2811 0.2978
0.3144 0.3310 0.3474 0.3394 0.3420
0.3692 0.3960 0.4222 0.4480 0.4734
0.4983 0.5228 0.5470 0.5707 0.5941
0.6171 0.6398 0.6621 0.6842 0.7059
0.7273 0.7484 0.7692 0.7898 0.8101
0.8301 0.8499 0.8695 0.8888 0.9078
0.9267 0.9453 0.9638 0.9820 1.0000

Width:

0.1815 0.2115 0.2415 0.2715 0.3015
0.3315 0.3615 0.3915 0.4215 0.4515
0.4815 0.5115 0.5415 0.5715 0.6015
0.6315 0.6615 0.6915 0.7788 0.8500
0.8550 0.8600 0.8650 0.8700 0.8750
0.8800 0.8850 0.8900 0.8950 0.9000
0.9050 0.9100 0.9150 0.9200 0.9250
0.9300 0.9350 0.9400 0.9450 0.9500
0.9550 0.9600 0.9650 0.9700 0.9750
0.9800 0.9850 0.9900 0.9950 1.0000

****

NOTE: The summary statistics displayed in this report are

based on results found at every computational time step,
not just on results from each reporting time step.
****

****
Analysis Options
****
Flow Units ..... CMS
Process Models:
  Rainfall/Runoff ..... YES
  RDII ..... NO
  Snowmelt ..... NO
  Groundwater ..... NO
  Flow Routing ..... YES
  Ponding Allowed ..... NO
  Water Quality ..... NO
Infiltration Method ..... CURVE_NUMBER
Flow Routing Method ..... DYNWAVE
Surcharge Method ..... EXTRAN
Starting Date 10/11/2022 00:00:00
Ending Date 10/12/2022 00:00:00
Antecedent Dry Days 0.0
Report Time Step 00:01:00
Wet Time Step 00:05:00
Dry Time Step 00:05:00
Routing Time Step ..... 1.00 sec
Variable Time Step ..... YES
Maximum Trials 8
Number of Threads 4
Head Tolerance ..... 0.001500 m

**********	Volume	Depth
Runoff Quantity Continuity	hectare-m	mm
**********	---	---
Total Precipitation	54.404	111.870
Evaporation Loss	0.000	0.000
Infiltration Loss	24.547	50.475
Surface Runoff	23.790	48.918
Final Storage	6.107	12.558
Continuity Error (%)	-0.073	

**********	Volume	Volume
Flow Routing Continuity	hectare-m	10^6 ltr
**********	---	---
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	23.777	237.775
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	21.029	210.292
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
Initial Stored Volume	0.000	0.001
Final Stored Volume	2.778	27.777

```
  Continuity Error (%) .....        -0.123


  *************************
  Highest Continuity Errors
  *************************
  Node J1 (1.47%)
  Node NODE5_US (1.44%)
  Node NODE2B (1.27%)


  ***************************
  Time-Step Critical Elements
  ***************************
  Link C55 (1.75%)


  *******************************
  Highest Flow Instability Indexes
  *******************************
  Link C2 (6)
  Link C52 (5)
  Link C55 (5)
  Link OL11 (4)
  Link C5 (3)


  *************************
  Routing Time Step Summary
  *************************
  Minimum Time Step           :     0.50 sec
  Average Time Step           :     1.00 sec
  Maximum Time Step           :     1.00 sec
  Percent in Steady State     :    -0.00
  Average Iterations per Step :     2.01
  Percent Not Converging      :     0.18
  Time Step Frequencies       :
      1.000 -  0.871 sec      :    99.97 %
      0.871 -  0.758 sec      :     0.01 %
      0.758 -  0.660 sec      :     0.01 %
      0.660 -  0.574 sec      :     0.00 %
      0.574 -  0.500 sec      :     0.01 %


  ***************************
  Subcatchment Runoff Summary
  ***************************

  ---------------------------------------------------------------------------------------
-----------------------------------------
                             Total      Total      Total      Total     Imperv
Perv      Total       Total     Peak  Runoff
                           Precip      Runon       Evap      Infil     Runoff
Runoff     Runoff      Runoff   Runoff   Coeff
  Subcatchment                mm         mm         mm         mm         mm
mm         mm    10^6 ltr      CMS
  ---------------------------------------------------------------------------------------
-----------------------------------------
```

1_b1*			111.87	0.00	0.00	59.10	2.21	
42.08	44.29	13.29	3.02	0.396				
1a_1			111.87	24.35	0.00	59.10	2.69	
60.23	62.93	12.71	0.63	0.462				
1a_2A			111.87	0.00	0.00	60.31	0.00	
39.59	39.59	2.25	0.16	0.354				
1a_2B			111.87	0.00	0.00	60.31	0.00	
39.40	39.40	4.92	0.33	0.352				
201			111.87	0.00	0.00	31.44	65.28	
23.89	74.81	5.92	1.19	0.669				
202A			111.87	0.00	0.00	28.30	69.53	
25.87	78.01	18.76	3.66	0.697				
202B			111.87	0.00	0.00	57.38	29.48	
21.41	44.40	0.74	0.12	0.397				
203			111.87	0.00	0.00	35.37	59.88	
22.62	70.52	3.43	0.69	0.630				
2E			111.87	0.00	0.00	59.10	2.21	
38.39	40.60	3.95	0.29	0.363				
2W			111.87	0.00	0.00	27.99	52.31	
23.77	76.08	29.72	6.14	0.680				
3			111.87	0.00	0.00	53.10	6.62	
40.47	47.10	19.46	1.91	0.421				
4			111.87	0.00	0.00	55.36	2.21	
38.60	40.81	49.90	2.61	0.365				
5			111.87	0.00	0.00	25.70	56.00	
25.41	81.41	2.56	0.69	0.728				
6			111.87	0.00	0.00	27.99	52.68	
26.10	78.78	3.78	0.97	0.704				
7			111.87	0.00	0.00	59.80	22.04	
22.69	44.73	4.34	0.82	0.400				
8_1			111.87	0.00	0.00	59.10	2.21	
41.13	43.33	4.17	0.61	0.387				
8_3			111.87	0.00	0.00	59.10	2.21	
39.60	41.80	5.93	0.55	0.374				
8_4			111.87	0.00	0.00	59.10	2.21	
41.13	43.33	1.49	0.22	0.387				
9*			111.87	0.00	0.00	59.10	2.21	
30.19	32.39	26.47	1.07	0.290				
A1			111.87	0.00	0.00	40.16	39.53	
26.00	65.53	5.34	1.22	0.586				
A10			111.87	0.00	0.00	40.16	39.70	
27.12	66.83	2.26	0.64	0.597				
A12			111.87	0.00	0.00	40.16	39.74	
27.77	67.51	0.10	0.03	0.603				
A13			111.87	0.00	0.00	40.16	39.74	
27.56	67.30	0.16	0.05	0.602				
A14			111.87	0.00	0.00	40.16	39.74	
27.62	67.36	0.15	0.05	0.602				
A15			111.87	0.00	0.00	40.16	39.74	
27.67	67.41	0.15	0.05	0.603				
A16			111.87	0.00	0.00	40.16	39.74	
27.62	67.36	0.17	0.05	0.602				
A17			111.87	0.00	0.00	40.16	39.74	
27.72	67.46	0.05	0.02	0.603				
A2			111.87	0.00	0.00	40.16	39.74	
27.75	67.49	0.05	0.02	0.603				
A3			111.87	0.00	0.00	40.16	39.74	
27.62	67.36	0.07	0.02	0.602				
A4			111.87	0.00	0.00	40.16	39.70	
27.12	66.83	2.98	0.84	0.597				

A5		111.87	0.00	0.00	40.16	39.74	
27.67	67.41	0.07	0.02	0.603			
A6		111.87	0.00	0.00	40.16	39.74	
27.54	67.28	0.12	0.04	0.601			
A7		111.87	0.00	0.00	40.16	39.70	
27.12	66.83	2.73	0.77	0.597			
A8		111.87	0.00	0.00	40.16	39.74	
27.60	67.34	0.12	0.04	0.602			
A9		111.87	0.00	0.00	40.16	39.74	
27.50	67.24	0.17	0.05	0.601			
EXT1		111.87	0.00	0.00	34.84	45.18	
27.10	72.29	6.62	1.90	0.646			
EXT2		111.87	0.00	0.00	58.18	22.08	
25.75	47.83	0.74	0.16	0.428			
MARYEXT		111.87	0.00	0.00	16.00	67.90	
23.63	91.52	6.98	1.87	0.818			

****
Node Depth Summary
****

Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
ACBMH1	JUNCTION	0.00	0.00	258.48	0 00:00	0.00
ACBMH2	JUNCTION	0.00	0.00	258.03	0 00:00	0.00
ACBMH3	JUNCTION	0.00	0.00	257.38	0 00:00	0.00
ADCBMH1	JUNCTION	0.00	0.00	257.52	0 00:00	0.00
AMH1	JUNCTION	0.10	0.60	256.80	0 11:55	0.60
CBMH1	JUNCTION	0.09	0.55	256.05	0 11:59	0.55
CBMH1-S	JUNCTION	0.01	0.07	257.63	0 11:56	0.07
CBMH2	JUNCTION	0.11	1.07	256.11	0 11:58	1.06
CBMH2-S	JUNCTION	0.02	0.13	257.24	0 11:54	0.13
CBMH3	JUNCTION	0.11	1.50	256.32	0 11:57	1.21
CBMH3-S	JUNCTION	0.02	0.13	257.06	0 11:55	0.13
CBMH4	JUNCTION	0.15	2.43	256.72	0 11:55	1.57
CBMH4-S	JUNCTION	0.03	0.17	256.69	0 11:55	0.17
CBMH5	JUNCTION	0.15	1.95	256.09	0 11:55	1.57
CBMH5-S	JUNCTION	0.02	0.15	256.53	0 11:56	0.15
DCBMH10	JUNCTION	0.18	1.02	254.34	0 11:59	1.02
DCBMH10-S	JUNCTION	0.01	0.16	255.14	0 11:59	0.16
DCBMH6	JUNCTION	0.16	1.77	255.57	0 11:55	1.52
DCBMH6-S	JUNCTION	0.03	0.17	255.94	0 11:57	0.17
DCBMH7	JUNCTION	0.18	1.82	255.44	0 11:55	1.46
DCBMH7-S	JUNCTION	0.03	0.19	255.64	0 11:57	0.19
DCBMH8	JUNCTION	0.18	1.54	255.05	0 11:55	1.33
DCBMH8-S	JUNCTION	0.03	0.18	255.47	0 11:58	0.18
DCBMH9	JUNCTION	0.18	1.22	254.64	0 11:55	1.18
DCBMH9-S	JUNCTION	0.04	0.18	255.32	0 11:58	0.18
J1	JUNCTION	0.21	0.34	247.51	0 14:43	0.34
J10	JUNCTION	0.27	1.10	249.21	0 13:00	1.10
J10_s	JUNCTION	0.05	0.49	249.62	0 12:11	0.49
J11	JUNCTION	0.00	0.00	247.41	0 00:00	0.00
J12	JUNCTION	0.00	0.00	266.00	0 00:00	0.00
J14	JUNCTION	0.30	1.14	249.20	0 13:00	1.14

J15	JUNCTION	0.00	0.00	247.37	0	00:00	0.00
J2	JUNCTION	0.09	0.50	261.25	0	11:54	0.50
J3	JUNCTION	0.37	1.01	251.39	0	12:37	1.01
J4	JUNCTION	0.07	0.38	259.58	0	11:54	0.38
J5	JUNCTION	0.44	1.30	249.54	0	12:59	1.30
J6	JUNCTION	0.07	0.38	258.13	0	11:54	0.38
J7	JUNCTION	0.09	0.45	257.20	0	11:55	0.45
J9	JUNCTION	0.00	0.00	259.20	0	00:00	0.00
MH1	JUNCTION	0.09	0.50	256.29	0	11:55	0.50
MH10	JUNCTION	0.33	0.89	247.96	0	12:33	0.89
MH12	JUNCTION	0.33	0.95	248.35	0	12:33	0.95
MH13	JUNCTION	0.34	0.97	248.70	0	12:33	0.97
MH14	JUNCTION	0.32	0.88	248.94	0	12:34	0.88
MH15	JUNCTION	0.35	1.03	249.42	0	12:34	1.03
MH16	JUNCTION	0.36	1.09	249.81	0	12:33	1.09
MH17	JUNCTION	0.32	0.95	250.00	0	12:33	0.95
MH1-S	JUNCTION	0.01	0.07	257.94	0	11:54	0.07
MH2	JUNCTION	0.16	1.87	255.80	0	11:55	1.56
MH2-S	JUNCTION	0.03	0.16	256.24	0	11:56	0.16
ND5_DS	JUNCTION	0.26	0.61	244.75	0	13:40	0.61
NODE1	JUNCTION	0.00	0.00	263.00	0	00:00	0.00
NODE2	JUNCTION	0.10	0.31	256.11	0	12:03	0.31
NODE2B	JUNCTION	0.19	0.59	253.04	0	12:41	0.59
NODE3	JUNCTION	0.29	0.74	253.00	0	12:41	0.74
NODE3B	JUNCTION	0.23	0.63	252.89	0	12:22	0.63
NODE3B_1	JUNCTION	0.19	0.71	249.57	0	12:59	0.71
NODE4_DS	JUNCTION	0.22	0.63	246.86	0	13:01	0.63
NODE4_US	JUNCTION	0.57	1.56	248.83	0	12:59	1.56
NODE4B_1	JUNCTION	0.37	1.34	246.34	0	13:39	1.34
NODE5_US	JUNCTION	0.71	1.98	246.28	0	13:40	1.98
NODE6	JUNCTION	0.33	0.90	251.22	0	12:33	0.90
NODE6_1	JUNCTION	0.33	0.89	250.82	0	12:34	0.89
NODE6_S	JUNCTION	0.02	0.37	253.07	0	11:56	0.37
NODE7	JUNCTION	0.03	0.46	251.37	0	12:03	0.46
NODE7_2	JUNCTION	0.34	0.92	250.41	0	12:34	0.92
NODE7_s	JUNCTION	0.30	0.86	250.04	0	12:33	0.86
NODE8	JUNCTION	0.27	0.76	247.50	0	12:32	0.76
NODE8_S	JUNCTION	0.09	0.62	248.24	0	12:16	0.62
PNDOUT	JUNCTION	0.28	0.53	253.53	0	13:33	0.53
J8	OUTFALL	0.00	0.00	253.27	0	00:00	0.00
MAD	OUTFALL	0.27	0.75	246.55	0	12:32	0.75
OF1	OUTFALL	0.17	0.92	254.19	0	11:59	0.92
OF2	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
OF3	OUTFALL	0.07	0.38	259.38	0	11:54	0.38
OF4	OUTFALL	0.15	0.41	244.55	0	13:40	0.41
AL_POND	STORAGE	0.81	1.72	254.72	0	13:32	1.72
SU1	STORAGE	0.00	0.00	0.00	0	00:00	0.00
SWMF1	STORAGE	0.80	1.78	249.98	0	13:01	1.78
SWMF2	STORAGE	0.87	1.80	249.35	0	14:49	1.80

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Node Inflow Summary
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Node	Type	Maximum Lateral Inflow CMS	Maximum Total Inflow CMS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
ACBMH1	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
ACBMH2	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
ACBMH3	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
ADCBMH1	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
AMH1	JUNCTION	1.901	1.901	0 11:54	6.62	6.62	0.134
CBMH1	JUNCTION	0.000	1.263	0 11:56	0	5.74	0.031
CBMH1-S	JUNCTION	0.019	0.139	0 11:54	0.0535	0.399	0.256
CBMH2	JUNCTION	0.000	1.566	0 11:57	0	7.64	0.021
CBMH2-S	JUNCTION	0.863	0.978	0 11:54	3.05	3.44	-0.003
CBMH3	JUNCTION	0.000	1.558	0 11:55	0	7.72	0.024
CBMH3-S	JUNCTION	0.024	0.678	0 11:54	0.0705	1.61	0.063
CBMH4	JUNCTION	0.000	2.002	0 11:55	0	10.2	0.040
CBMH4-S	JUNCTION	0.809	1.409	0 11:55	2.85	4.38	0.007
CBMH5	JUNCTION	0.000	2.012	0 11:59	0	10.3	0.022
CBMH5-S	JUNCTION	0.041	1.008	0 11:55	0.125	2.01	0.065
DCBMH10	JUNCTION	0.000	2.696	0 11:59	0	12.8	0.020
DCBMH10-S	JUNCTION	0.055	1.229	0 11:59	0.166	2.65	0.012
DCBMH6	JUNCTION	0.000	2.315	0 11:59	0	11.8	0.019
DCBMH6-S	JUNCTION	0.035	1.406	0 11:56	0.098	3.15	0.026
DCBMH7	JUNCTION	0.000	2.399	0 11:59	0	12.1	0.024
DCBMH7-S	JUNCTION	0.052	1.363	0 11:57	0.16	3.07	0.045
DCBMH8	JUNCTION	0.000	2.483	0 11:59	0	12.4	0.023
DCBMH8-S	JUNCTION	0.049	1.318	0 11:57	0.148	2.91	0.058
DCBMH9	JUNCTION	0.000	2.567	0 11:59	0	12.7	0.024
DCBMH9-S	JUNCTION	0.050	1.272	0 11:58	0.148	2.8	0.076

J1	JUNCTION	0.116	0.300	0	14:30	0.741	11.6	1.491
J10	JUNCTION	0.000	3.397	0	12:32	0	67.7	0.006
J10_s	JUNCTION	0.546	0.741	0	12:03	5.93	6.41	0.148
J11	JUNCTION	0.000	0.000	0	00:00	0	0	0.000 ltr
J12	JUNCTION	0.000	0.000	0	00:00	0	0	0.000 ltr
J14	JUNCTION	0.838	3.962	0	12:32	5.68	78	0.169
J15	JUNCTION	0.000	0.000	0	00:00	0	0	0.000 ltr
J2	JUNCTION	1.875	1.875	0	11:54	6.98	6.98	0.029
J3	JUNCTION	0.000	1.410	0	12:41	0	33.4	0.018
J4	JUNCTION	0.000	1.887	0	11:54	0	6.98	0.028
J5	JUNCTION	0.000	3.436	0	12:32	0	67.8	0.095
J6	JUNCTION	1.219	1.219	0	11:54	5.34	5.34	0.051
J7	JUNCTION	0.000	1.207	0	11:54	0	5.34	0.082
J9	JUNCTION	0.000	0.000	0	00:00	0	0	0.000 ltr
MH1	JUNCTION	0.000	1.258	0	11:55	0	5.73	0.072
MH10	JUNCTION	0.000	2.242	0	12:34	0	46.7	0.061
MH12	JUNCTION	0.000	2.242	0	12:33	0	46.7	0.061
MH13	JUNCTION	0.000	2.242	0	12:32	0	46.7	0.060
MH14	JUNCTION	0.000	1.895	0	12:34	0	41.3	0.064
MH15	JUNCTION	0.000	1.895	0	12:33	0	41.3	0.072
MH16	JUNCTION	0.000	1.896	0	12:32	0	41.4	0.072
MH17	JUNCTION	0.000	1.896	0	12:31	0	41.4	0.043
MH1-S	JUNCTION	0.165	0.165	0	11:54	0.743	0.743	-0.002
MH2	JUNCTION	0.000	2.231	0	11:59	0	11.6	0.021
MH2-S	JUNCTION	0.692	1.608	0	11:56	2.43	4.34	0.017
ND5_DS	JUNCTION	0.000	4.763	0	13:40	0	113	0.013
NODE1	JUNCTION	0.000	0.000	0	00:00	0	0	0.000 ltr
NODE2	JUNCTION	4.519	4.519	0	12:00	69.3	69.3	0.983
NODE2B	JUNCTION	0.286	4.528	0	12:31	3.94	96.9	1.282
NODE3	JUNCTION	0.000	4.497	0	12:43	0	95.9	0.231

NODE3B	JUNCTION	1.664	3.377	0	12:33	6.34	
68.6	0.437						
NODE3B_1	JUNCTION	0.000	3.426	0	12:28	0	
68.1	0.396						
NODE4_DS	JUNCTION	0.000	4.390	0	12:59	0	
90.3	0.201						
NODE4_US	JUNCTION	0.632	4.390	0	12:59	12.7	
90.6	0.362						
NODE4B_1	JUNCTION	0.000	4.389	0	13:01	0	
90.1	0.665						
NODE5_US	JUNCTION	3.017	4.828	0	13:27	13.3	
114	1.461						
NODE6	JUNCTION	0.000	1.595	0	12:32	0	
37.7	0.052						
NODE6_1	JUNCTION	0.000	1.595	0	12:32	0	
37.7	0.091						
NODE6_S	JUNCTION	0.820	0.820	0	11:54	4.34	
4.34	-0.378						
NODE7	JUNCTION	0.613	0.733	0	12:00	4.17	
4.26	0.166						
NODE7_2	JUNCTION	0.000	1.594	0	12:34	0	
37.7	0.086						
NODE7_s	JUNCTION	0.000	1.594	0	12:35	0	
37.6	0.043						
NODE8	JUNCTION	0.000	2.669	0	12:35	0	
49.1	0.331						
NODE8_S	JUNCTION	0.219	0.475	0	12:09	1.49	
2.45	0.111						
PNDOUT	JUNCTION	0.000	0.934	0	13:32	0	
24.4	0.162						
J8	OUTFALL	0.000	1.098	0	11:59	0	
2.53	0.000						
MAD	OUTFALL	0.000	2.610	0	12:32	0	
48.9	0.000						
OF1	OUTFALL	0.018	2.711	0	11:59	0.0526	
12.9	0.000						
OF2	OUTFALL	1.067	1.067	0	12:00	26.4	
26.4	0.000						
OF3	OUTFALL	0.000	1.889	0	11:54	0	
6.98	0.000						
OF4	OUTFALL	0.000	4.763	0	13:40	0	
113	0.000						
AL_POND	STORAGE	6.138	7.832	0	12:00	29.7	
36.3	0.959						
SU1	STORAGE	0.000	0.000	0	00:00	0	
0	0.000 ltr						
SWMF1	STORAGE	1.194	1.194	0	12:00	5.92	
5.92	0.003						
SWMF2	STORAGE	3.662	3.662	0	12:00	18.8	
18.8	0.005						

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Node Surcharge Summary
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Surcharging occurs when water rises above the top of the highest conduit.

	Max. Height	Min. Depth

Node	Type	Hours Surcharged	Above Crown Meters	Below Rim Meters
CBMH2	JUNCTION	0.01	0.021	0.999
CBMH3	JUNCTION	0.09	0.454	0.606
CBMH4	JUNCTION	0.18	1.380	0.000
CBMH5	JUNCTION	0.19	0.901	0.289
DCBMH6	JUNCTION	0.21	0.720	0.200
DCBMH7	JUNCTION	0.23	0.770	0.010
DCBMH8	JUNCTION	0.21	0.485	0.245
DCBMH9	JUNCTION	0.17	0.172	0.498
J14	JUNCTION	0.51	0.021	0.000
J5	JUNCTION	1.99	0.165	0.347
MH2	JUNCTION	0.21	0.822	0.278
NODE4_US	JUNCTION	1.95	0.065	0.000

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Node Flooding Summary
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Flooding refers to all water that overflows a node, whether it ponds or not.

Node	Hours Flooded	Maximum Rate CMS	Time of Max Occurrence days hr:min	Total Flood Volume 10^6 ltr	Maximum Ponded Depth Meters
CBMH4	0.01	0.286	0 11:55	0.000	0.200

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Storage Volume Summary
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Storage Unit	Average Volume 1000 m3	Avg Pcnt Full	Evap Pcnt Loss	Exfil Pcnt Loss	Maximum Volume 1000 m3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow CMS
AL_POND	8.310	20	0	0	18.689	46	0 13:32	0.934
SU1	0.000	0	0	0	0.000	0	0 00:00	0.000
SWMF1	0.975	24	0	0	2.653	66	0 13:01	0.230
SWMF2	5.328	29	0	0	11.439	63	0 14:49	0.284

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Outfall Loading Summary
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Outfall Node	Flow Freq Pcnt	Avg Flow CMS	Max Flow CMS	Total Volume 10^6 ltr
J8	99.29	0.030	1.098	2.531
MAD	97.37	0.582	2.610	48.912
OF1	99.21	0.151	2.711	12.854
OF2	99.93	0.307	1.067	26.429
OF3	99.78	0.081	1.889	6.980
OF4	92.25	1.414	4.763	112.584
System	97.97	2.565	9.293	210.291

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Link Flow Summary
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Link	Type	Maximum |Flow| CMS	Time of Max Occurrence days hr:min	Maximum |Veloc| m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	1.254	0 11:56	3.00	0.45	0.50
C1_1	CHANNEL	3.426	0 12:28	1.11	0.49	0.59
C1_2	CHANNEL	3.436	0 12:32	0.68	0.35	0.82
C10	CONDUIT	1.895	0 12:34	1.96	0.85	0.80
C11	CONDUIT	2.610	0 12:32	0.81	0.87	0.94
C12	CONDUIT	1.261	0 11:57	2.68	0.46	0.75
C12-S	CHANNEL	0.124	0 11:56	0.29	0.06	0.49
C13	CONDUIT	1.516	0 11:55	3.02	0.55	1.00
C13-S	CHANNEL	0.655	0 11:54	0.94	0.35	0.64
C14	CONDUIT	1.555	0 12:02	2.25	0.56	1.00
C14-S	CHANNEL	0.626	0 11:55	0.71	0.33	0.75
C15	CONDUIT	1.970	0 11:59	2.33	1.00	1.00
C15-S	CHANNEL	0.969	0 11:55	0.96	0.70	0.81
C16	CONDUIT	2.012	0 11:59	2.32	1.02	1.00
C16-S	CHANNEL	0.955	0 11:56	1.01	0.52	0.78
C17	CONDUIT	2.231	0 11:59	2.58	1.12	1.00
C17-S	CHANNEL	1.374	0 11:56	1.36	0.58	0.81
C18	CONDUIT	2.315	0 11:59	2.67	1.16	1.00
C18-S	CHANNEL	1.316	0 11:57	1.13	0.64	0.88
C19	CONDUIT	2.399	0 11:59	2.77	1.48	1.00
C19-S	CHANNEL	1.274	0 11:57	0.99	0.83	0.92
C1-S	CHANNEL	0.121	0 11:54	0.58	0.05	0.33
C2	CONDUIT	3.281	0 12:59	2.69	0.23	0.71
C20	CONDUIT	2.483	0 11:59	2.87	1.60	1.00
C20-S	CHANNEL	1.229	0 11:58	0.98	0.79	0.91
C21	CONDUIT	2.570	0 11:59	2.98	1.65	0.99
C21-S	CHANNEL	1.182	0 11:59	1.08	0.78	0.85
C22	CONDUIT	2.696	0 11:59	3.23	1.71	0.92
C23	CONDUIT	1.887	0 11:54	4.42	0.22	0.29
C24	CONDUIT	0.000	0 00:00	0.00	0.00	0.13
C25	CONDUIT	1.207	0 11:54	3.02	0.14	0.28
C26	CONDUIT	1.216	0 11:55	2.52	0.20	0.32

C28	CONDUIT	1.889	0	11:54	5.43	0.14	0.25
C29	CONDUIT	0.000	0	00:00	0.00	0.00	0.16
C3	CONDUIT	4.389	0	13:01	0.81	0.43	0.82
C30	CONDUIT	0.000	0	00:00	0.00	0.00	0.16
C31	CONDUIT	3.804	0	12:03	0.76	0.14	0.44
C32	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C33	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C34	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C35	CONDUIT	0.000	0	00:00	0.00	0.00	0.44
C36	CONDUIT	0.934	0	13:33	0.48	0.09	0.37
C37	CONDUIT	1.410	0	12:41	1.47	0.81	0.79
C38	CONDUIT	4.497	0	12:43	0.40	0.23	0.66
C39	CONDUIT	1.825	0	11:55	2.35	0.50	0.73
C4	CONDUIT	4.097	0	13:32	0.32	0.26	0.95
C40	CONDUIT	0.450	0	12:16	1.10	0.39	0.85
C41	CONDUIT	0.142	0	11:57	0.55	0.42	0.76
C42	CONDUIT	0.297	0	12:10	0.61	0.92	0.99
C43	CONDUIT	4.763	0	13:40	1.42	6.91	0.51
C44	CONDUIT	0.246	0	12:04	0.59	0.78	0.92
C45	CONDUIT	1.596	0	12:36	1.90	0.67	0.75
C46	CONDUIT	1.896	0	12:32	1.87	0.85	0.85
C47	CONDUIT	1.896	0	12:35	2.04	0.84	0.77
C48	CONDUIT	2.242	0	12:33	2.32	1.00	0.80
C49	CONDUIT	2.242	0	12:34	2.42	1.00	0.76
C5	CONDUIT	4.371	0	13:40	3.29	1.28	0.70
C50	CONDUIT	2.243	0	12:34	2.71	1.02	0.69
C51	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C52	CONDUIT	2.845	0	12:32	2.24	1.85	1.00
C53	CHANNEL	3.776	0	13:00	0.54	0.68	1.00
C54	CONDUIT	0.300	0	14:43	0.21	0.06	0.67
C55	CHANNEL	3.387	0	12:32	0.72	0.34	0.99
C6	CONDUIT	1.595	0	12:32	1.77	0.70	0.75
C7	CONDUIT	1.594	0	12:34	1.75	0.72	0.75
C8	CONDUIT	1.594	0	12:35	1.83	0.71	0.74
C9	CONDUIT	1.895	0	12:33	1.79	0.85	0.89
EDORF	ORIFICE	0.080	0	13:32			1.00
C27	WEIR	1.098	0	11:59			0.80
W1	WEIR	3.089	0	12:44			0.68
W2	WEIR	0.391	0	13:40			0.28
W3	WEIR	1.109	0	12:59			1.65
W4	WEIR	0.833	0	12:59			2.65
W5	WEIR	0.000	0	00:00			0.00
WEIR1	WEIR	0.854	0	13:32			0.42
WEIR2	WEIR	0.000	0	00:00			0.00
CBMH10-IC	DUMMY	0.042	0	11:54			
CBMH1-IC	DUMMY	0.009	0	11:56			
CBMH2-IC	DUMMY	0.275	0	11:54			
CBMH3-IC	DUMMY	0.042	0	11:52			
CBMH4-IC	DUMMY	0.413	0	11:55			
CBMH5-IC	DUMMY	0.042	0	11:50			
CBMH6-IC	DUMMY	0.084	0	11:49			
CBMH7-IC	DUMMY	0.084	0	11:48			
CBMH8-IC	DUMMY	0.084	0	11:50			
CBMH9-IC	DUMMY	0.084	0	11:51			
MH1-IC	DUMMY	0.043	0	11:54			
MH2-IC	DUMMY	0.185	0	11:56			
OL1	DUMMY	0.042	0	11:50			

OL11	DUMMY	1.410	0	12:41
OL2	DUMMY	0.042	0	11:46
OL3	DUMMY	0.042	0	11:48
OL4	DUMMY	0.084	0	11:54
OL5	DUMMY	0.374	0	12:11
OL6	DUMMY	0.329	0	11:56
OL7	DUMMY	0.329	0	11:56
OL8	DUMMY	0.362	0	12:03
SWMF_Outlet	DUMMY	0.230	0	13:01
SWMF2_Outlet	DUMMY	0.284	0	14:49

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Flow Classification Summary
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Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class: Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
C1	1.00	0.00	0.00	0.00	0.01	0.99	0.00	0.00	0.75	0.00
C1_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.12	0.00
C1_2	1.00	0.03	0.00	0.00	0.97	0.00	0.00	0.00	0.76	0.00
C10	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
C11	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03	0.00
C12	1.00	0.00	0.00	0.00	0.10	0.90	0.00	0.00	0.98	0.00
C12-S	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.93	0.00
C13	1.00	0.00	0.00	0.00	0.01	0.99	0.00	0.00	0.49	0.00
C13-S	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.91	0.00
C14	1.00	0.00	0.00	0.00	0.11	0.89	0.00	0.00	0.97	0.00
C14-S	1.00	0.00	0.00	0.00	0.97	0.03	0.00	0.00	0.67	0.00
C15	1.00	0.00	0.00	0.00	0.10	0.90	0.00	0.00	0.44	0.00
C15-S	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.33	0.00
C16	1.00	0.00	0.00	0.00	0.26	0.74	0.00	0.00	0.67	0.00
C16-S	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.93	0.00
C17	1.00	0.00	0.00	0.00	0.10	0.90	0.00	0.00	0.19	0.00
C17-S	1.00	0.00	0.00	0.00	0.90	0.10	0.00	0.00	0.97	0.00

C18	1.00	0.00	0.00	0.00	0.36	0.64	0.00	0.00	0.35
0.00									
C18-S	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.99
0.00									
C19	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.26
0.00									
C19-S	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.85
0.00									
C1-S	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.97
0.00									
C2	1.00	0.00	0.00	0.00	0.29	0.71	0.00	0.00	0.00
0.97									
C20	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.03
0.00									
C20-S	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.98
0.00									
C21	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.04
0.00									
C21-S	1.00	0.00	0.00	0.00	0.01	0.99	0.00	0.00	0.00
0.00									
C22	1.00	0.00	0.00	0.00	0.97	0.02	0.00	0.00	0.00
0.00									
C23	1.00	0.00	0.00	0.00	0.01	0.99	0.00	0.00	0.00
0.00									
C24	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C25	1.00	0.00	0.00	0.00	0.01	0.99	0.00	0.00	0.97
0.00									
C26	1.00	0.00	0.00	0.00	0.08	0.92	0.00	0.00	0.98
0.00									
C28	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.61
0.00									
C29	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.79
0.00									
C30	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C31	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.80
0.00									
C32	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C33	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C34	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C35	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C36	1.00	0.01	0.24	0.00	0.00	0.00	0.75	0.00	0.00
0.00									
C37	1.00	0.00	0.07	0.00	0.93	0.00	0.00	0.00	0.16
0.00									
C38	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.27
0.00									
C39	1.00	0.00	0.00	0.00	0.82	0.18	0.00	0.00	0.84
0.00									
C4	1.00	0.00	0.07	0.00	0.93	0.00	0.00	0.00	0.59
0.00									
C40	1.00	0.00	0.00	0.00	0.98	0.02	0.00	0.00	0.00
0.93									

C41	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.50	0.00
C42	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.99	0.00
C43	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.00	0.00
C44	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.55	0.00
C45	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.36	0.00
C46	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.47	0.00
C47	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.47	0.00
C48	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.11	0.00
C49	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.45	0.00
C5	1.00	0.00	0.00	0.00	0.86	0.14	0.00	0.00	0.00	0.79
C50	1.00	0.00	0.00	0.00	0.04	0.95	0.00	0.00	0.00	0.00
C51	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C52	1.00	0.05	0.00	0.00	0.85	0.10	0.00	0.00	0.00	0.72
C53	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.80	0.00
C54	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.79	0.00
C55	1.00	0.01	0.06	0.00	0.94	0.00	0.00	0.00	0.34	0.00
C6	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
C7	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
C8	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
C9	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.00

****
Conduit Surcharge Summary
****

Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
C1_2	0.01	0.01	2.41	0.01	0.01
C12	0.01	0.01	0.01	0.01	0.01
C13	0.01	0.01	0.09	0.01	0.01
C14	0.09	0.09	0.18	0.01	0.01
C15	0.18	0.18	0.19	0.01	0.02
C16	0.19	0.19	0.21	0.07	0.07
C17	0.21	0.21	0.21	0.15	0.15
C18	0.21	0.21	0.23	0.18	0.17

C19	0.21	0.23	0.21	0.29	0.21
C2	0.01	1.95	0.01	0.01	0.01
C20	0.17	0.21	0.17	0.32	0.17
C21	0.01	0.17	0.01	0.34	0.01
C22	0.01	0.01	0.01	0.34	0.01
C3	0.01	0.01	3.30	0.01	0.01
C39	0.01	0.01	11.04	0.01	0.01
C4	0.01	0.01	4.20	0.01	0.01
C42	0.01	0.01	0.58	0.01	0.01
C43	0.01	0.01	0.01	12.09	0.01
C5	0.01	4.20	0.01	3.40	0.01
C50	0.01	0.01	0.01	0.32	0.01
C52	1.91	3.94	1.91	4.72	1.91
C53	0.50	0.50	4.76	0.01	0.01
C54	0.01	0.01	8.07	0.01	0.01
C55	0.01	0.01	0.50	0.01	0.01

Analysis begun on: Wed Jun 10 14:53:18 2026
Analysis ended on: Wed Jun 10 14:53:27 2026
Total elapsed time: 00:00:09

```
  EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.015)
  ---------------------------------------------------------------

  WARNING 03: negative offset ignored for Link C10
  WARNING 04: minimum elevation drop used for Conduit C43
  WARNING 03: negative offset ignored for Link C45
  WARNING 03: negative offset ignored for Link C46
  WARNING 03: negative offset ignored for Link C47
  WARNING 03: negative offset ignored for Link C48
  WARNING 03: negative offset ignored for Link C49
  WARNING 03: negative offset ignored for Link C50
  WARNING 03: negative offset ignored for Link C6
  WARNING 03: negative offset ignored for Link C7
  WARNING 03: negative offset ignored for Link C8
  WARNING 03: negative offset ignored for Link C9
  WARNING 02: maximum depth increased for Node J14
  WARNING 02: maximum depth increased for Node J2
  WARNING 02: maximum depth increased for Node J4
  WARNING 02: maximum depth increased for Node J6
  WARNING 02: maximum depth increased for Node J7
  WARNING 02: maximum depth increased for Node J9
  WARNING 02: maximum depth increased for Node NODE2B
  WARNING 02: maximum depth increased for Node NODE3B
  WARNING 02: maximum depth increased for Node NODE3B_1
  WARNING 02: maximum depth increased for Node NODE4_US
  WARNING 02: maximum depth increased for Node NODE5_US
  WARNING 02: maximum depth increased for Node AL_POND

  *************
  Element Count
  *************
  Number of rain gages ...... 19
  Number of subcatchments ... 38
  Number of nodes ........... 80
  Number of links ........... 99
  Number of pollutants ...... 0
  Number of land uses ....... 0


  ****************
  Raingage Summary
  ****************
                                                    Data       Recording
  Name                 Data Source                  Type       Interval
  ------------------------------------------------------------------------
  100yr_SCS_Type_II_106.85mm 100yr_SCS_Type_II_106.85mm     INTENSITY    6 min.
  100yr12_HISTORICAL_SCS_Type_I_93.87mm 100yr12_HISTORICAL_SCS_Type_I_93.87mm
INTENSITY    6 min.
  100yr12hr_SCS_Type_II_106.85mm 100yr12hr_SCS_Type_II_106.85mm INTENSITY    6 min.
  100yr24h_SCS_Type_II_106.85mm 100yr24h_SCS_Type_II_106.85mm  INTENSITY    6 min.
  100yr6hr_HISTORICAL_SCS_Type_II_93.87mm 100yr6hr_HISTORICAL_SCS_Type_II_93.87mm
INTENSITY    6 min.
  10yr_SCS_Type_II_63.92mm 10yr_SCS_Type_II_63.92mm       INTENSITY    6 min.
  20yr_SCS_Type_II_75.51mm 20yr_SCS_Type_II_75.51mm       INTENSITY    6 min.
  25mm_Chicago_4h_IDFCC Chicago_4h                      INTENSITY   10 min.
  25mm4hrCHI           25mm4hrCHI                   INTENSITY    5 min.
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  25yr_SCS_Type_II_79.23mm 25yr_SCS_Type_II_79.23mm       INTENSITY    6 min.
  2yr_SCS_Type_II_37.8mm 2yr_SCS_Type_II_37.8mm         INTENSITY    6 min.
  50yr_SCS_Type_II_93.2mm SCS_Type_II_93.2mm             INTENSITY    6 min.
  5yr_SCS_Type_II_52.25mm 5yr_SCS_Type_II_52.25mm        INTENSITY    6 min.
  5yr12hr_SCS_Type_II_63.63mm 5yr12hr_SCS_Type_II_63.63mm    INTENSITY    6 min.
  5yr24hr_SCS_Type_II_66.26mm 5yr24hr_SCS_Type_II_66.26mm    INTENSITY    6 min.
  CC_100yr_24hr_SCS_Type_II_111.87mm CC_100yr_24hr_SCS_Type_II_111.87mm INTENSITY
6 min.
  CC_25yr_24hr_SCS_Type_II_92.74mm CC_25yr_24hr_SCS_Type_II_92.74mm INTENSITY    6
min.
  CC_5yr_24hr_SCS_Type_II_69.44mm CC_5yr_24hr_SCS_Type_II_69.44mm INTENSITY    6
min.
  Timmins_Storm_(0-25) Timmins_Storm_(0-25)           INTENSITY   60 min.


  ********************
  Subcatchment Summary
  ********************
  Name                         Area     Width   %Imperv    %Slope Rain Gage
Outlet
  ------------------------------------------------------------------------------
--------------------------
  1_b1*                       30.00    400.00      2.00    0.6000
25mm_Chicago_4h_IDFCC NODE5_US
  1a_1                        20.20    263.66      2.00    1.8300
25mm_Chicago_4h_IDFCC NODE4_US
  1a_2A                        5.69     99.83      0.00    1.3200
25mm_Chicago_4h_IDFCC J14
  1a_2B                       12.50    178.57      0.00    1.7900
25mm_Chicago_4h_IDFCC 1a_1
  201                          7.91    121.69     60.00    0.5000
25mm_Chicago_4h_IDFCC SWMF1
  202A                        24.05    343.57     64.00    0.5000
25mm_Chicago_4h_IDFCC SWMF2
  202B                         1.67     16.70     27.00    0.5000
25mm_Chicago_4h_IDFCC J1
  203                          4.86     73.08     55.00    0.5000
25mm_Chicago_4h_IDFCC J14
  2E                           9.72    121.50      2.00    2.0000
25mm_Chicago_4h_IDFCC NODE2B
  2W                          39.06    558.06     48.00    0.5000
25mm_Chicago_4h_IDFCC AL_POND
  3                           41.32    298.12      6.00    6.1300
25mm_Chicago_4h_IDFCC NODE2
  4                          122.26    467.71      2.00    5.8500
25mm_Chicago_4h_IDFCC NODE2
  5                            3.15    126.00     51.00    0.5000
25mm_Chicago_4h_IDFCC NODE3B
  6                            4.79    151.65     48.00    0.6300
25mm_Chicago_4h_IDFCC NODE3B
  7                            9.71    197.00     20.00    0.6100
25mm_Chicago_4h_IDFCC NODE6_S
  8_1                          9.62    641.24      2.00    0.5800
25mm_Chicago_4h_IDFCC NODE7
  8_3                         14.19    473.08      2.00    0.5800
25mm_Chicago_4h_IDFCC J10_s
  8_4                          3.44    229.14      2.00    0.5800
25mm_Chicago_4h_IDFCC NODE8_S
  9*                          81.71    517.15      2.00    0.6200
25mm_Chicago_4h_IDFCC OF2
```

A1	8.15	237.63	36.00	0.5000
25mm_Chicago_4h_IDFCC J6				
A10	3.38	281.31	36.00	0.5000
25mm_Chicago_4h_IDFCC MH2-S				
A12	0.15	42.68	36.00	0.5000
25mm_Chicago_4h_IDFCC DCBMH6-S				
A13	0.24	41.75	36.00	0.5000
25mm_Chicago_4h_IDFCC DCBMH7-S				
A14	0.22	44.02	36.00	0.5000
25mm_Chicago_4h_IDFCC DCBMH8-S				
A15	0.22	48.73	36.00	0.5000
25mm_Chicago_4h_IDFCC DCBMH9-S				
A16	0.25	49.16	36.00	0.5000
25mm_Chicago_4h_IDFCC DCBMH10-S				
A17	0.08	20.00	36.00	0.5000
25mm_Chicago_4h_IDFCC OF1				
A2	0.08	22.00	36.00	0.5000
25mm_Chicago_4h_IDFCC CBMH1-S				
A3	0.10	20.00	36.00	0.5000
25mm_Chicago_4h_IDFCC CBMH2-S				
A4	4.46	371.58	36.00	0.5000
25mm_Chicago_4h_IDFCC CBMH2-S				
A5	0.10	23.24	36.00	0.5000
25mm_Chicago_4h_IDFCC CBMH3-S				
A6	0.17	28.97	36.00	0.5000
25mm_Chicago_4h_IDFCC CBMH4-S				
A7	4.09	340.92	36.00	0.5000
25mm_Chicago_4h_IDFCC CBMH4-S				
A8	0.19	34.94	36.00	0.5000
25mm_Chicago_4h_IDFCC CBMH5-S				
A9	0.26	39.69	36.00	0.5000
25mm_Chicago_4h_IDFCC MH2-S				
EXT1	9.15	501.89	41.00	0.8700
25mm_Chicago_4h_IDFCC AMH1				
EXT2	1.55	102.26	20.00	0.6600
25mm_Chicago_4h_IDFCC MH1-S				
MARYEXT	7.63	187.01	62.00	0.9000
25mm_Chicago_4h_IDFCC J2				

****
Node Summary
****

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
ACBMH1	JUNCTION	258.48	2.00	0.0	
ACBMH2	JUNCTION	258.03	0.60	0.0	
ACBMH3	JUNCTION	257.38	1.46	0.0	
ADCBMH1	JUNCTION	257.52	1.32	0.0	
AMH1	JUNCTION	256.20	2.65	0.0	
CBMH1	JUNCTION	255.50	2.06	0.0	
CBMH1-S	JUNCTION	257.56	0.20	0.0	
CBMH2	JUNCTION	255.04	2.07	0.0	
CBMH2-S	JUNCTION	257.11	0.20	0.0	
CBMH3	JUNCTION	254.82	2.11	0.0	
CBMH3-S	JUNCTION	256.93	0.20	0.0	
CBMH4	JUNCTION	254.29	2.23	0.0	
CBMH4-S	JUNCTION	256.52	0.20	0.0	

CBMH5	JUNCTION	254.14	2.24	0.0
CBMH5-S	JUNCTION	256.38	0.20	0.0
DCBMH10	JUNCTION	253.32	1.66	0.0
DCBMH10-S	JUNCTION	254.98	0.20	0.0
DCBMH6	JUNCTION	253.80	1.97	0.0
DCBMH6-S	JUNCTION	255.77	0.20	0.0
DCBMH7	JUNCTION	253.62	1.83	0.0
DCBMH7-S	JUNCTION	255.45	0.20	0.0
DCBMH8	JUNCTION	253.51	1.78	0.0
DCBMH8-S	JUNCTION	255.29	0.20	0.0
DCBMH9	JUNCTION	253.42	1.72	0.0
DCBMH9-S	JUNCTION	255.14	0.20	0.0
J1	JUNCTION	247.17	1.23	0.0
J10	JUNCTION	248.10	1.78	0.0
J10_s	JUNCTION	249.13	0.50	0.0
J11	JUNCTION	247.41	1.26	0.0
J12	JUNCTION	266.00	1.00	0.0
J14	JUNCTION	248.06	1.12	0.0
J15	JUNCTION	247.37	1.80	0.0
J2	JUNCTION	260.75	1.50	0.0
J3	JUNCTION	250.38	3.05	0.0
J4	JUNCTION	259.20	1.50	0.0
J5	JUNCTION	248.24	1.65	0.0
J6	JUNCTION	257.75	1.50	0.0
J7	JUNCTION	256.75	1.50	0.0
J9	JUNCTION	259.20	1.50	0.0
MH1	JUNCTION	255.79	2.08	0.0
MH10	JUNCTION	247.07	2.23	0.0
MH12	JUNCTION	247.40	2.24	0.0
MH13	JUNCTION	247.73	2.45	0.0
MH14	JUNCTION	248.06	2.38	0.0
MH15	JUNCTION	248.39	2.61	0.0
MH16	JUNCTION	248.72	2.62	0.0
MH17	JUNCTION	249.05	3.08	0.0
MH1-S	JUNCTION	257.87	0.20	0.0
MH2	JUNCTION	253.93	2.15	0.0
MH2-S	JUNCTION	256.08	0.20	0.0
ND5_DS	JUNCTION	244.14	1.50	0.0
NODE1	JUNCTION	263.00	1.00	0.0
NODE2	JUNCTION	255.80	1.40	0.0
NODE2B	JUNCTION	252.45	1.69	0.0
NODE3	JUNCTION	252.26	1.17	0.0
NODE3B	JUNCTION	252.26	1.12	0.0
NODE3B_1	JUNCTION	248.86	1.12	0.0
NODE4_DS	JUNCTION	246.23	1.50	0.0
NODE4_US	JUNCTION	247.27	1.50	0.0
NODE4B_1	JUNCTION	245.00	1.50	0.0
NODE5_US	JUNCTION	244.30	2.20	0.0
NODE6	JUNCTION	250.32	2.38	0.0
NODE6_1	JUNCTION	249.93	2.53	0.0
NODE6_S	JUNCTION	252.70	0.50	0.0
NODE7	JUNCTION	250.91	0.50	0.0
NODE7_2	JUNCTION	249.49	2.84	0.0
NODE7_s	JUNCTION	249.18	3.18	0.0
NODE8	JUNCTION	246.74	1.99	0.0
NODE8_S	JUNCTION	247.62	0.80	0.0
PNDOUT	JUNCTION	253.00	3.00	0.0

J8	OUTFALL	253.27	0.00	0.0
MAD	OUTFALL	245.80	0.80	0.0
OF1	OUTFALL	253.27	1.05	0.0
OF2	OUTFALL	0.00	0.00	0.0
OF3	OUTFALL	259.00	1.50	0.0
OF4	OUTFALL	244.14	1.00	0.0
AL_POND	STORAGE	253.00	3.10	0.0
SU1	STORAGE	0.00	5.00	0.0
SWMF1	STORAGE	248.20	2.30	0.0
SWMF2	STORAGE	247.55	2.60	0.0

****
Link Summary
****

Name	From Node	To Node	Type	Length	% Slope	Roughness
C1	MH1	CBMH1	CONDUIT	47.7	0.6080	0.0100
C1_1	NODE3B	NODE3B_1	CONDUIT	600.0	0.5670	0.0400
C1_2	NODE3B_1	J5	CONDUIT	56.0	1.1108	0.0400
C10	MH15	MH14	CONDUIT	100.0	0.3300	0.0130
C11	NODE8	MAD	CONDUIT	320.3	0.2935	0.0400
C12	CBMH1	CBMH2	CONDUIT	77.3	0.5951	0.0100
C12-S	CBMH1-S	CBMH2-S	CONDUIT	76.4	0.5891	0.0140
C13	CBMH2	CBMH3	CONDUIT	36.3	0.6061	0.0100
C13-S	CBMH2-S	CBMH3-S	CONDUIT	38.4	0.4687	0.0140
C14	CBMH3	CBMH4	CONDUIT	87.3	0.6071	0.0100
C14-S	CBMH3-S	CBMH4-S	CONDUIT	85.7	0.4782	0.0140
C15	CBMH4	CBMH5	CONDUIT	48.9	0.3067	0.0100
C15-S	CBMH4-S	CBMH5-S	CONDUIT	55.9	0.2503	0.0140
C16	CBMH5	MH2	CONDUIT	67.5	0.3111	0.0100
C16-S	CBMH5-S	MH2-S	CONDUIT	67.4	0.4454	0.0140
C17	MH2	DCBMH6	CONDUIT	41.3	0.3148	0.0100
C17-S	MH2-S	DCBMH6-S	CONDUIT	41.7	0.7437	0.0140
C18	DCBMH6	DCBMH7	CONDUIT	57.2	0.3148	0.0100
C18-S	DCBMH6-S	DCBMH7-S	CONDUIT	56.5	0.5663	0.0140
C19	DCBMH7	DCBMH8	CONDUIT	52.5	0.2095	0.0100

C19-S		DCBMH7-S	DCBMH8-S	CONDUIT	51.4	
0.3112	0.0140					
C1-S		MH1-S	CBMH1-S	CONDUIT	46.6	
0.6649	0.0140					
C2		NODE4_US	NODE4_DS	CONDUIT	26.5	
3.9247	0.0130					
C20		DCBMH8	DCBMH9	CONDUIT	46.9	
0.1919	0.0100					
C20-S		DCBMH8-S	DCBMH9-S	CONDUIT	46.6	
0.3221	0.0140					
C21		DCBMH9	DCBMH10	CONDUIT	51.8	
0.1931	0.0100					
C21-S		DCBMH9-S	DCBMH10-S	CONDUIT	53.4	
0.2999	0.0140					
C22		DCBMH10	OF1	CONDUIT	25.5	
0.1961	0.0100					
C23		J2	J4	CONDUIT	185.0	
0.8379	0.0100					
C24		J9	J6	CONDUIT	162.3	
0.8932	0.0100					
C25		J6	J7	CONDUIT	119.2	
0.8389	0.0100					
C26		J7	MH1	CONDUIT	213.3	
0.4501	0.0100					
C28		J4	OF3	CONDUIT	9.1	
2.2056	0.0100					
C29		NODE1	NODE2	CONDUIT	854.0	
0.8431	0.0450					
C3		NODE4_DS	NODE4B_1	CONDUIT	290.4	
0.4235	0.0400					
C30		J12	NODE2	CONDUIT	217.5	
4.6950	0.0450					
C31		NODE2	NODE2B	CONDUIT	705.5	
0.4749	0.0400					
C32		ACBMH1	ACBMH2	CONDUIT	89.9	
0.5004	0.0100					
C33		ACBMH2	ADCBMH1	CONDUIT	89.3	
0.5708	0.0100					
C34		ADCBMH1	ACBMH3	CONDUIT	28.7	
0.4878	0.0100					
C35		ACBMH3	AMH1	CONDUIT	111.0	
1.0631	0.0100					
C36		PNDOUT	NODE2B	CONDUIT	30.0	-
0.4667	0.0500					
C37		J3	NODE6	CONDUIT	30.3	
0.1983	0.0130					
C38		NODE2B	NODE3	CONDUIT	78.0	
0.2436	0.0400					
C39		AMH1	AL_POND	CONDUIT	608.2	
0.5261	0.0100					
C4		NODE4B_1	NODE5_US	CONDUIT	342.6	
0.2043	0.0400					
C40		NODE8_S	NODE8	CONDUIT	34.7	
2.5368	0.0240					
C41		NODE6_S	NODE7	CONDUIT	327.0	
0.5474	0.0400					
C42		J10_s	NODE8_S	CONDUIT	310.2	
0.4867	0.0400					
C43		ND5_DS	OF4	CONDUIT	16.1	
0.0019	0.0400					

C44		NODE7	J10_s	CONDUIT	376.4
0.4729	0.0400				
C45		NODE7_s	MH17	CONDUIT	34.7
0.3746	0.0130				
C46		MH17	MH16	CONDUIT	99.8
0.3307	0.0130				
C47		MH14	MH13	CONDUIT	98.7
0.3343	0.0130				
C48		MH13	MH12	CONDUIT	99.7
0.3310	0.0130				
C49		MH12	MH10	CONDUIT	99.7
0.3310	0.0130				
C5		NODE5_US	ND5_DS	CONDUIT	20.0
0.8000	0.0240				
C50		MH10	NODE8	CONDUIT	103.5
0.3188	0.0130				
C51		J11	J15	CONDUIT	12.3
0.3252	0.0240				
C52		J5	J10	CONDUIT	21.4
0.6167	0.0240				
C53		J14	NODE4_US	CONDUIT	225.5
0.3503	0.0400				
C54		J1	NODE5_US	CONDUIT	647.3
0.4434	0.0400				
C55		J10	J14	CONDUIT	4.0
1.1001	0.0400				
C6		NODE6	NODE6_1	CONDUIT	113.8
0.3427	0.0130				
C7		NODE6_1	NODE7_2	CONDUIT	135.1
0.3257	0.0130				
C8		NODE7_2	NODE7_s	CONDUIT	92.9
0.3337	0.0130				
C9		MH16	MH15	CONDUIT	100.3
0.3290	0.0130				
EDORF		AL_POND	PNDOUT	ORIFICE	
C27		DCBMH10-S	J8	WEIR	
W1		NODE3	NODE3B	WEIR	
W2		NODE5_US	ND5_DS	WEIR	
W3		NODE4_US	NODE4_DS	WEIR	
W4		J5	J10	WEIR	
W5		J11	J15	WEIR	
WEIR1		AL_POND	PNDOUT	WEIR	
WEIR2		AL_POND	PNDOUT	WEIR	
CBMH10-IC		DCBMH10-S	DCBMH10	OUTLET	
CBMH1-IC		CBMH1-S	CBMH1	OUTLET	
CBMH2-IC		CBMH2-S	CBMH2	OUTLET	
CBMH3-IC		CBMH3-S	CBMH3	OUTLET	
CBMH4-IC		CBMH4-S	CBMH4	OUTLET	
CBMH5-IC		CBMH5-S	CBMH5	OUTLET	
CBMH6-IC		DCBMH6-S	DCBMH6	OUTLET	
CBMH7-IC		DCBMH7-S	DCBMH7	OUTLET	
CBMH8-IC		DCBMH8-S	DCBMH8	OUTLET	
CBMH9-IC		DCBMH9-S	DCBMH9	OUTLET	
MH1-IC		MH1-S	MH1	OUTLET	
MH2-IC		MH2-S	MH2	OUTLET	
OL1		CBMH2-S	CBMH2	OUTLET	
OL11		NODE3	J3	OUTLET	
OL2		CBMH4-S	CBMH4	OUTLET	
OL3		MH2-S	MH2	OUTLET	

OL4	DCBMH10-S	DCBMH10	OUTLET
OL5	J10_s	MH13	OUTLET
OL6	NODE6_S	NODE6	OUTLET
OL7	NODE6_S	NODE6	OUTLET
OL8	NODE7	MH17	OUTLET
SWMF_Outlet	SWMF1	J14	OUTLET
SWMF2_Outlet	SWMF2	J1	OUTLET

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Cross Section Summary
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	1.05	0.87	0.26	1.05	1	2.77
C1_1	EdwardDitch	1.12	8.08	0.32	25.10	1	7.05
C1_2	EdwardDitch	1.12	8.08	0.32	25.10	1	9.87
C10	CIRCULAR	1.20	1.13	0.30	1.20	1	2.24
C11	TRAPEZOIDAL	0.80	3.52	0.50	6.80	1	3.00
C12	CIRCULAR	1.05	0.87	0.26	1.05	1	2.74
C12-S	MarySt	0.20	1.57	0.12	18.50	1	2.11
C13	CIRCULAR	1.05	0.87	0.26	1.05	1	2.76
C13-S	MarySt	0.20	1.57	0.12	18.50	1	1.88
C14	CIRCULAR	1.05	0.87	0.26	1.05	1	2.77
C14-S	MarySt	0.20	1.57	0.12	18.50	1	1.90
C15	CIRCULAR	1.05	0.87	0.26	1.05	1	1.97
C15-S	MarySt	0.20	1.57	0.12	18.50	1	1.38
C16	CIRCULAR	1.05	0.87	0.26	1.05	1	1.98
C16-S	MarySt	0.20	1.57	0.12	18.50	1	1.84
C17	CIRCULAR	1.05	0.87	0.26	1.05	1	1.99
C17-S	MarySt	0.20	1.57	0.12	18.50	1	2.37
C18	CIRCULAR	1.05	0.87	0.26	1.05	1	1.99
C18-S	MarySt	0.20	1.57	0.12	18.50	1	2.07
C19	CIRCULAR	1.05	0.87	0.26	1.05	1	1.63
C19-S	MarySt	0.20	1.57	0.12	18.50	1	1.54

C1-S	MarySt	0.20	1.57	0.12	18.50	1
2.24						
C2	CIRCULAR	1.50	1.77	0.38	1.50	1
14.01						
C20	CIRCULAR	1.05	0.87	0.26	1.05	1
1.56						
C20-S	MarySt	0.20	1.57	0.12	18.50	1
1.56						
C21	CIRCULAR	1.05	0.87	0.26	1.05	1
1.56						
C21-S	MarySt	0.20	1.57	0.12	18.50	1
1.51						
C22	CIRCULAR	1.05	0.87	0.26	1.05	1
1.57						
C23	CIRCULAR	1.50	1.77	0.38	1.50	1
8.41						
C24	CIRCULAR	1.50	1.77	0.38	1.50	1
8.69						
C25	CIRCULAR	1.50	1.77	0.38	1.50	1
8.42						
C26	CIRCULAR	1.50	1.77	0.38	1.50	1
6.17						
C28	CIRCULAR	1.50	1.77	0.38	1.50	1
13.65						
C29	TRAPEZOIDAL	1.00	5.40	0.62	8.40	1
8.00						
C3	TRAPEZOIDAL	1.00	8.00	0.71	11.00	1
10.33						
C30	TRAPEZOIDAL	1.00	5.40	0.62	8.40	1
18.89						
C31	TRAPEZOIDAL	1.00	18.00	0.84	21.00	1
27.70						
C32	CIRCULAR	0.45	0.16	0.11	0.45	1
0.26						
C33	CIRCULAR	0.60	0.28	0.15	0.60	1
0.60						
C34	CIRCULAR	0.68	0.36	0.17	0.68	1
0.76						
C35	CIRCULAR	0.68	0.36	0.17	0.68	1
1.13						
C36	TRAPEZOIDAL	1.00	11.50	0.53	21.50	1
10.32						
C37	CIRCULAR	1.20	1.13	0.30	1.20	1
1.74						
C38	TRAPEZOIDAL	1.00	18.00	0.84	21.00	1
19.84						
C39	CIRCULAR	1.20	1.13	0.30	1.20	1
3.68						
C4	TRAPEZOIDAL	1.50	14.25	0.98	14.00	1
15.93						
C40	CIRCULAR	0.80	0.50	0.20	0.80	1
1.14						
C41	TRIANGULAR	0.50	0.50	0.22	2.00	1
0.34						
C42	TRIANGULAR	0.50	0.50	0.22	2.00	1
0.32						
C43	TRAPEZOIDAL	1.00	8.00	0.71	11.00	1
0.69						
C44	TRIANGULAR	0.50	0.50	0.22	2.00	1
0.32						

C45	CIRCULAR	1.20	1.13	0.30	1.20	1
2.39						
C46	CIRCULAR	1.20	1.13	0.30	1.20	1
2.24						
C47	CIRCULAR	1.20	1.13	0.30	1.20	1
2.25						
C48	CIRCULAR	1.20	1.13	0.30	1.20	1
2.24						
C49	CIRCULAR	1.20	1.13	0.30	1.20	1
2.24						
C5	CIRCULAR	1.50	1.77	0.38	1.50	1
3.43						
C50	CIRCULAR	1.20	1.13	0.30	1.20	1
2.20						
C51	CIRCULAR	0.90	0.64	0.23	0.90	2
0.56						
C52	CIRCULAR	0.90	0.64	0.23	0.90	2
0.77						
C53	EdwardDitch	1.12	8.08	0.32	25.10	1
5.54						
C54	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1
5.18						
C55	EdwardDitch	1.12	8.08	0.32	25.10	1
9.82						
C6	CIRCULAR	1.20	1.13	0.30	1.20	1
2.28						
C7	CIRCULAR	1.20	1.13	0.30	1.20	1
2.23						
C8	CIRCULAR	1.20	1.13	0.30	1.20	1
2.25						
C9	CIRCULAR	1.20	1.13	0.30	1.20	1
2.24						

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Transect Summary
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Transect EdwardDitch
Area:

0.0099	0.0200	0.0305	0.0413	0.0524
0.0638	0.0755	0.0875	0.0999	0.1125
0.1255	0.1388	0.1523	0.1662	0.1804
0.1949	0.2098	0.2249	0.2403	0.2561
0.2722	0.2885	0.3052	0.3222	0.3395
0.3571	0.3751	0.3933	0.4118	0.4307
0.4499	0.4694	0.4891	0.5092	0.5297
0.5504	0.5714	0.5927	0.6144	0.6364
0.6586	0.6812	0.7041	0.7273	0.7514
0.7825	0.8225	0.8719	0.9320	1.0000

Hrad:

0.0695	0.1366	0.2015	0.2645	0.3257
0.3853	0.4434	0.5001	0.5555	0.6098
0.6630	0.7152	0.7665	0.8169	0.8666
0.9154	0.9636	1.0111	1.0580	1.1043
1.1501	1.1953	1.2401	1.2845	1.3284
1.3718	1.4150	1.4577	1.5001	1.5422
1.5839	1.6254	1.6666	1.7075	1.7482

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            1.7886     1.8288     1.8687     1.9085     1.9480
            1.9874     2.0266     2.0655     2.1044     1.9099
            1.5088     1.2774     1.1051     0.9879     1.0000
Width:
            0.1439     0.1484     0.1528     0.1573     0.1618
            0.1662     0.1707     0.1751     0.1796     0.1841
            0.1885     0.1930     0.1975     0.2019     0.2064
            0.2108     0.2153     0.2198     0.2242     0.2287
            0.2331     0.2376     0.2421     0.2465     0.2510
            0.2555     0.2599     0.2644     0.2688     0.2733
            0.2778     0.2822     0.2867     0.2912     0.2956
            0.3001     0.3045     0.3090     0.3135     0.3179
            0.3224     0.3269     0.3313     0.3358     0.3841
            0.5114     0.6388     0.7863     0.9433     1.0000

Transect EdwardDitch-Deeper
Area:
            0.0104     0.0211     0.0321     0.0435     0.0551
            0.0671     0.0794     0.0920     0.1049     0.1181
            0.1317     0.1455     0.1597     0.1742     0.1890
            0.2041     0.2196     0.2353     0.2514     0.2678
            0.2845     0.3015     0.3189     0.3365     0.3545
            0.3728     0.3914     0.4103     0.4295     0.4491
            0.4689     0.4891     0.5096     0.5304     0.5515
            0.5730     0.5947     0.6168     0.6392     0.6619
            0.6849     0.7083     0.7319     0.7559     0.7802
            0.8048     0.8330     0.8741     0.9299     1.0000
Hrad:
            0.0744     0.1460     0.2151     0.2818     0.3464
            0.4092     0.4702     0.5295     0.5874     0.6440
            0.6993     0.7535     0.8065     0.8586     0.9098
            0.9601     1.0096     1.0584     1.1065     1.1539
            1.2007     1.2469     1.2926     1.3377     1.3824
            1.4267     1.4704     1.5138     1.5568     1.5995
            1.6417     1.6837     1.7253     1.7667     1.8077
            1.8485     1.8890     1.9293     1.9694     2.0092
            2.0488     2.0882     2.1274     2.1664     2.2052
            2.2439     1.7162     1.3177     1.0606     1.0000
Width:
            0.1437     0.1480     0.1524     0.1567     0.1610
            0.1653     0.1696     0.1739     0.1782     0.1825
            0.1868     0.1911     0.1954     0.1997     0.2040
            0.2083     0.2126     0.2169     0.2212     0.2255
            0.2298     0.2341     0.2384     0.2427     0.2470
            0.2513     0.2556     0.2599     0.2642     0.2685
            0.2728     0.2771     0.2814     0.2857     0.2900
            0.2943     0.2986     0.3029     0.3073     0.3116
            0.3159     0.3202     0.3245     0.3288     0.3331
            0.3374     0.4682     0.6524     0.8732     1.0000

Transect EdwardDitch-Wider
Area:
            0.0105     0.0213     0.0324     0.0438     0.0555
            0.0674     0.0797     0.0922     0.1051     0.1182
            0.1316     0.1453     0.1593     0.1736     0.1882
            0.2030     0.2182     0.2337     0.2494     0.2654
            0.2817     0.2983     0.3152     0.3324     0.3499
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            0.3677     0.3858     0.4041     0.4227     0.4417
            0.4609     0.4804     0.5002     0.5203     0.5407
            0.5614     0.5823     0.6036     0.6251     0.6470
            0.6691     0.6915     0.7142     0.7372     0.7610
            0.7914     0.8301     0.8776     0.9351     1.0000
Hrad:
            0.0664     0.1308     0.1933     0.2542     0.3135
            0.3713     0.4279     0.4832     0.5373     0.5904
            0.6425     0.6937     0.7440     0.7935     0.8422
            0.8903     0.9376     0.9843     1.0305     1.0760
            1.1211     1.1656     1.2097     1.2533     1.2965
            1.3393     1.3817     1.4237     1.4654     1.5067
            1.5478     1.5885     1.6290     1.6691     1.7090
            1.7487     1.7881     1.8273     1.8663     1.9050
            1.9436     1.9820     2.0201     2.0581     1.8788
            1.4992     1.2757     1.1066     0.9900     1.0000
Width:
            0.1606     0.1650     0.1694     0.1738     0.1781
            0.1825     0.1869     0.1913     0.1956     0.2000
            0.2044     0.2088     0.2131     0.2175     0.2219
            0.2263     0.2306     0.2350     0.2394     0.2438
            0.2481     0.2525     0.2569     0.2613     0.2656
            0.2700     0.2744     0.2788     0.2831     0.2875
            0.2919     0.2963     0.3006     0.3050     0.3094
            0.3138     0.3181     0.3225     0.3269     0.3313
            0.3356     0.3400     0.3444     0.3488     0.3961
            0.5210     0.6458     0.7904     0.9444     1.0000

Transect MarySt
Area:
            0.0005     0.0019     0.0043     0.0077     0.0121
            0.0174     0.0236     0.0308     0.0390     0.0482
            0.0583     0.0694     0.0815     0.0945     0.1085
            0.1234     0.1393     0.1562     0.1740     0.1928
            0.2126     0.2333     0.2549     0.2766     0.2982
            0.3199     0.3416     0.3633     0.3850     0.4067
            0.4284     0.4501     0.4718     0.4935     0.5152
            0.5368     0.5585     0.5805     0.6042     0.6300
            0.6578     0.6877     0.7196     0.7535     0.7895
            0.8275     0.8676     0.9097     0.9538     1.0000
Hrad:
            0.0160     0.0320     0.0480     0.0640     0.0800
            0.0960     0.1120     0.1280     0.1440     0.1600
            0.1760     0.1920     0.2080     0.2240     0.2400
            0.2560     0.2720     0.2880     0.3040     0.3200
            0.3360     0.3520     0.3758     0.4074     0.4390
            0.4705     0.5019     0.5333     0.5646     0.5959
            0.6271     0.6582     0.6893     0.7204     0.7513
            0.7823     0.8131     0.8438     0.8712     0.8949
            0.9152     0.9326     0.9472     0.9595     0.9698
            0.9783     0.9854     0.9912     0.9960     1.0000
Width:
            0.0204     0.0408     0.0613     0.0817     0.1021
            0.1225     0.1429     0.1634     0.1838     0.2042
            0.2246     0.2450     0.2655     0.2859     0.3063
            0.3267     0.3471     0.3676     0.3880     0.4084
            0.4288     0.4492     0.4595     0.4595     0.4595
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0.4595 0.4595 0.4595 0.4595 0.4595
0.4595 0.4595 0.4595 0.4595 0.4595
0.4595 0.4595 0.4811 0.5243 0.5676
0.6108 0.6541 0.6973 0.7405 0.7838
0.8270 0.8703 0.9135 0.9568 1.0000

Transect ND3TOND4
Area:
0.0045 0.0098 0.0160 0.0229 0.0307
0.0393 0.0487 0.0589 0.0699 0.0817
0.0944 0.1078 0.1221 0.1372 0.1531
0.1698 0.1873 0.2057 0.2254 0.2478
0.2709 0.2941 0.3175 0.3410 0.3647
0.3885 0.4124 0.4365 0.4607 0.4850
0.5094 0.5340 0.5588 0.5836 0.6087
0.6338 0.6591 0.6845 0.7100 0.7357
0.7615 0.7875 0.8136 0.8398 0.8662
0.8927 0.9193 0.9461 0.9730 1.0000
Hrad:
0.0300 0.0558 0.0790 0.1004 0.1207
0.1401 0.1589 0.1772 0.1951 0.2127
0.2301 0.2473 0.2642 0.2811 0.2978
0.3144 0.3310 0.3474 0.3394 0.3420
0.3692 0.3960 0.4222 0.4480 0.4734
0.4983 0.5228 0.5470 0.5707 0.5941
0.6171 0.6398 0.6621 0.6842 0.7059
0.7273 0.7484 0.7692 0.7898 0.8101
0.8301 0.8499 0.8695 0.8888 0.9078
0.9267 0.9453 0.9638 0.9820 1.0000
Width:
0.1815 0.2115 0.2415 0.2715 0.3015
0.3315 0.3615 0.3915 0.4215 0.4515
0.4815 0.5115 0.5415 0.5715 0.6015
0.6315 0.6615 0.6915 0.7788 0.8500
0.8550 0.8600 0.8650 0.8700 0.8750
0.8800 0.8850 0.8900 0.8950 0.9000
0.9050 0.9100 0.9150 0.9200 0.9250
0.9300 0.9350 0.9400 0.9450 0.9500
0.9550 0.9600 0.9650 0.9700 0.9750
0.9800 0.9850 0.9900 0.9950 1.0000

Transect ND4.5TO5
Area:
0.0031 0.0066 0.0107 0.0152 0.0203
0.0259 0.0319 0.0385 0.0456 0.0532
0.0613 0.0699 0.0790 0.0887 0.0994
0.1108 0.1231 0.1362 0.1502 0.1650
0.1807 0.1972 0.2145 0.2327 0.2517
0.2716 0.2923 0.3138 0.3362 0.3594
0.3835 0.4083 0.4341 0.4607 0.4881
0.5163 0.5454 0.5753 0.6061 0.6377
0.6702 0.7035 0.7376 0.7726 0.8084
0.8450 0.8825 0.9208 0.9600 1.0000
Hrad:
0.0379 0.0708 0.1005 0.1280 0.1540
0.1789 0.2029 0.2262 0.2490 0.2715
0.2935 0.3153 0.3364 0.3475 0.3599

0.3735 0.3879 0.4030 0.4187 0.4349
0.4516 0.4686 0.4859 0.5035 0.5213
0.5393 0.5575 0.5759 0.5944 0.6130
0.6317 0.6506 0.6695 0.6885 0.7076
0.7268 0.7460 0.7653 0.7846 0.8040
0.8235 0.8429 0.8625 0.8820 0.9016
0.9212 0.9409 0.9606 0.9803 1.0000

Width:

0.0817 0.0942 0.1066 0.1191 0.1315
0.1440 0.1565 0.1689 0.1814 0.1938
0.2063 0.2188 0.2315 0.2523 0.2731
0.2938 0.3146 0.3354 0.3562 0.3769
0.3977 0.4185 0.4392 0.4600 0.4808
0.5015 0.5223 0.5431 0.5638 0.5846
0.6054 0.6262 0.6469 0.6677 0.6885
0.7092 0.7300 0.7508 0.7715 0.7923
0.8131 0.8338 0.8546 0.8754 0.8962
0.9169 0.9377 0.9585 0.9792 1.0000

Transect ND4TOND4_5

Area:

0.0045 0.0098 0.0160 0.0229 0.0307
0.0393 0.0487 0.0589 0.0699 0.0817
0.0944 0.1078 0.1221 0.1372 0.1531
0.1698 0.1873 0.2057 0.2254 0.2478
0.2709 0.2941 0.3175 0.3410 0.3647
0.3885 0.4124 0.4365 0.4607 0.4850
0.5094 0.5340 0.5588 0.5836 0.6087
0.6338 0.6591 0.6845 0.7100 0.7357
0.7615 0.7875 0.8136 0.8398 0.8662
0.8927 0.9193 0.9461 0.9730 1.0000

Hrad:

0.0300 0.0558 0.0790 0.1004 0.1207
0.1401 0.1589 0.1772 0.1951 0.2127
0.2301 0.2473 0.2642 0.2811 0.2978
0.3144 0.3310 0.3474 0.3394 0.3420
0.3692 0.3960 0.4222 0.4480 0.4734
0.4983 0.5228 0.5470 0.5707 0.5941
0.6171 0.6398 0.6621 0.6842 0.7059
0.7273 0.7484 0.7692 0.7898 0.8101
0.8301 0.8499 0.8695 0.8888 0.9078
0.9267 0.9453 0.9638 0.9820 1.0000

Width:

0.1815 0.2115 0.2415 0.2715 0.3015
0.3315 0.3615 0.3915 0.4215 0.4515
0.4815 0.5115 0.5415 0.5715 0.6015
0.6315 0.6615 0.6915 0.7788 0.8500
0.8550 0.8600 0.8650 0.8700 0.8750
0.8800 0.8850 0.8900 0.8950 0.9000
0.9050 0.9100 0.9150 0.9200 0.9250
0.9300 0.9350 0.9400 0.9450 0.9500
0.9550 0.9600 0.9650 0.9700 0.9750
0.9800 0.9850 0.9900 0.9950 1.0000

****

NOTE: The summary statistics displayed in this report are

based on results found at every computational time step,
not just on results from each reporting time step.
****

****
Analysis Options
****
Flow Units ..... CMS
Process Models:
  Rainfall/Runoff ..... YES
  RDII ..... NO
  Snowmelt ..... NO
  Groundwater ..... NO
  Flow Routing ..... YES
  Ponding Allowed ..... NO
  Water Quality ..... NO
Infiltration Method ..... CURVE_NUMBER
Flow Routing Method ..... DYNWAVE
Surcharge Method ..... EXTRAN
Starting Date 10/11/2022 00:00:00
Ending Date 10/12/2022 00:00:00
Antecedent Dry Days 0.0
Report Time Step 00:01:00
Wet Time Step 00:05:00
Dry Time Step 00:05:00
Routing Time Step ..... 1.00 sec
Variable Time Step ..... YES
Maximum Trials 8
Number of Threads 4
Head Tolerance ..... 0.001500 m

**********	Volume	Depth
Runoff Quantity Continuity	hectare-m	mm
**********	---	---
Total Precipitation	12.825	26.371
Evaporation Loss	0.000	0.000
Infiltration Loss	10.493	21.576
Surface Runoff	1.731	3.559
Final Storage	0.614	1.263
Continuity Error (%)	-0.101	

**********	Volume	Volume
Flow Routing Continuity	hectare-m	10^6 ltr
**********	---	---
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	1.731	17.309
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	1.298	12.980
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
Initial Stored Volume	0.000	0.001
Final Stored Volume	0.436	4.362

Continuity Error (%) ..... -0.186

****
Highest Continuity Errors
****
Node NODE2B (2.89%)
Node NODE5_US (2.81%)
Node AMH1 (-2.02%)
Node CBMH1-S (1.76%)
Node AL_POND (1.43%)

****
Time-Step Critical Elements
****
None

****
Highest Flow Instability Indexes
****
Link C5 (15)
Link OL6 (14)
Link OL7 (14)
Link C43 (4)
Link C52 (1)

****
Routing Time Step Summary
****
Minimum Time Step : 0.50 sec
Average Time Step : 1.00 sec
Maximum Time Step : 1.00 sec
Percent in Steady State : 0.00
Average Iterations per Step : 2.00
Percent Not Converging : 0.00
Time Step Frequencies :
1.000 - 0.871 sec : 100.00 %
0.871 - 0.758 sec : 0.00 %
0.758 - 0.660 sec : 0.00 %
0.660 - 0.574 sec : 0.00 %
0.574 - 0.500 sec : 0.00 %

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Imperv Runoff mm	Perv Runoff mm	Total Runoff 10^6 ltr	Peak Runoff CMS	Runoff Coeff

1_b1*			26.37	0.00	0.00	24.67	0.50		
0.00	0.50	0.15	0.12	0.019					
1a_1			26.37	0.00	0.00	24.67	0.50		
0.00	0.50	0.10	0.08	0.019					
1a_2A			26.37	0.00	0.00	25.17	0.00		
0.00	0.00	0.00	0.00	0.000					
1a_2B			26.37	0.00	0.00	25.17	0.00		
0.00	0.00	0.00	0.00	0.000					
201			26.37	0.00	0.00	12.57	14.96		
0.77	12.43	0.98	0.32	0.471					
202A			26.37	0.00	0.00	11.61	15.94		
1.39	13.34	3.21	0.92	0.506					
202B			26.37	0.00	0.00	19.80	6.74		
0.00	5.26	0.09	0.04	0.199					
203			26.37	0.00	0.00	13.73	13.72		
0.31	11.28	0.55	0.20	0.428					
2E			26.37	0.00	0.00	24.67	0.50		
0.00	0.50	0.05	0.04	0.019					
2W			26.37	0.00	0.00	13.08	11.98		
0.00	11.98	4.68	1.81	0.454					
3			26.37	0.00	0.00	23.63	1.51		
0.00	1.51	0.63	0.49	0.057					
4			26.37	0.00	0.00	24.64	0.50		
0.00	0.50	0.62	0.48	0.019					
5			26.37	0.00	0.00	12.31	12.79		
0.02	12.81	0.40	0.25	0.486					
6			26.37	0.00	0.00	13.08	12.04		
0.00	12.04	0.58	0.35	0.457					
7			26.37	0.00	0.00	20.15	5.06		
0.00	5.06	0.49	0.33	0.192					
8_1			26.37	0.00	0.00	24.67	0.50		
0.00	0.50	0.05	0.04	0.019					
8_3			26.37	0.00	0.00	24.67	0.50		
0.00	0.50	0.07	0.06	0.019					
8_4			26.37	0.00	0.00	24.67	0.50		
0.00	0.50	0.02	0.01	0.019					
9*			26.37	0.00	0.00	24.67	0.50		
0.00	0.50	0.41	0.32	0.019					
A1			26.37	0.00	0.00	16.11	9.03		
0.00	9.03	0.74	0.46	0.343					
A10			26.37	0.00	0.00	16.11	9.07		
0.00	9.07	0.31	0.23	0.344					
A12			26.37	0.00	0.00	16.11	9.05		
0.00	9.05	0.01	0.01	0.343					
A13			26.37	0.00	0.00	16.11	9.07		
0.00	9.07	0.02	0.02	0.344					
A14			26.37	0.00	0.00	16.11	9.07		
0.00	9.07	0.02	0.02	0.344					
A15			26.37	0.00	0.00	16.11	9.06		
0.00	9.06	0.02	0.02	0.344					
A16			26.37	0.00	0.00	16.11	9.07		
0.00	9.07	0.02	0.02	0.344					
A17			26.37	0.00	0.00	16.11	9.06		
0.00	9.06	0.01	0.01	0.343					
A2			26.37	0.00	0.00	16.11	9.05		
0.00	9.05	0.01	0.01	0.343					
A3			26.37	0.00	0.00	16.11	9.17		
0.00	9.17	0.01	0.01	0.348					

A4		26.37	0.00	0.00	16.11	9.07	
0.00	9.07	0.40	0.31	0.344			
A5		26.37	0.00	0.00	16.11	9.06	
0.00	9.06	0.01	0.01	0.344			
A6		26.37	0.00	0.00	16.11	9.07	
0.00	9.07	0.02	0.01	0.344			
A7		26.37	0.00	0.00	16.11	9.07	
0.00	9.07	0.37	0.28	0.344			
A8		26.37	0.00	0.00	16.11	9.07	
0.00	9.07	0.02	0.01	0.344			
A9		26.37	0.00	0.00	16.11	9.08	
0.00	9.08	0.02	0.02	0.344			
EXT1		26.37	0.00	0.00	14.84	10.33	
0.00	10.33	0.95	0.70	0.392			
EXT2		26.37	0.00	0.00	20.14	5.04	
0.00	5.04	0.08	0.06	0.191			
MARYEXT		26.37	0.00	0.00	9.20	15.52	
0.36	15.88	1.21	0.62	0.602			

****
Node Depth Summary
****

Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
ACBMH1	JUNCTION	0.00	0.00	258.48	0 00:00	0.00
ACBMH2	JUNCTION	0.00	0.00	258.03	0 00:00	0.00
ACBMH3	JUNCTION	0.00	0.00	257.38	0 00:00	0.00
ADCBMH1	JUNCTION	0.00	0.00	257.52	0 00:00	0.00
AMH1	JUNCTION	0.02	0.40	256.60	0 01:30	0.40
CBMH1	JUNCTION	0.02	0.29	255.79	0 01:32	0.29
CBMH1-S	JUNCTION	0.00	0.05	257.61	0 01:30	0.05
CBMH2	JUNCTION	0.02	0.33	255.37	0 01:32	0.33
CBMH2-S	JUNCTION	0.00	0.08	257.19	0 01:30	0.08
CBMH3	JUNCTION	0.02	0.34	255.16	0 01:32	0.34
CBMH3-S	JUNCTION	0.00	0.08	257.01	0 01:31	0.08
CBMH4	JUNCTION	0.03	0.48	254.77	0 01:32	0.48
CBMH4-S	JUNCTION	0.00	0.10	256.62	0 01:30	0.10
CBMH5	JUNCTION	0.03	0.50	254.64	0 01:32	0.49
CBMH5-S	JUNCTION	0.00	0.09	256.47	0 01:31	0.09
DCBMH10	JUNCTION	0.04	0.61	253.93	0 01:33	0.61
DCBMH10-S	JUNCTION	0.00	0.05	255.03	0 01:33	0.05
DCBMH6	JUNCTION	0.03	0.56	254.36	0 01:32	0.56
DCBMH6-S	JUNCTION	0.00	0.09	255.86	0 01:31	0.09
DCBMH7	JUNCTION	0.03	0.63	254.25	0 01:33	0.63
DCBMH7-S	JUNCTION	0.01	0.10	255.55	0 01:31	0.10
DCBMH8	JUNCTION	0.03	0.64	254.15	0 01:33	0.64
DCBMH8-S	JUNCTION	0.01	0.09	255.38	0 01:32	0.09
DCBMH9	JUNCTION	0.03	0.63	254.05	0 01:33	0.63
DCBMH9-S	JUNCTION	0.01	0.09	255.23	0 01:33	0.09
J1	JUNCTION	0.14	0.18	247.35	0 01:57	0.18
J10	JUNCTION	0.01	0.17	248.27	0 01:50	0.17
J10_s	JUNCTION	0.00	0.03	249.16	0 01:30	0.03
J11	JUNCTION	0.00	0.00	247.41	0 00:00	0.00

J12	JUNCTION	0.00	0.00	266.00	0	00:00	0.00
J14	JUNCTION	0.03	0.20	248.26	0	01:50	0.20
J15	JUNCTION	0.00	0.00	247.37	0	00:00	0.00
J2	JUNCTION	0.02	0.29	261.04	0	01:30	0.28
J3	JUNCTION	0.14	0.28	250.66	0	02:12	0.28
J4	JUNCTION	0.02	0.22	259.42	0	01:30	0.22
J5	JUNCTION	0.03	0.25	248.48	0	01:48	0.25
J6	JUNCTION	0.01	0.23	257.98	0	01:30	0.23
J7	JUNCTION	0.02	0.27	257.02	0	01:31	0.27
J9	JUNCTION	0.00	0.00	259.20	0	00:00	0.00
MH1	JUNCTION	0.02	0.29	256.08	0	01:31	0.29
MH10	JUNCTION	0.12	0.31	247.38	0	01:38	0.31
MH12	JUNCTION	0.12	0.31	247.71	0	01:37	0.31
MH13	JUNCTION	0.12	0.31	248.04	0	01:36	0.31
MH14	JUNCTION	0.12	0.31	248.37	0	01:36	0.31
MH15	JUNCTION	0.12	0.33	248.72	0	01:35	0.33
MH16	JUNCTION	0.12	0.33	249.05	0	01:34	0.33
MH17	JUNCTION	0.12	0.31	249.36	0	01:33	0.31
MH1-S	JUNCTION	0.00	0.04	257.91	0	01:30	0.04
MH2	JUNCTION	0.03	0.53	254.46	0	01:32	0.53
MH2-S	JUNCTION	0.00	0.09	256.17	0	01:30	0.09
ND5_DS	JUNCTION	0.08	0.18	244.32	0	02:23	0.18
NODE1	JUNCTION	0.00	0.00	263.00	0	00:00	0.00
NODE2	JUNCTION	0.01	0.10	255.90	0	01:36	0.10
NODE2B	JUNCTION	0.03	0.07	252.52	0	02:09	0.07
NODE3	JUNCTION	0.10	0.23	252.49	0	02:13	0.23
NODE3B	JUNCTION	0.01	0.23	252.49	0	01:34	0.23
NODE3B_1	JUNCTION	0.01	0.12	248.98	0	01:47	0.12
NODE4_DS	JUNCTION	0.03	0.21	246.44	0	01:54	0.21
NODE4_US	JUNCTION	0.08	0.34	247.61	0	01:54	0.34
NODE4B_1	JUNCTION	0.03	0.17	245.17	0	02:09	0.17
NODE5_US	JUNCTION	0.16	0.31	244.61	0	02:23	0.31
NODE6	JUNCTION	0.12	0.33	250.65	0	01:30	0.33
NODE6_1	JUNCTION	0.12	0.32	250.25	0	01:31	0.32
NODE6_S	JUNCTION	0.00	0.10	252.80	0	01:30	0.10
NODE7	JUNCTION	0.00	0.02	250.93	0	01:30	0.02
NODE7_2	JUNCTION	0.12	0.33	249.82	0	01:32	0.33
NODE7_s	JUNCTION	0.11	0.30	249.48	0	01:33	0.30
NODE8	JUNCTION	0.08	0.23	246.97	0	01:43	0.23
NODE8_S	JUNCTION	0.00	0.08	247.70	0	01:25	0.08
PNDOUT	JUNCTION	0.19	0.21	253.21	0	04:51	0.21
J8	OUTFALL	0.00	0.00	253.27	0	00:00	0.00
MAD	OUTFALL	0.08	0.23	246.03	0	01:43	0.23
OF1	OUTFALL	0.03	0.60	253.87	0	01:34	0.60
OF2	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
OF3	OUTFALL	0.01	0.22	259.22	0	01:30	0.22
OF4	OUTFALL	0.02	0.07	244.21	0	02:23	0.07
AL_POND	STORAGE	0.40	0.54	253.54	0	04:49	0.54
SU1	STORAGE	0.00	0.00	0.00	0	00:00	0.00
SWMF1	STORAGE	0.55	0.80	249.00	0	04:54	0.80
SWMF2	STORAGE	0.31	0.49	248.04	0	04:59	0.49

****
Node Inflow Summary
****

Node	Type	Maximum Lateral Inflow CMS	Maximum Total Inflow CMS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
ACBMH1	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
ACBMH2	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
ACBMH3	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
ADCBMH1	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
AMH1	JUNCTION	0.697	0.697	0 01:30	0.945	0.945	-1.981
CBMH1	JUNCTION	0.000	0.445	0 01:32	0	0.783	0.021
CBMH1-S	JUNCTION	0.006	0.048	0 01:30	0.00717	0.0393	1.791
CBMH2	JUNCTION	0.000	0.581	0 01:32	0	1.06	-0.011
CBMH2-S	JUNCTION	0.314	0.358	0 01:30	0.414	0.453	-0.190
CBMH3	JUNCTION	0.000	0.595	0 01:32	0	1.06	0.011
CBMH3-S	JUNCTION	0.007	0.200	0 01:30	0.00948	0.19	0.543
CBMH4	JUNCTION	0.000	0.805	0 01:32	0	1.42	-0.007
CBMH4-S	JUNCTION	0.294	0.464	0 01:30	0.387	0.567	-0.252
CBMH5	JUNCTION	0.000	0.827	0 01:32	0	1.44	0.000
CBMH5-S	JUNCTION	0.013	0.237	0 01:30	0.0168	0.226	0.692
DCBMH10	JUNCTION	0.000	1.129	0 01:34	0	1.79	0.004
DCBMH10-S	JUNCTION	0.018	0.161	0 01:33	0.0223	0.289	-0.020
DCBMH6	JUNCTION	0.000	0.976	0 01:32	0	1.66	-0.004
DCBMH6-S	JUNCTION	0.010	0.333	0 01:30	0.0131	0.366	-0.017
DCBMH7	JUNCTION	0.000	1.035	0 01:33	0	1.71	0.000
DCBMH7-S	JUNCTION	0.017	0.291	0 01:31	0.0216	0.353	-0.009
DCBMH8	JUNCTION	0.000	1.081	0 01:33	0	1.74	0.005
DCBMH8-S	JUNCTION	0.016	0.237	0 01:31	0.02	0.326	0.048
DCBMH9	JUNCTION	0.000	1.127	0 01:33	0	1.79	-0.002

DCBMH9-S	JUNCTION	0.016	0.199	0	01:32	0.0199	0.309	0.088
J1	JUNCTION	0.039	0.044	0	01:30	0.0879	2.51	0.637
J10	JUNCTION	0.000	0.282	0	01:48	0	1.07	-0.116
J10_s	JUNCTION	0.056	0.056	0	01:30	0.071	0.071	-0.178
J11	JUNCTION	0.000	0.000	0	00:00	0	0	0.000 ltr
J12	JUNCTION	0.000	0.000	0	00:00	0	0	0.000 ltr
J14	JUNCTION	0.196	0.389	0	01:47	0.548	2.35	0.239
J15	JUNCTION	0.000	0.000	0	00:00	0	0	0.000 ltr
J2	JUNCTION	0.623	0.623	0	01:30	1.21	1.21	-0.014
J3	JUNCTION	0.000	0.164	0	02:13	0	3.81	0.029
J4	JUNCTION	0.000	0.618	0	01:30	0	1.21	0.019
J5	JUNCTION	0.000	0.283	0	01:47	0	1.08	0.176
J6	JUNCTION	0.457	0.457	0	01:30	0.737	0.737	-0.027
J7	JUNCTION	0.000	0.442	0	01:30	0	0.737	-0.010
J9	JUNCTION	0.000	0.000	0	00:00	0	0	0.000 ltr
MH1	JUNCTION	0.000	0.451	0	01:31	0	0.783	0.038
MH10	JUNCTION	0.000	0.329	0	01:38	0	4.38	0.083
MH12	JUNCTION	0.000	0.330	0	01:37	0	4.39	0.090
MH13	JUNCTION	0.000	0.332	0	01:36	0	4.39	0.081
MH14	JUNCTION	0.000	0.322	0	01:35	0	4.32	0.099
MH15	JUNCTION	0.000	0.325	0	01:34	0	4.33	0.093
MH16	JUNCTION	0.000	0.328	0	01:33	0	4.33	0.090
MH17	JUNCTION	0.000	0.329	0	01:33	0	4.33	0.056
MH1-S	JUNCTION	0.061	0.061	0	01:30	0.0784	0.0784	-0.344
MH2	JUNCTION	0.000	0.928	0	01:32	0	1.63	-0.002
MH2-S	JUNCTION	0.251	0.439	0	01:30	0.33	0.542	-0.177
ND5_DS	JUNCTION	0.000	0.302	0	02:23	0	4.9	-0.052
NODE1	JUNCTION	0.000	0.000	0	00:00	0	0	0.000 ltr
NODE2	JUNCTION	0.973	0.973	0	01:30	1.24	1.24	-0.020
NODE2B	JUNCTION	0.039	0.317	0	01:52	0.0487	4.07	2.971

NODE3	JUNCTION	0.000	0.223	0	02:09	0	
3.97	1.106						
NODE3B	JUNCTION	0.594	0.594	0	01:30	0.981	
1.1	-0.446						
NODE3B_1	JUNCTION	0.000	0.329	0	01:39	0	
1.08	0.541						
NODE4_DS	JUNCTION	0.000	0.376	0	01:54	0	
2.42	0.281						
NODE4_US	JUNCTION	0.080	0.389	0	01:50	0.101	
2.44	0.703						
NODE4B_1	JUNCTION	0.000	0.434	0	02:01	0	
2.42	1.141						
NODE5_US	JUNCTION	0.119	0.367	0	02:08	0.151	
5.04	2.896						
NODE6	JUNCTION	0.000	0.327	0	01:30	0	
4.3	0.059						
NODE6_1	JUNCTION	0.000	0.323	0	01:30	0	
4.3	0.112						
NODE6_S	JUNCTION	0.332	0.332	0	01:30	0.492	
0.492	-0.029						
NODE7	JUNCTION	0.038	0.039	0	01:30	0.048	
0.0485	-0.214						
NODE7_2	JUNCTION	0.000	0.316	0	01:32	0	
4.29	0.112						
NODE7_s	JUNCTION	0.000	0.311	0	01:33	0	
4.29	0.059						
NODE8	JUNCTION	0.000	0.332	0	01:38	0	
4.4	0.545						
NODE8_S	JUNCTION	0.014	0.014	0	01:28	0.0172	
0.0173	-0.078						
PNDOUT	JUNCTION	0.000	0.042	0	04:48	0	
2.79	0.430						
J8	OUTFALL	0.000	0.161	0	01:33	0	
0.289	0.000						
MAD	OUTFALL	0.000	0.261	0	01:43	0	
4.37	0.000						
OF1	OUTFALL	0.006	1.132	0	01:34	0.00706	
1.79	0.000						
OF2	OUTFALL	0.320	0.320	0	01:30	0.412	
0.412	0.000						
OF3	OUTFALL	0.000	0.617	0	01:30	0	
1.21	0.000						
OF4	OUTFALL	0.000	0.302	0	02:23	0	
4.9	0.000						
AL_POND	STORAGE	1.808	2.448	0	01:30	4.68	
5.64	1.446						
SU1	STORAGE	0.000	0.000	0	00:00	0	
0	0.000 ltr						
SWMF1	STORAGE	0.325	0.325	0	01:30	0.984	
0.984	0.003						
SWMF2	STORAGE	0.923	0.923	0	01:30	3.21	
3.21	0.003						

****
Node Surcharge Summary
****

No nodes were surcharged.

****
Node Flooding Summary
****

No nodes were flooded.

****
Storage Volume Summary
****

Storage Unit	Average Volume 1000 m3	Avg Pcnt Full	Evap Pcnt Loss	Exfil Pcnt Loss	Maximum Volume 1000 m3	Max Pcnt Full	Time of Max Occurrence days hr:min	Maximum Outflow CMS
AL_POND	3.596	9	0	0	4.840	12	0 04:49	0.042
SU1	0.000	0	0	0	0.000	0	0 00:00	0.000
SWMF1	0.513	13	0	0	0.810	20	0 04:54	0.011
SWMF2	1.573	9	0	0	2.576	14	0 04:59	0.040

****
Outfall Loading Summary
****

Outfall Node	Flow Freq Pcnt	Avg Flow CMS	Max Flow CMS	Total Volume 10^6 ltr
J8	24.99	0.013	0.161	0.289
MAD	97.89	0.052	0.261	4.373
OF1	65.25	0.032	1.132	1.794
OF2	29.99	0.016	0.320	0.412
OF3	83.04	0.017	0.617	1.212
OF4	94.98	0.060	0.302	4.900
System	66.02	0.189	2.065	12.980

****
Link Flow Summary
****

	Maximum	Time of Max	Maximum	Max/	Max/

Link	Type	|Flow| CMS	Occurrence days	Occurrence hr:min	|Veloc| m/sec	Full Flow	Full Depth
C1	CONDUIT	0.445	0	01:32	2.33	0.16	0.27
C1_1	CHANNEL	0.329	0	01:39	0.52	0.05	0.14
C1_2	CHANNEL	0.283	0	01:47	0.39	0.03	0.16
C10	CONDUIT	0.322	0	01:35	1.34	0.14	0.27
C11	CONDUIT	0.261	0	01:43	0.43	0.09	0.29
C12	CONDUIT	0.447	0	01:32	2.11	0.16	0.29
C12-S	CHANNEL	0.045	0	01:30	0.23	0.02	0.33
C13	CONDUIT	0.583	0	01:32	2.47	0.21	0.32
C13-S	CHANNEL	0.193	0	01:30	0.60	0.10	0.41
C14	CONDUIT	0.597	0	01:32	1.93	0.22	0.39
C14-S	CHANNEL	0.178	0	01:31	0.46	0.09	0.46
C15	CONDUIT	0.807	0	01:32	2.06	0.41	0.47
C15-S	CHANNEL	0.226	0	01:30	0.54	0.16	0.47
C16	CONDUIT	0.829	0	01:32	1.98	0.42	0.49
C16-S	CHANNEL	0.207	0	01:31	0.55	0.11	0.45
C17	CONDUIT	0.930	0	01:33	2.04	0.47	0.52
C17-S	CHANNEL	0.324	0	01:30	0.81	0.14	0.46
C18	CONDUIT	0.978	0	01:33	1.94	0.49	0.57
C18-S	CHANNEL	0.277	0	01:31	0.66	0.13	0.47
C19	CONDUIT	1.037	0	01:33	1.90	0.64	0.60
C19-S	CHANNEL	0.226	0	01:32	0.56	0.15	0.47
C1-S	CHANNEL	0.043	0	01:30	0.49	0.02	0.23
C2	CONDUIT	0.376	0	01:54	2.19	0.03	0.18
C20	CONDUIT	1.084	0	01:33	1.98	0.70	0.61
C20-S	CHANNEL	0.189	0	01:32	0.51	0.12	0.44
C21	CONDUIT	1.129	0	01:34	2.11	0.72	0.59
C21-S	CHANNEL	0.153	0	01:33	0.71	0.10	0.34
C22	CONDUIT	1.130	0	01:34	2.18	0.72	0.58
C23	CONDUIT	0.618	0	01:30	3.18	0.07	0.17
C24	CONDUIT	0.000	0	00:00	0.00	0.00	0.08
C25	CONDUIT	0.442	0	01:30	2.29	0.05	0.17
C26	CONDUIT	0.434	0	01:31	1.94	0.07	0.18
C28	CONDUIT	0.617	0	01:30	3.92	0.05	0.14
C29	CONDUIT	0.000	0	00:00	0.00	0.00	0.05
C3	CONDUIT	0.434	0	02:01	0.47	0.04	0.17
C30	CONDUIT	0.000	0	00:00	0.00	0.00	0.05
C31	CONDUIT	0.290	0	01:51	0.28	0.01	0.07
C32	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C33	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C34	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C35	CONDUIT	0.000	0	00:00	0.00	0.00	0.29
C36	CONDUIT	0.042	0	04:51	0.12	0.00	0.13
C37	CONDUIT	0.164	0	02:13	0.89	0.09	0.25
C38	CONDUIT	0.223	0	02:09	0.10	0.01	0.15
C39	CONDUIT	0.666	0	01:31	3.75	0.18	0.25
C4	CONDUIT	0.316	0	02:09	0.28	0.02	0.16
C40	CONDUIT	0.015	0	01:25	0.90	0.01	0.17
C41	CONDUIT	0.001	0	01:30	0.17	0.00	0.12
C42	CONDUIT	0.000	0	01:30	0.04	0.00	0.11
C43	CONDUIT	0.302	0	02:23	0.45	0.44	0.13
C44	CONDUIT	0.000	0	01:30	0.06	0.00	0.06
C45	CONDUIT	0.310	0	01:33	1.38	0.13	0.25
C46	CONDUIT	0.328	0	01:33	1.35	0.15	0.27
C47	CONDUIT	0.321	0	01:36	1.40	0.14	0.26

C48	CONDUIT	0.330	0	01:37	1.42	0.15	0.26
C49	CONDUIT	0.329	0	01:38	1.41	0.15	0.26
C5	CONDUIT	0.302	0	02:23	1.78	0.09	0.16
C50	CONDUIT	0.328	0	01:38	1.92	0.15	0.22
C51	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C52	CONDUIT	0.282	0	01:48	1.28	0.18	0.23
C53	CHANNEL	0.381	0	01:50	0.34	0.07	0.24
C54	CONDUIT	0.048	0	02:01	0.32	0.01	0.24
C55	CHANNEL	0.282	0	01:49	0.39	0.03	0.17
C6	CONDUIT	0.323	0	01:30	1.32	0.14	0.27
C7	CONDUIT	0.316	0	01:32	1.29	0.14	0.27
C8	CONDUIT	0.311	0	01:33	1.33	0.14	0.26
C9	CONDUIT	0.325	0	01:34	1.28	0.15	0.28
EDORF	ORIFICE	0.042	0	04:48			1.00
C27	WEIR	0.161	0	01:33			0.23
W1	WEIR	0.056	0	02:13			0.04
W2	WEIR	0.000	0	00:00			0.00
W3	WEIR	0.000	0	00:00			0.00
W4	WEIR	0.000	0	00:00			0.00
W5	WEIR	0.000	0	00:00			0.00
WEIR1	WEIR	0.000	0	00:00			0.00
WEIR2	WEIR	0.000	0	00:00			0.00
CBMH10-IC	DUMMY	0.000	0	00:00			
CBMH1-IC	DUMMY	0.000	0	00:00			
CBMH2-IC	DUMMY	0.140	0	01:30			
CBMH3-IC	DUMMY	0.014	0	01:31			
CBMH4-IC	DUMMY	0.190	0	01:30			
CBMH5-IC	DUMMY	0.020	0	01:31			
CBMH6-IC	DUMMY	0.051	0	01:31			
CBMH7-IC	DUMMY	0.061	0	01:31			
CBMH8-IC	DUMMY	0.045	0	01:32			
CBMH9-IC	DUMMY	0.043	0	01:33			
MH1-IC	DUMMY	0.018	0	01:30			
MH2-IC	DUMMY	0.082	0	01:30			
OL1	DUMMY	0.018	0	01:30			
OL11	DUMMY	0.164	0	02:13			
OL2	DUMMY	0.035	0	01:30			
OL3	DUMMY	0.026	0	01:30			
OL4	DUMMY	0.000	0	00:00			
OL5	DUMMY	0.056	0	01:30			
OL6	DUMMY	0.164	0	01:30			
OL7	DUMMY	0.164	0	01:30			
OL8	DUMMY	0.039	0	01:30			
SWMF_Outlet	DUMMY	0.011	0	04:40			
SWMF2_Outlet	DUMMY	0.040	0	04:59			

****
Flow Classification Summary
****

	Adjusted	Fraction of Time in Flow Class						
	/Actual	Up	Down	Sub	Sup	Up	Down	Norm
Inlet								

Conduit	Length	Dry	Dry	Dry	Crit	Crit	Crit	Crit	Ltd	Ctrl
C1	1.00	0.00	0.00	0.00	0.72	0.28	0.00	0.00	0.93	0.00
C1_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.80	0.00
C1_2	1.00	0.02	0.00	0.00	0.98	0.00	0.00	0.00	0.94	0.00
C10	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00
C11	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.02	0.00
C12	1.00	0.00	0.00	0.00	0.78	0.22	0.00	0.00	0.99	0.00
C12-S	1.00	0.00	0.00	0.00	0.77	0.22	0.00	0.00	0.17	0.00
C13	1.00	0.00	0.00	0.00	0.71	0.29	0.00	0.00	0.74	0.00
C13-S	1.00	0.00	0.47	0.00	0.52	0.01	0.00	0.00	0.96	0.00
C14	1.00	0.00	0.00	0.00	0.85	0.15	0.00	0.00	0.99	0.00
C14-S	1.00	0.00	0.00	0.00	0.71	0.29	0.00	0.00	0.09	0.00
C15	1.00	0.00	0.00	0.00	0.85	0.15	0.00	0.00	0.52	0.00
C15-S	1.00	0.00	0.48	0.00	0.52	0.00	0.00	0.00	0.93	0.00
C16	1.00	0.00	0.00	0.00	0.89	0.11	0.00	0.00	0.98	0.00
C16-S	1.00	0.00	0.00	0.00	0.68	0.32	0.00	0.00	0.16	0.00
C17	1.00	0.00	0.00	0.00	0.85	0.15	0.00	0.00	0.86	0.00
C17-S	1.00	0.00	0.41	0.00	0.57	0.02	0.00	0.00	0.96	0.00
C18	1.00	0.00	0.00	0.00	0.92	0.08	0.00	0.00	0.91	0.00
C18-S	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.99	0.00
C19	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.91	0.00
C19-S	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.96	0.00
C1-S	1.00	0.00	0.64	0.00	0.35	0.01	0.00	0.00	0.98	0.00
C2	1.00	0.00	0.00	0.00	0.03	0.97	0.00	0.00	0.00	0.98
C20	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.87	0.00
C20-S	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.99	0.00
C21	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.81	0.00
C21-S	1.00	0.00	0.00	0.00	0.02	0.98	0.00	0.00	0.00	0.00
C22	1.00	0.00	0.00	0.00	0.83	0.16	0.00	0.00	0.00	0.00

C23	1.00	0.00	0.00	0.00	0.56	0.44	0.00	0.00	0.00
0.00									
C24	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C25	1.00	0.00	0.00	0.00	0.77	0.23	0.00	0.00	0.97
0.00									
C26	1.00	0.00	0.00	0.00	0.82	0.18	0.00	0.00	0.98
0.00									
C28	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.12
0.00									
C29	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.91
0.00									
C30	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C31	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.92
0.00									
C32	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C33	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C34	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C35	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C36	1.00	0.01	0.06	0.00	0.00	0.00	0.93	0.00	0.00
0.00									
C37	1.00	0.00	0.04	0.00	0.96	0.00	0.00	0.00	0.00
0.00									
C38	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.93
0.00									
C39	1.00	0.00	0.00	0.00	0.93	0.07	0.00	0.00	0.93
0.00									
C4	1.00	0.00	0.05	0.00	0.95	0.00	0.00	0.00	0.95
0.00									
C40	1.00	0.00	0.73	0.00	0.21	0.06	0.00	0.00	0.00
0.94									
C41	1.00	0.49	0.00	0.00	0.51	0.00	0.00	0.00	0.00
0.00									
C42	1.00	0.72	0.07	0.00	0.20	0.00	0.00	0.00	1.00
0.00									
C43	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
C44	1.00	0.79	0.02	0.00	0.19	0.00	0.00	0.00	0.95
0.00									
C45	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.85
0.00									
C46	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.93
0.00									
C47	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.98
0.00									
C48	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.92
0.00									
C49	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.95
0.00									
C5	1.00	0.00	0.00	0.00	0.96	0.04	0.00	0.00	0.00
0.84									
C50	1.00	0.00	0.00	0.00	0.02	0.98	0.00	0.00	0.00
0.00									

C51	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C52	1.00	0.04	0.00	0.00	0.80	0.16	0.00	0.00	0.00
0.15									
C53	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	1.00
0.00									
C54	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.78
0.00									
C55	1.00	0.00	0.04	0.00	0.95	0.00	0.00	0.00	0.85
0.00									
C6	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
C7	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
C8	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
C9	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									

****
Conduit Surcharge Summary
****

No conduits were surcharged.

Analysis begun on: Wed Jun 10 15:27:01 2026
Analysis ended on: Wed Jun 10 15:27:07 2026
Total elapsed time: 00:00:06

```
  EPA STORM WATER MANAGEMENT MODEL - VERSION 5.1 (Build 5.1.015)
  ---------------------------------------------------------------

  WARNING 03: negative offset ignored for Link C10
  WARNING 04: minimum elevation drop used for Conduit C43
  WARNING 03: negative offset ignored for Link C45
  WARNING 03: negative offset ignored for Link C46
  WARNING 03: negative offset ignored for Link C47
  WARNING 03: negative offset ignored for Link C48
  WARNING 03: negative offset ignored for Link C49
  WARNING 03: negative offset ignored for Link C50
  WARNING 03: negative offset ignored for Link C6
  WARNING 03: negative offset ignored for Link C7
  WARNING 03: negative offset ignored for Link C8
  WARNING 03: negative offset ignored for Link C9
  WARNING 02: maximum depth increased for Node J14
  WARNING 02: maximum depth increased for Node J2
  WARNING 02: maximum depth increased for Node J4
  WARNING 02: maximum depth increased for Node J6
  WARNING 02: maximum depth increased for Node J7
  WARNING 02: maximum depth increased for Node J9
  WARNING 02: maximum depth increased for Node NODE2B
  WARNING 02: maximum depth increased for Node NODE3B
  WARNING 02: maximum depth increased for Node NODE3B_1
  WARNING 02: maximum depth increased for Node NODE4_US
  WARNING 02: maximum depth increased for Node NODE5_US
  WARNING 02: maximum depth increased for Node AL_POND

  *************
  Element Count
  *************
  Number of rain gages ...... 19
  Number of subcatchments ... 38
  Number of nodes ........... 80
  Number of links ........... 99
  Number of pollutants ...... 0
  Number of land uses ....... 0


  ****************
  Raingage Summary
  ****************
                                                    Data       Recording
  Name                 Data Source                  Type       Interval
  ------------------------------------------------------------------------
  100yr_SCS_Type_II_106.85mm 100yr_SCS_Type_II_106.85mm     INTENSITY    6 min.
  100yr12_HISTORICAL_SCS_Type_I_93.87mm 100yr12_HISTORICAL_SCS_Type_I_93.87mm
INTENSITY    6 min.
  100yr12hr_SCS_Type_II_106.85mm 100yr12hr_SCS_Type_II_106.85mm INTENSITY    6 min.
  100yr24h_SCS_Type_II_106.85mm 100yr24h_SCS_Type_II_106.85mm  INTENSITY    6 min.
  100yr6hr_HISTORICAL_SCS_Type_II_93.87mm 100yr6hr_HISTORICAL_SCS_Type_II_93.87mm
INTENSITY    6 min.
  10yr_SCS_Type_II_63.92mm 10yr_SCS_Type_II_63.92mm       INTENSITY    6 min.
  20yr_SCS_Type_II_75.51mm 20yr_SCS_Type_II_75.51mm       INTENSITY    6 min.
  25mm_Chicago_4h_IDFCC Chicago_4h                      INTENSITY   10 min.
  25mm4hrCHI           25mm4hrCHI                   INTENSITY    5 min.
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25yr_SCS_Type_II_79.23mm 25yr_SCS_Type_II_79.23mm INTENSITY 6 min.
2yr_SCS_Type_II_37.8mm 2yr_SCS_Type_II_37.8mm INTENSITY 6 min.
50yr_SCS_Type_II_93.2mm SCS_Type_II_93.2mm INTENSITY 6 min.
5yr_SCS_Type_II_52.25mm 5yr_SCS_Type_II_52.25mm INTENSITY 6 min.
5yr12hr_SCS_Type_II_63.63mm 5yr12hr_SCS_Type_II_63.63mm INTENSITY 6 min.
5yr24hr_SCS_Type_II_66.26mm 5yr24hr_SCS_Type_II_66.26mm INTENSITY 6 min.
CC_100yr_24hr_SCS_Type_II_111.87mm CC_100yr_24hr_SCS_Type_II_111.87mm INTENSITY 6 min.
CC_25yr_24hr_SCS_Type_II_92.74mm CC_25yr_24hr_SCS_Type_II_92.74mm INTENSITY 6 min.
CC_5yr_24hr_SCS_Type_II_69.44mm CC_5yr_24hr_SCS_Type_II_69.44mm INTENSITY 6 min.
Timmins_Storm_(0-25) Timmins_Storm_(0-25) INTENSITY 60 min.

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Subcatchment Summary
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Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
1_b1*	30.00	400.00	2.00	0.6000	Timmins_Storm_(0-25)	NODE5_US
1a_1	20.20	263.66	2.00	1.8300	Timmins_Storm_(0-25)	NODE4_US
1a_2A	5.69	99.83	0.00	1.3200	Timmins_Storm_(0-25)	J14
1a_2B	12.50	178.57	0.00	1.7900	Timmins_Storm_(0-25)	1a_1
201	7.91	121.69	60.00	0.5000	Timmins_Storm_(0-25)	SWMF1
202A	24.05	343.57	64.00	0.5000	Timmins_Storm_(0-25)	SWMF2
202B	1.67	16.70	27.00	0.5000	Timmins_Storm_(0-25)	J1
203	4.86	73.08	55.00	0.5000	Timmins_Storm_(0-25)	J14
2E	9.72	121.50	2.00	2.0000	Timmins_Storm_(0-25)	NODE2B
2W	39.06	558.06	48.00	0.5000	Timmins_Storm_(0-25)	AL_POND
3	41.32	298.12	6.00	6.1300	Timmins_Storm_(0-25)	NODE2
4	122.26	467.71	2.00	5.8500	Timmins_Storm_(0-25)	NODE2
5	3.15	126.00	51.00	0.5000	Timmins_Storm_(0-25)	NODE3B
6	4.79	151.65	48.00	0.6300	Timmins_Storm_(0-25)	NODE3B
7	9.71	197.00	20.00	0.6100	Timmins_Storm_(0-25)	NODE6_S
8_1	9.62	641.24	2.00	0.5800	Timmins_Storm_(0-25)	NODE7
8_3	14.19	473.08	2.00	0.5800	Timmins_Storm_(0-25)	J10_s
8_4	3.44	229.14	2.00	0.5800	Timmins_Storm_(0-25)	NODE8_S
9*	81.71	517.15	2.00	0.6200	Timmins_Storm_(0-25)	OF2

A1	8.15	237.63	36.00	0.5000	Timmins_Storm_(0-25) J6
A10	3.38	281.31	36.00	0.5000	Timmins_Storm_(0-25) MH2-S
A12	0.15	42.68	36.00	0.5000	Timmins_Storm_(0-25) DCBMH6-S
A13	0.24	41.75	36.00	0.5000	Timmins_Storm_(0-25) DCBMH7-S
A14	0.22	44.02	36.00	0.5000	Timmins_Storm_(0-25) DCBMH8-S
A15	0.22	48.73	36.00	0.5000	Timmins_Storm_(0-25) DCBMH9-S
A16	0.25	49.16	36.00	0.5000	Timmins_Storm_(0-25) DCBMH10-S
A17	0.08	20.00	36.00	0.5000	Timmins_Storm_(0-25) OF1
A2	0.08	22.00	36.00	0.5000	Timmins_Storm_(0-25) CBMH1-S
A3	0.10	20.00	36.00	0.5000	Timmins_Storm_(0-25) CBMH2-S
A4	4.46	371.58	36.00	0.5000	Timmins_Storm_(0-25) CBMH2-S
A5	0.10	23.24	36.00	0.5000	Timmins_Storm_(0-25) CBMH3-S
A6	0.17	28.97	36.00	0.5000	Timmins_Storm_(0-25) CBMH4-S
A7	4.09	340.92	36.00	0.5000	Timmins_Storm_(0-25) CBMH4-S
A8	0.19	34.94	36.00	0.5000	Timmins_Storm_(0-25) CBMH5-S
A9	0.26	39.69	36.00	0.5000	Timmins_Storm_(0-25) MH2-S
EXT1	9.15	501.89	41.00	0.8700	Timmins_Storm_(0-25) AMH1
EXT2	1.55	102.26	20.00	0.6600	Timmins_Storm_(0-25) MH1-S
MARYEXT	7.63	187.01	62.00	0.9000	Timmins_Storm_(0-25) J2

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Node Summary
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Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
ACBMH1	JUNCTION	258.48	2.00	0.0	
ACBMH2	JUNCTION	258.03	0.60	0.0	
ACBMH3	JUNCTION	257.38	1.46	0.0	
ADCBMH1	JUNCTION	257.52	1.32	0.0	
AMH1	JUNCTION	256.20	2.65	0.0	
CBMH1	JUNCTION	255.50	2.06	0.0	
CBMH1-S	JUNCTION	257.56	0.20	0.0	
CBMH2	JUNCTION	255.04	2.07	0.0	
CBMH2-S	JUNCTION	257.11	0.20	0.0	
CBMH3	JUNCTION	254.82	2.11	0.0	
CBMH3-S	JUNCTION	256.93	0.20	0.0	
CBMH4	JUNCTION	254.29	2.23	0.0	
CBMH4-S	JUNCTION	256.52	0.20	0.0	

CBMH5	JUNCTION	254.14	2.24	0.0
CBMH5-S	JUNCTION	256.38	0.20	0.0
DCBMH10	JUNCTION	253.32	1.66	0.0
DCBMH10-S	JUNCTION	254.98	0.20	0.0
DCBMH6	JUNCTION	253.80	1.97	0.0
DCBMH6-S	JUNCTION	255.77	0.20	0.0
DCBMH7	JUNCTION	253.62	1.83	0.0
DCBMH7-S	JUNCTION	255.45	0.20	0.0
DCBMH8	JUNCTION	253.51	1.78	0.0
DCBMH8-S	JUNCTION	255.29	0.20	0.0
DCBMH9	JUNCTION	253.42	1.72	0.0
DCBMH9-S	JUNCTION	255.14	0.20	0.0
J1	JUNCTION	247.17	1.23	0.0
J10	JUNCTION	248.10	1.78	0.0
J10_s	JUNCTION	249.13	0.50	0.0
J11	JUNCTION	247.41	1.26	0.0
J12	JUNCTION	266.00	1.00	0.0
J14	JUNCTION	248.06	1.12	0.0
J15	JUNCTION	247.37	1.80	0.0
J2	JUNCTION	260.75	1.50	0.0
J3	JUNCTION	250.38	3.05	0.0
J4	JUNCTION	259.20	1.50	0.0
J5	JUNCTION	248.24	1.65	0.0
J6	JUNCTION	257.75	1.50	0.0
J7	JUNCTION	256.75	1.50	0.0
J9	JUNCTION	259.20	1.50	0.0
MH1	JUNCTION	255.79	2.08	0.0
MH10	JUNCTION	247.07	2.23	0.0
MH12	JUNCTION	247.40	2.24	0.0
MH13	JUNCTION	247.73	2.45	0.0
MH14	JUNCTION	248.06	2.38	0.0
MH15	JUNCTION	248.39	2.61	0.0
MH16	JUNCTION	248.72	2.62	0.0
MH17	JUNCTION	249.05	3.08	0.0
MH1-S	JUNCTION	257.87	0.20	0.0
MH2	JUNCTION	253.93	2.15	0.0
MH2-S	JUNCTION	256.08	0.20	0.0
ND5_DS	JUNCTION	244.14	1.50	0.0
NODE1	JUNCTION	263.00	1.00	0.0
NODE2	JUNCTION	255.80	1.40	0.0
NODE2B	JUNCTION	252.45	1.69	0.0
NODE3	JUNCTION	252.26	1.17	0.0
NODE3B	JUNCTION	252.26	1.12	0.0
NODE3B_1	JUNCTION	248.86	1.12	0.0
NODE4_DS	JUNCTION	246.23	1.50	0.0
NODE4_US	JUNCTION	247.27	1.50	0.0
NODE4B_1	JUNCTION	245.00	1.50	0.0
NODE5_US	JUNCTION	244.30	2.20	0.0
NODE6	JUNCTION	250.32	2.38	0.0
NODE6_1	JUNCTION	249.93	2.53	0.0
NODE6_S	JUNCTION	252.70	0.50	0.0
NODE7	JUNCTION	250.91	0.50	0.0
NODE7_2	JUNCTION	249.49	2.84	0.0
NODE7_s	JUNCTION	249.18	3.18	0.0
NODE8	JUNCTION	246.74	1.99	0.0
NODE8_S	JUNCTION	247.62	0.80	0.0
PNDOUT	JUNCTION	253.00	3.00	0.0

J8	OUTFALL	253.27	0.00	0.0
MAD	OUTFALL	245.80	0.80	0.0
OF1	OUTFALL	253.27	1.05	0.0
OF2	OUTFALL	0.00	0.00	0.0
OF3	OUTFALL	259.00	1.50	0.0
OF4	OUTFALL	244.14	1.00	0.0
AL_POND	STORAGE	253.00	3.10	0.0
SU1	STORAGE	0.00	5.00	0.0
SWMF1	STORAGE	248.20	2.30	0.0
SWMF2	STORAGE	247.55	2.60	0.0

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Link Summary
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Name	From Node	To Node	Type	Length	% Slope	Roughness
C1	MH1	CBMH1	CONDUIT	47.7	0.6080	0.0100
C1_1	NODE3B	NODE3B_1	CONDUIT	600.0	0.5670	0.0400
C1_2	NODE3B_1	J5	CONDUIT	56.0	1.1108	0.0400
C10	MH15	MH14	CONDUIT	100.0	0.3300	0.0130
C11	NODE8	MAD	CONDUIT	320.3	0.2935	0.0400
C12	CBMH1	CBMH2	CONDUIT	77.3	0.5951	0.0100
C12-S	CBMH1-S	CBMH2-S	CONDUIT	76.4	0.5891	0.0140
C13	CBMH2	CBMH3	CONDUIT	36.3	0.6061	0.0100
C13-S	CBMH2-S	CBMH3-S	CONDUIT	38.4	0.4687	0.0140
C14	CBMH3	CBMH4	CONDUIT	87.3	0.6071	0.0100
C14-S	CBMH3-S	CBMH4-S	CONDUIT	85.7	0.4782	0.0140
C15	CBMH4	CBMH5	CONDUIT	48.9	0.3067	0.0100
C15-S	CBMH4-S	CBMH5-S	CONDUIT	55.9	0.2503	0.0140
C16	CBMH5	MH2	CONDUIT	67.5	0.3111	0.0100
C16-S	CBMH5-S	MH2-S	CONDUIT	67.4	0.4454	0.0140
C17	MH2	DCBMH6	CONDUIT	41.3	0.3148	0.0100
C17-S	MH2-S	DCBMH6-S	CONDUIT	41.7	0.7437	0.0140
C18	DCBMH6	DCBMH7	CONDUIT	57.2	0.3148	0.0100
C18-S	DCBMH6-S	DCBMH7-S	CONDUIT	56.5	0.5663	0.0140
C19	DCBMH7	DCBMH8	CONDUIT	52.5	0.2095	0.0100

C19-S		DCBMH7-S	DCBMH8-S	CONDUIT	51.4	
0.3112	0.0140					
C1-S		MH1-S	CBMH1-S	CONDUIT	46.6	
0.6649	0.0140					
C2		NODE4_US	NODE4_DS	CONDUIT	26.5	
3.9247	0.0130					
C20		DCBMH8	DCBMH9	CONDUIT	46.9	
0.1919	0.0100					
C20-S		DCBMH8-S	DCBMH9-S	CONDUIT	46.6	
0.3221	0.0140					
C21		DCBMH9	DCBMH10	CONDUIT	51.8	
0.1931	0.0100					
C21-S		DCBMH9-S	DCBMH10-S	CONDUIT	53.4	
0.2999	0.0140					
C22		DCBMH10	OF1	CONDUIT	25.5	
0.1961	0.0100					
C23		J2	J4	CONDUIT	185.0	
0.8379	0.0100					
C24		J9	J6	CONDUIT	162.3	
0.8932	0.0100					
C25		J6	J7	CONDUIT	119.2	
0.8389	0.0100					
C26		J7	MH1	CONDUIT	213.3	
0.4501	0.0100					
C28		J4	OF3	CONDUIT	9.1	
2.2056	0.0100					
C29		NODE1	NODE2	CONDUIT	854.0	
0.8431	0.0450					
C3		NODE4_DS	NODE4B_1	CONDUIT	290.4	
0.4235	0.0400					
C30		J12	NODE2	CONDUIT	217.5	
4.6950	0.0450					
C31		NODE2	NODE2B	CONDUIT	705.5	
0.4749	0.0400					
C32		ACBMH1	ACBMH2	CONDUIT	89.9	
0.5004	0.0100					
C33		ACBMH2	ADCBMH1	CONDUIT	89.3	
0.5708	0.0100					
C34		ADCBMH1	ACBMH3	CONDUIT	28.7	
0.4878	0.0100					
C35		ACBMH3	AMH1	CONDUIT	111.0	
1.0631	0.0100					
C36		PNDOUT	NODE2B	CONDUIT	30.0	-
0.4667	0.0500					
C37		J3	NODE6	CONDUIT	30.3	
0.1983	0.0130					
C38		NODE2B	NODE3	CONDUIT	78.0	
0.2436	0.0400					
C39		AMH1	AL_POND	CONDUIT	608.2	
0.5261	0.0100					
C4		NODE4B_1	NODE5_US	CONDUIT	342.6	
0.2043	0.0400					
C40		NODE8_S	NODE8	CONDUIT	34.7	
2.5368	0.0240					
C41		NODE6_S	NODE7	CONDUIT	327.0	
0.5474	0.0400					
C42		J10_s	NODE8_S	CONDUIT	310.2	
0.4867	0.0400					
C43		ND5_DS	OF4	CONDUIT	16.1	
0.0019	0.0400					

C44		NODE7	J10_s	CONDUIT	376.4
0.4729	0.0400				
C45		NODE7_s	MH17	CONDUIT	34.7
0.3746	0.0130				
C46		MH17	MH16	CONDUIT	99.8
0.3307	0.0130				
C47		MH14	MH13	CONDUIT	98.7
0.3343	0.0130				
C48		MH13	MH12	CONDUIT	99.7
0.3310	0.0130				
C49		MH12	MH10	CONDUIT	99.7
0.3310	0.0130				
C5		NODE5_US	ND5_DS	CONDUIT	20.0
0.8000	0.0240				
C50		MH10	NODE8	CONDUIT	103.5
0.3188	0.0130				
C51		J11	J15	CONDUIT	12.3
0.3252	0.0240				
C52		J5	J10	CONDUIT	21.4
0.6167	0.0240				
C53		J14	NODE4_US	CONDUIT	225.5
0.3503	0.0400				
C54		J1	NODE5_US	CONDUIT	647.3
0.4434	0.0400				
C55		J10	J14	CONDUIT	4.0
1.1001	0.0400				
C6		NODE6	NODE6_1	CONDUIT	113.8
0.3427	0.0130				
C7		NODE6_1	NODE7_2	CONDUIT	135.1
0.3257	0.0130				
C8		NODE7_2	NODE7_s	CONDUIT	92.9
0.3337	0.0130				
C9		MH16	MH15	CONDUIT	100.3
0.3290	0.0130				
EDORF		AL_POND	PNDOUT	ORIFICE	
C27		DCBMH10-S	J8	WEIR	
W1		NODE3	NODE3B	WEIR	
W2		NODE5_US	ND5_DS	WEIR	
W3		NODE4_US	NODE4_DS	WEIR	
W4		J5	J10	WEIR	
W5		J11	J15	WEIR	
WEIR1		AL_POND	PNDOUT	WEIR	
WEIR2		AL_POND	PNDOUT	WEIR	
CBMH10-IC		DCBMH10-S	DCBMH10	OUTLET	
CBMH1-IC		CBMH1-S	CBMH1	OUTLET	
CBMH2-IC		CBMH2-S	CBMH2	OUTLET	
CBMH3-IC		CBMH3-S	CBMH3	OUTLET	
CBMH4-IC		CBMH4-S	CBMH4	OUTLET	
CBMH5-IC		CBMH5-S	CBMH5	OUTLET	
CBMH6-IC		DCBMH6-S	DCBMH6	OUTLET	
CBMH7-IC		DCBMH7-S	DCBMH7	OUTLET	
CBMH8-IC		DCBMH8-S	DCBMH8	OUTLET	
CBMH9-IC		DCBMH9-S	DCBMH9	OUTLET	
MH1-IC		MH1-S	MH1	OUTLET	
MH2-IC		MH2-S	MH2	OUTLET	
OL1		CBMH2-S	CBMH2	OUTLET	
OL11		NODE3	J3	OUTLET	
OL2		CBMH4-S	CBMH4	OUTLET	
OL3		MH2-S	MH2	OUTLET	

OL4	DCBMH10-S	DCBMH10	OUTLET
OL5	J10_s	MH13	OUTLET
OL6	NODE6_S	NODE6	OUTLET
OL7	NODE6_S	NODE6	OUTLET
OL8	NODE7	MH17	OUTLET
SWMF_Outlet	SWMF1	J14	OUTLET
SWMF2_Outlet	SWMF2	J1	OUTLET

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Cross Section Summary
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Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	1.05	0.87	0.26	1.05	1	2.77
C1_1	EdwardDitch	1.12	8.08	0.32	25.10	1	7.05
C1_2	EdwardDitch	1.12	8.08	0.32	25.10	1	9.87
C10	CIRCULAR	1.20	1.13	0.30	1.20	1	2.24
C11	TRAPEZOIDAL	0.80	3.52	0.50	6.80	1	3.00
C12	CIRCULAR	1.05	0.87	0.26	1.05	1	2.74
C12-S	MarySt	0.20	1.57	0.12	18.50	1	2.11
C13	CIRCULAR	1.05	0.87	0.26	1.05	1	2.76
C13-S	MarySt	0.20	1.57	0.12	18.50	1	1.88
C14	CIRCULAR	1.05	0.87	0.26	1.05	1	2.77
C14-S	MarySt	0.20	1.57	0.12	18.50	1	1.90
C15	CIRCULAR	1.05	0.87	0.26	1.05	1	1.97
C15-S	MarySt	0.20	1.57	0.12	18.50	1	1.38
C16	CIRCULAR	1.05	0.87	0.26	1.05	1	1.98
C16-S	MarySt	0.20	1.57	0.12	18.50	1	1.84
C17	CIRCULAR	1.05	0.87	0.26	1.05	1	1.99
C17-S	MarySt	0.20	1.57	0.12	18.50	1	2.37
C18	CIRCULAR	1.05	0.87	0.26	1.05	1	1.99
C18-S	MarySt	0.20	1.57	0.12	18.50	1	2.07
C19	CIRCULAR	1.05	0.87	0.26	1.05	1	1.63
C19-S	MarySt	0.20	1.57	0.12	18.50	1	1.54

C1-S	MarySt	0.20	1.57	0.12	18.50	1
2.24						
C2	CIRCULAR	1.50	1.77	0.38	1.50	1
14.01						
C20	CIRCULAR	1.05	0.87	0.26	1.05	1
1.56						
C20-S	MarySt	0.20	1.57	0.12	18.50	1
1.56						
C21	CIRCULAR	1.05	0.87	0.26	1.05	1
1.56						
C21-S	MarySt	0.20	1.57	0.12	18.50	1
1.51						
C22	CIRCULAR	1.05	0.87	0.26	1.05	1
1.57						
C23	CIRCULAR	1.50	1.77	0.38	1.50	1
8.41						
C24	CIRCULAR	1.50	1.77	0.38	1.50	1
8.69						
C25	CIRCULAR	1.50	1.77	0.38	1.50	1
8.42						
C26	CIRCULAR	1.50	1.77	0.38	1.50	1
6.17						
C28	CIRCULAR	1.50	1.77	0.38	1.50	1
13.65						
C29	TRAPEZOIDAL	1.00	5.40	0.62	8.40	1
8.00						
C3	TRAPEZOIDAL	1.00	8.00	0.71	11.00	1
10.33						
C30	TRAPEZOIDAL	1.00	5.40	0.62	8.40	1
18.89						
C31	TRAPEZOIDAL	1.00	18.00	0.84	21.00	1
27.70						
C32	CIRCULAR	0.45	0.16	0.11	0.45	1
0.26						
C33	CIRCULAR	0.60	0.28	0.15	0.60	1
0.60						
C34	CIRCULAR	0.68	0.36	0.17	0.68	1
0.76						
C35	CIRCULAR	0.68	0.36	0.17	0.68	1
1.13						
C36	TRAPEZOIDAL	1.00	11.50	0.53	21.50	1
10.32						
C37	CIRCULAR	1.20	1.13	0.30	1.20	1
1.74						
C38	TRAPEZOIDAL	1.00	18.00	0.84	21.00	1
19.84						
C39	CIRCULAR	1.20	1.13	0.30	1.20	1
3.68						
C4	TRAPEZOIDAL	1.50	14.25	0.98	14.00	1
15.93						
C40	CIRCULAR	0.80	0.50	0.20	0.80	1
1.14						
C41	TRIANGULAR	0.50	0.50	0.22	2.00	1
0.34						
C42	TRIANGULAR	0.50	0.50	0.22	2.00	1
0.32						
C43	TRAPEZOIDAL	1.00	8.00	0.71	11.00	1
0.69						
C44	TRIANGULAR	0.50	0.50	0.22	2.00	1
0.32						

C45	CIRCULAR	1.20	1.13	0.30	1.20	1
2.39						
C46	CIRCULAR	1.20	1.13	0.30	1.20	1
2.24						
C47	CIRCULAR	1.20	1.13	0.30	1.20	1
2.25						
C48	CIRCULAR	1.20	1.13	0.30	1.20	1
2.24						
C49	CIRCULAR	1.20	1.13	0.30	1.20	1
2.24						
C5	CIRCULAR	1.50	1.77	0.38	1.50	1
3.43						
C50	CIRCULAR	1.20	1.13	0.30	1.20	1
2.20						
C51	CIRCULAR	0.90	0.64	0.23	0.90	2
0.56						
C52	CIRCULAR	0.90	0.64	0.23	0.90	2
0.77						
C53	EdwardDitch	1.12	8.08	0.32	25.10	1
5.54						
C54	TRAPEZOIDAL	1.00	5.00	0.49	10.00	1
5.18						
C55	EdwardDitch	1.12	8.08	0.32	25.10	1
9.82						
C6	CIRCULAR	1.20	1.13	0.30	1.20	1
2.28						
C7	CIRCULAR	1.20	1.13	0.30	1.20	1
2.23						
C8	CIRCULAR	1.20	1.13	0.30	1.20	1
2.25						
C9	CIRCULAR	1.20	1.13	0.30	1.20	1
2.24						

****
Transect Summary
****

Transect EdwardDitch
Area:

0.0099	0.0200	0.0305	0.0413	0.0524
0.0638	0.0755	0.0875	0.0999	0.1125
0.1255	0.1388	0.1523	0.1662	0.1804
0.1949	0.2098	0.2249	0.2403	0.2561
0.2722	0.2885	0.3052	0.3222	0.3395
0.3571	0.3751	0.3933	0.4118	0.4307
0.4499	0.4694	0.4891	0.5092	0.5297
0.5504	0.5714	0.5927	0.6144	0.6364
0.6586	0.6812	0.7041	0.7273	0.7514
0.7825	0.8225	0.8719	0.9320	1.0000

Hrad:

0.0695	0.1366	0.2015	0.2645	0.3257
0.3853	0.4434	0.5001	0.5555	0.6098
0.6630	0.7152	0.7665	0.8169	0.8666
0.9154	0.9636	1.0111	1.0580	1.1043
1.1501	1.1953	1.2401	1.2845	1.3284
1.3718	1.4150	1.4577	1.5001	1.5422
1.5839	1.6254	1.6666	1.7075	1.7482

```
            1.7886     1.8288     1.8687     1.9085     1.9480
            1.9874     2.0266     2.0655     2.1044     1.9099
            1.5088     1.2774     1.1051     0.9879     1.0000
Width:
            0.1439     0.1484     0.1528     0.1573     0.1618
            0.1662     0.1707     0.1751     0.1796     0.1841
            0.1885     0.1930     0.1975     0.2019     0.2064
            0.2108     0.2153     0.2198     0.2242     0.2287
            0.2331     0.2376     0.2421     0.2465     0.2510
            0.2555     0.2599     0.2644     0.2688     0.2733
            0.2778     0.2822     0.2867     0.2912     0.2956
            0.3001     0.3045     0.3090     0.3135     0.3179
            0.3224     0.3269     0.3313     0.3358     0.3841
            0.5114     0.6388     0.7863     0.9433     1.0000

Transect EdwardDitch-Deeper
Area:
            0.0104     0.0211     0.0321     0.0435     0.0551
            0.0671     0.0794     0.0920     0.1049     0.1181
            0.1317     0.1455     0.1597     0.1742     0.1890
            0.2041     0.2196     0.2353     0.2514     0.2678
            0.2845     0.3015     0.3189     0.3365     0.3545
            0.3728     0.3914     0.4103     0.4295     0.4491
            0.4689     0.4891     0.5096     0.5304     0.5515
            0.5730     0.5947     0.6168     0.6392     0.6619
            0.6849     0.7083     0.7319     0.7559     0.7802
            0.8048     0.8330     0.8741     0.9299     1.0000
Hrad:
            0.0744     0.1460     0.2151     0.2818     0.3464
            0.4092     0.4702     0.5295     0.5874     0.6440
            0.6993     0.7535     0.8065     0.8586     0.9098
            0.9601     1.0096     1.0584     1.1065     1.1539
            1.2007     1.2469     1.2926     1.3377     1.3824
            1.4267     1.4704     1.5138     1.5568     1.5995
            1.6417     1.6837     1.7253     1.7667     1.8077
            1.8485     1.8890     1.9293     1.9694     2.0092
            2.0488     2.0882     2.1274     2.1664     2.2052
            2.2439     1.7162     1.3177     1.0606     1.0000
Width:
            0.1437     0.1480     0.1524     0.1567     0.1610
            0.1653     0.1696     0.1739     0.1782     0.1825
            0.1868     0.1911     0.1954     0.1997     0.2040
            0.2083     0.2126     0.2169     0.2212     0.2255
            0.2298     0.2341     0.2384     0.2427     0.2470
            0.2513     0.2556     0.2599     0.2642     0.2685
            0.2728     0.2771     0.2814     0.2857     0.2900
            0.2943     0.2986     0.3029     0.3073     0.3116
            0.3159     0.3202     0.3245     0.3288     0.3331
            0.3374     0.4682     0.6524     0.8732     1.0000

Transect EdwardDitch-Wider
Area:
            0.0105     0.0213     0.0324     0.0438     0.0555
            0.0674     0.0797     0.0922     0.1051     0.1182
            0.1316     0.1453     0.1593     0.1736     0.1882
            0.2030     0.2182     0.2337     0.2494     0.2654
            0.2817     0.2983     0.3152     0.3324     0.3499
```

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            0.3677     0.3858     0.4041     0.4227     0.4417
            0.4609     0.4804     0.5002     0.5203     0.5407
            0.5614     0.5823     0.6036     0.6251     0.6470
            0.6691     0.6915     0.7142     0.7372     0.7610
            0.7914     0.8301     0.8776     0.9351     1.0000
Hrad:
            0.0664     0.1308     0.1933     0.2542     0.3135
            0.3713     0.4279     0.4832     0.5373     0.5904
            0.6425     0.6937     0.7440     0.7935     0.8422
            0.8903     0.9376     0.9843     1.0305     1.0760
            1.1211     1.1656     1.2097     1.2533     1.2965
            1.3393     1.3817     1.4237     1.4654     1.5067
            1.5478     1.5885     1.6290     1.6691     1.7090
            1.7487     1.7881     1.8273     1.8663     1.9050
            1.9436     1.9820     2.0201     2.0581     1.8788
            1.4992     1.2757     1.1066     0.9900     1.0000
Width:
            0.1606     0.1650     0.1694     0.1738     0.1781
            0.1825     0.1869     0.1913     0.1956     0.2000
            0.2044     0.2088     0.2131     0.2175     0.2219
            0.2263     0.2306     0.2350     0.2394     0.2438
            0.2481     0.2525     0.2569     0.2613     0.2656
            0.2700     0.2744     0.2788     0.2831     0.2875
            0.2919     0.2963     0.3006     0.3050     0.3094
            0.3138     0.3181     0.3225     0.3269     0.3313
            0.3356     0.3400     0.3444     0.3488     0.3961
            0.5210     0.6458     0.7904     0.9444     1.0000

Transect MarySt
Area:
            0.0005     0.0019     0.0043     0.0077     0.0121
            0.0174     0.0236     0.0308     0.0390     0.0482
            0.0583     0.0694     0.0815     0.0945     0.1085
            0.1234     0.1393     0.1562     0.1740     0.1928
            0.2126     0.2333     0.2549     0.2766     0.2982
            0.3199     0.3416     0.3633     0.3850     0.4067
            0.4284     0.4501     0.4718     0.4935     0.5152
            0.5368     0.5585     0.5805     0.6042     0.6300
            0.6578     0.6877     0.7196     0.7535     0.7895
            0.8275     0.8676     0.9097     0.9538     1.0000
Hrad:
            0.0160     0.0320     0.0480     0.0640     0.0800
            0.0960     0.1120     0.1280     0.1440     0.1600
            0.1760     0.1920     0.2080     0.2240     0.2400
            0.2560     0.2720     0.2880     0.3040     0.3200
            0.3360     0.3520     0.3758     0.4074     0.4390
            0.4705     0.5019     0.5333     0.5646     0.5959
            0.6271     0.6582     0.6893     0.7204     0.7513
            0.7823     0.8131     0.8438     0.8712     0.8949
            0.9152     0.9326     0.9472     0.9595     0.9698
            0.9783     0.9854     0.9912     0.9960     1.0000
Width:
            0.0204     0.0408     0.0613     0.0817     0.1021
            0.1225     0.1429     0.1634     0.1838     0.2042
            0.2246     0.2450     0.2655     0.2859     0.3063
            0.3267     0.3471     0.3676     0.3880     0.4084
            0.4288     0.4492     0.4595     0.4595     0.4595
```

0.4595 0.4595 0.4595 0.4595 0.4595
0.4595 0.4595 0.4595 0.4595 0.4595
0.4595 0.4595 0.4811 0.5243 0.5676
0.6108 0.6541 0.6973 0.7405 0.7838
0.8270 0.8703 0.9135 0.9568 1.0000

Transect ND3TOND4
Area:
0.0045 0.0098 0.0160 0.0229 0.0307
0.0393 0.0487 0.0589 0.0699 0.0817
0.0944 0.1078 0.1221 0.1372 0.1531
0.1698 0.1873 0.2057 0.2254 0.2478
0.2709 0.2941 0.3175 0.3410 0.3647
0.3885 0.4124 0.4365 0.4607 0.4850
0.5094 0.5340 0.5588 0.5836 0.6087
0.6338 0.6591 0.6845 0.7100 0.7357
0.7615 0.7875 0.8136 0.8398 0.8662
0.8927 0.9193 0.9461 0.9730 1.0000
Hrad:
0.0300 0.0558 0.0790 0.1004 0.1207
0.1401 0.1589 0.1772 0.1951 0.2127
0.2301 0.2473 0.2642 0.2811 0.2978
0.3144 0.3310 0.3474 0.3394 0.3420
0.3692 0.3960 0.4222 0.4480 0.4734
0.4983 0.5228 0.5470 0.5707 0.5941
0.6171 0.6398 0.6621 0.6842 0.7059
0.7273 0.7484 0.7692 0.7898 0.8101
0.8301 0.8499 0.8695 0.8888 0.9078
0.9267 0.9453 0.9638 0.9820 1.0000
Width:
0.1815 0.2115 0.2415 0.2715 0.3015
0.3315 0.3615 0.3915 0.4215 0.4515
0.4815 0.5115 0.5415 0.5715 0.6015
0.6315 0.6615 0.6915 0.7788 0.8500
0.8550 0.8600 0.8650 0.8700 0.8750
0.8800 0.8850 0.8900 0.8950 0.9000
0.9050 0.9100 0.9150 0.9200 0.9250
0.9300 0.9350 0.9400 0.9450 0.9500
0.9550 0.9600 0.9650 0.9700 0.9750
0.9800 0.9850 0.9900 0.9950 1.0000

Transect ND4.5TO5
Area:
0.0031 0.0066 0.0107 0.0152 0.0203
0.0259 0.0319 0.0385 0.0456 0.0532
0.0613 0.0699 0.0790 0.0887 0.0994
0.1108 0.1231 0.1362 0.1502 0.1650
0.1807 0.1972 0.2145 0.2327 0.2517
0.2716 0.2923 0.3138 0.3362 0.3594
0.3835 0.4083 0.4341 0.4607 0.4881
0.5163 0.5454 0.5753 0.6061 0.6377
0.6702 0.7035 0.7376 0.7726 0.8084
0.8450 0.8825 0.9208 0.9600 1.0000
Hrad:
0.0379 0.0708 0.1005 0.1280 0.1540
0.1789 0.2029 0.2262 0.2490 0.2715
0.2935 0.3153 0.3364 0.3475 0.3599

0.3735 0.3879 0.4030 0.4187 0.4349
0.4516 0.4686 0.4859 0.5035 0.5213
0.5393 0.5575 0.5759 0.5944 0.6130
0.6317 0.6506 0.6695 0.6885 0.7076
0.7268 0.7460 0.7653 0.7846 0.8040
0.8235 0.8429 0.8625 0.8820 0.9016
0.9212 0.9409 0.9606 0.9803 1.0000

Width:

0.0817 0.0942 0.1066 0.1191 0.1315
0.1440 0.1565 0.1689 0.1814 0.1938
0.2063 0.2188 0.2315 0.2523 0.2731
0.2938 0.3146 0.3354 0.3562 0.3769
0.3977 0.4185 0.4392 0.4600 0.4808
0.5015 0.5223 0.5431 0.5638 0.5846
0.6054 0.6262 0.6469 0.6677 0.6885
0.7092 0.7300 0.7508 0.7715 0.7923
0.8131 0.8338 0.8546 0.8754 0.8962
0.9169 0.9377 0.9585 0.9792 1.0000

Transect ND4TOND4_5

Area:

0.0045 0.0098 0.0160 0.0229 0.0307
0.0393 0.0487 0.0589 0.0699 0.0817
0.0944 0.1078 0.1221 0.1372 0.1531
0.1698 0.1873 0.2057 0.2254 0.2478
0.2709 0.2941 0.3175 0.3410 0.3647
0.3885 0.4124 0.4365 0.4607 0.4850
0.5094 0.5340 0.5588 0.5836 0.6087
0.6338 0.6591 0.6845 0.7100 0.7357
0.7615 0.7875 0.8136 0.8398 0.8662
0.8927 0.9193 0.9461 0.9730 1.0000

Hrad:

0.0300 0.0558 0.0790 0.1004 0.1207
0.1401 0.1589 0.1772 0.1951 0.2127
0.2301 0.2473 0.2642 0.2811 0.2978
0.3144 0.3310 0.3474 0.3394 0.3420
0.3692 0.3960 0.4222 0.4480 0.4734
0.4983 0.5228 0.5470 0.5707 0.5941
0.6171 0.6398 0.6621 0.6842 0.7059
0.7273 0.7484 0.7692 0.7898 0.8101
0.8301 0.8499 0.8695 0.8888 0.9078
0.9267 0.9453 0.9638 0.9820 1.0000

Width:

0.1815 0.2115 0.2415 0.2715 0.3015
0.3315 0.3615 0.3915 0.4215 0.4515
0.4815 0.5115 0.5415 0.5715 0.6015
0.6315 0.6615 0.6915 0.7788 0.8500
0.8550 0.8600 0.8650 0.8700 0.8750
0.8800 0.8850 0.8900 0.8950 0.9000
0.9050 0.9100 0.9150 0.9200 0.9250
0.9300 0.9350 0.9400 0.9450 0.9500
0.9550 0.9600 0.9650 0.9700 0.9750
0.9800 0.9850 0.9900 0.9950 1.0000

****

NOTE: The summary statistics displayed in this report are

based on results found at every computational time step,
not just on results from each reporting time step.
****

****
Analysis Options
****
Flow Units ..... CMS
Process Models:
  Rainfall/Runoff ..... YES
  RDII ..... NO
  Snowmelt ..... NO
  Groundwater ..... NO
  Flow Routing ..... YES
  Ponding Allowed ..... NO
  Water Quality ..... NO
Infiltration Method ..... CURVE_NUMBER
Flow Routing Method ..... DYNWAVE
Surcharge Method ..... EXTRAN
Starting Date 10/11/2022 00:00:00
Ending Date 10/12/2022 00:00:00
Antecedent Dry Days 0.0
Report Time Step 00:01:00
Wet Time Step 00:05:00
Dry Time Step 00:05:00
Routing Time Step ..... 1.00 sec
Variable Time Step ..... YES
Maximum Trials 8
Number of Threads 4
Head Tolerance ..... 0.001500 m

**********	Volume	Depth
Runoff Quantity Continuity	hectare-m	mm
**********	---	---
Total Precipitation	93.860	193.000
Evaporation Loss	0.000	0.000
Infiltration Loss	36.876	75.826
Surface Runoff	55.262	113.634
Final Storage	1.734	3.566
Continuity Error (%)	-0.013	

**********	Volume	Volume
Flow Routing Continuity	hectare-m	10^6 ltr
**********	---	---
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	55.262	552.626
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	44.014	440.143
Flooding Loss	9.028	90.278
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
Initial Stored Volume	0.000	0.001
Final Stored Volume	1.879	18.794

Continuity Error (%) 0.617

****
Highest Continuity Errors
****
Node NODE7 (-4.42%)
Node MH17 (3.79%)
Node J5 (-2.45%)
Node NODE7_s (-2.15%)
Node J10 (2.02%)

****
Time-Step Critical Elements
****
Link C55 (2.25%)

****
Highest Flow Instability Indexes
****
Link C55 (32)
Link C37 (28)
Link C52 (27)
Link W4 (24)
Link C1_2 (23)

****
Routing Time Step Summary
****
Minimum Time Step : 0.21 sec
Average Time Step : 1.00 sec
Maximum Time Step : 1.00 sec
Percent in Steady State : -0.00
Average Iterations per Step : 3.40
Percent Not Converging : 23.25
Time Step Frequencies :
1.000 - 0.871 sec : 99.53 %
0.871 - 0.758 sec : 0.41 %
0.758 - 0.660 sec : 0.01 %
0.660 - 0.574 sec : 0.01 %
0.574 - 0.500 sec : 0.04 %

****
Subcatchment Runoff Summary
****

Subcatchment	Total Precip mm	Total Runon mm	Total Evap mm	Total Infil mm	Imperv Runoff mm	Perv Runoff mm	Total Runoff 10^6 ltr	Peak Runoff CMS	Runoff Coeff

1_b1*		193.00		0.00	0.00	84.67	3.84	
103.35	107.18	32.16	2.52	0.555				
1a_1		193.00		62.21	0.00	91.27	5.08	
157.34	162.42	32.80	1.57	0.636				
1a_2A		193.00		0.00	0.00	91.03	0.00	
100.75	100.75	5.73	0.33	0.522				
1a_2B		193.00		0.00	0.00	91.24	0.00	
100.51	100.51	12.56	0.70	0.521				
201		193.00		0.00	0.00	49.79	114.87	
52.23	141.83	11.22	0.69	0.735				
202A		193.00		0.00	0.00	44.89	122.51	
54.75	146.64	35.27	2.18	0.760				
202B		193.00		0.00	0.00	95.11	51.71	
56.27	96.61	1.61	0.08	0.501				
203		193.00		0.00	0.00	56.11	105.31	
51.23	135.47	6.58	0.40	0.702				
2E		193.00		0.00	0.00	89.72	3.84	
98.22	102.06	9.92	0.54	0.529				
2W		193.00		0.00	0.00	40.99	91.91	
58.19	150.10	58.64	3.60	0.778				
3		193.00		0.00	0.00	79.46	11.50	
100.79	112.30	46.40	2.65	0.582				
4		193.00		0.00	0.00	82.84	3.84	
101.28	105.11	128.51	5.80	0.545				
5		193.00		0.00	0.00	35.46	97.71	
58.51	156.22	4.92	0.33	0.809				
6		193.00		0.00	0.00	38.98	91.96	
60.73	152.69	7.32	0.49	0.791				
7		193.00		0.00	0.00	92.72	38.36	
60.70	99.06	9.62	0.55	0.513				
8_1		193.00		0.00	0.00	86.01	3.84	
101.93	105.77	10.17	0.74	0.548				
8_3		193.00		0.00	0.00	88.18	3.84	
99.78	103.62	14.71	0.91	0.537				
8_4		193.00		0.00	0.00	86.01	3.84	
101.93	105.77	3.64	0.26	0.548				
9*		193.00		0.00	0.00	91.27	3.83	
89.12	92.95	75.95	3.04	0.482				
A1		193.00		0.00	0.00	58.59	68.97	
64.18	133.16	10.86	0.70	0.690				
A10		193.00		0.00	0.00	56.80	69.01	
65.92	134.93	4.55	0.32	0.699				
A12		193.00		0.00	0.00	55.83	69.05	
66.94	135.99	0.20	0.01	0.705				
A13		193.00		0.00	0.00	56.13	69.03	
66.62	135.65	0.32	0.02	0.703				
A14		193.00		0.00	0.00	56.05	69.04	
66.71	135.75	0.30	0.02	0.703				
A15		193.00		0.00	0.00	55.98	69.04	
66.78	135.82	0.30	0.02	0.704				
A16		193.00		0.00	0.00	56.05	69.04	
66.71	135.75	0.33	0.02	0.703				
A17		193.00		0.00	0.00	55.90	69.05	
66.87	135.91	0.11	0.01	0.704				
A2		193.00		0.00	0.00	55.83	69.05	
66.91	135.96	0.11	0.01	0.704				
A3		193.00		0.00	0.00	56.05	69.04	
66.71	135.74	0.14	0.01	0.703				

A4		193.00	0.00	0.00	56.80	69.01	
65.92	134.93	6.02	0.42	0.699			
A5		193.00	0.00	0.00	55.98	69.04	
66.78	135.82	0.14	0.01	0.704			
A6		193.00	0.00	0.00	56.20	69.03	
66.58	135.61	0.24	0.02	0.703			
A7		193.00	0.00	0.00	56.80	69.01	
65.92	134.93	5.52	0.39	0.699			
A8		193.00	0.00	0.00	56.13	69.04	
66.67	135.71	0.25	0.02	0.703			
A9		193.00	0.00	0.00	56.28	69.03	
66.52	135.55	0.35	0.03	0.702			
EXT1		193.00	0.00	0.00	48.72	78.58	
64.46	143.04	13.10	0.91	0.741			
EXT2		193.00	0.00	0.00	86.29	38.35	
67.15	105.50	1.64	0.12	0.547			
MARYEXT		193.00	0.00	0.00	21.38	118.76	
51.49	170.26	12.99	0.87	0.882			

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Node Depth Summary
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Node	Type	Average Depth Meters	Maximum Depth Meters	Maximum HGL Meters	Time of Max Occurrence days hr:min	Reported Max Depth Meters
ACBMH1	JUNCTION	0.00	0.00	258.48	0 00:00	0.00
ACBMH2	JUNCTION	0.00	0.00	258.03	0 00:00	0.00
ACBMH3	JUNCTION	0.00	0.00	257.38	0 00:00	0.00
ADCBMH1	JUNCTION	0.00	0.00	257.52	0 00:00	0.00
AMH1	JUNCTION	0.12	0.41	256.61	0 07:00	0.41
CBMH1	JUNCTION	0.11	0.37	255.87	0 07:01	0.37
CBMH1-S	JUNCTION	0.02	0.06	257.62	0 07:00	0.06
CBMH2	JUNCTION	0.13	0.43	255.47	0 07:00	0.43
CBMH2-S	JUNCTION	0.03	0.10	257.21	0 07:00	0.10
CBMH3	JUNCTION	0.13	0.45	255.27	0 07:00	0.45
CBMH3-S	JUNCTION	0.03	0.10	257.03	0 07:00	0.10
CBMH4	JUNCTION	0.18	0.64	254.93	0 07:00	0.64
CBMH4-S	JUNCTION	0.04	0.12	256.64	0 07:00	0.12
CBMH5	JUNCTION	0.19	0.67	254.81	0 07:01	0.67
CBMH5-S	JUNCTION	0.03	0.11	256.49	0 07:00	0.11
DCBMH10	JUNCTION	0.23	0.80	254.12	0 07:02	0.80
DCBMH10-S	JUNCTION	0.02	0.07	255.05	0 07:00	0.07
DCBMH6	JUNCTION	0.21	0.78	254.58	0 07:01	0.78
DCBMH6-S	JUNCTION	0.04	0.11	255.88	0 07:00	0.11
DCBMH7	JUNCTION	0.23	0.87	254.49	0 07:02	0.87
DCBMH7-S	JUNCTION	0.04	0.12	255.57	0 07:00	0.12
DCBMH8	JUNCTION	0.23	0.87	254.38	0 07:02	0.87
DCBMH8-S	JUNCTION	0.04	0.11	255.40	0 07:00	0.11
DCBMH9	JUNCTION	0.23	0.85	254.27	0 07:02	0.85
DCBMH9-S	JUNCTION	0.04	0.11	255.25	0 07:01	0.11
J1	JUNCTION	0.31	0.39	247.56	0 09:01	0.39
J10	JUNCTION	0.68	2.41	250.52	0 09:46	2.24
J10_s	JUNCTION	0.15	0.60	249.73	0 06:32	0.60
J11	JUNCTION	0.00	0.00	247.41	0 00:00	0.00

J12	JUNCTION	0.00	0.00	266.00	0	00:00	0.00
J14	JUNCTION	0.71	2.12	250.18	0	06:54	2.12
J15	JUNCTION	0.00	0.00	247.37	0	00:00	0.00
J2	JUNCTION	0.10	0.34	261.09	0	07:00	0.34
J3	JUNCTION	0.98	2.88	253.26	0	07:14	2.87
J4	JUNCTION	0.08	0.26	259.46	0	07:00	0.26
J5	JUNCTION	0.81	2.99	251.22	0	06:54	2.53
J6	JUNCTION	0.09	0.29	258.04	0	07:00	0.29
J7	JUNCTION	0.11	0.34	257.09	0	07:00	0.34
J9	JUNCTION	0.00	0.00	259.20	0	00:00	0.00
MH1	JUNCTION	0.11	0.37	256.16	0	07:00	0.37
MH10	JUNCTION	0.53	1.18	248.25	0	07:14	1.18
MH12	JUNCTION	0.56	1.31	248.71	0	07:14	1.31
MH13	JUNCTION	0.60	1.51	249.24	0	06:37	1.46
MH14	JUNCTION	0.59	2.21	250.27	0	06:34	1.48
MH15	JUNCTION	0.68	2.61	251.00	0	06:33	1.79
MH16	JUNCTION	0.71	2.58	251.30	0	06:35	2.20
MH17	JUNCTION	0.74	2.66	251.71	0	12:00	2.17
MH1-S	JUNCTION	0.02	0.06	257.93	0	07:00	0.06
MH2	JUNCTION	0.20	0.74	254.67	0	07:01	0.74
MH2-S	JUNCTION	0.03	0.11	256.19	0	07:00	0.11
ND5_DS	JUNCTION	0.40	0.73	244.87	0	07:00	0.73
NODE1	JUNCTION	0.00	0.00	263.00	0	00:00	0.00
NODE2	JUNCTION	0.17	0.48	256.28	0	09:00	0.48
NODE2B	JUNCTION	0.40	1.50	253.95	0	09:34	1.50
NODE3	JUNCTION	0.55	1.71	253.97	0	09:48	1.67
NODE3B	JUNCTION	0.42	1.49	253.75	0	09:48	1.46
NODE3B_1	JUNCTION	0.54	3.12	251.98	0	08:18	2.60
NODE4_DS	JUNCTION	0.40	1.02	247.25	0	08:17	1.02
NODE4_US	JUNCTION	0.84	1.80	249.07	0	08:58	1.80
NODE4B_1	JUNCTION	0.63	1.50	246.50	0	06:55	1.50
NODE5_US	JUNCTION	1.09	2.16	246.46	0	07:00	2.16
NODE6	JUNCTION	0.84	2.38	252.70	0	06:32	2.38
NODE6_1	JUNCTION	0.80	2.79	252.72	0	06:32	2.30
NODE6_S	JUNCTION	0.04	0.22	252.92	0	07:00	0.22
NODE7	JUNCTION	0.12	0.50	251.41	0	06:39	0.50
NODE7_2	JUNCTION	0.77	2.73	252.22	0	10:18	2.15
NODE7_s	JUNCTION	0.66	3.02	252.20	0	10:18	2.41
NODE8	JUNCTION	0.44	1.02	247.76	0	07:14	1.02
NODE8_S	JUNCTION	0.18	0.73	248.35	0	07:01	0.73
PNDOUT	JUNCTION	0.43	0.97	253.97	0	09:34	0.97
J8	OUTFALL	0.00	0.00	253.27	0	00:00	0.00
MAD	OUTFALL	0.41	0.80	246.60	0	11:29	0.80
OF1	OUTFALL	0.22	0.77	254.04	0	07:02	0.77
OF2	OUTFALL	0.00	0.00	0.00	0	00:00	0.00
OF3	OUTFALL	0.08	0.26	259.26	0	07:00	0.26
OF4	OUTFALL	0.24	0.52	244.66	0	07:00	0.52
AL_POND	STORAGE	1.41	2.46	255.46	0	09:10	2.46
SU1	STORAGE	0.00	0.00	0.00	0	00:00	0.00
SWMF1	STORAGE	1.36	2.30	250.50	0	08:36	2.30
SWMF2	STORAGE	1.73	2.60	250.15	0	08:15	2.60

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Node Inflow Summary
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Node	Type	Maximum Lateral Inflow CMS	Maximum Total Inflow CMS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
ACBMH1	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
ACBMH2	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
ACBMH3	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
ADCBMH1	JUNCTION	0.000	0.000	0 00:00	0	0	0.000 ltr
AMH1	JUNCTION	0.913	0.913	0 07:00	13.1	13.1	-0.163
CBMH1	JUNCTION	0.000	0.731	0 07:00	0	11.5	0.001
CBMH1-S	JUNCTION	0.008	0.092	0 07:00	0.108	1.16	0.057
CBMH2	JUNCTION	0.000	0.941	0 07:00	0	14.9	-0.001
CBMH2-S	JUNCTION	0.434	0.521	0 07:00	6.15	7.3	-0.012
CBMH3	JUNCTION	0.000	0.970	0 07:00	0	15.1	0.001
CBMH3-S	JUNCTION	0.010	0.318	0 07:00	0.142	4.01	0.019
CBMH4	JUNCTION	0.000	1.265	0 07:00	0	20.3	-0.000
CBMH4-S	JUNCTION	0.406	0.694	0 07:00	5.76	9.51	-0.011
CBMH5	JUNCTION	0.000	1.303	0 07:01	0	20.6	0.000
CBMH5-S	JUNCTION	0.018	0.413	0 07:00	0.251	4.64	0.021
DCBMH10	JUNCTION	0.000	1.816	0 07:02	0	27	0.000
DCBMH10-S	JUNCTION	0.024	0.332	0 07:00	0.334	4.32	-0.002
DCBMH6	JUNCTION	0.000	1.538	0 07:01	0	23.9	-0.000
DCBMH6-S	JUNCTION	0.014	0.581	0 07:00	0.197	6.99	-0.002
DCBMH7	JUNCTION	0.000	1.622	0 07:01	0	25	-0.000
DCBMH7-S	JUNCTION	0.023	0.519	0 07:00	0.323	6.42	-0.000
DCBMH8	JUNCTION	0.000	1.705	0 07:02	0	25.9	0.000
DCBMH8-S	JUNCTION	0.022	0.455	0 07:00	0.299	5.59	0.002
DCBMH9	JUNCTION	0.000	1.786	0 07:02	0	26.9	-0.000

DCBMH9-S	JUNCTION	0.021	0.391	0	07:00	0.298
4.98	0.005					
J1	JUNCTION	0.078	0.431	0	09:00	1.61
22.4	0.788					
J10	JUNCTION	0.000	12.579	0	07:13	0
178	2.060					
J10_s	JUNCTION	0.912	1.220	0	07:00	14.7
19.4	0.053					
J11	JUNCTION	0.000	0.000	0	00:00	0
0	0.000 ltr					
J12	JUNCTION	0.000	0.000	0	00:00	0
0	0.000 ltr					
J14	JUNCTION	0.727	10.500	0	07:14	12.3
197	0.810					
J15	JUNCTION	0.000	0.000	0	00:00	0
0	0.000 ltr					
J2	JUNCTION	0.868	0.868	0	07:00	13
13	-0.001					
J3	JUNCTION	0.000	3.020	0	07:14	0
83.7	0.003					
J4	JUNCTION	0.000	0.868	0	07:00	0
13	0.001					
J5	JUNCTION	0.000	7.325	0	08:18	0
173	-2.395					
J6	JUNCTION	0.700	0.700	0	07:00	10.9
10.9	-0.002					
J7	JUNCTION	0.000	0.698	0	07:00	0
10.9	0.001					
J9	JUNCTION	0.000	0.000	0	00:00	0
0	0.000 ltr					
MH1	JUNCTION	0.000	0.727	0	07:00	0
11.4	0.001					
MH10	JUNCTION	0.000	2.751	0	06:40	0
88.4	0.011					
MH12	JUNCTION	0.000	2.802	0	06:34	0
88.4	0.011					
MH13	JUNCTION	0.000	2.820	0	06:34	0
88.4	0.010					
MH14	JUNCTION	0.000	2.430	0	06:34	0
77.8	0.022					
MH15	JUNCTION	0.000	2.433	0	06:34	0
77.9	0.124					
MH16	JUNCTION	0.000	2.434	0	06:34	0
77.3	-0.718					
MH17	JUNCTION	0.000	2.613	0	06:36	0
80.4	3.942					
MH1-S	JUNCTION	0.116	0.116	0	07:00	1.64
1.64	-0.007					
MH2	JUNCTION	0.000	1.454	0	07:01	0
23	-0.000					
MH2-S	JUNCTION	0.346	0.720	0	07:00	4.9
9.22	-0.006					
ND5_DS	JUNCTION	0.000	7.034	0	07:00	0
222	-0.007					
NODE1	JUNCTION	0.000	0.000	0	00:00	0
0	0.000 ltr					
NODE2	JUNCTION	8.033	8.033	0	07:00	175
175	-0.006					
NODE2B	JUNCTION	0.544	10.569	0	09:00	9.92
247	0.119					

NODE3	JUNCTION	0.000	9.971	0	09:52	0
247	0.044					
NODE3B	JUNCTION	0.822	7.219	0	09:48	12.2
175	-0.033					
NODE3B_1	JUNCTION	0.000	7.283	0	08:18	0
176	1.179					
NODE4_DS	JUNCTION	0.000	8.113	0	08:58	0
218	-0.008					
NODE4_US	JUNCTION	1.567	8.113	0	08:58	32.8
218	0.010					
NODE4B_1	JUNCTION	0.000	8.064	0	08:17	0
218	0.037					
NODE5_US	JUNCTION	2.525	8.010	0	06:55	32.2
222	0.181					
NODE6	JUNCTION	0.000	3.432	0	09:00	0
93.2	0.007					
NODE6_1	JUNCTION	0.000	2.266	0	10:18	0
73.3	-0.087					
NODE6_S	JUNCTION	0.545	0.545	0	07:00	9.62
9.62	-0.035					
NODE7	JUNCTION	0.739	0.776	0	07:00	10.2
10.3	-4.235					
NODE7_2	JUNCTION	0.000	2.265	0	10:18	0
73.4	0.260					
NODE7_s	JUNCTION	0.000	2.261	0	10:18	0
73.2	-2.106					
NODE8	JUNCTION	0.000	3.281	0	06:56	0
97.9	0.055					
NODE8_S	JUNCTION	0.264	0.572	0	07:00	3.64
9.5	0.002					
PNDOUT	JUNCTION	0.000	2.270	0	09:08	0
62.5	0.039					
J8	OUTFALL	0.000	0.301	0	07:00	0
4.26	0.000					
MAD	OUTFALL	0.000	3.249	0	07:14	0
97.9	0.000					
OF1	OUTFALL	0.008	1.822	0	07:02	0.106
27.1	0.000					
OF2	OUTFALL	3.045	3.045	0	09:00	76
76	0.000					
OF3	OUTFALL	0.000	0.868	0	07:00	0
13	0.000					
OF4	OUTFALL	0.000	7.034	0	07:00	0
222	0.000					
AL_POND	STORAGE	3.604	4.514	0	07:00	58.6
71.8	0.397					
SU1	STORAGE	0.000	0.000	0	00:00	0
0	0.000 ltr					
SWMF1	STORAGE	0.694	0.956	0	06:58	11.2
11.2	-0.009					
SWMF2	STORAGE	2.178	2.178	0	07:00	35.3
35.3	0.000					

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Node Surcharge Summary
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Surcharging occurs when water rises above the top of the highest conduit.

Node	Type	Hours Surcharged	Max. Height Above Crown Meters	Min. Depth Below Rim Meters
J10	JUNCTION	6.34	1.272	0.000
J10_s	JUNCTION	3.26	0.100	0.000
J14	JUNCTION	6.47	1.000	0.000
J3	JUNCTION	5.93	1.675	0.175
J5	JUNCTION	7.08	1.848	0.000
MH12	JUNCTION	3.64	0.112	0.928
MH13	JUNCTION	5.45	0.306	0.944
MH14	JUNCTION	5.50	1.010	0.170
MH15	JUNCTION	5.70	1.410	0.000
MH16	JUNCTION	5.97	1.381	0.039
MH17	JUNCTION	5.83	1.463	0.417
NODE3	JUNCTION	4.61	0.709	0.000
NODE3B	JUNCTION	1.92	0.371	0.000
NODE3B_1	JUNCTION	5.38	2.000	0.000
NODE4_US	JUNCTION	6.95	0.297	0.000
NODE4B_1	JUNCTION	5.49	0.000	0.000
NODE6	JUNCTION	5.84	1.180	0.000
NODE6_1	JUNCTION	5.83	1.591	0.000
NODE7	JUNCTION	1.88	0.000	0.000
NODE7_2	JUNCTION	5.81	1.533	0.107
NODE7_s	JUNCTION	5.77	1.820	0.160

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Node Flooding Summary
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Flooding refers to all water that overflows a node, whether it ponds or not.

Node	Hours Flooded	Maximum Rate CMS	Time of Max Occurrence days	hr:min	Total Flood Volume 10^6 ltr	Maximum Ponded Depth Meters
J10_s	3.03	0.492	0	07:00	2.894	0.100
J14	3.00	2.824	0	07:14	10.031	1.000
MH15	0.01	0.152	0	06:33	0.000	0.000
NODE3B_1	0.01	1.402	0	10:50	0.012	2.000
NODE4B_1	5.49	3.947	0	07:02	49.730	0.000
NODE6	5.39	1.261	0	09:00	19.834	0.000
NODE7	0.90	0.278	0	07:00	0.459	0.000
SWMF1	0.76	0.111	0	09:00	0.213	0.000
SWMF2	4.00	0.946	0	09:00	7.135	0.000

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Storage Volume Summary
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	Average	Avg	Evap	Exfil	Maximum	Max	Time of Max	Maximum

Storage Unit	Volume 1000 m3	Pcnt Full	Pcnt Loss	Pcnt Loss	Volume 1000 m3	Pcnt Full	Occurrence days hr:min	Outflow CMS
AL_POND	15.247	37	0	0	29.864	73	0 09:10	2.270
SU1	0.000	0	0	0	0.000	0	0 00:00	0.000
SWMF1	1.913	47	0	0	4.034	100	0 08:36	0.311
SWMF2	11.296	62	0	0	18.123	100	0 08:15	0.364

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Outfall Loading Summary
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Outfall Node	Flow Freq Pcnt	Avg Flow CMS	Max Flow CMS	Total Volume 10^6 ltr
J8	62.15	0.079	0.301	4.256
MAD	99.32	1.143	3.249	97.863
OF1	99.95	0.315	1.822	27.113
OF2	100.00	0.881	3.045	75.950
OF3	99.96	0.151	0.868	12.991
OF4	98.52	2.613	7.034	221.968
System	93.32	5.183	15.452	440.141

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Link Flow Summary
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Link	Type	Maximum |Flow| CMS	Time of Max Occurrence days	hr:min	Maximum |Veloc| m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	0.726	0	07:00	2.66	0.26	0.35
C1_1	CHANNEL	7.283	0	08:18	1.18	1.03	1.00
C1_2	CHANNEL	7.325	0	08:18	0.91	0.74	1.00
C10	CONDUIT	2.430	0	06:34	2.22	1.08	1.00
C11	CONDUIT	3.249	0	07:14	0.92	1.08	1.00
C12	CONDUIT	0.732	0	07:01	2.41	0.27	0.38
C12-S	CHANNEL	0.087	0	07:00	0.30	0.04	0.40
C13	CONDUIT	0.941	0	07:00	2.72	0.34	0.42
C13-S	CHANNEL	0.308	0	07:00	0.69	0.16	0.49
C14	CONDUIT	0.971	0	07:01	2.13	0.35	0.52
C14-S	CHANNEL	0.288	0	07:00	0.53	0.15	0.55
C15	CONDUIT	1.265	0	07:01	2.23	0.64	0.62
C15-S	CHANNEL	0.395	0	07:00	0.67	0.29	0.57
C16	CONDUIT	1.303	0	07:01	2.12	0.66	0.67

C16-S	CHANNEL	0.375	0	07:00	0.69	0.20	0.54
C17	CONDUIT	1.454	0	07:01	2.17	0.73	0.72
C17-S	CHANNEL	0.567	0	07:00	0.99	0.24	0.56
C18	CONDUIT	1.538	0	07:01	2.10	0.77	0.79
C18-S	CHANNEL	0.496	0	07:00	0.82	0.24	0.58
C19	CONDUIT	1.621	0	07:02	2.11	1.00	0.83
C19-S	CHANNEL	0.434	0	07:00	0.72	0.28	0.58
C1-S	CHANNEL	0.084	0	07:00	0.52	0.04	0.29
C2	CONDUIT	3.922	0	08:58	2.72	0.28	0.84
C20	CONDUIT	1.706	0	07:02	2.24	1.10	0.82
C20-S	CHANNEL	0.370	0	07:01	0.66	0.24	0.55
C21	CONDUIT	1.787	0	07:02	2.45	1.15	0.79
C21-S	CHANNEL	0.309	0	07:01	0.82	0.20	0.45
C22	CONDUIT	1.816	0	07:02	2.62	1.16	0.75
C23	CONDUIT	0.868	0	07:00	3.52	0.10	0.20
C24	CONDUIT	0.000	0	00:00	0.00	0.00	0.10
C25	CONDUIT	0.698	0	07:00	2.57	0.08	0.21
C26	CONDUIT	0.696	0	07:00	2.19	0.11	0.24
C28	CONDUIT	0.868	0	07:00	4.33	0.06	0.17
C29	CONDUIT	0.000	0	00:00	0.00	0.00	0.24
C3	CONDUIT	8.064	0	08:17	1.01	0.78	1.00
C30	CONDUIT	0.000	0	00:00	0.00	0.00	0.24
C31	CONDUIT	7.879	0	09:00	0.66	0.28	0.74
C32	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C33	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C34	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C35	CONDUIT	0.000	0	00:00	0.00	0.00	0.30
C36	CONDUIT	2.249	0	09:22	0.64	0.22	0.89
C37	CONDUIT	3.021	0	08:14	2.67	1.74	1.00
C38	CONDUIT	9.971	0	09:52	0.55	0.50	1.00
C39	CONDUIT	0.910	0	07:00	2.65	0.25	0.67
C4	CONDUIT	5.696	0	12:25	0.40	0.36	1.00
C40	CONDUIT	0.562	0	07:01	1.14	0.49	0.96
C41	CONDUIT	0.037	0	07:00	0.14	0.11	0.72
C42	CONDUIT	0.320	0	09:34	0.64	0.99	1.00
C43	CONDUIT	7.034	0	07:00	1.63	10.20	0.63
C44	CONDUIT	0.309	0	09:04	0.62	0.97	1.00
C45	CONDUIT	2.315	0	11:58	2.05	0.97	1.00
C46	CONDUIT	2.434	0	06:34	2.15	1.09	1.00
C47	CONDUIT	2.412	0	12:07	2.14	1.07	1.00
C48	CONDUIT	2.802	0	06:34	2.50	1.25	1.00
C49	CONDUIT	2.751	0	06:40	2.54	1.23	0.99
C5	CONDUIT	4.830	0	07:00	3.43	1.41	0.74
C50	CONDUIT	2.735	0	06:35	2.97	1.24	0.92
C51	CONDUIT	0.000	0	00:00	0.00	0.00	0.00
C52	CONDUIT	2.838	0	06:31	2.23	1.84	1.00
C53	CHANNEL	6.658	0	11:29	0.82	1.20	1.00
C54	CONDUIT	0.430	0	09:01	0.44	0.08	0.70
C55	CHANNEL	9.622	0	07:14	1.19	0.98	1.00
C6	CONDUIT	2.266	0	10:18	2.00	0.99	1.00
C7	CONDUIT	2.265	0	10:18	2.00	1.02	1.00
C8	CONDUIT	2.261	0	10:18	2.00	1.00	1.00
C9	CONDUIT	2.433	0	06:34	2.15	1.09	1.00
EDORF	ORIFICE	0.096	0	08:37			1.00
C27	WEIR	0.301	0	07:00			0.35
W1	WEIR	6.958	0	09:52			1.00
W2	WEIR	2.205	0	07:00			0.86

W3	WEIR	4.191	0	08:58	3.97
W4	WEIR	10.340	0	07:13	18.26
W5	WEIR	0.000	0	00:00	0.00
WEIR1	WEIR	2.178	0	09:09	0.79
WEIR2	WEIR	0.000	0	00:00	0.00
CBMH10-IC	DUMMY	0.010	0	07:00	
CBMH1-IC	DUMMY	0.005	0	07:00	
CBMH2-IC	DUMMY	0.180	0	07:00	
CBMH3-IC	DUMMY	0.029	0	07:00	
CBMH4-IC	DUMMY	0.255	0	07:00	
CBMH5-IC	DUMMY	0.038	0	07:00	
CBMH6-IC	DUMMY	0.084	0	06:49	
CBMH7-IC	DUMMY	0.084	0	06:27	
CBMH8-IC	DUMMY	0.084	0	06:52	
CBMH9-IC	DUMMY	0.082	0	07:01	
MH1-IC	DUMMY	0.031	0	07:00	
MH2-IC	DUMMY	0.111	0	07:00	
OL1	DUMMY	0.032	0	07:00	
OL11	DUMMY	3.020	0	07:14	
OL2	DUMMY	0.042	0	06:19	
OL3	DUMMY	0.042	0	06:48	
OL4	DUMMY	0.020	0	07:00	
OL5	DUMMY	0.420	0	06:32	
OL6	DUMMY	0.251	0	07:00	
OL7	DUMMY	0.251	0	07:00	
OL8	DUMMY	0.364	0	06:37	
SWMF_Outlet	DUMMY	0.311	0	08:36	
SWMF2_Outlet	DUMMY	0.364	0	07:27	

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Flow Classification Summary
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Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class: Dry	Up Dry	Down Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
C1	1.00	0.00	0.00	0.00	0.33	0.67	0.00	0.00	0.70	0.00
C1_1	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.25	0.00
C1_2	1.00	0.01	0.00	0.00	0.99	0.00	0.00	0.00	0.64	0.00
C10	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00	0.00
C11	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01	0.00
C12	1.00	0.00	0.00	0.00	0.34	0.65	0.00	0.00	0.95	0.00
C12-S	1.00	0.00	0.00	0.00	0.79	0.21	0.00	0.00	0.55	0.00

C13	1.00	0.00	0.00	0.00	0.33	0.67	0.00	0.00	0.59
0.00									
C13-S	1.00	0.00	0.18	0.00	0.82	0.00	0.00	0.00	0.67
0.00									
C14	1.00	0.00	0.00	0.00	0.36	0.64	0.00	0.00	0.87
0.00									
C14-S	1.00	0.00	0.00	0.00	0.73	0.26	0.00	0.00	0.53
0.00									
C15	1.00	0.00	0.00	0.00	0.43	0.57	0.00	0.00	0.48
0.00									
C15-S	1.00	0.00	0.18	0.00	0.82	0.00	0.00	0.00	0.48
0.00									
C16	1.00	0.00	0.00	0.00	0.48	0.52	0.00	0.00	0.54
0.00									
C16-S	1.00	0.00	0.00	0.00	0.72	0.28	0.00	0.00	0.56
0.00									
C17	1.00	0.00	0.00	0.00	0.47	0.53	0.00	0.00	0.52
0.00									
C17-S	1.00	0.00	0.14	0.00	0.44	0.42	0.00	0.00	0.93
0.00									
C18	1.00	0.00	0.00	0.00	0.72	0.28	0.00	0.00	0.46
0.00									
C18-S	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.99
0.00									
C19	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.47
0.00									
C19-S	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.52
0.00									
C1-S	1.00	0.00	0.31	0.00	0.69	0.00	0.00	0.00	0.98
0.00									
C2	1.00	0.00	0.00	0.00	0.44	0.56	0.00	0.00	0.00
0.99									
C20	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.53
0.00									
C20-S	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.95
0.00									
C21	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.39
0.00									
C21-S	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00
0.00									
C22	1.00	0.00	0.00	0.00	0.92	0.08	0.00	0.00	0.00
0.00									
C23	1.00	0.00	0.00	0.00	0.20	0.80	0.00	0.00	0.00
0.00									
C24	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C25	1.00	0.00	0.00	0.00	0.35	0.65	0.00	0.00	0.99
0.00									
C26	1.00	0.00	0.00	0.00	0.37	0.63	0.00	0.00	0.97
0.00									
C28	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	0.13
0.00									
C29	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C3	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.68
0.00									
C30	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C31	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.94
0.00									

C32	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C33	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C34	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C35	1.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C36	1.00	0.00	0.03	0.00	0.12	0.00	0.84	0.00	0.00
0.00									
C37	1.00	0.00	0.01	0.00	0.99	0.00	0.00	0.00	0.00
0.00									
C38	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.26
0.00									
C39	1.00	0.00	0.00	0.00	0.95	0.05	0.00	0.00	0.96
0.00									
C4	1.00	0.00	0.02	0.00	0.98	0.00	0.00	0.00	0.55
0.00									
C40	1.00	0.00	0.33	0.00	0.65	0.02	0.00	0.00	0.00
0.99									
C41	1.00	0.18	0.00	0.00	0.82	0.00	0.00	0.00	0.47
0.00									
C42	1.00	0.29	0.01	0.00	0.71	0.00	0.00	0.00	0.48
0.00									
C43	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
C44	1.00	0.29	0.07	0.00	0.63	0.00	0.00	0.00	0.85
0.00									
C45	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.01
0.00									
C46	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.52
0.00									
C47	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.52
0.00									
C48	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.43
0.00									
C49	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.39
0.00									
C5	1.00	0.00	0.00	0.00	0.47	0.53	0.00	0.00	0.00
0.91									
C50	1.00	0.00	0.00	0.00	0.23	0.77	0.00	0.00	0.00
0.00									
C51	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.00									
C52	1.00	0.01	0.00	0.00	0.81	0.18	0.00	0.00	0.00
0.51									
C53	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.65
0.00									
C54	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.94
0.00									
C55	1.00	0.00	0.02	0.00	0.98	0.00	0.00	0.00	0.13
0.00									
C6	1.00	0.00	0.00	0.00	0.99	0.01	0.00	0.00	0.00
0.00									
C7	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
C8	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									
C9	1.00	0.00	0.00	0.00	1.00	0.00	0.00	0.00	0.00
0.00									

****
Conduit Surcharge Summary
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Conduit	Hours Full: Both Ends	Hours Full: Upstream	Hours Full: Dnstream	Hours Above Full Normal Flow	Hours Capacity Limited
C1_1	1.92	1.92	5.37	0.57	0.15
C1_2	5.37	5.37	7.22	0.01	0.17
C10	5.50	5.70	5.50	5.66	5.50
C11	0.01	5.36	0.01	4.84	0.01
C2	0.01	6.95	0.01	0.01	0.01
C20	0.01	0.01	0.01	0.46	0.01
C21	0.01	0.01	0.01	0.59	0.01
C22	0.01	0.01	0.01	0.60	0.01
C3	2.33	2.33	7.87	0.01	0.01
C31	0.01	0.01	2.94	0.01	0.01
C37	5.84	5.93	5.84	5.82	5.84
C38	2.94	2.94	4.61	0.01	0.01
C39	0.01	0.01	12.69	0.01	0.01
C4	5.49	5.49	8.41	0.01	0.01
C40	0.01	0.01	5.36	0.01	0.01
C42	3.26	3.26	4.84	0.01	0.01
C43	0.01	0.01	0.01	15.86	0.01
C44	0.01	0.01	3.26	0.01	0.01
C45	5.76	5.77	5.83	0.01	0.06
C46	5.83	5.83	5.97	5.65	5.58
C47	5.45	5.50	5.45	5.65	5.41
C48	3.64	5.45	3.64	6.04	3.64
C49	0.01	3.64	0.01	6.04	0.01
C5	0.01	8.41	0.01	7.95	0.01
C50	0.01	0.01	0.01	6.10	0.01
C52	7.03	8.13	7.03	6.95	3.82
C53	6.47	6.47	8.47	4.99	4.94
C54	0.01	0.01	10.48	0.01	0.01
C55	6.38	6.38	6.47	0.01	1.65
C6	5.83	5.84	5.83	0.01	5.81
C7	5.81	5.83	5.81	0.75	5.78
C8	5.77	5.81	5.77	0.01	5.73
C9	5.70	5.97	5.70	5.66	5.69

Analysis begun on: Wed Jun 10 15:16:15 2026
Analysis ended on: Wed Jun 10 15:16:23 2026
Total elapsed time: 00:00:08

Appendix D:
Stormwater Management Facility Calculations

TATHAM ENGINEERING

PROJECT	163, 164 Edward Street E, Creemore	FILE	419453
		DATE	6/11/2026
SUBJECT	SWMF1 (North) - Stage-Storage	NAME	LJC
		PAGE	1 OF 5

Bottom of Dry Cell: 248.20 masl **Top of Pond Elevation:** 250.50 masl

		Dry Cell Area		Dry Cell Volume	
Elevation	Depth	Incremental	Average	Incremental	Cumulative
masl	m	m^2	m^2	m^3	m^3
248.20	0.00	660	660	0	0
248.30	0.10	759	710	71	71
248.40	0.20	859	809	81	152
248.50	0.30	958	908	91	243
248.60	0.40	1,057	1,008	101	343
248.70	0.50	1,157	1,107	111	454
248.80	0.60	1,256	1,206	121	575
248.90	0.70	1,355	1,306	131	705
249.00	0.80	1,455	1,405	141	846
249.10	0.90	1,554	1,504	150	996
249.20	1.00	1,653	1,604	160	1,157
249.30	1.10	1,753	1,703	170	1,327
249.40	1.20	1,852	1,803	180	1,507
249.50	1.30	1,952	1,902	190	1,697
249.60	1.40	2,051	2,001	200	1,898
249.70	1.50	2,150	2,101	210	2,108
249.80	1.60	2,250	2,200	220	2,328
249.90	1.70	2,349	2,299	230	2,558
250.00	1.80	2,448	2,399	240	2,797
250.10	1.90	2,548	2,498	250	3,047
250.20	2.00	2,647	2,597	260	3,307
250.30	2.10	2,746	2,697	270	3,577
250.40	2.20	2,846	2,796	280	3,856
250.50	2.30	2,945	2,895	290	4,146

TATHAM ENGINEERING

PROJECT	163, 164 Edward Street E, Creemore	FILE	419453
		DATE	6/11/2026
SUBJECT	SWMF1 (North) - Stage-Discharge	NAME	LJC
		PAGE	2 OF 5

Bottom of Dry Cell: 248.20 masl **Top of Pond Elevation:** 250.50 masl

Elevation	Primary Control: Orifice		Secondary Control: Orifice		Outfall Pipe		Emergency Spillway		Total Discharge
	Head	Discharge	Head	Discharge	Head	Discharge	Head	Discharge	
masl	m	m^3/s	m	m^3/s	m	m^3/s	m	m^3/s	m^3/s
248.20	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
248.30	0.062	0.002	0.000	0.000	0.100	0.014	0.000	0.000	0.002
248.40	0.162	0.005	0.000	0.000	0.200	0.050	0.000	0.000	0.005
248.50	0.262	0.006	0.000	0.000	0.075	0.154	0.000	0.000	0.006
248.60	0.362	0.007	0.000	0.000	0.175	0.236	0.000	0.000	0.007
248.70	0.462	0.008	0.000	0.000	0.275	0.296	0.000	0.000	0.008
248.80	0.562	0.009	0.000	0.000	0.375	0.345	0.000	0.000	0.009
248.90	0.662	0.010	0.000	0.000	0.475	0.388	0.000	0.000	0.010
249.00	0.762	0.011	0.000	0.000	0.575	0.427	0.000	0.000	0.011
249.10	0.862	0.011	0.000	0.000	0.675	0.463	0.000	0.000	0.011
249.20	0.962	0.012	0.000	0.000	0.775	0.496	0.000	0.000	0.012
249.30	1.062	0.013	0.100	0.012	0.875	0.527	0.000	0.000	0.025
249.40	1.162	0.013	0.022	0.041	0.975	0.556	0.000	0.000	0.055
249.50	1.262	0.014	0.122	0.097	1.075	0.584	0.000	0.000	0.111
249.60	1.362	0.014	0.222	0.130	1.175	0.611	0.000	0.000	0.145
249.70	1.462	0.015	0.322	0.157	1.275	0.636	0.000	0.000	0.172
249.80	1.562	0.015	0.422	0.180	1.375	0.661	0.000	0.000	0.195
249.90	1.662	0.016	0.522	0.200	1.475	0.684	0.000	0.000	0.216
250.00	1.762	0.016	0.622	0.218	1.575	0.707	0.000	0.000	0.234
250.10	1.862	0.017	0.722	0.235	1.675	0.729	0.000	0.000	0.252
250.20	1.962	0.017	0.822	0.250	1.775	0.751	0.000	0.000	0.268
250.30	2.062	0.018	0.922	0.265	1.875	0.772	0.100	0.989	1.272
250.40	2.162	0.018	1.022	0.279	1.975	0.792	0.200	2.929	3.227
250.50	2.262	0.019	1.122	0.293	2.075	0.812	0.300	5.626	5.938

Primary Control: Orifice		Secondary Control: Orifice		Outlet Pipe		Emergency Spillway	
Diameter (mm)	75	Diameter (mm)	355	Diameter (mm)	450	Bottom Width (m)	20
Invert (masl)	248.20	Invert (masl)	249.20	Invert (masl)	248.20	Weir Sill Elevation (masl)	250.20
Area (m^2)	0.004	Area (m^2)	0.099	Area (m^2)	0.159	Weir Length (m)	7.50
Coefficient	0.63	Coefficient	0.63	Coefficient	0.80	Side Slope	10 :1
Flows in shaded cells use the Partially Full Orifice equation.						Weir Coefficient	1.49

9.9 Reservoir Routing

9.9.1 Orifice

When calculating orifice discharge, the orifice equation is only to be applied for water levels above the centroid of the orifice. Flows for water levels below the orifice centroid should be calculated using the weir equation.

$Q_w = 1.65([(pi*(D^2)/4)(2*\cos^{-1}[(((D/2)-d)/(D/2))*(180/pi)]/360)-((D/2-d)(Dd-d^2)^{0.5})]/d)d^{1.5}$

Where:
Q_w is weir flow (m^3/s)
D is orifice diameter (m)
d is depth of flow above the invert (m)

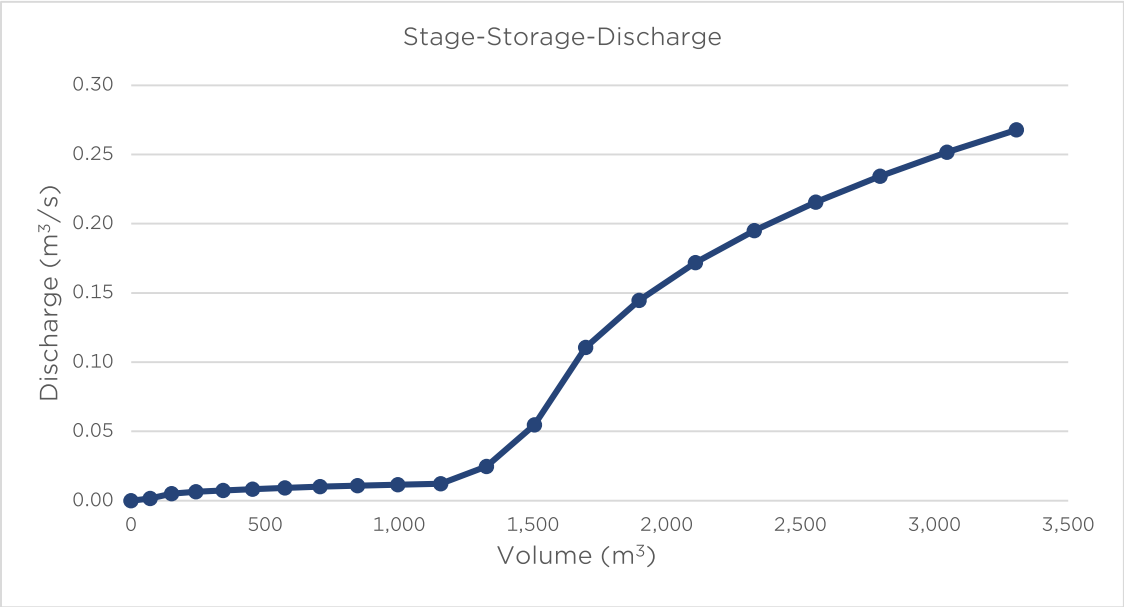
Where routing is applied, the technical report should discuss the method of routing used and assumptions made in determining routed flows.

The discharge coefficients of 0.63 and 0.8 are recommended for orifice plates and orifice tubes, respectively.

TATHAM ENGINEERING

PROJECT	163, 164 Edward Street E, Creemore	FILE	419453
		DATE	6/11/2026
SUBJECT	SWMF1 (North) - Stage-Discharge-Discharge	NAME	LJC
		PAGE	4 OF 5

Elevation masl	Total Discharge m^3/s	Total Volume m^3
248.20	0.000	0
248.30	0.002	71
248.40	0.005	152
248.50	0.006	243
248.60	0.007	343
248.70	0.008	454
248.80	0.009	575
248.90	0.010	705
249.00	0.011	846
249.10	0.011	996
249.20	0.012	1,157
249.30	0.025	1,327
249.40	0.055	1,507
249.50	0.111	1,697
249.60	0.145	1,898
249.70	0.172	2,108
249.80	0.195	2,328
249.90	0.216	2,558
250.00	0.234	2,797
250.10	0.252	3,047
250.20	0.268	3,307



TATHAM ENGINEERING

PROJECT	163, 164 Edward Street E, Creemore	FILE	419453
		DATE	6/11/2026
SUBJECT	SWMF1 (North) - Operating Characteristics	NAME	LJC
		PAGE	5 OF 5

24-Hour SCS	Storage m^3	Discharge m^3/s	Water Level masl
25 mm (Water Quality)	885	0.011	249.00
1:100-year	2,743	0.230	249.98

Freeboard: 0.52 m

SWMF1 (North) - Water Quality Requirements

Project Details

163, 164 Edward Street East	423444

Prepared By

LJC	6/11/2026

Water Quality Sizing Criteria

Methodology & Data Source	Volumetric water quality criteria as presented in Table 3.2 in Ministry of Environment, Conservation and Parks (MECP) Stormwater Management Planning & Design Manual (SWMPDM) March 2003.

Contributing Catchments

Catchment ID	Area (ha)	TIMP (%)	XIMP (%)
201	7.91	60%	47%
Total	**7.91**	**60%**	**47%**

Treatment Method Details

SWM Facility Type	Dry Pond
Target Treatment Level	Basic Level
Treatment Percentage	60%

Treatment

Water Quality Storage Requirement	371	m^3
Extended Detention Volume (40 m^3)	371	m^3
Permanent Pool Volume Required	-	m^3
25 mm Storm Runoff Volume (PCSWMM)	885	m^3
Required Extended Detention Volume	885	m^3
Erosion Control Storage Required	1,661	m^3

Extended Detention Storage Provided	1,157	**Provided > Required**	
Active Storage Provided	3,307	**Provided > Required**	

SWMF1 (North) - Drawdown Time

Project Details

163, 164 Edward Street East	419453

Prepared By

LJC	6/11/2026

Pond Drawdown Time Calculation

Methodology & Data Source	Falling head orifice equation which assumes a constant pond surface area, per Equation 4.10 of Ministry of Environment, Conservation and Parks (MECP) Stormwater Management Planning & Design Manual (SWMPDM) March 2003.

Drawdown Time (t) = $$\frac{2A_p}{CA_o(2g)^{0.5}}(h_1^{0.5} - h_2^{0.5})$$

Pond Operation Characteristics

Orifice Diameter	=	75	mm
Cross Sectional Area of Orifice (A_o)	=	0.004	m^2
Orifice Discharge Coefficient (C)	=	0.63	
Starting Water Level	=	248.20	m
Starting Surface Area	=	660	m^2
25 mm Rainfall Water Level	=	249.00	m
25 mm Rainfall Water Level Surface Area	=	1,405	m^2
Extended Detention Zone Water Level	=	249.20	m
Extended Detention Zone Surface Area	=	1,604	m^2
Gravitational Acceleration Constant (g)	=	9.81	m/s^2

25 mm Storm Event Drawdown Time

Average Surface Area (A_p)	=	1,033	m^2
Starting Water Elevation Above Orifice (h_1)	=	0.80	m
Ending Water Elevation Above Orifice (h_2)	=	0.00	m

t_{25mm} = 41.6 hours

Extended Detention Zone Drawdown Time

Average Surface Area (A_p)	=	1,132	m^2
Starting Water Elevation Above Orifice (h_1)	=	1.00	m
Ending Water Elevation Above Orifice (h_2)	=	0.00	m

t_{ExtDet} = 51.0 hours

TATHAM ENGINEERING

PROJECT	163, 164 Edward Street East, Creemore	FILE	419453
		DATE	6/11/2026
SUBJECT	Stormwater Quality - Site Treatment Train (North)	NAME	LJC
		PAGE	1 OF 1

North Site Treatment Train

$$TSS\ Removal = 1 - (1 - R_P) \times (1 - R_S)$$

where:

TSS: 'Total Suspended Solids'

R_P: % TSS Removal provided by Primary Treatment Strategy

R_S: % TSS Removal provided by Secondary Treatment Strategy

Treatment Device		TSS Removal
Primary Treatment	OGS*	50%
Secondary Treatment	Dry Pond	60%
Applied TSS Removal Efficiency:		**80%**

*The NVCA recognizes 50% TSS removal minimum for an OGS unit.

TATHAM ENGINEERING

PROJECT	163, 164 Edward Street E, Creemore	FILE	419453
		DATE	6/12/2026
SUBJECT	SWMF2 (South) - Stage-Storage	NAME	LJC
		PAGE	1 OF 6

Bottom of Permanent Pool: 246.05 masl **Permanent Pool:** 247.55 masl **Top of Pond Elevation:** 249.85 masl

		Permanent Pool Area		Permanent Pool Volume		Wet Cell Area		Wet Cell Volume	
Elevation	Depth	Incremental	Average	Incremental	Cumulative	Incremental	Average	Incremental	Cumulative
masl	m	m^2	m^2	m^3	m^3	m^2	m^2	m^3	m^3
246.05	0.00	2,710	2,710	0	0	-	-	-	-
246.15	0.10	2,830	2,770	277	277	-	-	-	-
246.25	0.20	2,949	2,889	289	566	-	-	-	-
246.35	0.30	3,069	3,009	301	867	-	-	-	-
246.45	0.40	3,188	3,129	313	1,180	-	-	-	-
246.55	0.50	3,308	3,248	325	1,504	-	-	-	-
246.65	0.60	3,428	3,368	337	1,841	-	-	-	-
246.75	0.70	3,547	3,487	349	2,190	-	-	-	-
246.85	0.80	3,667	3,607	361	2,551	-	-	-	-
246.95	0.90	3,786	3,726	373	2,923	-	-	-	-
247.05	1.00	3,906	3,846	385	3,308	-	-	-	-
247.15	1.10	4,025	3,966	397	3,704	-	-	-	-
247.25	1.20	4,145	4,085	409	4,113	-	-	-	-
247.35	1.30	4,373	4,259	426	4,539	-	-	-	-
247.45	1.40	4,602	4,488	449	4,988	-	-	-	-
247.55	1.50	4,830	4,716	472	**5,459**	4,830	4,830	0	0
247.65	1.60	-	-	-	-	5,068	4,949	495	495
247.75	1.70	-	-	-	-	5,307	5,188	519	1,014
247.85	1.80	-	-	-	-	5,545	5,426	543	1,556
247.95	1.90	-	-	-	-	5,697	5,621	562	2,118
248.05	2.00	-	-	-	-	5,849	5,773	577	2,696
248.15	2.10	-	-	-	-	6,001	5,925	592	3,288
248.25	2.20	-	-	-	-	6,153	6,077	608	3,896

TATHAM ENGINEERING

PROJECT	163, 164 Edward Street E, Creemore	FILE	419453
		DATE	6/12/2026
SUBJECT	SWMF2 (South) - Stage-Storage	NAME	LJC
		PAGE	2 OF 6

		Permanent Pool Area		Permanent Pool Volume		Wet Cell Area		Wet Cell Volume	
Elevation	Depth	Incremental	Average	Incremental	Cumulative	Incremental	Average	Incremental	Cumulative
masl	m	m^2	m^2	m^3	m^3	m^2	m^2	m^3	m^3
248.35	2.30	-	-	-	-	6,305	6,229	623	4,519
248.45	2.40	-	-	-	-	6,457	6,381	638	5,157
248.55	2.50	-	-	-	-	6,609	6,533	653	5,810
248.65	2.60	-	-	-	-	6,761	6,685	668	6,479
248.75	2.70	-	-	-	-	6,913	6,837	684	7,162
248.85	2.80	-	-	-	-	7,065	6,989	699	7,861
248.95	2.90	-	-	-	-	7,217	7,141	714	8,575
249.05	3.00	-	-	-	-	7,369	7,293	729	9,305
249.15	3.10	-	-	-	-	7,521	7,445	744	10,049
249.25	3.20	-	-	-	-	7,673	7,597	760	10,809
249.35	3.30	-	-	-	-	7,825	7,749	775	11,584
249.45	3.40	-	-	-	-	7,977	7,901	790	12,374
249.55	3.50	-	-	-	-	8,129	8,053	805	**13,179**
249.65	3.60	-	-	-	-	8,281	8,205	820	14,000
249.75	3.70	-	-	-	-	8,433	8,357	836	14,835
249.85	3.80	-	-	-	-	8,585	8,509	851	**15,686**

TATHAM ENGINEERING

PROJECT	163, 164 Edward Street E, Creemore	FILE	419453
		DATE	6/12/2026
SUBJECT	SWMF2 (South) - Stage-Discharge	NAME	LJC
		PAGE	3 OF 6

Bottom of Permanent Pool: 246.05 masl **Permanent Pool:** 247.55 masl **Top of Pond Elevation:** 249.85 masl

Elevation	Primary Control: Orifice		Secondary Control: Orifice		Outfall Pipe		Emergency Spillway		Total Discharge
	Head	Discharge	Head	Discharge	Head	Discharge	Head	Discharge	
masl	m	m^3/s	m	m^3/s	m	m^3/s	m	m^3/s	m^3/s
247.55	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
247.65	0.015	0.008	0.000	0.000	0.100	0.014	0.000	0.000	0.008
247.75	0.115	0.021	0.000	0.000	0.200	0.050	0.000	0.000	0.021
247.85	0.215	0.029	0.000	0.000	0.075	0.154	0.000	0.000	0.029
247.95	0.315	0.036	0.000	0.000	0.175	0.236	0.000	0.000	0.036
248.05	0.415	0.041	0.000	0.000	0.275	0.296	0.000	0.000	0.041
248.15	0.515	0.045	0.000	0.000	0.375	0.345	0.000	0.000	0.045
248.25	0.615	0.050	0.000	0.000	0.475	0.388	0.000	0.000	0.050
248.35	0.715	0.054	0.000	0.000	0.575	0.427	0.000	0.000	0.054
248.45	0.815	0.057	0.000	0.000	0.675	0.463	0.000	0.000	0.057
248.55	0.915	0.061	0.000	0.000	0.775	0.496	0.000	0.000	0.061
248.65	1.015	0.064	0.100	0.012	0.875	0.527	0.000	0.000	0.075
248.75	1.115	0.067	0.030	0.044	0.975	0.556	0.000	0.000	0.111
248.85	1.215	0.070	0.130	0.091	1.075	0.584	0.000	0.000	0.161
248.95	1.315	0.073	0.230	0.122	1.175	0.611	0.000	0.000	0.194
249.05	1.415	0.075	0.330	0.146	1.275	0.636	0.000	0.000	0.221
249.15	1.515	0.078	0.430	0.166	1.375	0.661	0.000	0.000	0.244
249.25	1.615	0.080	0.530	0.184	1.475	0.684	0.000	0.000	0.265
249.35	1.715	0.083	0.630	0.201	1.575	0.707	0.000	0.000	0.284
249.45	1.815	0.085	0.730	0.216	1.675	0.729	0.000	0.000	0.302
249.55	1.915	0.088	0.830	0.231	1.775	0.751	0.000	0.000	0.318
249.65	2.015	0.090	0.930	0.244	1.875	0.772	0.100	0.989	1.323
249.75	2.115	0.092	1.030	0.257	1.975	0.792	0.200	2.929	3.279
249.85	2.215	0.094	1.130	0.269	2.075	0.812	0.300	5.626	5.990

Primary Control: Orifice		Secondary Control: Oriice		Outlet Pipe		Emergency Spillway	
Diameter (mm)	170	Diameter (mm)	340	Diameter (mm)	450	Bottom Width (m)	20
Invert (masl)	247.55	Invert (masl)	248.55	Invert (masl)	247.55	Weir Sill Elevation (masl)	249.55
Area (m^2)	0.023	Area (m^2)	0.091	Area (m^2)	0.159	Weir Length (m)	7.50
Coefficient	0.63	Coefficient	0.63	Coefficient	0.80	Side Slope	10 :1
Flows in shaded cells use the Partially Full Orifice equation.						Weir Coefficient	1.49

9.9 Reservoir Routing

9.9.1 Orifice

When calculating orifice discharge, the orifice equation is only to be applied for water levels above the centroid of the orifice. Flows for water levels below the orifice centroid should be calculated using the weir equation.

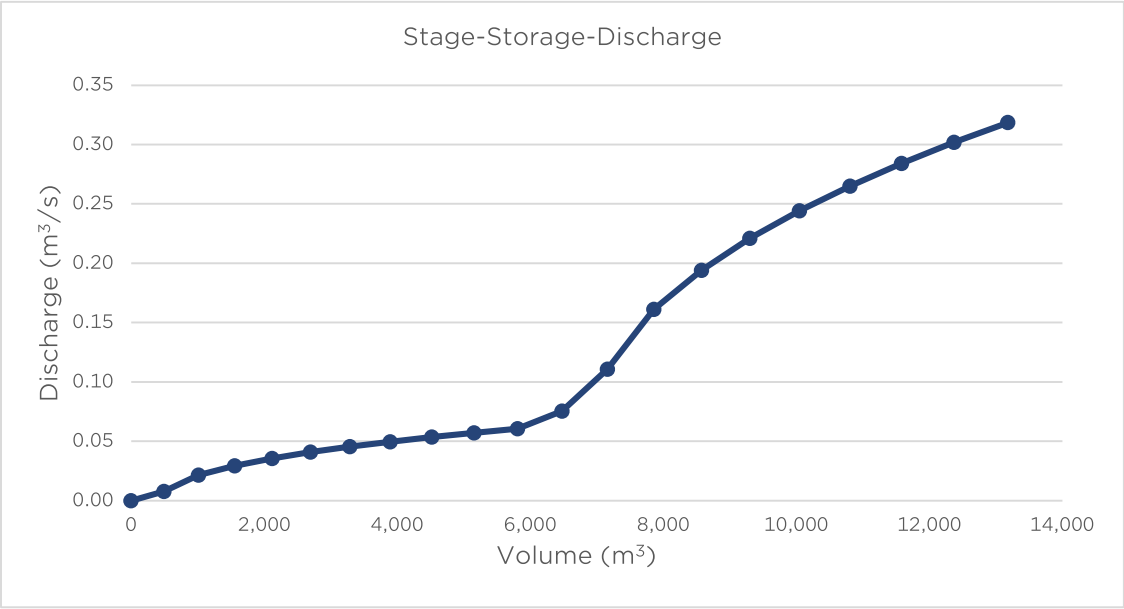
$Q_w = 1.65([(pi*(D^2)/4)(2*\cos^{-1}[(((D/2)-d)/(D/2))*(180/pi)]/360)-((D/2-d)(Dd-d^2)^{0.5})]/d)d^{1.5}$

Where:
Q_w is weir flow (m^3/s)
D is orifice diameter (m)
d is depth of flow above the invert (m)

Where routing is applied, the technical report should discuss the method of routing used and assumptions made in determining routed flows.

The discharge coefficients of 0.63 and 0.8 are recommended for orifice plates and orifice tubes, respectively.

Elevation masl	Total Discharge m^3/s	Total Volume m^3
247.55	0.000	0
247.65	0.008	495
247.75	0.021	1,014
247.85	0.029	1,556
247.95	0.036	2,118
248.05	0.041	2,696
248.15	0.045	3,288
248.25	0.050	3,896
248.35	0.054	4,519
248.45	0.057	5,157
248.55	0.061	5,810
248.65	0.075	6,479
248.75	0.111	7,162
248.85	0.161	7,861
248.95	0.194	8,575
249.05	0.221	9,305
249.15	0.244	10,049
249.25	0.265	10,809
249.35	0.284	11,584
249.45	0.302	12,374
249.55	0.318	13,179



TATHAM ENGINEERING

PROJECT	163, 164 Edward Street E, Creemore	FILE	419453
		DATE	6/12/2026
SUBJECT	SWMF2 (South) - Operating Characteristics	NAME	LJC
		PAGE	6 OF 6

24-Hour SCS	Storage m^3	Discharge m^3/s	Water Level masl
25 mm (Water Quality)	2,607	0.040	248.04
1:100-year	11,582	0.284	249.34

Freeboard: 0.51 m

SWMF2 (South) - Water Quality Requirements

Project Details

163, 164 Edward Street East	419453

Prepared By

LJC	6/11/2026

Water Quality Sizing Criteria

Methodology & Data Source	Volumetric water quality criteria as presented in Table 3.2 in Ministry of Environment, Conservation and Parks (MECP) Stormwater Management Planning & Design Manual (SWMPDM) March 2003.

Contributing Catchments

Catchment ID	Area (ha)	TIMP (%)	XIMP (%)
202A	24.05	64%	48%
Total	**24.05**	**64%**	**48%**

Treatment Method Details

SWM Facility Type	Wet Pond
Target Treatment Level	Enhanced Level
Treatment Percentage	80%

Treatment

Water Quality Storage Requirement	3,968	m^3
Extended Detention Volume (40 m^3)	962	m^3
Permanent Pool Volume Required	3,006	m^3
25 mm Storm Runoff Volume (PCSWMM)	2,607	m^3
Required Extended Detention Volume	2,607	m^3
Erosion Control Storage Required	5,291	m^3

Permanent Pool Volume Provided	5,459	**Provided > Required**	
Extended Detention Storage Provided	5,810	**Provided > Required**	
Active Storage Provided	13,179	**Provided > Required**	

SWMF2 (South) - Drawdown Time

Project Details

163, 164 Edward Street East	419453

Prepared By

LJC	6/11/2026

Pond Drawdown Time Calculation

Methodology & Data Source	Falling head orifice equation which assumes a constant pond surface area, per Equation 4.10 of Ministry of Environment, Conservation and Parks (MECP) Stormwater Management Planning & Design Manual (SWMPDM) March 2003.

Drawdown Time (t) = $$\frac{2A_p}{CA_o(2g)^{0.5}}(h_1^{0.5} - h_2^{0.5})$$

Pond Operation Characteristics

Orifice Diameter	=	170	mm
Cross Sectional Area of Orifice (A_o)	=	0.023	m^2
Orifice Discharge Coefficient (C)	=	0.63	
Starting Water Level	=	247.55	m
Starting Surface Area	=	4,830	m^2
25 mm Rainfall Water Level	=	248.04	m
25 mm Rainfall Water Level Surface Area	=	5,767	m^2
Extended Detention Zone Water Level	=	248.55	m
Extended Detention Zone Surface Area	=	6,533	m^2
Gravitational Acceleration Constant (g)	=	9.81	m/s^2

25 mm Storm Event Drawdown Time

Average Surface Area (A_p)	=	5,299	m^2
Starting Water Elevation Above Orifice (h_1)	=	0.49	m
Ending Water Elevation Above Orifice (h_2)	=	0.00	m

t_{25mm} = 32.5 hours

Extended Detention Zone Drawdown Time

Average Surface Area (A_p)	=	5,682	m^2
Starting Water Elevation Above Orifice (h_1)	=	1.00	m
Ending Water Elevation Above Orifice (h_2)	=	0.00	m

t_{ExtDet} = 49.8 hours

Appendix E:
Site Conveyance

TATHAM ENGINEERING

Manning's Equation Flow Calculations

Project Details	
163, 164 Edward Street	419453

Prepared By	
LJC	6/11/2026

Manning's Equation: $Q = \frac{1}{n} \cdot A \cdot R^{\frac{2}{3}} \cdot S^{\frac{1}{2}}$

Where:

Q = flow (m^3/s)

n = Manning's roughness coefficient

A = area of flow (m^2)

R = hydraulic radius (m) equal to flow area divided by wetted perimeter

S = Slope (m/m)

North Wraparound Ditch (Conveys Runoff from Catchment 1a_2A)

Manning's n =	0.040		Design Flow[(1)] =	0.330	m^3/s
Slope =	0.005	m/m	Area =	1.080	m^2
Right Side Slope =	3.0	:1 (H:V)	Wetted Perimeter =	3.795	m
Left Side Slope =	3.0	:1 (H:V)	Hydraulic Radius =	0.285	m
Depth =	0.60	m	Capacity =	0.83	m^3/s
Bottom Width =	0.00	m	Freeboard =	0.17	m

Notes

(1) Design flow is the Regional (Timmins) generated from 1a_2A.

TATHAM ENGINEERING

Manning's Equation Flow Calculations

Project Details	
163, 164 Edward Street E	419453

Prepared By	
LJC	6/11/2026

Manning's Equation: $Q = \frac{1}{n} \cdot A \cdot R^{\frac{2}{3}} \cdot S^{\frac{1}{2}}$

Where:

Q = flow (m^3/s)

n = Manning's roughness coefficient

A = area of flow (m^2)

R = hydraulic radius (m) equal to flow area divided by wetted perimeter

S = Slope (m/m)

Walkway Drainage Channel to SWMF1 (North)

Composite Manning's n =	0.028		Design Flow[(1)] =	1.190	m^3/s
Slope =	0.005	m/m	Area =	2.250	m^2
Right Side Slope =	3.0	:1 (H:V)	Wetted Perimeter =	6.162	m
Left Side Slope =	3.0	:1 (H:V)	Hydraulic Radius =	0.365	m
Depth =	0.50	m	Capacity =	2.90	m^3/s
Bottom Width =	3.00	m			

Notes

(1) Design flow is the uncontrolled 1:100YR storm from Catchment 201A.

ROW Capacity - Composite Manning's Calculations

Project Details

163, 164 Edward Street	419453

Prepared By:

LJC	6/11/2026

ROW capacity calculations using Manning's Equation with composite channel sections

ROW Description: ROW Upstream of North SWMF1

ROW Information:

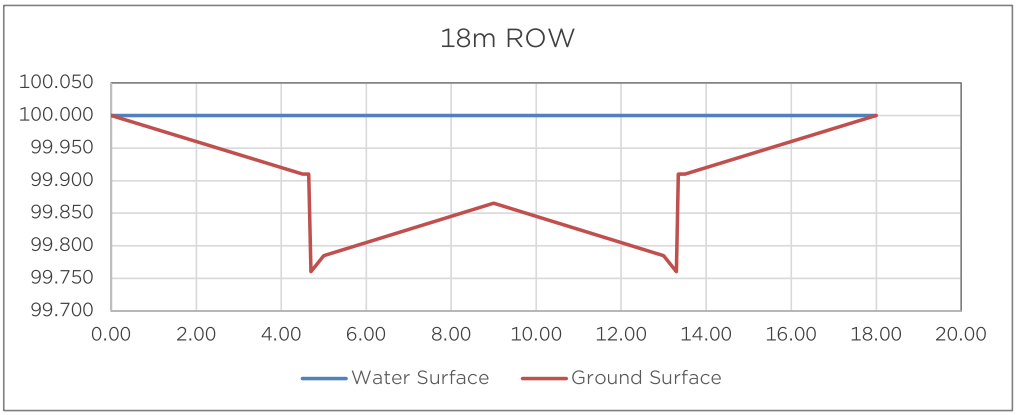
Manning's n Boulevard	0.040	
Manning's n Roadway	0.016	
ROW Width	18	m
Road Width	8	m
Boulevard Slope	0.020	m/m
Curb Top Width	0.15	m
Curb Height	0.15	m
Gutter Width	0.30	m
Gutter Depth	0.025	m
Slope	0.005	m/m

Manning's Equation

$$Q = \frac{1}{n} A R^{2/3} S^{1/2}$$

STA.	ELEV.	AREA (m^2)		WET. PERIMETER (m)		HYD. RAD (m)	Q (m^3/s)	
0.00	100.000							
4.50	99.910	0.203		4.5009		0.045	0.045	Left Boulevard
4.65	99.910	0.014		0.150				
4.70	99.760	0.008		0.158				
5.00	99.785	0.068		0.301				
9.00	99.865	0.700	1.58	4.001	9.220	0.171	2.154	Roadway
13.00	99.785	0.700		4.001				
13.30	99.760	0.068		0.301				
13.35	99.910	0.008		0.158				
13.50	99.910	0.014		0.150				
18.00	100.000	0.203		4.5009		0.045	0.045	Right Boulevard

Total Flow Capacity	**2.24**	m^3/s
Design Flow (100YR)	1.19	m^3/s



ROW Capacity - Composite Manning's Calculations

Project Details

163, 164 Edward Street	419453

Prepared By:

LJC	6/11/2026

ROW capacity calculations using Manning's Equation with composite channel sections

ROW Description: ROW Upstream of South SWMF2 - Street O

ROW Information:

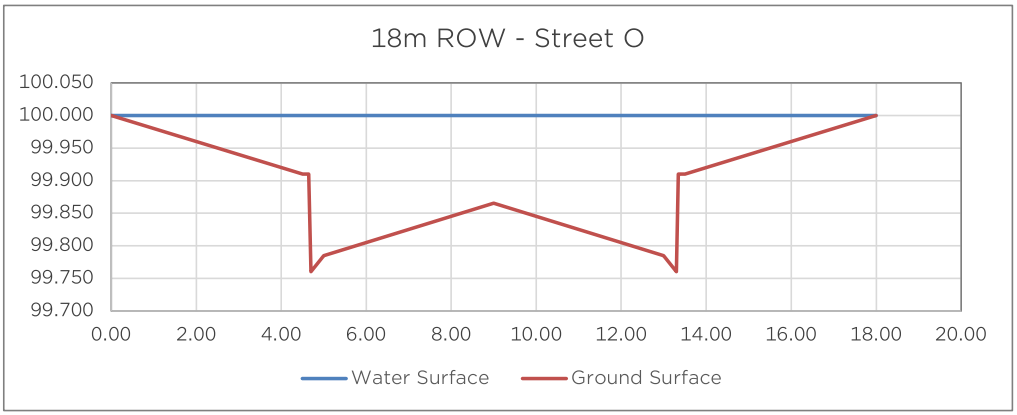
Manning's n Boulevard	0.040	
Manning's n Roadway	0.016	
ROW Width	18	m
Road Width	8	m
Boulevard Slope	0.020	m/m
Curb Top Width	0.15	m
Curb Height	0.15	m
Gutter Width	0.30	m
Gutter Depth	0.025	m
Slope	0.005	m/m

Manning's Equation

$$Q = \frac{1}{n} A R^{2/3} S^{1/2}$$

STA.	ELEV.	AREA (m^2)		WET. PERIMETER (m)		HYD. RAD (m)	Q (m^3/s)	
0.00	100.000							
4.50	99.910	0.203		4.5009		0.045	0.045	Left Boulevard
4.65	99.910	0.014		0.150				
4.70	99.760	0.008		0.158				
5.00	99.785	0.068		0.301				
9.00	99.865	0.700	1.58	4.001	9.220	0.171	2.154	Roadway
13.00	99.785	0.700		4.001				
13.30	99.760	0.068		0.301				
13.35	99.910	0.008		0.158				
13.50	99.910	0.014		0.150				
18.00	100.000	0.203		4.5009		0.045	0.045	Right Boulevard

Total Flow Capacity	**2.24**	m^3/s
Design Flow (100YR)*	1.87	m^3/s



ROW Capacity - Composite Manning's Calculations

Project Details

163, 164 Edward Street	419453

Prepared By:

LJC	6/11/2026

ROW capacity calculations using Manning's Equation with composite channel sections

ROW Description: ROW Upstream of South SWMF2 - Street E

ROW Information:

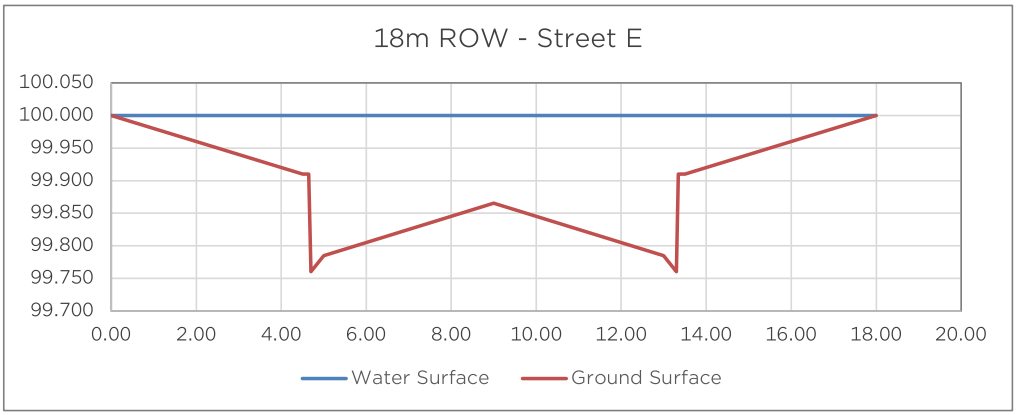
Manning's n Boulevard	0.040	
Manning's n Roadway	0.016	
ROW Width	18	m
Road Width	8	m
Boulevard Slope	0.020	m/m
Curb Top Width	0.15	m
Curb Height	0.15	m
Gutter Width	0.30	m
Gutter Depth	0.025	m
Slope	0.005	m/m

Manning's Equation

$$Q = \frac{1}{n} A R^{2/3} S^{1/2}$$

STA.	ELEV.	AREA (m^2)		WET. PERIMETER (m)		HYD. RAD (m)	Q (m^3/s)	
0.00	100.000							
4.50	99.910	0.203		4.5009		0.045	0.045	Left Boulevard
4.65	99.910	0.014		0.150				
4.70	99.760	0.008		0.158				
5.00	99.785	0.068		0.301				
9.00	99.865	0.700	1.58	4.001	9.220	0.171	2.154	Roadway
13.00	99.785	0.700		4.001				
13.30	99.760	0.068		0.301				
13.35	99.910	0.008		0.158				
13.50	99.910	0.014		0.150				
18.00	100.000	0.203		4.5009		0.045	0.045	Right Boulevard

Total Flow Capacity	**2.24**	m^3/s
Design Flow (100YR)*	2.14	m^3/s



TATHAM ENGINEERING

Manning's Equation Flow Calculations

Project Details	
163, 164 Edward Street E	419453

Prepared By	
LJC	6/11/2026

Manning's Equation: $Q = \frac{1}{n} \cdot A \cdot R^{\frac{2}{3}} \cdot S^{\frac{1}{2}}$

Where:

Q = flow (m^3/s)

n = Manning's roughness coefficient

A = area of flow (m^2)

R = hydraulic radius (m) equal to flow area divided by wetted perimeter

S = channel slope (m/m)

South Pond Outlet Ditch (Flows East to Airport Road Culvert)

Manning's n =	0.040				
Slope =	0.005	m/m	Design Flow[(1)] =	3.780	m^3/s
Right Side Slope =	5.0	:1 (H:V)	Area =	5.000	m^2
Left Side Slope =	5.0	:1 (H:V)	Wetted Perimeter =	10.198	m
Depth =	1.00	m	Hydraulic Radius =	0.490	m
Bottom Width =	0.00	m	Capacity =	5.496	m^3/s
			Freeobard =	0.13	m

Notes

(1) Design flow is the 1:100YR storm (uncontrolled) generated from Catchment 202A and Catchment 202B.

Appendix F:
NVCA Volume Control Criteria

TATHAM ENGINEERING

PROJECT	163, 164 Edward Street, Creemore	FILE	426023
		DATE	6/11/2026
SUBJECT	5 mm Erosion Control Criteria	NAME	LJC
		PAGE	1 OF 1

North Site (164 Edward Street East)

5 mm Storm Across Site Impervious Area

Total North Property Area	9.30	ha	
Site TIMP Area:	5.73	ha	
Target Retention Depth:	5	mm	
Target Infitlration Volume:	287	m^3	(storage within LID Facilities throughout the site)

South Site (163 Edward Street East)

5 mm Storm Across Site Impervious Area

Total Site Property Area:	27.74	ha	
Site TIMP Area:	17.04	ha	
Target Retention Depth:	5	mm	
Target Infitlration Volume:	852	m^3	(storage within LID Facilities throughout the site)

Appendix G: Drawings

NOTE: CATCHMENT DELINEATIONS AS SHOWN FROM PCSWMM MODEL OF PROPOSED CONDITIONS "OPTION 2" COMPLETED BY RJ BURNSIDE (DATED SEPTEMBER 2024).

FAIRGROUNDS ROAD SOUTH

COUNTY ROAD 9

EDWARD STREET TRIBUTARY

AIRPORT ROAD

EDWARD STREET EAST

CAROLINE STREET WEST

GEORGE STREET

COLLINGWOOD STREET

CONCESSION ROAD 3

TRIBUTE LANDS DRAINAGE CHANNEL ℄ BASED ON CROZIER'S CHANNEL DESIGN CAD (DATED SEP 29/25) PROVIDED TO TATHAM

(ECDS CHANNEL)

EAST CREEMORE DRAIN ℄ AND FLOW SPLITTER LOCATION BASED ON RJ BURNSIDE'S REISSUED FOR 30% REVIEW DRAWINGS (DATED AUG 08/25)

FLOW SPLITTER

1500Ø CULVERT CROSSING AIRPORT ROAD

ASSUMED EXISTING CULVERT

4	122.26	69.0
3	41.32	69.0
2E	9.72	66.0
EXT1	9.15	41%
2W	39.06	48%
5	3.15	51%
6	4.79	48%
1a_2	28.57	66.0
1a_1	20.20	66.0
1b_2	19.44	66.0
1b_1	29.72	66.0
9	91.37	66.0

Q_{100YR}: 4.50m³/s UPSTREAM OF FLOW SPLITTER

Q_{100YR}: 1.41m³/s

Q_{100YR}: 3.43m³/s

Q_{100YR}: 4.07m³/s

Q_{100YR}: 0.41m³/s (TO AIRPORT ROAD CULVERT)

Q_{100YR}: 4.34m³/s

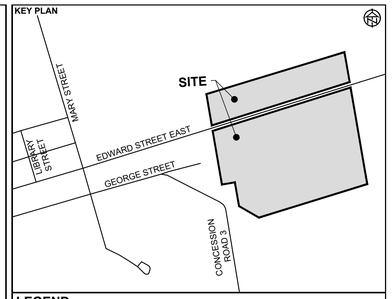
Q_{100YR}: 4.87m³/s

Q_{100YR}: 1.19m³/s

*OUTLET #1

*OUTLET #2

KEY PLAN



LEGEND

- SUBJECT SITE
- 250.00 — EXISTING ELEVATION LIDAR CONTOUR (5m INTERVALS)
- MAD RIVER TRIBUTARY (APPROXIMATE LOCATION)
- EAST CREEMORE DRAIN DITCH/CHANNEL
- TRIBUTE LANDS DRAINAGE CHANNEL CENTRELINE
- EAST CREEMORE DRAIN STORM SEWER
- EAST CREEMORE DRAIN ASSESSMENT AREA CATCHMENT BOUNDARY
- REMAINING EAST CREEMORE DRAIN LANDS NOT CONTRIBUTING TO OUTLET #1 OR #2
- 1a_1 | 28.57 | 66.0 — CATCHMENT ID; AREA (ha) | CURVE NUMBER (CN) / % IMPERVIOUSNESS
- PRE-DEVELOPMENT CONDITIONS OVERLAND FLOW DIRECTION
- KEY PRE-DEVELOPMENT 100-YEAR PEAK FLOW RATE

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AERIAL IMAGERY FROM ESRI, 2026.

VERSION		DATE
1	ISSUED FOR OPA/ZBA 1ST SUBMISSION	2026 05 29

DESIGN BY	DRAWN BY	CHECKED BY
LJC	LQ	JM

STAMP

DRAFT

TATHAM ENGINEERING

COLLINGWOOD - BRACEBRIDGE - ORILLIA - BARRIE - OTTAWA - GUELPH

PROJECT TITLE

163 & 164 EDWARD STREET EAST, CREEMORE TOWNSHIP OF CLEARVIEW

DRAWING TITLE

EAST CREEMORE DRAINAGE PLAN PRE-DEVELOPMENT CONDITIONS

PROJECT	SCALE	DRAWING
419453	1:7500	DP.1

0 15 30 60 METRES

NOTE: CATCHMENT DELINEATIONS AS SHOWN FROM PCSWMM MODEL OF PROPOSED CONDITIONS "OPTION 2" COMPLETED BY RJ BURNSIDE (DATED SEPTEMBER 2024).

NOTE: CATCHMENTS 1a_2A, 1a_2b, 201, 202 AND 9* REFLECT POST-DEVELOPMENT CONDITIONS BY TATHAM ENGINEERING

FAIRGROUNDS ROAD SOUTH

COUNTY ROAD 9

EDWARD STREET EAST

AIRPORT ROAD

CAROLINE STREET WEST

GEORGE STREET

COLLINGWOOD STREET

CONCESSION ROAD 3

EDWARD STREET TRIBUTARY

TRIBUTE LANDS DRAINAGE CHANNEL ℄ BASED ON CROZIER'S CHANNEL DESIGN CAD (DATED SEP 29/25) PROVIDED TO TATHAM

NORTH SWMF (SWMF1)
1:100-YR VOLUME: 2,743m³

SOUTH SWMF (SWMF2)
1:100-YR VOLUME: 11,582m³

4	122.26	69.0
3	41.32	69.0
2E	9.72	66.0
1a_2B	12.50	66.0
1a_1	20.20	66.0
EXT1	9.15	41%
2W	39.06	48%
1a_2A	5.69	66.0
201	7.91	60%
5	3.15	51%
6	4.79	48%
203	4.86	55%
1b_1*	30.00	66.0
202B	1.67	27%
202A	24.05	64%
9*	81.71	66.0

$Q_{100YR,PR}$: 4.39m³/s
$Q_{100YR,EX}$: 4.34m³/s

$Q_{100YR,PR}$: 3.96m³/s

Q_{100YR}: 3.43m³/s (EDCS CHANNEL)

Q_{100YR}: 4.50m³/s UPSTREAM OF FLOW SPLITTER

Q_{100YR}: 1.41m³/s ECD STM SEWER

FLOW SPLITTER

PROP. BOX CULVERT TO CONVEY FLOWS ALONG EAST EDWARD ST E

EAST CREEMORE DRAIN ℄ AND FLOW SPLITTER LOCATION BASED ON RJ BURNSIDE'S REISSUSED FOR 30% REVIEW DRAWINGS (DATED AUG 08/25)

1500Ø CULVERT CROSSING AIRPORT ROAD

Q_{100YR}: 0.30m³/s

$Q_{100YR,PR}$: 4.76m³/s
$Q_{100YR,EX}$: *4.87m³/s*

PROP. SOUTH SWMF OUTLET CHANNEL TO OUTLET #1

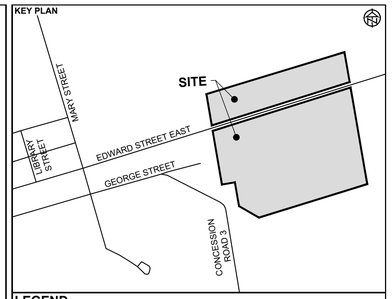
*OUTLET #1

*OUTLET #2

ASSUMED EXISTING CULVERT

$Q_{100YR,PR}$: 1.07m³/s
$Q_{100YR,EX}$: *1.19m³/s*

KEY PLAN



LEGEND

- SUBJECT SITE
- 250.00 — EXISTING ELEVATION LiDAR CONTOUR (5m INTERVALS)
- MAD RIVER TRIBUTARY (APPROXIMATE LOCATION)
- EAST CREEMORE DRAIN CENTRELINE
- PROPOSED ECD BOX CULVERT CENTRELINE
- TRIBUTE LANDS DRAINAGE CHANNEL CENTRELINE
- PROPOSED OUTLET CHANNEL CENTRELINE
- FUTURE STORM SEWER
- EAST CREEMORE DRAIN ASSESSMENT AREA CATCHMENT BOUNDARY
- REMAINING EAST CREEMORE DRAIN LANDS NOT CONTRIBUTING TO OUTLET #1 OR #2
- 201A | 9.30 | 61% — CATCHMENT ID | AREA (ha) | CURVE NUMBER (CN) / % IMPERVIOUSNESS
- POST-DEVELOPMENT CONDITIONS OVERLAND FLOW DIRECTION
- PRE-DEVELOPMENT CONDITIONS OVERLAND FLOW DIRECTION
- KEY POST-DEVELOPMENT 100-YEAR PEAK FLOW RATE

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AERIAL IMAGERY FROM ESRI, 2026.

VERSION		DATE
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DESIGN BY	DRAWN BY	CHECKED BY
LJC	LQ	JM

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DRAFT

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PROJECT TITLE

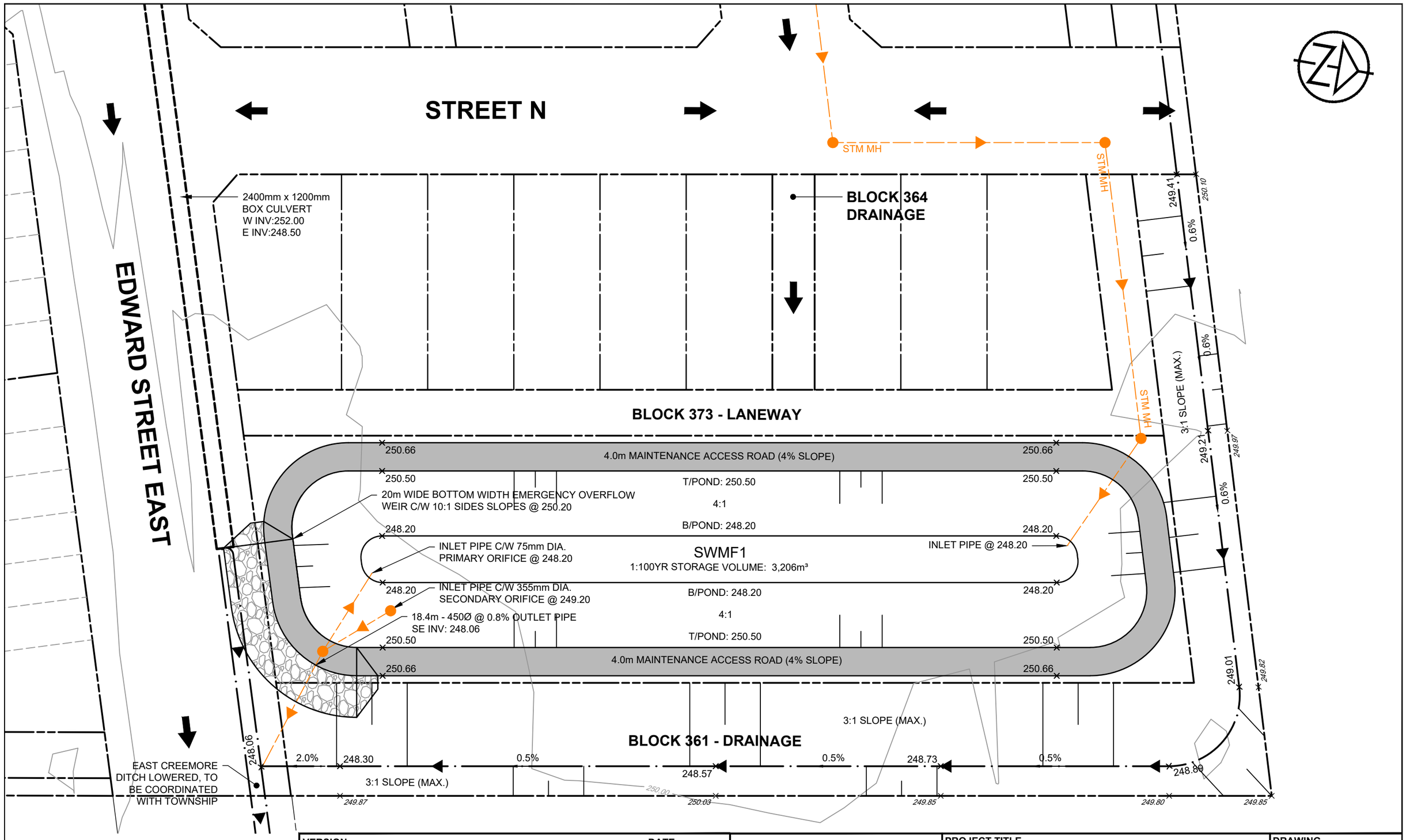
163 & 164 EDWARD STREET EAST, CREEMORE TOWNSHIP OF CLEARVIEW

DRAWING TITLE

EAST CREEMORE DRAINAGE PLAN POST-DEVELOPMENT CONDITIONS

PROJECT	SCALE	DRAWING
419453	1:7500	DP.2

0 15 30 60 METRES



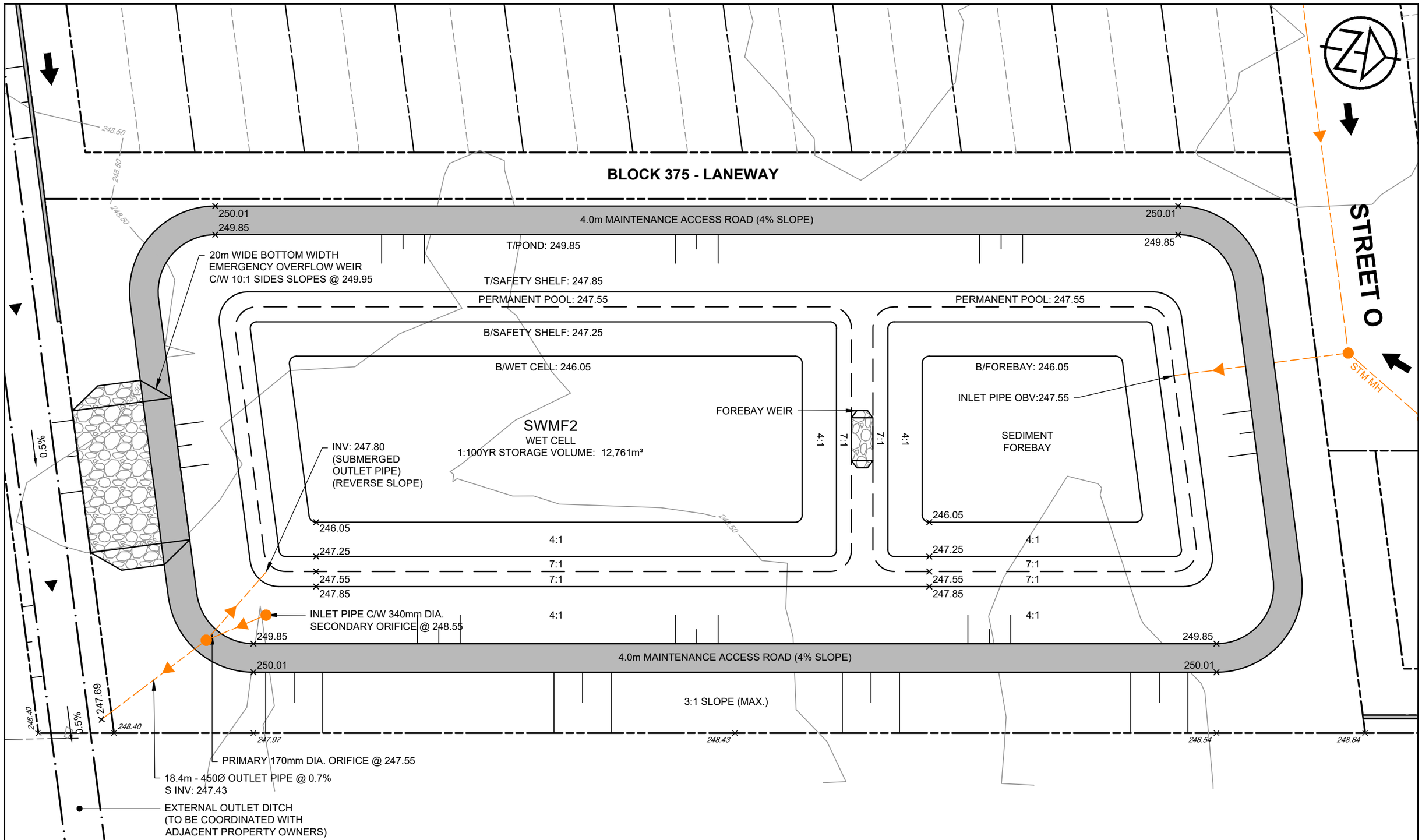
VERSION		DATE
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PROJECT TITLE
163 & 164 EDWARD STREET EAST,
CREEMORE
STORMWATER MANAGEMENT FACILITY #1

DRAWING
PND.1

DATE	JUNE 2026	DRAWN BY	LQ	SCALE	1:500	PROJECT	419453



VERSION		DATE
1	ISSUED FOR OPA/ZBA	2026 06 05

TATHAM ENGINEERING

PROJECT TITLE
163 & 164 EDWARD STREET EAST,
CREEMORE
STORMWATER MANAGEMENT FACILITY #2

DRAWING
PND.2

DATE	JUNE 2026	DRAWN BY	LQ	SCALE	1:500	PROJECT	419453