



Stormwater Management Report 4380 Trail Road, Ottawa, ON

Type of Document:
Site Plan Application

Client:
Drain-All Ltd.
3385 Hawthorne Road
Ottawa, ON K1G 4G2

Project Number: OTT-21023795-A0

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Date Submitted:
June 23, 2023
Revised: December 19, 2023

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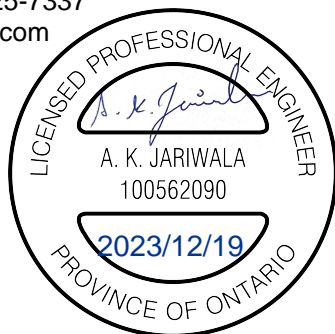
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1 Introduction

Drain-All Ltd. has retained EXP Services Inc. (EXP) to undertake a stormwater management study in support of a site plan application for 4380 Trail Road.

The 4.30-hectare property is situated on the south side of Trail Road between Moodie Drive and Barnsdale Road in the City of Ottawa, Ontario as shown on **Figure A-1** in **Appendix A**. The site is currently being used as a soil dump facility. With the zoning by-law amendment application, the client wishes to continue the use of the site as a soil sump facility.

The description of the subject property is noted below:

- Part of 1 of Plan 5R-11776, City of Ottawa, consisting of:
 - PIN 04592-007 (4380 Trail Road)

This report will discuss the existing and proposed stormwater management scheme for the site. This report provides a design brief for submission, along with the engineering drawings, for City approval.

2 Existing Conditions

The subject property is being used as a soil dump facility. Within the subject property, there is an existing gravel access road, concrete pads and depressed sand trenches for storm drainage and infiltration.

There are no municipal or private services within the subject property or along Trail Road.

The existing topography of the site is relatively flat in the center of the property with steeper slopes around the edges. In some areas the property lines are approximately 9m to 11m higher than the center. Refer to **Figure A-3** in **Appendix A** for existing topography of the area. Topographic survey by a certified land surveyor is also included in **Appendix E**.

The existing soil type within the property has a high infiltration rate, with a ground water elevation noted to fluctuate between 96.07m to 96.80m as per the Ground Water Monitoring Report and Geotechnical Investigation Report. In the existing condition the stormwater management is achieved by infiltration throughout the site and overland flows towards the depressed sand trenches. There is no additional storm water management infrastructure on site.

3 Referenced Guidelines

Various documents were referred to in preparing the current report including:

- Sewer Design Guidelines, Second Edition, Document SDG002, October 2012, City of Ottawa (Guidelines) including:
- Ontario Ministry of Transportation (MTO) Drainage Manual, 1995-1997
- Stormwater Management Planning and Design Manual, Ontario Ministry of the Environment, Conservation and Parks, March 2003 (SMPDM).
- Hydrology National Engineering Handbook, United States Department of Agriculture (USDA) (July2004)

- Land Inventory Ontario – Elevation Mapping Program
- Stormwater Management Criteria, Toronto and Region Conservation Authority (TRCA) (August 2012)
- Low Impact Development Stormwater Management Planning and Design Guide (LID SMPDG), Credit Valley Conservation (CVC) and Toronto Region Conservation Authority (TRCA) (2010)

4 Stormwater Management

4.1 Design Criteria

The proposed stormwater system is designed in conformance with the latest version of the City of Ottawa Design Guidelines (October 2012) - section 8 “Stormwater Management” and Stormwater Management Planning and Design Manual, Ontario Ministry of the Environment, Conservation and Parks, March 2003 (SMPDM). Stormwater management requirements noted in the pre-consultation meeting minutes with the City is included in **Appendix D** and is summarized below:

- Control post-development discharge rate for up-to and including 100-year storm event to pre-development discharge rates.
- Post-development discharge rates must demonstrate that its equal to pre-development discharge rates during 2-year and 100-year storm events.
- Demonstrated that stormwater can be managed for the current condition, various stages of infill, and for final site rehabilitation.
- Stormwater management quality criteria of 80% TSS removal.

4.2 Pre-Development Conditions and Allowable Release Rates

In the existing condition, the stormwater management within the subject property is achieved by on-site infiltration. There are no municipal services available within the property or within Trail Road. About ± 2400 m² of external area drains towards the subject property and ± 3500 m² area of the subject property along Trail Road drains towards the City ROW. Therefore, a total effective area of $\pm 41,900$ m² (4.19 ha) is currently managed by on-site infiltration. **Figure A-2** in **Appendix A** shows pre-development subcatchment areas contributing to stormwater management related to the subject site.

Given that the site is situated in rural area, SCS Type II – 6 hours and 12 hours storms for up to 100-year return period were used to simulate the existing condition stormwater management on-site and to estimate the allowable release rate for the post-development condition based on the quantity of water leaving the site for each storm event in the existing conditions. The modelling was done using PCSWMM - version 7.5.3406 (SWMM - version 5.1.015) by CHI Water. To accurately simulate the existing conditions, 12 infiltration tests were performed at 6 locations on the subject site at varying depths from ground level. The results of the tests showed infiltration rates ranging between 120 mm/hr to 638 mm/hr at depths of 0.9 – 1.7 m and 293 mm/hr to 768 mm/hr at depths of 2 – 3 m. To model the infiltration rate in PCSWMM, the geometric mean of the test results was divided by a Factor of Safety of 2.5 based on Table C2 of LID SMPDG, 2010. This resulted in the infiltration rates of 143 mm/hr at shallow depths and 187 mm/hr at depths between 2 m – 3 m. For details, refer to the memo – “Percolation Tests – 4380 Trail Road, Richmond, Ontario” dated October 24, 2022 included in **Appendix D**. In addition to the infiltration test, it was noted in the Groundwater Monitoring Program prepared by EXP Services Inc. dated, June 16, 2023 that the groundwater levels at the subject site range between 96.07 m to 96.80m and were found to be within this range between the months of June 2022 and May 2023.

Based on the above noted information and applicable guidelines, the input parameters used in PCSWMM for pre-development conditions are summarized below:

1. Rain Gauge: SCS Type II – 6 Hour and 12 Hour Storms
 - i. 2-year, 6-hour Storm: 37.2 mm
 - ii. 5-year, 6-hour Storm: 50.4 mm
 - iii. 100-year, 6-hour Storm: 87.0 mm
 - iv. 2-year, 12-hour Storm: 43.2 mm
 - v. 5-year, 12-hour Storm: 57.6 mm
 - vi. 100-year, 12-hour Storm: 96.0 mm
2. Manning's N
 - i. for Impervious Surface: 0.013
 - ii. for Pervious Surface: 0.15
3. Depression Storage Depth
 - i. for Impervious Surface: 1.57 mm
 - ii. for Pervious Surface: 4.67 mm
4. Method for Infiltration Losses: Curve Number Method
5. Curve Number: 77 (Assuming Soil Group A based on Geo Investigation report, Barren Lands as per USDA, 2004 – Chapter 9)
6. Hydraulic Conductivity: 88.4 mm/hr (Assuming Soil Group A, value taken from Table 7-1 of Chapter 7, USDA, 2004)
7. Drying Time: 7 days

These parameters were applied on pre-development subcatchments E1 to E5, shown in **Figure A-2** in **Appendix A**. These 5 subcatchments were created from the subcatchments that were created using Watershed Delineation Tool (WDT) in PCSWMM. WDT was performed on Digital Terrain Model (DTM) surface derived from Land Inventory Ontario Lidar derived raster dataset package from Ottawa-Gatineau 2019-20 project. The outputs of the WDT tool were closely compared with the topographical data from the site survey and was adjusted to create the pre-development subcatchment areas E1-E5. **Figure A-3** in **Appendix A** shows the existing topography of the area surrounding the subject property based on the DTM surface. In addition to defining subcatchments, appropriate outlets were also assigned to each subcatchments based on Watershed Delineation Tool output. Based on the existing topography, catchments E1, E2 and E3 contribute to the on-site storm drainage and includes some external drainage areas routing towards the site. Whereas subcatchments E4 and E5 are the areas within the subject property draining outside, towards Trail Road and the neighboring property on the south, respectively.

To model the existing infiltration by on-site depressed areas, Low Impact Development (LID) definitions were assigned to each subcatchments. The type of LID used was infiltration trench with varying berm height (depth of surface ponding). The area and depth for LID definitions were calculated by creating storage polygons on the Digital Terrain Model (DTM) surface. Based on that the depth was the LIDs ranged between ± 1 m to 3 m. **Figure A-3** in **Appendix A** shows the outline of existing storage polygons as well as their area and max. depth. **Table 4-1** below summarizes the LID parameters assigned to

applicable catchments based on the storage polygons and max. depth of ponding in each LID definition during the critical storm event.

Based on PCSWMM output, it is evident that the peak runoff occurs during SCS Type II – 6-hour, 100-year storm event, whereas maximum volume of runoff occurs during SCS Type II – 12-hour, 100-year storm event. **Table 4-2** and **Table 4-3** below summarizes flowrates and volume of run-off to the assigned outlets. Catchments E1, E2 and E3 form majority of the site area are assigned the outlet (OF1). Catchment area E4, as noted above discharges towards the Trail Road as well as the neighboring property to the south and is assigned the outlet OF3. Area E5 discharges to the neighboring property to the south and assigned the outlet OF3.

Table 4-4 below provides the summary of peak runoff and maximum total runoff volumes to each of the 3 outlets (OF1, OF2 and OF3). Detailed infiltration reports (LID reports from PCSWMM) are provided in **Appendix B** along with output report for pre-development condition.

Table 4-1 - LID Parameters Input in PCSWMM to Replicate Existing Condition and Output

Input					Output	
Sub catchment	Existing Depressed Area (m ²)	% of Subcatchment Occupied	Max. Surface Ponding Depth (mm)	Existing Infiltration Rate (mm/hr)	Max. Depth of Ponding Utilized During Critical Storm Event (mm)	Critical Storm Event
E1	964.42	32.90	1762.7	143.00	41.11	SCS_Type_II_87mm_6hr_100yr
E2	9937.48	28.20	421.6	143.00	47.49	SCS_Type_II_87mm_6hr_100yr
E3	792.09	20.40	604.0	143.00	81.89	SCS_Type_II_87mm_6hr_100yr

Table 4-2 – Max. Runoff and Total Runoff Volume from Pre-Dev Subcatchments During 6-hr Design Storms

Outfall	Catchment Area (ha)	SCS_Type_II_37.2mm_6hr_2yr		SCS_Type_II_50.4mm_6hr_5yr		SCS_Type_II_87mm_6hr_100yr	
		Max. Runoff (L/s)	Total Runoff (m ³)	Max. Runoff (L/s)	Total Runoff (m ³)	Max. Runoff (L/s)	Total Runoff (m ³)
OF1	0.07	4.04	5.44	7.99	11.08	19.34	29.42
OF2	4.21	0.00	0.00	0.00	0.00	0.00	0.00
OF3	0.27	12.16	20.62	26.5	43.11	73.88	114.90
Total	4.56	16.20	26.06	34.49	54.19	93.22	114.32

Table 4-3 – Max. Runoff and Total Runoff Volume from Pre-Dev Subcatchments During 12-hr Design Storms

Outfall	Catchment Area (ha)	SCS_Type_II_43.2mm_12hr_2yr		SCS_Type_II_57.6mm_12hr_5yr		SCS_Type_II_96mm_12hr_100yr	
		Max. Runoff (L/s)	Total Runoff (m ³)	Max. Runoff (L/s)	Total Runoff (m ³)	Max. Runoff (L/s)	Total Runoff (m ³)
OF1	0.07	4.35	8.27	8.47	14.46	18.75	34.13
OF2	4.21	0.00	0.00	0.00	0.00	0.00	0.00
OF3	0.27	15.43	30.85	29.57	55.83	71.66	133.80
Total	4.56	19.78	39.12	38.04	70.29	90.41	167.93

Table 4-4 – Summary of Max. Runoff and Max.Total Runoff Volume to Outlets

Outlet	Contributing Sub catchments	Max. Runoff (L/s)	Associated Rainfall Event	Max. Total Runoff (m ³)	Associated Rainfall Event	Comments
OF1	E5	19.34	SCS_Type_II_87mm_6hr_100yr	34.13	SCS_Type_I_96mm_12hr_100yr	Outlet towards Trail Road and neighboring property to the South
OF2	E1, E2, E3	0.00	NA	0.00	NA	Infiltration via existing on-site depressed areas
OF3	E4	73.88	SCS_Type_II_87mm_6hr_100yr	133.80	SCS_Type_I_96mm_12hr_100yr	Outlet towards neighboring property to the South

From the outputs of pre-development condition modelling from PCSWMM, it was found that no run-off from subcatchments E1 – E3 drains off-site. Run-off from these areas is entirely managed by on-site surface ponding and infiltration up-to and including 100-year storm events. Therefore, in post-development condition, run-off from these areas must be detained and infiltrated into the native soil on-site, up-to and including 100-year storm event and no run-off shall leave the site during the design storm events. No development or changes are proposed within subcatchments E4 and E5. Therefore, post-development run-off from these areas will not change and shall meet the design criteria.

4.3 Post-Development Conditions and Runoff

In post-development conditions, the subject site is proposed to be used as a soil dump facility. The outline of the areas of backfill can be found on Civil drawings attached in **Appendix E**. The site is proposed to be back filled in six phases. The grading and drainage plans show the stormwater conveyance and proposed grades at the end of each phase. Civil drawing #C200-3 shows the ultimate grading plan at the end of six phases of soil backfilling. **Figure A-4** in **Appendix A** shows post-development subcatchment areas based on the existing conditions and proposed grading.

The proposed infiltration trenches were designed using modelling in PCSWMM and are in accordance with the Stormwater Management Planning and Design Manual, Ontario Ministry of the Environment, Conservation and Parks, March 2003 (SMPDM).

There are total of three infiltration trenches proposed to be built on-site to manage post-development storm drainage to pre-development levels up to and including 100-year storm events. One infiltration trench having a surface area of 150 m² is proposed on the south-east section of the site, hereon referred to as the east infiltration trench. Two infiltration trenches having a surface area of 450 m² each, are proposed in the west section of the site, hereon referred to as the west infiltration trench. The east infiltration trench will be built prior to backfilling 'Area C' (post dev subcatchment S6) to accommodate storm drainage from this area as shown on Civil drawing #C200-3. The west infiltration trenches are proposed to be built after the final backfilling is completed. Storm drainage in the interim will be managed by the existing depressed areas on-site, consistent with the pre-development conditions. The existing depressed areas will remain functional until the proposed infiltration trenches are constructed to replace them. The existing depressed areas are shown on **Figure A-3** in **Appendix A**.

The input parameters in PCSWMM for post-development conditions are summarized below:

1. Rain Gauge: SCS Type II – 6 Hour and 12 Hour Storms

- i. 2-year, 6-hour Storm: 37.2 mm
 - ii. 5-year, 6-hour Storm: 50.4 mm
 - iii. 100-year, 6-hour Storm: 87 mm
 - iv. 100-year + 20%, 6-hour Storm: 104.4 mm
 - v. 2-year, 12-hour Storm: 43.2 mm
 - vi. 5-year, 12-hour Storm: 57.6 mm
 - vii. 100-year, 12-hour Storm: 96 mm
 - viii. 100-year + 20%, 12-hour Storm: 115.2 mm
2. Manning's N
 - i. for Impervious Surface: 0.013
 - ii. for Pervious Surface: 0.15
 3. Depression Storage Depth
 - i. for Impervious Surface: 1.57 mm
 - ii. for Pervious Surface: 4.67 mm
 4. Method for Infiltration Losses: Horton Method.
 5. Infiltration Rate for Horton Method: Initial Infiltration Rate (f_0) = 76.2 mm, Final Infiltration Rate (f_c) = 12.7 mm, Decay Coefficient (k) = 4 /h (City of Ottawa Sewer Design Guidelines, October 2012).

As noted in the input parameters above, 100-year + 20% storms were modelled in addition to 2-year, 5-year and 100-year SCS Type II storms for 6-hour and 12-hour periods to confirm the adequacy of the on-site stormwater drainage system considering the climate change impact.

Following criteria were taken into account for the infiltration trench design as per MECP SMPDM 2003:

1. Maximum depth of water: 2.0 m
2. Maximum area managed: 2 ha/trench
3. Thickness of sand filter layer at the bottom of the trench: 300 mm
4. Groundwater: > 1 m below bottom
5. Bedrock: > 1 m below bottom
6. Infiltration Rate: ≥ 60 mm/hr
7. Porosity of Storage Layer (n): 0.4 (50 mm dia. clear stone)
8. Design Infiltration rate (P): 187 mm/hour (Measured by On-site infiltration test)
9. Target Retention time (Δt) = 24 hours
10. Runoff volume to be infiltrated (V) = 1310 m³ for west infiltration trench and 120 m³ for east infiltration trench (value taken from PCSWMM for 100-year SCS Type-II, 24-hour storm event)

The west infiltration trenches are proposed to have a bottom area of ± 512.5 m² each, adding to a total area of 1025 m². The trenches will have a 1.2m deep storage layer filled with 50mm dia. clear stones. 300mm of sand filter layer is proposed at the bottom of the storage layer. There will be surface ponding available above the trench. The total area draining towards the west infiltration trenches will be 3.8 ha (1.9 ha each). 3.8 ha of area draining into the west infiltration trench includes subcatchments S1, S2, S3, S4 and S5. The two trenches will be connected with three 300mm diameter pipe installed at 300mm above the bottom of the storage layer to ensure equal distribution of storm drainage flows between two trenches. This is provided to avoid excessive infiltration from one trench which can reduce the infiltration capacity of the native soil below the trench.

The east infiltration trench is proposed to have a bottom area of 150 m² and a 1.0m deep storage layer filled with 50mm dia. clear stones. 300mm of sand filter layer is proposed at the bottom of the storage layer. There will be additional 1.0m depth of surface ponding available above the trench before the water starts overflowing towards the neighboring property to the south. The total area draining towards the east trench will be 0.43 ha (subcatchment S6).

Highest ground water elevation noted in the Groundwater Monitoring Program report is 96.80m. Bottom of storage layer for the west infiltration trenches is proposed at 98.80m which is 2.0m higher than the high ground water elevation. Similarly, the bottom of storage layer at the east infiltration trench is proposed at 98.70m, which is 1.90m higher than the high ground water elevation. No bedrock is present at shallow depths within the subject site. Refer to the hydrogeological assessment and geotechnical report for further details on bedrock and soil types for the subject site.

Refer to Civil drawing #C200-4 for further details regarding proposed infiltration trenches.

To ensure the proposed infiltration trenches have large enough areas to allow for uniform distribution of water within the storage layer, the minimum bottom trench area was calculated using Equation 4.3: Infiltration Trench Bottom Area from the Stormwater Management Planning and Design Manual, Ontario Ministry of the Environment, Conservation and Parks, March 2003 (SMPDM). The above-noted criteria were used in the equation below.

$$A = \frac{1000 V}{P n \Delta t}$$

Where;

A = Bottom area of infiltration trench (m²)

V = Runoff Volume to be Infiltrated

P = Percolation Rate of Surrounding Native Soil (mm/h)

n = Porosity of the Storage Media (0.4 for Clear Stone)

Δt = Retention Time (24 Hours Considered)

The required infiltration trench bottom area was calculated as 729.70 m² and 66.85 m² for west trench and east trench, respectively. Therefore, the proposed bottom area for the west infiltration trenches (1025 m²) and east infiltration trench (150 m²) are more than the minimum required area as per the above noted equation.

The subcatchment parameters noted above were applied to 8 post-development drainage areas S1 to S8 in PCSWMM, as shown on **Figure A-4** in **Appendix A**. Drainage areas S5, S7 and S8 will remain unchanged from pre-development condition. Drainage areas S1, S2, S3 and S4 represent the area used for soil dump which will drain towards the west infiltration trenches in area S1. Drainage area S6 will also be used for soil dump which will drain towards the east infiltration trench in area S6. The proposed infiltration trenches were modelled as LID definitions in PCSWMM with the following input,

West Infiltration Trench applied to drainage area S1:

Berm Height (Surface Storage): 2000 mm

Infiltration Rate: 187 mm/hr

Storage Layer Thickness: 1200 mm

Void Ratio: 0.6 (0.4 Porosity = 0.6 Void Ratio)
 Area: 512.5 m² (each) = 1025 m² (total)

East Infiltration Trench applied to drainage area S6:

Berm Height (Surface Storage): 1000 mm
 Infiltration Rate: 187 mm/hr
 Storage Layer Thickness: 1000 mm
 Void Ratio: 0.6 (0.4 Porosity = 0.6 Void Ratio)
 Area: 150 m²

Table 4-5 and **Table 4-6** below summarizes the depth of water in each infiltration trench during the design storm events derived from the detailed LID reports from PCSWMM outputs. The “Depth from Model” column represents the total depth of water (storage layer + surface ponding) from detailed LID reports from PCSWMM. The “Adjusted Depth” column represents the actual depth of water in the proposed infiltration trenches considering the tapered sides at 3:1 slope for the surface ponding. PCSWMM does not account for the incremental storage volume available at each contour lines within the surface ponding available due to 3:1 side slopes of the trench surface ponding layer above the storage layer. It only considers a constant area of LID definition which is area of bottom of trench or area of storage layer. Therefore, stage storage report was created from CAD to estimate the storage volume available at each contour elevation above the storage layer in each trench to estimate the total actual depth of water provided in the “Adjusted Depth” column in **Table 4-5** and **Table 4-6**. These water depths and ponding areas are illustrated on civil drawing #C200-4. Detailed LID reports and stage storage reports are included in **Appendix C** along with the output reports for post-development condition from PCSWMM.

The maximum depth of water in the west trenches is 1.90 m and the maximum depth of water in the east trench is 1.60 m during 100-year + 20% storm event, which is well below the maximum suggested water level of 2.0 m in MECP SMPDM, March 2003 to prevent subsurface soil compaction. Maximum water levels during 100-year storm events in the west trench and east trench are 1.65 m and 1.40 m, respectively.

Table 4-9 below provides a comparison of pre-development and post-development discharge rates to outfalls OF1, OF2 and OF3. **Table 4-7** and **Table 4-8** provides a summary of peak runoff and total runoff volume from post-development subcatchments towards the assigned outlets during each storm event considering the infiltration trenches in applicable subcatchments.

Table 4-5 – Depth of Water in Proposed Infiltration Trenches During 6-hr Design Storm Events

Infiltration Trench (catchment)	Max. Depth of Water from LID Reports and Equivalent Adjusted Depth of Water based on Stage Storage Report (mm)							
	SCS_Type_II_37.2m m_6hr_2yr		SCS_Type_II_50.4m m_6hr_5yr		SCS_Type_II_87mm 6hr_100yr		SCS_Type_II_104.4m m_6hr_100yr+20%	
	Depth from Model	Adjusted Depth	Depth from Model	Adjusted Depth	Depth from Model	Adjusted Depth	Depth from Model	Adjusted Depth
West (S1)	0.00	0.00	414.08	414.08	1722.99	1640.00	2163.92	1920.00
East (S6)	49.44	49.44	612.05	612.05	1576.83	1430.00	1933.46	1620.00

Table 4-6 – Depth of Water in Proposed Infiltration Trenches During 12-hr Design Storm Events

Infiltration Trench (catchment)	Max. Depth of Water from LID Reports and Equivalent Adjusted Depth of Water based on Stage Storage Report (mm)							
	SCS_Type_II_43.2 mm_12hr_2yr		SCS_Type_II_57.6mm_12hr_5yr		SCS_Type_II_96mm_12hr_100yr		SCS_Type_II_96mm_12hr_100yr+20%	
	Depth from Model	Adjusted Depth	Depth from Model	Adjusted Depth	Depth from Model	Adjusted Depth	Depth from Model	Adjusted Depth
West (S1)	34.02	34.02	505.87	505.87	1678.80	1610.00	2078.92	1870.00
East (S6)	87.65	87.65	677.92	677.92	1521.04	1390.00	1839.19	1570.00

Table 4-7 – Max. Runoff and Total Runoff Volume from Post-Dev Subcatchments during 6-hr Design Storms

Sub catchment	Catchment Area (ha)	SCS_Type_II_37.2 mm_6hr_2yr		SCS_Type_II_50.4 mm_6hr_5yr		SCS_Type_II_87mm_6hr_100yr		SCS_Type_II_104.4 mm_6hr_100yr+20%	
		Max. Runoff (L/s)	Total Runoff (m³)	Max. Runoff (L/s)	Total Runoff (m³)	Max. Runoff (L/s)	Total Runoff (m³)	Max. Runoff (L/s)	Total Runoff (m³)
OF1	0.06	3.19	4.40	6.31	9.05	15.71	24.00	20.60	31.83
OF2	4.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OF3	0.27	9.27	20.24	24.98	42.50	70.26	114.50	94.17	152.50
Total	4.56	12.46	24.64	31.29	51.55	85.97	138.50	114.77	184.33

Table 4-8 – Max. Runoff and Total Runoff Volume from Post-Dev Subcatchments during 12-hr Design Storms

Sub catchment	Catchment Area (ha)	SCS_Type_II_43.2 mm_12hr_2yr		SCS_Type_II_57.6 mm_12hr_5yr		SCS_Type_II_96mm_12hr_100yr		SCS_Type_II_96mm_12hr_100yr+20%	
		Max. Runoff (L/s)	Total Runoff (m³)	Max. Runoff (L/s)	Total Runoff (m³)	Max. Runoff (L/s)	Total Runoff (m³)	Max. Runoff (L/s)	Total Runoff (m³)
OF1	0.06	3.53	6.67	6.84	11.75	15.22	27.84	19.82	36.83
OF2	4.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OF3	0.27	13.14	30.25	26.59	55.42	68.53	133.70	90.83	177.00
Total	4.56	16.67	36.92	33.43	67.17	83.75	161.54	110.65	213.83

Table 4-9 – Comparison of Pre-Development and Post-Development Peak Runoff Rates to Outlets

Outlet	Pre Dev Catchments	PostDev Catchments	Pre Dev Max. Runoff (L/s)	Post Dev Max. Runoff (L/s)	Associated Rainfall Event	Comments
OF1	E6	S8	19.34	15.71	SCS_Type_II_87mm_6hr_100yr	Outlet towards Trail Road and neighbouring property to the South
OF2	E1, E2, E3, E4, E5	S1, S2,S3,S4, S5,S6	0.00	0.00	NA	Infiltration via proposed infiltration trenches
OF3	E7	S7	73.88	70.26	SCS_Type_II_87mm_6hr_100yr	Outlet towards neighbouring property to the South

Based on these results, it is evident that the proposed infiltration trenches are sufficient to meet the design criteria of maintaining pre-development run-offs from the development area up to and including 100-year storm event in the post-development conditions.

Since post-development drainage areas S7 and S8 remain unchanged from pre-development condition (pre-development areas E4 and E5), no further control has been proposed in these areas.

Quality control for this site will be achieved naturally through infiltration. A 300 mm sand filter layer is proposed at the bottom of the infiltration trenches to promote water quality enhancement before it infiltrates into the native soil. No run-off drains off-site in the post-development conditions therefore, 80% TSS removal criteria does not apply for the proposed stormwater management strategy.

5 Erosion, Sediment and Compaction Control

During all construction activities, erosion, sedimentation and Compaction control measures shall be followed by the following techniques:

- Extent of exposed soils shall be limited as much as possible,
- On the exposed backfilled slopes of greater than 7% shall be covered by temporary erosion and sediment control blankets rated for at least 3:1 slope or steeper, until sufficient vegetation cover is established,
- Backfilled soil shall be vegetated after completion of each phase of backfilling,
- Light duty silt fencing shall be used around the backfilled area until sufficient vegetation cover is established. Silt fencing locations are identified on the erosion control plan,
- Visual inspection shall be completed daily on sediment control barriers and any damage repaired immediately. Care will be taken to prevent damage during site operations,
- In some cases, barriers may be removed temporarily to accommodate the site operations. The affected barriers shall be reinstated as soon as possible,
- Sediment control devices shall be cleaned of accumulated silt as required,
- Construction and maintenance requirements for erosion and sediment controls are to comply with Ontario Provincial Standard Specification (OPSS) OPSS 805, and City of Ottawa specifications.
- During all backfilling operations, the trucks shall avoid driving over the existing depressed areas on site to maintain the stormwater management by infiltration by avoiding compaction of the soil.

6 Conclusions

This report addresses stormwater design for the purposes of Zoning By-Law Amendment and Site Plan Application with the City of Ottawa. The following summarizes the Stormwater Management Design for the site:

- Post-Development storm run-off shall be controlled to pre-development levels for each storm event up to and including 100-year storm.
- The site is located in rural area, hence SCS Type II storms were used for stormwater management design.
- Stormwater runoff from 4.19 ha of total drainage area which includes 3.71 ha of area within the property and 0.24 ha of external areas, are being managed by on-site surface ponding and infiltration. 0.35 ha of property drains towards Trail Road and neighboring property to the south.
- Pre-development subcatchments E1 to E3 includes drainage areas being managed by on-site surface ponding and infiltration. No storm run-off occurs off-site from these areas up to and including SCS Type II – 100-year events of 6 hour and 12 hour duration. Drainage areas E4 and E5 drains off-site and are proposed to be unchanged in the post-development condition.
- Soil backfilling within the subject property will take place in six phases.
- Three infiltration trenches are proposed to be built in post-development conditions. The east infiltration trench, which will have 150 m² area and max. 2.0 m of total water depth, will be built before backfilling subcatchment S6. The west infiltration trenches, which includes two equal size trenches of 512.5 m² and 2.0m of total water depth, will be built after completion of all soil dump operations on site.
- Stormwater in the interim period will be managed by the existing depressed areas within the site.
- No run-off occurs off-site from the development area (post-development subcatchments S1 to S6) including SCS Type II 100 year and 100 year + 20% (climate change consideration) storm events of 12 hour and 24 hour durations. The maximum depth of water within the west and east infiltration trench will be 1.75 m and 1.47 m, respectively during 100 year + 20% storms. This is well below the maximum suggested depth of 2.0 m in MECP SMPDM guidelines. Therefore, the design criteria for the stormwater management of the subject site can be met successfully.
- During all soil dump activities, erosion and sedimentation will be controlled on site.

Appendix A – Figures

Figure A-1: Site Location Plan

Figure A-2: Pre-Development SWM Subcatchments

Figure A-3: Pre-Development Site Topography

Figure A-4: Post-Development SWM Subcatchments

Figure A-1 - Site Location Plan

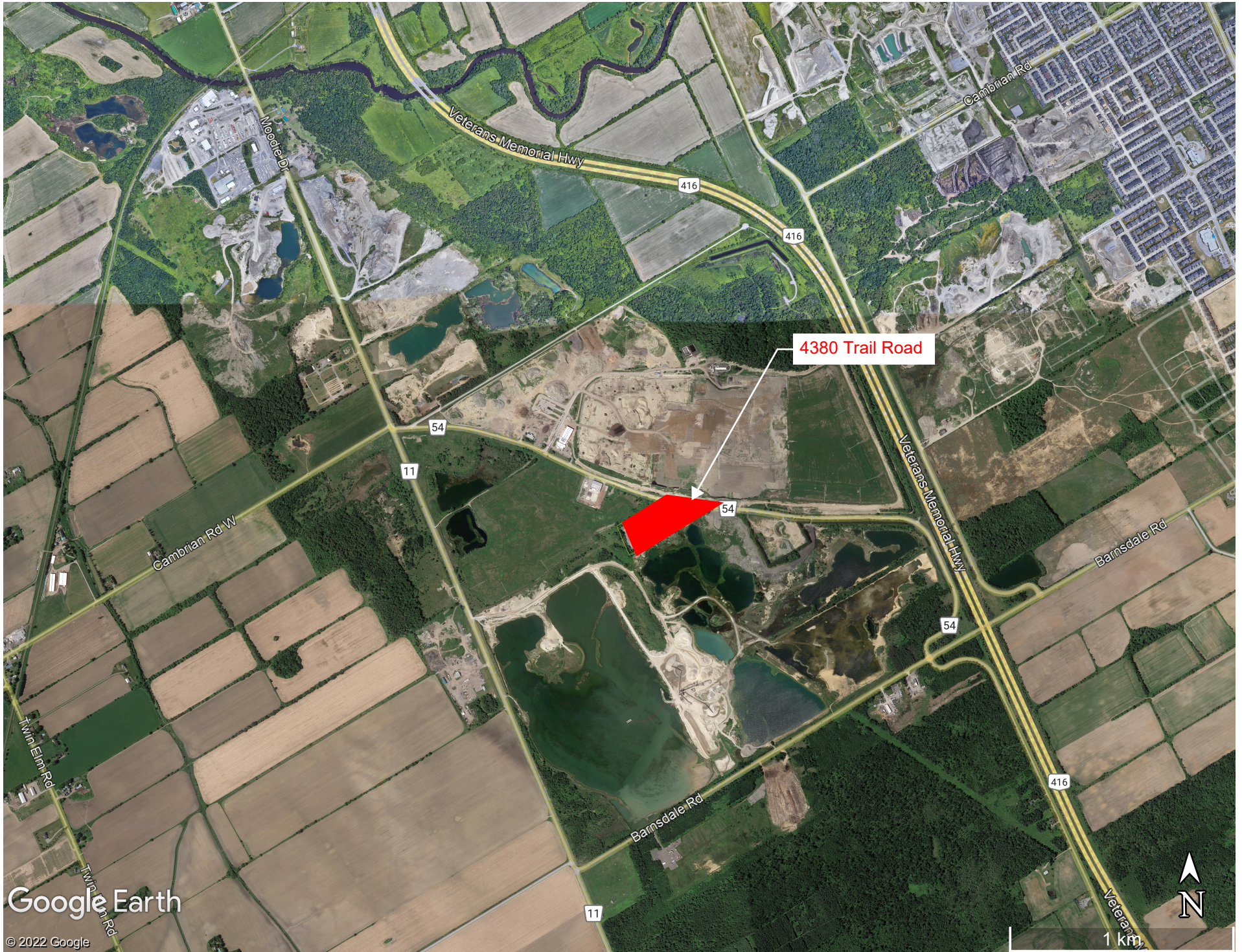


Figure A-2 - Pre-Development SWM Subcatchments

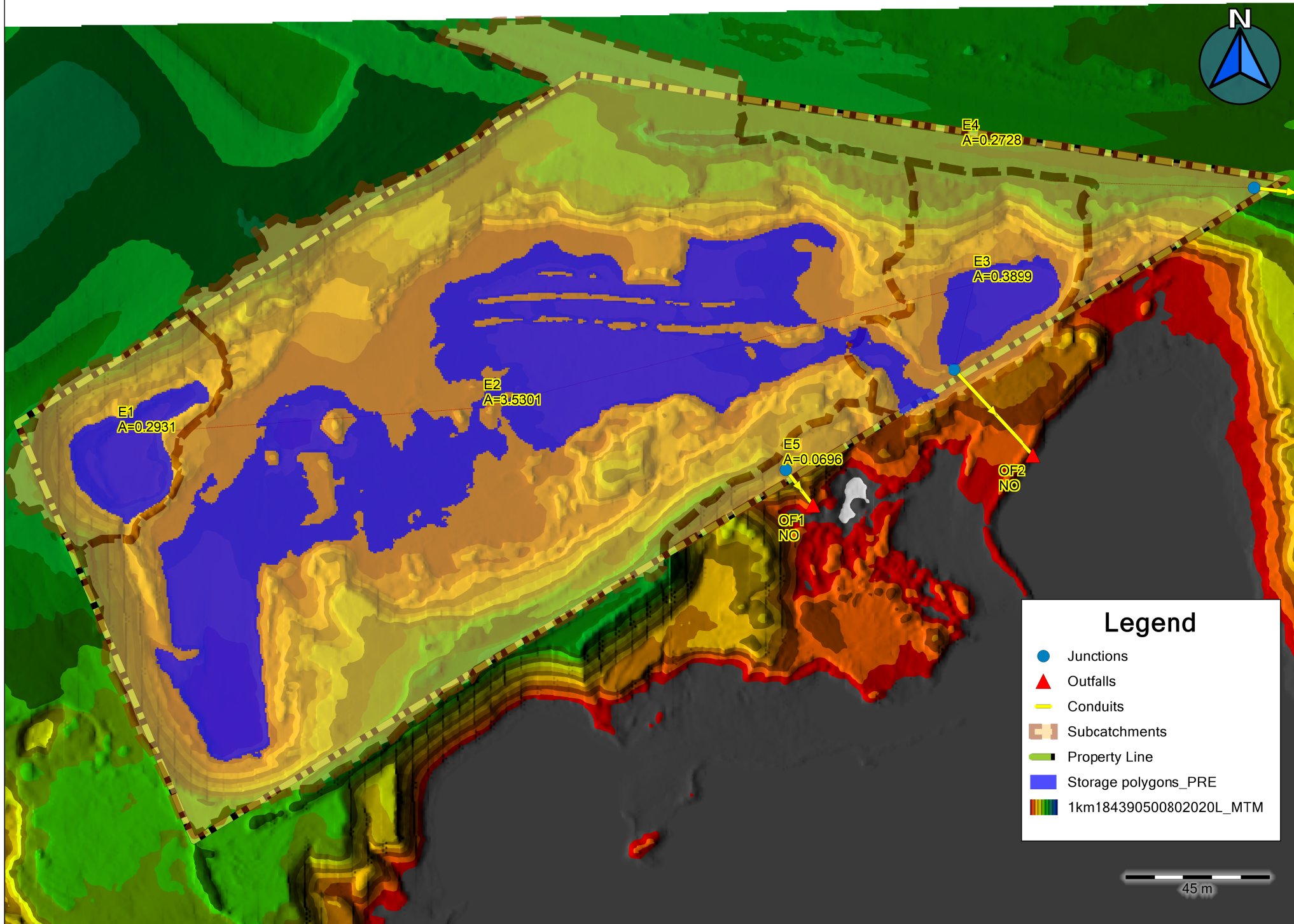
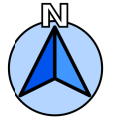
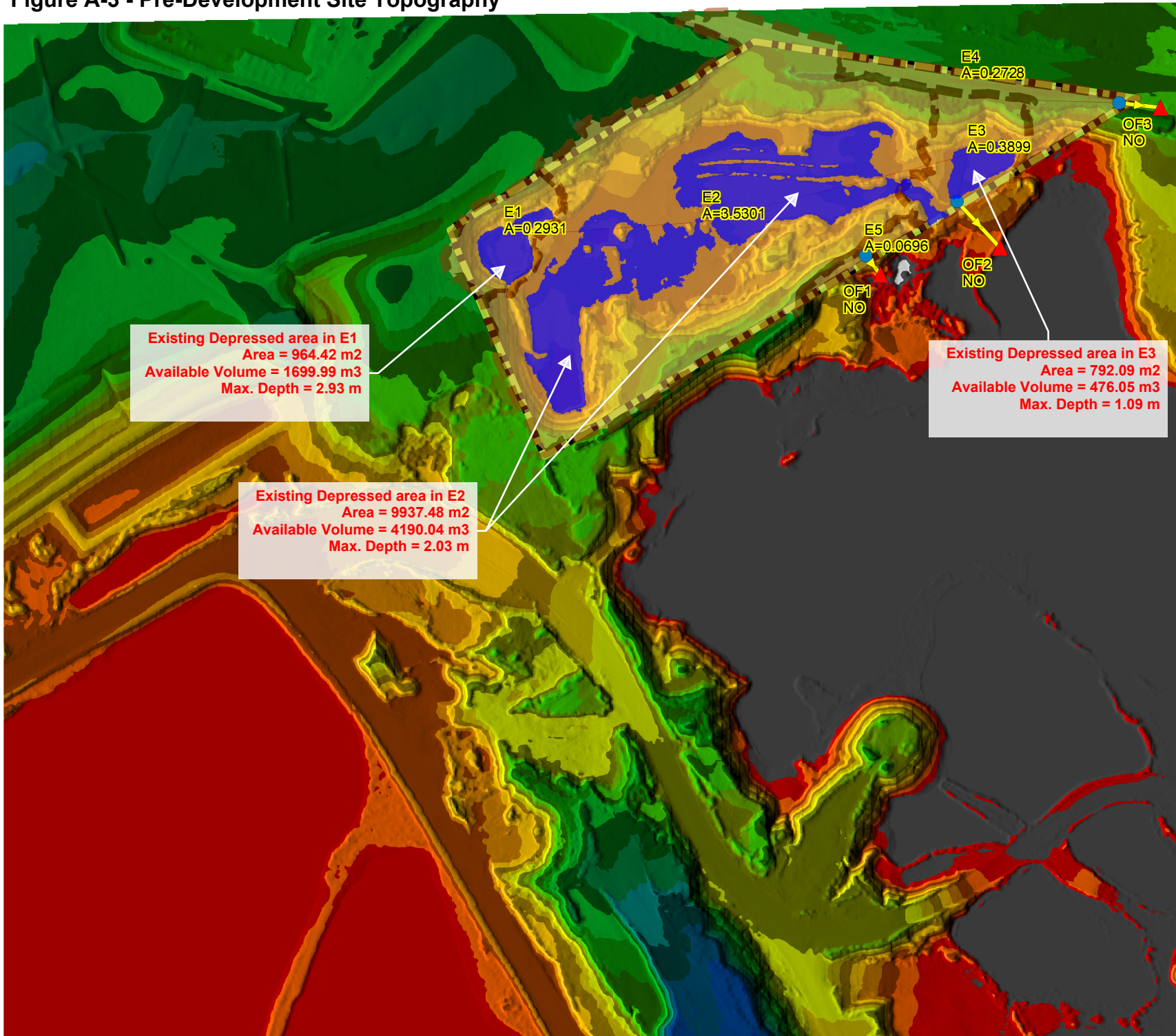


Figure A-3 - Pre-Development Site Topography



Legend

- Conduits
- Property Line
- Storage polygons_PRE
- 1km18439050080202 OL_MTM

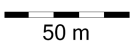
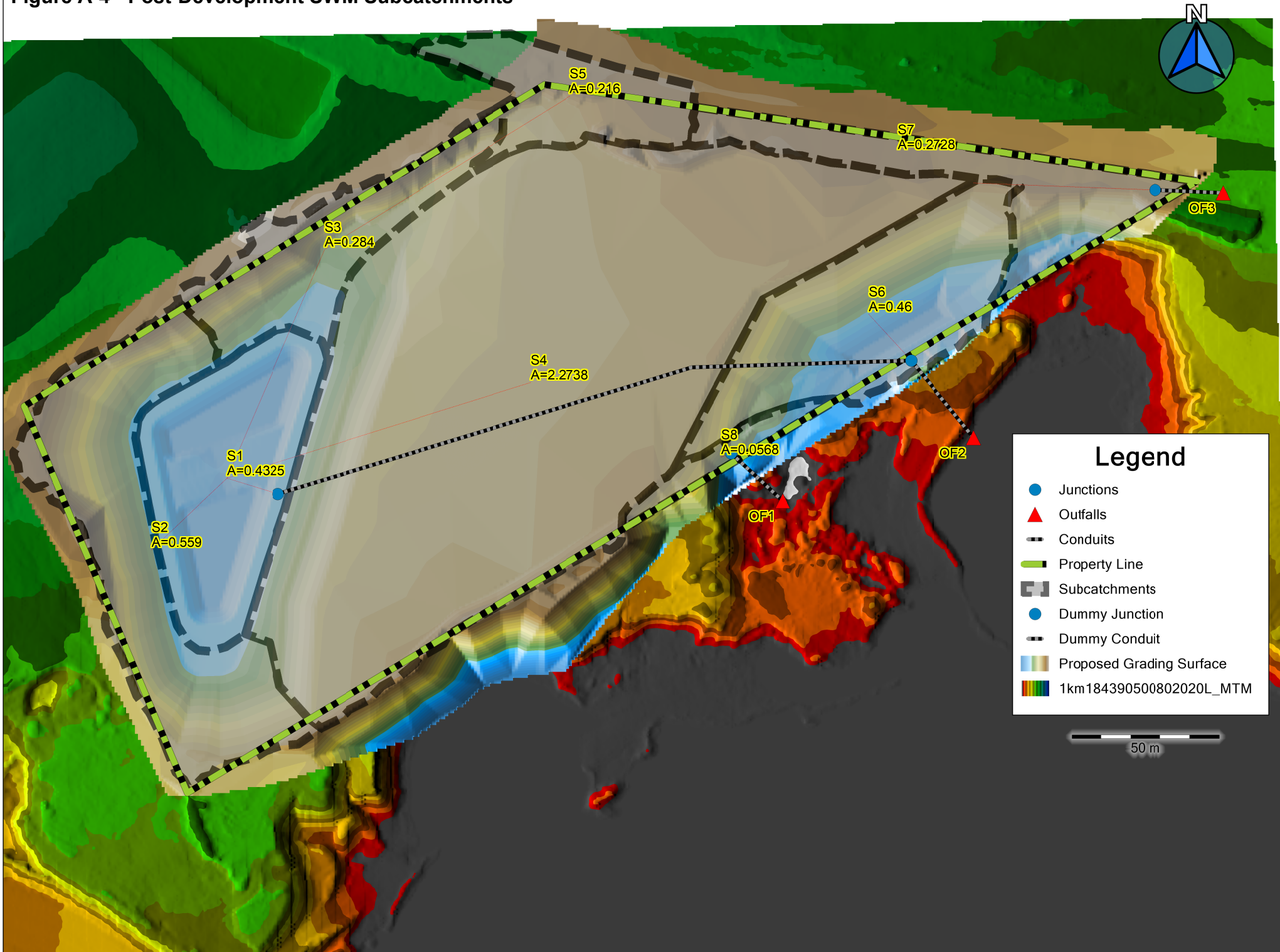


Figure A-4 - Post-Development SWM Subcatchments



Appendix B – Pre-Development SWM

PCSWMM STATUS REPORTS PRE_DEVELOPMENT

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

 WARNING 01: wet weather time step reduced to recording interval for Rain Gage SCS_Type_II_37.2mm_6hr_2yr

Element Count

Number of rain gages 7
 Number of subcatchments ... 5
 Number of nodes 9
 Number of links 6
 Number of pollutants 0
 Number of land uses 0

Raingage Summary

Name	Data Source	Data Type	Recording Interval
SCS_Type_II_12hr_5yr_57.6mm	SCS_Type_II_57.6mm	INTENSITY	6 min.
SCS_Type_II_12hr_100yr_96mm	SCS_Type_II_96mm	INTENSITY	6 min.
SCS_Type_II_12hr_2yr_43.2mm	SCS_Type_II_43.2mm	INTENSITY	6 min.
SCS_Type_II_24hr_100yr_103.2mm	SCS_Type_II_103.2mm	INTENSITY	6 min.
SCS_Type_II_24hr_2yr_48mm	SCS_Type_II_48mm	INTENSITY	6 min.
SCS_Type_II_24hr_5yr_62.4mm	SCS_Type_II_62.4mm	INTENSITY	6 min.
SCS_Type_II_37.2mm_6hr_2yr	SCS_Type_II_37.2mm_6hr_2yr	INTENSITY	6 min.

Subcatchment Summary

Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
E1	0.29	243.38	0.00	46.2630	SCS_Type_II_37.2mm_6hr_2yr	E2
E2	3.53	689.45	0.00	26.1130	SCS_Type_II_37.2mm_6hr_2yr	E3
E3	0.39	208.53	0.00	28.1010	SCS_Type_II_37.2mm_6hr_2yr	J5
E4	0.27	162.40	0.00	27.7450	SCS_Type_II_37.2mm_6hr_2yr	J7
E5	0.07	100.75	0.00	50.6290	SCS_Type_II_37.2mm_6hr_2yr	J6

LID Control Summary

Subcatchment	LID Control	No. of Units	Unit Area	Unit Width	% Area Covered	% Imperv Treated	% Perv Treated
E1	INF_1	1	964.42	35.00	32.90	100.00	100.00
E2	INF_2	1	9937.48	50.00	28.15	100.00	100.00
E3	INF_3	1	792.09	35.00	20.32	100.00	100.00

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J2	JUNCTION	100.80	1.00	0.0	
J3	JUNCTION	100.29	1.00	0.0	
J4	JUNCTION	100.17	1.00	0.0	
J5	JUNCTION	100.10	1.00	0.0	
J6	JUNCTION	103.22	1.00	0.0	
J7	JUNCTION	109.54	1.00	0.0	
OF1	OUTFALL	97.70	1.00	0.0	
OF2	OUTFALL	96.90	1.00	0.0	
OF3	OUTFALL	108.50	1.00	0.0	

Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C2	J2	J3	CONDUIT	84.2	0.6059	0.0100
C3	J3	J4	CONDUIT	126.6	0.0948	0.0100
C4	J4	J5	CONDUIT	34.8	0.2013	0.0100
C5	J5	OF2	CONDUIT	36.4	8.8146	0.0100
C6	J6	OF1	CONDUIT	13.9	43.1138	0.0100
C7	J7	OF3	CONDUIT	23.7	4.3964	0.0100

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C2	CIRCULAR	1.00	0.79	0.25	1.00	1	2426.26
C3	CIRCULAR	1.00	0.79	0.25	1.00	1	959.84
C4	CIRCULAR	1.00	0.79	0.25	1.00	1	1398.51
C5	CIRCULAR	1.00	0.79	0.25	1.00	1	9254.33
C6	CIRCULAR	1.00	0.79	0.25	1.00	1	20466.84
C7	CIRCULAR	1.00	0.79	0.25	1.00	1	6535.67

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 LPS

Process Models:

```

Rainfall/Runoff ..... YES
RDII ..... NO
Snowmelt ..... NO
Groundwater ..... NO
Flow Routing ..... YES
Ponding Allowed ..... NO
Water Quality ..... NO
Infiltration Method ..... HORTON
Flow Routing Method ..... DYNWAVE
Surcharge Method ..... EXTRAN
Starting Date ..... 01/01/2000 00:00:00
Ending Date ..... 01/03/2000 05:54:00
Antecedent Dry Days ..... 0.0
Report Time Step ..... 00:01:00
Wet Time Step ..... 00:06:00
Dry Time Step ..... 00:10:00
Routing Time Step ..... 5.00 sec
Variable Time Step ..... YES
Maximum Trials ..... 8
Number of Threads ..... 1
Head Tolerance ..... 0.001500 m

```

```

*****
                Volume      Depth
Runoff Quantity Continuity  hectare-m      mm
*****
Total Precipitation .....      0.169      37.200
Evaporation Loss .....      0.000      0.000
Infiltration Loss .....      0.163      35.814
Surface Runoff .....      0.003      0.572
Final Storage .....      0.004      0.925
Continuity Error (%) .....      -0.299

```

```

*****
                Volume      Volume
Flow Routing Continuity    hectare-m      10^6 ltr
*****
Dry Weather Inflow .....      0.000      0.000
Wet Weather Inflow .....      0.003      0.026
Groundwater Inflow .....      0.000      0.000
RDII Inflow .....      0.000      0.000
External Inflow .....      0.000      0.000
External Outflow .....      0.003      0.026
Flooding Loss .....      0.000      0.000
Evaporation Loss .....      0.000      0.000
Exfiltration Loss .....      0.000      0.000
Initial Stored Volume ....      0.000      0.000
Final Stored Volume .....      0.000      0.000
Continuity Error (%) .....      0.000

```

```

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

```

Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

Minimum Time Step : 0.67 sec
 Average Time Step : 5.00 sec
 Maximum Time Step : 5.00 sec
 Percent in Steady State : -0.00
 Average Iterations per Step : 2.00
 Percent Not Converging : 0.00
 Time Step Frequencies :
 5.000 - 3.155 sec : 99.99 %
 3.155 - 1.991 sec : 0.00 %
 1.991 - 1.256 sec : 0.00 %
 1.256 - 0.792 sec : 0.00 %
 0.792 - 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 mm	Total Runoff 10 ⁶ ltr	Peak Runoff LPS	Runoff Coeff
E1	37.20	0.00	0.00	36.57	0.00	5.21	-0.00	-0.00	0.00	-0.000
E2	37.20	-0.00	0.00	36.39	0.00	5.28	-0.00	-0.00	0.00	-0.000
E3	37.20	-0.00	0.00	36.37	0.00	6.04	0.00	0.00	0.00	0.000
E4	37.20	0.00	0.00	28.58	0.00	7.56	7.56	0.02	12.43	0.203
E5	37.20	0.00	0.00	28.50	0.00	7.81	7.81	0.01	4.08	0.210

LID Performance Summary

Subcatchment	LID Control	Total Inflow mm	Evap Loss mm	Infil Loss mm	Surface Outflow mm	Drain Outflow mm	Initial Storage mm	Final Storage mm	Continuity Error %
E1	INF_1	53.02	0.00	53.02	0.00	0.00	0.00	0.00	0.00
E2	INF_2	55.96	0.00	55.96	0.00	0.00	0.00	0.00	0.00
E3	INF_3	66.96	0.00	66.96	0.00	0.00	0.00	0.00	0.00

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
J2	JUNCTION	0.00	0.00	100.80	0 00:00	0.00
J3	JUNCTION	0.00	0.00	100.29	0 00:00	0.00
J4	JUNCTION	0.00	0.00	100.17	0 00:00	0.00
J5	JUNCTION	0.00	0.00	100.10	0 04:39	0.00
J6	JUNCTION	0.00	0.01	103.23	0 03:06	0.01
J7	JUNCTION	0.00	0.03	109.57	0 03:06	0.03
OF1	OUTFALL	0.00	0.01	97.71	0 03:06	0.01
OF2	OUTFALL	0.00	0.00	96.90	0 00:00	0.00
OF3	OUTFALL	0.00	0.03	108.53	0 03:06	0.03

 Node Inflow Summary

Node	Type	Maximum Lateral Inflow LPS	Maximum Total Inflow LPS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
J2	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J3	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J4	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J5	JUNCTION	0.00	0.00	0 04:36	6.54e-36	3.77e-20	0.000 ltr
J6	JUNCTION	4.08	4.08	0 03:06	0.00544	0.00544	-0.056
J7	JUNCTION	12.43	12.43	0 03:06	0.0206	0.0206	0.006
OF1	OUTFALL	0.00	4.07	0 03:06	0	0.00544	0.000
OF2	OUTFALL	0.00	0.00	0 00:00	0	0	0.000 ltr
OF3	OUTFALL	0.00	12.39	0 03:06	0	0.0206	0.000

 Node Surcharge Summary

No nodes were surcharged.

 Node Flooding Summary

No nodes were flooded.

Outfall Loading Summary

Outfall Node	Flow Freq Pcmt	Avg Flow LPS	Max Flow LPS	Total Volume 10^6 ltr
OF1	5.98	0.50	4.07	0.005
OF2	0.00	0.00	0.00	0.000
OF3	6.26	1.78	12.39	0.021
System	4.08	2.28	16.43	0.026

 Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C2	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C3	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C4	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C5	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C6	CONDUIT	4.07	0 03:06	2.46	0.00	0.01
C7	CONDUIT	12.39	0 03:06	1.61	0.00	0.03

 Flow Classification Summary

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class								
		Up Dry	Down Dry	Sub Dry	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl	
C2	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C4	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C5	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C6	1.00	0.05	0.00	0.00	0.89	0.06	0.00	0.00	0.04	0.00
C7	1.00	0.05	0.00	0.00	0.88	0.06	0.00	0.00	0.01	0.00

 Conduit Surchage Summary

No conduits were surcharged.

Analysis begun on: Wed Dec 13 11:06:51 2023
Analysis ended on: Wed Dec 13 11:06:56 2023
Total elapsed time: 00:00:05

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

WARNING 01: wet weather time step reduced to recording interval for Rain Gage SCS_Type_II_50.4mm_6hr_5yr

Element Count

Number of rain gages 7
 Number of subcatchments ... 5
 Number of nodes 9
 Number of links 6
 Number of pollutants 0
 Number of land uses 0

Raingage Summary

Name	Data Source	Data Type	Recording Interval
SCS_Type_II_12hr_5yr_57.6mm	SCS_Type_II_57.6mm	INTENSITY	6 min.
SCS_Type_II_12hr_100yr_96mm	SCS_Type_II_96mm	INTENSITY	6 min.
SCS_Type_II_12hr_2yr_43.2mm	SCS_Type_II_43.2mm	INTENSITY	6 min.
SCS_Type_II_24hr_100yr_103.2mm	SCS_Type_II_103.2mm	INTENSITY	6 min.
SCS_Type_II_24hr_2yr_48mm	SCS_Type_II_48mm	INTENSITY	6 min.
SCS_Type_II_24hr_5yr_62.4mm	SCS_Type_II_62.4mm	INTENSITY	6 min.
SCS_Type_II_50.4mm_6hr_5yr	SCS_Type_II_50.4mm_6hr_5yr	INTENSITY	6 min.

Subcatchment Summary

Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
E1	0.29	243.38	0.00	46.2630	SCS_Type_II_50.4mm_6hr_5yr	E2
E2	3.53	689.45	0.00	26.1130	SCS_Type_II_50.4mm_6hr_5yr	E3
E3	0.39	208.53	0.00	28.1010	SCS_Type_II_50.4mm_6hr_5yr	J5
E4	0.27	162.40	0.00	27.7450	SCS_Type_II_50.4mm_6hr_5yr	J7
E5	0.07	100.75	0.00	50.6290	SCS_Type_II_50.4mm_6hr_5yr	J6

LID Control Summary

Subcatchment	LID Control	No. of Units	Unit Area	Unit Width	% Area Covered	% Imperv Treated	% Perv Treated
E1	INF_1	1	964.42	35.00	32.90	100.00	100.00
E2	INF_2	1	9937.48	50.00	28.15	100.00	100.00
E3	INF_3	1	792.09	35.00	20.32	100.00	100.00

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J2	JUNCTION	100.80	1.00	0.0	
J3	JUNCTION	100.29	1.00	0.0	
J4	JUNCTION	100.17	1.00	0.0	
J5	JUNCTION	100.10	1.00	0.0	
J6	JUNCTION	103.22	1.00	0.0	
J7	JUNCTION	109.54	1.00	0.0	
OF1	OUTFALL	97.70	1.00	0.0	
OF2	OUTFALL	96.90	1.00	0.0	
OF3	OUTFALL	108.50	1.00	0.0	

Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C2	J2	J3	CONDUIT	84.2	0.6059	0.0100
C3	J3	J4	CONDUIT	126.6	0.0948	0.0100
C4	J4	J5	CONDUIT	34.8	0.2013	0.0100
C5	J5	OF2	CONDUIT	36.4	8.8146	0.0100
C6	J6	OF1	CONDUIT	13.9	43.1138	0.0100
C7	J7	OF3	CONDUIT	23.7	4.3964	0.0100

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C2	CIRCULAR	1.00	0.79	0.25	1.00	1	2426.26
C3	CIRCULAR	1.00	0.79	0.25	1.00	1	959.84
C4	CIRCULAR	1.00	0.79	0.25	1.00	1	1398.51
C5	CIRCULAR	1.00	0.79	0.25	1.00	1	9254.33
C6	CIRCULAR	1.00	0.79	0.25	1.00	1	20466.84
C7	CIRCULAR	1.00	0.79	0.25	1.00	1	6535.67

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 LPS

Process Models:

```

Rainfall/Runoff ..... YES
RDII ..... NO
Snowmelt ..... NO
Groundwater ..... NO
Flow Routing ..... YES
Ponding Allowed ..... NO
Water Quality ..... NO
Infiltration Method ..... HORTON
Flow Routing Method ..... DYNWAVE
Surcharge Method ..... EXTRAN
Starting Date ..... 01/01/2000 00:00:00
Ending Date ..... 01/03/2000 05:54:00
Antecedent Dry Days ..... 0.0
Report Time Step ..... 00:01:00
Wet Time Step ..... 00:06:00
Dry Time Step ..... 00:10:00
Routing Time Step ..... 5.00 sec
Variable Time Step ..... YES
Maximum Trials ..... 8
Number of Threads ..... 1
Head Tolerance ..... 0.001500 m

```

```

*****
                Volume      Depth
Runoff Quantity Continuity  hectare-m      mm
*****
-----
Total Precipitation .....    0.230      50.400
Evaporation Loss .....      0.000      0.000
Infiltration Loss .....     0.222      48.646
Surface Runoff .....        0.005      1.189
Final Storage .....         0.004      0.907
Continuity Error (%) .....   -0.679

```

```

*****
                Volume      Volume
Flow Routing Continuity    hectare-m      10^6 ltr
*****
-----
Dry Weather Inflow .....    0.000      0.000
Wet Weather Inflow .....    0.005      0.054
Groundwater Inflow .....    0.000      0.000
RDII Inflow .....           0.000      0.000
External Inflow .....       0.000      0.000
External Outflow .....      0.005      0.054
Flooding Loss .....         0.000      0.000
Evaporation Loss .....      0.000      0.000
Exfiltration Loss .....     0.000      0.000
Initial Stored Volume ....   0.000      0.000
Final Stored Volume .....   0.000      0.000
Continuity Error (%) .....   0.000

```

```

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

```

Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

Minimum Time Step : 0.25 sec
 Average Time Step : 4.99 sec
 Maximum Time Step : 5.00 sec
 Percent in Steady State : -0.00
 Average Iterations per Step : 2.00
 Percent Not Converging : 0.00
 Time Step Frequencies :
 5.000 - 3.155 sec : 99.82 %
 3.155 - 1.991 sec : 0.18 %
 1.991 - 1.256 sec : 0.00 %
 1.256 - 0.792 sec : 0.00 %
 0.792 - 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 mm	Total Runoff 10 ⁶ ltr	Peak Runoff LPS	Runoff Coeff
E1	50.40	0.00	0.00	50.01	0.00	10.68	0.00	0.00	0.00	0.000
E2	50.40	0.00	0.00	49.82	0.00	11.10	0.00	0.00	0.00	0.000
E3	50.40	0.00	0.00	49.93	0.00	12.62	0.00	0.00	0.00	0.000
E4	50.40	0.00	0.00	33.97	0.00	15.80	15.80	0.04	26.53	0.313
E5	50.40	0.00	0.00	33.81	0.00	15.91	15.91	0.01	8.07	0.316

LID Performance Summary

Subcatchment	LID Control	Total Inflow mm	Evap Loss mm	Infil Loss mm	Surface Outflow mm	Drain Outflow mm	Initial Storage mm	Final Storage mm	Continuity Error %
E1	INF_1	82.87	0.00	82.87	0.00	0.00	0.00	0.00	0.00
E2	INF_2	89.85	0.00	89.85	0.00	0.00	0.00	0.00	0.00
E3	INF_3	112.52	0.00	112.52	0.00	0.00	0.00	0.00	0.00

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
J2	JUNCTION	0.00	0.00	100.80	0 00:00	0.00
J3	JUNCTION	0.00	0.00	100.29	0 00:00	0.00
J4	JUNCTION	0.00	0.00	100.17	0 00:00	0.00
J5	JUNCTION	0.00	0.00	100.10	0 00:00	0.00
J6	JUNCTION	0.00	0.02	103.23	0 03:00	0.02
J7	JUNCTION	0.00	0.05	109.59	0 03:06	0.05
OF1	OUTFALL	0.00	0.02	97.72	0 03:00	0.02
OF2	OUTFALL	0.00	0.00	96.90	0 00:00	0.00
OF3	OUTFALL	0.00	0.05	108.54	0 03:06	0.05

 Node Inflow Summary

Node	Type	Maximum Lateral Inflow LPS	Maximum Total Inflow LPS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
J2	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J3	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J4	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J5	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J6	JUNCTION	8.07	8.07	0 03:00	0.0111	0.0111	-0.010
J7	JUNCTION	26.53	26.53	0 03:06	0.0431	0.0431	0.010
OF1	OUTFALL	0.00	8.08	0 03:00	0	0.0111	0.000
OF2	OUTFALL	0.00	0.00	0 00:00	0	0	0.000 ltr
OF3	OUTFALL	0.00	26.51	0 03:06	0	0.0431	0.000

 Node Surcharge Summary

No nodes were surcharged.

 Node Flooding Summary

No nodes were flooded.

Outfall Loading Summary

Outfall Node	Flow Freq Pcmt	Avg Flow LPS	Max Flow LPS	Total Volume 10^6 ltr
OF1	6.16	1.15	8.08	0.011
OF2	0.00	0.00	0.00	0.000
OF3	6.48	4.18	26.51	0.043
System	4.21	5.34	33.34	0.054

 Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C2	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C3	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C4	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C5	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C6	CONDUIT	8.08	0 03:00	3.07	0.00	0.02
C7	CONDUIT	26.51	0 03:06	2.01	0.00	0.05

 Flow Classification Summary

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class									
		Up Dry		Down Dry		Sub Crit		Sup Crit		Norm Ltd	Inlet Ctrl
C2	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C4	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C5	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C6	1.00	0.05	0.00	0.00	0.88	0.06	0.00	0.00	0.05	0.00	0.00
C7	1.00	0.05	0.00	0.00	0.88	0.07	0.00	0.00	0.03	0.00	0.00

 Conduit Surcharge Summary

No conduits were surcharged.

Analysis begun on: Wed Dec 13 11:06:50 2023
Analysis ended on: Wed Dec 13 11:06:56 2023
Total elapsed time: 00:00:06

 WARNING 01: wet weather time step reduced to recording interval for Rain Gage SCS_Type_II_87mm_6hr_100yr

Element Count

Number of rain gages 7
 Number of subcatchments ... 5
 Number of nodes 9
 Number of links 6
 Number of pollutants 0
 Number of land uses 0

Raingage Summary

Name	Data Source	Data Type	Recording Interval
SCS_Type_II_12hr_5yr_57.6mm	SCS_Type_II_57.6mm	INTENSITY	6 min.
SCS_Type_II_12hr_100yr_96mm	SCS_Type_II_96mm	INTENSITY	6 min.
SCS_Type_II_12hr_2yr_43.2mm	SCS_Type_II_43.2mm	INTENSITY	6 min.
SCS_Type_II_24hr_100yr_103.2mm	SCS_Type_II_103.2mm	INTENSITY	6 min.
SCS_Type_II_24hr_2yr_48mm	SCS_Type_II_48mm	INTENSITY	6 min.
SCS_Type_II_24hr_5yr_62.4mm	SCS_Type_II_62.4mm	INTENSITY	6 min.
SCS_Type_II_87mm_6hr_100yr	SCS_Type_II_87mm_6hr_100yr	INTENSITY	6 min.

Subcatchment Summary

Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
E1	0.29	243.38	0.00	46.2630	SCS_Type_II_87mm_6hr_100yr	E2
E2	3.53	689.45	0.00	26.1130	SCS_Type_II_87mm_6hr_100yr	E3
E3	0.39	208.53	0.00	28.1010	SCS_Type_II_87mm_6hr_100yr	J5
E4	0.27	162.40	0.00	27.7450	SCS_Type_II_87mm_6hr_100yr	J7
E5	0.07	100.75	0.00	50.6290	SCS_Type_II_87mm_6hr_100yr	J6

LID Control Summary

Subcatchment	LID Control	No. of Units	Unit Area	Unit Width	% Area Covered	% Imperv Treated	% Perv Treated
E1	INF_1	1	964.42	35.00	32.90	100.00	100.00
E2	INF_2	1	9937.48	50.00	28.15	100.00	100.00
E3	INF_3	1	792.09	35.00	20.32	100.00	100.00

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J2	JUNCTION	100.80	1.00	0.0	
J3	JUNCTION	100.29	1.00	0.0	
J4	JUNCTION	100.17	1.00	0.0	
J5	JUNCTION	100.10	1.00	0.0	
J6	JUNCTION	103.22	1.00	0.0	
J7	JUNCTION	109.54	1.00	0.0	
OF1	OUTFALL	97.70	1.00	0.0	
OF2	OUTFALL	96.90	1.00	0.0	
OF3	OUTFALL	108.50	1.00	0.0	

Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C2	J2	J3	CONDUIT	84.2	0.6059	0.0100
C3	J3	J4	CONDUIT	126.6	0.0948	0.0100
C4	J4	J5	CONDUIT	34.8	0.2013	0.0100
C5	J5	OF2	CONDUIT	36.4	8.8146	0.0100
C6	J6	OF1	CONDUIT	13.9	43.1138	0.0100
C7	J7	OF3	CONDUIT	23.7	4.3964	0.0100

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C2	CIRCULAR	1.00	0.79	0.25	1.00	1	2426.26
C3	CIRCULAR	1.00	0.79	0.25	1.00	1	959.84
C4	CIRCULAR	1.00	0.79	0.25	1.00	1	1398.51
C5	CIRCULAR	1.00	0.79	0.25	1.00	1	9254.33
C6	CIRCULAR	1.00	0.79	0.25	1.00	1	20466.84
C7	CIRCULAR	1.00	0.79	0.25	1.00	1	6535.67

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 LPS

Process Models:

```

Rainfall/Runoff ..... YES
RDII ..... NO
Snowmelt ..... NO
Groundwater ..... NO
Flow Routing ..... YES
Ponding Allowed ..... NO
Water Quality ..... NO
Infiltration Method ..... HORTON
Flow Routing Method ..... DYNWAVE
Surcharge Method ..... EXTRAN
Starting Date ..... 01/01/2000 00:00:00
Ending Date ..... 01/03/2000 05:54:00
Antecedent Dry Days ..... 0.0
Report Time Step ..... 00:01:00
Wet Time Step ..... 00:06:00
Dry Time Step ..... 00:10:00
Routing Time Step ..... 5.00 sec
Variable Time Step ..... YES
Maximum Trials ..... 8
Number of Threads ..... 1
Head Tolerance ..... 0.001500 m

```

```

*****
Volume      Depth
Runoff Quantity Continuity  hectare-m      mm
*****
-----
Total Precipitation .....    0.396      87.000
Evaporation Loss .....      0.000      0.000
Infiltration Loss .....     0.380      83.335
Surface Runoff .....        0.014      3.167
Final Storage .....         0.004      0.929
Continuity Error (%) .....   -0.494

```

```

*****
Volume      Volume
Flow Routing Continuity  hectare-m      10^6 ltr
*****
-----
Dry Weather Inflow .....    0.000      0.000
Wet Weather Inflow .....    0.014      0.144
Groundwater Inflow .....    0.000      0.000
RDII Inflow .....           0.000      0.000
External Inflow .....       0.000      0.000
External Outflow .....      0.014      0.144
Flooding Loss .....         0.000      0.000
Evaporation Loss .....      0.000      0.000
Exfiltration Loss .....     0.000      0.000
Initial Stored Volume ....   0.000      0.000
Final Stored Volume .....   0.000      0.000
Continuity Error (%) .....   0.000

```

```
*****
```

```
Time-Step Critical Elements
*****
```

```
Link C6 (2.37%)
```

Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

Minimum Time Step : 2.19 sec
 Average Time Step : 4.96 sec
 Maximum Time Step : 5.00 sec
 Percent in Steady State : -0.00
 Average Iterations per Step : 2.00
 Percent Not Converging : 0.00
 Time Step Frequencies :
 5.000 - 3.155 sec : 98.95 %
 3.155 - 1.991 sec : 1.05 %
 1.991 - 1.256 sec : 0.00 %
 1.256 - 0.792 sec : 0.00 %
 0.792 - 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 mm	Total Runoff 10 ⁶ ltr	Peak Runoff LPS	Runoff Coeff
E1	87.00	0.00	0.00	86.57	0.00	28.34	0.00	0.00	0.00	0.000
E2	87.00	0.00	0.00	86.51	0.00	30.08	-0.00	-0.00	0.00	-0.000
E3	87.00	-0.00	0.00	86.52	0.00	33.56	0.00	0.00	0.00	0.000
E4	87.00	0.00	0.00	44.28	0.00	42.10	42.10	0.11	74.50	0.484
E5	87.00	0.00	0.00	44.11	0.00	42.26	42.26	0.03	19.43	0.486

LID Performance Summary

Subcatchment	LID Control	Total Inflow mm	Evap Loss mm	Infil Loss mm	Surface Outflow mm	Drain Outflow mm	Initial Storage mm	Final Storage mm	Continuity Error %
E1	INF_1	173.14	0.00	173.14	0.00	0.00	0.00	0.00	0.00
E2	INF_2	193.87	0.00	193.87	0.00	0.00	0.00	0.00	0.00
E3	INF_3	252.22	0.00	252.22	0.00	0.00	0.00	0.00	0.00

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
J2	JUNCTION	0.00	0.00	100.80	0 00:00	0.00
J3	JUNCTION	0.00	0.00	100.29	0 00:00	0.00
J4	JUNCTION	0.00	0.00	100.17	0 00:00	0.00
J5	JUNCTION	0.00	0.00	100.10	0 00:00	0.00
J6	JUNCTION	0.00	0.02	103.24	0 03:00	0.02
J7	JUNCTION	0.00	0.08	109.62	0 03:00	0.07
OF1	OUTFALL	0.00	0.02	97.72	0 03:00	0.02
OF2	OUTFALL	0.00	0.00	96.90	0 00:00	0.00
OF3	OUTFALL	0.00	0.08	108.57	0 03:00	0.07

Node Inflow Summary

Node	Type	Maximum Lateral Inflow LPS	Maximum Total Inflow LPS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
J2	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J3	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J4	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J5	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J6	JUNCTION	19.43	19.43	0 03:00	0.0294	0.0294	-0.002
J7	JUNCTION	74.50	74.50	0 03:00	0.115	0.115	0.015
OF1	OUTFALL	0.00	19.43	0 03:00	0	0.0294	0.000
OF2	OUTFALL	0.00	0.00	0 00:00	0	0	0.000 ltr
OF3	OUTFALL	0.00	74.58	0 03:00	0	0.115	0.000

Node Surcharge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

Outfall Loading Summary

Outfall Node	Flow Freq Pcmt	Avg Flow LPS	Max Flow LPS	Total Volume 10^6 ltr
OF1	7.08	3.27	19.43	0.029
OF2	0.00	0.00	0.00	0.000
OF3	7.42	12.10	74.58	0.115
System	4.83	15.37	93.95	0.144

 Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C2	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C3	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C4	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C5	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C6	CONDUIT	19.43	0 03:00	4.01	0.00	0.02
C7	CONDUIT	74.58	0 03:00	2.78	0.01	0.08

 Flow Classification Summary

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class									
		Up Dry		Down Dry		Sub Crit		Sup Crit		Norm Ltd	Inlet Ctrl
C2	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C4	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C5	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C6	1.00	0.05	0.00	0.00	0.88	0.07	0.00	0.00	0.05	0.00	0.00
C7	1.00	0.05	0.00	0.00	0.88	0.08	0.00	0.00	0.04	0.00	0.00

 Conduit Surchage Summary

No conduits were surcharged.

Analysis begun on: Wed Dec 13 11:06:51 2023
Analysis ended on: Wed Dec 13 11:06:56 2023
Total elapsed time: 00:00:05

 WARNING 01: wet weather time step reduced to recording interval for Rain Gage SCS_Type_II_43.2mm_12hr_2yr

Element Count

Number of rain gages 7
 Number of subcatchments ... 5
 Number of nodes 9
 Number of links 6
 Number of pollutants 0
 Number of land uses 0

Raingage Summary

Name	Data Source	Data Type	Recording Interval
SCS_Type_II_12hr_5yr_57.6mm	SCS_Type_II_57.6mm	INTENSITY	6 min.
SCS_Type_II_12hr_100yr_96mm	SCS_Type_II_96mm	INTENSITY	6 min.
SCS_Type_II_12hr_2yr_43.2mm	SCS_Type_II_43.2mm	INTENSITY	6 min.
SCS_Type_II_24hr_100yr_103.2mm	SCS_Type_II_103.2mm	INTENSITY	6 min.
SCS_Type_II_24hr_2yr_48mm	SCS_Type_II_48mm	INTENSITY	6 min.
SCS_Type_II_24hr_5yr_62.4mm	SCS_Type_II_62.4mm	INTENSITY	6 min.
SCS_Type_II_43.2mm_12hr_2yr	SCS_Type_II_43.2mm_12hr_2yr	INTENSITY	6 min.

Subcatchment Summary

Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
E1	0.29	243.38	0.00	46.2630	SCS_Type_II_43.2mm_12hr_2yr	E2
E2	3.53	689.45	0.00	26.1130	SCS_Type_II_43.2mm_12hr_2yr	E3
E3	0.39	208.53	0.00	28.1010	SCS_Type_II_43.2mm_12hr_2yr	J5
E4	0.27	162.40	0.00	27.7450	SCS_Type_II_43.2mm_12hr_2yr	J7
E5	0.07	100.75	0.00	50.6290	SCS_Type_II_43.2mm_12hr_2yr	J6

LID Control Summary

Subcatchment	LID Control	No. of Units	Unit Area	Unit Width	% Area Covered	% Imperv Treated	% Perv Treated
E1	INF_1	1	964.42	35.00	32.90	100.00	100.00
E2	INF_2	1	9937.48	50.00	28.15	100.00	100.00
E3	INF_3	1	792.09	35.00	20.32	100.00	100.00

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J2	JUNCTION	100.80	1.00	0.0	
J3	JUNCTION	100.29	1.00	0.0	
J4	JUNCTION	100.17	1.00	0.0	
J5	JUNCTION	100.10	1.00	0.0	
J6	JUNCTION	103.22	1.00	0.0	
J7	JUNCTION	109.54	1.00	0.0	
OF1	OUTFALL	97.70	1.00	0.0	
OF2	OUTFALL	96.90	1.00	0.0	
OF3	OUTFALL	108.50	1.00	0.0	

Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C2	J2	J3	CONDUIT	84.2	0.6059	0.0100
C3	J3	J4	CONDUIT	126.6	0.0948	0.0100
C4	J4	J5	CONDUIT	34.8	0.2013	0.0100
C5	J5	OF2	CONDUIT	36.4	8.8146	0.0100
C6	J6	OF1	CONDUIT	13.9	43.1138	0.0100
C7	J7	OF3	CONDUIT	23.7	4.3964	0.0100

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C2	CIRCULAR	1.00	0.79	0.25	1.00	1	2426.26
C3	CIRCULAR	1.00	0.79	0.25	1.00	1	959.84
C4	CIRCULAR	1.00	0.79	0.25	1.00	1	1398.51
C5	CIRCULAR	1.00	0.79	0.25	1.00	1	9254.33
C6	CIRCULAR	1.00	0.79	0.25	1.00	1	20466.84
C7	CIRCULAR	1.00	0.79	0.25	1.00	1	6535.67

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 LPS

Process Models:

Rainfall/Runoff YES
 RDII NO
 Snowmelt NO
 Groundwater NO
 Flow Routing YES
 Ponding Allowed NO
 Water Quality NO
 Infiltration Method HORTON
 Flow Routing Method DYNWAVE
 Surcharge Method EXTRAN
 Starting Date 01/01/2000 00:00:00
 Ending Date 01/03/2000 11:54:00
 Antecedent Dry Days 0.0
 Report Time Step 00:01:00
 Wet Time Step 00:06:00
 Dry Time Step 00:10:00
 Routing Time Step 5.00 sec
 Variable Time Step YES
 Maximum Trials 8
 Number of Threads 1
 Head Tolerance 0.001500 m

	Volume	Depth
Runoff Quantity Continuity	hectare-m	mm
Total Precipitation	0.197	43.200
Evaporation Loss	0.000	0.000
Infiltration Loss	0.190	41.658
Surface Runoff	0.004	0.858
Final Storage	0.004	0.928
Continuity Error (%)	-0.564	

	Volume	Volume
Flow Routing Continuity	hectare-m	10 ⁶ ltr
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.004	0.039
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	0.004	0.039
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

 Time-Step Critical Elements

None

Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

Minimum Time Step : 1.29 sec
Average Time Step : 4.99 sec
Maximum Time Step : 5.00 sec
Percent in Steady State : 0.00
Average Iterations per Step : 2.00
Percent Not Converging : 0.00
Time Step Frequencies :
5.000 - 3.155 sec : 100.00 %
3.155 - 1.991 sec : 0.00 %
1.991 - 1.256 sec : 0.00 %
1.256 - 0.792 sec : 0.00 %
0.792 - 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 mm	Total Runoff 10 ⁶ ltr	Peak Runoff LPS	Runoff Coeff
E1	43.20	0.00	0.00	42.94	0.00	7.90	-0.00	-0.00	0.00	-0.000
E2	43.20	-0.00	0.00	42.48	0.00	7.90	0.00	0.00	0.00	0.000
E3	43.20	0.00	0.00	42.59	0.00	9.05	-0.00	-0.00	0.00	-0.000
E4	43.20	0.00	0.00	31.08	0.00	11.30	11.30	0.03	15.59	0.262
E5	43.20	0.00	0.00	31.00	0.00	11.87	11.87	0.01	4.35	0.275

LID Performance Summary

Subcatchment	LID Control	Total Inflow mm	Evap Loss mm	Infil Loss mm	Surface Outflow mm	Drain Outflow mm	Initial Storage mm	Final Storage mm	Continuity Error %
E1	INF_1	67.21	0.00	67.21	0.00	0.00	0.00	0.00	0.00
E2	INF_2	71.28	0.00	71.28	0.00	0.00	0.00	0.00	0.00
E3	INF_3	87.75	0.00	87.75	0.00	0.00	0.00	0.00	0.00

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
J2	JUNCTION	0.00	0.00	100.80	0 00:00	0.00
J3	JUNCTION	0.00	0.00	100.29	0 00:00	0.00
J4	JUNCTION	0.00	0.00	100.17	0 00:00	0.00
J5	JUNCTION	0.00	0.00	100.10	0 11:48	0.00
J6	JUNCTION	0.00	0.01	103.23	0 06:00	0.01
J7	JUNCTION	0.00	0.04	109.58	0 06:00	0.04
OF1	OUTFALL	0.00	0.01	97.71	0 06:00	0.01
OF2	OUTFALL	0.00	0.00	96.90	0 00:00	0.00
OF3	OUTFALL	0.00	0.04	108.53	0 06:00	0.04

Node Inflow Summary

Node	Type	Maximum Lateral Inflow LPS	Maximum Total Inflow LPS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
J2	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J3	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J4	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J5	JUNCTION	-0.00	0.00	0 11:42	-1.76e-19	2.52e-20	-0.000 ltr
J6	JUNCTION	4.35	4.35	0 06:00	0.00826	0.00826	-0.016
J7	JUNCTION	15.59	15.59	0 06:00	0.0308	0.0308	0.008
OF1	OUTFALL	0.00	4.35	0 06:00	0	0.00826	0.000
OF2	OUTFALL	0.00	0.00	0 00:00	0	0	0.000 ltr
OF3	OUTFALL	0.00	15.55	0 06:00	0	0.0308	0.000

Node Surcharge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

 Outfall Loading Summary

Outfall Node	Flow Freq Pcnt	Avg Flow LPS	Max Flow LPS	Total Volume 10^6 ltr
OF1	10.61	0.40	4.35	0.008
OF2	0.00	0.00	0.00	0.000
OF3	10.93	1.41	15.55	0.031
System	7.18	1.81	19.88	0.039

 Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C2	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C3	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C4	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C5	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C6	CONDUIT	4.35	0 06:00	2.51	0.00	0.01
C7	CONDUIT	15.55	0 06:00	1.72	0.00	0.04

 Flow Classification Summary

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class								
		Up Dry	Down Dry	Sub Dry	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl	
C2	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C4	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C5	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C6	1.00	0.10	0.00	0.00	0.80	0.11	0.00	0.00	0.03	0.00
C7	1.00	0.10	0.00	0.00	0.79	0.11	0.00	0.00	0.01	0.00

 Conduit Surge Summary

No conduits were surcharged.

Analysis begun on: Wed Dec 13 11:06:51 2023
Analysis ended on: Wed Dec 13 11:06:56 2023
Total elapsed time: 00:00:05

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

WARNING 01: wet weather time step reduced to recording interval for Rain Gage SCS_Type_II_57.6mm_12hr_5yr

Element Count

Number of rain gages 7
 Number of subcatchments ... 5
 Number of nodes 9
 Number of links 6
 Number of pollutants 0
 Number of land uses 0

Raingage Summary

Name	Data Source	Data Type	Recording Interval
SCS_Type_II_12hr_5yr_57.6mm	SCS_Type_II_57.6mm	INTENSITY	6 min.
SCS_Type_II_12hr_100yr_96mm	SCS_Type_II_96mm	INTENSITY	6 min.
SCS_Type_II_12hr_2yr_43.2mm	SCS_Type_II_43.2mm	INTENSITY	6 min.
SCS_Type_II_24hr_100yr_103.2mm	SCS_Type_II_103.2mm	INTENSITY	6 min.
SCS_Type_II_24hr_2yr_48mm	SCS_Type_II_48mm	INTENSITY	6 min.
SCS_Type_II_24hr_5yr_62.4mm	SCS_Type_II_62.4mm	INTENSITY	6 min.
SCS_Type_II_57.6mm_12hr_5yr	SCS_Type_II_57.6mm_12hr_5yr	INTENSITY	6 min.

Subcatchment Summary

Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
E1	0.29	243.38	0.00	46.2630	SCS_Type_II_57.6mm_12hr_5yr	E2
E2	3.53	689.45	0.00	26.1130	SCS_Type_II_57.6mm_12hr_5yr	E3
E3	0.39	208.53	0.00	28.1010	SCS_Type_II_57.6mm_12hr_5yr	J5
E4	0.27	162.40	0.00	27.7450	SCS_Type_II_57.6mm_12hr_5yr	J7
E5	0.07	100.75	0.00	50.6290	SCS_Type_II_57.6mm_12hr_5yr	J6

LID Control Summary

Subcatchment	LID Control	No. of Units	Unit Area	Unit Width	% Area Covered	% Imperv Treated	% Perv Treated
E1	INF_1	1	964.42	35.00	32.90	100.00	100.00
E2	INF_2	1	9937.48	50.00	28.15	100.00	100.00
E3	INF_3	1	792.09	35.00	20.32	100.00	100.00

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J2	JUNCTION	100.80	1.00	0.0	
J3	JUNCTION	100.29	1.00	0.0	
J4	JUNCTION	100.17	1.00	0.0	
J5	JUNCTION	100.10	1.00	0.0	
J6	JUNCTION	103.22	1.00	0.0	
J7	JUNCTION	109.54	1.00	0.0	
OF1	OUTFALL	97.70	1.00	0.0	
OF2	OUTFALL	96.90	1.00	0.0	
OF3	OUTFALL	108.50	1.00	0.0	

Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C2	J2	J3	CONDUIT	84.2	0.6059	0.0100
C3	J3	J4	CONDUIT	126.6	0.0948	0.0100
C4	J4	J5	CONDUIT	34.8	0.2013	0.0100
C5	J5	OF2	CONDUIT	36.4	8.8146	0.0100
C6	J6	OF1	CONDUIT	13.9	43.1138	0.0100
C7	J7	OF3	CONDUIT	23.7	4.3964	0.0100

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C2	CIRCULAR	1.00	0.79	0.25	1.00	1	2426.26
C3	CIRCULAR	1.00	0.79	0.25	1.00	1	959.84
C4	CIRCULAR	1.00	0.79	0.25	1.00	1	1398.51
C5	CIRCULAR	1.00	0.79	0.25	1.00	1	9254.33
C6	CIRCULAR	1.00	0.79	0.25	1.00	1	20466.84
C7	CIRCULAR	1.00	0.79	0.25	1.00	1	6535.67

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 LPS

Process Models:

```

Rainfall/Runoff ..... YES
RDII ..... NO
Snowmelt ..... NO
Groundwater ..... NO
Flow Routing ..... YES
Ponding Allowed ..... NO
Water Quality ..... NO
Infiltration Method ..... HORTON
Flow Routing Method ..... DYNWAVE
Surcharge Method ..... EXTRAN
Starting Date ..... 01/01/2000 00:00:00
Ending Date ..... 01/03/2000 11:54:00
Antecedent Dry Days ..... 0.0
Report Time Step ..... 00:01:00
Wet Time Step ..... 00:06:00
Dry Time Step ..... 00:10:00
Routing Time Step ..... 5.00 sec
Variable Time Step ..... YES
Maximum Trials ..... 8
Number of Threads ..... 1
Head Tolerance ..... 0.001500 m

```

```

*****
                Volume      Depth
Runoff Quantity Continuity  hectare-m      mm
*****
Total Precipitation .....      0.262      57.600
Evaporation Loss .....      0.000      0.000
Infiltration Loss .....      0.252      55.401
Surface Runoff .....      0.007      1.542
Final Storage .....      0.004      0.934
Continuity Error (%) .....      -0.483

```

```

*****
                Volume      Volume
Flow Routing Continuity    hectare-m      10^6 ltr
*****
Dry Weather Inflow .....      0.000      0.000
Wet Weather Inflow .....      0.007      0.070
Groundwater Inflow .....      0.000      0.000
RDII Inflow .....      0.000      0.000
External Inflow .....      0.000      0.000
External Outflow .....      0.007      0.070
Flooding Loss .....      0.000      0.000
Evaporation Loss .....      0.000      0.000
Exfiltration Loss .....      0.000      0.000
Initial Stored Volume ....      0.000      0.000
Final Stored Volume .....      0.000      0.000
Continuity Error (%) .....      0.000

```

```

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

```

Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

Minimum Time Step : 0.81 sec
 Average Time Step : 4.99 sec
 Maximum Time Step : 5.00 sec
 Percent in Steady State : 0.00
 Average Iterations per Step : 2.00
 Percent Not Converging : 0.00
 Time Step Frequencies :
 5.000 - 3.155 sec : 99.76 %
 3.155 - 1.991 sec : 0.23 %
 1.991 - 1.256 sec : 0.00 %
 1.256 - 0.792 sec : 0.00 %
 0.792 - 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 mm	Total Runoff 10^6 ltr	Peak Runoff LPS	Runoff Coeff
E1	57.60	0.00	0.00	57.18	0.00	13.90	0.00	0.00	0.00	0.000
E2	57.60	0.00	0.00	56.93	0.00	14.54	0.00	0.00	0.00	0.000
E3	57.60	0.00	0.00	56.96	0.00	16.32	-0.00	-0.00	0.00	-0.000
E4	57.60	0.00	0.00	36.35	0.00	20.46	20.46	0.06	29.98	0.355
E5	57.60	0.00	0.00	36.23	0.00	20.77	20.77	0.01	8.53	0.361

LID Performance Summary

Subcatchment	LID Control	Total Inflow mm	Evap Loss mm	Infil Loss mm	Surface Outflow mm	Drain Outflow mm	Initial Storage mm	Final Storage mm	Continuity Error %
E1	INF_1	99.83	0.00	99.83	0.00	0.00	0.00	0.00	0.00
E2	INF_2	109.25	0.00	109.25	0.00	0.00	0.00	0.00	-0.00
E3	INF_3	137.96	0.00	137.96	0.00	0.00	0.00	0.00	0.00

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
J2	JUNCTION	0.00	0.00	100.80	0 00:00	0.00
J3	JUNCTION	0.00	0.00	100.29	0 00:00	0.00
J4	JUNCTION	0.00	0.00	100.17	0 00:00	0.00
J5	JUNCTION	0.00	0.00	100.10	0 11:00	0.00
J6	JUNCTION	0.00	0.02	103.23	0 05:54	0.02
J7	JUNCTION	0.00	0.05	109.59	0 05:54	0.05
OF1	OUTFALL	0.00	0.02	97.72	0 05:54	0.02
OF2	OUTFALL	0.00	0.00	96.90	0 00:00	0.00
OF3	OUTFALL	0.00	0.05	108.55	0 05:54	0.05

Node Inflow Summary

Node	Type	Maximum Lateral Inflow LPS	Maximum Total Inflow LPS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
J2	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J3	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J4	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J5	JUNCTION	-0.00	0.00	0 10:54	-5.03e-20	5.03e-20	-0.000 ltr
J6	JUNCTION	8.53	8.53	0 05:54	0.0145	0.0145	-0.007
J7	JUNCTION	29.98	29.98	0 05:54	0.0558	0.0558	0.012
OF1	OUTFALL	0.00	8.53	0 05:54	0	0.0145	0.000
OF2	OUTFALL	0.00	0.00	0 00:00	0	0	0.000 ltr
OF3	OUTFALL	0.00	30.01	0 05:54	0	0.0558	0.000

Node Surcharge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

Outfall Loading Summary

Outfall Node	Flow Freq Pcmt	Avg Flow LPS	Max Flow LPS	Total Volume 10^6 ltr
OF1	10.92	0.75	8.53	0.014
OF2	0.00	0.00	0.00	0.000
OF3	11.29	2.77	30.01	0.056
System	7.40	3.52	38.51	0.070

 Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C2	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C3	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C4	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C5	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C6	CONDUIT	8.53	0 05:54	3.12	0.00	0.02
C7	CONDUIT	30.01	0 05:54	2.09	0.00	0.05

 Flow Classification Summary

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class								
		Up Dry	Down Dry	Sub Dry	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl	
C2	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C4	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C5	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C6	1.00	0.10	0.00	0.00	0.79	0.11	0.00	0.00	0.07	0.00
C7	1.00	0.09	0.00	0.00	0.79	0.11	0.00	0.00	0.02	0.00

 Conduit Surcharge Summary

No conduits were surcharged.

Analysis begun on: Wed Dec 13 11:06:50 2023
Analysis ended on: Wed Dec 13 11:06:56 2023
Total elapsed time: 00:00:06

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

WARNING 01: wet weather time step reduced to recording interval for Rain Gage SCS_Type_II_96mm_12hr_100yr

Element Count

Number of rain gages 7
 Number of subcatchments ... 5
 Number of nodes 9
 Number of links 6
 Number of pollutants 0
 Number of land uses 0

Raingage Summary

Name	Data Source	Data Type	Recording Interval
SCS_Type_II_12hr_5yr_57.6mm	SCS_Type_II_57.6mm	INTENSITY	6 min.
SCS_Type_II_12hr_100yr_96mm	SCS_Type_II_96mm	INTENSITY	6 min.
SCS_Type_II_12hr_2yr_43.2mm	SCS_Type_II_43.2mm	INTENSITY	6 min.
SCS_Type_II_24hr_100yr_103.2mm	SCS_Type_II_103.2mm	INTENSITY	6 min.
SCS_Type_II_24hr_2yr_48mm	SCS_Type_II_48mm	INTENSITY	6 min.
SCS_Type_II_24hr_5yr_62.4mm	SCS_Type_II_62.4mm	INTENSITY	6 min.
SCS_Type_II_96mm_12hr_100yr	SCS_Type_II_96mm_12hr_100yr	INTENSITY	6 min.

Subcatchment Summary

Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
E1	0.29	243.38	0.00	46.2630	SCS_Type_II_96mm_12hr_100yr	E2
E2	3.53	689.45	0.00	26.1130	SCS_Type_II_96mm_12hr_100yr	E3
E3	0.39	208.53	0.00	28.1010	SCS_Type_II_96mm_12hr_100yr	J5
E4	0.27	162.40	0.00	27.7450	SCS_Type_II_96mm_12hr_100yr	J7
E5	0.07	100.75	0.00	50.6290	SCS_Type_II_96mm_12hr_100yr	J6

LID Control Summary

Subcatchment	LID Control	No. of Units	Unit Area	Unit Width	% Area Covered	% Imperv Treated	% Perv Treated
E1	INF_1	1	964.42	35.00	32.90	100.00	100.00
E2	INF_2	1	9937.48	50.00	28.15	100.00	100.00
E3	INF_3	1	792.09	35.00	20.32	100.00	100.00

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J2	JUNCTION	100.80	1.00	0.0	
J3	JUNCTION	100.29	1.00	0.0	
J4	JUNCTION	100.17	1.00	0.0	
J5	JUNCTION	100.10	1.00	0.0	
J6	JUNCTION	103.22	1.00	0.0	
J7	JUNCTION	109.54	1.00	0.0	
OF1	OUTFALL	97.70	1.00	0.0	
OF2	OUTFALL	96.90	1.00	0.0	
OF3	OUTFALL	108.50	1.00	0.0	

Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C2	J2	J3	CONDUIT	84.2	0.6059	0.0100
C3	J3	J4	CONDUIT	126.6	0.0948	0.0100
C4	J4	J5	CONDUIT	34.8	0.2013	0.0100
C5	J5	OF2	CONDUIT	36.4	8.8146	0.0100
C6	J6	OF1	CONDUIT	13.9	43.1138	0.0100
C7	J7	OF3	CONDUIT	23.7	4.3964	0.0100

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C2	CIRCULAR	1.00	0.79	0.25	1.00	1	2426.26
C3	CIRCULAR	1.00	0.79	0.25	1.00	1	959.84
C4	CIRCULAR	1.00	0.79	0.25	1.00	1	1398.51
C5	CIRCULAR	1.00	0.79	0.25	1.00	1	9254.33
C6	CIRCULAR	1.00	0.79	0.25	1.00	1	20466.84
C7	CIRCULAR	1.00	0.79	0.25	1.00	1	6535.67

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 LPS

Process Models:

```

Rainfall/Runoff ..... YES
RDII ..... NO
Snowmelt ..... NO
Groundwater ..... NO
Flow Routing ..... YES
Ponding Allowed ..... NO
Water Quality ..... NO
Infiltration Method ..... HORTON
Flow Routing Method ..... DYNWAVE
Surcharge Method ..... EXTRAN
Starting Date ..... 01/01/2000 00:00:00
Ending Date ..... 01/03/2000 11:54:00
Antecedent Dry Days ..... 0.0
Report Time Step ..... 00:01:00
Wet Time Step ..... 00:06:00
Dry Time Step ..... 00:10:00
Routing Time Step ..... 5.00 sec
Variable Time Step ..... YES
Maximum Trials ..... 8
Number of Threads ..... 1
Head Tolerance ..... 0.001500 m

```

```

*****
                Volume      Depth
Runoff Quantity Continuity  hectare-m      mm
*****
Total Precipitation .....    0.437      96.000
Evaporation Loss .....      0.000      0.000
Infiltration Loss .....     0.417      91.634
Surface Runoff .....        0.017      3.686
Final Storage .....         0.004      0.930
Continuity Error (%) .....   -0.262

```

```

*****
                Volume      Volume
Flow Routing Continuity    hectare-m      10^6 ltr
*****
Dry Weather Inflow .....     0.000      0.000
Wet Weather Inflow .....     0.017      0.168
Groundwater Inflow .....     0.000      0.000
RDII Inflow .....           0.000      0.000
External Inflow .....       0.000      0.000
External Outflow .....      0.017      0.168
Flooding Loss .....         0.000      0.000
Evaporation Loss .....      0.000      0.000
Exfiltration Loss .....     0.000      0.000
Initial Stored Volume ....   0.000      0.000
Final Stored Volume .....   0.000      0.000
Continuity Error (%) .....   0.000

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*****
Time-Step Critical Elements
*****
Link C6 (2.20%)

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Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

Minimum Time Step : 1.00 sec
 Average Time Step : 4.97 sec
 Maximum Time Step : 5.00 sec
 Percent in Steady State : -0.00
 Average Iterations per Step : 2.00
 Percent Not Converging : 0.00
 Time Step Frequencies :
 5.000 - 3.155 sec : 99.05 %
 3.155 - 1.991 sec : 0.94 %
 1.991 - 1.256 sec : 0.00 %
 1.256 - 0.792 sec : 0.00 %
 0.792 - 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 mm	Total Runoff 10 ⁶ ltr	Peak Runoff LPS	Runoff Coeff
E1	96.00	0.00	0.00	95.29	0.00	32.89	-0.00	-0.00	0.00	-0.000
E2	96.00	-0.00	0.00	95.36	0.00	35.19	0.00	0.00	0.00	0.000
E3	96.00	0.00	0.00	95.25	0.00	39.09	0.00	0.00	0.00	0.000
E4	96.00	0.00	0.00	46.01	0.00	49.05	49.05	0.13	72.23	0.511
E5	96.00	0.00	0.00	45.89	0.00	49.01	49.01	0.03	18.82	0.511

LID Performance Summary

Subcatchment	LID Control	Total Inflow mm	Evap Loss mm	Infil Loss mm	Surface Outflow mm	Drain Outflow mm	Initial Storage mm	Final Storage mm	Continuity Error %
E1	INF_1	195.96	0.00	195.96	0.00	0.00	0.00	0.00	0.00
E2	INF_2	221.02	0.00	221.02	0.00	0.00	0.00	0.00	0.00
E3	INF_3	288.41	0.00	288.41	0.00	0.00	0.00	0.00	0.00

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
J2	JUNCTION	0.00	0.00	100.80	0 00:00	0.00
J3	JUNCTION	0.00	0.00	100.29	0 00:00	0.00
J4	JUNCTION	0.00	0.00	100.17	0 00:00	0.00
J5	JUNCTION	0.00	0.00	100.10	0 00:00	0.00
J6	JUNCTION	0.00	0.02	103.24	0 05:54	0.02
J7	JUNCTION	0.00	0.07	109.61	0 05:54	0.07
OF1	OUTFALL	0.00	0.02	97.72	0 05:54	0.02
OF2	OUTFALL	0.00	0.00	96.90	0 00:00	0.00
OF3	OUTFALL	0.00	0.07	108.57	0 05:54	0.07

Node Inflow Summary

Node	Type	Maximum Lateral Inflow LPS	Maximum Total Inflow LPS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
J2	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J3	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J4	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J5	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J6	JUNCTION	18.82	18.82	0 05:54	0.0341	0.0341	-0.018
J7	JUNCTION	72.23	72.23	0 05:54	0.134	0.134	0.012
OF1	OUTFALL	0.00	18.83	0 05:54	0	0.0341	0.000
OF2	OUTFALL	0.00	0.00	0 00:00	0	0	0.000 ltr
OF3	OUTFALL	0.00	72.31	0 05:54	0	0.134	0.000

Node Surcharge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

Outfall Loading Summary

Outfall Node	Flow Freq Pcmt	Avg Flow LPS	Max Flow LPS	Total Volume 10^6 ltr
OF1	12.00	1.90	18.83	0.034
OF2	0.00	0.00	0.00	0.000
OF3	12.43	7.16	72.31	0.134
System	8.14	9.06	91.08	0.168

 Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C2	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C3	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C4	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C5	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C6	CONDUIT	18.83	0 05:54	3.97	0.00	0.02
C7	CONDUIT	72.31	0 05:54	2.75	0.01	0.07

 Flow Classification Summary

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class									
		Up Dry		Down Dry		Sub Crit		Sup Crit		Norm Ltd	Inlet Ctrl
C2	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C4	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C5	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C6	1.00	0.09	0.00	0.00	0.79	0.12	0.00	0.00	0.10	0.00	0.00
C7	1.00	0.09	0.00	0.00	0.79	0.13	0.00	0.00	0.06	0.00	0.00

 Conduit Surchage Summary

No conduits were surcharged.

Analysis begun on: Wed Dec 13 11:06:51 2023
Analysis ended on: Wed Dec 13 11:06:56 2023
Total elapsed time: 00:00:05

**PCSWMM DETAILED LID REPORTS
PRE_DEVELOPMENT**

SWMM5 LID Report File

Project:
 LID Unit: INF_2 in Subcatchment E2
 Storm Event: SCS_Type_II_37.2mm_6hr_2yr

Date	Time	Elapsed Time Hours	Total Inflow mm/hr	Total Evap mm/hr	Surface Infil mm/hr	Pavement Perc mm/hr	Soil Perc mm/hr	Storage Exfil mm/hr	Surface Runoff mm/hr	Drain OutFlow mm/hr	Surface Level mm	Pavement Level mm	Soil Moisture Content	Storage Level mm
01/01/2000	00:06:00	0.100	1.658	0.0000	1.658	0.000	0.000	1.658	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:12:00	0.200	1.685	0.0000	1.685	0.000	0.000	1.685	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:18:00	0.300	1.685	0.0000	1.685	0.000	0.000	1.685	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:24:00	0.400	1.685	0.0000	1.685	0.000	0.000	1.685	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:30:00	0.500	1.685	0.0000	1.685	0.000	0.000	1.685	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:36:00	0.600	1.685	0.0000	1.685	0.000	0.000	1.685	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:42:00	0.700	1.727	0.0000	1.727	0.000	0.000	1.727	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:48:00	0.800	1.811	0.0000	1.811	0.000	0.000	1.811	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:54:00	0.900	1.895	0.0000	1.895	0.000	0.000	1.895	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:00:00	1.000	1.979	0.0000	1.979	0.000	0.000	1.979	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:06:00	1.100	2.064	0.0000	2.064	0.000	0.000	2.064	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:12:00	1.200	2.169	0.0000	2.169	0.000	0.000	2.169	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:18:00	1.300	2.295	0.0000	2.295	0.000	0.000	2.295	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:24:00	1.400	2.422	0.0000	2.422	0.000	0.000	2.422	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:30:00	1.500	2.548	0.0000	2.548	0.000	0.000	2.548	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:36:00	1.600	2.674	0.0000	2.674	0.000	0.000	2.674	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:42:00	1.700	2.843	0.0000	2.843	0.000	0.000	2.843	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:48:00	1.800	3.053	0.0000	3.053	0.000	0.000	3.053	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:54:00	1.900	3.264	0.0000	3.264	0.000	0.000	3.264	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:00:00	2.000	3.475	0.0000	3.475	0.000	0.000	3.475	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:06:00	2.100	3.685	0.0000	3.685	0.000	0.000	3.685	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:12:00	2.200	4.043	0.0000	4.043	0.000	0.000	4.043	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:18:00	2.300	4.549	0.0000	4.549	0.000	0.000	4.549	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:24:00	2.400	5.054	0.0000	5.054	0.000	0.000	5.054	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:30:00	2.500	5.559	0.0000	5.559	0.000	0.000	5.559	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:36:00	2.600	6.065	0.0000	6.065	0.000	0.000	6.065	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:42:00	2.700	12.551	0.0000	12.551	0.000	0.000	12.551	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:48:00	2.800	25.017	0.0000	25.017	0.000	0.000	25.017	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:54:00	2.900	40.237	0.0000	40.237	0.000	0.000	40.237	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:00:00	3.000	74.014	0.0000	74.014	0.000	0.000	74.014	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:06:00	3.100	77.454	0.0000	77.454	0.000	0.000	77.454	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:12:00	3.200	28.676	0.0000	28.676	0.000	0.000	28.676	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:18:00	3.300	23.328	0.0000	23.328	0.000	0.000	23.328	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:24:00	3.400	19.604	0.0000	19.604	0.000	0.000	19.604	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:30:00	3.500	16.538	0.0000	16.538	0.000	0.000	16.538	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:36:00	3.600	13.754	0.0000	13.754	0.000	0.000	13.754	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:42:00	3.700	11.801	0.0000	11.801	0.000	0.000	11.801	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:48:00	3.800	10.725	0.0000	10.725	0.000	0.000	10.725	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:54:00	3.900	9.863	0.0000	9.863	0.000	0.000	9.863	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:00:00	4.000	9.117	0.0000	9.117	0.000	0.000	9.117	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:06:00	4.100	8.435	0.0000	8.435	0.000	0.000	8.435	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:12:00	4.200	7.882	0.0000	7.882	0.000	0.000	7.882	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:18:00	4.300	7.458	0.0000	7.458	0.000	0.000	7.458	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:24:00	4.400	7.074	0.0000	7.074	0.000	0.000	7.074	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:30:00	4.500	6.714	0.0000	6.714	0.000	0.000	6.714	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:36:00	4.600	6.367	0.0000	6.367	0.000	0.000	6.367	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:42:00	4.700	6.058	0.0000	6.058	0.000	0.000	6.058	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:48:00	4.800	5.791	0.0000	5.791	0.000	0.000	5.791	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:54:00	4.900	5.535	0.0000	5.535	0.000	0.000	5.535	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:00:00	5.000	5.287	0.0000	5.287	0.000	0.000	5.287	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:06:00	5.100	5.043	0.0000	5.043	0.000	0.000	5.043	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:12:00	5.200	4.855	0.0000	4.855	0.000	0.000	4.855	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:18:00	5.300	4.715	0.0000	4.715	0.000	0.000	4.715	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:24:00	5.400	4.605	0.0000	4.605	0.000	0.000	4.605	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:30:00	5.500	4.494	0.0000	4.494	0.000	0.000	4.494	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:36:00	5.600	4.403	0.0000	4.403	0.000	0.000	4.403	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:42:00	5.700	4.304	0.0000	4.304	0.000	0.000	4.304	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:48:00	5.800	4.222	0.0000	4.222	0.000	0.000	4.222	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:54:00	5.900	4.128	0.0000	4.128	0.000	0.000	4.128	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	06:00:00	6.000	4.050	0.0000	4.050	0.000	0.000	4.050	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	06:06:00	6.100	1.304	0.0000	1.304	0.000	0.000	1.304	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	06:12:00	6.200	0.648	0.0000	0.648	0.000	0.000	0.648	0.000	0.000	0.000	0.000	0.000	0.000

SWMM5 LID Report File

Project:
 LID Unit: INF_3 in Subcatchment E3
 Storm Event: SCS_Type_II_37.2mm_6hr_2yr

Date	Time	Elapsed Time Hours	Total Inflow mm/hr	Total Evap mm/hr	Surface Infil mm/hr	Pavement Perc mm/hr	Soil Perc mm/hr	Storage Exfil mm/hr	Surface Runoff mm/hr	Drain OutFlow mm/hr	Surface Level mm	Pavement Level mm	Soil Moisture Content	Storage Level mm
01/01/2000	00:06:00	0.100	1.658	0.0000	1.658	0.000	0.000	1.658	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:12:00	0.200	1.685	0.0000	1.685	0.000	0.000	1.685	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:18:00	0.300	1.685	0.0000	1.685	0.000	0.000	1.685	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:24:00	0.400	1.685	0.0000	1.685	0.000	0.000	1.685	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:30:00	0.500	1.685	0.0000	1.685	0.000	0.000	1.685	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:36:00	0.600	1.685	0.0000	1.685	0.000	0.000	1.685	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:42:00	0.700	1.727	0.0000	1.727	0.000	0.000	1.727	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:48:00	0.800	1.811	0.0000	1.811	0.000	0.000	1.811	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:54:00	0.900	1.895	0.0000	1.895	0.000	0.000	1.895	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:00:00	1.000	1.979	0.0000	1.979	0.000	0.000	1.979	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:06:00	1.100	2.064	0.0000	2.064	0.000	0.000	2.064	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:12:00	1.200	2.169	0.0000	2.169	0.000	0.000	2.169	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:18:00	1.300	2.295	0.0000	2.295	0.000	0.000	2.295	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:24:00	1.400	2.422	0.0000	2.422	0.000	0.000	2.422	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:30:00	1.500	2.548	0.0000	2.548	0.000	0.000	2.548	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:36:00	1.600	2.674	0.0000	2.674	0.000	0.000	2.674	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:42:00	1.700	2.843	0.0000	2.843	0.000	0.000	2.843	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:48:00	1.800	3.053	0.0000	3.053	0.000	0.000	3.053	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:54:00	1.900	3.264	0.0000	3.264	0.000	0.000	3.264	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:00:00	2.000	3.475	0.0000	3.475	0.000	0.000	3.475	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:06:00	2.100	3.685	0.0000	3.685	0.000	0.000	3.685	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:12:00	2.200	4.043	0.0000	4.043	0.000	0.000	4.043	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:18:00	2.300	4.549	0.0000	4.549	0.000	0.000	4.549	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:24:00	2.400	5.054	0.0000	5.054	0.000	0.000	5.054	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:30:00	2.500	5.559	0.0000	5.559	0.000	0.000	5.559	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:36:00	2.600	6.065	0.0000	6.065	0.000	0.000	6.065	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:42:00	2.700	12.551	0.0000	12.551	0.000	0.000	12.551	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:48:00	2.800	25.017	0.0000	25.017	0.000	0.000	25.017	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:54:00	2.900	40.237	0.0000	40.237	0.000	0.000	40.237	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:00:00	3.000	79.259	0.0000	79.259	0.000	0.000	79.259	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:06:00	3.100	117.494	0.0000	117.494	0.000	0.000	117.494	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:12:00	3.200	38.611	0.0000	38.611	0.000	0.000	38.611	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:18:00	3.300	28.708	0.0000	28.708	0.000	0.000	28.708	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:24:00	3.400	23.776	0.0000	23.776	0.000	0.000	23.776	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:30:00	3.500	20.041	0.0000	20.041	0.000	0.000	20.041	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:36:00	3.600	16.619	0.0000	16.619	0.000	0.000	16.619	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:42:00	3.700	14.261	0.0000	14.261	0.000	0.000	14.261	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:48:00	3.800	13.076	0.0000	13.076	0.000	0.000	13.076	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:54:00	3.900	12.150	0.0000	12.150	0.000	0.000	12.150	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:00:00	4.000	11.323	0.0000	11.323	0.000	0.000	11.323	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:06:00	4.100	10.531	0.0000	10.531	0.000	0.000	10.531	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:12:00	4.200	9.880	0.0000	9.880	0.000	0.000	9.880	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:18:00	4.300	9.390	0.0000	9.390	0.000	0.000	9.390	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:24:00	4.400	8.941	0.0000	8.941	0.000	0.000	8.941	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:30:00	4.500	8.509	0.0000	8.509	0.000	0.000	8.509	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:36:00	4.600	8.083	0.0000	8.083	0.000	0.000	8.083	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:42:00	4.700	7.700	0.0000	7.700	0.000	0.000	7.700	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:48:00	4.800	7.370	0.0000	7.370	0.000	0.000	7.370	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:54:00	4.900	7.053	0.0000	7.053	0.000	0.000	7.053	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:00:00	5.000	6.742	0.0000	6.742	0.000	0.000	6.742	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:06:00	5.100	6.433	0.0000	6.433	0.000	0.000	6.433	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:12:00	5.200	6.197	0.0000	6.197	0.000	0.000	6.197	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:18:00	5.300	6.031	0.0000	6.031	0.000	0.000	6.031	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:24:00	5.400	5.907	0.0000	5.907	0.000	0.000	5.907	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:30:00	5.500	5.780	0.0000	5.780	0.000	0.000	5.780	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:36:00	5.600	5.677	0.0000	5.677	0.000	0.000	5.677	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:42:00	5.700	5.559	0.0000	5.559	0.000	0.000	5.559	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:48:00	5.800	5.461	0.0000	5.461	0.000	0.000	5.461	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:54:00	5.900	5.345	0.0000	5.345	0.000	0.000	5.345	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	06:00:00	6.000	5.247	0.0000	5.247	0.000	0.000	5.247	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	06:06:00	6.100	1.157	0.0000	1.157	0.000	0.000	1.157	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	06:12:00	6.200	0.182	0.0000	0.182	0.000	0.000	0.182	0.000	0.000	0.000	0.000	0.000	0.000

SWMM5 LID Report File

Project:
 LID Unit: INF_1 in Subcatchment E1
 Storm Event: SCS_Type_II_43.2mm_12hr_2yr

Date	Time	Elapsed Time Hours	Total Inflow mm/hr	Total Evap mm/hr	Surface Infil mm/hr	Pavement Perc mm/hr	Soil Perc mm/hr	Storage Exfil mm/hr	Surface Runoff mm/hr	Drain OutFlow mm/hr	Surface Level mm	Pavement Level mm	Soil Moisture Content	Storage Level mm
01/01/2000	00:06:00	0.100	0.930	0.0000	0.930	0.000	0.000	0.930	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:12:00	0.200	0.940	0.0000	0.940	0.000	0.000	0.940	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:18:00	0.300	0.950	0.0000	0.950	0.000	0.000	0.950	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:24:00	0.400	0.961	0.0000	0.961	0.000	0.000	0.961	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:30:00	0.500	0.971	0.0000	0.971	0.000	0.000	0.971	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:36:00	0.600	0.981	0.0000	0.981	0.000	0.000	0.981	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:42:00	0.700	0.991	0.0000	0.991	0.000	0.000	0.991	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:48:00	0.800	1.002	0.0000	1.002	0.000	0.000	1.002	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:54:00	0.900	1.012	0.0000	1.012	0.000	0.000	1.012	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:00:00	1.000	1.022	0.0000	1.022	0.000	0.000	1.022	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:06:00	1.100	1.032	0.0000	1.032	0.000	0.000	1.032	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:12:00	1.200	1.043	0.0000	1.043	0.000	0.000	1.043	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:18:00	1.300	1.053	0.0000	1.053	0.000	0.000	1.053	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:24:00	1.400	1.063	0.0000	1.063	0.000	0.000	1.063	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:30:00	1.500	1.074	0.0000	1.074	0.000	0.000	1.074	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:36:00	1.600	1.084	0.0000	1.084	0.000	0.000	1.084	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:42:00	1.700	1.094	0.0000	1.094	0.000	0.000	1.094	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:48:00	1.800	1.104	0.0000	1.104	0.000	0.000	1.104	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:54:00	1.900	1.115	0.0000	1.115	0.000	0.000	1.115	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:00:00	2.000	1.125	0.0000	1.125	0.000	0.000	1.125	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:06:00	2.100	1.156	0.0000	1.156	0.000	0.000	1.156	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:12:00	2.200	1.207	0.0000	1.207	0.000	0.000	1.207	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:18:00	2.300	1.258	0.0000	1.258	0.000	0.000	1.258	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:24:00	2.400	1.310	0.0000	1.310	0.000	0.000	1.310	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:30:00	2.500	1.361	0.0000	1.361	0.000	0.000	1.361	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:36:00	2.600	1.413	0.0000	1.413	0.000	0.000	1.413	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:42:00	2.700	1.464	0.0000	1.464	0.000	0.000	1.464	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:48:00	2.800	1.515	0.0000	1.515	0.000	0.000	1.515	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:54:00	2.900	1.567	0.0000	1.567	0.000	0.000	1.567	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:00:00	3.000	1.618	0.0000	1.618	0.000	0.000	1.618	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:06:00	3.100	1.644	0.0000	1.644	0.000	0.000	1.644	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:12:00	3.200	1.644	0.0000	1.644	0.000	0.000	1.644	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:18:00	3.300	1.644	0.0000	1.644	0.000	0.000	1.644	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:24:00	3.400	1.644	0.0000	1.644	0.000	0.000	1.644	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:30:00	3.500	1.644	0.0000	1.644	0.000	0.000	1.644	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:36:00	3.600	1.685	0.0000	1.685	0.000	0.000	1.685	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:42:00	3.700	1.767	0.0000	1.767	0.000	0.000	1.767	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:48:00	3.800	1.849	0.0000	1.849	0.000	0.000	1.849	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:54:00	3.900	1.931	0.0000	1.931	0.000	0.000	1.931	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:00:00	4.000	2.014	0.0000	2.014	0.000	0.000	2.014	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:06:00	4.100	2.116	0.0000	2.116	0.000	0.000	2.116	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:12:00	4.200	2.240	0.0000	2.240	0.000	0.000	2.240	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:18:00	4.300	2.363	0.0000	2.363	0.000	0.000	2.363	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:24:00	4.400	2.486	0.0000	2.486	0.000	0.000	2.486	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:30:00	4.500	2.609	0.0000	2.609	0.000	0.000	2.609	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:36:00	4.600	2.774	0.0000	2.774	0.000	0.000	2.774	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:42:00	4.700	2.979	0.0000	2.979	0.000	0.000	2.979	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:48:00	4.800	3.185	0.0000	3.185	0.000	0.000	3.185	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:54:00	4.900	3.390	0.0000	3.390	0.000	0.000	3.390	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:00:00	5.000	3.596	0.0000	3.596	0.000	0.000	3.596	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:06:00	5.100	3.945	0.0000	3.945	0.000	0.000	3.945	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:12:00	5.200	4.438	0.0000	4.438	0.000	0.000	4.438	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:18:00	5.300	4.931	0.0000	4.931	0.000	0.000	4.931	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:24:00	5.400	5.424	0.0000	5.424	0.000	0.000	5.424	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:30:00	5.500	5.918	0.0000	5.918	0.000	0.000	5.918	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:36:00	5.600	12.246	0.0000	12.246	0.000	0.000	12.246	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:42:00	5.700	24.410	0.0000	24.410	0.000	0.000	24.410	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:48:00	5.800	39.260	0.0000	39.260	0.000	0.000	39.260	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:54:00	5.900	111.445	0.0000	111.445	0.000	0.000	111.445	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	06:00:00	6.000	94.661	0.0000	94.661	0.000	0.000	94.661	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	06:06:00	6.100	22.287	0.0000	22.287	0.000	0.000	22.287	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	06:12:00	6.200	17.841	0.0000	17.841	0.000	0.000	17.841	0.000	0.000	0.000	0.000	0.000	0.000

01/01/2000 06:18:00	6.300	15.321	0.0000	15.321	0.000	0.000	15.321	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 06:24:00	6.400	13.005	0.0000	13.005	0.000	0.000	13.005	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 06:30:00	6.500	10.696	0.0000	10.696	0.000	0.000	10.696	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 06:36:00	6.600	9.187	0.0000	9.187	0.000	0.000	9.187	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 06:42:00	6.700	8.549	0.0000	8.549	0.000	0.000	8.549	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 06:48:00	6.800	7.999	0.0000	7.999	0.000	0.000	7.999	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 06:54:00	6.900	7.465	0.0000	7.465	0.000	0.000	7.465	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 07:00:00	7.000	6.931	0.0000	6.931	0.000	0.000	6.931	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 07:06:00	7.100	6.505	0.0000	6.505	0.000	0.000	6.505	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 07:12:00	7.200	6.198	0.0000	6.198	0.000	0.000	6.198	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 07:18:00	7.300	5.905	0.0000	5.905	0.000	0.000	5.905	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 07:24:00	7.400	5.615	0.0000	5.615	0.000	0.000	5.615	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 07:30:00	7.500	5.324	0.0000	5.324	0.000	0.000	5.324	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 07:36:00	7.600	5.068	0.0000	5.068	0.000	0.000	5.068	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 07:42:00	7.700	4.852	0.0000	4.852	0.000	0.000	4.852	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 07:48:00	7.800	4.640	0.0000	4.640	0.000	0.000	4.640	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 07:54:00	7.900	4.430	0.0000	4.430	0.000	0.000	4.430	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 08:00:00	8.000	4.219	0.0000	4.219	0.000	0.000	4.219	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 08:06:00	8.100	4.070	0.0000	4.070	0.000	0.000	4.070	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 08:12:00	8.200	3.974	0.0000	3.974	0.000	0.000	3.974	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 08:18:00	8.300	3.905	0.0000	3.905	0.000	0.000	3.905	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 08:24:00	8.400	3.823	0.0000	3.823	0.000	0.000	3.823	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 08:30:00	8.500	3.758	0.0000	3.758	0.000	0.000	3.758	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 08:36:00	8.600	3.678	0.0000	3.678	0.000	0.000	3.678	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 08:42:00	8.700	3.613	0.0000	3.613	0.000	0.000	3.613	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 08:48:00	8.800	3.532	0.0000	3.532	0.000	0.000	3.532	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 08:54:00	8.900	3.467	0.0000	3.467	0.000	0.000	3.467	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 09:00:00	9.000	3.386	0.0000	3.386	0.000	0.000	3.386	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 09:06:00	9.100	3.320	0.0000	3.320	0.000	0.000	3.320	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 09:12:00	9.200	3.238	0.0000	3.238	0.000	0.000	3.238	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 09:18:00	9.300	3.172	0.0000	3.172	0.000	0.000	3.172	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 09:24:00	9.400	3.090	0.0000	3.090	0.000	0.000	3.090	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 09:30:00	9.500	3.023	0.0000	3.023	0.000	0.000	3.023	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 09:36:00	9.600	2.940	0.0000	2.940	0.000	0.000	2.940	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 09:42:00	9.700	2.873	0.0000	2.873	0.000	0.000	2.873	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 09:48:00	9.800	2.790	0.0000	2.790	0.000	0.000	2.790	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 09:54:00	9.900	2.722	0.0000	2.722	0.000	0.000	2.722	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 10:00:00	10.000	2.639	0.0000	2.639	0.000	0.000	2.639	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 10:06:00	10.100	2.588	0.0000	2.588	0.000	0.000	2.588	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 10:12:00	10.200	2.551	0.0000	2.551	0.000	0.000	2.551	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 10:18:00	10.300	2.526	0.0000	2.526	0.000	0.000	2.526	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 10:24:00	10.400	2.494	0.0000	2.494	0.000	0.000	2.494	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 10:30:00	10.500	2.471	0.0000	2.471	0.000	0.000	2.471	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 10:36:00	10.600	2.441	0.0000	2.441	0.000	0.000	2.441	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 10:42:00	10.700	2.419	0.0000	2.419	0.000	0.000	2.419	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 10:48:00	10.800	2.388	0.0000	2.388	0.000	0.000	2.388	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 10:54:00	10.900	2.366	0.0000	2.366	0.000	0.000	2.366	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 11:00:00	11.000	2.336	0.0000	2.336	0.000	0.000	2.336	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 11:06:00	11.100	2.313	0.0000	2.313	0.000	0.000	2.313	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 11:12:00	11.200	2.282	0.0000	2.282	0.000	0.000	2.282	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 11:18:00	11.300	2.260	0.0000	2.260	0.000	0.000	2.260	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 11:24:00	11.400	2.229	0.0000	2.229	0.000	0.000	2.229	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 11:30:00	11.500	2.206	0.0000	2.206	0.000	0.000	2.206	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 11:36:00	11.600	2.176	0.0000	2.176	0.000	0.000	2.176	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 11:42:00	11.700	2.152	0.0000	2.152	0.000	0.000	2.152	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 11:48:00	11.800	2.122	0.0000	2.122	0.000	0.000	2.122	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 11:54:00	11.900	2.099	0.0000	2.099	0.000	0.000	2.099	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 12:00:00	12.000	2.068	0.0000	2.068	0.000	0.000	2.068	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 12:06:00	12.100	0.262	0.0000	0.262	0.000	0.000	0.262	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 12:12:00	12.200	0.006	0.0000	0.006	0.000	0.000	0.006	0.000	0.000	0.000	0.000	0.000	0.000

SWMM5 LID Report File

Project:
 LID Unit: INF_2 in Subcatchment E2
 Storm Event: SCS_Type_II_43.2mm_12hr_2yr

Date	Time	Elapsed Time Hours	Total Inflow mm/hr	Total Evap mm/hr	Surface Infil mm/hr	Pavement Perc mm/hr	Soil Perc mm/hr	Storage Exfil mm/hr	Surface Runoff mm/hr	Drain OutFlow mm/hr	Surface Level mm	Pavement Level mm	Soil Moisture Content	Storage Level mm
01/01/2000	00:06:00	0.100	0.930	0.0000	0.930	0.000	0.000	0.930	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:12:00	0.200	0.940	0.0000	0.940	0.000	0.000	0.940	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:18:00	0.300	0.950	0.0000	0.950	0.000	0.000	0.950	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:24:00	0.400	0.961	0.0000	0.961	0.000	0.000	0.961	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:30:00	0.500	0.971	0.0000	0.971	0.000	0.000	0.971	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:36:00	0.600	0.981	0.0000	0.981	0.000	0.000	0.981	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:42:00	0.700	0.991	0.0000	0.991	0.000	0.000	0.991	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:48:00	0.800	1.002	0.0000	1.002	0.000	0.000	1.002	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:54:00	0.900	1.012	0.0000	1.012	0.000	0.000	1.012	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:00:00	1.000	1.022	0.0000	1.022	0.000	0.000	1.022	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:06:00	1.100	1.032	0.0000	1.032	0.000	0.000	1.032	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:12:00	1.200	1.043	0.0000	1.043	0.000	0.000	1.043	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:18:00	1.300	1.053	0.0000	1.053	0.000	0.000	1.053	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:24:00	1.400	1.063	0.0000	1.063	0.000	0.000	1.063	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:30:00	1.500	1.074	0.0000	1.074	0.000	0.000	1.074	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:36:00	1.600	1.084	0.0000	1.084	0.000	0.000	1.084	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:42:00	1.700	1.094	0.0000	1.094	0.000	0.000	1.094	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:48:00	1.800	1.104	0.0000	1.104	0.000	0.000	1.104	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:54:00	1.900	1.115	0.0000	1.115	0.000	0.000	1.115	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:00:00	2.000	1.125	0.0000	1.125	0.000	0.000	1.125	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:06:00	2.100	1.156	0.0000	1.156	0.000	0.000	1.156	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:12:00	2.200	1.207	0.0000	1.207	0.000	0.000	1.207	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:18:00	2.300	1.258	0.0000	1.258	0.000	0.000	1.258	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:24:00	2.400	1.310	0.0000	1.310	0.000	0.000	1.310	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:30:00	2.500	1.361	0.0000	1.361	0.000	0.000	1.361	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:36:00	2.600	1.413	0.0000	1.413	0.000	0.000	1.413	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:42:00	2.700	1.464	0.0000	1.464	0.000	0.000	1.464	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:48:00	2.800	1.515	0.0000	1.515	0.000	0.000	1.515	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:54:00	2.900	1.567	0.0000	1.567	0.000	0.000	1.567	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:00:00	3.000	1.618	0.0000	1.618	0.000	0.000	1.618	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:06:00	3.100	1.644	0.0000	1.644	0.000	0.000	1.644	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:12:00	3.200	1.644	0.0000	1.644	0.000	0.000	1.644	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:18:00	3.300	1.644	0.0000	1.644	0.000	0.000	1.644	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:24:00	3.400	1.644	0.0000	1.644	0.000	0.000	1.644	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:30:00	3.500	1.644	0.0000	1.644	0.000	0.000	1.644	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:36:00	3.600	1.685	0.0000	1.685	0.000	0.000	1.685	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:42:00	3.700	1.767	0.0000	1.767	0.000	0.000	1.767	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:48:00	3.800	1.849	0.0000	1.849	0.000	0.000	1.849	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:54:00	3.900	1.931	0.0000	1.931	0.000	0.000	1.931	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:00:00	4.000	2.014	0.0000	2.014	0.000	0.000	2.014	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:06:00	4.100	2.116	0.0000	2.116	0.000	0.000	2.116	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:12:00	4.200	2.240	0.0000	2.240	0.000	0.000	2.240	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:18:00	4.300	2.363	0.0000	2.363	0.000	0.000	2.363	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:24:00	4.400	2.486	0.0000	2.486	0.000	0.000	2.486	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:30:00	4.500	2.609	0.0000	2.609	0.000	0.000	2.609	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:36:00	4.600	2.774	0.0000	2.774	0.000	0.000	2.774	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:42:00	4.700	2.979	0.0000	2.979	0.000	0.000	2.979	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:48:00	4.800	3.185	0.0000	3.185	0.000	0.000	3.185	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:54:00	4.900	3.390	0.0000	3.390	0.000	0.000	3.390	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:00:00	5.000	3.596	0.0000	3.596	0.000	0.000	3.596	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:06:00	5.100	3.945	0.0000	3.945	0.000	0.000	3.945	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:12:00	5.200	4.438	0.0000	4.438	0.000	0.000	4.438	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:18:00	5.300	4.931	0.0000	4.931	0.000	0.000	4.931	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:24:00	5.400	5.424	0.0000	5.424	0.000	0.000	5.424	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:30:00	5.500	5.918	0.0000	5.918	0.000	0.000	5.918	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:36:00	5.600	12.246	0.0000	12.246	0.000	0.000	12.246	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:42:00	5.700	24.410	0.0000	24.410	0.000	0.000	24.410	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:48:00	5.800	39.260	0.0000	39.260	0.000	0.000	39.260	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:54:00	5.900	85.690	0.0000	85.690	0.000	0.000	85.690	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	06:00:00	6.000	89.206	0.0000	89.206	0.000	0.000	89.206	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	06:06:00	6.100	33.128	0.0000	33.128	0.000	0.000	33.128	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	06:12:00	6.200	25.232	0.0000	25.232	0.000	0.000	25.232	0.000	0.000	0.000	0.000	0.000	0.000

01/01/2000 06:18:00	6.300	20.517	0.0000	20.517	0.000	0.000	20.517	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 06:24:00	6.400	17.011	0.0000	17.011	0.000	0.000	17.011	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 06:30:00	6.500	14.015	0.0000	14.015	0.000	0.000	14.015	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 06:36:00	6.600	11.951	0.0000	11.951	0.000	0.000	11.951	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 06:42:00	6.700	10.810	0.0000	10.810	0.000	0.000	10.810	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 06:48:00	6.800	9.913	0.0000	9.913	0.000	0.000	9.913	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 06:54:00	6.900	9.147	0.0000	9.147	0.000	0.000	9.147	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 07:00:00	7.000	8.452	0.0000	8.452	0.000	0.000	8.452	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 07:06:00	7.100	7.890	0.0000	7.890	0.000	0.000	7.890	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 07:12:00	7.200	7.460	0.0000	7.460	0.000	0.000	7.460	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 07:18:00	7.300	7.072	0.0000	7.072	0.000	0.000	7.072	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 07:24:00	7.400	6.708	0.0000	6.708	0.000	0.000	6.708	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 07:30:00	7.500	6.359	0.0000	6.359	0.000	0.000	6.359	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 07:36:00	7.600	6.049	0.0000	6.049	0.000	0.000	6.049	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 07:42:00	7.700	5.780	0.0000	5.780	0.000	0.000	5.780	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 07:48:00	7.800	5.523	0.0000	5.523	0.000	0.000	5.523	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 07:54:00	7.900	5.274	0.0000	5.274	0.000	0.000	5.274	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 08:00:00	8.000	5.030	0.0000	5.030	0.000	0.000	5.030	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 08:06:00	8.100	4.841	0.0000	4.841	0.000	0.000	4.841	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 08:12:00	8.200	4.700	0.0000	4.700	0.000	0.000	4.700	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 08:18:00	8.300	4.590	0.0000	4.590	0.000	0.000	4.590	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 08:24:00	8.400	4.478	0.0000	4.478	0.000	0.000	4.478	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 08:30:00	8.500	4.386	0.0000	4.386	0.000	0.000	4.386	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 08:36:00	8.600	4.287	0.0000	4.287	0.000	0.000	4.287	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 08:42:00	8.700	4.204	0.0000	4.204	0.000	0.000	4.204	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 08:48:00	8.800	4.111	0.0000	4.111	0.000	0.000	4.111	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 08:54:00	8.900	4.031	0.0000	4.031	0.000	0.000	4.031	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 09:00:00	9.000	3.940	0.0000	3.940	0.000	0.000	3.940	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 09:06:00	9.100	3.863	0.0000	3.863	0.000	0.000	3.863	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 09:12:00	9.200	3.773	0.0000	3.773	0.000	0.000	3.773	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 09:18:00	9.300	3.696	0.0000	3.696	0.000	0.000	3.696	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 09:24:00	9.400	3.606	0.0000	3.606	0.000	0.000	3.606	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 09:30:00	9.500	3.529	0.0000	3.529	0.000	0.000	3.529	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 09:36:00	9.600	3.439	0.0000	3.439	0.000	0.000	3.439	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 09:42:00	9.700	3.361	0.0000	3.361	0.000	0.000	3.361	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 09:48:00	9.800	3.271	0.0000	3.271	0.000	0.000	3.271	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 09:54:00	9.900	3.193	0.0000	3.193	0.000	0.000	3.193	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 10:00:00	10.000	3.103	0.0000	3.103	0.000	0.000	3.103	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 10:06:00	10.100	3.039	0.0000	3.039	0.000	0.000	3.039	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 10:12:00	10.200	2.986	0.0000	2.986	0.000	0.000	2.986	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 10:18:00	10.300	2.945	0.0000	2.945	0.000	0.000	2.945	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 10:24:00	10.400	2.902	0.0000	2.902	0.000	0.000	2.902	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 10:30:00	10.500	2.868	0.0000	2.868	0.000	0.000	2.868	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 10:36:00	10.600	2.830	0.0000	2.830	0.000	0.000	2.830	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 10:42:00	10.700	2.799	0.0000	2.799	0.000	0.000	2.799	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 10:48:00	10.800	2.763	0.0000	2.763	0.000	0.000	2.763	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 10:54:00	10.900	2.734	0.0000	2.734	0.000	0.000	2.734	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 11:00:00	11.000	2.700	0.0000	2.700	0.000	0.000	2.700	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 11:06:00	11.100	2.672	0.0000	2.672	0.000	0.000	2.672	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 11:12:00	11.200	2.638	0.0000	2.638	0.000	0.000	2.638	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 11:18:00	11.300	2.611	0.0000	2.611	0.000	0.000	2.611	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 11:24:00	11.400	2.577	0.0000	2.577	0.000	0.000	2.577	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 11:30:00	11.500	2.550	0.0000	2.550	0.000	0.000	2.550	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 11:36:00	11.600	2.517	0.0000	2.517	0.000	0.000	2.517	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 11:42:00	11.700	2.489	0.0000	2.489	0.000	0.000	2.489	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 11:48:00	11.800	2.456	0.0000	2.456	0.000	0.000	2.456	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 11:54:00	11.900	2.429	0.0000	2.429	0.000	0.000	2.429	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 12:00:00	12.000	2.395	0.0000	2.395	0.000	0.000	2.395	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 12:06:00	12.100	0.925	0.0000	0.925	0.000	0.000	0.925	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 12:12:00	12.200	0.569	0.0000	0.569	0.000	0.000	0.569	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 12:18:00	12.300	0.330	0.0000	0.330	0.000	0.000	0.330	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 12:24:00	12.400	0.168	0.0000	0.168	0.000	0.000	0.168	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 12:30:00	12.500	0.063	0.0000	0.063	0.000	0.000	0.063	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000 12:36:00	12.600	0.007	0.0000	0.007	0.000	0.000	0.007	0.000	0.000	0.000	0.000	0.000	0.000

SWMM5 LID Report File

Project:
 LID Unit: INF_3 in Subcatchment E3
 Storm Event: SCS_Type_II_43.2mm_12hr_2yr

Date	Time	Elapsed Time Hours	Total Inflow mm/hr	Total Evap mm/hr	Surface Infil mm/hr	Pavement Perc mm/hr	Soil Perc mm/hr	Storage Exfil mm/hr	Surface Runoff mm/hr	Drain OutFlow mm/hr	Surface Level mm	Pavement Level mm	Soil Moisture Content	Storage Level mm
01/01/2000	00:06:00	0.100	0.930	0.0000	0.930	0.000	0.000	0.930	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:12:00	0.200	0.940	0.0000	0.940	0.000	0.000	0.940	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:18:00	0.300	0.950	0.0000	0.950	0.000	0.000	0.950	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:24:00	0.400	0.961	0.0000	0.961	0.000	0.000	0.961	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:30:00	0.500	0.971	0.0000	0.971	0.000	0.000	0.971	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:36:00	0.600	0.981	0.0000	0.981	0.000	0.000	0.981	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:42:00	0.700	0.991	0.0000	0.991	0.000	0.000	0.991	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:48:00	0.800	1.002	0.0000	1.002	0.000	0.000	1.002	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:54:00	0.900	1.012	0.0000	1.012	0.000	0.000	1.012	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:00:00	1.000	1.022	0.0000	1.022	0.000	0.000	1.022	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:06:00	1.100	1.032	0.0000	1.032	0.000	0.000	1.032	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:12:00	1.200	1.043	0.0000	1.043	0.000	0.000	1.043	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:18:00	1.300	1.053	0.0000	1.053	0.000	0.000	1.053	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:24:00	1.400	1.063	0.0000	1.063	0.000	0.000	1.063	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:30:00	1.500	1.074	0.0000	1.074	0.000	0.000	1.074	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:36:00	1.600	1.084	0.0000	1.084	0.000	0.000	1.084	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:42:00	1.700	1.094	0.0000	1.094	0.000	0.000	1.094	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:48:00	1.800	1.104	0.0000	1.104	0.000	0.000	1.104	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:54:00	1.900	1.115	0.0000	1.115	0.000	0.000	1.115	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:00:00	2.000	1.125	0.0000	1.125	0.000	0.000	1.125	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:06:00	2.100	1.156	0.0000	1.156	0.000	0.000	1.156	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:12:00	2.200	1.207	0.0000	1.207	0.000	0.000	1.207	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:18:00	2.300	1.258	0.0000	1.258	0.000	0.000	1.258	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:24:00	2.400	1.310	0.0000	1.310	0.000	0.000	1.310	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:30:00	2.500	1.361	0.0000	1.361	0.000	0.000	1.361	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:36:00	2.600	1.413	0.0000	1.413	0.000	0.000	1.413	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:42:00	2.700	1.464	0.0000	1.464	0.000	0.000	1.464	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:48:00	2.800	1.515	0.0000	1.515	0.000	0.000	1.515	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:54:00	2.900	1.567	0.0000	1.567	0.000	0.000	1.567	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:00:00	3.000	1.618	0.0000	1.618	0.000	0.000	1.618	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:06:00	3.100	1.644	0.0000	1.644	0.000	0.000	1.644	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:12:00	3.200	1.644	0.0000	1.644	0.000	0.000	1.644	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:18:00	3.300	1.644	0.0000	1.644	0.000	0.000	1.644	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:24:00	3.400	1.644	0.0000	1.644	0.000	0.000	1.644	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:30:00	3.500	1.644	0.0000	1.644	0.000	0.000	1.644	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:36:00	3.600	1.685	0.0000	1.685	0.000	0.000	1.685	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:42:00	3.700	1.767	0.0000	1.767	0.000	0.000	1.767	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:48:00	3.800	1.849	0.0000	1.849	0.000	0.000	1.849	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:54:00	3.900	1.931	0.0000	1.931	0.000	0.000	1.931	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:00:00	4.000	2.014	0.0000	2.014	0.000	0.000	2.014	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:06:00	4.100	2.116	0.0000	2.116	0.000	0.000	2.116	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:12:00	4.200	2.240	0.0000	2.240	0.000	0.000	2.240	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:18:00	4.300	2.363	0.0000	2.363	0.000	0.000	2.363	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:24:00	4.400	2.486	0.0000	2.486	0.000	0.000	2.486	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:30:00	4.500	2.609	0.0000	2.609	0.000	0.000	2.609	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:36:00	4.600	2.774	0.0000	2.774	0.000	0.000	2.774	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:42:00	4.700	2.979	0.0000	2.979	0.000	0.000	2.979	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:48:00	4.800	3.185	0.0000	3.185	0.000	0.000	3.185	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:54:00	4.900	3.390	0.0000	3.390	0.000	0.000	3.390	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:00:00	5.000	3.596	0.0000	3.596	0.000	0.000	3.596	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:06:00	5.100	3.945	0.0000	3.945	0.000	0.000	3.945	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:12:00	5.200	4.438	0.0000	4.438	0.000	0.000	4.438	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:18:00	5.300	4.931	0.0000	4.931	0.000	0.000	4.931	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:24:00	5.400	5.424	0.0000	5.424	0.000	0.000	5.424	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:30:00	5.500	5.918	0.0000	5.918	0.000	0.000	5.918	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:36:00	5.600	12.246	0.0000	12.246	0.000	0.000	12.246	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:42:00	5.700	24.410	0.0000	24.410	0.000	0.000	24.410	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:48:00	5.800	39.260	0.0000	39.260	0.000	0.000	39.260	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:54:00	5.900	119.233	0.0000	119.233	0.000	0.000	119.233	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	06:00:00	6.000	131.400	0.0000	131.400	0.000	0.000	131.400	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	06:06:00	6.100	40.886	0.0000	40.886	0.000	0.000	40.886	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	06:12:00	6.200	29.418	0.0000	29.418	0.000	0.000	29.418	0.000	0.000	0.000	0.000	0.000	0.000

SWMM5 LID Report File

Project:
 LID Unit: INF_1 in Subcatchment E1
 Storm Event: SCS_Type_II_87mm_6hr_100yr

Date	Time	Elapsed Time Hours	Total Inflow mm/hr	Total Evap mm/hr	Surface Infil mm/hr	Pavement Perc mm/hr	Soil Perc mm/hr	Storage Exfil mm/hr	Surface Runoff mm/hr	Drain OutFlow mm/hr	Surface Level mm	Pavement Level mm	Soil Moisture Content	Storage Level mm
01/01/2000	00:06:00	0.100	3.878	0.0000	3.878	0.000	0.000	3.878	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:12:00	0.200	3.940	0.0000	3.940	0.000	0.000	3.940	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:18:00	0.300	3.940	0.0000	3.940	0.000	0.000	3.940	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:24:00	0.400	3.940	0.0000	3.940	0.000	0.000	3.940	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:30:00	0.500	3.940	0.0000	3.940	0.000	0.000	3.940	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:36:00	0.600	3.940	0.0000	3.940	0.000	0.000	3.940	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:42:00	0.700	4.038	0.0000	4.038	0.000	0.000	4.038	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:48:00	0.800	4.235	0.0000	4.235	0.000	0.000	4.235	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:54:00	0.900	4.432	0.0000	4.432	0.000	0.000	4.432	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:00:00	1.000	4.629	0.0000	4.629	0.000	0.000	4.629	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:06:00	1.100	4.826	0.0000	4.826	0.000	0.000	4.826	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:12:00	1.200	5.073	0.0000	5.073	0.000	0.000	5.073	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:18:00	1.300	5.368	0.0000	5.368	0.000	0.000	5.368	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:24:00	1.400	5.664	0.0000	5.664	0.000	0.000	5.664	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:30:00	1.500	5.959	0.0000	5.959	0.000	0.000	5.959	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:36:00	1.600	6.255	0.0000	6.255	0.000	0.000	6.255	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:42:00	1.700	6.649	0.0000	6.649	0.000	0.000	6.649	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:48:00	1.800	7.141	0.0000	7.141	0.000	0.000	7.141	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:54:00	1.900	7.634	0.0000	7.634	0.000	0.000	7.634	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:00:00	2.000	8.126	0.0000	8.126	0.000	0.000	8.126	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:06:00	2.100	8.618	0.0000	8.618	0.000	0.000	8.618	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:12:00	2.200	9.456	0.0000	9.456	0.000	0.000	9.456	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:18:00	2.300	10.638	0.0000	10.638	0.000	0.000	10.638	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:24:00	2.400	11.820	0.0000	11.820	0.000	0.000	11.820	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:30:00	2.500	13.002	0.0000	13.002	0.000	0.000	13.002	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:36:00	2.600	14.184	0.0000	14.184	0.000	0.000	14.184	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:42:00	2.700	29.352	0.0000	29.352	0.000	0.000	29.352	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:48:00	2.800	100.822	0.0000	100.822	0.000	0.000	100.822	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:54:00	2.900	187.772	0.0000	143.500	0.000	0.000	143.000	0.000	0.000	4.427	0.000	0.000	0.100
01/01/2000	03:00:00	3.000	373.555	0.0000	143.000	0.000	0.000	143.000	0.000	0.000	27.483	0.000	0.000	0.100
01/01/2000	03:06:00	3.100	279.317	0.0000	143.000	0.000	0.000	143.000	0.000	0.000	41.114	0.000	0.000	0.100
01/01/2000	03:12:00	3.200	59.855	0.0000	143.000	0.000	0.000	143.000	0.000	0.000	32.800	0.000	0.000	0.100
01/01/2000	03:18:00	3.300	50.954	0.0000	143.000	0.000	0.000	143.000	0.000	0.000	23.595	0.000	0.000	0.100
01/01/2000	03:24:00	3.400	44.230	0.0000	143.000	0.000	0.000	143.000	0.000	0.000	13.718	0.000	0.000	0.100
01/01/2000	03:30:00	3.500	37.495	0.0000	143.000	0.000	0.000	143.000	0.000	0.000	3.168	0.000	0.000	0.100
01/01/2000	03:36:00	3.600	30.685	0.0000	62.362	0.000	0.000	62.862	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:42:00	3.700	26.372	0.0000	26.372	0.000	0.000	26.372	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:48:00	3.800	24.685	0.0000	24.685	0.000	0.000	24.685	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:54:00	3.900	23.125	0.0000	23.125	0.000	0.000	23.125	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:00:00	4.000	21.566	0.0000	21.566	0.000	0.000	21.566	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:06:00	4.100	19.998	0.0000	19.998	0.000	0.000	19.998	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:12:00	4.200	18.773	0.0000	18.773	0.000	0.000	18.773	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:18:00	4.300	17.897	0.0000	17.897	0.000	0.000	17.897	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:24:00	4.400	17.047	0.0000	17.047	0.000	0.000	17.047	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:30:00	4.500	16.196	0.0000	16.196	0.000	0.000	16.196	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:36:00	4.600	15.342	0.0000	15.342	0.000	0.000	15.342	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:42:00	4.700	14.598	0.0000	14.598	0.000	0.000	14.598	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:48:00	4.800	13.973	0.0000	13.973	0.000	0.000	13.973	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:54:00	4.900	13.359	0.0000	13.359	0.000	0.000	13.359	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:00:00	5.000	12.744	0.0000	12.744	0.000	0.000	12.744	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:06:00	5.100	12.127	0.0000	12.127	0.000	0.000	12.127	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:12:00	5.200	11.705	0.0000	11.705	0.000	0.000	11.705	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:18:00	5.300	11.440	0.0000	11.440	0.000	0.000	11.440	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:24:00	5.400	11.250	0.0000	11.250	0.000	0.000	11.250	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:30:00	5.500	11.012	0.0000	11.012	0.000	0.000	11.012	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:36:00	5.600	10.825	0.0000	10.825	0.000	0.000	10.825	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:42:00	5.700	10.586	0.0000	10.586	0.000	0.000	10.586	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:48:00	5.800	10.398	0.0000	10.398	0.000	0.000	10.398	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:54:00	5.900	10.159	0.0000	10.159	0.000	0.000	10.159	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	06:00:00	6.000	9.969	0.0000	9.969	0.000	0.000	9.969	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	06:06:00	6.100	0.906	0.0000	0.906	0.000	0.000	0.906	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	06:12:00	6.200	0.002	0.0000	0.002	0.000	0.000	0.002	0.000	0.000	0.000	0.000	0.000	0.000

SWMM5 LID Report File

Project:
 LID Unit: INF_2 in Subcatchment E2
 Storm Event: SCS_Type_II_96mm_12hr_100yr

Date	Time	Elapsed Time Hours	Total Inflow mm/hr	Total Evap mm/hr	Surface Infil mm/hr	Pavement Perc mm/hr	Soil Perc mm/hr	Storage Exfil mm/hr	Surface Runoff mm/hr	Drain OutFlow mm/hr	Surface Level mm	Pavement Level mm	Soil Moisture Content	Storage Level mm
01/01/2000	00:06:00	0.100	2.066	0.0000	2.066	0.000	0.000	2.066	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:12:00	0.200	2.089	0.0000	2.089	0.000	0.000	2.089	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:18:00	0.300	2.112	0.0000	2.112	0.000	0.000	2.112	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:24:00	0.400	2.135	0.0000	2.135	0.000	0.000	2.135	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:30:00	0.500	2.157	0.0000	2.157	0.000	0.000	2.157	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:36:00	0.600	2.180	0.0000	2.180	0.000	0.000	2.180	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:42:00	0.700	2.203	0.0000	2.203	0.000	0.000	2.203	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:48:00	0.800	2.226	0.0000	2.226	0.000	0.000	2.226	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:54:00	0.900	2.249	0.0000	2.249	0.000	0.000	2.249	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:00:00	1.000	2.272	0.0000	2.272	0.000	0.000	2.272	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:06:00	1.100	2.294	0.0000	2.294	0.000	0.000	2.294	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:12:00	1.200	2.317	0.0000	2.317	0.000	0.000	2.317	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:18:00	1.300	2.340	0.0000	2.340	0.000	0.000	2.340	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:24:00	1.400	2.363	0.0000	2.363	0.000	0.000	2.363	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:30:00	1.500	2.386	0.0000	2.386	0.000	0.000	2.386	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:36:00	1.600	2.409	0.0000	2.409	0.000	0.000	2.409	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:42:00	1.700	2.431	0.0000	2.431	0.000	0.000	2.431	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:48:00	1.800	2.454	0.0000	2.454	0.000	0.000	2.454	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:54:00	1.900	2.477	0.0000	2.477	0.000	0.000	2.477	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:00:00	2.000	2.500	0.0000	2.500	0.000	0.000	2.500	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:06:00	2.100	2.568	0.0000	2.568	0.000	0.000	2.568	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:12:00	2.200	2.683	0.0000	2.683	0.000	0.000	2.683	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:18:00	2.300	2.797	0.0000	2.797	0.000	0.000	2.797	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:24:00	2.400	2.911	0.0000	2.911	0.000	0.000	2.911	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:30:00	2.500	3.025	0.0000	3.025	0.000	0.000	3.025	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:36:00	2.600	3.139	0.0000	3.139	0.000	0.000	3.139	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:42:00	2.700	3.253	0.0000	3.253	0.000	0.000	3.253	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:48:00	2.800	3.367	0.0000	3.367	0.000	0.000	3.367	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:54:00	2.900	3.482	0.0000	3.482	0.000	0.000	3.482	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:00:00	3.000	3.596	0.0000	3.596	0.000	0.000	3.596	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:06:00	3.100	3.653	0.0000	3.653	0.000	0.000	3.653	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:12:00	3.200	3.653	0.0000	3.653	0.000	0.000	3.653	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:18:00	3.300	3.653	0.0000	3.653	0.000	0.000	3.653	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:24:00	3.400	3.653	0.0000	3.653	0.000	0.000	3.653	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:30:00	3.500	3.653	0.0000	3.653	0.000	0.000	3.653	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:36:00	3.600	3.744	0.0000	3.744	0.000	0.000	3.744	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:42:00	3.700	3.927	0.0000	3.927	0.000	0.000	3.927	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:48:00	3.800	4.109	0.0000	4.109	0.000	0.000	4.109	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:54:00	3.900	4.292	0.0000	4.292	0.000	0.000	4.292	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:00:00	4.000	4.475	0.0000	4.475	0.000	0.000	4.475	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:06:00	4.100	4.703	0.0000	4.703	0.000	0.000	4.703	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:12:00	4.200	4.977	0.0000	4.977	0.000	0.000	4.977	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:18:00	4.300	5.251	0.0000	5.251	0.000	0.000	5.251	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:24:00	4.400	5.525	0.0000	5.525	0.000	0.000	5.525	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:30:00	4.500	5.799	0.0000	5.799	0.000	0.000	5.799	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:36:00	4.600	6.164	0.0000	6.164	0.000	0.000	6.164	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:42:00	4.700	6.621	0.0000	6.621	0.000	0.000	6.621	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:48:00	4.800	7.077	0.0000	7.077	0.000	0.000	7.077	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:54:00	4.900	7.534	0.0000	7.534	0.000	0.000	7.534	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:00:00	5.000	7.990	0.0000	7.990	0.000	0.000	7.990	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:06:00	5.100	8.767	0.0000	8.767	0.000	0.000	8.767	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:12:00	5.200	9.863	0.0000	9.863	0.000	0.000	9.863	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:18:00	5.300	10.958	0.0000	10.958	0.000	0.000	10.958	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:24:00	5.400	12.708	0.0000	12.708	0.000	0.000	12.708	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:30:00	5.500	17.373	0.0000	17.373	0.000	0.000	17.373	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:36:00	5.600	42.746	0.0000	42.746	0.000	0.000	42.746	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:42:00	5.700	100.064	0.0000	100.064	0.000	0.000	100.064	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:48:00	5.800	187.458	0.0000	143.500	0.000	0.000	143.000	0.000	0.000	4.396	0.000	0.000	0.100
01/01/2000	05:54:00	5.900	382.179	0.0000	143.000	0.000	0.000	143.000	0.000	0.000	28.314	0.000	0.000	0.100
01/01/2000	06:00:00	6.000	305.224	0.0000	143.000	0.000	0.000	143.000	0.000	0.000	44.536	0.000	0.000	0.100
01/01/2000	06:06:00	6.100	94.320	0.0000	143.000	0.000	0.000	143.000	0.000	0.000	39.668	0.000	0.000	0.100
01/01/2000	06:12:00	6.200	65.804	0.0000	143.000	0.000	0.000	143.000	0.000	0.000	31.949	0.000	0.000	0.100

Appendix C – Post-Development SWM

PCSWMM STATUS REPORTS POST_DEVELOPMENT

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

Element Count

Number of rain gages 7
 Number of subcatchments ... 8
 Number of nodes 7
 Number of links 4
 Number of pollutants 0
 Number of land uses 0

Raingage Summary

Name	Data Source	Data Type	Recording Interval
SCS_Type_II_103.2mm_100yr	SCS_Type_II_103.2mm_100yr	INTENSITY	6 min.
SCS_Type_II_103.2mm_100yr_+20%	SCS_Type_II_103.2mm_100yr_+20%	INTENSITY	6 min.
SCS_Type_II_104.4mm	SCS_Type_II_104.4mm	INTENSITY	6 min.
SCS_Type_II_115.2mm_12hr_100yr_+20%	SCS_Type_II_115.2mm_12hr_100yr_+20%	INTENSITY	6 min.
SCS_Type_II_37.2mm_2yr	SCS_Type_II_37.2mm_2yr	INTENSITY	6 min.
SCS_Type_II_37.2mm_6hr_2yr	SCS_Type_II_37.2mm_6hr_2yr	INTENSITY	6 min.
SCS_Type_II_96mm_12hr_100yr	SCS_Type_II_96mm_12hr_100yr	INTENSITY	6 min.

Subcatchment Summary

Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
S1	0.43	416.23	0.00	13.5700	SCS_Type_II_37.2mm_6hr_2yr	J1
S2	0.56	365.91	0.00	34.3370	SCS_Type_II_37.2mm_6hr_2yr	S1
S3	0.28	122.12	0.00	33.7950	SCS_Type_II_37.2mm_6hr_2yr	S1
S4	2.27	167.72	0.00	9.1980	SCS_Type_II_37.2mm_6hr_2yr	S1
S5	0.22	184.30	0.00	5.8430	SCS_Type_II_37.2mm_6hr_2yr	S3
S6	0.46	125.06	0.00	18.0000	SCS_Type_II_37.2mm_6hr_2yr	J6
S7	0.27	158.03	0.00	9.4810	SCS_Type_II_37.2mm_6hr_2yr	J7
S8	0.06	67.34	0.00	43.9950	SCS_Type_II_37.2mm_6hr_2yr	J8

LID Control Summary

Subcatchment	LID Control	No. of Units	Unit Area	Unit Width	% Area Covered	% Imperv Treated	% Perv Treated
S1	Trench-West	2	512.50	15.00	23.70	100.00	100.00
S6	Trench-East	1	150.00	4.50	3.26	100.00	100.00

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J1	JUNCTION	102.00	3.00	0.0	
J6	JUNCTION	100.30	1.00	0.0	
J7	JUNCTION	110.00	1.00	0.0	
J8	JUNCTION	103.66	1.00	0.0	
OF1	OUTFALL	97.70	1.00	0.0	
OF2	OUTFALL	96.90	1.00	0.0	
OF3	OUTFALL	108.49	1.00	0.0	

Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J7	OF3	CONDUIT	23.0	6.5691	0.0100
C2	J8	OF1	CONDUIT	23.8	25.9220	0.0100
C3	J1	J6	CONDUIT	220.8	0.7701	0.0100
C4	J6	OF2	CONDUIT	33.6	10.1786	0.0100

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	1.00	0.79	0.25	1.00	1	7989.05
C2	CIRCULAR	1.00	0.79	0.25	1.00	1	15869.99
C3	CIRCULAR	1.00	0.79	0.25	1.00	1	2735.35
C4	CIRCULAR	1.00	0.79	0.25	1.00	1	9944.59

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 LPS
Process Models:
 Rainfall/Runoff YES
 RDII NO
 Snowmelt NO
 Groundwater NO

Flow Routing YES
 Ponding Allowed YES
 Water Quality NO
 Infiltration Method HORTON
 Flow Routing Method DYNWAVE
 Surcharge Method EXTRAN
 Starting Date 01/01/2000 00:00:00
 Ending Date 01/03/2000 05:54:00
 Antecedent Dry Days 0.0
 Report Time Step 00:01:00
 Wet Time Step 00:06:00
 Dry Time Step 00:06:00
 Routing Time Step 5.00 sec
 Variable Time Step YES
 Maximum Trials 8
 Number of Threads 1
 Head Tolerance 0.001500 m

	Volume	Depth
Runoff Quantity Continuity	hectare-m	mm
Total Precipitation	0.169	37.200
Evaporation Loss	0.000	0.000
Infiltration Loss	0.166	36.417
Surface Runoff	0.002	0.541
Final Storage	0.002	0.375
Continuity Error (%)	-0.357	

	Volume	Volume
Flow Routing Continuity	hectare-m	10 ⁶ ltr
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.002	0.025
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	0.002	0.025
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

 Time-Step Critical Elements

 None

 Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

Minimum Time Step : 4.50 sec
 Average Time Step : 5.00 sec
 Maximum Time Step : 5.00 sec
 Percent in Steady State : 0.00
 Average Iterations per Step : 2.00
 Percent Not Converging : 0.00
 Time Step Frequencies :
 5.000 - 3.155 sec : 100.00 %
 3.155 - 1.991 sec : 0.00 %
 1.991 - 1.256 sec : 0.00 %
 1.256 - 0.792 sec : 0.00 %
 0.792 - 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 mm	Total Runoff 10 ⁶ ltr	Peak Runoff LPS	Runoff Coeff
S1	37.20	20.38	0.00	57.85	0.00	9.79	-0.00	-0.00	0.00	-0.000
S2	37.20	0.00	0.00	28.58	0.00	7.60	7.60	0.04	27.37	0.204
S3	37.20	5.67	0.00	28.73	0.00	13.07	13.07	0.04	12.27	0.305
S4	37.20	0.00	0.00	36.87	0.00	0.38	0.38	0.01	16.56	0.010
S5	37.20	0.00	0.00	28.65	0.00	7.46	7.46	0.02	8.12	0.201
S6	37.20	0.00	0.00	37.45	0.00	1.21	0.00	0.00	0.00	0.000
S7	37.20	0.00	0.00	28.73	0.00	7.42	7.42	0.02	9.46	0.199
S8	37.20	0.00	0.00	28.50	0.00	7.74	7.74	0.00	3.25	0.208

LID Performance Summary

Subcatchment	LID Control	Total Inflow mm	Evap Loss mm	Infil Loss mm	Surface Outflow mm	Drain Outflow mm	Initial Storage mm	Final Storage mm	Continuity Error %
S1	Trench-West	78.49	0.00	78.49	0.00	0.00	0.00	0.00	0.00
S6	Trench-East	74.21	0.00	74.21	0.00	0.00	0.00	0.00	-0.00

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
J1	JUNCTION	0.00	0.00	102.00	0 00:00	0.00
J6	JUNCTION	0.00	0.00	100.30	0 00:00	0.00
J7	JUNCTION	0.00	0.03	110.03	0 03:06	0.03
J8	JUNCTION	0.00	0.01	103.67	0 03:06	0.01
OF1	OUTFALL	0.00	0.01	97.71	0 03:06	0.01
OF2	OUTFALL	0.00	0.00	96.90	0 00:00	0.00
OF3	OUTFALL	0.00	0.03	108.52	0 03:06	0.03

Node Inflow Summary

Node	Type	Maximum Lateral Inflow LPS	Maximum Total Inflow LPS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
J1	JUNCTION	-0.00	0.00	0 00:00	-1.96e-22	0	-0.000 ltr
J6	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J7	JUNCTION	9.46	9.46	0 03:06	0.0202	0.0202	-0.002
J8	JUNCTION	3.25	3.25	0 03:06	0.0044	0.0044	-0.013
OF1	OUTFALL	0.00	3.24	0 03:06	0	0.0044	0.000
OF2	OUTFALL	0.00	0.00	0 00:00	0	0	0.000 ltr
OF3	OUTFALL	0.00	9.46	0 03:06	0	0.0202	0.000

Node Surcharge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

Outfall Loading Summary

Flow Freq	Avg Flow	Max Flow	Total Volume
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Outfall Node	Pcnt	LPS	LPS	10^6 ltr
OF1	5.93	0.38	3.24	0.004
OF2	0.00	0.00	0.00	0.000
OF3	6.35	1.64	9.46	0.020
System	4.09	2.02	12.70	0.025

Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	9.46	0 03:06	1.70	0.00	0.03
C2	CONDUIT	3.24	0 03:06	1.94	0.00	0.01
C3	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C4	CONDUIT	0.00	0 00:00	0.00	0.00	0.00

Flow Classification Summary

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class								
		Dry	Up Dry	Down Dry	Sub Dry	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
C1	1.00	0.05	0.00	0.00	0.88	0.06	0.00	0.00	0.02	0.00
C2	1.00	0.05	0.00	0.00	0.89	0.06	0.00	0.00	0.01	0.00
C3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C4	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Conduit Surchage Summary

No conduits were surcharged.

Analysis begun on: Fri Dec 15 11:28:46 2023
Analysis ended on: Fri Dec 15 11:28:50 2023
Total elapsed time: 00:00:04

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

Element Count

Number of rain gages 7
 Number of subcatchments ... 8
 Number of nodes 7
 Number of links 4
 Number of pollutants 0
 Number of land uses 0

Raingage Summary

Name	Data Source	Data Type	Recording Interval
SCS_Type_II_103.2mm_100yr	SCS_Type_II_103.2mm_100yr	INTENSITY	6 min.
SCS_Type_II_103.2mm_100yr_+20%	SCS_Type_II_103.2mm_100yr_+20%	INTENSITY	6 min.
SCS_Type_II_104.4mm	SCS_Type_II_104.4mm	INTENSITY	6 min.
SCS_Type_II_115.2mm_12hr_100yr_+20%	SCS_Type_II_115.2mm_12hr_100yr_+20%	INTENSITY	6 min.
SCS_Type_II_37.2mm_2yr	SCS_Type_II_37.2mm_2yr	INTENSITY	6 min.
SCS_Type_II_50.4mm_6hr_5yr	SCS_Type_II_50.4mm_6hr_5yr	INTENSITY	6 min.
SCS_Type_II_96mm_12hr_100yr	SCS_Type_II_96mm_12hr_100yr	INTENSITY	6 min.

Subcatchment Summary

Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
S1	0.43	416.23	0.00	13.5700	SCS_Type_II_50.4mm_6hr_5yr	J1
S2	0.56	365.91	0.00	34.3370	SCS_Type_II_50.4mm_6hr_5yr	S1
S3	0.28	122.12	0.00	33.7950	SCS_Type_II_50.4mm_6hr_5yr	S1
S4	2.27	167.72	0.00	9.1980	SCS_Type_II_50.4mm_6hr_5yr	S1
S5	0.22	184.30	0.00	5.8430	SCS_Type_II_50.4mm_6hr_5yr	S3
S6	0.46	125.06	0.00	18.0000	SCS_Type_II_50.4mm_6hr_5yr	J6
S7	0.27	158.03	0.00	9.4810	SCS_Type_II_50.4mm_6hr_5yr	J7
S8	0.06	67.34	0.00	43.9950	SCS_Type_II_50.4mm_6hr_5yr	J8

LID Control Summary

Subcatchment	LID Control	No. of Units	Unit Area	Unit Width	% Area Covered	% Imperv Treated	% Perv Treated
S1	Trench-West	2	512.50	15.00	23.70	100.00	100.00
S6	Trench-East	1	150.00	4.50	3.26	100.00	100.00

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J1	JUNCTION	102.00	3.00	0.0	
J6	JUNCTION	100.30	1.00	0.0	
J7	JUNCTION	110.00	1.00	0.0	
J8	JUNCTION	103.66	1.00	0.0	
OF1	OUTFALL	97.70	1.00	0.0	
OF2	OUTFALL	96.90	1.00	0.0	
OF3	OUTFALL	108.49	1.00	0.0	

Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J7	OF3	CONDUIT	23.0	6.5691	0.0100
C2	J8	OF1	CONDUIT	23.8	25.9220	0.0100
C3	J1	J6	CONDUIT	220.8	0.7701	0.0100
C4	J6	OF2	CONDUIT	33.6	10.1786	0.0100

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	1.00	0.79	0.25	1.00	1	7989.05
C2	CIRCULAR	1.00	0.79	0.25	1.00	1	15869.99
C3	CIRCULAR	1.00	0.79	0.25	1.00	1	2735.35
C4	CIRCULAR	1.00	0.79	0.25	1.00	1	9944.59

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 LPS
Process Models:
 Rainfall/Runoff YES
 RDII NO
 Snowmelt NO
 Groundwater NO
 Flow Routing YES

Ponding Allowed YES
 Water Quality NO
 Infiltration Method HORTON
 Flow Routing Method DYNWAVE
 Surcharge Method EXTRAN
 Starting Date 01/01/2000 00:00:00
 Ending Date 01/03/2000 05:54:00
 Antecedent Dry Days 0.0
 Report Time Step 00:01:00
 Wet Time Step 00:06:00
 Dry Time Step 00:06:00
 Routing Time Step 5.00 sec
 Variable Time Step YES
 Maximum Trials 8
 Number of Threads 1
 Head Tolerance 0.001500 m

*****	Volume	Depth
Runoff Quantity Continuity	hectare-m	mm
*****	-----	-----
Total Precipitation	0.230	50.400
Evaporation Loss	0.000	0.000
Infiltration Loss	0.225	49.459
Surface Runoff	0.005	1.131
Final Storage	0.002	0.371
Continuity Error (%)	-1.113	

*****	Volume	Volume
Flow Routing Continuity	hectare-m	10^6 ltr
*****	-----	-----
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.005	0.052
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	0.005	0.052
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
Initial Stored Volume ...	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

 Time-Step Critical Elements

 None

 Highest Flow Instability Indexes

All links are stable.

 Routing Time Step Summary

Minimum Time Step : 0.90 sec
 Average Time Step : 5.00 sec
 Maximum Time Step : 5.00 sec
 Percent in Steady State : 0.00
 Average Iterations per Step : 2.00
 Percent Not Converging : 0.00
 Time Step Frequencies :
 5.000 - 3.155 sec : 100.00 %
 3.155 - 1.991 sec : 0.00 %
 1.991 - 1.256 sec : 0.00 %
 1.256 - 0.792 sec : 0.00 %
 0.792 - 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 mm	Total Runoff 10 ⁶ ltr	Peak Runoff LPS	Runoff Coeff
S1	50.40	70.60	0.00	122.58	0.00	65.20	-0.00	-0.00	0.00	-0.000
S2	50.40	0.00	0.00	33.97	0.00	15.85	15.85	0.09	54.72	0.315
S3	50.40	11.90	0.00	34.13	0.00	27.51	27.51	0.08	41.94	0.442
S4	50.40	0.00	0.00	44.57	0.00	6.09	6.09	0.14	123.05	0.121
S5	50.40	0.00	0.00	34.05	0.00	15.64	15.64	0.03	20.30	0.310
S6	50.40	0.00	0.00	51.43	0.00	9.23	0.00	0.00	0.00	0.000
S7	50.40	0.00	0.00	34.05	0.00	15.58	15.58	0.04	25.10	0.309
S8	50.40	0.00	0.00	33.89	0.00	15.93	15.93	0.01	6.43	0.316

 LID Performance Summary

Subcatchment	LID Control	Total Inflow mm	Evap Loss mm	Infil Loss mm	Surface Outflow mm	Drain Outflow mm	Initial Storage mm	Final Storage mm	Continuity Error %
S1	Trench-West	325.52	0.00	325.52	0.00	0.00	0.00	0.00	0.00
S6	Trench-East	333.60	0.00	333.60	0.00	0.00	0.00	0.00	0.00

 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
J1	JUNCTION	0.00	0.00	102.00	0 00:00	0.00
J6	JUNCTION	0.00	0.00	100.30	0 00:00	0.00
J7	JUNCTION	0.00	0.04	110.04	0 03:06	0.04
J8	JUNCTION	0.00	0.02	103.68	0 03:00	0.02
OF1	OUTFALL	0.00	0.02	97.72	0 03:00	0.02
OF2	OUTFALL	0.00	0.00	96.90	0 00:00	0.00
OF3	OUTFALL	0.00	0.04	108.53	0 03:06	0.04

Node Inflow Summary

Node	Type	Maximum Lateral Inflow LPS	Maximum Total Inflow LPS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
J1	JUNCTION	-0.00	0.00	0 00:00	-3.32e-18	0	-0.000 ltr
J6	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J7	JUNCTION	25.10	25.10	0 03:06	0.0425	0.0425	-0.001
J8	JUNCTION	6.43	6.43	0 03:00	0.00905	0.00905	-0.004
OF1	OUTFALL	0.00	6.43	0 03:00	0	0.00905	0.000
OF2	OUTFALL	0.00	0.00	0 00:00	0	0	0.000 ltr
OF3	OUTFALL	0.00	25.05	0 03:06	0	0.0425	0.000

Node Surcharge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

Outfall Loading Summary

Outfall Node	Flow Freq Pcmt	Avg Flow LPS	Max Flow LPS	Total Volume 10^6 ltr
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OF1	5.97	0.78	6.43	0.009
OF2	0.00	0.00	0.00	0.000
OF3	6.45	3.39	25.05	0.042
System	4.14	4.18	30.63	0.052

Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	25.05	0 03:06	2.29	0.00	0.04
C2	CONDUIT	6.43	0 03:00	2.43	0.00	0.02
C3	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C4	CONDUIT	0.00	0 00:00	0.00	0.00	0.00

Flow Classification Summary

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class								
		Up Dry	Down Dry	Sub Dry	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl	
C1	1.00	0.05	0.00	0.00	0.88	0.07	0.00	0.00	0.04	0.00
C2	1.00	0.05	0.00	0.00	0.89	0.06	0.00	0.00	0.03	0.00
C3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C4	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Conduit Surcharge Summary

No conduits were surcharged.

Analysis begun on: Fri Dec 15 11:28:46 2023
Analysis ended on: Fri Dec 15 11:28:50 2023
Total elapsed time: 00:00:04

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

Element Count

Number of rain gages 7
 Number of subcatchments ... 8
 Number of nodes 7
 Number of links 4
 Number of pollutants 0
 Number of land uses 0

Raingage Summary

Name	Data Source	Data Type	Recording Interval
SCS_Type_II_103.2mm_100yr	SCS_Type_II_103.2mm_100yr	INTENSITY	6 min.
SCS_Type_II_103.2mm_100yr_+20%	SCS_Type_II_103.2mm_100yr_+20%	INTENSITY	6 min.
SCS_Type_II_104.4mm	SCS_Type_II_104.4mm	INTENSITY	6 min.
SCS_Type_II_115.2mm_12hr_100yr_+20%	SCS_Type_II_115.2mm_12hr_100yr_+20%	INTENSITY	6 min.
SCS_Type_II_37.2mm_2yr	SCS_Type_II_37.2mm_2yr	INTENSITY	6 min.
SCS_Type_II_87mm_6hr_100yr	SCS_Type_II_87mm_6hr_100yr	INTENSITY	6 min.
SCS_Type_II_96mm_12hr_100yr	SCS_Type_II_96mm_12hr_100yr	INTENSITY	6 min.

Subcatchment Summary

Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
S1	0.43	416.23	0.00	13.5700	SCS_Type_II_87mm_6hr_100yr	J1
S2	0.56	365.91	0.00	34.3370	SCS_Type_II_87mm_6hr_100yr	S1
S3	0.28	122.12	0.00	33.7950	SCS_Type_II_87mm_6hr_100yr	S1
S4	2.27	167.72	0.00	9.1980	SCS_Type_II_87mm_6hr_100yr	S1
S5	0.22	184.30	0.00	5.8430	SCS_Type_II_87mm_6hr_100yr	S3
S6	0.46	125.06	0.00	18.0000	SCS_Type_II_87mm_6hr_100yr	J6
S7	0.27	158.03	0.00	9.4810	SCS_Type_II_87mm_6hr_100yr	J7
S8	0.06	67.34	0.00	43.9950	SCS_Type_II_87mm_6hr_100yr	J8

LID Control Summary

Subcatchment	LID Control	No. of Units	Unit Area	Unit Width	% Area Covered	% Imperv Treated	% Perv Treated
S1	Trench-West	2	512.50	15.00	23.70	100.00	100.00
S6	Trench-East	1	150.00	4.50	3.26	100.00	100.00

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J1	JUNCTION	102.00	3.00	0.0	
J6	JUNCTION	100.30	1.00	0.0	
J7	JUNCTION	110.00	1.00	0.0	
J8	JUNCTION	103.66	1.00	0.0	
OF1	OUTFALL	97.70	1.00	0.0	
OF2	OUTFALL	96.90	1.00	0.0	
OF3	OUTFALL	108.49	1.00	0.0	

Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J7	OF3	CONDUIT	23.0	6.5691	0.0100
C2	J8	OF1	CONDUIT	23.8	25.9220	0.0100
C3	J1	J6	CONDUIT	220.8	0.7701	0.0100
C4	J6	OF2	CONDUIT	33.6	10.1786	0.0100

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	1.00	0.79	0.25	1.00	1	7989.05
C2	CIRCULAR	1.00	0.79	0.25	1.00	1	15869.99
C3	CIRCULAR	1.00	0.79	0.25	1.00	1	2735.35
C4	CIRCULAR	1.00	0.79	0.25	1.00	1	9944.59

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 LPS
Process Models:
 Rainfall/Runoff YES
 RDII NO
 Snowmelt NO
 Groundwater NO
 Flow Routing YES

Ponding Allowed YES
 Water Quality NO
 Infiltration Method HORTON
 Flow Routing Method DYNWAVE
 Surcharge Method EXTRAN
 Starting Date 01/01/2000 00:00:00
 Ending Date 01/03/2000 05:54:00
 Antecedent Dry Days 0.0
 Report Time Step 00:01:00
 Wet Time Step 00:06:00
 Dry Time Step 00:06:00
 Routing Time Step 5.00 sec
 Variable Time Step YES
 Maximum Trials 8
 Number of Threads 1
 Head Tolerance 0.001500 m

*****	Volume	Depth
Runoff Quantity Continuity	hectare-m	mm
*****	-----	-----
Total Precipitation	0.396	87.000
Evaporation Loss	0.000	0.000
Infiltration Loss	0.384	84.282
Surface Runoff	0.014	3.040
Final Storage	0.002	0.375
Continuity Error (%)	-0.801	

*****	Volume	Volume
Flow Routing Continuity	hectare-m	10^6 ltr
*****	-----	-----
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.014	0.138
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	0.014	0.138
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
Initial Stored Volume ...	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

 Time-Step Critical Elements

 None

 Highest Flow Instability Indexes

All links are stable.

 Routing Time Step Summary

Minimum Time Step : 0.14 sec
 Average Time Step : 5.00 sec
 Maximum Time Step : 5.00 sec
 Percent in Steady State : 0.00
 Average Iterations per Step : 2.00
 Percent Not Converging : 0.00
 Time Step Frequencies :
 5.000 - 3.155 sec : 100.00 %
 3.155 - 1.991 sec : 0.00 %
 1.991 - 1.256 sec : 0.00 %
 1.256 - 0.792 sec : 0.00 %
 0.792 - 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 mm	Total Runoff 10 ⁶ ltr	Peak Runoff LPS	Runoff Coeff
S1	87.00	270.77	0.00	358.69	0.00	284.28	0.00	0.00	0.00	0.000
S2	87.00	0.00	0.00	44.28	0.00	42.13	42.13	0.24	153.99	0.484
S3	87.00	31.94	0.00	44.44	0.00	73.90	73.90	0.21	119.30	0.621
S4	87.00	0.00	0.00	55.69	0.00	31.91	31.91	0.73	529.22	0.367
S5	87.00	0.00	0.00	44.36	0.00	42.00	42.00	0.09	57.16	0.483
S6	87.00	0.00	0.00	88.20	0.00	34.17	-0.00	-0.00	0.00	-0.000
S7	87.00	0.00	0.00	44.36	0.00	41.96	41.96	0.11	70.99	0.482
S8	87.00	0.00	0.00	44.11	0.00	42.24	42.24	0.02	15.84	0.485

 LID Performance Summary

Subcatchment	LID Control	Total Inflow mm	Evap Loss mm	Infil Loss mm	Surface Outflow mm	Drain Outflow mm	Initial Storage mm	Final Storage mm	Continuity Error %
S1	Trench-West	1286.51	0.00	1286.51	0.00	0.00	0.00	0.00	0.00
S6	Trench-East	1134.73	0.00	1134.73	0.00	0.00	0.00	0.00	0.00

 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
J1	JUNCTION	0.00	0.00	102.00	0 06:06	0.00
J6	JUNCTION	0.00	0.00	100.30	0 00:00	0.00
J7	JUNCTION	0.00	0.07	110.07	0 03:00	0.07
J8	JUNCTION	0.00	0.02	103.68	0 03:00	0.02
OF1	OUTFALL	0.00	0.02	97.72	0 03:00	0.02
OF2	OUTFALL	0.00	0.00	96.90	0 00:00	0.00
OF3	OUTFALL	0.00	0.07	108.56	0 03:00	0.07

Node Inflow Summary

Node	Type	Maximum Lateral Inflow LPS	Maximum Total Inflow LPS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
J1	JUNCTION	0.00	0.00	0 03:06	5.28e-17	5.28e-17	0.000 ltr
J6	JUNCTION	-0.00	0.00	0 00:00	-3.22e-18	0	-0.000 ltr
J7	JUNCTION	70.99	70.99	0 03:00	0.114	0.114	0.008
J8	JUNCTION	15.84	15.84	0 03:00	0.024	0.024	-0.003
OF1	OUTFALL	0.00	15.84	0 03:00	0	0.024	0.000
OF2	OUTFALL	0.00	0.00	0 00:00	0	0	0.000 ltr
OF3	OUTFALL	0.00	71.06	0 03:00	0	0.114	0.000

Node Surcharge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

Outfall Loading Summary

Outfall Node	Flow Freq Pcmt	Avg Flow LPS	Max Flow LPS	Total Volume 10^6 ltr
--------------	----------------	--------------	--------------	-----------------------

OF1	6.45	1.96	15.84	0.024
OF2	0.00	0.00	0.00	0.000
OF3	7.01	8.61	71.06	0.114
System	4.49	10.57	86.90	0.138

Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	71.06	0 03:00	3.14	0.01	0.07
C2	CONDUIT	15.84	0 03:00	3.19	0.00	0.02
C3	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C4	CONDUIT	0.00	0 00:00	0.00	0.00	0.00

Flow Classification Summary

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class								
		Up Dry	Down Dry	Sub Dry	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl	
C1	1.00	0.05	0.00	0.00	0.88	0.07	0.00	0.00	0.04	0.00
C2	1.00	0.05	0.00	0.00	0.88	0.06	0.00	0.00	0.05	0.00
C3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C4	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Conduit Surcharge Summary

No conduits were surcharged.

Analysis begun on: Fri Dec 15 11:28:46 2023
Analysis ended on: Fri Dec 15 11:28:50 2023
Total elapsed time: 00:00:04

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

Element Count

Number of rain gages 7
 Number of subcatchments ... 8
 Number of nodes 7
 Number of links 4
 Number of pollutants 0
 Number of land uses 0

Raingage Summary

Name	Data Source	Data Type	Recording Interval
SCS_Type_II_103.2mm_100yr	SCS_Type_II_103.2mm_100yr	INTENSITY	6 min.
SCS_Type_II_103.2mm_100yr_+20%	SCS_Type_II_103.2mm_100yr_+20%	INTENSITY	6 min.
SCS_Type_II_104.4mm	SCS_Type_II_104.4mm	INTENSITY	6 min.
SCS_Type_II_104.4mm_6hr_100yr+20%	SCS_Type_II_104.4mm_6hr_100yr+20%	INTENSITY	6 min.
SCS_Type_II_115.2mm_12hr_100yr_+20%	SCS_Type_II_115.2mm_12hr_100yr_+20%	INTENSITY	6 min.
SCS_Type_II_37.2mm_2yr	SCS_Type_II_37.2mm_2yr	INTENSITY	6 min.
SCS_Type_II_96mm_12hr_100yr	SCS_Type_II_96mm_12hr_100yr	INTENSITY	6 min.

Subcatchment Summary

Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
S1	0.43	416.23	0.00	13.5700	SCS_Type_II_104.4mm_6hr_100yr+20%	J1
S2	0.56	365.91	0.00	34.3370	SCS_Type_II_104.4mm_6hr_100yr+20%	S1
S3	0.28	122.12	0.00	33.7950	SCS_Type_II_104.4mm_6hr_100yr+20%	S1
S4	2.27	167.72	0.00	9.1980	SCS_Type_II_104.4mm_6hr_100yr+20%	S1
S5	0.22	184.30	0.00	5.8430	SCS_Type_II_104.4mm_6hr_100yr+20%	S3
S6	0.46	125.06	0.00	18.0000	SCS_Type_II_104.4mm_6hr_100yr+20%	J6
S7	0.27	158.03	0.00	9.4810	SCS_Type_II_104.4mm_6hr_100yr+20%	J7
S8	0.06	67.34	0.00	43.9950	SCS_Type_II_104.4mm_6hr_100yr+20%	J8

LID Control Summary

Subcatchment	LID Control	No. of Units	Unit Area	Unit Width	% Area Covered	% Imperv Treated	% Perv Treated
S1	Trench-West	2	512.50	15.00	23.70	100.00	100.00
S6	Trench-East	1	150.00	4.50	3.26	100.00	100.00

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J1	JUNCTION	102.00	3.00	0.0	
J6	JUNCTION	100.30	1.00	0.0	
J7	JUNCTION	110.00	1.00	0.0	
J8	JUNCTION	103.66	1.00	0.0	
OF1	OUTFALL	97.70	1.00	0.0	
OF2	OUTFALL	96.90	1.00	0.0	
OF3	OUTFALL	108.49	1.00	0.0	

Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J7	OF3	CONDUIT	23.0	6.5691	0.0100
C2	J8	OF1	CONDUIT	23.8	25.9220	0.0100
C3	J1	J6	CONDUIT	220.8	0.7701	0.0100
C4	J6	OF2	CONDUIT	33.6	10.1786	0.0100

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	1.00	0.79	0.25	1.00	1	7989.05
C2	CIRCULAR	1.00	0.79	0.25	1.00	1	15869.99
C3	CIRCULAR	1.00	0.79	0.25	1.00	1	2735.35
C4	CIRCULAR	1.00	0.79	0.25	1.00	1	9944.59

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 LPS
Process Models:
 Rainfall/Runoff YES
 RDII NO
 Snowmelt NO
 Groundwater NO
 Flow Routing YES

Ponding Allowed YES
 Water Quality NO
 Infiltration Method HORTON
 Flow Routing Method DYNWAVE
 Surcharge Method EXTRAN
 Starting Date 01/01/2000 00:00:00
 Ending Date 01/03/2000 05:54:00
 Antecedent Dry Days 0.0
 Report Time Step 00:01:00
 Wet Time Step 00:06:00
 Dry Time Step 00:06:00
 Routing Time Step 5.00 sec
 Variable Time Step YES
 Maximum Trials 8
 Number of Threads 1
 Head Tolerance 0.001500 m

*****	Volume	Depth
Runoff Quantity Continuity	hectare-m	mm
*****	-----	-----
Total Precipitation	0.476	104.400
Evaporation Loss	0.000	0.000
Infiltration Loss	0.459	100.808
Surface Runoff	0.018	4.047
Final Storage	0.002	0.369
Continuity Error (%)	-0.789	

*****	Volume	Volume
Flow Routing Continuity	hectare-m	10^6 ltr
*****	-----	-----
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.018	0.184
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	0.018	0.184
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
Initial Stored Volume ...	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

 Time-Step Critical Elements

 None

 Highest Flow Instability Indexes

All links are stable.

 Routing Time Step Summary

Minimum Time Step : 0.70 sec
 Average Time Step : 5.00 sec
 Maximum Time Step : 5.00 sec
 Percent in Steady State : 0.00
 Average Iterations per Step : 2.00
 Percent Not Converging : 0.00
 Time Step Frequencies :
 5.000 - 3.155 sec : 100.00 %
 3.155 - 1.991 sec : 0.00 %
 1.991 - 1.256 sec : 0.00 %
 1.256 - 0.792 sec : 0.00 %
 0.792 - 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 mm	Total Runoff 10 ⁶ ltr	Peak Runoff LPS	Runoff Coeff
S1	104.40	373.90	0.00	480.09	0.00	399.75	-0.00	-0.00	0.00	-0.000
S2	104.40	0.00	0.00	47.69	0.00	55.99	55.99	0.31	202.26	0.536
S3	104.40	42.54	0.00	47.94	0.00	98.40	98.40	0.28	156.33	0.670
S4	104.40	0.00	0.00	60.07	0.00	45.07	45.07	1.02	719.32	0.432
S5	104.40	0.00	0.00	47.77	0.00	55.94	55.94	0.12	76.04	0.536
S6	104.40	0.00	0.00	105.64	0.00	46.52	-0.00	-0.00	0.00	-0.000
S7	104.40	0.00	0.00	47.86	0.00	55.91	55.91	0.15	94.92	0.536
S8	104.40	0.00	0.00	47.53	0.00	56.01	56.01	0.03	20.71	0.536

 LID Performance Summary

Subcatchment	LID Control	Total Inflow mm	Evap Loss mm	Infil Loss mm	Surface Outflow mm	Drain Outflow mm	Initial Storage mm	Final Storage mm	Continuity Error %
S1	Trench-West	1791.15	0.00	1791.15	0.00	0.00	0.00	0.00	-0.00
S6	Trench-East	1530.86	0.00	1530.86	0.00	0.00	0.00	0.00	0.00

 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
J1	JUNCTION	0.00	0.00	102.00	0 02:54	0.00
J6	JUNCTION	0.00	0.00	100.30	0 02:56	0.00
J7	JUNCTION	0.00	0.08	110.08	0 03:00	0.08
J8	JUNCTION	0.00	0.03	103.69	0 03:00	0.03
OF1	OUTFALL	0.00	0.03	97.73	0 03:00	0.03
OF2	OUTFALL	0.00	0.00	96.90	0 00:00	0.00
OF3	OUTFALL	0.00	0.08	108.57	0 03:00	0.08

Node Inflow Summary

Node	Type	Maximum Lateral Inflow LPS	Maximum Total Inflow LPS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
J1	JUNCTION	-0.00	0.00	0 02:48	-6.44e-18	6.44e-18	-0.000 ltr
J6	JUNCTION	-0.00	0.00	0 02:54	-5.63e-18	5.1e-18	-0.000 ltr
J7	JUNCTION	94.92	94.92	0 03:00	0.153	0.153	0.010
J8	JUNCTION	20.71	20.71	0 03:00	0.0318	0.0318	-0.005
OF1	OUTFALL	0.00	20.73	0 03:00	0	0.0318	0.000
OF2	OUTFALL	0.00	0.00	0 00:00	0	0	0.000 ltr
OF3	OUTFALL	0.00	95.13	0 03:00	0	0.153	0.000

Node Surcharge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

Outfall Loading Summary

Outfall Node	Flow Freq Pcmt	Avg Flow LPS	Max Flow LPS	Total Volume 10^6 ltr
--------------	----------------	--------------	--------------	-----------------------

OF1	6.69	2.59	20.73	0.032
OF2	0.00	0.00	0.00	0.000
OF3	7.27	11.43	95.13	0.153
System	4.65	14.02	115.81	0.184

Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	95.13	0 03:00	3.44	0.01	0.08
C2	CONDUIT	20.73	0 03:00	3.46	0.00	0.03
C3	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C4	CONDUIT	0.00	0 00:00	0.00	0.00	0.00

Flow Classification Summary

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class								
		Up Dry	Down Dry	Sub Dry	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl	
C1	1.00	0.05	0.00	0.00	0.88	0.07	0.00	0.00	0.03	0.00
C2	1.00	0.05	0.00	0.00	0.88	0.07	0.00	0.00	0.06	0.00
C3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C4	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Conduit Surcharge Summary

No conduits were surcharged.

Analysis begun on: Fri Dec 15 11:28:46 2023
Analysis ended on: Fri Dec 15 11:28:50 2023
Total elapsed time: 00:00:04

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

Element Count

Number of rain gages 7
 Number of subcatchments ... 8
 Number of nodes 7
 Number of links 4
 Number of pollutants 0
 Number of land uses 0

Raingage Summary

Name	Data Source	Data Type	Recording Interval
SCS_Type_II_103.2mm_100yr	SCS_Type_II_103.2mm_100yr	INTENSITY	6 min.
SCS_Type_II_103.2mm_100yr_+20%	SCS_Type_II_103.2mm_100yr_+20%	INTENSITY	6 min.
SCS_Type_II_104.4mm	SCS_Type_II_104.4mm	INTENSITY	6 min.
SCS_Type_II_115.2mm_12hr_100yr_+20%	SCS_Type_II_115.2mm_12hr_100yr_+20%	INTENSITY	6 min.
SCS_Type_II_37.2mm_2yr	SCS_Type_II_37.2mm_2yr	INTENSITY	6 min.
SCS_Type_II_43.2mm_12hr_2yr	SCS_Type_II_43.2mm_12hr_2yr	INTENSITY	6 min.
SCS_Type_II_96mm_12hr_100yr	SCS_Type_II_96mm_12hr_100yr	INTENSITY	6 min.

Subcatchment Summary

Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
S1	0.43	416.23	0.00	13.5700	SCS_Type_II_43.2mm_12hr_2yr	J1
S2	0.56	365.91	0.00	34.3370	SCS_Type_II_43.2mm_12hr_2yr	S1
S3	0.28	122.12	0.00	33.7950	SCS_Type_II_43.2mm_12hr_2yr	S1
S4	2.27	167.72	0.00	9.1980	SCS_Type_II_43.2mm_12hr_2yr	S1
S5	0.22	184.30	0.00	5.8430	SCS_Type_II_43.2mm_12hr_2yr	S3
S6	0.46	125.06	0.00	18.0000	SCS_Type_II_43.2mm_12hr_2yr	J6
S7	0.27	158.03	0.00	9.4810	SCS_Type_II_43.2mm_12hr_2yr	J7
S8	0.06	67.34	0.00	43.9950	SCS_Type_II_43.2mm_12hr_2yr	J8

LID Control Summary

Subcatchment	LID Control	No. of Units	Unit Area	Unit Width	% Area Covered	% Imperv Treated	% Perv Treated
S1	Trench-West	2	512.50	15.00	23.70	100.00	100.00
S6	Trench-East	1	150.00	4.50	3.26	100.00	100.00

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J1	JUNCTION	102.00	3.00	0.0	
J6	JUNCTION	100.30	1.00	0.0	
J7	JUNCTION	110.00	1.00	0.0	
J8	JUNCTION	103.66	1.00	0.0	
OF1	OUTFALL	97.70	1.00	0.0	
OF2	OUTFALL	96.90	1.00	0.0	
OF3	OUTFALL	108.49	1.00	0.0	

Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J7	OF3	CONDUIT	23.0	6.5691	0.0100
C2	J8	OF1	CONDUIT	23.8	25.9220	0.0100
C3	J1	J6	CONDUIT	220.8	0.7701	0.0100
C4	J6	OF2	CONDUIT	33.6	10.1786	0.0100

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	1.00	0.79	0.25	1.00	1	7989.05
C2	CIRCULAR	1.00	0.79	0.25	1.00	1	15869.99
C3	CIRCULAR	1.00	0.79	0.25	1.00	1	2735.35
C4	CIRCULAR	1.00	0.79	0.25	1.00	1	9944.59

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 LPS
Process Models:
 Rainfall/Runoff YES
 RDII NO
 Snowmelt NO
 Groundwater NO

Flow Routing YES
 Ponding Allowed YES
 Water Quality NO
 Infiltration Method HORTON
 Flow Routing Method DYNWAVE
 Surcharge Method EXTRAN
 Starting Date 01/01/2000 00:00:00
 Ending Date 01/03/2000 11:54:00
 Antecedent Dry Days 0.0
 Report Time Step 00:01:00
 Wet Time Step 00:06:00
 Dry Time Step 00:06:00
 Routing Time Step 5.00 sec
 Variable Time Step YES
 Maximum Trials 8
 Number of Threads 1
 Head Tolerance 0.001500 m

	Volume	Depth
Runoff Quantity Continuity	hectare-m	mm
Total Precipitation	0.197	43.200
Evaporation Loss	0.000	0.000
Infiltration Loss	0.192	42.246
Surface Runoff	0.004	0.810
Final Storage	0.002	0.381
Continuity Error (%)	-0.551	

	Volume	Volume
Flow Routing Continuity	hectare-m	10 ⁶ ltr
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.004	0.037
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	0.004	0.037
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

 Time-Step Critical Elements

 None

 Highest Flow Instability Indexes

All links are stable.

Routing Time Step Summary

Minimum Time Step : 4.50 sec
 Average Time Step : 5.00 sec
 Maximum Time Step : 5.00 sec
 Percent in Steady State : 0.00
 Average Iterations per Step : 2.00
 Percent Not Converging : 0.00
 Time Step Frequencies :
 5.000 - 3.155 sec : 100.00 %
 3.155 - 1.991 sec : 0.00 %
 1.991 - 1.256 sec : 0.00 %
 1.256 - 0.792 sec : 0.00 %
 0.792 - 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 mm	Total Runoff 10 ⁶ ltr	Peak Runoff LPS	Runoff Coeff
S1	43.20	31.86	0.00	75.56	0.00	17.14	0.00	0.00	0.00	0.000
S2	43.20	0.00	0.00	31.08	0.00	11.39	11.39	0.06	33.04	0.264
S3	43.20	8.47	0.00	31.19	0.00	19.62	19.62	0.06	19.60	0.380
S4	43.20	0.00	0.00	42.46	0.00	0.81	0.81	0.02	27.05	0.019
S5	43.20	0.00	0.00	31.12	0.00	11.14	11.14	0.02	11.08	0.258
S6	43.20	0.00	0.00	43.46	0.00	2.09	0.00	0.00	0.00	0.000
S7	43.20	0.00	0.00	31.15	0.00	11.09	11.09	0.03	13.29	0.257
S8	43.20	0.00	0.00	31.04	0.00	11.74	11.74	0.01	3.54	0.272

LID Performance Summary

Subcatchment	LID Control	Total Inflow mm	Evap Loss mm	Infil Loss mm	Surface Outflow mm	Drain Outflow mm	Initial Storage mm	Final Storage mm	Continuity Error %
S1	Trench-West	115.53	0.00	115.53	0.00	0.00	0.00	0.00	0.00
S6	Trench-East	107.20	0.00	107.20	0.00	0.00	0.00	0.00	0.00

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
J1	JUNCTION	0.00	0.00	102.00	0 00:00	0.00
J6	JUNCTION	0.00	0.00	100.30	0 00:00	0.00
J7	JUNCTION	0.00	0.03	110.03	0 06:00	0.03
J8	JUNCTION	0.00	0.01	103.67	0 06:00	0.01
OF1	OUTFALL	0.00	0.01	97.71	0 06:00	0.01
OF2	OUTFALL	0.00	0.00	96.90	0 00:00	0.00
OF3	OUTFALL	0.00	0.03	108.52	0 06:00	0.03

Node Inflow Summary

Node	Type	Maximum Lateral Inflow LPS	Maximum Total Inflow LPS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
J1	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J6	JUNCTION	0.00	0.00	0 00:00	0	0	0.000 ltr
J7	JUNCTION	13.29	13.29	0 06:00	0.0302	0.0302	-0.002
J8	JUNCTION	3.54	3.54	0 06:00	0.00667	0.00667	-0.010
OF1	OUTFALL	0.00	3.54	0 06:00	0	0.00667	0.000
OF2	OUTFALL	0.00	0.00	0 00:00	0	0	0.000 ltr
OF3	OUTFALL	0.00	13.28	0 06:00	0	0.0302	0.000

Node Surcharge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

Outfall Loading Summary

Flow Freq	Avg Flow	Max Flow	Total Volume
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Outfall Node	Pcnt	LPS	LPS	10^6 ltr
OF1	10.51	0.29	3.54	0.007
OF2	0.00	0.00	0.00	0.000
OF3	11.02	1.27	13.28	0.030
System	7.18	1.57	16.81	0.037

Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	13.28	0 06:00	1.89	0.00	0.03
C2	CONDUIT	3.54	0 06:00	2.00	0.00	0.01
C3	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C4	CONDUIT	0.00	0 00:00	0.00	0.00	0.00

Flow Classification Summary

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class								
		Up Dry	Down Dry	Sub Dry	Sub Crit	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl
C1	1.00	0.10	0.00	0.00	0.79	0.11	0.00	0.00	0.02	0.00
C2	1.00	0.10	0.00	0.00	0.80	0.11	0.00	0.00	0.01	0.00
C3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C4	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Conduit Surcharge Summary

No conduits were surcharged.

Analysis begun on: Fri Dec 15 11:28:46 2023
Analysis ended on: Fri Dec 15 11:28:50 2023
Total elapsed time: 00:00:04

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

Element Count

Number of rain gages 7
 Number of subcatchments ... 8
 Number of nodes 7
 Number of links 4
 Number of pollutants 0
 Number of land uses 0

Raingage Summary

Name	Data Source	Data Type	Recording Interval
SCS_Type_II_103.2mm_100yr	SCS_Type_II_103.2mm_100yr	INTENSITY	6 min.
SCS_Type_II_103.2mm_100yr_+20%	SCS_Type_II_103.2mm_100yr_+20%	INTENSITY	6 min.
SCS_Type_II_104.4mm	SCS_Type_II_104.4mm	INTENSITY	6 min.
SCS_Type_II_115.2mm_12hr_100yr_+20%	SCS_Type_II_115.2mm_12hr_100yr_+20%	INTENSITY	6 min.
SCS_Type_II_37.2mm_2yr	SCS_Type_II_37.2mm_2yr	INTENSITY	6 min.
SCS_Type_II_57.6mm_12hr_5yr	SCS_Type_II_57.6mm_12hr_5yr	INTENSITY	6 min.
SCS_Type_II_96mm_12hr_100yr	SCS_Type_II_96mm_12hr_100yr	INTENSITY	6 min.

Subcatchment Summary

Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
S1	0.43	416.23	0.00	13.5700	SCS_Type_II_57.6mm_12hr_5yr	J1
S2	0.56	365.91	0.00	34.3370	SCS_Type_II_57.6mm_12hr_5yr	S1
S3	0.28	122.12	0.00	33.7950	SCS_Type_II_57.6mm_12hr_5yr	S1
S4	2.27	167.72	0.00	9.1980	SCS_Type_II_57.6mm_12hr_5yr	S1
S5	0.22	184.30	0.00	5.8430	SCS_Type_II_57.6mm_12hr_5yr	S3
S6	0.46	125.06	0.00	18.0000	SCS_Type_II_57.6mm_12hr_5yr	J6
S7	0.27	158.03	0.00	9.4810	SCS_Type_II_57.6mm_12hr_5yr	J7
S8	0.06	67.34	0.00	43.9950	SCS_Type_II_57.6mm_12hr_5yr	J8

LID Control Summary

Subcatchment	LID Control	No. of Units	Unit Area	Unit Width	% Area Covered	% Imperv Treated	% Perv Treated
S1	Trench-West	2	512.50	15.00	23.70	100.00	100.00
S6	Trench-East	1	150.00	4.50	3.26	100.00	100.00

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J1	JUNCTION	102.00	3.00	0.0	
J6	JUNCTION	100.30	1.00	0.0	
J7	JUNCTION	110.00	1.00	0.0	
J8	JUNCTION	103.66	1.00	0.0	
OF1	OUTFALL	97.70	1.00	0.0	
OF2	OUTFALL	96.90	1.00	0.0	
OF3	OUTFALL	108.49	1.00	0.0	

Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J7	OF3	CONDUIT	23.0	6.5691	0.0100
C2	J8	OF1	CONDUIT	23.8	25.9220	0.0100
C3	J1	J6	CONDUIT	220.8	0.7701	0.0100
C4	J6	OF2	CONDUIT	33.6	10.1786	0.0100

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	1.00	0.79	0.25	1.00	1	7989.05
C2	CIRCULAR	1.00	0.79	0.25	1.00	1	15869.99
C3	CIRCULAR	1.00	0.79	0.25	1.00	1	2735.35
C4	CIRCULAR	1.00	0.79	0.25	1.00	1	9944.59

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 LPS
Process Models:
 Rainfall/Runoff YES
 RDII NO
 Snowmelt NO
 Groundwater NO
 Flow Routing YES

Ponding Allowed YES
 Water Quality NO
 Infiltration Method HORTON
 Flow Routing Method DYNWAVE
 Surcharge Method EXTRAN
 Starting Date 01/01/2000 00:00:00
 Ending Date 01/03/2000 11:54:00
 Antecedent Dry Days 0.0
 Report Time Step 00:01:00
 Wet Time Step 00:06:00
 Dry Time Step 00:06:00
 Routing Time Step 5.00 sec
 Variable Time Step YES
 Maximum Trials 8
 Number of Threads 1
 Head Tolerance 0.001500 m

*****	Volume	Depth
Runoff Quantity Continuity	hectare-m	mm
*****	-----	-----
Total Precipitation	0.262	57.600
Evaporation Loss	0.000	0.000
Infiltration Loss	0.256	56.232
Surface Runoff	0.007	1.475
Final Storage	0.002	0.382
Continuity Error (%)	-0.849	

*****	Volume	Volume
Flow Routing Continuity	hectare-m	10^6 ltr
*****	-----	-----
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.007	0.067
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	0.007	0.067
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
Initial Stored Volume ...	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

 Time-Step Critical Elements

 None

 Highest Flow Instability Indexes

All links are stable.

 Routing Time Step Summary

Minimum Time Step : 4.50 sec
 Average Time Step : 5.00 sec
 Maximum Time Step : 5.00 sec
 Percent in Steady State : 0.00
 Average Iterations per Step : 2.00
 Percent Not Converging : 0.00
 Time Step Frequencies :
 5.000 - 3.155 sec : 100.00 %
 3.155 - 1.991 sec : 0.00 %
 1.991 - 1.256 sec : 0.00 %
 1.256 - 0.792 sec : 0.00 %
 0.792 - 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 mm	Total Runoff 10^6 ltr	Peak Runoff LPS	Runoff Coeff
S1	57.60	86.98	0.00	145.89	0.00	74.20	0.00	0.00	0.00	0.000
S2	57.60	0.00	0.00	36.31	0.00	20.50	20.50	0.11	63.77	0.356
S3	57.60	15.48	0.00	36.43	0.00	35.83	35.83	0.10	47.65	0.490
S4	57.60	0.00	0.00	50.84	0.00	7.03	7.03	0.16	136.43	0.122
S5	57.60	0.00	0.00	36.39	0.00	20.35	20.35	0.04	21.29	0.353
S6	57.60	0.00	0.00	58.55	0.00	10.16	-0.00	-0.00	0.00	-0.000
S7	57.60	0.00	0.00	36.39	0.00	20.31	20.31	0.06	26.61	0.353
S8	57.60	0.00	0.00	36.27	0.00	20.69	20.69	0.01	6.91	0.359

 LID Performance Summary

Subcatchment	LID Control	Total Inflow mm	Evap Loss mm	Infil Loss mm	Surface Outflow mm	Drain Outflow mm	Initial Storage mm	Final Storage mm	Continuity Error %
S1	Trench-West	370.70	0.00	370.70	0.00	0.00	0.00	0.00	-0.00
S6	Trench-East	369.11	0.00	369.11	0.00	0.00	0.00	0.00	-0.00

 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
J1	JUNCTION	0.00	0.00	102.00	0 06:40	0.00
J6	JUNCTION	0.00	0.00	100.30	0 00:00	0.00
J7	JUNCTION	0.00	0.04	110.04	0 06:00	0.04
J8	JUNCTION	0.00	0.02	103.68	0 05:54	0.02
OF1	OUTFALL	0.00	0.02	97.72	0 05:54	0.02
OF2	OUTFALL	0.00	0.00	96.90	0 00:00	0.00
OF3	OUTFALL	0.00	0.04	108.53	0 06:00	0.04

Node Inflow Summary

Node	Type	Maximum Lateral Inflow LPS	Maximum Total Inflow LPS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
J1	JUNCTION	0.00	0.00	0 06:18	7.24e-18	7.78e-18	0.000 ltr
J6	JUNCTION	-0.00	0.00	0 00:00	-1.01e-19	0	-0.000 ltr
J7	JUNCTION	26.61	26.61	0 06:00	0.0554	0.0554	0.002
J8	JUNCTION	6.91	6.91	0 05:54	0.0118	0.0118	-0.004
OF1	OUTFALL	0.00	6.91	0 05:54	0	0.0118	0.000
OF2	OUTFALL	0.00	0.00	0 00:00	0	0	0.000 ltr
OF3	OUTFALL	0.00	26.60	0 06:00	0	0.0554	0.000

Node Surcharge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

Outfall Loading Summary

Outfall Node	Flow Freq Pcmt	Avg Flow LPS	Max Flow LPS	Total Volume 10^6 ltr
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OF1	10.73	0.51	6.91	0.012
OF2	0.00	0.00	0.00	0.000
OF3	11.30	2.27	26.60	0.055
System	7.34	2.78	32.32	0.067

Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	26.60	0 06:00	2.33	0.00	0.04
C2	CONDUIT	6.91	0 05:54	2.48	0.00	0.02
C3	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C4	CONDUIT	0.00	0 00:00	0.00	0.00	0.00

Flow Classification Summary

Conduit	Adjusted /Actual Length	Fraction of Time in Flow Class								
		Up Dry	Down Dry	Sub Dry	Sup Crit	Up Crit	Down Crit	Norm Ltd	Inlet Ctrl	
C1	1.00	0.10	0.00	0.00	0.79	0.11	0.00	0.00	0.03	0.00
C2	1.00	0.10	0.00	0.00	0.80	0.11	0.00	0.00	0.02	0.00
C3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C4	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Conduit Surcharge Summary

No conduits were surcharged.

Analysis begun on: Fri Dec 15 11:28:46 2023
Analysis ended on: Fri Dec 15 11:28:50 2023
Total elapsed time: 00:00:04

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

Element Count

Number of rain gages 6
 Number of subcatchments ... 8
 Number of nodes 7
 Number of links 4
 Number of pollutants 0
 Number of land uses 0

Raingage Summary

Name	Data Source	Data Type	Recording Interval
SCS_Type_II_103.2mm_100yr	SCS_Type_II_103.2mm_100yr	INTENSITY	6 min.
SCS_Type_II_103.2mm_100yr_+20%	SCS_Type_II_103.2mm_100yr_+20%	INTENSITY	6 min.
SCS_Type_II_104.4mm	SCS_Type_II_104.4mm	INTENSITY	6 min.
SCS_Type_II_115.2mm_12hr_100yr_+20%	SCS_Type_II_115.2mm_12hr_100yr_+20%	INTENSITY	6 min.
SCS_Type_II_37.2mm_2yr	SCS_Type_II_37.2mm_2yr	INTENSITY	6 min.
SCS_Type_II_96mm_12hr_100yr	SCS_Type_II_96mm_12hr_100yr	INTENSITY	6 min.

Subcatchment Summary

Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
S1	0.43	416.23	0.00	13.5700	SCS_Type_II_96mm_12hr_100yr	J1
S2	0.56	365.91	0.00	34.3370	SCS_Type_II_96mm_12hr_100yr	S1
S3	0.28	122.12	0.00	33.7950	SCS_Type_II_96mm_12hr_100yr	S1
S4	2.27	167.72	0.00	9.1980	SCS_Type_II_96mm_12hr_100yr	S1
S5	0.22	184.30	0.00	5.8430	SCS_Type_II_96mm_12hr_100yr	S3
S6	0.46	125.06	0.00	18.0000	SCS_Type_II_96mm_12hr_100yr	J6
S7	0.27	158.03	0.00	9.4810	SCS_Type_II_96mm_12hr_100yr	J7
S8	0.06	67.34	0.00	43.9950	SCS_Type_II_96mm_12hr_100yr	J8

LID Control Summary

Subcatchment	LID Control	No. of Units	Unit Area	Unit Width	% Area Covered	% Imperv Treated	% Perv Treated
S1	Trench-West	2	512.50	15.00	23.70	100.00	100.00
S6	Trench-East	1	150.00	4.50	3.26	100.00	100.00

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J1	JUNCTION	102.00	3.00	0.0	
J6	JUNCTION	100.30	1.00	0.0	
J7	JUNCTION	110.00	1.00	0.0	
J8	JUNCTION	103.66	1.00	0.0	
OF1	OUTFALL	97.70	1.00	0.0	
OF2	OUTFALL	96.90	1.00	0.0	
OF3	OUTFALL	108.49	1.00	0.0	

Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J7	OF3	CONDUIT	23.0	6.5691	0.0100
C2	J8	OF1	CONDUIT	23.8	25.9220	0.0100
C3	J1	J6	CONDUIT	220.8	0.7701	0.0100
C4	J6	OF2	CONDUIT	33.6	10.1786	0.0100

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	1.00	0.79	0.25	1.00	1	7989.05
C2	CIRCULAR	1.00	0.79	0.25	1.00	1	15869.99
C3	CIRCULAR	1.00	0.79	0.25	1.00	1	2735.35
C4	CIRCULAR	1.00	0.79	0.25	1.00	1	9944.59

 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 LPS
 Process Models:
 Rainfall/Runoff YES
 RDII NO
 Snowmelt NO
 Groundwater NO
 Flow Routing YES
 Ponding Allowed YES

Water Quality NO
 Infiltration Method HORTON
 Flow Routing Method DYNWAVE
 Surcharge Method EXTRAN
 Starting Date 01/01/2000 00:00:00
 Ending Date 01/03/2000 11:54:00
 Antecedent Dry Days 0.0
 Report Time Step 00:01:00
 Wet Time Step 00:06:00
 Dry Time Step 00:06:00
 Routing Time Step 5.00 sec
 Variable Time Step YES
 Maximum Trials 8
 Number of Threads 1
 Head Tolerance 0.001500 m

*****	Volume	Depth
Runoff Quantity Continuity	hectare-m	mm
*****	-----	-----
Total Precipitation	0.437	96.000
Evaporation Loss	0.000	0.000
Infiltration Loss	0.422	92.668
Surface Runoff	0.016	3.547
Final Storage	0.002	0.383
Continuity Error (%)	-0.624	

*****	Volume	Volume
Flow Routing Continuity	hectare-m	10^6 ltr
*****	-----	-----
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.016	0.162
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	0.016	0.162
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

 Time-Step Critical Elements

 None

 Highest Flow Instability Indexes

 All links are stable.

Routing Time Step Summary

Minimum Time Step : 4.34 sec
 Average Time Step : 5.00 sec
 Maximum Time Step : 5.00 sec
 Percent in Steady State : -0.00
 Average Iterations per Step : 2.00
 Percent Not Converging : 0.00
 Time Step Frequencies :
 5.000 - 3.155 sec : 100.00 %
 3.155 - 1.991 sec : 0.00 %
 1.991 - 1.256 sec : 0.00 %
 1.256 - 0.792 sec : 0.00 %
 0.792 - 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 mm	Total Runoff 10 ⁶ ltr	Peak Runoff LPS	Runoff Coeff
S1	96.00	278.12	0.00	375.65	0.00	274.39	0.00	0.00	0.00	0.000
S2	96.00	0.00	0.00	45.97	0.00	49.05	49.05	0.27	149.21	0.511
S3	96.00	37.29	0.00	46.13	0.00	86.29	86.29	0.25	114.50	0.647
S4	96.00	0.00	0.00	66.45	0.00	30.07	30.07	0.68	494.42	0.313
S5	96.00	0.00	0.00	46.05	0.00	49.04	49.04	0.11	55.59	0.511
S6	96.00	0.00	0.00	96.96	0.00	32.33	-0.00	-0.00	0.00	-0.000
S7	96.00	0.00	0.00	46.09	0.00	49.02	49.02	0.13	69.20	0.511
S8	96.00	0.00	0.00	45.93	0.00	49.02	49.02	0.03	15.34	0.511

LID Performance Summary

Subcatchment	LID Control	Total Inflow mm	Evap Loss mm	Infil Loss mm	Surface Outflow mm	Drain Outflow mm	Initial Storage mm	Final Storage mm	Continuity Error %
S1	Trench-West	1253.77	0.00	1253.77	0.00	0.00	0.00	0.00	0.00
S6	Trench-East	1087.35	0.00	1087.35	0.00	0.00	0.00	0.00	0.00

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
J1	JUNCTION	0.00	0.00	102.00	0 07:10	0.00
J6	JUNCTION	0.00	0.00	100.30	0 00:00	0.00
J7	JUNCTION	0.00	0.07	110.07	0 05:54	0.07
J8	JUNCTION	0.00	0.02	103.68	0 05:54	0.02
OF1	OUTFALL	0.00	0.02	97.72	0 05:54	0.02
OF2	OUTFALL	0.00	0.00	96.90	0 00:00	0.00
OF3	OUTFALL	0.00	0.07	108.56	0 05:54	0.07

Node Inflow Summary

Node	Type	Maximum Lateral Inflow LPS	Maximum Total Inflow LPS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
J1	JUNCTION	0.00	0.00	0 07:06	8.55e-19	1.39e-18	0.000 ltr
J6	JUNCTION	-0.00	0.00	0 00:00	-4.02e-19	0	-0.000 ltr
J7	JUNCTION	69.20	69.20	0 05:54	0.134	0.134	0.006
J8	JUNCTION	15.34	15.34	0 05:54	0.0278	0.0278	-0.004
OF1	OUTFALL	0.00	15.34	0 05:54	0	0.0278	0.000
OF2	OUTFALL	0.00	0.00	0 00:00	0	0	0.000 ltr
OF3	OUTFALL	0.00	69.25	0 05:54	0	0.134	0.000

Node Surcharge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

Outfall Loading Summary

Outfall Node	Flow Freq Pcnt	Avg Flow LPS	Max Flow LPS	Total Volume 10^6 ltr
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OF1	11.48	1.14	15.34	0.028
OF2	0.00	0.00	0.00	0.000
OF3	12.15	5.19	69.25	0.134

System	7.88	6.33	84.59	0.162

Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	69.25	0 05:54	3.12	0.01	0.07
C2	CONDUIT	15.34	0 05:54	3.16	0.00	0.02
C3	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C4	CONDUIT	0.00	0 00:00	0.00	0.00	0.00

Flow Classification Summary

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	0.09	0.00	0.00	0.79	0.12	0.00	0.00	0.09	0.00
C2	1.00	0.09	0.00	0.00	0.80	0.12	0.00	0.00	0.06	0.00
C3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C4	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Conduit Surcharge Summary

No conduits were surcharged.

Analysis begun on: Fri Dec 15 11:28:46 2023
Analysis ended on: Fri Dec 15 11:28:50 2023
Total elapsed time: 00:00:04

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

Element Count

Number of rain gages 6
 Number of subcatchments ... 8
 Number of nodes 7
 Number of links 4
 Number of pollutants 0
 Number of land uses 0

Raingage Summary

Name	Data Source	Data Type	Recording Interval
SCS_Type_II_103.2mm_100yr	SCS_Type_II_103.2mm_100yr	INTENSITY	6 min.
SCS_Type_II_103.2mm_100yr_+20%	SCS_Type_II_103.2mm_100yr_+20%	INTENSITY	6 min.
SCS_Type_II_104.4mm	SCS_Type_II_104.4mm	INTENSITY	6 min.
SCS_Type_II_115.2mm_12hr_100yr_+20%	SCS_Type_II_115.2mm_12hr_100yr_+20%	INTENSITY	6 min.
SCS_Type_II_37.2mm_2yr	SCS_Type_II_37.2mm_2yr	INTENSITY	6 min.
SCS_Type_II_96mm_12hr_100yr	SCS_Type_II_96mm_12hr_100yr	INTENSITY	6 min.

Subcatchment Summary

Name	Area	Width	%Imperv	%Slope	Rain Gage	Outlet
S1	0.43	416.23	0.00	13.5700	SCS_Type_II_115.2mm_12hr_100yr_+20%	J1
S2	0.56	365.91	0.00	34.3370	SCS_Type_II_115.2mm_12hr_100yr_+20%	S1
S3	0.28	122.12	0.00	33.7950	SCS_Type_II_115.2mm_12hr_100yr_+20%	S1
S4	2.27	167.72	0.00	9.1980	SCS_Type_II_115.2mm_12hr_100yr_+20%	S1
S5	0.22	184.30	0.00	5.8430	SCS_Type_II_115.2mm_12hr_100yr_+20%	S3
S6	0.46	125.06	0.00	18.0000	SCS_Type_II_115.2mm_12hr_100yr_+20%	J6
S7	0.27	158.03	0.00	9.4810	SCS_Type_II_115.2mm_12hr_100yr_+20%	J7
S8	0.06	67.34	0.00	43.9950	SCS_Type_II_115.2mm_12hr_100yr_+20%	J8

LID Control Summary

Subcatchment	LID Control	No. of Units	Unit Area	Unit Width	% Area Covered	% Imperv Treated	% Perv Treated
S1	Trench-West	2	512.50	15.00	23.70	100.00	100.00
S6	Trench-East	1	150.00	4.50	3.26	100.00	100.00

Node Summary

Name	Type	Invert Elev.	Max. Depth	Ponded Area	External Inflow
J1	JUNCTION	102.00	3.00	0.0	
J6	JUNCTION	100.30	1.00	0.0	
J7	JUNCTION	110.00	1.00	0.0	
J8	JUNCTION	103.66	1.00	0.0	
OF1	OUTFALL	97.70	1.00	0.0	
OF2	OUTFALL	96.90	1.00	0.0	
OF3	OUTFALL	108.49	1.00	0.0	

Link Summary

Name	From Node	To Node	Type	Length	%Slope	Roughness
C1	J7	OF3	CONDUIT	23.0	6.5691	0.0100
C2	J8	OF1	CONDUIT	23.8	25.9220	0.0100
C3	J1	J6	CONDUIT	220.8	0.7701	0.0100
C4	J6	OF2	CONDUIT	33.6	10.1786	0.0100

Cross Section Summary

Conduit	Shape	Full Depth	Full Area	Hyd. Rad.	Max. Width	No. of Barrels	Full Flow
C1	CIRCULAR	1.00	0.79	0.25	1.00	1	7989.05
C2	CIRCULAR	1.00	0.79	0.25	1.00	1	15869.99
C3	CIRCULAR	1.00	0.79	0.25	1.00	1	2735.35
C4	CIRCULAR	1.00	0.79	0.25	1.00	1	9944.59

 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 LPS

Process Models:

- Rainfall/Runoff YES
- RDII NO
- Snowmelt NO
- Groundwater NO
- Flow Routing YES
- Ponding Allowed YES

Water Quality NO
 Infiltration Method HORTON
 Flow Routing Method DYNWAVE
 Surcharge Method EXTRAN
 Starting Date 01/01/2000 00:00:00
 Ending Date 01/03/2000 11:54:00
 Antecedent Dry Days 0.0
 Report Time Step 00:01:00
 Wet Time Step 00:06:00
 Dry Time Step 00:06:00
 Routing Time Step 5.00 sec
 Variable Time Step YES
 Maximum Trials 8
 Number of Threads 1
 Head Tolerance 0.001500 m

*****	Volume	Depth
Runoff Quantity Continuity	hectare-m	mm
*****	-----	-----
Total Precipitation	0.525	115.200
Evaporation Loss	0.000	0.000
Infiltration Loss	0.505	110.779
Surface Runoff	0.021	4.695
Final Storage	0.002	0.383
Continuity Error (%)	-0.570	

*****	Volume	Volume
Flow Routing Continuity	hectare-m	10^6 ltr
*****	-----	-----
Dry Weather Inflow	0.000	0.000
Wet Weather Inflow	0.021	0.214
Groundwater Inflow	0.000	0.000
RDII Inflow	0.000	0.000
External Inflow	0.000	0.000
External Outflow	0.021	0.214
Flooding Loss	0.000	0.000
Evaporation Loss	0.000	0.000
Exfiltration Loss	0.000	0.000
Initial Stored Volume	0.000	0.000
Final Stored Volume	0.000	0.000
Continuity Error (%)	0.000	

 Time-Step Critical Elements

 None

 Highest Flow Instability Indexes

 All links are stable.

Routing Time Step Summary

Minimum Time Step : 0.35 sec
 Average Time Step : 5.00 sec
 Maximum Time Step : 5.00 sec
 Percent in Steady State : 0.00
 Average Iterations per Step : 2.00
 Percent Not Converging : 0.00
 Time Step Frequencies :
 5.000 - 3.155 sec : 100.00 %
 3.155 - 1.991 sec : 0.00 %
 1.991 - 1.256 sec : 0.00 %
 1.256 - 0.792 sec : 0.00 %
 0.792 - 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 mm	Total Runoff 10 ⁶ ltr	Peak Runoff LPS	Runoff Coeff
S1	115.20	378.12	0.00	494.07	0.00	380.54	0.00	0.00	0.00	0.000
S2	115.20	0.00	0.00	49.34	0.00	64.89	64.89	0.36	194.98	0.563
S3	115.20	49.81	0.00	49.50	0.00	114.64	114.64	0.33	152.43	0.695
S4	115.20	0.00	0.00	74.22	0.00	41.65	41.65	0.95	662.54	0.362
S5	115.20	0.00	0.00	49.42	0.00	65.49	65.49	0.14	76.64	0.568
S6	115.20	0.00	0.00	116.39	0.00	43.34	0.00	0.00	0.00	0.000
S7	115.20	0.00	0.00	49.46	0.00	64.90	64.90	0.18	91.62	0.563
S8	115.20	0.00	0.00	49.27	0.00	64.83	64.83	0.04	19.96	0.563

LID Performance Summary

Subcatchment	LID Control	Total Inflow mm	Evap Loss mm	Infil Loss mm	Surface Outflow mm	Drain Outflow mm	Initial Storage mm	Final Storage mm	Continuity Error %
S1	Trench-West	1720.90	0.00	1720.90	0.00	0.00	0.00	0.00	-0.00
S6	Trench-East	1444.39	0.00	1444.39	0.00	0.00	0.00	0.00	0.00

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
J1	JUNCTION	0.00	0.00	102.00	0 06:24	0.00
J6	JUNCTION	0.00	0.00	100.30	0 06:24	0.00
J7	JUNCTION	0.00	0.08	110.08	0 05:54	0.08
J8	JUNCTION	0.00	0.03	103.69	0 05:54	0.03
OF1	OUTFALL	0.00	0.03	97.73	0 05:54	0.03
OF2	OUTFALL	0.00	0.00	96.90	0 00:00	0.00
OF3	OUTFALL	0.00	0.08	108.57	0 05:54	0.07

Node Inflow Summary

Node	Type	Maximum Lateral Inflow LPS	Maximum Total Inflow LPS	Time of Max Occurrence days hr:min	Lateral Inflow Volume 10^6 ltr	Total Inflow Volume 10^6 ltr	Flow Balance Error Percent
J1	JUNCTION	0.00	0.00	0 06:18	7.85e-18	1.5e-17	0.000 ltr
J6	JUNCTION	0.00	0.00	0 05:42	1.61e-18	1.61e-18	0.000 ltr
J7	JUNCTION	91.62	91.62	0 05:54	0.177	0.177	0.009
J8	JUNCTION	19.96	19.96	0 05:54	0.0368	0.0368	-0.003
OF1	OUTFALL	0.00	19.97	0 05:54	0	0.0368	0.000
OF2	OUTFALL	0.00	0.00	0 00:00	0	0	0.000 ltr
OF3	OUTFALL	0.00	91.70	0 05:54	0	0.177	0.000

Node Surcharge Summary

No nodes were surcharged.

Node Flooding Summary

No nodes were flooded.

Outfall Loading Summary

Outfall Node	Flow Freq Pcnt	Avg Flow LPS	Max Flow LPS	Total Volume 10^6 ltr
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OF1	12.04	1.48	19.97	0.037
OF2	0.00	0.00	0.00	0.000
OF3	12.76	6.71	91.70	0.177

System	8.27	8.19	111.64	0.214

Link Flow Summary

Link	Type	Maximum Flow LPS	Time of Max Occurrence days hr:min	Maximum Veloc m/sec	Max/ Full Flow	Max/ Full Depth
C1	CONDUIT	91.70	0 05:54	3.40	0.01	0.08
C2	CONDUIT	19.97	0 05:54	3.42	0.00	0.03
C3	CONDUIT	0.00	0 00:00	0.00	0.00	0.00
C4	CONDUIT	0.00	0 00:00	0.00	0.00	0.00

Flow Classification Summary

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	0.08	0.00	0.00	0.79	0.13	0.00	0.00	0.08	0.00
C2	1.00	0.08	0.00	0.00	0.79	0.12	0.00	0.00	0.09	0.00
C3	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
C4	1.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Conduit Surcharge Summary

No conduits were surcharged.

Analysis begun on: Fri Dec 15 11:28:46 2023
Analysis ended on: Fri Dec 15 11:28:50 2023
Total elapsed time: 00:00:04

**PCSWMM DETAILED LID REPORTS
POST_DEVELOPMENT**

SWMM5 LID Report File

Project:
 LID Unit: Trench-West in Subcatchment S1
 Storm Event: SCS_Type_II_87mm_6hr_100yr

Date	Time	Elapsed Time Hours	Total Inflow mm/hr	Total Evap mm/hr	Surface Infil mm/hr	Pavement Perc mm/hr	Soil Perc mm/hr	Storage Exfil mm/hr	Surface Runoff mm/hr	Drain OutFlow mm/hr	Surface Level mm	Pavement Level mm	Soil Moisture Content	Storage Level mm
01/01/2000	00:06:00	0.100	3.878	0.0000	3.878	0.000	0.000	3.878	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:12:00	0.200	3.940	0.0000	3.940	0.000	0.000	3.940	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:18:00	0.300	3.940	0.0000	3.940	0.000	0.000	3.940	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:24:00	0.400	3.940	0.0000	3.940	0.000	0.000	3.940	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:30:00	0.500	3.940	0.0000	3.940	0.000	0.000	3.940	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:36:00	0.600	3.940	0.0000	3.940	0.000	0.000	3.940	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:42:00	0.700	4.038	0.0000	4.038	0.000	0.000	4.038	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:48:00	0.800	4.235	0.0000	4.235	0.000	0.000	4.235	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:54:00	0.900	4.432	0.0000	4.432	0.000	0.000	4.432	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:00:00	1.000	4.629	0.0000	4.629	0.000	0.000	4.629	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:06:00	1.100	4.826	0.0000	4.826	0.000	0.000	4.826	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:12:00	1.200	5.073	0.0000	5.073	0.000	0.000	5.073	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:18:00	1.300	5.368	0.0000	5.368	0.000	0.000	5.368	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:24:00	1.400	5.664	0.0000	5.664	0.000	0.000	5.664	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:30:00	1.500	5.959	0.0000	5.959	0.000	0.000	5.959	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:36:00	1.600	6.255	0.0000	6.255	0.000	0.000	6.255	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:42:00	1.700	6.649	0.0000	6.649	0.000	0.000	6.649	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:48:00	1.800	7.141	0.0000	7.141	0.000	0.000	7.141	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:54:00	1.900	7.634	0.0000	7.634	0.000	0.000	7.634	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:00:00	2.000	8.126	0.0000	8.126	0.000	0.000	8.126	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:06:00	2.100	8.618	0.0000	8.618	0.000	0.000	8.618	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:12:00	2.200	9.456	0.0000	9.456	0.000	0.000	9.456	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:18:00	2.300	10.638	0.0000	10.638	0.000	0.000	10.638	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:24:00	2.400	11.820	0.0000	11.820	0.000	0.000	11.820	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:30:00	2.500	13.002	0.0000	13.002	0.000	0.000	13.002	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:36:00	2.600	14.184	0.0000	14.184	0.000	0.000	14.184	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:42:00	2.700	29.352	0.0000	29.352	0.000	0.000	29.352	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:48:00	2.800	58.507	0.0000	58.507	0.000	0.000	58.507	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:54:00	2.900	445.954	0.0000	445.954	0.000	0.000	187.000	0.000	0.000	0.000	0.000	0.000	69.054
01/01/2000	03:00:00	3.000	1321.996	0.0000	1321.996	0.000	0.000	187.000	0.000	0.000	0.000	0.000	0.000	371.720
01/01/2000	03:06:00	3.100	2824.294	0.0000	2824.294	0.000	0.000	187.000	0.000	0.000	0.000	0.000	0.000	1074.998
01/01/2000	03:12:00	3.200	2766.258	0.0000	655.756	0.000	0.000	187.000	0.000	0.000	211.050	0.000	0.000	1200.000
01/01/2000	03:18:00	3.300	1488.187	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	341.169	0.000	0.000	1200.000
01/01/2000	03:24:00	3.400	952.314	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	417.700	0.000	0.000	1200.000
01/01/2000	03:30:00	3.500	677.264	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	466.727	0.000	0.000	1200.000
01/01/2000	03:36:00	3.600	495.051	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	497.532	0.000	0.000	1200.000
01/01/2000	03:42:00	3.700	361.340	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	514.966	0.000	0.000	1200.000
01/01/2000	03:48:00	3.800	267.277	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	522.994	0.000	0.000	1200.000
01/01/2000	03:54:00	3.900	202.840	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	524.578	0.000	0.000	1200.000
01/01/2000	04:00:00	4.000	155.163	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	521.394	0.000	0.000	1200.000
01/01/2000	04:06:00	4.100	117.956	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	514.489	0.000	0.000	1200.000
01/01/2000	04:12:00	4.200	88.639	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	504.653	0.000	0.000	1200.000
01/01/2000	04:18:00	4.300	66.554	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	492.609	0.000	0.000	1200.000
01/01/2000	04:24:00	4.400	50.840	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	478.993	0.000	0.000	1200.000
01/01/2000	04:30:00	4.500	41.597	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	464.452	0.000	0.000	1200.000
01/01/2000	04:36:00	4.600	36.858	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	449.438	0.000	0.000	1200.000
01/01/2000	04:42:00	4.700	32.956	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	434.034	0.000	0.000	1200.000
01/01/2000	04:48:00	4.800	29.541	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	418.288	0.000	0.000	1200.000
01/01/2000	04:54:00	4.900	26.433	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	402.231	0.000	0.000	1200.000
01/01/2000	05:00:00	5.000	23.487	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	385.880	0.000	0.000	1200.000
01/01/2000	05:06:00	5.100	20.624	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	369.242	0.000	0.000	1200.000
01/01/2000	05:12:00	5.200	18.091	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	352.352	0.000	0.000	1200.000
01/01/2000	05:18:00	5.300	16.074	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	335.259	0.000	0.000	1200.000
01/01/2000	05:24:00	5.400	14.536	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	318.013	0.000	0.000	1200.000
01/01/2000	05:30:00	5.500	13.242	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	300.637	0.000	0.000	1200.000
01/01/2000	05:36:00	5.600	12.130	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	283.150	0.000	0.000	1200.000
01/01/2000	05:42:00	5.700	11.068	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	265.557	0.000	0.000	1200.000
01/01/2000	05:48:00	5.800	10.080	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	247.865	0.000	0.000	1200.000
01/01/2000	05:54:00	5.900	9.088	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	230.073	0.000	0.000	1200.000
01/01/2000	06:00:00	6.000	8.144	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	212.188	0.000	0.000	1200.000
01/01/2000	06:06:00	6.100	0.000	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	193.488	0.000	0.000	1200.000
01/01/2000	06:12:00	6.200	0.000	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	174.788	0.000	0.000	1200.000

SWMM5 LID Report File

Project:
 LID Unit: Trench-East in Subcatchment S6
 Storm Event: SCS_Type_II_87mm_6hr_100yr

Date	Time	Elapsed Time Hours	Total Inflow mm/hr	Total Evap mm/hr	Surface Infil mm/hr	Pavement Perc mm/hr	Soil Perc mm/hr	Storage Exfil mm/hr	Surface Runoff mm/hr	Drain OutFlow mm/hr	Surface Level mm	Pavement Level mm	Soil Moisture Content	Storage Level mm
01/01/2000	00:06:00	0.100	3.878	0.0000	3.878	0.000	0.000	3.878	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:12:00	0.200	3.940	0.0000	3.940	0.000	0.000	3.940	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:18:00	0.300	3.940	0.0000	3.940	0.000	0.000	3.940	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:24:00	0.400	3.940	0.0000	3.940	0.000	0.000	3.940	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:30:00	0.500	3.940	0.0000	3.940	0.000	0.000	3.940	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:36:00	0.600	3.940	0.0000	3.940	0.000	0.000	3.940	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:42:00	0.700	4.038	0.0000	4.038	0.000	0.000	4.038	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:48:00	0.800	4.235	0.0000	4.235	0.000	0.000	4.235	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:54:00	0.900	4.432	0.0000	4.432	0.000	0.000	4.432	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:00:00	1.000	4.629	0.0000	4.629	0.000	0.000	4.629	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:06:00	1.100	4.826	0.0000	4.826	0.000	0.000	4.826	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:12:00	1.200	5.073	0.0000	5.073	0.000	0.000	5.073	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:18:00	1.300	5.368	0.0000	5.368	0.000	0.000	5.368	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:24:00	1.400	5.664	0.0000	5.664	0.000	0.000	5.664	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:30:00	1.500	5.959	0.0000	5.959	0.000	0.000	5.959	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:36:00	1.600	6.255	0.0000	6.255	0.000	0.000	6.255	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:42:00	1.700	6.649	0.0000	6.649	0.000	0.000	6.649	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:48:00	1.800	7.141	0.0000	7.141	0.000	0.000	7.141	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:54:00	1.900	7.634	0.0000	7.634	0.000	0.000	7.634	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:00:00	2.000	8.126	0.0000	8.126	0.000	0.000	8.126	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:06:00	2.100	8.618	0.0000	8.618	0.000	0.000	8.618	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:12:00	2.200	9.456	0.0000	9.456	0.000	0.000	9.456	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:18:00	2.300	10.638	0.0000	10.638	0.000	0.000	10.638	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:24:00	2.400	11.820	0.0000	11.820	0.000	0.000	11.820	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:30:00	2.500	13.002	0.0000	13.002	0.000	0.000	13.002	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:36:00	2.600	14.184	0.0000	14.184	0.000	0.000	14.184	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:42:00	2.700	29.352	0.0000	29.352	0.000	0.000	29.352	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:48:00	2.800	58.507	0.0000	58.507	0.000	0.000	58.507	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:54:00	2.900	1449.505	0.0000	1449.505	0.000	0.000	187.000	0.000	0.000	0.000	0.000	0.000	336.668
01/01/2000	03:00:00	3.000	4259.154	0.0000	2674.495	0.000	0.000	187.000	0.000	0.000	158.466	0.000	0.000	1000.000
01/01/2000	03:06:00	3.100	3275.327	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	467.299	0.000	0.000	1000.000
01/01/2000	03:12:00	3.200	911.467	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	539.745	0.000	0.000	1000.000
01/01/2000	03:18:00	3.300	462.058	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	567.251	0.000	0.000	1000.000
01/01/2000	03:24:00	3.400	282.814	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	576.833	0.000	0.000	1000.000
01/01/2000	03:30:00	3.500	175.041	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	575.637	0.000	0.000	1000.000
01/01/2000	03:36:00	3.600	94.380	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	566.375	0.000	0.000	1000.000
01/01/2000	03:42:00	3.700	41.578	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	551.832	0.000	0.000	1000.000
01/01/2000	03:48:00	3.800	14.817	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	534.614	0.000	0.000	1000.000
01/01/2000	03:54:00	3.900	9.111	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	516.825	0.000	0.000	1000.000
01/01/2000	04:00:00	4.000	8.471	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	498.972	0.000	0.000	1000.000
01/01/2000	04:06:00	4.100	7.831	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	481.055	0.000	0.000	1000.000
01/01/2000	04:12:00	4.200	7.338	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	463.089	0.000	0.000	1000.000
01/01/2000	04:18:00	4.300	6.993	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	445.089	0.000	0.000	1000.000
01/01/2000	04:24:00	4.400	6.649	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	427.053	0.000	0.000	1000.000
01/01/2000	04:30:00	4.500	6.304	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	408.984	0.000	0.000	1000.000
01/01/2000	04:36:00	4.600	5.959	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	390.880	0.000	0.000	1000.000
01/01/2000	04:42:00	4.700	5.664	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	372.746	0.000	0.000	1000.000
01/01/2000	04:48:00	4.800	5.417	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	354.588	0.000	0.000	1000.000
01/01/2000	04:54:00	4.900	5.171	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	336.405	0.000	0.000	1000.000
01/01/2000	05:00:00	5.000	4.925	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	318.197	0.000	0.000	1000.000
01/01/2000	05:06:00	5.100	4.679	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	299.965	0.000	0.000	1000.000
01/01/2000	05:12:00	5.200	4.519	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	281.717	0.000	0.000	1000.000
01/01/2000	05:18:00	5.300	4.420	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	263.459	0.000	0.000	1000.000
01/01/2000	05:24:00	5.400	4.346	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	245.194	0.000	0.000	1000.000
01/01/2000	05:30:00	5.500	4.248	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	226.918	0.000	0.000	1000.000
01/01/2000	05:36:00	5.600	4.174	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	208.636	0.000	0.000	1000.000
01/01/2000	05:42:00	5.700	4.075	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	190.343	0.000	0.000	1000.000
01/01/2000	05:48:00	5.800	4.001	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	172.044	0.000	0.000	1000.000
01/01/2000	05:54:00	5.900	3.903	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	153.734	0.000	0.000	1000.000
01/01/2000	06:00:00	6.000	3.829	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	135.417	0.000	0.000	1000.000
01/01/2000	06:06:00	6.100	0.000	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	116.717	0.000	0.000	1000.000
01/01/2000	06:12:00	6.200	0.000	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	98.017	0.000	0.000	1000.000

SWMM5 LID Report File

Project:
 LID Unit: Trench-West in Subcatchment S1
 Storm Event: SCS_Type_II_96mm_12hr_100yr

Date	Time	Elapsed Time Hours	Total Inflow mm/hr	Total Evap mm/hr	Surface Infil mm/hr	Pavement Perc mm/hr	Soil Perc mm/hr	Storage Exfil mm/hr	Surface Runoff mm/hr	Drain OutFlow mm/hr	Surface Level mm	Pavement Level mm	Soil Moisture Content	Storage Level mm
01/01/2000	00:06:00	0.100	2.066	0.0000	2.066	0.000	0.000	2.066	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:12:00	0.200	2.089	0.0000	2.089	0.000	0.000	2.089	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:18:00	0.300	2.112	0.0000	2.112	0.000	0.000	2.112	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:24:00	0.400	2.135	0.0000	2.135	0.000	0.000	2.135	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:30:00	0.500	2.157	0.0000	2.157	0.000	0.000	2.157	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:36:00	0.600	2.180	0.0000	2.180	0.000	0.000	2.180	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:42:00	0.700	2.203	0.0000	2.203	0.000	0.000	2.203	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:48:00	0.800	2.226	0.0000	2.226	0.000	0.000	2.226	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:54:00	0.900	2.249	0.0000	2.249	0.000	0.000	2.249	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:00:00	1.000	2.272	0.0000	2.272	0.000	0.000	2.272	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:06:00	1.100	2.294	0.0000	2.294	0.000	0.000	2.294	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:12:00	1.200	2.317	0.0000	2.317	0.000	0.000	2.317	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:18:00	1.300	2.340	0.0000	2.340	0.000	0.000	2.340	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:24:00	1.400	2.363	0.0000	2.363	0.000	0.000	2.363	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:30:00	1.500	2.386	0.0000	2.386	0.000	0.000	2.386	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:36:00	1.600	2.409	0.0000	2.409	0.000	0.000	2.409	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:42:00	1.700	2.431	0.0000	2.431	0.000	0.000	2.431	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:48:00	1.800	2.454	0.0000	2.454	0.000	0.000	2.454	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:54:00	1.900	2.477	0.0000	2.477	0.000	0.000	2.477	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:00:00	2.000	2.500	0.0000	2.500	0.000	0.000	2.500	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:06:00	2.100	2.568	0.0000	2.568	0.000	0.000	2.568	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:12:00	2.200	2.683	0.0000	2.683	0.000	0.000	2.683	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:18:00	2.300	2.797	0.0000	2.797	0.000	0.000	2.797	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:24:00	2.400	2.911	0.0000	2.911	0.000	0.000	2.911	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:30:00	2.500	3.025	0.0000	3.025	0.000	0.000	3.025	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:36:00	2.600	3.139	0.0000	3.139	0.000	0.000	3.139	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:42:00	2.700	3.253	0.0000	3.253	0.000	0.000	3.253	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:48:00	2.800	3.367	0.0000	3.367	0.000	0.000	3.367	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:54:00	2.900	3.482	0.0000	3.482	0.000	0.000	3.482	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:00:00	3.000	3.596	0.0000	3.596	0.000	0.000	3.596	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:06:00	3.100	3.653	0.0000	3.653	0.000	0.000	3.653	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:12:00	3.200	3.653	0.0000	3.653	0.000	0.000	3.653	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:18:00	3.300	3.653	0.0000	3.653	0.000	0.000	3.653	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:24:00	3.400	3.653	0.0000	3.653	0.000	0.000	3.653	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:30:00	3.500	3.653	0.0000	3.653	0.000	0.000	3.653	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:36:00	3.600	3.744	0.0000	3.744	0.000	0.000	3.744	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:42:00	3.700	3.927	0.0000	3.927	0.000	0.000	3.927	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:48:00	3.800	4.109	0.0000	4.109	0.000	0.000	4.109	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:54:00	3.900	4.292	0.0000	4.292	0.000	0.000	4.292	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:00:00	4.000	4.475	0.0000	4.475	0.000	0.000	4.475	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:06:00	4.100	4.703	0.0000	4.703	0.000	0.000	4.703	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:12:00	4.200	4.977	0.0000	4.977	0.000	0.000	4.977	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:18:00	4.300	5.251	0.0000	5.251	0.000	0.000	5.251	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:24:00	4.400	5.525	0.0000	5.525	0.000	0.000	5.525	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:30:00	4.500	5.799	0.0000	5.799	0.000	0.000	5.799	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:36:00	4.600	6.164	0.0000	6.164	0.000	0.000	6.164	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:42:00	4.700	6.621	0.0000	6.621	0.000	0.000	6.621	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:48:00	4.800	7.077	0.0000	7.077	0.000	0.000	7.077	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:54:00	4.900	7.534	0.0000	7.534	0.000	0.000	7.534	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:00:00	5.000	7.990	0.0000	7.990	0.000	0.000	7.990	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:06:00	5.100	8.767	0.0000	8.767	0.000	0.000	8.767	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:12:00	5.200	9.863	0.0000	9.863	0.000	0.000	9.863	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:18:00	5.300	10.958	0.0000	10.958	0.000	0.000	10.958	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:24:00	5.400	12.054	0.0000	12.054	0.000	0.000	12.054	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:30:00	5.500	13.150	0.0000	13.150	0.000	0.000	13.150	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:36:00	5.600	27.213	0.0000	27.213	0.000	0.000	27.213	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:42:00	5.700	200.139	0.0000	200.139	0.000	0.000	187.000	0.000	0.000	0.000	0.000	0.000	3.504
01/01/2000	05:48:00	5.800	523.752	0.0000	523.752	0.000	0.000	187.000	0.000	0.000	0.000	0.000	0.000	93.304
01/01/2000	05:54:00	5.900	1333.676	0.0000	1333.676	0.000	0.000	187.000	0.000	0.000	0.000	0.000	0.000	399.085
01/01/2000	06:00:00	6.000	2695.017	0.0000	2695.017	0.000	0.000	187.000	0.000	0.000	0.000	0.000	0.000	1067.889
01/01/2000	06:06:00	6.100	2600.838	0.0000	682.416	0.000	0.000	187.000	0.000	0.000	191.842	0.000	0.000	1200.000
01/01/2000	06:12:00	6.200	1407.384	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	313.881	0.000	0.000	1200.000

SWMM5 LID Report File

Project:
 LID Unit: Trench-East in Subcatchment S6
 Storm Event: SCS_Type_II_96mm_12hr_100yr

Date	Time	Elapsed Time Hours	Total Inflow mm/hr	Total Evap mm/hr	Surface Infil mm/hr	Pavement Perc mm/hr	Soil Perc mm/hr	Storage Exfil mm/hr	Surface Runoff mm/hr	Drain OutFlow mm/hr	Surface Level mm	Pavement Level mm	Soil Moisture Content	Storage Level mm
01/01/2000	00:06:00	0.100	2.066	0.0000	2.066	0.000	0.000	2.066	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:12:00	0.200	2.089	0.0000	2.089	0.000	0.000	2.089	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:18:00	0.300	2.112	0.0000	2.112	0.000	0.000	2.112	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:24:00	0.400	2.135	0.0000	2.135	0.000	0.000	2.135	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:30:00	0.500	2.157	0.0000	2.157	0.000	0.000	2.157	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:36:00	0.600	2.180	0.0000	2.180	0.000	0.000	2.180	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:42:00	0.700	2.203	0.0000	2.203	0.000	0.000	2.203	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:48:00	0.800	2.226	0.0000	2.226	0.000	0.000	2.226	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:54:00	0.900	2.249	0.0000	2.249	0.000	0.000	2.249	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:00:00	1.000	2.272	0.0000	2.272	0.000	0.000	2.272	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:06:00	1.100	2.294	0.0000	2.294	0.000	0.000	2.294	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:12:00	1.200	2.317	0.0000	2.317	0.000	0.000	2.317	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:18:00	1.300	2.340	0.0000	2.340	0.000	0.000	2.340	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:24:00	1.400	2.363	0.0000	2.363	0.000	0.000	2.363	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:30:00	1.500	2.386	0.0000	2.386	0.000	0.000	2.386	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:36:00	1.600	2.409	0.0000	2.409	0.000	0.000	2.409	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:42:00	1.700	2.431	0.0000	2.431	0.000	0.000	2.431	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:48:00	1.800	2.454	0.0000	2.454	0.000	0.000	2.454	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:54:00	1.900	2.477	0.0000	2.477	0.000	0.000	2.477	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:00:00	2.000	2.500	0.0000	2.500	0.000	0.000	2.500	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:06:00	2.100	2.568	0.0000	2.568	0.000	0.000	2.568	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:12:00	2.200	2.683	0.0000	2.683	0.000	0.000	2.683	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:18:00	2.300	2.797	0.0000	2.797	0.000	0.000	2.797	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:24:00	2.400	2.911	0.0000	2.911	0.000	0.000	2.911	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:30:00	2.500	3.025	0.0000	3.025	0.000	0.000	3.025	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:36:00	2.600	3.139	0.0000	3.139	0.000	0.000	3.139	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:42:00	2.700	3.253	0.0000	3.253	0.000	0.000	3.253	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:48:00	2.800	3.367	0.0000	3.367	0.000	0.000	3.367	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:54:00	2.900	3.482	0.0000	3.482	0.000	0.000	3.482	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:00:00	3.000	3.596	0.0000	3.596	0.000	0.000	3.596	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:06:00	3.100	3.653	0.0000	3.653	0.000	0.000	3.653	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:12:00	3.200	3.653	0.0000	3.653	0.000	0.000	3.653	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:18:00	3.300	3.653	0.0000	3.653	0.000	0.000	3.653	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:24:00	3.400	3.653	0.0000	3.653	0.000	0.000	3.653	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:30:00	3.500	3.653	0.0000	3.653	0.000	0.000	3.653	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:36:00	3.600	3.744	0.0000	3.744	0.000	0.000	3.744	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:42:00	3.700	3.927	0.0000	3.927	0.000	0.000	3.927	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:48:00	3.800	4.109	0.0000	4.109	0.000	0.000	4.109	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:54:00	3.900	4.292	0.0000	4.292	0.000	0.000	4.292	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:00:00	4.000	4.475	0.0000	4.475	0.000	0.000	4.475	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:06:00	4.100	4.703	0.0000	4.703	0.000	0.000	4.703	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:12:00	4.200	4.977	0.0000	4.977	0.000	0.000	4.977	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:18:00	4.300	5.251	0.0000	5.251	0.000	0.000	5.251	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:24:00	4.400	5.525	0.0000	5.525	0.000	0.000	5.525	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:30:00	4.500	5.799	0.0000	5.799	0.000	0.000	5.799	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:36:00	4.600	6.164	0.0000	6.164	0.000	0.000	6.164	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:42:00	4.700	6.621	0.0000	6.621	0.000	0.000	6.621	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:48:00	4.800	7.077	0.0000	7.077	0.000	0.000	7.077	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:54:00	4.900	7.534	0.0000	7.534	0.000	0.000	7.534	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:00:00	5.000	7.990	0.0000	7.990	0.000	0.000	7.990	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:06:00	5.100	8.767	0.0000	8.767	0.000	0.000	8.767	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:12:00	5.200	9.863	0.0000	9.863	0.000	0.000	9.863	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:18:00	5.300	10.958	0.0000	10.958	0.000	0.000	10.958	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:24:00	5.400	12.054	0.0000	12.054	0.000	0.000	12.054	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:30:00	5.500	13.150	0.0000	13.150	0.000	0.000	13.150	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:36:00	5.600	27.213	0.0000	27.213	0.000	0.000	27.213	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:42:00	5.700	66.826	0.0000	66.826	0.000	0.000	66.826	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:48:00	5.800	1472.140	0.0000	1472.140	0.000	0.000	187.000	0.000	0.000	0.000	0.000	0.000	342.704
01/01/2000	05:54:00	5.900	3981.989	0.0000	2651.860	0.000	0.000	187.000	0.000	0.000	133.013	0.000	0.000	1000.000
01/01/2000	06:00:00	6.000	3060.727	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	420.386	0.000	0.000	1000.000
01/01/2000	06:06:00	6.100	870.317	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	488.717	0.000	0.000	1000.000
01/01/2000	06:12:00	6.200	436.616	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	513.679	0.000	0.000	1000.000

SWMM5 LID Report File

Project:

LID Unit: Trench-West in Subcatchment S1

Storm Event: SCS_Type_II_104.4mm_6hr_100yr+20%

Date	Time	Elapsed Time Hours	Total Inflow mm/hr	Total Evap mm/hr	Surface Infil mm/hr	Pavement Perc mm/hr	Soil Perc mm/hr	Storage Exfil mm/hr	Surface Runoff mm/hr	Drain OutFlow mm/hr	Surface Level mm	Pavement Level mm	Soil Moisture Content	Storage Level mm
01/01/2000	00:06:00	0.100	4.654	0.0000	4.654	0.000	0.000	4.654	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:12:00	0.200	4.728	0.0000	4.728	0.000	0.000	4.728	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:18:00	0.300	4.728	0.0000	4.728	0.000	0.000	4.728	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:24:00	0.400	4.728	0.0000	4.728	0.000	0.000	4.728	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:30:00	0.500	4.728	0.0000	4.728	0.000	0.000	4.728	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:36:00	0.600	4.728	0.0000	4.728	0.000	0.000	4.728	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:42:00	0.700	4.846	0.0000	4.846	0.000	0.000	4.846	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:48:00	0.800	5.082	0.0000	5.082	0.000	0.000	5.082	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:54:00	0.900	5.319	0.0000	5.319	0.000	0.000	5.319	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:00:00	1.000	5.555	0.0000	5.555	0.000	0.000	5.555	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:06:00	1.100	5.792	0.0000	5.792	0.000	0.000	5.792	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:12:00	1.200	6.087	0.0000	6.087	0.000	0.000	6.087	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:18:00	1.300	6.442	0.0000	6.442	0.000	0.000	6.442	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:24:00	1.400	6.796	0.0000	6.796	0.000	0.000	6.796	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:30:00	1.500	7.151	0.0000	7.151	0.000	0.000	7.151	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:36:00	1.600	7.505	0.0000	7.505	0.000	0.000	7.505	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:42:00	1.700	7.978	0.0000	7.978	0.000	0.000	7.978	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:48:00	1.800	8.569	0.0000	8.569	0.000	0.000	8.569	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:54:00	1.900	9.160	0.0000	9.160	0.000	0.000	9.160	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:00:00	2.000	9.751	0.0000	9.751	0.000	0.000	9.751	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:06:00	2.100	10.342	0.0000	10.342	0.000	0.000	10.342	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:12:00	2.200	11.347	0.0000	11.347	0.000	0.000	11.347	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:18:00	2.300	12.765	0.0000	12.765	0.000	0.000	12.765	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:24:00	2.400	14.184	0.0000	14.184	0.000	0.000	14.184	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:30:00	2.500	15.602	0.0000	15.602	0.000	0.000	15.602	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:36:00	2.600	17.020	0.0000	17.020	0.000	0.000	17.020	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:42:00	2.700	35.223	0.0000	35.223	0.000	0.000	35.223	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:48:00	2.800	237.839	0.0000	237.839	0.000	0.000	187.000	0.000	0.000	0.000	0.000	0.000	13.557
01/01/2000	02:54:00	2.900	711.784	0.0000	711.784	0.000	0.000	187.000	0.000	0.000	0.000	0.000	0.000	153.500
01/01/2000	03:00:00	3.000	1956.425	0.0000	1956.425	0.000	0.000	187.000	0.000	0.000	0.000	0.000	0.000	625.346
01/01/2000	03:06:00	3.100	3947.793	0.0000	2341.952	0.000	0.000	187.000	0.000	0.000	160.584	0.000	0.000	1200.000
01/01/2000	03:12:00	3.200	3710.246	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	512.909	0.000	0.000	1200.000
01/01/2000	03:18:00	3.300	1927.762	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	686.985	0.000	0.000	1200.000
01/01/2000	03:24:00	3.400	1217.895	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	790.074	0.000	0.000	1200.000
01/01/2000	03:30:00	3.500	869.398	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	858.314	0.000	0.000	1200.000
01/01/2000	03:36:00	3.600	642.689	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	903.883	0.000	0.000	1200.000
01/01/2000	03:42:00	3.700	477.346	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	932.918	0.000	0.000	1200.000
01/01/2000	03:48:00	3.800	361.815	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	950.399	0.000	0.000	1200.000
01/01/2000	03:54:00	3.900	283.593	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	960.058	0.000	0.000	1200.000
01/01/2000	04:00:00	4.000	225.656	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	963.924	0.000	0.000	1200.000
01/01/2000	04:06:00	4.100	179.851	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	963.209	0.000	0.000	1200.000
01/01/2000	04:12:00	4.200	142.767	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	958.786	0.000	0.000	1200.000
01/01/2000	04:18:00	4.300	113.548	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	951.441	0.000	0.000	1200.000
01/01/2000	04:24:00	4.400	90.777	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	941.818	0.000	0.000	1200.000
01/01/2000	04:30:00	4.500	72.809	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	930.399	0.000	0.000	1200.000
01/01/2000	04:36:00	4.600	59.097	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	917.609	0.000	0.000	1200.000
01/01/2000	04:42:00	4.700	50.866	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	903.995	0.000	0.000	1200.000
01/01/2000	04:48:00	4.800	46.193	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	889.915	0.000	0.000	1200.000
01/01/2000	04:54:00	4.900	42.271	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	875.442	0.000	0.000	1200.000
01/01/2000	05:00:00	5.000	38.582	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	860.600	0.000	0.000	1200.000
01/01/2000	05:06:00	5.100	34.981	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	845.398	0.000	0.000	1200.000
01/01/2000	05:12:00	5.200	31.794	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	829.878	0.000	0.000	1200.000
01/01/2000	05:18:00	5.300	29.292	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	814.107	0.000	0.000	1200.000
01/01/2000	05:24:00	5.400	27.429	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	798.150	0.000	0.000	1200.000
01/01/2000	05:30:00	5.500	25.870	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	782.037	0.000	0.000	1200.000
01/01/2000	05:36:00	5.600	24.508	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	765.787	0.000	0.000	1200.000
01/01/2000	05:42:00	5.700	23.191	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	749.407	0.000	0.000	1200.000
01/01/2000	05:48:00	5.800	21.941	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	732.901	0.000	0.000	1200.000
01/01/2000	05:54:00	5.900	20.675	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	716.268	0.000	0.000	1200.000
01/01/2000	06:00:00	6.000	19.447	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	699.513	0.000	0.000	1200.000
01/01/2000	06:06:00	6.100	4.574	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	681.270	0.000	0.000	1200.000
01/01/2000	06:12:00	6.200	0.000	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	662.570	0.000	0.000	1200.000

SWMM5 LID Report File

Project:
 LID Unit: Trench-East in Subcatchment S6
 Storm Event: SCS_Type_II_104.4mm_6hr_100yr+20%

Date	Time	Elapsed Time Hours	Total Inflow mm/hr	Total Evap mm/hr	Surface Infil mm/hr	Pavement Perc mm/hr	Soil Perc mm/hr	Storage Exfil mm/hr	Surface Runoff mm/hr	Drain OutFlow mm/hr	Surface Level mm	Pavement Level mm	Soil Moisture Content	Storage Level mm
01/01/2000	00:06:00	0.100	4.654	0.0000	4.654	0.000	0.000	4.654	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:12:00	0.200	4.728	0.0000	4.728	0.000	0.000	4.728	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:18:00	0.300	4.728	0.0000	4.728	0.000	0.000	4.728	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:24:00	0.400	4.728	0.0000	4.728	0.000	0.000	4.728	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:30:00	0.500	4.728	0.0000	4.728	0.000	0.000	4.728	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:36:00	0.600	4.728	0.0000	4.728	0.000	0.000	4.728	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:42:00	0.700	4.846	0.0000	4.846	0.000	0.000	4.846	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:48:00	0.800	5.082	0.0000	5.082	0.000	0.000	5.082	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:54:00	0.900	5.319	0.0000	5.319	0.000	0.000	5.319	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:00:00	1.000	5.555	0.0000	5.555	0.000	0.000	5.555	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:06:00	1.100	5.792	0.0000	5.792	0.000	0.000	5.792	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:12:00	1.200	6.087	0.0000	6.087	0.000	0.000	6.087	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:18:00	1.300	6.442	0.0000	6.442	0.000	0.000	6.442	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:24:00	1.400	6.796	0.0000	6.796	0.000	0.000	6.796	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:30:00	1.500	7.151	0.0000	7.151	0.000	0.000	7.151	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:36:00	1.600	7.505	0.0000	7.505	0.000	0.000	7.505	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:42:00	1.700	7.978	0.0000	7.978	0.000	0.000	7.978	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:48:00	1.800	8.569	0.0000	8.569	0.000	0.000	8.569	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:54:00	1.900	9.160	0.0000	9.160	0.000	0.000	9.160	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:00:00	2.000	9.751	0.0000	9.751	0.000	0.000	9.751	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:06:00	2.100	10.342	0.0000	10.342	0.000	0.000	10.342	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:12:00	2.200	11.347	0.0000	11.347	0.000	0.000	11.347	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:18:00	2.300	12.765	0.0000	12.765	0.000	0.000	12.765	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:24:00	2.400	14.184	0.0000	14.184	0.000	0.000	14.184	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:30:00	2.500	15.602	0.0000	15.602	0.000	0.000	15.602	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:36:00	2.600	17.020	0.0000	17.020	0.000	0.000	17.020	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:42:00	2.700	35.223	0.0000	35.223	0.000	0.000	35.223	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:48:00	2.800	361.171	0.0000	361.171	0.000	0.000	187.000	0.000	0.000	0.000	0.000	0.000	46.446
01/01/2000	02:54:00	2.900	2372.667	0.0000	2372.667	0.000	0.000	187.000	0.000	0.000	0.000	0.000	0.000	629.290
01/01/2000	03:00:00	3.000	5429.787	0.0000	1577.162	0.000	0.000	187.000	0.000	0.000	385.263	0.000	0.000	1000.000
01/01/2000	03:06:00	3.100	4043.131	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	770.876	0.000	0.000	1000.000
01/01/2000	03:12:00	3.200	1113.719	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	863.548	0.000	0.000	1000.000
01/01/2000	03:18:00	3.300	598.678	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	904.715	0.000	0.000	1000.000
01/01/2000	03:24:00	3.400	394.283	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	925.444	0.000	0.000	1000.000
01/01/2000	03:30:00	3.500	267.119	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	933.455	0.000	0.000	1000.000
01/01/2000	03:36:00	3.600	166.844	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	931.440	0.000	0.000	1000.000
01/01/2000	03:42:00	3.700	97.278	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	922.468	0.000	0.000	1000.000
01/01/2000	03:48:00	3.800	56.389	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	909.407	0.000	0.000	1000.000
01/01/2000	03:54:00	3.900	29.133	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	893.620	0.000	0.000	1000.000
01/01/2000	04:00:00	4.000	12.293	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	876.149	0.000	0.000	1000.000
01/01/2000	04:06:00	4.100	9.397	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	858.389	0.000	0.000	1000.000
01/01/2000	04:12:00	4.200	8.806	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	840.569	0.000	0.000	1000.000
01/01/2000	04:18:00	4.300	8.392	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	822.709	0.000	0.000	1000.000
01/01/2000	04:24:00	4.400	7.978	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	804.806	0.000	0.000	1000.000
01/01/2000	04:30:00	4.500	7.565	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	786.863	0.000	0.000	1000.000
01/01/2000	04:36:00	4.600	7.151	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	768.878	0.000	0.000	1000.000
01/01/2000	04:42:00	4.700	6.796	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	750.858	0.000	0.000	1000.000
01/01/2000	04:48:00	4.800	6.501	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	732.808	0.000	0.000	1000.000
01/01/2000	04:54:00	4.900	6.205	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	714.728	0.000	0.000	1000.000
01/01/2000	05:00:00	5.000	5.910	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	696.619	0.000	0.000	1000.000
01/01/2000	05:06:00	5.100	5.614	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	678.481	0.000	0.000	1000.000
01/01/2000	05:12:00	5.200	5.422	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	660.323	0.000	0.000	1000.000
01/01/2000	05:18:00	5.300	5.304	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	642.153	0.000	0.000	1000.000
01/01/2000	05:24:00	5.400	5.215	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	623.975	0.000	0.000	1000.000
01/01/2000	05:30:00	5.500	5.097	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	605.785	0.000	0.000	1000.000
01/01/2000	05:36:00	5.600	5.009	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	587.585	0.000	0.000	1000.000
01/01/2000	05:42:00	5.700	4.890	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	569.374	0.000	0.000	1000.000
01/01/2000	05:48:00	5.800	4.802	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	551.155	0.000	0.000	1000.000
01/01/2000	05:54:00	5.900	4.684	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	532.923	0.000	0.000	1000.000
01/01/2000	06:00:00	6.000	4.595	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	514.682	0.000	0.000	1000.000
01/01/2000	06:06:00	6.100	0.000	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	495.982	0.000	0.000	1000.000
01/01/2000	06:12:00	6.200	0.000	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	477.282	0.000	0.000	1000.000

SWMM5 LID Report File

Project:
 LID Unit: Trench-West in Subcatchment S1
 Storm Event: SCS_Type_II_115.2mm_12hr_100yr+20%

Date	Time	Elapsed Time Hours	Total Inflow mm/hr	Total Evap mm/hr	Surface Infil mm/hr	Pavement Perc mm/hr	Soil Perc mm/hr	Storage Exfil mm/hr	Surface Runoff mm/hr	Drain OutFlow mm/hr	Surface Level mm	Pavement Level mm	Soil Moisture Content	Storage Level mm
01/01/2000	00:06:00	0.100	2.479	0.0000	2.479	0.000	0.000	2.479	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:12:00	0.200	2.507	0.0000	2.507	0.000	0.000	2.507	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:18:00	0.300	2.534	0.0000	2.534	0.000	0.000	2.534	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:24:00	0.400	2.562	0.0000	2.562	0.000	0.000	2.562	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:30:00	0.500	2.589	0.0000	2.589	0.000	0.000	2.589	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:36:00	0.600	2.616	0.0000	2.616	0.000	0.000	2.616	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:42:00	0.700	2.644	0.0000	2.644	0.000	0.000	2.644	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:48:00	0.800	2.671	0.0000	2.671	0.000	0.000	2.671	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:54:00	0.900	2.699	0.0000	2.699	0.000	0.000	2.699	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:00:00	1.000	2.726	0.0000	2.726	0.000	0.000	2.726	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:06:00	1.100	2.753	0.0000	2.753	0.000	0.000	2.753	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:12:00	1.200	2.781	0.0000	2.781	0.000	0.000	2.781	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:18:00	1.300	2.808	0.0000	2.808	0.000	0.000	2.808	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:24:00	1.400	2.835	0.0000	2.835	0.000	0.000	2.835	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:30:00	1.500	2.863	0.0000	2.863	0.000	0.000	2.863	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:36:00	1.600	2.890	0.0000	2.890	0.000	0.000	2.890	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:42:00	1.700	2.918	0.0000	2.918	0.000	0.000	2.918	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:48:00	1.800	2.945	0.0000	2.945	0.000	0.000	2.945	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:54:00	1.900	2.972	0.0000	2.972	0.000	0.000	2.972	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:00:00	2.000	3.000	0.0000	3.000	0.000	0.000	3.000	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:06:00	2.100	3.082	0.0000	3.082	0.000	0.000	3.082	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:12:00	2.200	3.219	0.0000	3.219	0.000	0.000	3.219	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:18:00	2.300	3.356	0.0000	3.356	0.000	0.000	3.356	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:24:00	2.400	3.493	0.0000	3.493	0.000	0.000	3.493	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:30:00	2.500	3.630	0.0000	3.630	0.000	0.000	3.630	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:36:00	2.600	3.767	0.0000	3.767	0.000	0.000	3.767	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:42:00	2.700	3.904	0.0000	3.904	0.000	0.000	3.904	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:48:00	2.800	4.041	0.0000	4.041	0.000	0.000	4.041	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:54:00	2.900	4.178	0.0000	4.178	0.000	0.000	4.178	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:00:00	3.000	4.315	0.0000	4.315	0.000	0.000	4.315	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:06:00	3.100	4.383	0.0000	4.383	0.000	0.000	4.383	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:12:00	3.200	4.383	0.0000	4.383	0.000	0.000	4.383	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:18:00	3.300	4.383	0.0000	4.383	0.000	0.000	4.383	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:24:00	3.400	4.383	0.0000	4.383	0.000	0.000	4.383	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:30:00	3.500	4.383	0.0000	4.383	0.000	0.000	4.383	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:36:00	3.600	4.493	0.0000	4.493	0.000	0.000	4.493	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:42:00	3.700	4.712	0.0000	4.712	0.000	0.000	4.712	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:48:00	3.800	4.931	0.0000	4.931	0.000	0.000	4.931	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:54:00	3.900	5.150	0.0000	5.150	0.000	0.000	5.150	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:00:00	4.000	5.370	0.0000	5.370	0.000	0.000	5.370	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:06:00	4.100	5.644	0.0000	5.644	0.000	0.000	5.644	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:12:00	4.200	5.972	0.0000	5.972	0.000	0.000	5.972	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:18:00	4.300	6.301	0.0000	6.301	0.000	0.000	6.301	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:24:00	4.400	6.630	0.0000	6.630	0.000	0.000	6.630	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:30:00	4.500	6.959	0.0000	6.959	0.000	0.000	6.959	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:36:00	4.600	7.397	0.0000	7.397	0.000	0.000	7.397	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:42:00	4.700	7.945	0.0000	7.945	0.000	0.000	7.945	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:48:00	4.800	8.493	0.0000	8.493	0.000	0.000	8.493	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:54:00	4.900	9.041	0.0000	9.041	0.000	0.000	9.041	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:00:00	5.000	9.589	0.0000	9.589	0.000	0.000	9.589	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:06:00	5.100	10.520	0.0000	10.520	0.000	0.000	10.520	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:12:00	5.200	11.835	0.0000	11.835	0.000	0.000	11.835	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:18:00	5.300	13.150	0.0000	13.150	0.000	0.000	13.150	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:24:00	5.400	14.465	0.0000	14.465	0.000	0.000	14.465	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:30:00	5.500	15.780	0.0000	15.780	0.000	0.000	15.780	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:36:00	5.600	131.902	0.0000	131.902	0.000	0.000	131.902	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:42:00	5.700	354.774	0.0000	354.774	0.000	0.000	187.000	0.000	0.000	0.000	0.000	0.000	44.740
01/01/2000	05:48:00	5.800	738.778	0.0000	738.778	0.000	0.000	187.000	0.000	0.000	0.000	0.000	0.000	191.881
01/01/2000	05:54:00	5.900	1885.514	0.0000	1885.514	0.000	0.000	187.000	0.000	0.000	0.000	0.000	0.000	644.818
01/01/2000	06:00:00	6.000	3691.644	0.0000	2268.934	0.000	0.000	187.000	0.000	0.000	142.271	0.000	0.000	1200.000
01/01/2000	06:06:00	6.100	3460.059	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	469.577	0.000	0.000	1200.000
01/01/2000	06:12:00	6.200	1805.845	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	631.461	0.000	0.000	1200.000

SWMM5 LID Report File

Project:
 LID Unit: Trench-East in Subcatchment S6
 Storm Event: SCS_Type_II_115.2mm_12hr_100yr+20%

Date	Time	Elapsed Time Hours	Total Inflow mm/hr	Total Evap mm/hr	Surface Infil mm/hr	Pavement Perc mm/hr	Soil Perc mm/hr	Storage Exfil mm/hr	Surface Runoff mm/hr	Drain OutFlow mm/hr	Surface Level mm	Pavement Level mm	Soil Moisture Content	Storage Level mm
01/01/2000	00:06:00	0.100	2.479	0.0000	2.479	0.000	0.000	2.479	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:12:00	0.200	2.507	0.0000	2.507	0.000	0.000	2.507	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:18:00	0.300	2.534	0.0000	2.534	0.000	0.000	2.534	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:24:00	0.400	2.562	0.0000	2.562	0.000	0.000	2.562	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:30:00	0.500	2.589	0.0000	2.589	0.000	0.000	2.589	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:36:00	0.600	2.616	0.0000	2.616	0.000	0.000	2.616	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:42:00	0.700	2.644	0.0000	2.644	0.000	0.000	2.644	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:48:00	0.800	2.671	0.0000	2.671	0.000	0.000	2.671	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	00:54:00	0.900	2.699	0.0000	2.699	0.000	0.000	2.699	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:00:00	1.000	2.726	0.0000	2.726	0.000	0.000	2.726	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:06:00	1.100	2.753	0.0000	2.753	0.000	0.000	2.753	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:12:00	1.200	2.781	0.0000	2.781	0.000	0.000	2.781	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:18:00	1.300	2.808	0.0000	2.808	0.000	0.000	2.808	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:24:00	1.400	2.835	0.0000	2.835	0.000	0.000	2.835	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:30:00	1.500	2.863	0.0000	2.863	0.000	0.000	2.863	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:36:00	1.600	2.890	0.0000	2.890	0.000	0.000	2.890	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:42:00	1.700	2.918	0.0000	2.918	0.000	0.000	2.918	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:48:00	1.800	2.945	0.0000	2.945	0.000	0.000	2.945	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	01:54:00	1.900	2.972	0.0000	2.972	0.000	0.000	2.972	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:00:00	2.000	3.000	0.0000	3.000	0.000	0.000	3.000	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:06:00	2.100	3.082	0.0000	3.082	0.000	0.000	3.082	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:12:00	2.200	3.219	0.0000	3.219	0.000	0.000	3.219	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:18:00	2.300	3.356	0.0000	3.356	0.000	0.000	3.356	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:24:00	2.400	3.493	0.0000	3.493	0.000	0.000	3.493	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:30:00	2.500	3.630	0.0000	3.630	0.000	0.000	3.630	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:36:00	2.600	3.767	0.0000	3.767	0.000	0.000	3.767	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:42:00	2.700	3.904	0.0000	3.904	0.000	0.000	3.904	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:48:00	2.800	4.041	0.0000	4.041	0.000	0.000	4.041	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	02:54:00	2.900	4.178	0.0000	4.178	0.000	0.000	4.178	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:00:00	3.000	4.315	0.0000	4.315	0.000	0.000	4.315	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:06:00	3.100	4.383	0.0000	4.383	0.000	0.000	4.383	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:12:00	3.200	4.383	0.0000	4.383	0.000	0.000	4.383	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:18:00	3.300	4.383	0.0000	4.383	0.000	0.000	4.383	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:24:00	3.400	4.383	0.0000	4.383	0.000	0.000	4.383	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:30:00	3.500	4.383	0.0000	4.383	0.000	0.000	4.383	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:36:00	3.600	4.493	0.0000	4.493	0.000	0.000	4.493	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:42:00	3.700	4.712	0.0000	4.712	0.000	0.000	4.712	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:48:00	3.800	4.931	0.0000	4.931	0.000	0.000	4.931	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	03:54:00	3.900	5.150	0.0000	5.150	0.000	0.000	5.150	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:00:00	4.000	5.370	0.0000	5.370	0.000	0.000	5.370	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:06:00	4.100	5.644	0.0000	5.644	0.000	0.000	5.644	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:12:00	4.200	5.972	0.0000	5.972	0.000	0.000	5.972	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:18:00	4.300	6.301	0.0000	6.301	0.000	0.000	6.301	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:24:00	4.400	6.630	0.0000	6.630	0.000	0.000	6.630	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:30:00	4.500	6.959	0.0000	6.959	0.000	0.000	6.959	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:36:00	4.600	7.397	0.0000	7.397	0.000	0.000	7.397	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:42:00	4.700	7.945	0.0000	7.945	0.000	0.000	7.945	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:48:00	4.800	8.493	0.0000	8.493	0.000	0.000	8.493	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	04:54:00	4.900	9.041	0.0000	9.041	0.000	0.000	9.041	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:00:00	5.000	9.589	0.0000	9.589	0.000	0.000	9.589	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:06:00	5.100	10.520	0.0000	10.520	0.000	0.000	10.520	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:12:00	5.200	11.835	0.0000	11.835	0.000	0.000	11.835	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:18:00	5.300	13.150	0.0000	13.150	0.000	0.000	13.150	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:24:00	5.400	14.465	0.0000	14.465	0.000	0.000	14.465	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:30:00	5.500	15.780	0.0000	15.780	0.000	0.000	15.780	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:36:00	5.600	32.656	0.0000	32.656	0.000	0.000	32.656	0.000	0.000	0.000	0.000	0.000	0.000
01/01/2000	05:42:00	5.700	403.856	0.0000	403.856	0.000	0.000	187.000	0.000	0.000	0.000	0.000	0.000	57.828
01/01/2000	05:48:00	5.800	2237.915	0.0000	2237.915	0.000	0.000	187.000	0.000	0.000	0.000	0.000	0.000	604.739
01/01/2000	05:54:00	5.900	5030.245	0.0000	1669.229	0.000	0.000	187.000	0.000	0.000	336.102	0.000	0.000	1000.000
01/01/2000	06:00:00	6.000	3758.851	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	693.287	0.000	0.000	1000.000
01/01/2000	06:06:00	6.100	1052.993	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	779.886	0.000	0.000	1000.000
01/01/2000	06:12:00	6.200	558.198	0.0000	187.000	0.000	0.000	187.000	0.000	0.000	817.006	0.000	0.000	1000.000

**STAGE STORAGE TABLES FOR
INFILTRATION TRENCHES
POST_DEVELOPMENT**

WEST TRENCH(es) STAGE STORAGE

	ELEV	TOTAL STORAGE NO CLEARSTONE	STAGE STORAGE	POSROSIITY	STAGE STORAGE X 0.4 UP TO TOP OF STORAGE LAYER 100.00	TOTAL STORAGE WITH 0.4 POROSITY CLEARSTONE	TOTAL SURFACE PONSING VOLUME	REQUIRED SURFACE PONDING VOLUME DURING MAJOR STORMS (FROM PCSWMM)	INTERPOLATED SURFACE PONDING ELEVATION DURING MAJOR STORMS	ASSOCIATED STORM EVENTS
TOP OF SLOPE	102.00	5390.07	292.56	1	292.56	4656.26	4167.05			
SIDE SLOPE	101.90	5097.51	285.46	1	285.46	4363.70	3874.49			
SIDE SLOPE	101.80	4812.05	278.43	1	278.43	4078.24	3589.03			
SIDE SLOPE	101.70	4533.62	271.44	1	271.44	3799.81	3310.6			
SIDE SLOPE	101.60	4262.18	264.52	1	264.52	3528.37	3039.16			
SIDE SLOPE	101.50	3997.66	257.64	1	257.64	3263.85	2774.64			
SIDE SLOPE	101.40	3740.02	250.84	1	250.84	3006.21	2517			
SIDE SLOPE	101.30	3489.18	244.08	1	244.08	2755.37	2266.16			
SIDE SLOPE	101.20	3245.1	237.37	1	237.37	2511.29	2022.08			
SIDE SLOPE	101.10	3007.73	230.73	1	230.73	2273.92	1784.71			
SIDE SLOPE	101.00	2777	214.01	1	214.01	2043.19	1553.98			
SIDE SLOPE	100.90	2562.99	198.17	1	198.17	1829.18	1339.97			
SIDE SLOPE	100.80	2364.82	184.75	1	184.75	1631.01	1141.8	988.02	100.72	6_hour 100-Year + 20%
SIDE SLOPE	100.70	2180.07	171.77	1	171.77	1446.26	957.05	900.89	100.67	12_hour 100-Year + 20%
SIDE SLOPE	100.60	2008.3	158.63	1	158.63	1274.49	785.28			
SIDE SLOPE	100.50	1849.67	145.67	1	145.67	1115.86	626.65	537.80	100.44	6_hour 100-Year
SIDE SLOPE	100.40	1704	134.34	1	134.34	970.19	480.98	490.76	100.41	12_hour 100-Year
SIDE SLOPE	100.30	1569.66	124.45	1	124.45	835.85	346.64			
SIDE SLOPE	100.20	1445.21	115.43	1	115.43	711.40	222.19			
SIDE SLOPE	100.10	1329.78	106.76	1	106.76	595.97	106.76			
TOP OF CLEARSTONE	100.00	1223.02	102.41	0.4	40.96	489.21	-			
TRENCH	99.90	1120.61	102.32	0.4	40.93	448.24	-			
TRENCH	99.80	1018.29	102.23	0.4	40.89	407.32	-			
TRENCH	99.70	916.06	102.14	0.4	40.86	366.42	-			
TRENCH	99.60	813.92	102.06	0.4	40.82	325.57	-			
TRENCH	99.50	711.86	101.96	0.4	40.78	284.74	-			
TRENCH	99.40	609.9	101.87	0.4	40.75	243.96	-			
TRENCH	99.30	508.03	101.79	0.4	40.72	203.21	-			
TRENCH	99.20	406.24	101.69	0.4	40.68	162.50	-			
TRENCH	99.10	304.55	101.61	0.4	40.64	121.82	-			
TRENCH	99.00	202.94	101.51	0.4	40.60	81.18	-			
TRENCH	98.90	101.43	101.43	0.4	40.57	40.57	-			
BOTTOM OF CLEARSTONE	98.80	0	0	0.4	0.00	0.00	-			

EAST TRENCH STAGE STORAGE

	ELEV	TOTAL STORAGE NO CLEARSTONE	STAGE STORAGE	POSROSIY	STAGE STORAGE X 0.4 UP TO TOP OF STORAGE LAYER 99.70	TOTAL STORAGE WITH 0.4 POROSITY CLEARSTONE	TOTAL SURFACE PONSING VOLUME	REQUIRED SURFACE PONDING VOLUME DURING MAJOR STORMS (FROM PCSWMM)	INTERPOLATED SURFACE PONDING ELEVATION DURING MAJOR STORMS	ASSOCIATED STORM EVENTS
TOP OF SLOPE	100.60	386.34	37.28	1	37.28	297.082	237.57			
SIDE SLOPE	100.50	349.07	34.38	1	34.38	259.802	200.29			
SIDE SLOPE	100.40	314.69	31.56	1	31.56	225.422	165.91	140.02	100.32	6_hour 100-Year + 20%
SIDE SLOPE	100.30	283.13	28.81	1	28.81	193.862	134.35	125.88	100.27	12_hour 100-Year + 20%
SIDE SLOPE	100.20	254.32	26.14	1	26.14	165.052	105.54	86.52	100.13	6_hour 100-Year
SIDE SLOPE	100.10	228.18	23.55	1	23.55	138.912	79.4	78.16	100.09	12_hour 100-Year
SIDE SLOPE	100.00	204.63	21.03	1	21.03	115.362	55.85			
SIDE SLOPE	99.90	183.6	18.59	1	18.59	94.332	34.82			
SIDE SLOPE	99.80	165.01	16.23	1	16.23	75.742	16.23			
TOP OF CLEARSTONE	99.70	148.78	15.05	0.4	6.02	59.512	-			
TRENCH	99.60	133.73	15.01	0.4	6.004	53.492	-			
TRENCH	99.50	118.72	14.97	0.4	5.988	47.488	-			
TRENCH	99.40	103.75	14.93	0.4	5.972	41.5	-			
TRENCH	99.30	88.81	14.9	0.4	5.96	35.528	-			
TRENCH	99.20	73.92	14.86	0.4	5.944	29.568	-			
TRENCH	99.10	59.06	14.82	0.4	5.928	23.624	-			
TRENCH	99.00	44.24	14.78	0.4	5.912	17.696	-			
TRENCH	98.90	29.45	14.75	0.4	5.9	11.784	-			
TRENCH	98.80	14.71	14.71	0.4	5.884	5.884	-			
BOTTOM OF CLEARSTONE	98.70	0	0	0.4	0	0	-			

Appendix D – Background Info.

Site Plan and Zoning By-law Amendment Pre-Application Consultation

4380 Trail Road

Meeting Date: November 2, 2021

PC2021-0356

Applicant: Fotenn c/o Ghada Zaki **Owner:** Drain-All Ltd. c/o David Elsie
Ward 21 – Rideau Gouldburn **Proposal Summary:** Permit the continued use of subject property as waste processing activity

Attendees:

Cheryl McWilliams, File Lead, City of Ottawa
Christine Reist, Project Manager, City of Ottawa
Matthew Hayley, Environmental Planner, City of Ottawa
Heidi Scott, Program Manager at Trail Waste Facility, City of Ottawa
Brandon Maynard, Compliance Manager at Trail Waste Facility, City of Ottawa
Brent Loney, Trail Waste Facility Consultant, Dillon Consulting
Samantha Willock, Student Planner, City of Ottawa

Regrets

Tessa Di Iorio, Senior Project Manager – Hydrogeology, City of Ottawa
Neeti Paudel, Transportation Engineer, City of Ottawa
Eric Lalande, Rideau Valley Conservation Authority

Consultation Team

Ghada Zaki, Applicant, Fotenn
David Elsie, Drain-All, Waste Transfer and Processing Facility Manager
Frank Cardinali, Drain-All, President
Richard Roth, Drain-All, Chief Executive Officer
Michael Long

Meeting Minutes

Proposal Details

- Drain-All using site for storing clean excess soils removed from other sites.
- Site was previously a pit which is not currently licensed; NDMNRF deferred to MECP process for oversight of excess soils.
- Proposed to use excess soils to rehabilitate the abandoned pit in accordance with NDMNRF guidelines.
- Site includes a segregated containment area for soils awaiting contamination study results; contaminated soils taken to a different site.
- No servicing is required on site.

Planning Comments - *Provided by Cheryl McWilliams*

- The City has received confirmation from NDMNRF that the site is depleted of any viable sand and gravel aggregate resources.
- The site is zoned as Parks and Open Space (O1) and Mineral Aggregate Reserve, exception 7 (MR[7r]). As the site no longer contains aggregate resources, it will need to be removed from this zone. The site will likely be rezoned to a rural industrial zone, which would limit the potential uses for the site.
- Please note that the City recently adopted a new Official Plan. During this transition period, any planning applications must be evaluated against the existing Official Plan and the Council approved new Official Plan. When provisions between the two plans are not consistent, the more restrictive will be applied.
- Under the new Official Plan, this site is designated Rural Countryside, which contemplates light industrial uses. This would permit the transfer, but not disposal, of excess soils. The **Planning Rationale** must prove the site is not disposal in regard to Official Plan policies.
- Please review the newly adopted Official Plan and ensure that all requirements regarding the adjacent land uses will be met (See Sections 5.6.3 and 10.1.7).
- Please note that waste facilities require a Site Plan Control approval. As the proposal doesn't include the construction of buildings, the **Site Plan** will need to illustrate the existing conditions, use, and final conditions instead.
- Regarding the formal application process, this proposal will require a Major Rural Zoning By-law Amendment and a Small, Rural Site Plan Control application. These applications can be handed concurrently.
 - Depending on the outcome of the ECA and anything else that may arise during our review, site plan control approval may be accomplished through a letter of undertaking instead of a site plan control agreement. In this scenario, the approval would acknowledge the ECA as dealing with the rehabilitation portion of the development.

Engineering Comments - *Provided by Christine Reist & Tessa Di Iorio*

Following the pre-consultation meeting on November 2, 2021, the City corresponded with the MECP and NDMNRF. Based on the City's correspondence with the MECP and NDMNRF, it's our understanding that:

- The following documents are already requested by the MECP as part of the ECA application: "...a hydrogeological study to assess the impacts of infiltration at the site and all proposed monitoring, a stormwater management assessment in so far as it pertains to contact water generated on-site soil piles or rates of infiltration, and the design of the liquid storage and infiltration area."
- The former pit is depleted of sand and gravel resources.
- The former pit is no longer licensed by NDMNRF.
- As the former pit is no longer licensed, the NDMNRF doesn't have rehabilitation requirements for this property. The rehabilitation requirements for the property are to be determined by the City.

It is the City's understanding that the applicant is proposing to rehabilitate the former pit using excess soils generated by the soil management activities on site.

The requirements below assume that there is no potential for the site to be privately serviced, and that a Site Plan application would also be required.

Mineral Aggregate Resources:

- An **Abandoned Pit Study** is required to provide the information outlined in section 10.1.10 of the newly adopted Official Plan. This study will need to include the proposed rehabilitation details for the property.
- There are licensed Pits adjacent to the south and west sides of the property. Refer to section 5.6.3.2 of the newly adopted Official Plan for information on development in proximity to existing pits. The development described in this pre-consultation application wouldn't be considered to conflict with future mineral aggregate extraction, and therefore there are no associated submission requirements. This comment is included for information purposes to note that if there are changes to the development proposal in the future, it will need to be re-evaluated to determine if a Mineral Resource impact Assessment would be required.

Servicing:

- There are no existing municipal services. It is the City's understanding that there is no intention to provide private servicing (well and septic) for the site. A holding provision will be required on the proposed zoning to restrict any future private servicing on the site unless a **Hydrogeological Report and Terrain Analysis** is provided to demonstrate suitability of servicing the site. Alternatively, if the applicant would like the zoning to allow for the future potential of servicing the site (i.e., avoid having a holding provision on the zoning), then a Hydrogeological Report and Terrain Analysis will be required with the application. The Hydrogeological Report

would need to demonstrate that the proposed supply well can provide satisfactory quality and quantity of drinking water to the site, and that the supply well is protected in the long term from contamination. The Terrain Analysis would need to demonstrate that the site is suitable for the proposed septic system and would need to include a septic impact assessment. Refer to the [City's Hydrogeological and Terrain Analysis Guidelines](#).

Stormwater Management:

- It will need to be demonstrated that there is legal and sufficient stormwater outlet from the site.
- Stormwater management quality criteria shall be set by the Rideau Valley Conservation Authority (RVCA) and is anticipated to be 80% TSS removal.
- The stormwater management quantity criteria for the subject site is that the post-development peak flow rate must match the pre-development peak flow rate as per section 8.3.6.1 of the Ottawa Sewer Design Guidelines (SDG). It must be demonstrated that the storm runoff post-development is equal to the storm runoff pre-development in the 5-year and 100-year storm events. If the MECP has different stormwater management quantity criteria, the most stringent criteria shall apply.
- It will need to be demonstrated that stormwater can be managed for the current condition, various stages of infill, and for final site rehabilitation.
- Please note that stormwater systems for industrial-use sites require a direct submission **ECA** application to the MECP. It is anticipated that the stormwater systems for this site will be included under the ECA application for the management of excess soils.
- Provided that the **Stormwater Management Report** prepared for the ECA application submitted to the MECP meets the City's submission requirements, the same Stormwater Management Report can be submitted to the City.
- Please also refer to 'Permits and Approvals' section below.

Hydrogeological:

- A **Groundwater Impact Assessment** is required to assess the impact associated with the potential land use(s) resulting from the proposed re-zoning application (e.g., discussion of impacts of placing liquid and dry soils on site and impacts of potentially contaminated leachate from soils before sampling results are received, as well as addressing any supply wells as sensitive receptors). The Groundwater Impact Assessment will also need to include the proposed current and future monitoring and reporting plan.
- Given that the Site has been used for soil management for solid and liquid soils from various sites over the past years, it is anticipated that the list of parameters to be tested as part of the Groundwater Impact Assessment will include many, if not all, of the parameters identified in the applicable tables of the Soil, ground water and sediment standards for use under Part XV.1 of the Environmental Protection Act. Note that where applicable, this testing can be coordinated with the testing

undertaken as part of the Environmental Site Assessment to avoid duplication (refer to 'Environmental Site Assessment' section below).

- Provided that the hydrogeological information prepared for the ECA application submitted to the MECP meets the City's submission requirements, the same reports can be submitted to the City. Please also refer to 'Permits and Approvals' section below.
- Please also refer to 'Servicing' section above.

Geotechnical:

- A **Geotechnical Investigation Report** is required to demonstrate that the site is geotechnically suitable for the proposed use (i.e., current condition, various stages of infill, and final site rehabilitation).

Slope Stability:

- The available topographic information shows that the site is 8-12m below the original grade in most areas with side slopes around 1.5:1 to 2:1. A **Slope Stability Assessment Report** is required to demonstrate that the site is suitable for the proposed use (i.e., current condition, various stages of infill, and final site rehabilitation).

Environmental Site Assessment:

- A **Phase 1 Environmental Site Assessment (ESA)** completed in accordance with Ontario Regulation (O.Reg.) 153/04 is required.
- A **Phase 2 ESA** may be required, depending on the outcome of the Phase 1 ESA.
 - Given that the Site has been used for soil management for solid and liquid soils from various sites over the past years, it is anticipated that the list of parameters to be tested as part of the Environmental Site Assessment will include many, if not all, of the parameters identified in the applicable tables of the Soil, ground water and sediment standards for use under Part XV.1 of the Environmental Protection Act. Note that where applicable, this testing can be coordinated with the testing undertaken as part of the Groundwater Impact Assessment to avoid duplication (refer to 'Hydrogeological' section above).

Permits and Approvals:

- Please contact RVCA amongst other federal and provincial departments/agencies, to identify all the necessary permits and approvals required to facilitate the development. Responsibility rests with the developer and their consultant for obtaining all external agency approvals. The address shall be in good standing with all approval agencies. Copies of confirmation of correspondence will be required by the City of Ottawa from all approval agencies that a form of assent is given.
- It is requested that the reports and plans submitted to the MECP in support of the ECA application are provided to the City. Note that depending on what's included in

the information to be provided, the City may have additional submission requirements.

- It is acknowledged that there may be overlap between the information being reviewed by the MECP and the information being requested by the City at this time. Where applicable, the same reports and plans submitted to the MECP can be submitted to the City, provided that they meet the City's submission requirements. For items where the MECP has the same submission requirements as the City, and the MECP has already reviewed the information, the City won't duplicate the review process. However, please be aware that in order for the City to confirm that requirements have already been addressed by the MECP, the applicant will need to provide sufficient information such as, copies of the reports and plans, MECP's review comments, copies of correspondence, etc.
- Please also refer to the 'Stormwater Management' and 'Hydrogeological' sections above for comments related to the ECA.

Zoning By-law Amendment – Report Submission Requirements for Engineering:

- Abandoned Pit Study
- Stormwater Management Report
- Hydrogeological Report and Terrain Analysis, only required if potential future servicing is proposed (refer to Servicing comment above)
- Groundwater Impact Assessment
- Geotechnical Investigation Report
- Slope Stability Assessment Report
- Phase 1 Environmental Site Assessment
- Phase 2 Environmental Site Assessment, if required depending on the outcome of Phase 1 ESA

Site Plan – Plan Submission Requirements for Engineering:

A Site Plan application will have the same requirements as the Zoning By-law Amendment application with the addition of the following plans to provide the details of what's proposed.

- Site Rehabilitation Plan
- Grade Control and Drainage Plan
- Stormwater Management Plan
- Erosion and Sediment Control Plan

Environmental Comments - *Provided by Matthew Hayley*

- The zoning by-law amendment will need to be supported by an **Environmental Impact Statement** that addresses species at risk.

Transportation Engineering Comments - *Provided by Neeti Paudel*

- As this site does not fall under the type of land use provided in the TIA screening form, please update the screening form to include the number of anticipated site generated vehicle trips. This information is required to determine if a full Transportation Impact Assessment is required.

Rideau Valley Conservation Authority Comments - *Provided by Eric*

Lalande

- The Rideau Valley Conservation Authority comments are to ensure that groundwater protections are adequately addressed. The RVCA will defer to the City's Hydrogeologist on this matter.

Application Submission Information

Application Type:

Major Zoning By-law Amendment & Rural Small Site Plan Control

For more information on Zoning By-law Amendment and Site Plan Control Applications, including fees, please visit: <https://ottawa.ca/en/planning-development-and-construction/developing-property/development-application-review-process/development-application-submission/development-applications#>

For information on the preparation of Studies and Plans and the City's requirements, please visit: <https://ottawa.ca/en/planning-development-and-construction/developing-property/development-application-review-process/development-application-submission/guide-preparing-studies-and-plans>

All identified required plans are to be submitted on standard A1 size sheets and use an appropriate metric scale as per [Guide to preparing studies and plans | City of Ottawa](#), and shall note the survey monument used to establish datum (beyond the local benchmark) on the plans with sufficient information to enable a layperson to locate the monument.

Note that many of the plans and studies collected with this application must be signed, sealed and dated by a qualified engineer, architect, surveyor, planner, or designated specialist. As per Section 53 of the Professional Engineers Act, O.Reg. 941/40, R.S.O. 1990, all documents prepared by engineers must be signed and dated on the seal.

To request City of Ottawa plan(s) or report information please contact the City of Ottawa Information Centre: informationcentre@ottawa.ca OR (613) 580-2424 ext. 44455

****A complete list of required studies and plans accompanies this document****



Memorandum

To: Karlinda Hinds, P. Eng. Project Manager, From: Delwar Ahmed, P. Geo Project Manager

Date: October 24, 2022

Project No.: OTT-21023795-A0 ---

Subject: Percolation Tests - 4380 Trail Road, Richmond, Ontario

Distribution: Chris Kimmerly, P. Geo., Manager, Earth and Environmental Sciences

To determine infiltration rates, percolation tests were performed on June 10, 2022 at the above subject site. The following is a summary of the completed tests and the estimated infiltration rates that will be used in the designing of the infiltration basin/trench or the storm water management pond (SWMP)

A **percolation test** is a test to determine the water absorption rate of soil (that is, its capacity for percolation) in preparation for the building of a septic drain field (leach field) or infiltration basin. In its broadest terms, percolation testing is simply observing how quickly a known volume of water dissipates into the subsoil of a drilled hole of known surface area.

A percolation test consists of digging one or more holes in the soil of the proposed infiltration basin or storm water management pond (SWMP) area to a specified depth, presoaking the holes by maintaining a high-water level in the holes, then running the test by filling the holes to a specific level and timing the drop of the water level as the water percolates into the surrounding soil. The results are reported in various formats but most commonly as units of mm/hr. For testing, a minimum of two test holes are drilled or dug by hand, most commonly 150 mm to 200 mm in diameter. Ideally, these should be drilled to different depths from 0.9 m to 1.8 m below the surface.

Percolation tests were performed at six (6) select locations at the 4380 Trail Road site on June 10, 2022. The testing locations are shown in the site plan Figure 1. The tests were performed in order to select potential locations of infiltration trench and or storm water management pond for the proposed development site. Two holes (shallow and deep), 200 mm in diameter were dug at the testing locations 1S/D, 2S/D, 3S, 4S/D, 5S/D and 6S/D. Due to soil stability issues (frequent cave in) at test location 3D, a 50 mm diameter well was installed to a depth of 3.1 m below ground surface (mbgs). All of the testing locations were equipped with electronic datalogger to facilitate data collection at very discrete intervals. Manual water levels were also measured as a backup and for comparison.

For the tests, known volumes of water was poured in to the wells and the drop in water level were measured using both electronic dataloggers and conventional manual measurements to calculate infiltration rates. The summary of the test results are provided in the following table, Table 1.

The range of infiltration rates varies considering both the shallow and deep wells 120 mm/hr to 768 mm/hr. The geometric mean of the rates for shallow depth soils is 359 mm/hr and that for the deeper soils is 468 mm/hr which corroborates with the site soil types of fill composed of sandy silt, with gravel underlain by silty sand, sandy gravel and sand. The extraordinary higher rate of infiltration at test location #3 could be the result of very high hydraulic head pressure induced by large volume of water being poured in during the test. Since the soil is relatively high permeability type pouring high volume of water in short interval resulted in an equivalent of an very high column

*Memorandum
Percolation Test Results,
4389 Trail Road, Richmond, Ontario
OTT-21023795-A0
October 19, 2022*

of water at the location may have influenced the infiltration rates. So in the geometric mean calculations the values from test #3 was not included as it would have biased the geometric means of the infiltration rates.

For the designing the infiltration trench and or SWMP the geometric mean values should be used for infiltration rates where required.

Should you have any questions, please get contact this office.

Sincerely,

Delwar Ahmed

Digitally signed by Delwar Ahmed
DN: C=CA, E=delwar.ahmed@exp.com,
O=EXP Services Inc., OU=Earth and
Environmental Sciences, CN=Delwar
Ahmed
Date: 2022.10.24 09:45:12-04'00'

Delwar Ahmed, P. Geo., Senior Hydrogeologist
Project Manager, Environmental Services
Earth & Environment

Chris Kimmerly

Digitally signed by Chris
Kimmerly
DN: C=CA,
E=chris.kimmerly@exp.com,
CN=Chris Kimmerly
Date: 2022.10.24
09:19:56-04'00'

Chris Kimmerly, P. Geo., Senior Geoscientist
Manager, Environmental Services
Earth & Environment

Attachment:

Table 1 – Infiltration Rates

Table 1 Infiltration Rate Calculations
4380 Trail Road site

Infiltration Rates based on Manual Data

Test ID	Well Dia (m)	Well Depth (m)	Vol of the well (L)	Vol of Water Poured in (L)	Test start	Test End	Test well status
Inf #1 S	0.2032	0.96	31.13	40	9:30	13:30	Dry in the end
Inf #1 D	0.2032	1.94	62.91	80	10:16	12:10	Dry in the end
Inf #2 S	0.2032	1.5	48.64	60	11:24	12:10	Dry in the end
Inf #2 D	0.2032	2.84	92.10	80	11:42	12:27	Dry in the end
Inf #3 S	0.2032	1.44	46.70		13:39	14:06	Dry in the end
Inf #3 D	0.0508	3.1	6.28	40	13:56	14:19	
Inf #4 S	0.2032	1.7	55.13		14:24	15:23	
Inf #4 D	0.2032	3.06	99.23	80	14:45	15:43	Dry in the end
Inf #5 S	0.2032	1.22	39.56	20	15:32	16:39	
Inf #5 D	0.2032	2.8	90.80		15:51	16:16	Dry in the end
Inf #6 S	0.2032	1.35	43.78	20	16:51	17:23	Dry in the end
Inf #6 D	0.2032	3	97.29	60	17:04	17:37	Dry in the end

Table 1 Infiltration
4380 Trail Road :

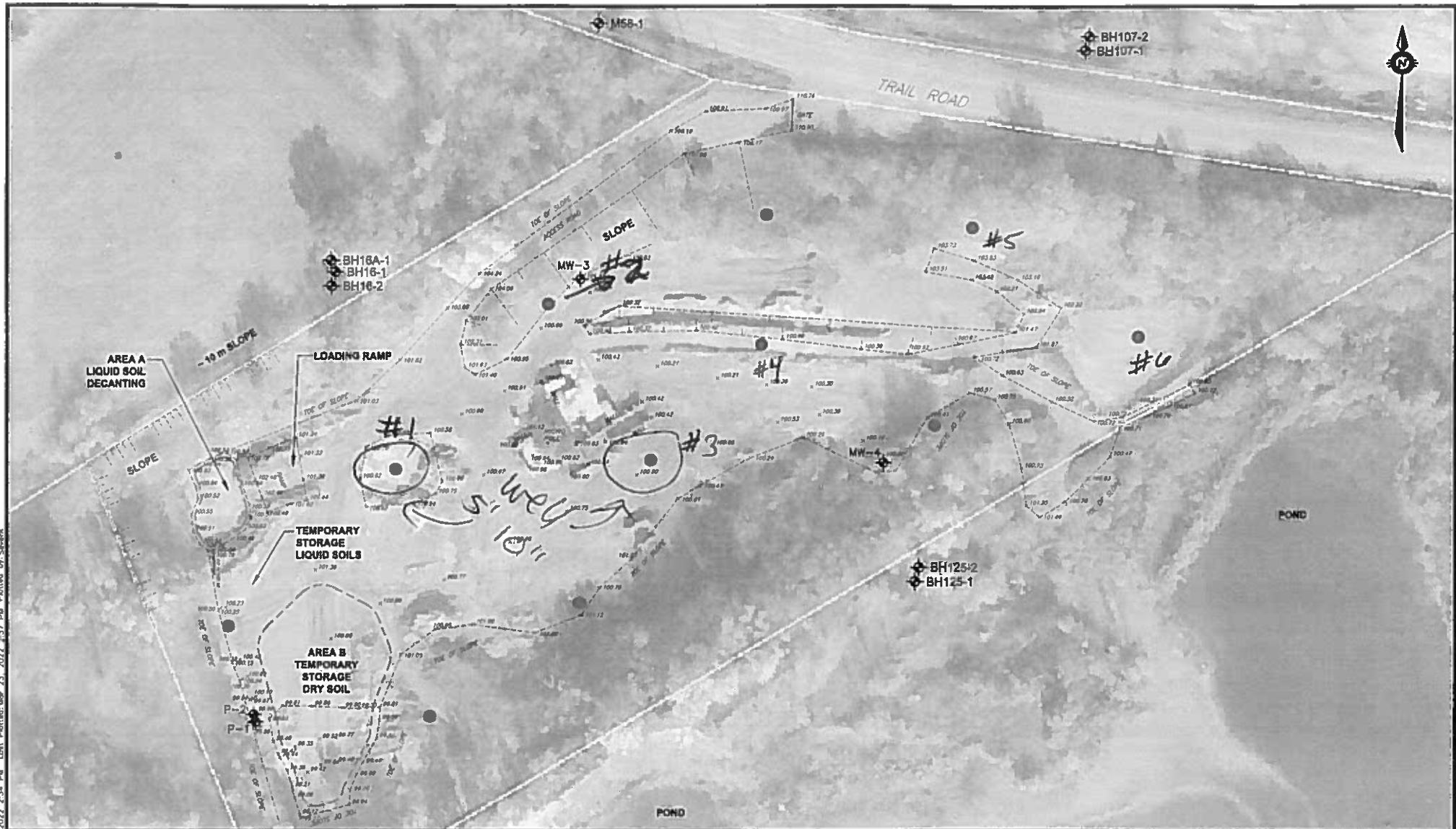
Test ID	Initial WL (m)	Final WL (m)	Duration (h:min)	In Minutes	INF Rate (m/min)	INF Rate (m/s)	m/hr	mm/hr
Inf #1 S	0.18	0.66	4:00	240	0.0020	3.33E-05	1.20E-01	120
Inf #1 D	0.91	1.47	1:54	114	0.0049	8.19E-05	2.95E-01	295
Inf #2 S	0.78	1.25	0:46	46	0.0102	1.70E-04	6.13E-01	613
Inf #2 D	1.66	1.88	0:45	45	0.0049	8.15E-05	2.93E-01	293
Inf #3 S	0.86	1.35	0:27	27	0.0181	3.02E-04	1.09E+00	1089
Inf #3 D	2.32	3.03	0:23	23	0.0309	5.14E-04	1.85E+00	1852
Inf #4 S	1.09	1.44	0:59	59	0.0059	9.89E-05	3.56E-01	356
Inf #4 D	1.80	2.25	0:58	58	0.0078	1.29E-04	4.66E-01	466
Inf #5 S	0.47	0.87	1:07	67	0.0060	9.95E-05	3.58E-01	358
Inf #5 D	1.88	2.20	0:25	25	0.0128	2.13E-04	7.68E-01	768
Inf #6 S	0.96	1.30	0:32	32	0.0106	1.77E-04	6.38E-01	638
Inf #6 D	2.02	2.42	0:33	33	0.0121	2.02E-04	7.27E-01	727

Min (S+D) =	3.33E-05	1.20E-01	120
Max (S+D) =	2.13E-04	7.68E-01	768

Values of 3S/D were omitted as the values are extraordinarily high

S geomean =	9.98E-05	3.59E-01	359
D geomean =	1.30E-04	4.68E-01	468

Values of 3S/D were omitted as the values are extraordinarily high



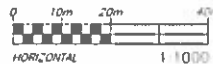
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LEGEND

MONITORING WELL LOCATION  P-1

MONITORING WELL NO. & LOCATION  BH125-1

GROUND ELEVATION  100.00



exp Services Inc.
 100-2650 Queensview Drive
 Ottawa, ON K2B 8H6
 www.exp.com



DESIGN PJV
 DRAWN P.JV/AS
 DATE 03/23/22
 FILE NO OTT-21023795

PROPOSED GROUNDWATER MONITORING PROGRAM
 4380 TRAIL ROAD, OTTAWA, ONTARIO

SITE LAYOUT

SCALE 1:1000
 SKETCH NO
 FIG 3

Appendix E – Drawings

- Included Separately